MEDDELELSER OM GRØNLAND

From Middle Ages to Colonial Times

Archaeological and ethnohistorical studies of the Thule culture in South West Greenland 1300-1800 AD

Hans Christian Gulløv



MAN & SOCIETY

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From Middle Ages to Colonial Times. Archaeological and ethnohistorical studies of the Thule culture in South West Greenland 1300-1800 AD

HANS CHRISTIAN GULLØV

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In the following chapters I present the archaeological, the written and the oral sources which form the basis of ethnohistory in South West Greenland. The background to the Thule culture there is then discussed on the basis of the available archaeological source material from Greenland and my choice of source-types is defended. An interpretation of these sources emphasizes the cultural tradition which lies behind the Thule culture in South West Greenland.

Chapter II describes the archaeological investigations in Godthåb District and discusses the development of the Greenlandic winter dwelling.

Chapter III describes the archaeological find material from Godthåb District and dates this chronologically to the period 1300-1800 AD. The main categories of artefacts are discussed and their significance for the description of the Thule culture is emphasized. I also re-examine whether a cultural continuity can be demonstrated in South West Greenland during the five centuries.

Chapter IV deals with the historical sources and discusses how they corroborate the archaeology. The geography of the settlement pattern is described and the origin of the house types is discussed. The chronology of the artefacts can thereafter be related to the ethnographic descriptions. This is done by examining trade and exchange in South West Greenland. The chapter demonstrates that ethnohistory deepens our interpretation of archaeology.

Chapter V reconstructs the cultural stratigraphy in West Greenland and discusses the cultural background of the Thule culture in South West Greenland on the basis of the occurrence of selected diagnostic types (i.e. soapstone lamps, harpoon heads and Norse objects). I examine whether meetings of cultures could have taken place before the meeting with the Norse community.

Chapter VI establishes a model for the cultural influences on the Thule culture by examining the forms of the harpoon head and its distribution as a territorial marker. This shows how the prehistoric meetings of cultures can be discerned in the Eskimo tradition in South West Greenland after 1600 AD.

Chapter VII discusses tradition in ethnohistory, and the continuity in Thule culture is viewed in relation to theories concerning migration and meeting of cultures in Greenland.

Keywords: Greenland; Eskimos; Thule culture; archaeology; ethnohistory; Europeans; cultural contacts.

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Introduction

Behind the present examination of the objects from the Godthåb District lies the archaeological, historical and ethnographic fieldwork which has been undertaken since 1945 in connection with excavations of sites belonging to the Thule culture and the colonial age.

In 1945 Eigil Knuth excavated at the settlement Qarajat south of Nuuk/Godthåb, as well as at a couple of sites inside the Ameralik Fjord.

In 1952 Jørgen Meldgaard travelled round the district, together with George Nellemann, Inge Kleivan and Claude Desgoffe, to record settlements for the Geodetic Institute's new map to the scale of 1:250 000 and to carry out some trial excavations on selected sites for the National Museum of Denmark. It was at that time suggested that a Greenlandic local museum be established in the earlier Brethren mission station Neu Herrnhut.

In 1966 the National Museum of Greenland (Grønlands Landsmuseum) was established in the buildings at Neu Herrnhut.

In 1968 H.C.Gulløv and Jørgen Ilkjær carried out some archaeological excavations in the middens in Kangeq for the National Museum of Denmark's Archaeological Survey of Greenland.

In 1969-70 H.C.Gulløv and Hans Kapel, on behalf of the Archaeological Survey of Greenland and in co-operation with the National Museum of Greenland, were in charge of the archaeological examination and the subsequent restoration of the Dano-Norwegian mission station, Hope Colony of 1721-28.

In 1972 and 1975 H.C.Gulløv and Hans Kapel, on behalf of the National Museum of Denmark and in co-operation with the National Museum of Greenland, led the archaeological investigation of the Eskimo settlements on Hope Island and adjacent islands and also travelled up the coast to the Sukkertoppen/Maniitsoq municipality and recorded the Eskimo settlements.

In 1976-77 the Inuit-Norse project conducted excavations at selected Eskimo and Norse sites in the Ameralik Fjord as a co-operative project between the National Museum of Greenland, under the direction of Jens Rosing, and the National Museum of Denmark, under the direction of Jørgen Meldgaard.

In 1978 the National Museum of Greenland was moved from Neu Herrnhut to newly refurbished buildings at the colony's harbour in Nuuk and the objects from Hope Colony were displayed in the inaugural exhibition about Godthåb in 250 years, from 1728 to 1978.

Since 1981, when the Museum Service was transferred to the Greenlandic Home Rule, the Greenland Museum has led expeditions round the district every year.

In 1983 and 1985 the Greenland Museum undertook an archaeological examination of the buildings at the German Brethren mission station Neu Herrnhut of 1733-1900, which had been designated as the home of Ilisimatusarfik/University of Greenland.

In 1990-91 the re-organized National Museum and Archive of Greenland, under the direction of Hans Kapel, undertook archaeological and ethnological investigations around Kangerluarsunnguup Tasersua south of Ameralik Fjord, when the hydro-electric power station was to be built at Buksefjorden.

The material from these investigations – except the last-mentioned (*cf.* Kapel 1993) – is discussed in the present work, where the archaeological results are described in chapters II and III. The greatest amount of information comes from the Kangeq investigation and the "Hope Island" project in 1968 and 1969-75. final reports of the fieldwork are kept in the archives of the National Museum of Denmark and the National Museum & Archive of Greenland (Gulløv & Ilkjær 1969; Gulløv & Kapel 1973, 1976). A number of published works are based on material collected in connection with the "Hope Island" project (e.g. Gulløv 1979, 1980, 1982, 1982a,b,c, 1983, 1983a,b, 1985, 1985a, 1986, 1986b, 1987, 1988, 1988b,c; Gulløv & Kapel 1979, 1979/80).

The archaeological material from the investigations made after 1969 belongs to the National Museum & Archive of Greenland. The archives of the Greenland Secretariat at the National Museum in Copenhagen contains notebooks, original plans, finished plans and photographs from the fieldwork. The current material relating to the "Hope Island" project is filed under journal number 2167 in the Ethnographic Department.

In connection with the Greenland Museum's archaeological examination of the buildings at Neu Herrnhut, a journey was made in 1984 to the then GDR with a study trip to Herrnhut. In co-operation with the National Archive in Copenhagen a record was made of documents, drawings, plans, photographic records and publications concerning the Brethren mission's activity in Greenland. During the stay in the GDR, Heinz Israel, Curator at the Museum für Völkerkunde, Dresden, and Ingeborg Baldauf, Chief Archivist at Archiv der Brüder-Unität, Herrnhut, were of great assistance. The report of the journey was published by the National Museum of Greenland (Gulløv *et al.* 1985).

The work on the sources relating to Neu Herrnhut thus supplements the material from Hope Colony 1721-28 (Gulløv & Kapel 1979) and enables us to treat the colonial age in Godthåb District in greater detail, especially on the subject of the 18th-century Eskimo population, which was the object of attention from two competing missionary movements, i.e. the Dano-Norwegian mission and the German Brethren mission.

On the initiative of the then Museum of Greenland and the University of Greenland, an investigation was commenced in 1985 of the culture-historical research in Greenland during the preceeding four decades, with the aim of establishing a survey of completed fieldwork. The survey was subsequently intended to serve as a planning tool for the Greenlandic research policy. The survey was published in the form of a report to be used by the Commission for Dano-Greenlandic Museum Co-operation (Gulløv 1986c) and I have used it as an auxiliary archive in my search for the source material discussed in the present work, in particular in chapters III and IV.

For the comparison between the archaeology of Godthåb District and other regions in Greenland, I have used the object material in the National Museum of Denmark's Eskimo-archaeological stores. The work on the data which lies behind this book took place in the National Museum's Ethnographic Department, where I was given financial assistance in the form of a one-year research grant (15-5408) from the Danish Research Council for the Humanities (Gulløv 1990).

I. Background, theory and method

The subject of the present work is a study of the Thule culture in Greenland. The account is primarily based on the available archaeological material. It does not, however, take its starting point in the earliest material from North Greenland, the gateway to the country, but begins in South West Greenland, where the Thule culture can be demonstrated to have been present in the time after the colonization in 1721. Here the archaeological investigations can be compared with the documentary sources from the colonial age and the results can be used in the description of the ethnohistory. Models have been established in this account, which serve to explain the cultural meeting between Eskimos and Europeans. I have used the results when I discuss the possible developments of earlier meetings of cultures between the ethnic groups in the country, back to the time of the Norsemen.

The archaeological investigations in South West Greenland presented here can be related to an extensive genealogical material, where present-day Greenlanders can trace their ancestors back for *c.* 300 years. This ethnohistorical time perspective has extended the archaeological context and has informed the interpretation of the data. From this starting point the aim has then been to point out and explain the origins of the features which characterize the Thule culture in South West Greenland, prior to the time when the colonization changed the foundations of this arctic hunting culture.

The Thule culture is still the concept which links together archaeological collections from Greenland, Canada and Alaska. It was defined by Therkel Mathiassen in 1927 on the basis of typological and functional similarities between the archaeological collections of the fifth Thule Expedition and other find groups from the North American Arctic and Siberia. The definition comprised not only the objects, but also dwelling types and hunting and fishing structures. Common features in the artefact types determined the geographical distribution of the culture, while variations determined its temporal extent (1927,II: 5). During the course of time, many archaeological investigations in east and west have refined the description of the culture by dividing it into periods, demonstrating adaptation to local resources and interpreting changes as manifestations of new influences or immigration; but the descriptions have always referred to the Thule culture (*cf.* McCartney 1977; de Laguna 1979; Morrison 1983; McCullough 1989). In other words, it was a diehard concept that Therkel Mathiassen introduced in 1927, and its geographical extent, chronological contents and typological variations still stand today. Mathiassen's perception, that differences and similarities in the archaeological artefacts were expressions of function and cultural development (*cf.* 1927,II: 196, 1928: 238f), was thus not far off the "processual archaeology" of later times (*cf.* Binford 1968: 273).

Survey of the research

The archaeological fieldwork

The first collections of objects from Greenland were sent to Oldnordisk Museum in Copenhagen in 1824. They caught the interest of the Director C. J. Thomsen and he asked the officials in the country to send more. The result was, however, meagre. A large and systematically ordered collection of objects from Disko Bay was established by C. G. F. Pfaff, doctor in Jakobshavn 1854-76, but this did not interest the National Museum and it was sold to Sweden. Parts of this collection were later published (Swenander 1906; Solberg 1907) and the attentions of the academic world were directed to the sites which were rich in finds, among others Sermermiut, in Disko Bay.

When a commission was established in 1878 for the purpose of directing the scientific investigtions in Greenland, the expeditions were enjoined to undertake archaeological explorations too. The first investigations took place in East Greenland. first in Scoresby Sund in 1891-92 (Ryder 1895), then between Scoresby Sund and Ammassalik in 1898-1900 (Thalbitzer 1909) and finally in North East Greenland from 1906 to 1908 (Thostrup 1911; Thomsen 1917). The results of these investigations lent credence to the theory that the Eskimo culture had arrived on the east coast in the north of the country. This supposition was, however, later doubted by Knud Rasmussen, because of the absence of winter dwellings in northernmost Greenland, and Therkel Mathiassen thought to find support for an idea of an early immigration from the south into North East Greenland after he had finished his investigations in Ammassalik in 1931-32 (1933: 145, 1936: 123), while a later immigration round the north of the country was to have taken place in the 17th century (1936: 124).

The systematic investigation of Greenland's prehistory was instigated in 1929 by the Commission for Scientific Investigations and was led by Therkel Mathiassen. He had joined Knud Rasmussen's fifth Thule Expedition to Arctic Canada as its archaeologist and after his return in 1923 he presented the scientific results in his extensive monograph about the Thule culture (1927,I-II). He finished his investigations in the course of six field-seasons and thereupon submitted the conclusions of his observations of the Thule culture in Greenland. These were influenced by the evolutionary theories of his age and maintained that, from a culture-historical point of view, Greenland was a cul-de-sac from where nothing came out once it had gone in; yet "to study the manner in which the culture develops within so limited a region within a limited period is surely also of importance to cultural science in general" (Mathiassen 1936: 126).

Mathiassen's main task in Greenland was the description of the Thule culture in time and space. This he carried out by excavating selected sites in West Greenland (Mathiassen 1930, 1931, 1934, 1936) in East Greenland (Mathiassen 1933, 1936a) and examining collections of objects from other investigations (Mathiassen 1928a, 1929, 1934a). The dating was made by referring to the written European sources which mentioned the Eskimo population and to the excavated artefacts of European origin.

The discovery of Norse artefacts during the initial investigation in Upernavik in 1929 came to be of decisive importance for Mathiassen's perception of the Thule culture in Greenland. He saw it as a later phase which was influenced by the Norse community in South West Greenland and called it the Inussuk culture after the find-spot in Upernavik (Mathiassen 1930: 300). With this, the meeting of cultures was introduced as a theme in the archaeology of Greenland. The task of the subsequent investigations was, however, still the development of the Thule culture in Greenland, while

new finds of Norse and Norse inspired objects contributed to the geographical description of the later Inussuk culture.

The problem inherent in describing the development of the culture without regard to the meeting of the Norse and Eskimo cultures was not significant to Mathiassen's working method. This was based on a perception of cultures as independent systems, which were able to develop and adapt within defined physical-geographical boundaries. In Mathiassen's opinion the Inussuk culture had the ability to develop kayak hunting during the winter in North Greenland to perfection, so that South Greenland became accessible to the Eskimos, whereupon "they then trekked southwards, and the Norse culture perished" (1930: 302).

The presence of other cultures in the Arctic, e.g. Dorset, was not seen as one of the prerequisites for the Inussuk culture, since Mathiassen did not realize this factor (1936: 129), although it was later in the 1930s presented to him by his assistant Frederica de Laguna (*cf.* 1979: 22). This came to be one of the major items of criticism against the Inussuk culture as a concept (Jordan 1979), but before then he had all the same recognized that there had been several cultural periods in Greenland prior to the Thule culture (Mathiassen 1958).

Helge Larsen was an assistant at the investigations in the Kangaamiut area in 1930. The Inussuk culture was demonstrated here and was dated on the basis of those sources which related that the Norse Western Settlement was occupied by the Eskimos from the mid-14th century (Mathiassen 1931: 125). After that Larsen acted as the archaeologist on Lauge Koch's expedition to North East Greenland, where he overwintered in 1931-32. The result was that the Inussuk culture was shown to have come first and from the south, followed by the two stages of the north-eastern Greenlandic mixed culture, both of which were defined as a merging of cultures coming from the north and the south (1934: 86,171). He referred to Mathiassen's archaeological material from his excavations in Ammassalik in 1931-32 (1933).

Mathiassen participated in Knud Rasmussen's 7th Thule Expedition and travelled along Frederik VI's Coast from Ammassalik to Cape Farewell, excavating on the way. In all places he described the Inussuk culture as being the earliest phase, which, like the later cultural remains along the coast, had come into Ammassalik from the south after the Norse Eastern Settlement had been abandoned during the 15th century (Mathiassen 1936a). In his account he included the results of the excavations, which Erik Holtved had carried out at the very south of this coast when he was the archaeologist on the 6th Thule Expedition in 1931.

Holtved then became Mathiassen's assistant at the subsequent excavations in Disko Bay in 1933 and Julianehåb in 1934. In Disko Bay Mathiassen thought that he had for the first time identified the Thule culture without any Norse influence and dated it to the 11th century, followed by the Inussuk culture which was introduced in the 13th century. Crucial for this dating was the Norse source *Historia Norvegiæ* from *c.* 1200 AD which mentioned conflicts between Norse hunters and scrælings (*skrælingjar*). This became the argument for Mathiassen's early dating of the Thule culture without Norse artefacts (1934: 84-85, 167-168). The investigations in Julianehåb sought, *inter alia*, to corroborate the earliest information on stone tools, boats and settlements, that were observed when the Norse first settled in the 10th century, and which is thought to have been written down by Ari fródi in *Íslendingabók* in the 12th century (Mathiassen 1936: 86; Jansen 1972: 26). This did not meet with success and Mathiassen suggested (*op.cit.*) that the information referred to the traces of a short visit by a comparatively small group of Eskimos from North Greenland, who had attempted to live in these regions, but had left because the winter was not favourable for ice-hunting. The earliest Inussuk culture was thus dated to the period 1350-1650, the beginning being

determined by the Norse sources, which mentioned the scrælings' attack on the Norsemen in 1379, and the end by the find of glass beads, which were linked to the 17th-century European whaling activity (1936: 84).

With this Therkel Mathiassen ended his archaeological investigations of Greenland's Eskimo culture. An extensive number of finds had been taken to the National Museum in Copenhagen. The reports had been published in *Meddelelser om Grønland*. The Thule culture and the subsequent phase, the Inussuk culture, had been dated by means of European sources. Mathiassen's assistants, Frederica de Laguna, Helge Larsen and Erik Holtved, continued the archaeological exploration of the Eskimo Arctic.

The Thule area was now, in archaeological terms, the least known area compared to the rest of Greenland (Mathiassen 1936: 130). During the years 1935-37 and 1946-47, Erik Holtved made archaeological, ethnographic, folkloristic and linguistic investigations there. The results of the archaeological excavations were published in three volumes (Holtved 1944,I-II, 1954). As in the rest of Greenland, the find of Norse objects also here became the chronological basis for the ordering of the cultural elements; the Dorset culture was for the first time recognized as an independent culture in Greenland and was placed chronologically before the Thule culture; and the examination of the houses on Ruin Island and Nuulliit demonstrated a close connection with the Punuk culture in Alaska (1944,II: 177,179, 1954: 102). In Holtved's opinion, the Ruin Island people had quickly assimilated the already existing and superior Inussuk culture in West Greenland and had been the driving force behind the Eskimo thrust southwards, which led to the abandonment of the Western Settlement in the 14th century (1944,II: 178). He pointed out the clear similarity between the architecture in North East Greenland and Cape Kent, referring to the rectangular structures, and suggested that an immigration had occurred from the west round the north of the country in the 14th century (*ibid.*). This last similarity was investigated by Jørgen Meldgaard in 1948 when he participated in Eigil Knuth's Pearyland Expedition.

Eigil Knuth had been Helge Larsen's assistant on the Anglo-Danish East Greenland Expedition in 1935 (Larsen 1938) and, as leader of the Danish Pearyland Expedition during the years 1947-50, he made an archaeological investigation of the most northerly areas in Greenland, where he found and described the palaeo-Eskimo cultures Independence I & II, which had earlier been called Dorset culture (Knuth 1952). Hans-Georg Bandi and Jørgen Meldgaard worked as assistants on Clavering Island in North East Greenland. Among the main results of the investigations there were the demonstration of the cultural connection between Cape Kent and North East Greenland, as Holtved had suggested, and the visible Dorset features in the finds from the earliest structures, which were now placed chronologically before Helge Larsen's earliest Inussuk culture (Bandi & Meldgaard 1952: 30-31).

After an independent palaeo-Eskimo culture was shown to have been present in Disko Bay before the Dorset culture (Meldgaard 1952a), the archaeological interest concentrated on the description of this new culture, the Saqqaq culture. Its place in the chronology was clarified by means of stratigraphic examinations at Sermermiut and the result was that Greenland's prehistory in West Greenland was divided into three parts; a result with which Mathieassen could also agree (Larsen & Meldgaard 1958; Mathiassen 1958). There was, however, no archaeological evicence for any continuity between these three cultures in Disko Bay and the question arose whether there was any cultural contact in Greenland at all (e.g. Jordan 1979; Meldgaard 1962, 1977; Taylor 1968).

In 1967 and the following years the meeting between the European and Eskimo cultures became a subject for study at the National Museum. Communal houses from the 18th century and late pagan graves were excavated in Upernavik in order to shed light on the influence from European whaling activity (Hjarnø 1969, 1974), and in Godthåb the first Dano-Norwegian mission station of 1721 and contemporary communal houses were excavated in order to trace the influence from the colonization (Gulløv & Kapel 1973a, 1979).

The co-operation between the re-organized National Museum of Greenland and the National Museum of Denmark was initiated by the Inuit-Norse project and the object was to shed light on the meeting between Eskimo and Norse cultures, by means of archaeological investigations of Norse farms and Eskimo ruins in the Western Settlement (Meldgaard 1977a).

The first archaeological investigation of a caribou hunting camp was undertaken in 1978 at Aasivissuit in West Greenland (Grønnow *et al.* 1983). By using ethnographic and zoo-archaeological sources, this investigation records the exploitation of local resources, primarily caribou, and demonstrates that changes in hunting methods and periods of settlement must be seen as a result of fluctuating resources and social changes in the Eskimo community.

On Knud Rasmussen's Memorial Expedition in 1979-80 archaeological investigations were undertaken in order to shed light on the cultural connections within Melville Bay in historic and prehistoric times (Grønnow & Meldgaard 1980; Meldgaard 1980b).

The Greenland Museum Service has been independent since 1981 and is administered by Greenland's Home Rule (Andreasen 1986). The preservation and recording of legally protected monuments in accordance with the Greenlandic Preservation Act has prevented the staff at the recently established National Museum & Archives of Greenland from undertaking major archaeological investigations and assistance for such work still has to be sought from abroad (*cf.* Sandell & Sandell 1991).

Research questions

The description of the Thule culture in Greenland is based on extensive archaeological collections, most of which have been published. The Thule area, with its geographical location at the gateway to Greenland, has been given prominence as a key locality for the description of the culture in the rest of the country. The dating has been based on archaeological and historical sources from the Norse communities in South West Greenland.

The prevalent opinion was thus that prehistoric Thule culture could be dated on the basis of existing historical sources and that these sources could explain the causes of its distribution. The problem is, however, that the existing sources only mention the meeting of cultures in terms of violent conflicts and thus render it difficult to perceive the Inussuk culture as being a result of Norse influence.

The cultural meeting between the two ethnic groups was one of the main subjects of the Inuit-Norse project (*cf.* Meldgaard, *op.cit.*), although the archaeology did not provide evidence of the meeting. But the possibility of such a meeting was discussed and a hypothetical model was established to explain the course of events. The model was divided into four phases, starting with early contacts between Norse and Eskimo hunters in Disko Bay, followed by Eskimo settlement in respectively the Western and Eastern Settlements and finishing with the Eskimos digging for iron in the abandoned

Norse farms (*cf.* McGovern 1979). The problem of explaining the meeting of cultures on the basis of Norse sources remains unsolved and Therkel Mathiassen's postulate that Greenland was a cultural cul-de-sac (*op.cit.*) still appears valid.

The discussion was mainly based on the dating of the archaeological material collected before C-14 dating gained ground. A single date from Sermermiut had placed the Thule culture in Disko Bay in the 13th century (Mathiassen 1958: 48). But the subsequent datings, carried out in 1969, did not contribute to any clarification of this discussion. They were derived from the Ruin Island phase in the Thule area, which according to Holtved had been the driving force behind the thrust against the Norse settlement (*op.cit.*), and the selected objects from Ruin Island and Nuulliit were dated to the period 800-1000 AD, while the Norse objects could be placed in the 13th century (Jordan 1979: 162; Meldgaard 1977: 34, 1986: 30). The fact that it could be demonstrated that the reservoir effect affected living organisms in the High Arctic sea area (*cf.* Arundale 1981) meant that after correlation the dates could be shown to coincide with the dates of the Norse material and be compared with the Ruin Island phase on Ellesmere Island (*cf.* McCullough 1989).

Other dates from the Godthåb area in the earlier Western Settlement showed that the Norse and Eskimo settlements were most likely contemporary (Gulløv 1982b, 1983a) during the first half of the 14th century, until the time when the Ruin Island people "destroyed" it.

But before the correlated dates were available, the idea, which had been propounded at an early stage, about the meeting between the Dorset and the Thule cultures (Collins 1937: 315), was discussed with reference to the connection between the Thule District and North East Greenland (Bandi & Meldgaard, *op.cit.*; Jordan 1979, 1984). From this it appeared that the unmistakable Dorset features in the Thule culture in northern Greenland might be the result of influence from North East Greenland. This argument is still valid, although the beginning of the Ruin Island phase is now dated to the 13th century; but it must be emphasized that we must now take into account that there were at least two cultural influences, both of which were present in the Thule culture (*cf.* Bielawski 1979).

The dating of the Ruin Island phase and the associated objects have been discussed on the basis of the archaeological material from Ellesmere Island (McCullough, *op.cit.*). It could be established that the phase contained many features from the Punuk culture from St. Lawrence Island and that it represented the earliest Thule culture in this area, since the still earlier cultural remains were palaeo-Eskimo (*ibid.*). Early Thule culture in Canada with connections to the Birnirk culture in North Alaska has however been dated to around 1000 AD and is found distributed eastwards as far as the area around Lancaster Sound, e.g. Cornwallis and Devon Islands (Arnold & Stimmell 1983; Morison 1989: 60). There were thus two separate phases in the Thule culture, the Ruin Island phase being the later. Both phases have left traces in the eastern Arctic.

Seen in relation to Greenland, the Ruin Island phase occupies a key position in the discussion of the Thule culture, the succeeding Inussuk culture and the visible Dorset features. As a result, one of the research tasks is a clarification of the time when the ethnic groups in the country met with one another and of the nature of the cultural contact. The most recent investigations into the Norse artefacts found in Eskimo structures and middens (Arneborg 1991) emphasizes the possibility of commercial intercourse between Eskimos and Norsemen, although it cannot yet be established when and where this took place. The greater majority of the Norse artefacts seem to have been acquired by the Eskimos after the Norsemen had left the country. Furthermore, it is proposed that a shipwreck in northernmost West Greenland may have been

the reason for the many Norse artefacts, e.g. ship rivets, which were found in the structures of the Ruin Island phase (Arneborg 1991; Schledermann 1978: 472).

For the description of the Thule culture in Greenland we now have at our disposal a great amount of archaeological material from arctic Canada, which is largely the result of Therkel Mathiassen's pioneering work in 1927 (*cf.* McCartney 1979). The growing interest in the study of cultural contacts, based on archaeological and historical sources, has similarly increased the possibilities of explaining the development in the Arctic (*cf.* Fitzhugh 1985). But the results of the earlier excavations are still among our most important research sources and are also used by other disciplines. There is thus a clear challenge to archaeology to explain the physical-anthropological and linguistic differences which can be demonstrated in Greenland (*cf.* Anom. 1986: 7-14, 187-191).

Physical anthropology (Jørgensen 1953) has described the skeletal material from West and South Greenland as a homogeneous group, the "Inussuk group", and has found a connection between this and North Alaska, i.e. "Old Igloo" from the Birnirk culture (Ford 1959: 19), while the skeletons from North East Grenland constitute a comparatively isolated group, which is compared with arctic Canada, i.e. Mathiassen's finds at Naujan and northern Baffin Island (Fischer-Møller 1937). The material from the late burials in Upernavik (Jørgensen & Vesely 1974) has been compared with the "Inussuk group" and North East Greenland and, although European involvement cannot be ruled out, certain correspondences with the latter region can be demonstrated (Koch 1988). The investigations of variations (*ibid.*) emphasize that the "inussuk group" is heterogeneous and that the material must in future be divided into smaller regions. However, the greatest measurable difference is still found between North East and South East Greenland.

A connection between biological and cultural development cannot, however, be taken for granted (*cf.* Schindler 1985) and an alternative suggestion to investigate man and environment in Greenland's past paves the way for an increased insight in the study of physical anthropology (Arneborg *et al.* 1988).

For a long time, linguistic and dialectical investigations have concerned themselves with the development of and the connection between the three main Greenlandic dialects, i.e. West Greenlandic, East Greenlandic and Polar Eskimo (*cf.* Fortescue 1986; Thalbitzer 1904). The presence of East Greenlandic dialectical features in the most southerly, as well as in the most northerly, West Greenland, presupposes direct influence southwards and northwards round the country (Petersen 1986; Rischel 1986). This influence in South West Greenland has been demonstrated by means of historical sources (*cf.* Gulløv 1982, 1986b), while the documentation in North West Greenland, i.e. Upernavik, suggests that the Thule District was empty of people before the advent of the present population. There are some archaeological indications in the Thule District that it was thinly populated in the 17th and 18th centuries (Holtved 1944,II: 40), but there is no archaeological evidence of the comparatively late connection between North West and East Greenland. On the other hand the traditional song-tradition in Upernavik contains melodic features which are normally only found in East Greenland, i.e. Ammassalik (Hauser 1992: 154-155).

The Thule District is known to have been inhabited in 1771 (Egede 1788) and another immigration took place in the 1860s (Gilberg 1974/75). Linguistic investigations have demonstrated the similarities between Copper Eskimo and Polar Eskimo (Fortescue 1986a; Holtved 1952:24), and ethno-musicological and kinship-terminological studies confirm this similarity and furnish evidence that the immigrants in the 1860s brought a drum-singing tradition from Baffin Island with them (Hauser 1988, 1992: 227ff; Søby 1977/78).

Summary

The archaeological account of the Thule culture in Greenland now presupposes that there were several immigrations and that the Inussuk culture must be perceived as a synthesis of these.

The chronology begins with the Ruin Island phase, which on Ellesmere Island can be archaeologically demonstrated to have been the Thule culture's earliest phase and C-14 dated to *c.* 1200 AD onwards. Norse artefacts from this phase are dated within the period 1260-1400 AD. The Thule culture can be dated to the 13th century in Disko Bay and to the beginning of the 14th century in the Western Settlement.

We presume that the Thule culture spread both round the north and the south of the country. In South Greenland the chronology is based on the depopulation of the Norse settlements in the 15th century, after which time the Inussuk culture would have reached North East Greenland from the south in the 16th century and mingled with the Thule culture there, which had itself come into the region from the north in the 14th century.

It has been hard to escape from Therkel Mathiassen's view of Greenland as a cultural cul-de-sac and the research has been, and will continue to be, influenced by the ideas from a model which is based on linear evolution and simple ecology. The description of the Inussuk culture as a result of a cultural mix of Thule and Norse (Mathiassen 1930: 325) has been the subject of later discussion, but the critique of this interpretation (*cf.* Jordan 1979) does emphasize that the relationship between internal adaptation and external influence is essential for our understanding of the cultural history. Our attention is thus increasingly drawn to the ethnic groups in the country whose mutual influence renders the description of the culture more complex (*cf.* Grønnow *et al.* 1983; Gulløv 1985; McGovern 1979).

This complexity is also evident in other sources. Linguistics in particular, with its unambiguous arguments for the development of the Greenlandic dialects, has confronted archaeology with a number of problems. Chronologically, West Greenlandic and East Greenlandic are described as having split up from a Common Greenlandic stem, which can be traced back to the earliest immigration from Canada. The language spread in two directions, i.e. down along the west coast to the Cape Farewell area and the southernmost east coast and north around the country down along the east coast to the Cape Farewell area. Then follows a linguistic stratum in northern West Greenland, where certain dialectical features can be demonstrated between Disko Bay-Uummannaq and Igdloolik-North Baffin Island. Subsequent East Greenlandic features can be demonstrated in southernmost and northernmost West Greenland and are explained as a return migration from the east round both the south and the north of the country, and this East Greenlandic influence is also found in the drum-singing tradition of these areas (Fortescue 1986a; Rischel 1986; Hauser 1992). The special vowel-shift from *u* to *i*, which is one of the characteristics in the East Greenlandic dialect, does not seem to be very old phonetically, so the return migration must be presumed to have taken place comparatively late. finally, Polar Eskimo is explained as a later Greenlandic dialect originating in the Copper Eskimo geographical area (*ibid.*).

Archaic features in Central West Greenlandic, i.e. between Nuuk and Sisimiut, can be connected with similar features in North Alaska outside the Canadian area, which argues in favour of the hypothesis about an early, independent development of the Greenlandic and Canadian dialects. Changes in the West Greenlandic dialects outside Central West Greenlandic, i.e. Disko Bay-Uummannaq in the north and Paamiut-Julianehåb in the south are presumably due to linguistic interference phenomena

which arose at the meeting between original West Greenlandic and incoming East Greenlandic.

East Greenlandic has gone through more changes than the dialects on the west coast, but has preserved archaic elements which are also found in Old MacKenzie and Yupik (Fortescue 1986a: 174; Petersen 1986: 117). The dialect, with its distinctive phonetic features, has thus moved further away from North Alaska than the other Greenlandic dialects, but in terms of immigration it must be placed at an early date, which has given rise to the idea of a linguistic substratum, e.g. Dorset, in North East Greenland from where the dialect may have come (Petersen 1986: 121).

It is obviously problematic to elucidate these matters by means of archaeology, since the Thule culture primarily describes an arctic hunting culture, whose social composition ethnographically consists of comparatively small groups, which "move around a lot" (*cf.* Lee & De Vore 1968: 11). Linguistic observations made in one region may thus refer to actual circumstances elsewhere. But Greenland's particular geography, being an island with a narrow ice-free coast, can be regarded as a circular model where migration and cultural changes can only happen in two directions. This makes it easier to clarify certain linguistic characteristics in one area by comparing them to the neighbouring areas, as has been done with the help of historical sources (*cf.* Fortescue 1986: 420-421).

The Ruin Island phase is, in terms of archaeology, presumed to be the first branch of the Thule culture to reach Greenland. This happened shortly after 1200 AD. According to C-14 dates from Ellesmere Island, it can be shown to have been present in the area for the next couple of centuries. During this period, it is thought to have spread southwards in the Canadian Arctic from there, *i.e.* to the Foxe Basin region and southern Baffin Island, where another branch of the Thule culture had already arrived (Maxwell 1985: 258). In the Thule District, however, Holtved's investigations show that the Ruin Island phase succeeded an early Thule culture (1954: 106). No early Thule culture with Norse artefacts has, however, been demonstrated in any of the examined structures from the Ruin Island phase on either side of Smith Sound, which strengthens the excavators' opinion about the influence of the Ruin Island phase on the development in West Greenland.

When these archaeological factors are collated with the linguistic exposition set out above, the Ruin Island phase would have had its cultural origins in the Thule culture in North Alaska, from where it reached Greenland in comparatively unaltered form. The obvious Punuk character seems to confirm the latter, but not the former theory. The Ruin Island phase's architectural characteristic, the internal kitchen niche, is also found in Disko Bay, Julianehåb and South East Greenland, but has not been identified in the central West Greenland area, including the Norse Western Settlement, and thus appears to be a secondary phenomenon.

The Punuk culture originated in the Bering Sea area, where the Eskimo Yupik language predominates today. Archaic elements have survived in the East Greenlandic dialect which are also found in Yupik. In both these peripheral regions the concept of *Angakkut puullit* has been preserved in historical sources and myths (Sonne 1986: 143). If this concept can be associated with the Ruin Island phase, it would imply that a migration round northern Greenland could be demonstrated by archaeological means. Here, however, one finds the North East Greenlandic mixed culture, with its particular archaeological and physical-anthropological characteristics, which does not lend immediate credence to such a hypothesis. But the opposite theory of a migration south around the country would have left traces in the Central West Greenlandic dialect, and this has not happened.

The Ruin Island phase is found isolated in parts of the Smith Sound area and

seems indirectly to have left traces in Greenland, while linguistic and physical-anthropological data from West Greenland show direct influence from North Alaska, but in this last region its archaeological origins must be sought in the early Thule/Birnirk culture. There are thus features from both North and West Alaska in the earliest Thule culture in Greenland, and the subsequent Inussuk culture must be seen as the synthesis of this influence from the west and the meeting with the Norse culture in South West Greenland. But Norse objects are, as already mentioned, also found in the Thule District before this period, which made Holtved first include and later exclude the Ruin Island phase in the Inussuk period (1944,II: 39, 1954: 106).

The Inussuk culture is as a concept a cultural conglomerate which also contains physical elements from the Dorset culture (Jordan 1979). Most of the physical common features have been demonstrated between North Baffin Island across Thule to North West Greenland (Holtved 1944,II: 128; Mathiassen 1930: 186). The origins of the Inussuk culture must be sought in this geographical area. In spite of Mathiassen's critique of Holtved and the emphasis on the unique nature of the archaeology in the Thule District (1944/45: 71), the archaeological and dialectical common features, which have been demonstrated to exist between North Baffin Island-Igloolik and Disko Bay-Uummannaq, seem to support the hypothesis of an originally culturally coherent area (Fortescue 1986a: 169).

Here we also find the parameters which link North East Greenland with this region, e.g. the physical-anthropological material from North Baffin Island-Igloolik and the archaeology from Inglefield Land. Holtved notes that there were no graves in the latter area and suggests the possibility of a burial custom in which the deceased were buried at sea or left exposed (1944,II: 147). A burial custom of this kind is known in South East Greenland in the 19th century (Graah 1832: 85; Thalbitzer 1933: 36) and this could explain the physical-anthropological difference which has been demonstrated between the populations in North East and South East Greenland. But it does not explain the presence of graves in North East Greenland, which in this respect differs from its neighbouring regions.

The composition of the North East Greenlandic mixed culture of elements from Dorset, Thule and Inussuk (Jordan 1979; Holtved 1944,II: 119; Bandi & Meldgaard 1952) has not yet been clarified archaeologically, but it is from here and from the Thule area that the last influence in West Greenland shows up in the 17th and 18th centuries, in the form of a linguistic feature that came from East Greenland.

The Thule culture can today be described as being composed of elements from the cultures in Alaska, from the Dorset culture in the eastern Arctic and from the European cultures in the country. Future research must seek to clarify what cultural significance these influences may have had on Greenland.

The meeting of cultures

Cultural background

The survey of the research showed that the description of the Thule culture in Greenland grew ever more complex as more excavations were carried out. The interpretation of the typological differences in the archaeological material as an expression of a linear evolution could not be maintained after Holtved's investigations in the Thule area. The division into periods then gave a statistical basis for a comparison with other geographic regions in the eastern Arctic and for establishing a chronology of the Thule culture. As Holtved was influenced by the evolutionist views of his age he, however, added periods of transition before and after the Inussuk culture in his diachronic model, though he emphasized (1944,II: 113), on the basis of the archaeological stratigraphy on the Uummannaq site in Thule, that these periods might have been of short duration. Holtved's archaeological work thus also enables us to describe the Thule culture within the framework of a synchronic model.

Such a model describes cultural contacts and presupposes a contemporary presence of at least two population groups. It is such a situation Holtved points out (*op.cit.*) as he tries to place the Ruin Island phase in his chronology. It was later C-14 dated to one century earlier than he had deemed (McCullough 1989), but this does not alter his archaeological arguments. We still lack the other party in this meeting of cultures, which brought the Norse objects north to the Ruin Island people in Thule in the 13th century; unless the theory of a shipwreck must be upheld.

In arctic Canada the Thule culture's chronology and division into phases show that the earliest, separate migrations from Alaska were also contemporaneous (Morrison 1989). It has long been known that these migrations did not take place in an unpopulated area, but that they at some time met with the palaeo-Eskimo Dorset culture (Collins 1937: 315), even though it has not been possible to demonstrate this archaeologically *in situ* (Manning 1951; Maxwell 1985: 239ff; O'Bryan 1953). We here have a challenge to archaeology to investigate whether this meeting of cultures could also have taken place in Greenland, as has been postulated (*cf.* Jordan 1979). If this were the case there would have been additional participants in a multi-ethnic meeting of cultures, with the Dorset people as intermediaries. The study of the geographical distribution of metal in late Dorset and early Thule demonstrates that such a cultural contact in the eastern Arctic is probable and must have happened by trade over long distances (McCartney 1988: 62-63). This trade presupposes a mobility which cannot easily be demonstrated *in situ*.

The dating of the Thule culture and its various stylistic phases in arctic Canada has been established as follows (*cf.* Morrison, *op.cit.*):

Birnirk: Is found geographically in North West Alaska. Defined as the direct origin of the Thule culture by Ford (1959) and Stanford (1976). The transition Birnirk/ Thule is dated to *c.* 900 AD.

Western Thule: Is originally defined by Larsen & Rainey (1948) in North Alaska and is geographically distributed in the most westerly Canada (Yorga 1980). The period terminates *c.* 1400 AD, when the open shaft sockets on the harpoon heads were replaced by closed sockets and when the whaling ceased. The dating divides early Thule from late Thule.

Classic Thule: Is confined to arctic Canada and was defined by McCartney (1977), primarily on the basis of sites in the north-westerly Hudson Bay area, including Nau-

jan (Mathiassen 1927) and a few local phases on sites north of these up to Bathurst and Cornwallis Islands (McGhee 1984). It is derived from an early stage of *Western Thule* and dated to the period 900-1400 AD. Whaling and harpoon heads of the Thule 2 and 3 types connect the phase with Alaska, while clay is replaced by soapstone for the manufacture of cooking pots and lamps during the period and the lashing slots on the harpoon heads are replaced by lashing holes.

Early Classic Thule: Separated from *Classic Thule* on the basis of particular stylistic features including harpoon heads of the Sicco, Sicco-like and Natchuk type (Taylor 1963), which comes from West and North Alaska, as well as Thule 2 and the special Thule 5 with closed shaft socket which Collins had suggested derived from a Dorset type (*op.cit.*). *Early Classic Thule* is described geographically on sites from Banks Island in the west to North Baffin Island in the east (Arnold & Stimmell 1983; McGhee 1984; Mary-Rousselière 1979). It is dated to the period 900-1200 AD.

Ruin Island: Is defined by Holtved (1944,1954) and McCullough (1989) and is geographically confined to the area around Smith Sound. Stylistic features clearly relate this phase to *Western Thule* and geographically places it in West Alaska, where the large Sicco harpoon heads and the internal kitchen niches are found. Clay is sometimes used instead of soapstone and harpoon heads of Thule 2 and 3 type also occur. The phase is dated to the period 1200-1400 AD. All of this indicates a comparatively late and direct immigration from Alaska, which on Ellesmere Island later appears to have become admixed with features from more southerly regions in the eastern Arctic (Morrison 1989: 52, 56).

Clachan Thule: Is defined as a variant of the Thule culture and derived from *Western* and *Classic Thule*, and has been geographically identified in the western part of Coronation Gulf and along the coast westwards as far as the mouth of MacKenzie River (Morrison 1983, 1990). Stylistic features are harpoon heads of the Clachan type, as well as Thule 2 and 3, some with Sicco features, the use of clay rather than soapstone and large occurrence of local copper. The phase is dated to the period 1000-1300 AD.

Late Prehistoric: Is geographically located in the western Canadian Arctic and seems here to be derived from *Clachan Thule*. Characteristic features are thin harpoon heads with closed shaft sockets of the Barrow and Nuwuk types and the continued use of clay rather than soapstone. The phase is dated to the period 1300-1600 AD and includes the prehistoric Copper Eskimo caribou-hunting site, Nadlok, south of Coronation Gulf (Gordon 1988). *Late Prehistoric* can be directly related to the MacKenzie and Copper Eskimo groups, and the connection with the inland Eskimos west of Hudson Bay can be demonstrated with the help of other source material (*cf.* Burch 1978).

Modified Thule: Is defined by McCartney (1977) as a development of *Classic Thule*. The phase includes all those prehistoric sites in the eastern and central Arctic which are stylistically later than McCartney's key location on the west coast of Hudson Bay, and in particular contains a preponderance of flat harpoon heads, often with double dorsal spurs. The dates place the phase in the period 1250-1600 AD.

Seen from Canada, *Inussuk* is described as an analogue to *Modified Thule* (Morrison 1989: 52), but in spite of the similarities that are thereby pointed out, similarities which also include certain secondary dialectical features mentioned in the research survey above, we yet lack an explanation for the relationship with the western Thule phases, i.e. *Early Classic Thule* and *Ruin Island*, both of which contain Norse artefacts from South West Greenland.

This relationship can today be described as a meeting of cultures and thus explains

the early distribution of metal as a result of trade between Dorset and Thule (McCartney 1988). The described phases of the Thule culture show that several groups were early on involved in this trade which also increased the knowledge of local resources; *cf. Clachan Thule* where extensive use was made of local copper for harpoon blades, which were used for breathing-hole hunting of ringed seal, and the later organized trade in soapstone from the same area (Morrison 1983, 1991), and *Ruin Island*'s Punuk-decorated harpoon heads and its whaling (Holtved 1944; McCullough 1989).

The meeting of cultures in the eastern Arctic has become the framework for the interpretation of the Thule culture, even though it has not yet been possible to demonstrate this meeting archaeologically *in situ*, because those objects which were traded were taken to other locations and are therefore found in other archaeological contexts. The social and economic aspects of such trading relationships are, however, well known in South West Greenland and are described in 18th-century written sources (*cf.* Glahn 1771: 262-263).

The research questions and objectives of the study

We can increase our understanding of this cultural contact through a presentation and discussion of an archaeological context, which can be corroborated by written sources. This approach, which was at an early stage recognized as being a prerequisite for ethnoarchaeology (Clark 1968: 276, 280), was the basis for the historical-archaeological examination of the 18th-century Dano-Norwegian mission station Hope Colony and the contemporary Eskimo settlement (Gulløv & Kapel 1979: 15).

South West Greenland and the Eskimo population find early mention in the written sources. Since English explorers disembarked here at the end of the 16th century, the coast has been visited by Europeans, whose accounts all contain information about the region betwen 63º and 65º, i.e. Godthåb District. The sea in this geographical region differs from the neighbouring stretches by being ice-free in winter, so that the kayak could be used throughout the year. This is of significance for the description of the Thule culture, and the archaeological material of the study is indeed situated in this part of Greenland.

The study presents archaeological and documentary source material from Godthåb District from the time before and after Dano-Norwegian colonization in 1721. The archaeological context is thus the result of a meeting of cultures, whose influence on the Thule culture can be demonstrated in artefacts and dwelling types. The historical context demonstrates that several Eskimo and European population groups were involved in this meeting.

On the basis of the above data the aims of this study are:

- to discuss and explain the changes in the archaeological context on the basis of the historical source material,
- to discuss the archaeological contribution to ethnohistory in South West Greenland with the emphasis on migration, control of resources and the oral tradition and
- to discuss the origins of the Thule culture in South West Greenland on the basis of the archaeological source material and to compare this with historical, linguistic, ethnographic and physical-anthropological hypotheses about migration and meeting of cultures.

In other words, the chosen method, which includes historical archaeology (*op.cit.*)

makes it possible to interpret the contemporary, archaeologically recorded Eskimo culture with the help of non-archaeological data. In this way historical sources, oral tradition and ethnography come to be included in this "direct historical approach" (*cf.* Trigger 1991: 552, 562, 563).

On the basis of the presented material the meeting of cultures can be described and the continuity in ethnohistory can be demonstrated. The postulate of the book is then that the meeting between Dorset, Thule and Norsemen, as it presents itself in the archaeological material from Greenland (*cf.* Arneborg 1991; Bielawski 1979; Jordan 1979), happened in the same way as the meeting of cultures in 17th- and 18th-century South West Greenland.

Archaeology and ethnohistory – theory and hermeneutics

The definition of the Eskimo community, as an arctic hunter-gatherer culture, is an essential prerequisite for the discussion of the study's stated objectives. A high degree of mobility, seasonal variations of the social communities and the explicit circumstances concerning territorial rights and the rights of use, have long been known to have been the cornerstones of these communities (*cf.* Mauss 1904/05, 1979).

For the historian the ethnographic characteristics have proved an unwieldy group of sources and the description of the historical Eskimo communities in Greenland has had to be rationalized on the basis of the ethnography of subsequent periods (*cf.* Gad 1967: 314-371). Because the sources are so sporadic it has been tempting to generalize and a situation has arisen, where the Eskimo community disappears and from the mid-18th century "seems to be rather kaleidoscopic" (Gad 1969: 517). Similarly, the absence of ethnography in the archaeological model of Greenland – which has been described as a cul-de-sac or a fox trap (*cf.* Mathiassen 1936: 126; Meldgaard 1986: 24) – has hampered our understanding of the prehistory, beyond nature-determinism.

In recent years the archaeological research into Greenland's prehistory has increasingly made use of the ethnographic and historical source material. This has been the case in investigations where ethnoarchaeological methods have been used (*cf.* Møbjerg 1983; Møbjerg & Robert-Lamblin 1990), where the coincidence between the ethnographic object, the ethnographic description and the archaeological object provides the optimal opportunity for interpreting data in an ethnographic "continuous model" (*cf.* Gould 1977: 371). By these means we also avoid the archaeological dilemma inherent in the choice of ethnographic analogies (*cf.* Wobst 1978) i.e. on sites of great depth of time which are far away from the ethnographic object (Gould *ibid.*; Wylie 1985).

"Discontinuous models" have been employed in the study of caribou hunting camps in Greenland (*cf.* Grønnow *et al.* 1983), and the lessons learnt from Binford's "middle range research" have been used here, together with an account of the archaeological stratigraphy and the diachronic situations on the site. The study concludes that changes in hunting methods and the exploitation of the catch took place throughout the course of time (*cf.* Grønnow 1987: 132). In this way the ethnoarchaeological investigations in Greenland implicitly contribute to a considerable criticism of the lack of time perspective, and thus the absence of the culture-historical dimension in Binford's "middle range research", which is evident in the following quotation: "What we are seeking through the middle-range are [...] reliable cognitive devices; we are looking for "Rosetta stones" that permit the accurate conversion from observation on statics to statements about dynamics" (1981: 25).

The demonstration of changed hunting methods and the exploitation of the living resources throughout the course of time makes an important contribution to the understanding of Greenland's prehistory since the time when Mathiassen introduced the cul-de-sac model. With this cultural history has been re-instated in archaeological research, as a concept which draws human behaviour and concepts into a temporal perspective (*cf.* Sandell & Sandell 1991); this is, also outside Greenland, a characteristic in the study of hunters and gatherers (*cf.* Bettinger 1987: 138; Myers 1988: 276; Solway & Lee 1990).

The greater part of the archaeological material in the present study is dated to the 17th and 18th centuries, when the presence of Europeans is marked. This first appears as seasonal visits by whalers and subsequently as a permanent colonization. This meeting of cultures came to be of decisive influence on the Eskimo communities in the country, which early on sought the European landing-places with an intensity, which in this period can be described as the discovery of a new ecological niche, e.g. "Europeans were treated like migratory animals" (Graburn 1969: 101; Riches 1982: 14). A meeting of this nature can be demonstrated in the archaeological context as a concentration of settlement and an increased heterogeneity in the object material, circumstances which are well known and described in North America (*cf.* Ramsden 1978).

The emergence of an altered dwelling type, the Greenlandic communal house, which is the archaeological objective of this study, has been explained on the basis of nature- deterministic criteria, which are supported by the deterioration of the climate (Petersen 1974/75; Schledermann 1976) and historical sources (Gulløv 1982). An ethnoarchaeological examination of this dwelling type will include ethnographic criteria, such as the scattered resources and the associated mobility of the settlements (*cf.* Binford 1980). But such "middle-range research" will not explain satisfactorily why some people chose another dwelling type. The question cannot be answered by archaeology alone, other sources must be employed too, as was made clear in the aims of the study. These sources are abundant and constitute the methodological starting point of the study, as "it is only when we make assumptions about the subjective meanings in the minds of people long dead that we can begin to do archaeology" (Hodder 1986: 79). Historical archaeology has confirmed this statement (*cf.* Gulløv & Kapel 1979) and archaeology has corroborated "the subjective meanings" in the written sources (*cf.* Gulløv & Kapel 1979/80). The one methodological view-point does, however, not exclude the other, as will be evident at the end of chapter IV, where both ethnoarchaeology (e.g. Binford 1980) and contextual archaeology (e.g. Hodder 1986) contribute to the interpretation of the archaeological data (*cf.* Kosso 1991).

It is, however, not the primary aim of the present study to contribute to the creation of archaeological theory, but on the contrary to justify the choice of the archaeological objective as a source for ethnohistory. This discipline is a part of, among others, anthropology, and ethnohistory's use of written, oral and archaeological sources has for a long time been recognized by anthropologists and historians outside Greenland (*cf.* Sturtevant 1966; Axtell 1979); while it was introduced comparatively late into Greenland research as a critique of colonial history (Gulløv 1980).

The demands of historical criticism apply here in the same way as they do to history, but differ in the choice of objective (*cf.* Axtell 1979). Greenland's history is at the same time colonial history and ethnohistory and in the latter ethnic circumstances are emphasized, concerning rights, traditions and courses of action, which are not treated, or which do not exist, in the former and this argues for the independence of ethnohistory (*cf.* Gulløv 1977; Trigger 1985, 1986). From a colonialist point of view, ethnohistory concerns itself with 'the others' as opposed to 'us' (Gulløv 1985a).

The criticism of the term 'ethnohistory' itself is particular directed at the prefix ethno-, as opposed to 'traditional history', since it gives rise to colonialist associations and it has therefore been suggested that it should be replaced by 'historical anthropology' (Krech 1991: 365). The present study, however, emphasizes the significance of the archaeological source material for the understanding of ethnohistory, an understanding that would be lost within the framework of historical anthropology, which is extensively based on written sources. I cannot claim that I can enter into the sphere of others, but from an archaeological point of view agree "that what archaeologists need is a more complete understanding not of how they know but what there is to know" (Trigger 1991: 553) and I can pass on this acquired knowledge. I have chosen ethnohistory and perceive it as a method which can be described as a synthesis of archaeology, ethnography and history – and Greenland has an abundant source material on which to build.

My method thus furnishes me with a new insight with which I can trace the oral tradition back in time, together with the archaeological evidence, which a great part of the way is corroborated by the written sources. My archaeological starting point was 18th century colonial Greenland, and the oral tradition concerning the events of that time and their prerequisites in the 17th century can be traced more than three centuries back in time from the present day. The archaeological investigation can demonstrate traces of settlements in South West Greenland for a couple more centuries before that time. Then I have reached the time when the Thule culture appeared in this part of the country.

The method is thus also hermeneutic, as it seeks to interpret a course of events which originated in the Greenlandic meeting of cultures. Our understanding of the incidents which have determined this course must be subject to the interpretations made by the people who came after and which have been significant for their ways of thinking, acting and living. Seen in this manner, history becomes 'effect history', as has been mentioned above, e.g. with posterity's concept of the man Hans Egede as a symbol of colonization in 1721 (Gulløv & Kapel 1979: 207) and the man Sinngajik as the mythical figure who founded the new community in Godthåb's archipelago at the end of the 17th century (Gulløv & Kapel 1979/80), or when earlier mission stations were pointed out as having been Eskimo feasting houses, *qassit* (Gulløv 1988: 196). The present study is about this course of events.

The retrogressive history writing and the account of the prerequisites for the emergence of the Thule culture in South West Greenland are primarily based on the archaeological sources in Greenland, interpreted as expressions of cultural traditions. These should, however, never be thought of as stable, since they were subject to individual patterns of behaviour, determined by choices whose physical limitations archaeology can define, while the cultural limitations are formed by experience.

Such experiences are transmitted by oral tradition through the generations, and the present study thus defines the artefacts as ethnohistorical sources. The relationship between these sources and the cultural tradition which they express can be described semiotically (e.g. Guiraud 1971: 58). In other words, culture is in this connection seen as the ability to manipulate symbols in a way which enables man to predict and to justify his choices (*cf.* Trigger 1991: 555). For example, the Eskimo hunter was able to connect finds of older harpoon heads with the choice of prey (*cf.* Mathiassen 1927,II: 14; Porsild 1914: 242), which semiotically can be described by paraphrasing Bateson: it is not the meaning of the coded message which is sought, but the meaning of the chosen code [e.g. the form of the harpoon head] (1972: 130). This interpretation of the archaeological object is also used in the present study when I describe the cultural traditions which lie behind the concept 'inussuk culture'.

The harpoon head is here seen as a cultural symbol which tells of time and space, a concept in Greenlandic called *piffik*, i.e. a time or place to do something. This correlation of time and space, which for me is a decisive feature of archaeology as an ethnohistorical source, is expressed by Jørgen Meldgaard in a description of the development of the harpoon head: "In a polysynthetic language such as Greenlandic, one would from the first to the last type call the harpoon head a harpoon head. But the semantic elements which describe the specific form, the partly or wholely altered function [...] must presumably have found a new expression, a sentence with a new combination of the elements, or altered elements", which leads to the hypothesis of periods of stress, which indicate cultural transitions (e.g. from pre-Dorset to Dorset) and "are marked by a faster change in the types, when some completely disappear, new ways are sought, the form becomes less settled and there are more and greater variations" (1986: 24).

When I enquire about "the subjective meanings in the minds of people long dead" (Hodder *op.cit.*) I am at the same time enquiring about the meaning of the chosen code in the archaeological object. This enquiry is met by an analysis of the semiotic relationship between the primary symbol (e.g. the harpoon head), the object (e.g. the form of the harpoon head) and the interpreter (e.g. the hunter). It is in the last relationship, where the hunter interprets the meaning of the object and thereby uncovers the code, that the contents of the expression *piffik* emerges. It may contain a religious relationship (the connection with the Sea Woman), an aesthetic expression (decoration) or social circumstances (group identity/owner's mark) (*cf.* Guiraud 1971: 49, 55ff).

In my interpretation of the archaeological object I demonstrate either cultural contact or a cultural tradition, for which I find evidence in South West Greenland's ethnohistory. My argument is thus that the cultural traditions which are represented by the Dorset, the Classic Thule and the Norse cultures can all be seen to have been present in 18th-century South West Greenlandic Thule culture as the result of a meeting of cultures and that ethnohistory is thus living history, which can transmit its own message about the past, i.e. that ethnohistory is tradition.

The construction of the book

In the following chapters I present the archaeological, the written and the oral sources which form the basis of ethnohistory in South West Greenland. The background to the Thule culture there is then discussed on the basis of the available archaeological source material from Greenland and my choice of source-types is defended. An interpretation of these sources emphasizes the cultural tradition which lies behind the Thule culture in South West Greenland.

Chapter II describes the archaeological investigations in Godthåb District (fig. 1) and discusses the development of the Greenlandic winter dwelling.

Chapter III describes the archaeological find material from Godthåb District and dates this chronologically to the period 1300-1800 AD. The main categories of artefacts are discussed and their significance for the descripion of the Thule culture is emphasized. I also re-examine whether a cultural continuity can be demonstrated in South West Greenland during the five centuries.

Chapter IV deals with the historical sources and discusses how they corroborate the archaeology. The geography of the settlement pattern is described and the origin

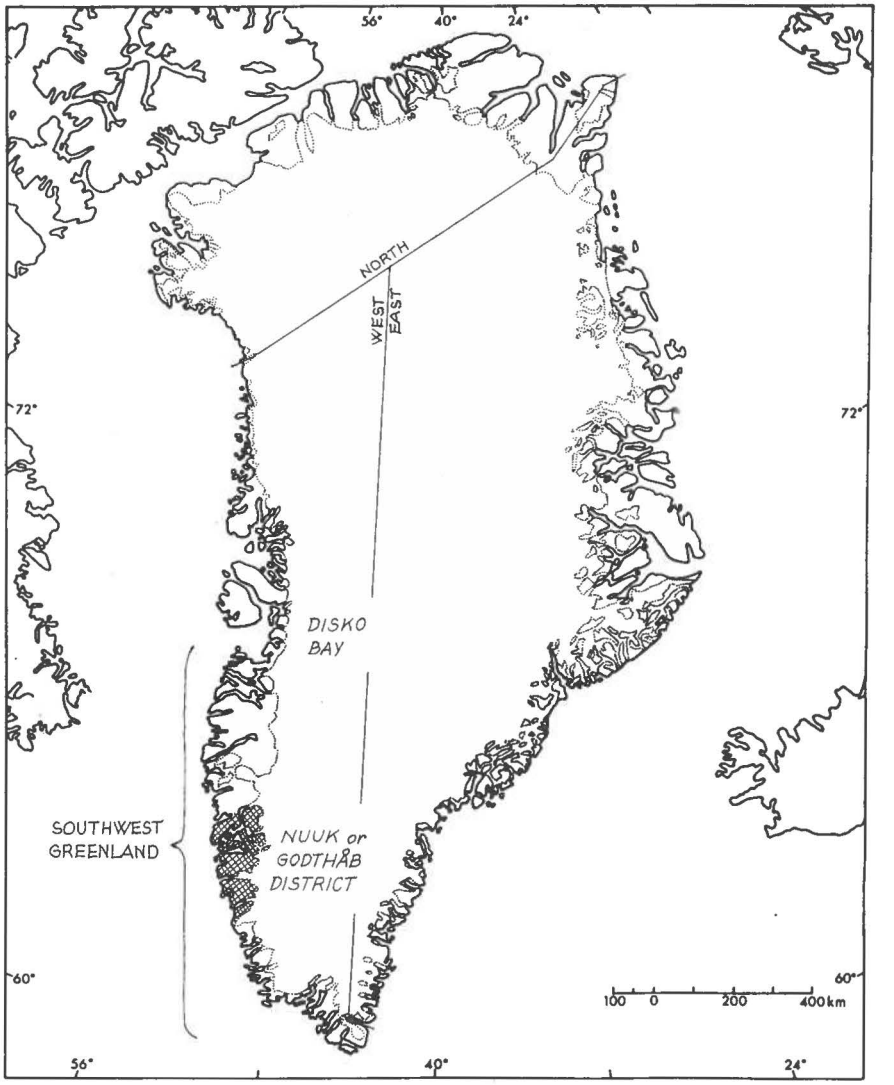


Fig. 1. *The location of Godthåb (Nuuk) District. South West Greenland is the area between Disko Bay and the Cape Farewell region (i.e. South Greenland).*

of the house types is discussed. The chronology of the artefacts can thereafter be related to the ethnographic descriptions which "permit the accurate conversion from observation on statics to statement about dynamics" (*cf.* Binford 1981 *op.cit.*). This is done by examining trade and exchange in South West Greenland. The chapter demonstrates that ethnohistory deepens our interpretation of archaeology.

Chapter V reconstructs the cultural stratigraphy in West Greenland and discusses the cultural background of the Thule culture in South West Greenland on the basis of the occurrence of selected diagnostic types (i.e. soapstone lamps, harpoon heads and Norse objects). I examine whether meetings of cultures could have taken place before the meeting with the Norse community.

Chapter VI establishes a model for the cultural influences on the Thule culture by examining the forms of the harpoon head and its distribution as a territorial marker. This shows how the prehistoric meetings of cultures can be discerned in the Eskimo tradition in South West Greenland after 1600 AD.

Chapter VII discusses tradition in ethnohistory, and the continuity in Thule culture is viewed in relation to theories concerning migration and meeting of cultures in Greenland.

II. Archaeology

Topography

In the course of time thousands of Eskimo antiquities have been recorded in the Godthåb District (Gulløv 1983), which stretches more than 300 km from Frederikshåb Isblink in the south to Tasersuaq in the north. Winter-houses as well as tent rings from summer habitation have been found on *c.* 500 sites over an area between the coast and the inland ice which, at its widest by the Godthåb Fjord complex, measures *c.* 150 km.

Most of the sites lie around the mouth of the Godthåb Fjord. Geologically the area consists of slightly dome-shaped mountains from the Archean era which descend into the sea, creating a multitude of small islands and skerries stretching more than 10 km from the mainland (Gulløv & Kapel 1979: 32). Between these islands and the mountains on the mainland there is abundant wildlife in the form of fish, seals and birds, which have been year-round resources for the people in the many settlements. The settlements lie sheltered behind projecting rocks, as for example at Kangeq (Gulløv 1983: 115), or at the bottom of a small inlet, as at Qarajat and Illorpaat (*ibid.*, pp. 26, 106).

In contrast to the dense settlement on the coast, the habitation in the Godthåb Fjord is scattered. The fjord landscape is of a typical alpine character, with high mountain peaks. The bedrock massif is gneiss and granite. At the innermost end of the fjord-branches the terrain flattens out in the place where the earlier Norse Western Settlement lies, with its farms and home fields, churches and cemeteries. There are no Eskimo winter settlements here, but instead there are tent sites, spread over large areas along the edge of the inland ice and by the great lakes where caribou is hunted in summer.

The region has been subject to archaeological examination during the last 50 years and reconnaissances have increased our knowledge of its cultural history. The Norse and the Thule cultures have been the primary focus of these examinations. The archaeological description below deals with the settlement along the northern side of the mouth of the fjord. The basic material for this description has been published in the form of reports (Gulløv & Ilkjær 1969; Gulløv & Kapel 1973, 1976), and a survey of the region's settlements has also been published (Gulløv 1983).

The three sites discussed below are the Illorpaat settlement on the southern side of Hope Island, the house site on Itissalik to the south of it and the Kangeq settlement a couple of kilometres to the east (see Fig. 2). The other settlements which have been examined are described, together with their finds, in the following chapter.

Illorpaat (earlier orthography Igdlorpait)

The settlement of Illorpaat, which means 'the cluster of houses', lies on the southern side of Hope Island. There are nine dwelling-houses, of which six are communal (Figs.3, 5). Immediately to the east of these there are another nine dwelling-houses,

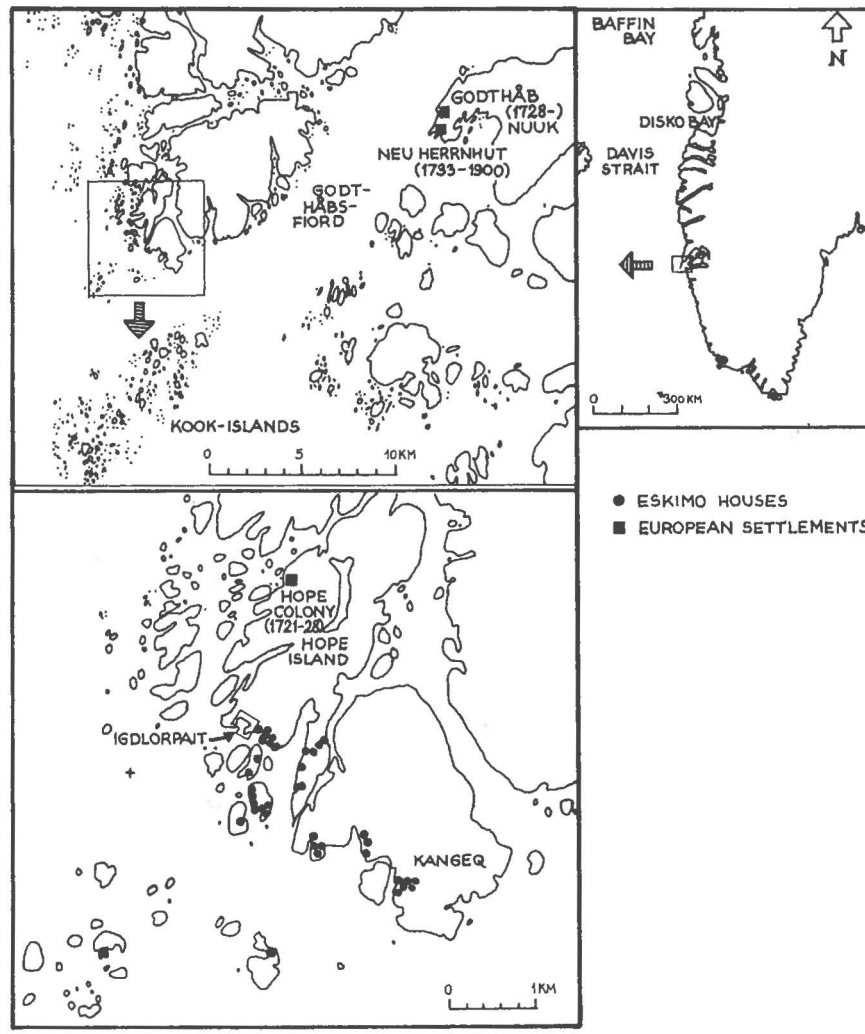


Fig. 2. *The Godthåb Fjord with adjoining areas. The examined area lies inside the square.*

which do not belong to Illorpaat, in spite of their location on the southern side of Hope Island, which is called Illorpaat Nuuaat (Igdlorpait Nunat), i.e. 'the land of the cluster of houses' (Fig. 4). The site is well known in historical times and is mentioned by the missionary Hans Egede as the place where he often goes to preach (Gulløv & Kapel 1979: 29). The daily journal of the Brethren mission mentions that Illorpaat is occupied in 1786 and 1796 (Israel 1969: 63, 138). The place is also mentioned in Greenlandic sources in the 18th century (Gulløv & Kapel 1979/80). In 1810 the geologist Giesecke notes that Illorpaat is deserted (1910: 271).

The naval lieutenant Andreas Gerner, who travelled to Greenland in 1731 to fetch home the military garrison under the command of Major Claus Enevold Paars, made a detailed survey of the mouth of the Godthåb Fjord (Gulløv & Kapel 1979: 26-27). This showed four Eskimo houses on the southern side of Hope Island. The area is well documented by the local inhabitants of the present day (Fig. 6).

The following describes the examination of these building remains, which all appear to be of the well known 18th century dwelling-house type, the communal house. The structures shown on Fig.3, which were archaeologically investigated are house 3, with the midden trench immediately to the east, house 9 and house 13. House 13, although belonging to the area east of Illorpaat, is presumed to be identical with the site marked on Gerner's map.

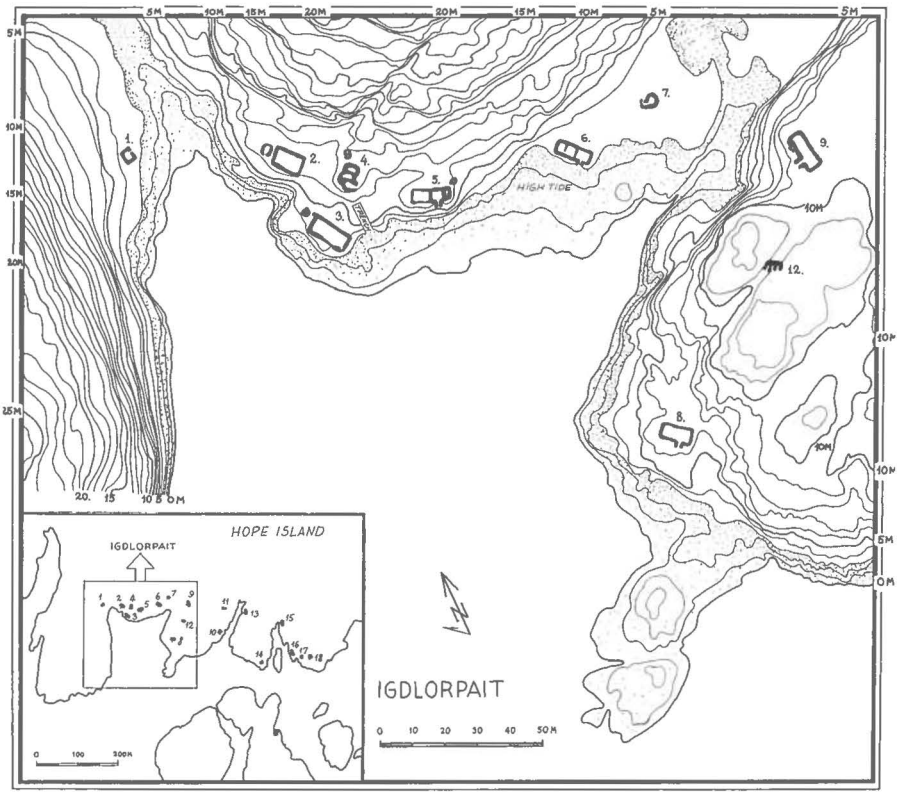


Fig. 3. *A plan of Illorpaat (Igdlorpait) including structures 1-9.*

1: Small hut or tent base.
2: Communal house with meat cache.
3: Communal house with double burial.
4: Site of uncertain origin with meat cache built into the outer wall and two burials to the north.
5: Communal house with burial, the site later rebuilt as a smaller house.
6: Communal house, later rebuilt as a smaller house.
7: Tent ring with flag-stones.
8: Communal house.
9: Communal house.

10-18 make up the other structures.
10: Small structure.
11: Communal house later rebuilt as a smaller house.
12: Structure of uncertain origin.
13: Communal house.
14: Small structure with meat cache.
15: Communal house with meat cache, the structure later rebuilt into several small houses.
17: Structure of uncertain origin.
18: Communal house (Gulløv 1985: 105-110).



Fig. 4. *Aerial photo of Illorpaat from the west.*

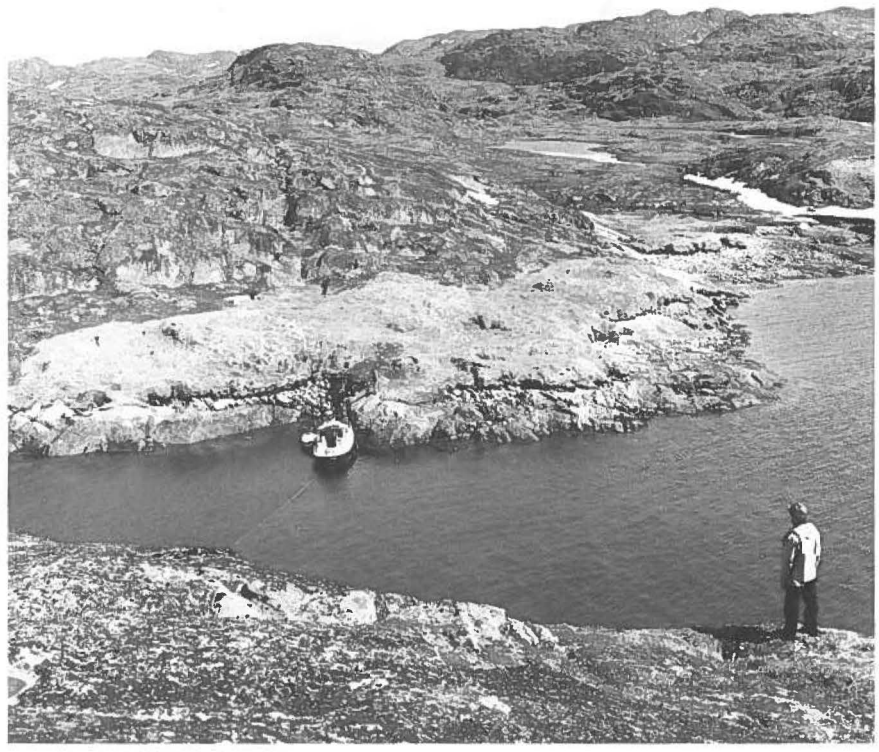


Fig. 5. *Illorpaat from the west. House 3 is immediately to the right of the boat. House 9 is above the snow, extreme right.*

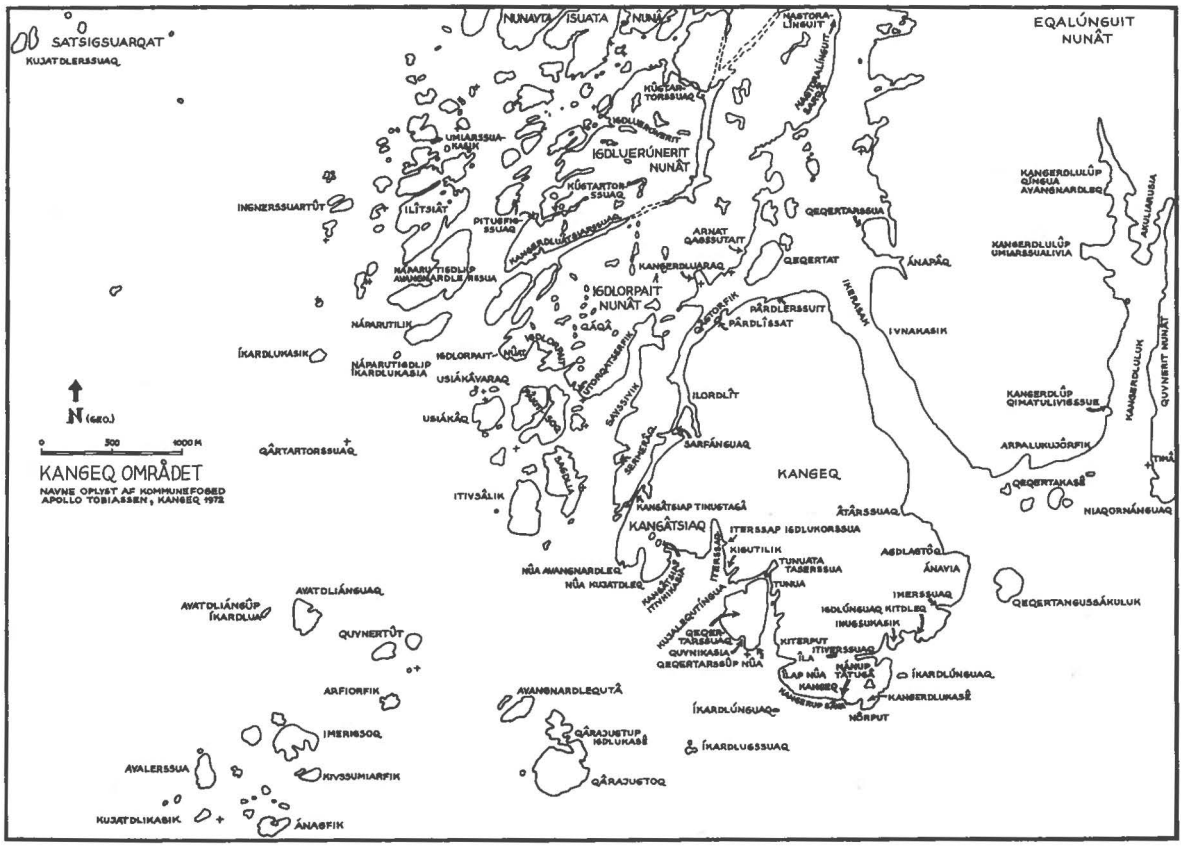


Fig. 6. *Place names in the Kangeq area supplied by Catechist Apollo Tobiassen, Kangeq in 1972.*

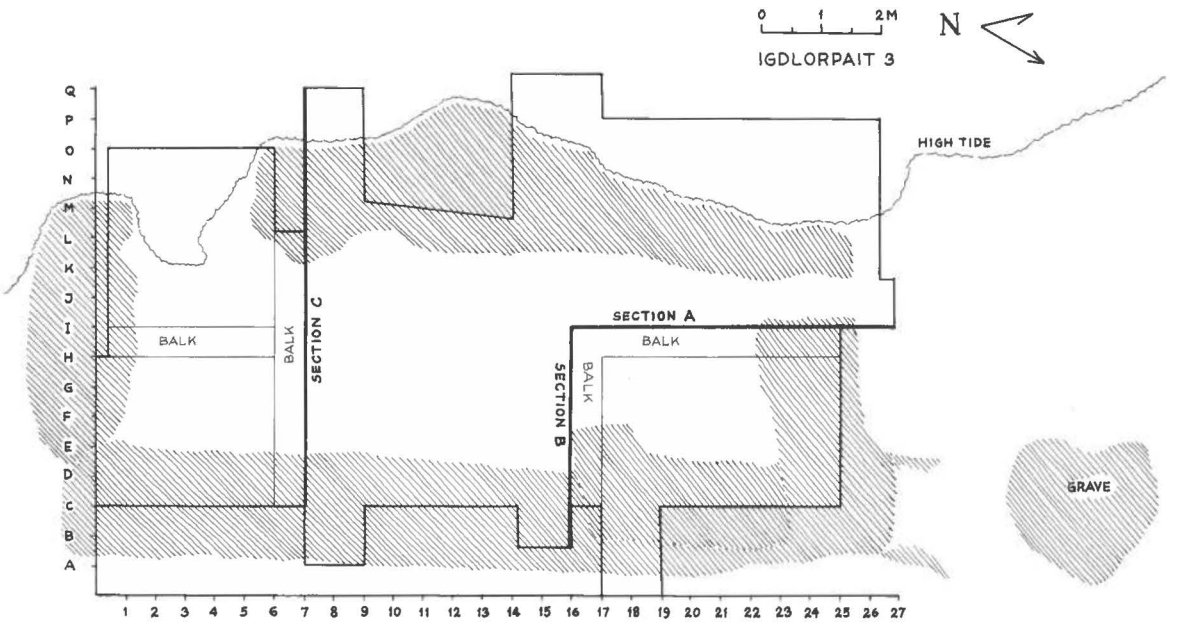


Fig. 7. *Plan of Illorpaat, house 3, before excavation. The turf walls are hatched and balks and sections in the excavated area are marked out.*

Illorpaat, house 3

The communal house, which before the excavation measured *c.* 11 metres internally, lies in the western part of Illorpaat, right out in the high tide zone (Fig. 7). At the highest tide the water reaches the projecting turfs and erodes the outer walls heavily. The midden in front of the site has been eroded away.

This structure or house 2 may be one of the "savage's houses" marked on Gerner's map. The signature may, however, not refer to any distinct location, but merely indicate that Eskimo houses were found in this place.

Method

The fixed point was chiselled into bare rock south west of the site and marked with paint. The point has level 3.26 metres measured according to the Danish Geodetic Institute's trigonometric point no. 7466 in Kangeq (level 2.90 metres).

The datum point of the co-ordinate grid was placed immediately outside the south eastern corner of the structure, so that the abscissa ran along the outer side of the eastern long-wall and the ordinate through the southern gable-wall. The abscissa in the system was divided into lengths of 0.5 metres with the metre-points 1, 2, 3 etc. going towards NNW in a positive direction. The ordinate in the system was divided into lengths of 0.5 metres with the point indicators A, B, C etc. going WSW in a positive direction.

The field indicator 1/A covers 0.25 m^2 with, for example, the corner co-ordinators (0,0), (0,A), (1,0) and (1,A). In this way a distinction is made between a point and a field in the co-ordinate system.

The datum point and fixed point of the co-ordinate system are, together with the datum point for the midden trench and for house 9, measured in relation to an overall co-ordinate which formed the basis for drawing up the map of the whole of central Illorpaat (see Fig. 3).

Two balk systems for use in the subsequent section work were laid down within an area defined by the co-ordinate and the ordinate axis. The first balk was left through

the 7-fields and the second was left at right angle to this through the I-fields from 1 to 7. In the northern part of the site, a balk was left through the 17-fields from A to I and the second at right angles to that through the I-fields from 17 to 26.

The wall in the 8- and 9-fields, the 15- and 16-fields and the 18- and 19-fields was dug through in several places. To the west most of the western long wall was dug away.

Originally the balk through the 17-fields was extended right through the west wall, so that the northern balk system corresponded to the southern one. However, it was soon discovered that the missing house passage happened to be below the western part of the balk through the 17-fields, and this part was then excavated.

As work progressed it became necessary to enlarge the excavated area. The structure had been rebuilt several times and had many floor levels. The bedrock was therefore only reached in the central field after 15 plans had been drawn up. The remaining balks in the northern system provided an opportunity to draw two sections, one parallel with the long axis of the house and running through the northern wall, the other from the middle of the eastern wall out to the passage. The balks in the southern system provided an opportunity to draw a section right through the structure from the eastern to the western wall. These sections are in the following designated A, B and C respectively (*cf.* Figs. 8, 10, 12).

Sections

The descriptions of the individual layers of the sections will, as far as possible, include nuances of colour, botanical structure and cultural remains. Hatched areas on the plans are stones; fairly heavy lines mark a border between two dwelling structures. The other signatures will be made clear in the descriptions.

Section A (Fig. 8):

1. Recent, yellowish brown turf. Matted, primarily mosses in the southern part and primarily grasses, scurvy grass (*cochlearia groenlandica*), chickweed (*cerastium arcticum*) in the northern part, i.e. the wall.

1a. Lens of recent turf. Ochre to grey-brown. Visible root remains.

2. Disturbed blackish brown turf mass. Structured and heterogeneous. Individual turfs are oriented in various directions. Several turfs can be seen to slope southwards from the wall structure **4**. The layer contains a few pieces of wood and bones. The degree of humification is fairly small.
3. As **2**, but slightly more stratified (no continuous layers). Also a few charcoal particles.
4. Turf construction of fairly well preserved turfs, which at the centre are piled almost horizontally and slope downwards on the inner and outer sides (marked with broken lines). To the north the structure seems to have bulged out in the centre, while the southern side gives the appearance of a more even subsidence and evident structuring.
5. Layer mainly consisting of plant remains. Black. Predominantly crowberry (*empetrum hermaphroditum*). Greatly compressed. Primarily surface elements. Culturally sterile. In some places the layer is very thin and from the centre of the 18-field it can be seen to emerge under the wall structure **4** and continue northwards. Where the layer becomes thicker it is generally mixed up with dark, liver-brown turf.
6. As **2**, slightly more humified; divided from it by **7**.
7. Golden brown horizon consisting of slightly humified plant remains, mainly

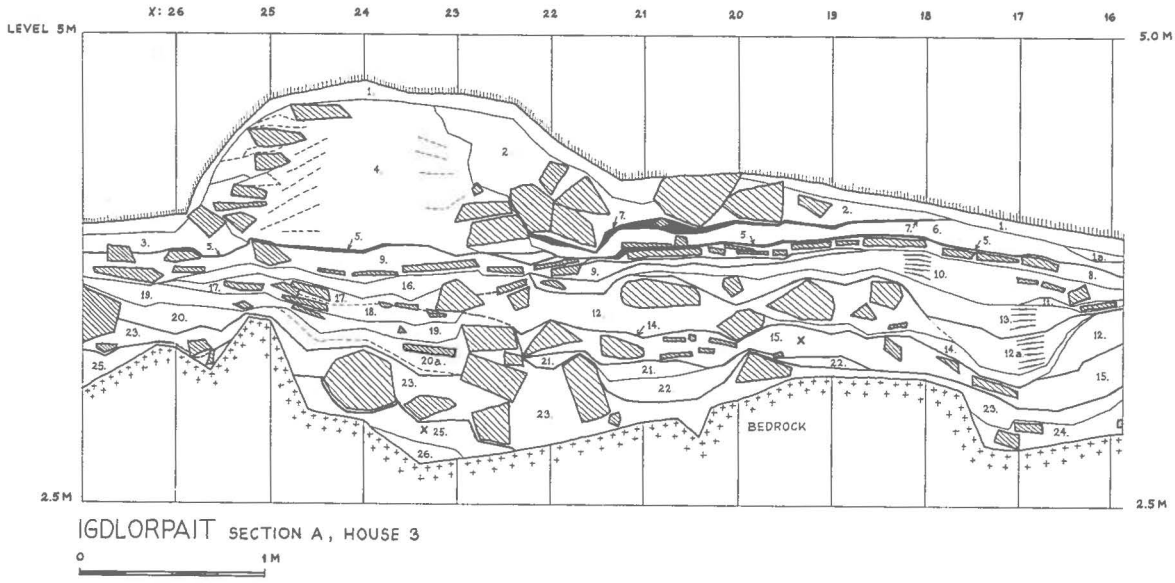


Fig. 8. *Section A, Illorpaat, house 3. Layers 1-26 are described in the text.*

mosses, but also of recognisable grass remains, upper as well as subterranean parts. The layer contains no cultural remains and has well defined borders.

8. Liver brown to yellowish brown turf horizon in which a horizontal layer of flat, thin stones is embedded. Contains many root fragments. Leafed structure. In the northern part the layer contains more turf and is dark liver brown. A number of bones.

9. Dark brown to grey brown turf horizon with a well defined upper edge. The layer consists of fibrous plant remains, mainly grasses. Lower edge fairly well defined with plant remains and bones. The central part is more humurous and admixed with plant fragments (no crowberry). Contains bones and fragments of wood.

10. Deep brown with golden brown stripes. Stratified in layers, but no continous layers. There are five recognisable layers on the 18-abscissa (marked on the plan). Contains bones and plant fragments. A well defined, golden brown horizon of plant remains constitutes the lower edge.

11. Brown highly humified turf with a few plant fragments. Light greyish to greenish.

12. Very mixed (disturbed) turf horizon. The contents are mainly small and large clumps of greatly humified turf. Among them lens-shaped flakes of lightly humified plant fragments, grasses, crowberry, etc. Contains pieces of wood, bones and cultural remains. At the 23-field the further continuation northwards is diffuse or non-existent (disturbed by the construction of a wall).

12a. Stratified turf-fill with a number of wood shavings, bones and cultural remains. Black-brown layers with liver brown stripes, six of which can be recognised at the 17-abscissa.

13. Blackish brown with brown plant remain stripes, four of which can be seen by the 17-abscissa. Rather humurous turf-mass with a few bones. Well defined borders.

14. Layer with a concentration of wood shavings admixed with grasses and many bones, as well as a fair amount of hair. Cultural contents. From the centre of the 20-field the layer thins out to less than 1 cm and becomes diffuse. Apparently ceases in the middle of the 23-field (wall construction).

15. Blackish brown turf horizon with a layered structure. No demonstrable continous layers, but divided from the original humurous turf fill by flakes of brown plant remains. These flakes, which in some places can be traced over more than 1 m, consist of matted root fragments and in some places contain a small amount of wood shavings. The primary substance is very finely grained and sticky. A molar from a domestic ox (*bos domesticus*) was found in the 20-field and is marked by a cross on the plan (Fig. 8).

16. Golden brown to liver brown turf with lenses of blackish brown humurous turfs. The main substance, whose structure is relatively uniform, contains a number of plant fragments, primarily grasses. Also a number of bones. The layer ends diffusely to the south, but there is no connection with **12.**

17. Rather like **16**, but is a little more red in colour. The border with **16** consists of a thin horizon of dark brown to blackish brown turf with charcoal. The dividing horizon is less than 0.5 cm. The layer ends at the stone in the 23-abscissa.

18. The layer starts by the flat stones in the 15-field. It is a mixed, humurous blackish brown turf-layer with a diffuse upper edge and a lower edge consisting of a clear, golden brown horizon of plant remains, primarily containing grasses. The layer is possibly connected to **12.**

19. Greenish brown, gravelly turf horizon. The upper edge consists of a horizon of plant remains. The lower edge is an almost continuous (partly disturbed) horizon with many root fragments and some wood shavings. The layer itself is heterogeneous and without archaeological finds.

20. Very mixed layer consisting of a few humurous turfs in a somewhat gravelly, brownish green main substance. The upper edge is acute, the lower somewhat diffuse. A horizon with frayed plant fragments and many wood shavings can, however, be seen between the 23- and 24-fields.

20a. The layer is of the same character as the previous one. The two layers are, however, divided by a discernible layer of wood shavings (a broken line on the plan, Fig. 8).

21. Blackish brown to brownish black highly humurous turf with many wood shavings. The upper edge is well defined and appears as a lighter stripe with some plant fragments and many wood shavings. The lower edge is well defined with many plant fragments and some wood shavings.

22. Blackish brown to greenish brown turf. Matted structure and spongy consistency with many plant fragments and a number of wood shavings. The edges well defined (possibly growth stripes).

23. Very mixed, brownish black turf-mass with a high incidence of wood shavings. Between the stones the layer is loose, frayed to matted. Under the stones the layer is compact. In the layer there are cultural remains and many bones. Also whole twigs of crowberry, leather fragments and hairs (caribou and seal). Well defined borders.

24. Brownish black turf of the same character as **23**, but darker and with more crowberry wood and fewer wood shavings.

25. Deep brown to blackish brown layer of totally humified turf, darkest towards the bottom. The layer is homogeneous, but contains flakes of silicified slate (marked by a cross on the plan, Fig. 8).

26. Greenish grey, coarse detritus-gravel. A little yellow towards the bedrock.

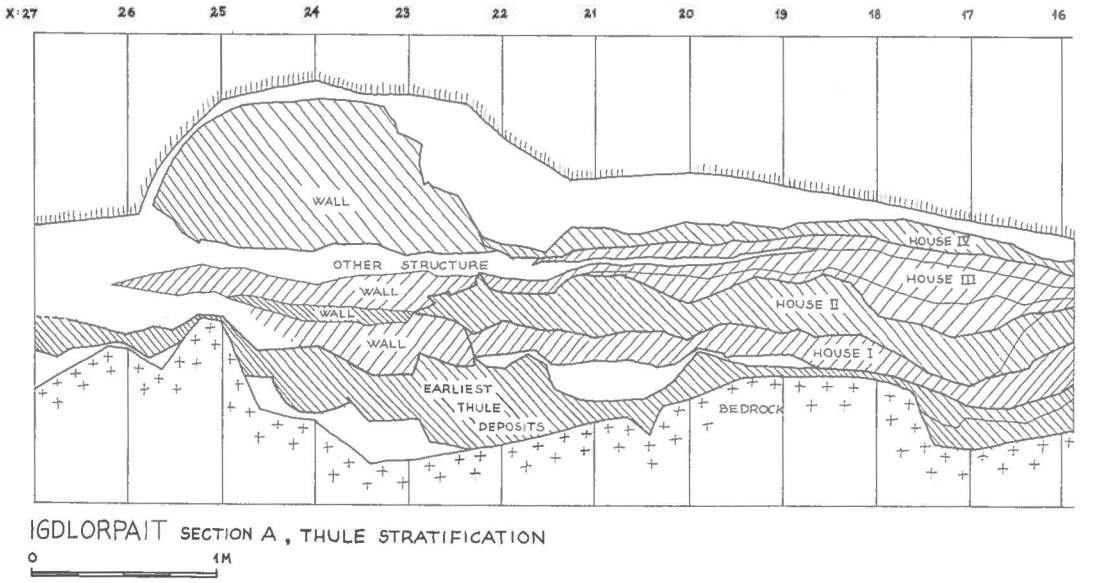


Fig. 9. *Explanation of section A, Illorpaat, house 3. The stratigraphy of the various building phases is drawn up.*

Explanation of section A (Fig. 9):

The youngest dwelling structure can be established as having been placed above **5**. This layer is almost continuous and indicates, where it runs under **4**, that the house's visible northern wall must originally have been built at the time when the latest house on the site was constructed. The large stones in **2** are from fallen wall-material. **7** contains root fragments and thus represents a period when the surface was exposed, probably between two building phases.

8 is a distinct floor layer belonging to the penultimate building phase on the site. The layer partly covers **9**, which also contains flat stones. It continues under the north wall and was therefore either part of a floor in another structure or the foundation of a wall construction. **10, 11** and **13** are building phases in the dwelling house that terminates with **8**. The depression in **13** around the 17-abscissa indicates the presence of a house passage.

12, 12a and **14** make up a coherent area, primarily characterized by the presence of irregularly shaped stones in a mixed fill. **18** is the remains of a north wall. **12a** is a filled-in house passage.

15 is a coherent area which runs under the above. The layer is mainly of a finely grained consistency and must be the remains of the earliest dwelling on the site. A minor alteration to the direction of the sunken house passage can be discerned in the 17-field. The northern wall lies in **19** and **20**.

The very mixed layer **23** is succeeded to the south by layer **24**, which is of the same character. These layers must constitute earlier phases of settlement on the site. The section does not allow us to say anything about possible structures. **21** and **22** are contemporary with **23**, but these layers have more the character of activity surfaces or similar prior to the communal house.

25 must be seen in isolation from the others because of its degree of humification and must thus be considered to be a palaeo-Eskimo phenomenon. The archaeological finds suggest that it belongs to the Saqqaq culture (e.g. Larsen & Meldgaard 1958: 14).

Dating:

From the cleaned-off layer west of section A organic material was collected, which stratigraphically corresponds with layer **23**. The material consisted of caribou bones,

bones of harp seal (90.5% of a normal fill) and bones of guillemot. The dates are correlated for isothope-fractions and expressed in conventional 14-C years and calendar years in accordance with the calibration curves of Stuiver (1982) and Stuiver and Pearson (1986).

Sample no	Material	C-14 years	Calibrated (Stuiver)	Calibrated (Stuiver & Pearson)
K-4356	caribou	1570 ± 65	A.D. 1475	A.D. 1470
K-4357	harp seal	1590 ± 55	A.D. 1490	A.D. 1495
K-4358	guillemot	1540 ± 65	A.D. 1450	A.D. 1455
Average	4356, 4357, 4358		A.D. 1475	A.D. 1475

The dating thus indicates the earliest settlement at the site. The dating falls within the Thule culture, since layer **25** which is immediately below belongs to a palaeo-Eskimo culture. The layer is however, in some places of a certain thickness – up to 0.5 m in the centre of the 23-field – and it must therefore be broadly dated probably to the 15th and 16th centuries. Calibrated at ± 1 standard deviation (Stuiver & Pearson 1993) the average dating will thus be to the period 1440-1590 A.D.

A molar from a domestic ox was found *in situ* in layer **15**. Norse influence can be excluded, but not a possible influence from the subsequent European colonization, which took place when Hope Colony was founded in 1721 on the north side of the island. Domestic ox was brought there from Norway (Gulløv & Kapel 1979: 225-227). The homogeneous and stratified structure of layer **15**, compared to that of the surrounding layers, suggests archaeologically, that this layer represents the remains of a communal house. This house type emerges in the Godthåb district at the end of the 17th century (Gulløv & Kapel 1979/80).

The other building phases, which are mentioned in connection with the dating of section A, must therefore have taken place in the 18th century, before Illorpaat was abandoned as a settlement around the year 1800.

Section B (Fig. 10):

1. Recent, brownish yellow turf. Corresponds with **1**, section A.
1a. Corresponds with **1a**, section A.
2. Corresponds with **2**, section A. Collapsed wall.
4. Corresponds with **4**, section A. Turf construction. Clear structuring. Single turfs inside and slightly sloping towards west. Presumably in original location or slightly slipped. Bone fragments evenly distributed.
5. Corresponds with **5**, section A. Between the D- and F-ordinate the layer is black and consists of densely compressed plant fragments (crowberry etc.). Root fragments cannot be seen. Culturally sterile with well defined borders. 27 cm after the F-ordinate the sterile crowberry layer ceases and continues as a brownish black turf horizon, which is slightly gravelly with plant remains (a little crowberry, some moss and root fragments). A few pieces of wood can be discerned. All of **5** is bordered by millimetre thick, yellowish brown stripes of plant remains.
6. Corresponds with **6**, section A. Heterogeneous turf mass, which is a strong dark brown. The layer is structured, but not stratified. At the F-ordinate seven to eight golden brown stripes of plant remains can be seen, and by the G-ordinate six. A fair number of bones.

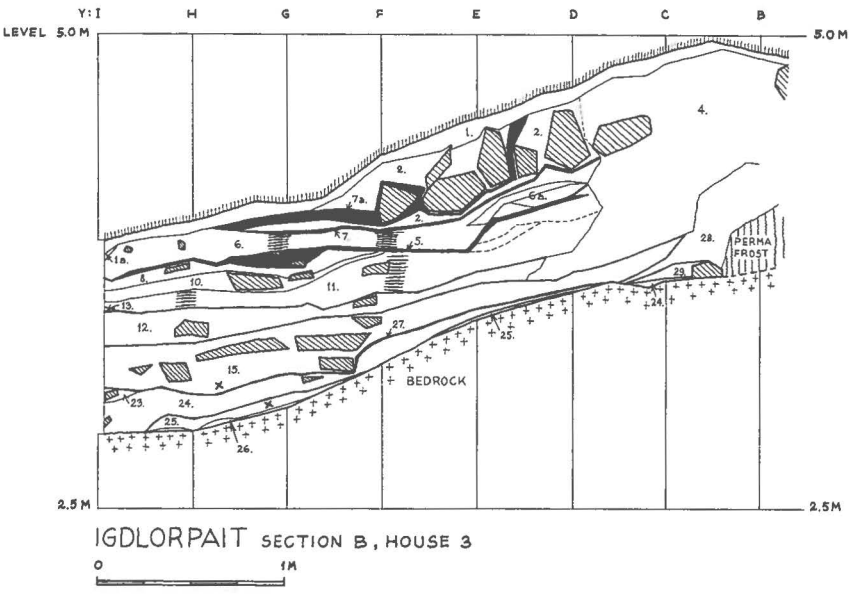


Fig. 10. *Section B, Illorpaat, house 3. Layers 1-29 are described in the text.*

6a. Turfs. Dark brown. Some plant fragments. Possibly primary location. The layer of plant remains is partly humified.

7. Corresponds with **7**, section A. Dark, yellowish brown horizon of plant remains. Somewhat humified, but with identifiable plant fragments. Matted. Primarily mosses, some grasses (mostly root fragments). Culturally sterile. Well defined borders.

7a. Corresponds with **7**. Layer of unhumified plant fragments. Yellowish brown. Mainly mosses, while a third is grasses. Must be interpreted as a phase in the collapse of the east wall.

8. Corresponds with **8**, section A. Dark to blackish brown turf mass with light structuring. Slightly gravelly. Wood fragments and bones. Some root fragments.

10. Corresponds with **10**, section A. Heterogeneous turf mass. Layered structure. Towards **8** the edge is sharp and consists of plant fragments (mostly grasses and crowberry) with preserved roots. The colour here is golden brown. Pieces of wood and seal hairs can be seen. The central part of the layer is blackish brown to brownish black and somewhat gravelly. Towards **11** the edge is sharp and consists of plant fragments (mostly grasses and crowberry) with few discernible root fragments. Pieces of wood are present in large number and there are many seal hairs.

11. Corresponds with **11**, section A. Blackish brown turf mass. Layered structure (the individual layers are somewhat diffuse and not continuous). Two brownish black horizons can be seen between the D- and E-ordinates (broken lines on the plan, Fig. 10) and consist of fairly humified plant fragments (crowberry). Can be interpreted as a platform layer. At the F-ordinate are eleven golden brown layers of plant remains with seal hair between them. At the H-ordinate there are four to five layers with the same characteristics (very diffuse). The pronounced layering ceases *c.* 10 cm to the right of the G-ordinate. European artefacts, e.g. pottery.

12. Corresponds with **12**, section A. Heterogeneous turf mass. Greyish to blackish brown. Highly humified and sticky. By the E- and G-ordinates two individual turfs can be discerned, otherwise the layer is unstructured. Many pieces of wood and bones. Some objects, e.g. pottery.

13. Corresponds with **13**, section A.

15. Corresponds with **15**, section A. Heterogeneous and slightly gravelly layer, which is dark greyish brown to brownish black. The basic mass is very humurous with sporadic unhumified plant remains (grasses). A number of bones and a number of pieces of wood. Artefacts of, *inter alia*, European origin, e.g. glass, which is marked by a cross on the plan (Fig. 10). Towards the bottom the volume of unhumified plant fragments increases (possible vegetation layer). Several seal hairs and skin fragments. Between the H- and I-ordinates the layer seems somewhat disturbed. The bottom edge (unhumified plant fragments) can, however, be made out easily.

23. Corresponds with **23**, section A.

24. Corresponds with **24**, section A. Very heterogeneous layer, mainly consisting of a blackish brown turf mass with a high concentration of wood shavings and artefacts. No discernible layering, but many recognizable plant fragments (moss, grasses, branch fragments (dwarf birch (*betula nana*)). Concentration of bones (e.g. great auk (*pinguinus impennis*)), whole feathers, seal hair, baleen fibres etc.

25. Corresponds with **25**, section A. Flakes of silicified slate are marked by a cross on the plan (Fig. 10).

26. Corresponds with **26**, section A.

27. Black layer (2-3 mm) consisting of plant fragments (roots) with crowberry. Culturally sterile. From the F- to the I-ordinate the layer becomes more turfy and humurous.

28. Turf construction of highly humified single turfs, which lie horizontally or slightly sloping towards west. Some pieces of wood and bones. The border with **4** is well defined and is marked by a yellowish brown moss horizon.

29. Sterile, greyish green gravel.

Explanation of section B (Fig. 11):

Section B is set at right angles to section A and corresponds with it everywhere where the layer overlaps the joint corner. From the section in the east wall it is clear that there has been a continuous construction of dwelling houses from, and including, layer **15** (i.e. house I) to, and including, layer **6** (i.e. house IV). The three last houses had a joint east wall. The floor layer of house I runs under it. Traces of platform constructions can be seen in house II and IV. In layer **15** (i.e. house I) European artefacts can be demonstrated *in situ*, corresponding to section A. In the earlier layers there are no European objects. Layer **24** can be demonstrated under the eastern wall of house I.

The dating of this section was carried out in the same way as that of section A.

Section C (Fig. 12):

This section was described in the field in late September, when hard frost sometimes made it difficult to discern the nuances of colour in the individual layers.

1. Recent, brownish yellow surface turf. Mainly root fragments. Corresponds with **1** in sections A and B.

2. Structured turf. Brown colour (dark). Collapsed sections are marked by broken lines (Fig. 12). Sharp lower border. Some bones can be seen. Corresponds with section B.

3. Lighter in colour, pronounced lower border with **2**. Contains plant fragments. Corresponds with **7a**, section B.

4. Colour as **2**. Tendency to horizontal structuring. More bones than in **2**. The horizontal structuring ceases at the F-ordinate. Corresponds with **6**, section B.

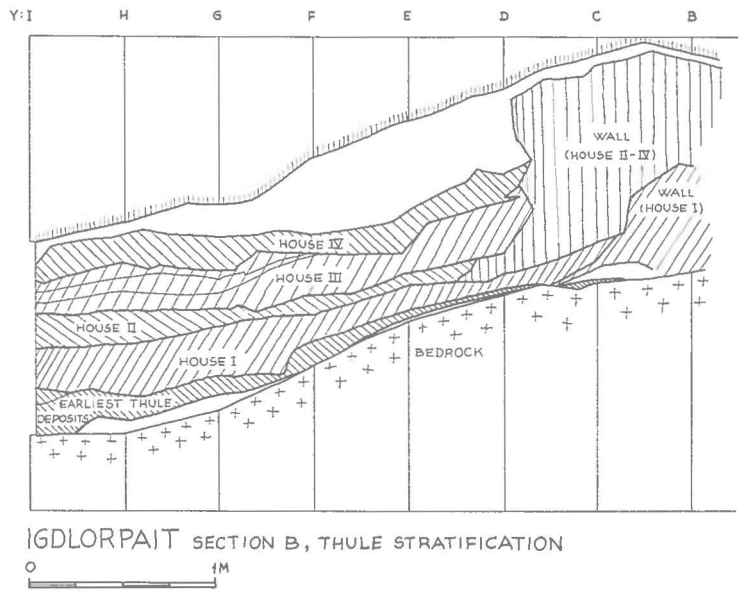


Fig. 11. *Explanation of section B, Illorpaat house 3. The stratigraphy of the various construction phases is shown.*

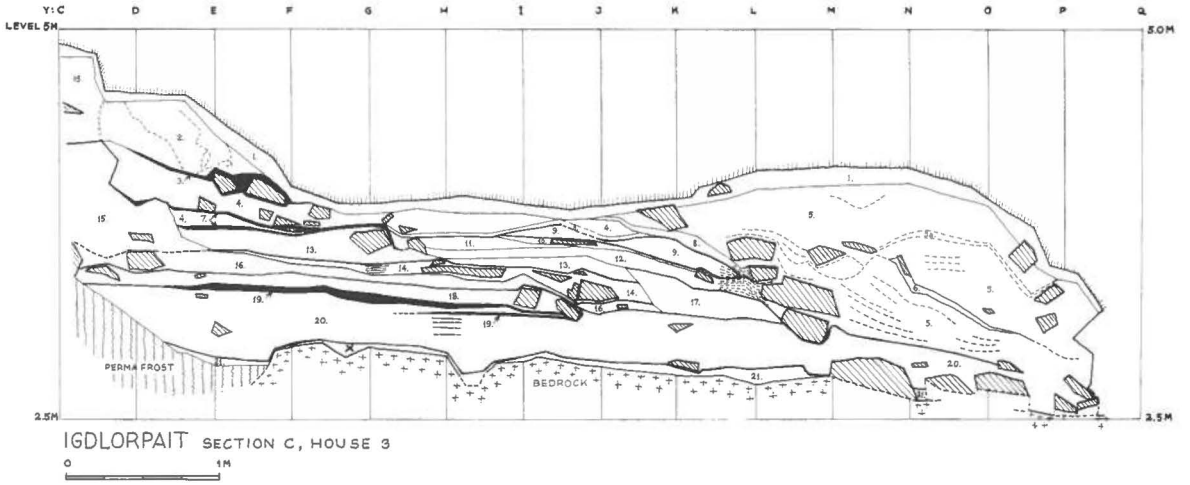


Fig. 12. *Section C, Illorpaat, house 3. Layers 1-21 are described in the text.*

5. Dark brown. Wall construction, somewhat slipped. Evident turf structuring. In the western part discernible vegetation stripes, e.g. **5a**, which is ochre-yellow with grasses or lyme grass.
6. Black layer of incinerated wood, as well as pieces of turf. The structure is blistery and like coke. The texture is crisp.
7. Highly humified, brownish black turf mass. Compressed and compact. Discernible plant remains (crowberry etc.). Culturally sterile. Corresponds with **5**, section B.
8. Brown colour (light). Plant remains with root fragments. Occurrence of pieces of wood, which increases towards west in the section. A few bones. The border with the western continuation of the layer is rather unclear.
9. Structured, gravelly turf. Discernible individual turfs (dark brown lenses). Also plant fragments (bush-like).
10. Turf of a mid-brown shade with leafy or scaly texture. Plant fragments (grasses and mosses). Tendency towards stratification. Sharp boundaries.
11. Heterogeneous, slightly gravelly turf horizon. Structured. Bones.

12. Rather like **11**. However, in the western part there is a sizeable occurrence of wood (shavings). Corresponds partly with **8** and **10**, section B.
13. Sharp upper and lower borders, mainly consists of mosses with hair (upper edge) and root remains and bones (lower edge). The layer itself is heterogeneous with a few wood shavings and bones and mussel shells, as well as a few plant fragments (discernible pieces of branches and twigs). Artefacts.
14. Stratified structure of turf in shades of dark to light brown. In the G-ordinate four layers can be seen. The upper border is sharp with a high concentration of thin wood shavings as well as plant fragments. The lower border is manifest, with plant fragments (grasses and mosses) and some wood shavings. Horizontal stripes of dark humurous turf can be seen in the layer.
15. Wall construction with evident, horizontal turfs. Comparatively small degree of humification, fairly large occurrence of bones. Corresponds with **4**, section B.
16. Heterogeneous layer without discernible structure. High occurrence of wood shavings. Hair occurs. Artefacts. Bones. Sharp borders. Plant fragments (grasses). Corresponds with **15**, section B.
17. Turf construction. Flaky structure. Contains artefacts. The degree of humification of the turf is somewhat higher than in **15**. Occurrence of charcoal particles. Twigs can be seen in some parts of the vegetation stripes.
18. Heterogeneous horizon. Matted. A number of plant fragments (pieces of twig etc.). Artefacts. Discernible border. Corresponds with **23**, sections A and B.
19. Culturally sterile layer of plant fragments (vegetation layer). Primarily mosses and a few grasses. Corresponds with **17**, section B.
20. Dense to solid layer of bones and wood shavings. Artefacts. Plant fragments. Hairs. Very mixed. Sporadic visible remains of vegetable layers (none continuous). Three to four layers can be made out by the H-ordinate. The bottom layer is considerably more humurous than the upper part. Lower border with **21** is sharp. Corresponds with **24**, section B.
21. Corresponds with **25**, sections A and B. Turf mass which is totally humified. Artefacts. A block of chalcedony is marked by a cross on the plan (Fig. 12). Sticky (muddy) consistency and ungrained structure.

    The extent of **20** and **21** west of the O-ordinate cannot be determined because of sea-erosion.

Explanation of section C (Fig. 13):

The upper and lower layers of the section are clearly connected and this corresponds to the descriptions of sections A and B. A wedge-shaped depression from house IV, which can be seen between the G- and H-ordinates, is probably caused by a rebuilding of this house. The core of the western wall should lie between the L- and M-ordinates; a heavy slippage has, however, distorted the construction to some extent.

Layer **16** corresponds with layer **15** in section B and thus belongs to house I. The layer clearly continues under the east wall, as was also observed in section B. The west wall can clearly be seen around the K-ordinate, which must also have been the location of house II's west wall. This wall fragment should be seen in relation to the disturbed layer **12**, section A, which must also be considered to belong to house II.

House III shows evidence of several settlement phases, as was also seen in sections A and B. The first phase would thus have had a western wall in common with houses I and II, while the subsequent phases had a west wall in common with house IV. Layer **9** cannot be associated with any actual dwelling house, but must be a result of rebuildings of house III.

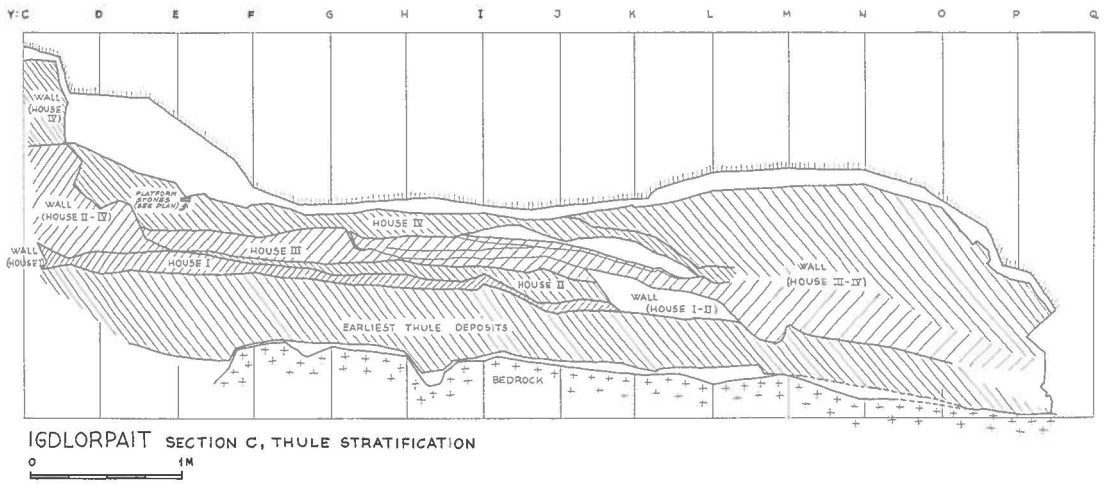


Fig. 13. *Explanation of section C, Illorpaat, house 3. The stratigraphy of the various construction phases is shown.*

Dating:

In the cleaned-off area north of section C organic material was collected, which stratigraphically corresponds with layer **20** between the I- and L-ordinates. The material consisted of caribou bones (52.3% of a normal fill), bones from harp seal and bones from guillemot. The dates are correlated for isothope-fractions and expressed in conventional 14-C years and calendar years in accordance with the calibration curves of Stuiver (1982) and Stuiver and Pearson (1986).

Sample no.	Material	C-14 years	Calibrated (Stuiver)	Calibrated (Stuiver & Pearson)
K-4359	caribou	1640 ± 70	A.D. 1530-1630	A.D. 1530-1635
K-4360	harp seal	1600 ± 65	A.D. 1495-1615	A.D. 1500
K-4361	guillemot	1540 ± 55	A.D. 1450	A.D. 1455
Average 4359, 4360, 4361			A.D. 1490	A.D. 1490

The dating corresponds with the dating of section A and must be considered evidence of the earliest presence of the Thule culture in this location. The heterogeneous character of the layer does, however, mean that the dates do not give a date of a structure, as will become clear on the plans below. Since layer **20** is *c.* 0.5 m thick where the sample was taken, the cultural deposit can be dated to the 15th and 16th centuries. Calibrated with ± 1 standard deviation (Stuiver & Pearson 1993) the mean date falls within the period 1450-1595 AD.

The dates of the following dwelling houses are discussed in the description of section A, which is still valid here.

Plans

The descriptions of the following seven plans begin with house IV and end at the nethermost (earliest) structures, which can be ascribed to the Thule culture. A few symbols are used on the plans, which all describe building constructions: Hatched areas indicate the outline of the walls; thick lines are building stones; thin lines indicate flat stones or flagstones; and pieces of wood are marked by the woodgrain. A few other symbols are explained as they occur.

Plan 1, house IVa (Fig. 14):

The plan corresponds with section A layers **4** and **6**, section B layers **4** and **6** and section C layers **15, 4, 8** and **5**. The ground plan shows a small rectangular house with a flagged inner floor area. The difference in level between the flagstones is 15 cm; however, the flags in the north west corner of the structure lie 10 cm lower as a result of slippage.

Along the east wall there is a row of smaller flat stones which have formed the foundation of the inner part of the sleeping platform. The outer part of the platform was made of planks which are seen to lie all along the eastern half of the house.

The walls have been more than 1 m thick, as measured in the two excavated parts of the east wall. The north west corner had been supported by a couple of heavy posts. The row of stones which lie along the 7-fields indicates the southern boundary of the house and the flagstones south of there are indeed laid at a lower level. The irregularities which are described in section C can in all probability be ascribed to this rebuilding (shortening) of house IV.

Besides objects of Eskimo origin, metal, glass beads, pottery and pieces of clay pipe were also found.

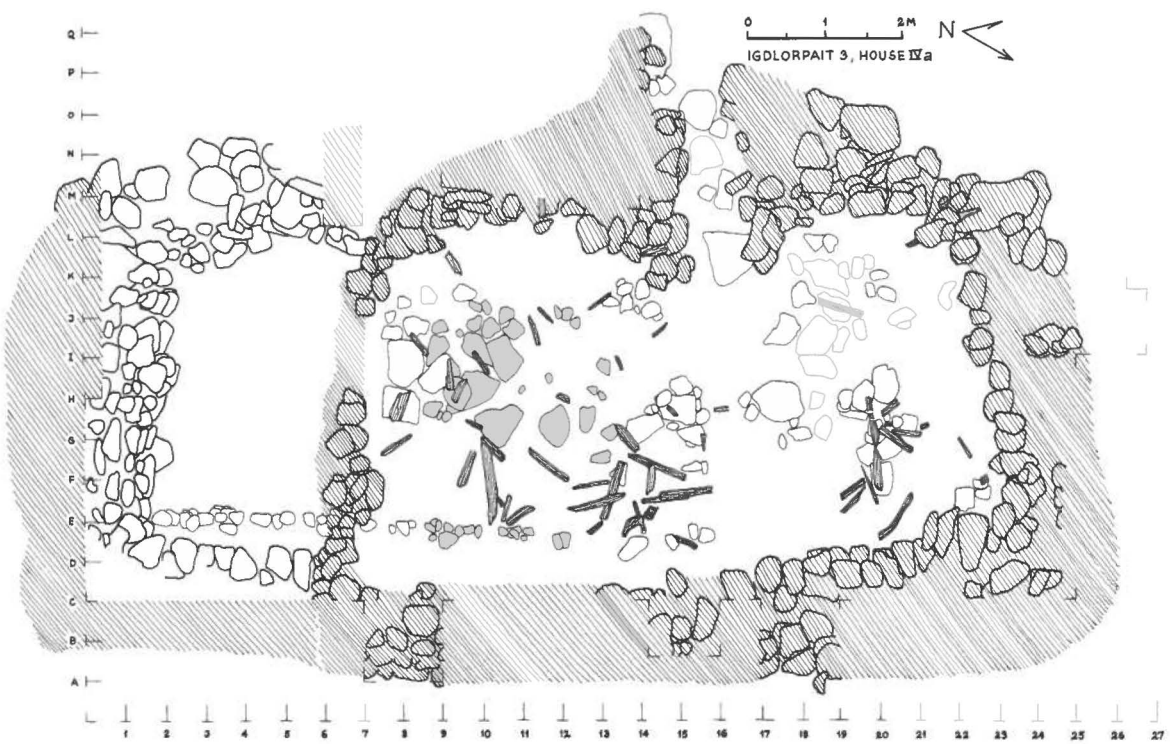


Fig. 14. *Ground plan of the latest dwelling house, house IVa, Illorpaat 3.*

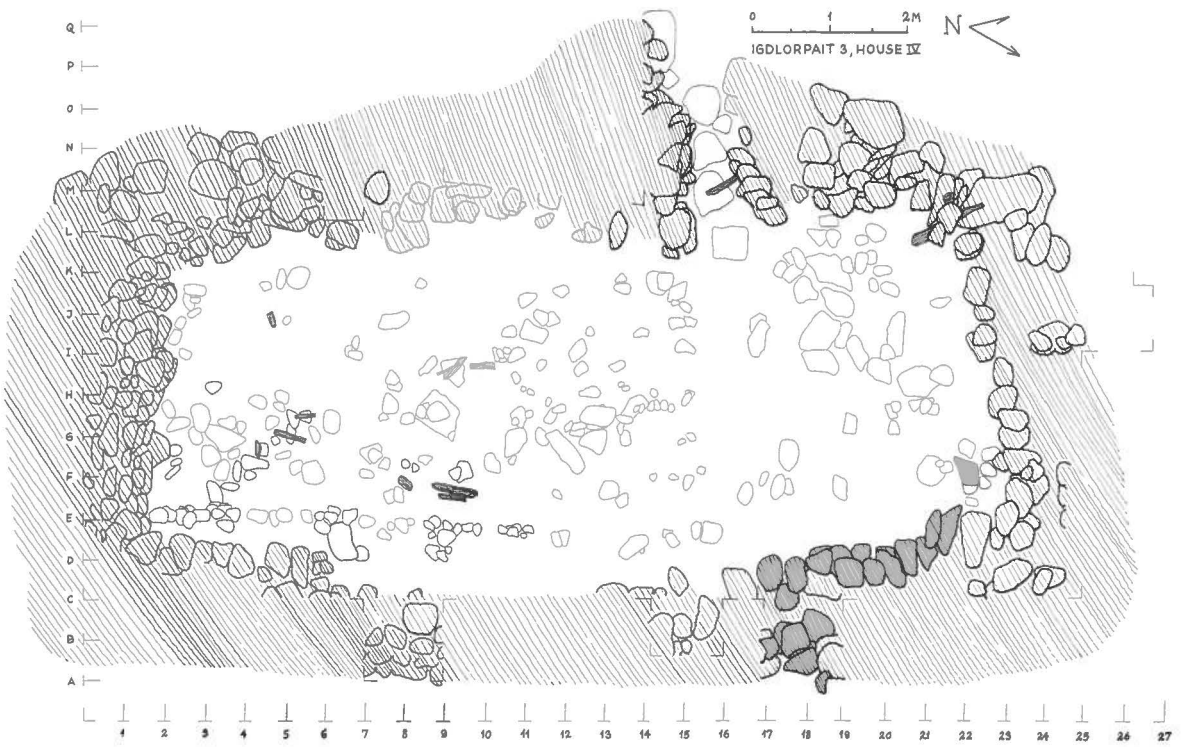


Fig. 15. *Ground plan of the latest communal house, house IV, Illorpaat 3.*

Plan 2, house IV (Fig. 15):

The plan corresponds with the sections as noted in the description of plan 1. The ground plan shows a rectangular house, of a communal house-type. The flagstones cover the entire inner area of the house, with a difference in level of *c.* 20 cm.

The inner platform-foundation can be seen along the E-ordinate and can be followed as far as the 16-abscissa. This row of stones is marked on section C (Fig. 13) which has already been described.

The wall course corresponds with that on plan 1. The south wall had at least four courses. The house passage is clearly marked by flat stones. The large triangular stone, shown on plan 1 (Fig. 14), lies on a level with the stones inside the structure and has functioned as a stepping stone. The flagstones at the outer part of the house passage lie 1 m lower.

The objects are of Eskimo as well as European origin.

Plan 3, house III (Fig. 16):

The plan corresponds with section A layers **8, 9, 10, 11** and **13**, section B layers **4, 8, 10** and **11** and section C layers **15, 10, 11, 12, 13** and **5**. The ground plan shows a rectangular house, whose west, south and east walls correspond with those on the previous plan. The hatched stones in the north wall are seen again in layer **9**, section A (Fig. 8).

In the description of this layer it was pointed out that the flagstones might derive from a separate structure, which could have been associated with the northward extension of the east wall that was observed before the excavation took place (see Fig. 7). But no conclusion can be drawn from this possible congruence of construction details. On the other hand, it is probable that the flat stones have served as the foundation of a wall construction and have thus prevented any further slippage of the north west corner in house IV. Similar flat stones (hatched on the plan), which appear

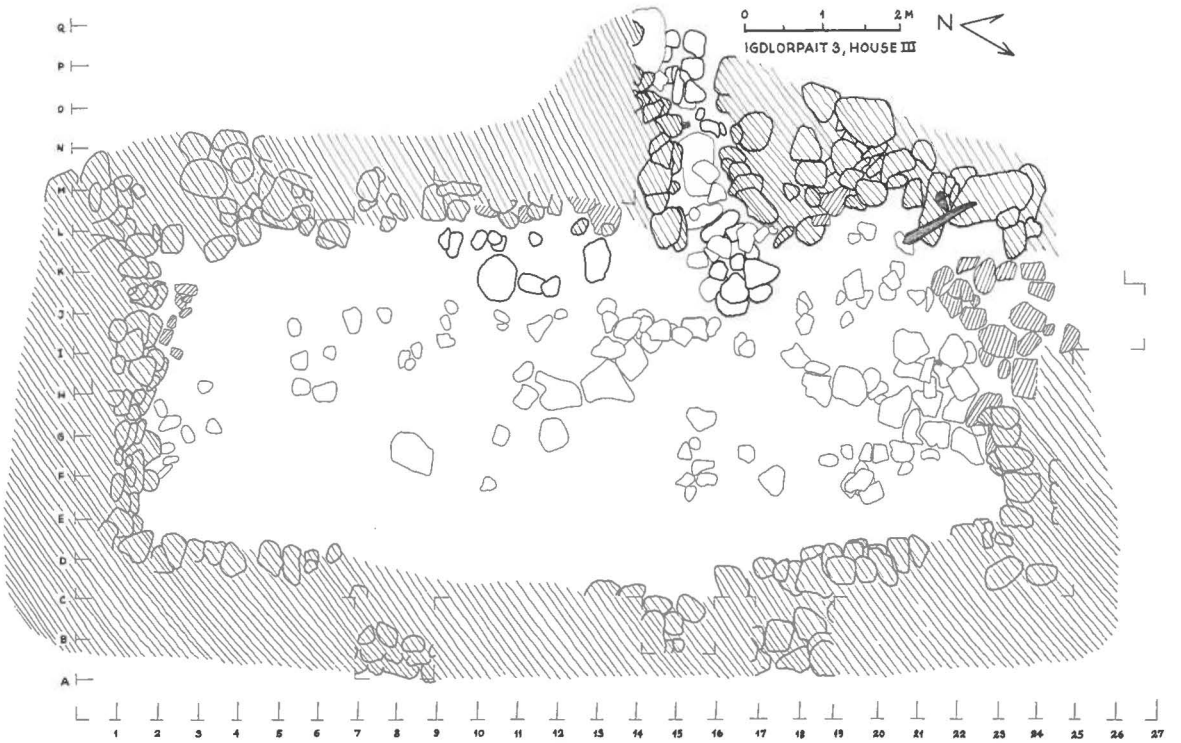


Fig. 16. *Ground plan of the rebuilt communal house, house III, Illorpaat 3.*

to have served as foundation stones, can be seen in several places along the west wall and in one place by the south wall.

The flagstones in the floor, which can be seen to be evenly distributed across the entire inner area of the house, closest in the northern half, have a level difference of *c.* 10 cm.

The relatively large stones, which lie along the west wall by the house passage and also a little to the south, are respectively the descent of the passage and remains of wall construction. It is clear from the description of the section that house III has been rebuilt several times and at least three phases can be demonstrated.

There is a marked increase in wood shavings in this level. The number of artefacts of European origin is decreasing.

Plan 4, house II (Fig. 17).

The plan corresponds with section A layers **12** and **14**, section B layers **4** and **12** and section C layers **15, 14** and **17**. Compared to the later houses this structure has changed in character and has become narrower. Parts of the wall foundation of house III are included on this plan in order to indicate where the changes have been made.

The east wall nearly follows the wall of house III, as is confirmed in the section drawing. The south wall is represented by some large wall stones, which lie in a humurous turf mass, while the floor layer immediately inside it is filled with wood shavings. This border is clear. The north wall follows house III a short way until it meets with the west wall, which has been moved 1.5 m further in. The inner course of the west wall is marked by a row of large stones, which can be seen in section A layer **12** (Fig. 8), while the foundation which continued southwards could be traced in section A layer **17**. These two observations correspond with one another.

The flagstones in the floor are evenly distributed across the entire inner area with a maximum difference in level of *c.* 20 cm. A number of pieces of wood can be seen.

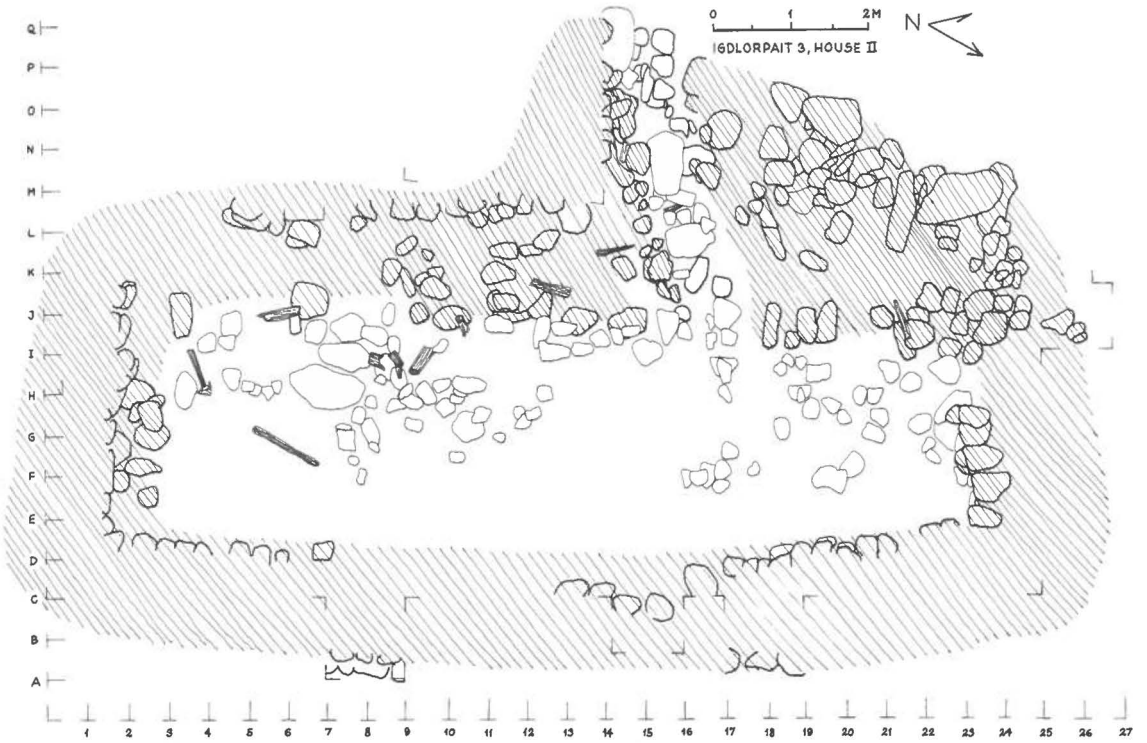


Fig. 17. *Ground plan of the earlier communal house, house II, Illorpaat 3.*

The course of the house passage is indicated by the stones along its sides and it goes in the same direction as on the other plans. A number of foundation stones can be seen.

Increased number of Eskimo objects and fewer European.

Plan 5, house I (Fig. 18):

The plan corresponds with section A layer **15**, section B layer **15** and **28** and section C layers **16** and **17**. The structure shown here is the nethermost coherent dwelling. It can be described as the first communal house on the site, where the south, west and north walls follow the previous house, while the course of the east wall is determined on the basis of information in sections B and C.

The house passage turns in a south-westerly direction and a small group of foundation stones can be seen immediately inside.

The fill is very admixed with woodshavings throughout the interior of the house. The flagstones occur mostly in the northern part. This is, however, primarily due to the many later rebuildings, when the flags were re-used. This plan is the last in which the flags can be observed in a continuous horizon. The level difference is 15 cm.

A number of pieces of wood can be seen in the central area. Two of these have been upright (field 11/I) and have presumably belonged to subjacent structures (e.g. the house passage in plan 7).

The Eskimo objects occur in large numbers. The European objects are few, but are present: a tooth from a domestic ox inside the house (field 20/I), a piece of curved, green glass, igd 3194 (field 16/H) and a wooden doll representing a European woman in a shawl, igd 3924 (field 16/G).

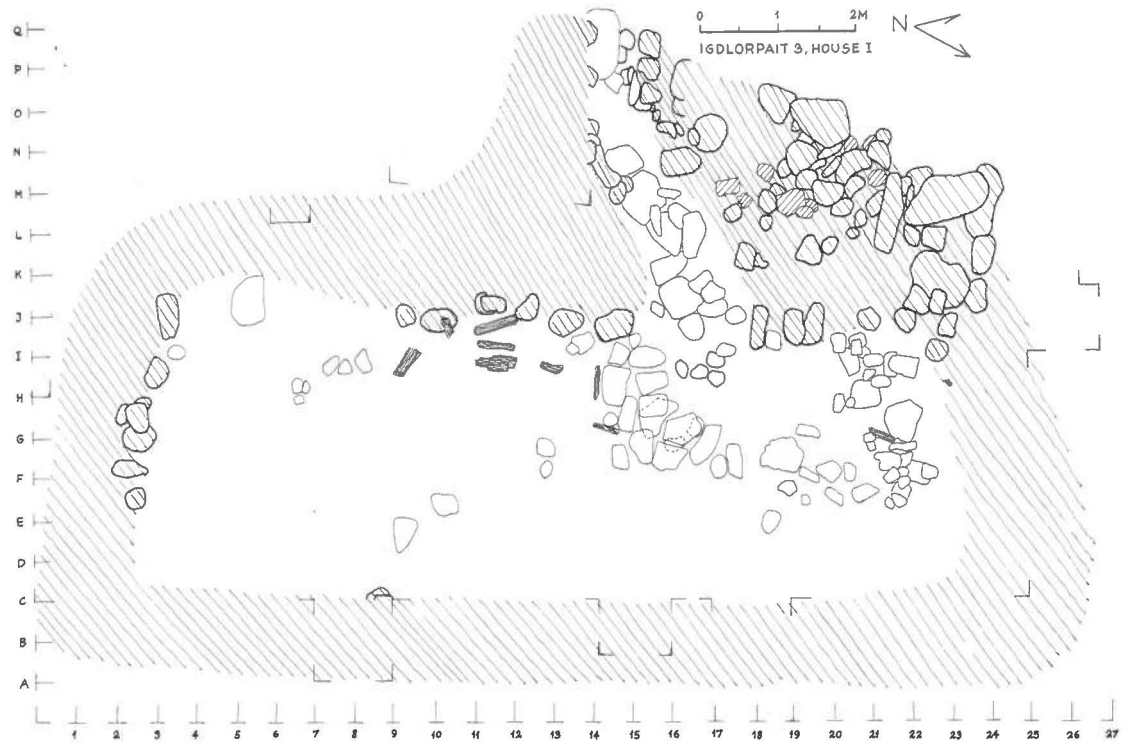


Fig. 18. *Ground plan of the first communal house on the site, house I, Illorpaat 3.*

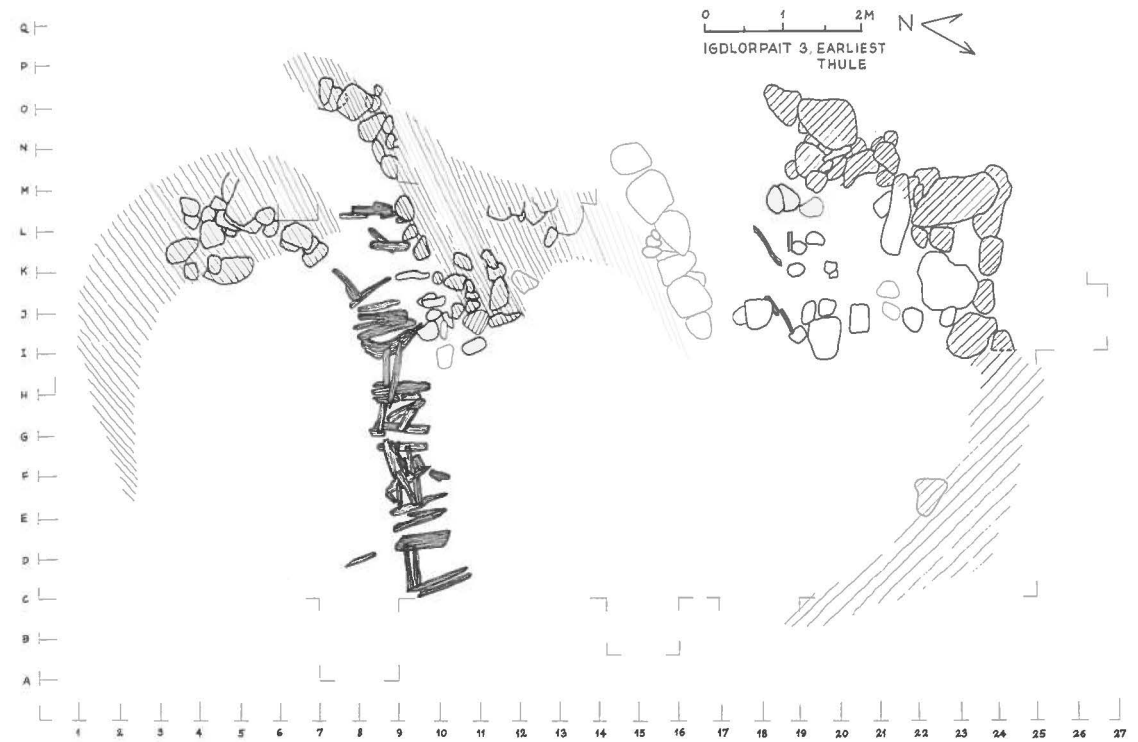


Fig. 19. *Plan 6 with the row of planks and other structural details, as well as presumed wall courses, Illorpaat 3.*



Fig. 20. *The excavated row of planks. The arrows with numbers mark the locations of the objects.*

Plan 6, earliest Thule culture (Fig. 19):

The plan corresponds with section A layers **23** and **24**, section B layers **23** and **24** and section C layers **18, 19** and **20**. A row of planks lies below house I. These lie parallel, with a few at right angles on top. The level of this row drops 40 cm from east to west, which is primarily due to the slope of the bedrock. Nothing can be said about the function of this row, although it is very regularly placed (Fig. 20). One of the planks had been trimmed and had circular depressions worked into it, an effect which cannot be ascribed to Eskimo technology (Fig. 21). The construction might suggest the remains of a covered house passage, in which case it would have collapsed in a very orderly manner(!). Dating the timbers, which are driftwood, would be highly problematic. The C-14 dating in section C was made on bones collected at a slightly lower level, immediately north of the row of timbers, and their dating means that the timbers cannot have been placed here before the 16th century. The row probably continues out under the east wall of the upper communal houses.

To the west of the row of planks a stone construction can be seen to run in a south-westerly direction. There is a suggestion of two wall courses and they are marked by hatching. To the north of the described area the flagstones from the house passage of house I are still marked, since their possible use in connection with an earlier dwelling house cannot be elucidated.

More stones, which are evidently related to this nethermost horizon of cultural deposit, have been found in the north west corner of the excavation area. These stones might be the remains of a now destroyed structure, which was later incorporated in

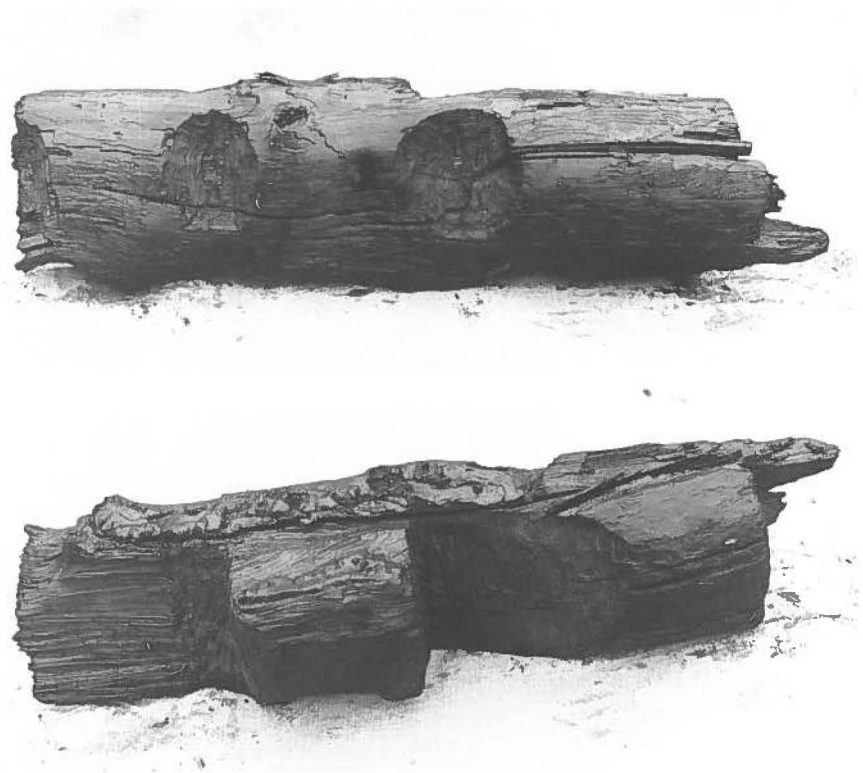


Fig. 21. *Timber from the row of planks with cutting marks.*

the construction of the communal houses above. A suggested wall course is marked by hatching.

The area around the row of planks is rich in objects of Eskimo origin. Comparatively few objects were found in the remainder of the described area. No European objects were recorded in this plan.

Plan 7, earliest Thule culture (Fig. 22):

The plan corresponds with section A layers **23** and **24**, section B layers **23** and **24** and with section C layers **18, 19** and **20**. A row of large flat stones has turned up below the row of planks. These continue in a south-westerly direction and are the remains of an earlier house passage. The western wall of the house passage, as marked on plan 6, has been removed and below it lie a couple of planks in continuation of the aformentioned row which is now marked by a dotted signature. This new house passage cannot be associated with the row of planks, since their courses cross one another at a sharp angle. The house passage is, however, earlier than the row of planks, which runs above it, even though the planks furthest west end up at a lower level than the house passage's stepping stones.

The inner stepping stones of the house passage, in conjunction with sections of the wall course, may give an approximate indication of the perimeter of the original 16th century house.

The fill consists almost exclusively of massive layers of wood shavings separated by vegetation horizons, which can be discerned as partly continuous slabs across the whole of this excavation area (e.g. layer **19**, section C, Fig. 12).

The objects are of purely Eskimo origin and mainly consist of wood. Immediately inside the house passage lay a harpoon head of a thin type, igd 4141 (field 9/K).

The dating of this area is discussed above and C-14 dates indicate around 1490 AD.

In the north-westerly part of the excavation we now have a large number of tim-

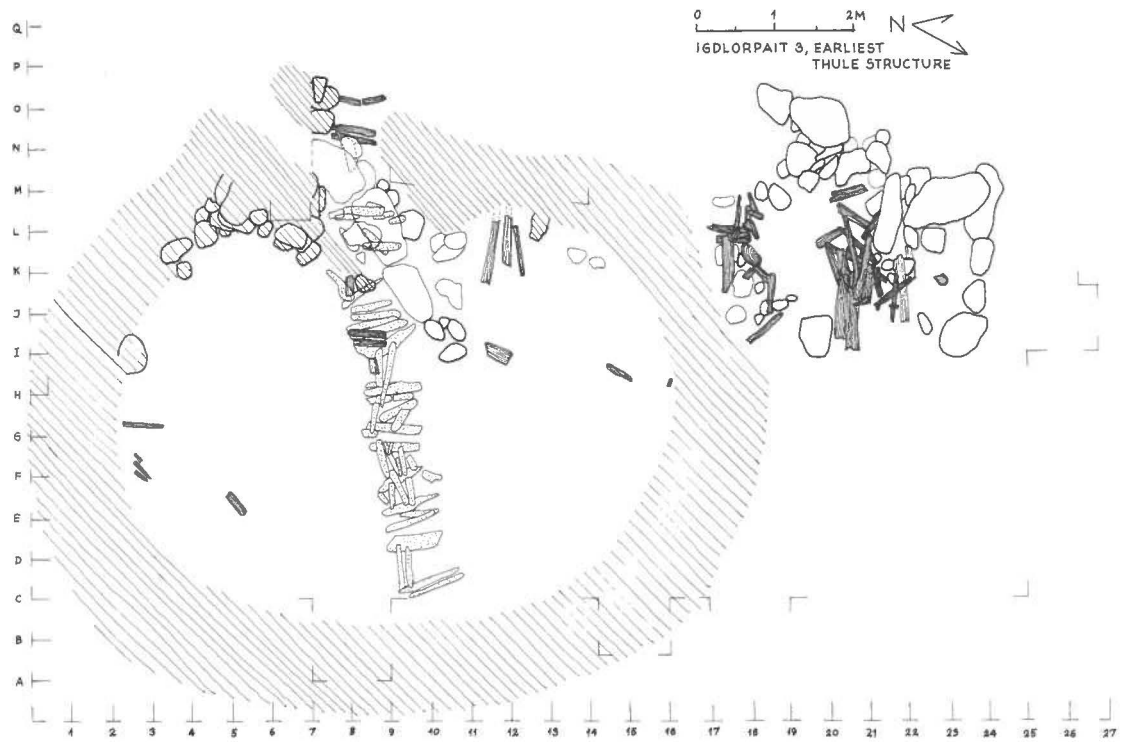


Fig. 22. *Plan 7 with the earliest Thule culture structures. A winter dwelling must have lain within the hatched wall courses. The row of planks from plan 6 is marked with a dotted signature. To the north west are heaps of driftwood.*

bers, though nothing to indicate any structure. The timbers, which lie 1 m to the south of there, lie above a row of flat stones, about which nothing can be said.

A harpoon head of a thin type, igd 3793, lay on the larger number of timbers (field 21/10).

The dating of this area is discussed in the description of section A and C-14 dates indicate around 1475 AD.

Illorpaat, midden-trench

All the structures at Illorpaat lie in the tidal zone and are wholly or partly without middens. Instead an area was chosen for investigation between houses 3 and 5, where the midden slopes evenly down from site 4 towards the coastline. The purpose here was to record the bone material strategraphically and compare it to the results at Illorpaat 3. Also the objects were to be compared to the results of Illorpaat 3.

Method

The trench was tied into a co-ordination system, whose zero point tied into an overall measuring system together with the excavated structures Illorpaat 3 and 9, which formed the basis for drawing up the map of central Illorpaat (Fig. 3).

The abscissa ran in a north-westerly and the ordinate in a south-westerly direction. The width of the trench was set to 2 m and the length to 8 m. The abscissa was divided into 1 metre lengths and the meterpoints were given the numbers 1, 2, 3 etc. and the ordinate was divided in the same way with the meterpoints given the letters A, B, C etc. The field designation 1/A covers 1 m^2 with the corner co-ordinates (0,0), (0,A),

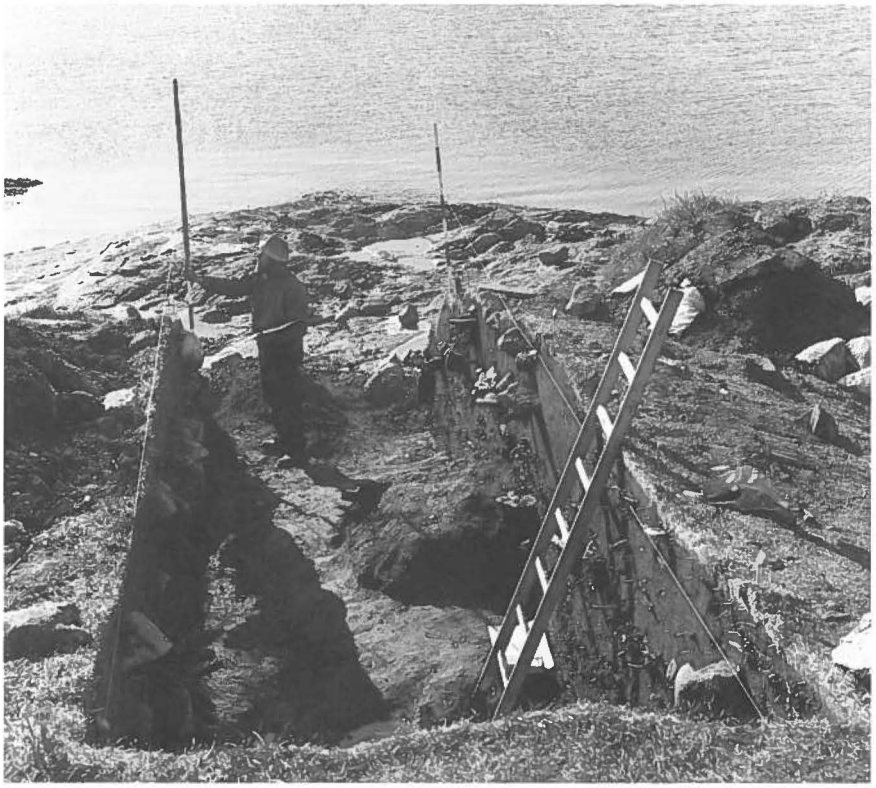


Fig. 23. *The midden trench, Illorpaat, after excavation. The measured and drawn up west section.*

(1,0) and (1,A), for example. Thus a differentiation is made between a point and a field in the measuring system.

The excavation constituted an elementary cleaning of horizontal levels. A total of 16 levels were drawn before the bedrock was reached and the section descriptions could commence. These sections were designated the east and the west sections respectively (Fig. 23).

Sections

The northern part of the west section turned out to be the most suitable for a description, since the other sections were so disturbed that no continuous layer could be traced. These sections have been drawn up and described elsewhere (Gulløv & Kapel 1976), but will not be discussed here. Any correspondence that might occur between individual layers will be noted in the following.

Description of the west section (Fig. 24):

1. Bedrock.
2. Humified peat mass. Partly sandy. Liver brown on exposure, but oxidized to a black colour. In the northern part of the section the layer is very sandy and darker. Corresponds with equivalent layers in the eastern section. Constitutes the original vegetation layer, in which tools and flakes of silicified slate from the Saqqaq culture were found in several places in the trench.
3. Very compact, gravelly layer with weathered stones. Dark brown to black stripes and lenses can be seen. The whole layer appears light grey. Culturally sterile.
4. Heterogeneous layer with many objects. Stratified. The basic colour is blackish brown to black. Thin golden brown vegetation layers, alternating with black

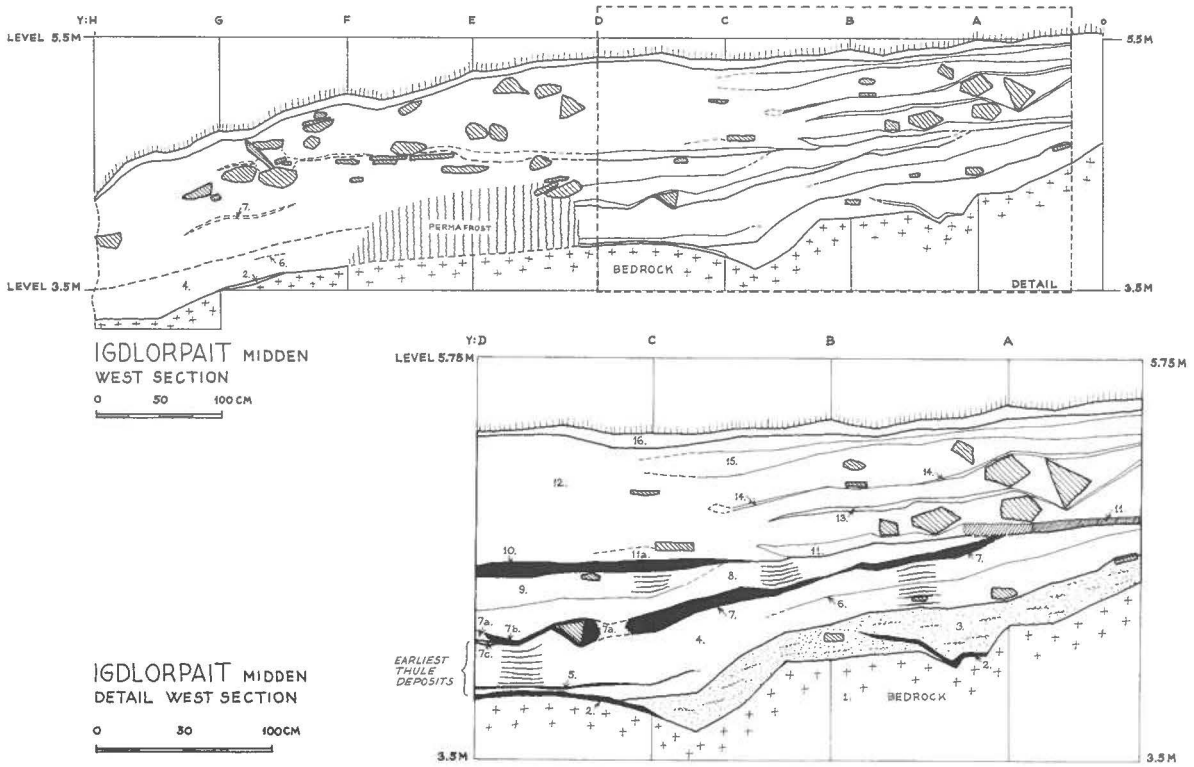


Fig. 24. *Section drawing of the west section, the midden trench, Illorpaat. Layers 1-16 are described in the text.*

layers containing crowberry, can be seen. In the middle of the D- and B-fields six or seven layers have been marked. Crowberry, grasses and mosses can be seen throughout the layer, together with a concentration of large pieces of wood, wood shavings and bones (of *inter alia* great auk, *pinguinus impennis*). The layer ends towards **2** in a distinct grass horizon, in and on which there are pieces of wood. Layers **5** and **6** are embedded in this layer. Corresponds with the eastern section.

5. Thin and black continuous stripe with crowberry.

6. Continuous, *c.* 2 m long horizon of common mussel (*mytilus edulis*). Thin and at times disappearing.

7. Continuous layer without objects. Golden brown, well defined vegetation horizons, alternating with black sections of crowberry, define the layer. In the middle are dark brown, homogeneous sandy turf lenses between thin lighter coloured sandy layers which constitute the fill. Corresponds with equivalent, continuous layers in the east section. This layer also contains **7a**, **7b** and **7c**.

7a. Break in the layer. Disturbed sections with objects.

7b. Golden brown, very mossy layer. Well defined border with **4** consisting of crowberry.

7c. Blubber layer, under which the crowberry layer from **7b** can be seen. The blubber has been up to 5 cm thick, very hard and compact in the cleaned-off surface of the trench.

8. Sandy turf mass. The colour is burnt umber, in which light brown to golden brown vegetation stripes can be seen. The borders are very clear. A few bones and pieces of wood can be seen in the borders. Evident stratification and in the C-field five layers can be discerned.

9. Blackish brown, sandy turf mass. Large pieces of wood, crowberry and bones can be seen. Four vegetation horizons can be observed in the C-line.
10. Stratified, light to blackish brown layer. From a black, slightly sticky turf mass with crowberry and moss alternating with a light brown 1 cm thick grass layer, to a dark brown and more sticky layer containing moss. No objects.
11. The layer consists of a dark, almost black turf mass, which gets lighter to the south and continues in a compact layer of wood waste. The closely hatched area is a sandy and sticky turf mass with a few pieces of wood and bones. The more lightly hatched area is a golden brown, less humified turf mass without objects. The area that is not hatched is a compact layer of wood shavings. The borders of the continuous layer can be described as very clear (closely hatched) and well defined (the compact bone layer). Appears to correspond with the northern part of the east section.

11a. Is presumably associated with layer **11**. Pieces of wood are seen here, but in a less dense layer. Some plant fragments, mostly crowberry.

12. Dark brown to blackish brown, sandy and structured turf mass. Golden brown vegetation horizons over short distances. Lighter coloured sand stripes can be seen in some places. Blackish brown humified, lens-shaped sections of turf are seen, together with golden brown lenses, i.e. turf lenses in colours of golden brown to black. Some bones, skin and pieces of wood. **13**, **14** and **15** are embedded in this layer. Corresponds with the east section.
13. Structured. Bones and fragments of skin are seen in a few places. Humified turf of various colours can be seen. Corresponds with a number of flat stones laying in the cleaned-off area of the trench. Dwelling structure?
14. As **13**. Dwelling house. Corresponds with a number of flat stones lying on the cleaned-off area in the trench. One of these can be seen in the section by the C-line.
15. Partly humified, blackish brown, sandy turf mass. In the layer are areas with dense layers of bone, which decrease towards the south left of the C-line. Where the dense bone layers do not have well defined borders they are marked by layers of black turf with distinct borders. Corresponds with the east section.
16. Recent, yellowish brown peat. Recent root parts go down into **12**. Culturally sterile layer of grass with moss.

Description of the west section:

In explaining this section, reference can in several places be made to the sections from Illorpaat 3. Section C especially contains information, which corresponds with observations made in the midden trench. As regards dating, layers **2** and **3** can be associated with palaeo-Eskimo activity. Layer **2** is an original vegetation horizon, which is seen also in section C layer **21**. Layer **3** can be explained as an erosion phenomenon.

Layer **4** clearly corresponds with section C layer **20**. The growth stripes can be discerned in both sections. Characteristic of both sections is the large concentration of pieces of wood and wood shavings, which lies right down in the grass horizon that constitutes the original growth surface and separates the layer from the palaeo-Eskimo horizons beneath. The objects are exclusively of Eskimo origin and they define the layer as the earliest deposits of the Thule culture on this site.

Layer **7** defines the border between this earliest Thule culture and the subsequent settlement. The layer marks a period of abandonment of settlement at the site. The layer corresponds with section C layer **19**.

Layers **8** and **9** are both characterized by sandy turf fill with several visible vegeta-

tion stripes. This might be explained as a less dense settlement, or rubbish dumping during the period represented by the layers.

Layer **10** can be explained in the same way as layer **7**. A period of abandonment of the site.

Layer **11** represents a partial re-settlement of the site.

Layer **12** corresponds with the sections in Illorpaat 3, where they are explained as belonging to communal houses I-IV. A sheep bone (*ovis aries*) which lies in the cleaned-off area in field B, immediately above the compact layer of wood shavings, layer **11**, indicates association with the European colonization in the 18th century. Layers **13** and **14** represent dwelling houses at the site, while layer **15** is a characteristic rubbish layer.

Dating:

In field C layer **4** organic material was collected immediately above layer **3** (and **2**), i.e. among the pieces of wood in the grass horizon, which was the vegetation surface at the time the Thule culture arrived. The material consisted of guillemot bones. The dating is corrected for isothope fracture and expressed in conventional C-14 years and in calendar years based on the Stuiver (1982) and Stuiver & Pearson (1986) calibration curve. Another sample taken in the same place, which consisted of harp seal and ringed seal was lost in the C-14 laboratory after the C-13 date had been obtained. However, nothing indicates that this sample would have been significantly different from the one that was dated, if one compares with the samples from Illorpaat 3, since both types of seal as well as guillemot are 100% adapted to their marine environment.

Sample no.	Material	C-14 years	Calibrated (Stuiver)	Calibrated (Stuiver & Pearson)
K-4363	guillemot	1580±65	A.D. 1485	A.D. 1480

The date lies between the dates from Illorpaat 3 cited above and thus helps to establish that the earliest presence of the Thule culture on Illorpaat was at the end of the 15th century. Calibrated with ± 1 standard deviation (Stuiver & Pearson 1993) the date would thus fall within the period 1445-1535 A.D.

Layer **12** is the last phase of the settlement. It can be dated to the 18th century and contains several discernible dwelling structures.

Layers **8** and **9** cannot be explained in any significant detail, but they must be presumed to date from the 16th and 17th centuries.

The abandonment of Illorpaat after the initial settlement period, which seems to be demonstrated by the midden layer **7** and section C layer **19**, may have been caused by a change in the fauna due to climatic circumstances, or by an unknown factor, which could have influenced the settlement. Altered economic conditions would always have played a large part in a partial move, either to another place on the coast or into the fjord. Both hypotheses will apply when the climate and historical conditions of the 17th century, which tie in closely with the European and Eskimo whaling, are used as parameters in the culture-historical exposition (e.g. Gulløv 1982, 1985, 1987).

Illorpaat, house 9

The communal house, which prior to the excavations had an internal length of *c.* 10.5 m, is situated as the outermost, most easterly house on Illorpaat (Fig. 5). The structure, however, differs from the previous structure in that it lies *c.* 10 m above sea level. From here one can see the whole of Illorpaat's large grass-covered area to the north-west.

"Savages' houses" are marked in two places on Andreas Gerner's map of 1731, where the Illorpaat inlet is marked. The most easterly may well be identified as Illorpaat 9.

Method

The fixed point was chiselled into a bare rock immediately south-east of the structure and was marked out in paint. The point is level 10.67 according to the Danish Geodetic Institute's trigonometric point no. 7466 in Kangeq (level 2.90).

A co-ordinate system was laid out over the site with the datum point in the north-eastern corner, 11.7 m above sea level from the fixed point. The abscissa was reckoned positive towards the west and was given the point indicators A, B, C etc. at each metre. The field indicator 1/A covers 1m² with, for example, the corner co-ordinates (0,0), (0,A), (1,0) and (1,A). In this way a distinction is made between a point and a field in the co-ordinate system.

The datum point and the fixed point in the co-ordinate system are together with Illorpaat 3 and the midden trench tied into an overall co-ordinate system, which formed the basis for drawing up the map of Illorpaat (Fig. 3).

A rectangle with the corner-coordinates (0,0), (0,K), (4,K) and (4,0) covers the interior of the house. The fields 5-8/G were excavated through the house passage, which could be seen on the surface. Further extensions were made in fields 5/A-C, 6/C-D and 4/-A (Fig. 25).

Two balks, 1m and 0.5 m wide respectively, were left across the house in the D- and H-fields. Two sections, respectively called B and A could be drawn up along the north walls of the balks after the excavation had finished.

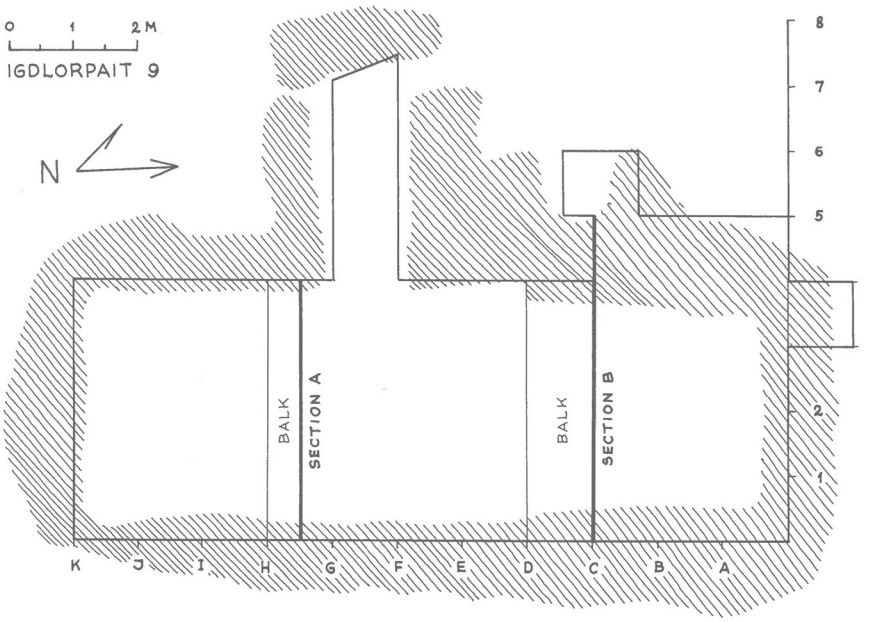


Fig. 25. *Plan of Illorpaat, house 9, before excavation. The turf walls are hatched and balks and sections in the excavated area are marked.*

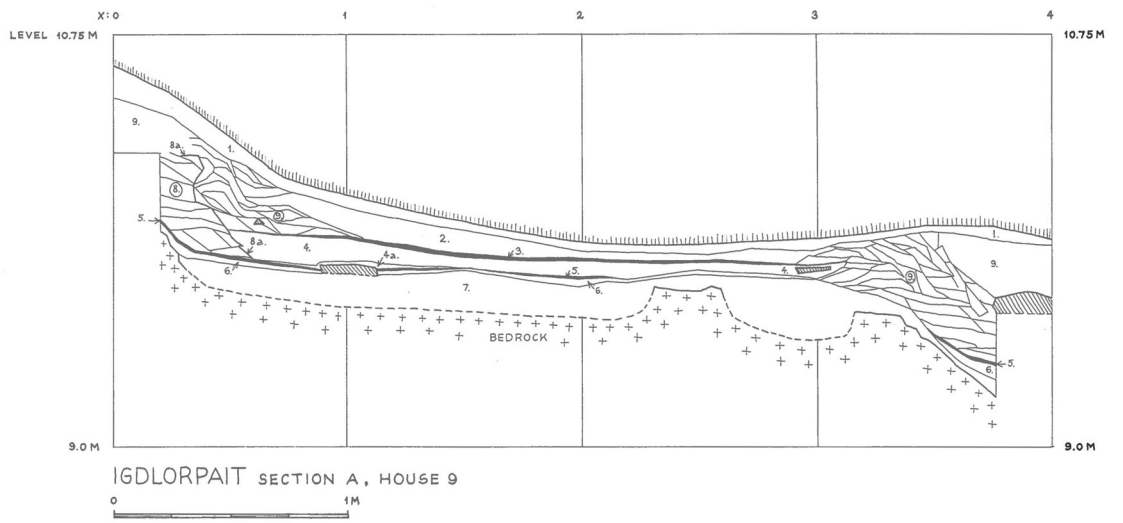


Fig. 26. *Drawing of section A, Illorpaat, house 9. Layers 1-9 are described in the text.*

Sections

The individual layers of the sections are described in the same way as above. The bedrock at section A is very decayed and erosion material can therefore make it difficult to determine the upper edge of this lowest layer.

Section A (Fig. 26):

1. Brown to greyish brown surface turf. The layer is culturally sterile and matted with root parts.
2. Heterogeneous turf mass, varying in colour from burnt umber to greyish brown. The layer is somewhat structured with some turf flakes and brownish grey gravel stripes. In the profile only two bones can be seen in the layer, otherwise no objects. The border with **1** is somewhat diffuse.
3. Golden brown to brownish yellow vegetation horizon. The layer is of a greatly varying depth and consists of very humified and compressed plant parts. The texture is fibrous to matted. Root parts and surface parts of plants can be seen. *Polytrichum alpinum* is present, but other mosses can also be seen in the predominantly sticky areas. In small areas, the fill is admixed with fine gravel.
4. Blackish brown heterogeneous turf mass with a sticky basic texture. There is a suggestion of stratification in some places, but no layer can be traced continuously throughout the horizon. Nor can any turf structuring be made out. The fill is inelastic with a large amount of fine gravel. The layer is more humified and less gravelly than **2**. Black peat occurs sporadically. There are a number of very distintegrated bones in the layer.

4a. Black turf mass found sporadically in **4**.

5. Golden brown to iron brown vegetation horizon with a slightly elastic texture. Thin and, in some places, disappearing layer consisting of very compressed and very humified plant fragments. Where the layer is thickest, the texture is almost fibrous. The plants could not be identified *in situ* because of the degree of humification. The flat stone by the 1-abscissa appears to have been pressed down through the layer. Cultural remains could not be demonstrated in the horizon. This layer may be taken to represent the original vegetation surface.
6. Brownish black turf mass. Plastic to slightly elastic. Greatly humified. The layer mainly appears very finely grained, in some places almost sticky, but in some small areas it contains grainy particles from the material below. The layer is of

varying thickness and in some places appears disturbed. Culturally sterile. Must be taken to be original surface turf.

7. Brownish yellow to yellowish brown grainy gravel detritus with lumps the size of peas. Very leached and sterile.
8. Turf construction of large, flat, piled up surface turfs. The layer comprises the area bordered by the thick lines. The layer's regularity and virtually horizontal orientation seem to demonstrate the intact, original wall construction.

8a. A very thin line of yellowish brown, microscopic plant fragments.

9. Greatly structured turf fill. Wall material. The fill resembles **8**, but the shape and position of the turfs (shown by thin lines in the section drawing) indicate that they have slipped and fallen.

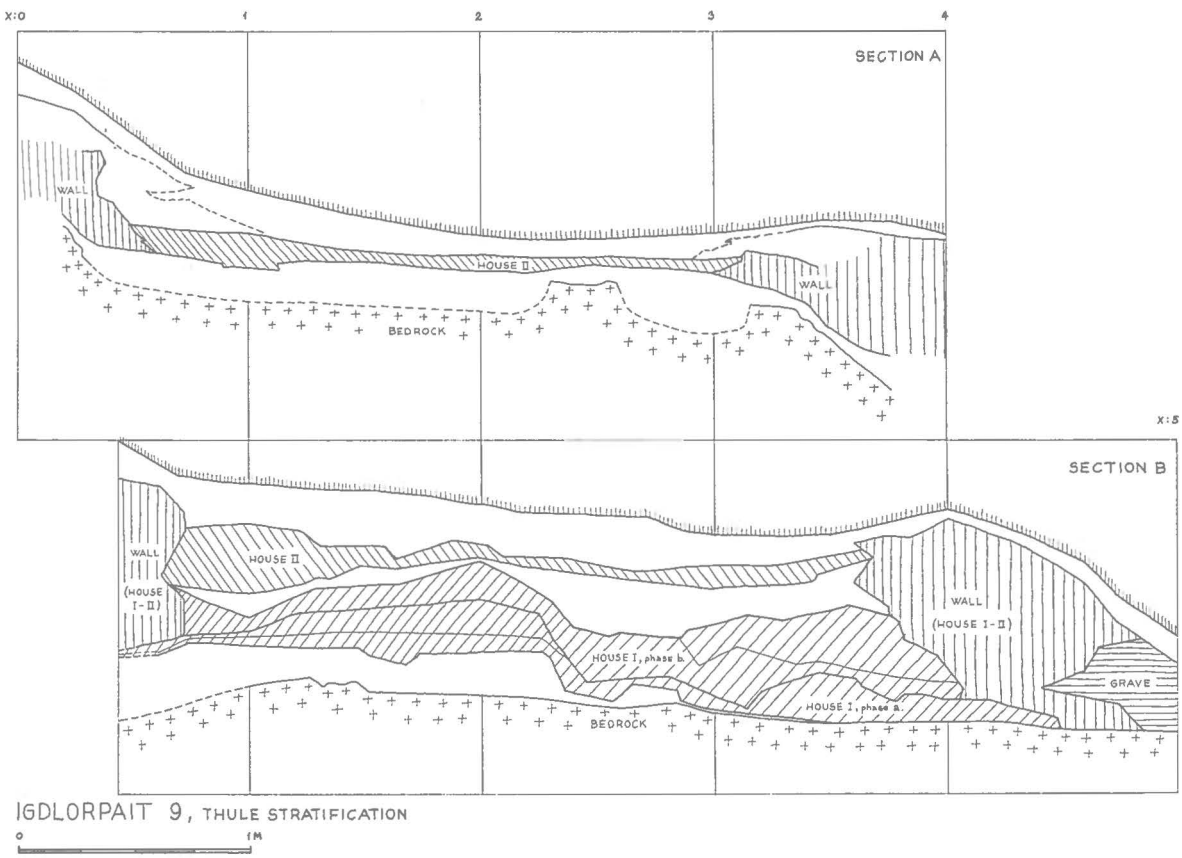


Fig. 27. *Explanation of sections A and B, Illorpaat, house 9. The stratigraphy of the various construction phases is marked.*

Explanation of section A (Fig. 27):

There is only one settlement phase here and it lies within layer **4**. This layer is sealed off by the vegetation horizons **3** and **5**. The building is constructed directly on to the original surface, **6**. Above the building phase lies **2**, which must be collapsed wall material and fallen roof turfs. The fallen material from the east wall, **9**, lies in two tongues, one of which overlaps **3** and **4**, while the other overlaps **2**. This shows that there were at least two phases of collapse. The fallen material from the west wall, **9**, shows a slippage towards the west, while the nethermost structuring appears to be an intact wall fragment.

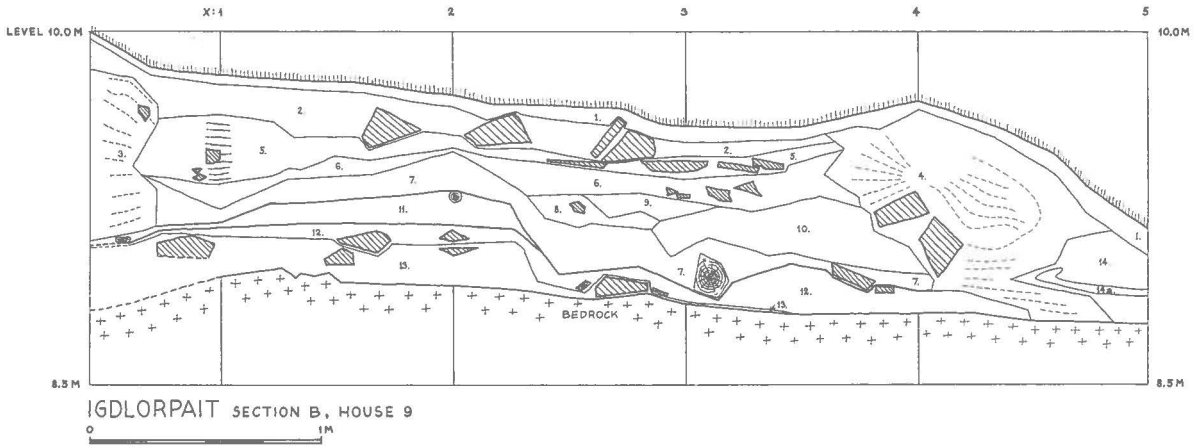


Fig. 28. *Drawing of section B, Illorpaat, house 9. Layers 1-14a are described in the text.*

Section B (Fig. 28):

A hard frost at the end of the field season made it difficult to describe the more subtle nuances of colours in this section.

1. Recent, yellowish brown turf.
2. Heterogeneous, dark brown, very disturbed turf. A few bones. Corresponds with layer **2** section A. There are large stones in the layer.
3. East wall. Pendant turfs. Structured. Clear stratification consisting of golden brown turf stripes (broken lines on the section drawing). A few bones.
4. West wall. Structured. Clear stratification consisting of golden brown turf stripes (broken lines on the section drawing), which demonstrate a collapse in the east and a slippage towards the west. A few bones.
5. Heterogeneous, structured turfs. Stratified. Dark brown basic colour with stripes of golden brown layers with root fragments (marked on the section drawing). Nine stripes can be made out in the 1-abscissa. A few bones.
6. Dark brown, heterogeneous layer. No discernible structure, but lenses or stripes of turfs of a slightly humified character can be seen throughout the layer. A few bones and other cultural remains, e.g. pieces of wood.
7. Structured layer with turf lenses in shades of grey. Sharp borders. At the top towards **6**, **8** and **10** is a thin horizon of wood shavings. At the bottom towards **11** and **12** is a golden brown horizon with fragments of plant roots. A large beam is seen at the bottom of the layer. The layering within the described borders is detailed in connection with layer **11**.
8. Very disturbed, dark brown layer. Clear borders with plant fragments.
9. Heterogeneous, unstructured turf mass. Partly like **8**.
10. Dark brown turf layer. Structured. No discernible continuous layers. Artefacts, bones, pieces of wood, hair.
11. Highly structured layer. The stratification in the middle of the layer was as follows. Highest up a layer of wood shavings, then a brown turf layer with plant fragments, then a grey and gravelly fill, followed by a light brown horizon of plant fragments and hair and at the bottom a dark brown and gravelly turf horizon with a few pieces of wood. The layer is thus a continuation of **7**, whose structure can be seen more easily here.
12. Clearly structured layer with an upper, sharp border to **11**, consisting of a golden brown vegetation horizon, then a light brown, gravelly horizon; then a dark brown to blackish brown horizon with plant fragments; at the bottom, a horizon

of wood shavings with a few bones and a few largish pieces of wood. The layer can be seen to disappear under the west wall.

13. A gravelly horizon mainly consisting of detritus material. Corresponds with layer **7** section A.

14. Dark brown and slightly disturbed layer, which meets the outer side of the west wall. Comparatively large amounts of wood.

14a. Coherent area with pieces of wood.

Explanation of section B (Fig. 27):

There are clear traces of several building phases in this section. The east and west walls correspond with the observations made in section A. Layer **2** seals off the latest settlement and must be collapsed material; it contains several large stones.

The settlement phase, which was observed in section A, here recurs as layer **5**. There are flagstones in the west, while the platform construction is demonstrated by several small horizons in the east.

The heterogeneous nature of layer **6** probably indicates that this represents a stage in the rebuilding of the first house, i.e. **7, 11** and **12**.

Layer **7** illustrates an evident building phase, associated with a smaller house, since it could not be discerned in section A. Layer **10** also belongs to this construction and could thus be explained as a section through a side platform. Layers **8** and **9** are fill, deriving from the later rebuilding.

Layer **11** is a platform construction which must belong to an earlier phase of the first house.

Layer **12** constitutes the earliest settlement on the site and must have been a dwelling house of the same size as that of layer **7**, since no wall remains can be found west of the latter. The continuation of layer **12** below the west wall must therefore be explained as a section through an earlier house passage.

Layer **14** demonstrates a later construction, as the layer runs into the west wall. The construction is shown on the plans.

Dating:

There is no C-14 dating of material from this site. The size of the last building phase, however, demonstrates that this was a communal house. In this last settlement phase only two objects of European origin were found. This dates it to the time of the early communal houses, *cf.* the datings from Illorpaat 3. That is around 1700 AD or a little later.

The earliest construction at this site was located far away from the structures on Illorpaat and *c.* 10 m above sea level. This might indicate that Illorpaat itself was settled when the house was built. There is no marked difference between the two dwelling structures to indicate that there was a lapse of time between them, and the later house must be presumed built immediately after the earlier was abandoned.

This explanation corresponds with the oral tradition, which was still alive among the population in Kangeq in the 1970s. This tradition identifies the site as the house of the legendary Sinngajik (see Gulløv & Kapel 1979/80).

Plans

The description of the following two plans follows the interpretations of the sections above. It will thus be a description of house II, i.e. the last building phase, and house I, i.e. the first. The signatures are the same as those used in the description of Illorpaat 3. Other signatures are explained below.

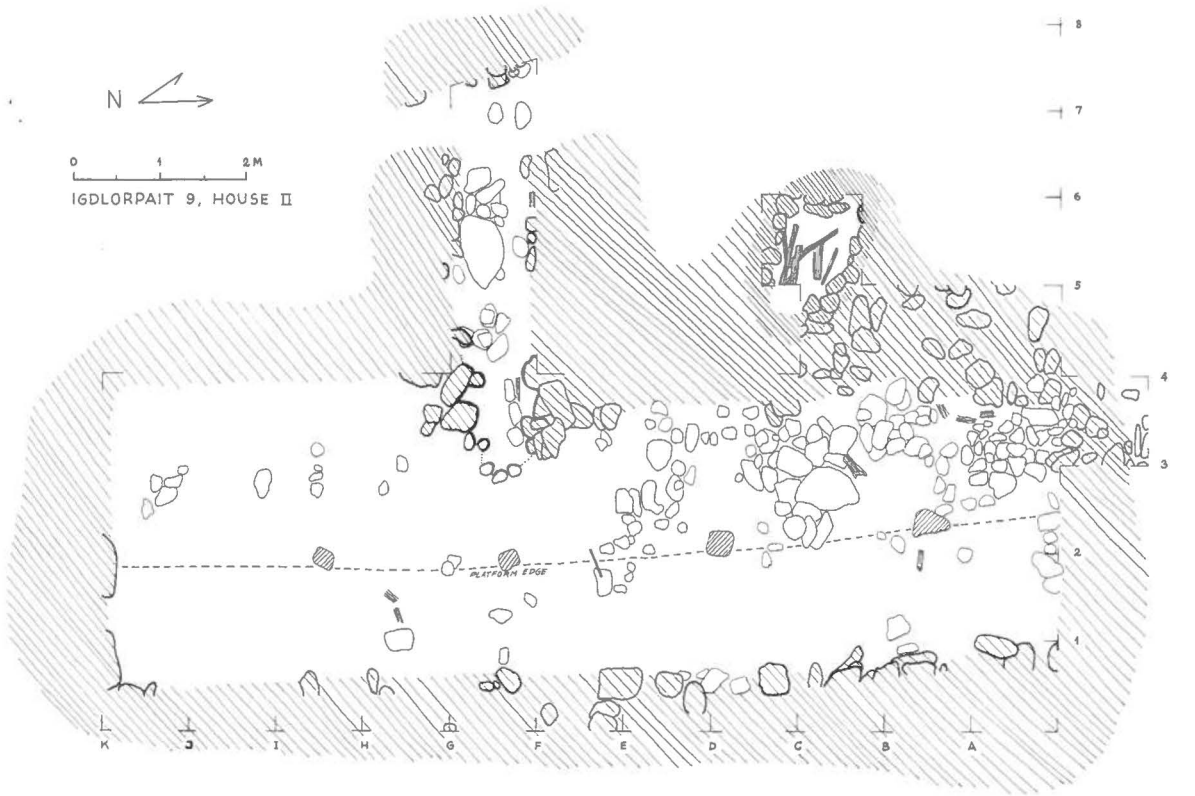


Fig. 29. *Groundplan of house II; the communal house, Illorpaat 9, with a grave inside the west wall.*

House II (Fig. 29):

The plan corresponds with section A layers **4** and **8**, as well as section B layers **3, 4, 5** and **14**. The ground plan shows a rectangular house with flagstones over large parts of the floor, though most densely in the northern part. The difference in level between the flags is *c.* 50 cm, highest in the southern part. Four larger flat stones are seen to lie in the house's long axis (hatched on the plan). These are explained as foundation stones for the posts which supported the roof. The platform had been placed to the east of them.

The descent to the house passage is indicated by a heavy line on the plan. The floor of the passage is here *c.* 70 cm lower than the inner floor of the house. The passage slopes evenly *c.* 75 cm and ends by a sheltering wall.

The walls have a thickness of *c.* 1 m, although it is considerably thicker to the west, where a grave has been dug into the wall. This is seen clearly in section B layer **14** (Fig. 28). The grave was covered by pieces of wood (section B layer **14a**) and contained the skeleton of a *c.* 40-50 year old woman. When the disturbed bones were uncovered, fragments could be seen of the skin into which the corpse had been sewn (Gulløv & Kapel 1976: Appendix II). The grave goods were three soapstone lamps, a soapstone cooking pot and a wooden ladle.

The objects in the house are of Eskimo origin, except a piece of glass and an iron knifeblade with handle.

House I (Fig. 30):

The plan corresponds with section B, layers **7, 10, 11** and **12**. The ground plan shows a small rounded house with flagstones. A couple of pieces of posts can be seen on the floor. They are presumably from the roof construction, or from a roof prop. The edge

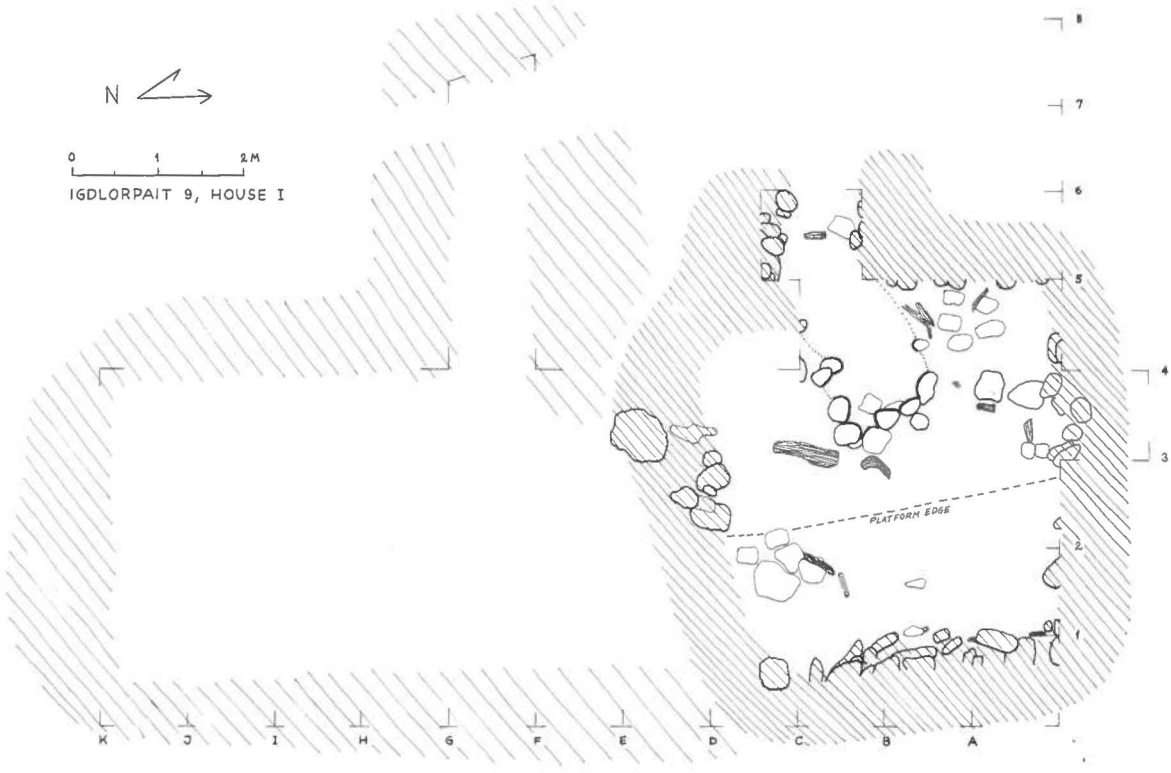


Fig. 30. *The ground plan of house I, the earliest, Illorpaat 9.*

of the platform has been deduced from section B. Possible side platforms can be seen in the north-west corner, as well as in section B.

The descent area is clearly marked (thick lines on the plan). The house passage runs below the later grave, at a level of *c.* 50 cm under the floor of the structure.

The fill contains many wood shavings and the objects are exclusively of Eskimo origin.

When the bedrock was totally exposed it turned out to be very irregular in level. The whole of the southern half of the excavated area lies *c.* 1 m higher than the northern half. The difference in level between house II and the northernmost flagstones in house I is thus 80 cm.

Illorpaat, house 13

The communal house, which before the excavation measured *c.* 12.5 m internally, lies east of central Illorpaat at the bottom of an inlet with steep rocky sides. The site was heavily eroded at high tide, which had removed virtually all of the midden.

It is not possible to identify the house on the basis of the historical cartographical material, but an excavation was thought to be important for comparative purposes with relation to the structures described above.

Method

The fixed point was chiselled into the mountain on an area of bare rock and was marked with paint. The point was measured to lie 3.93 m above sea level. With the

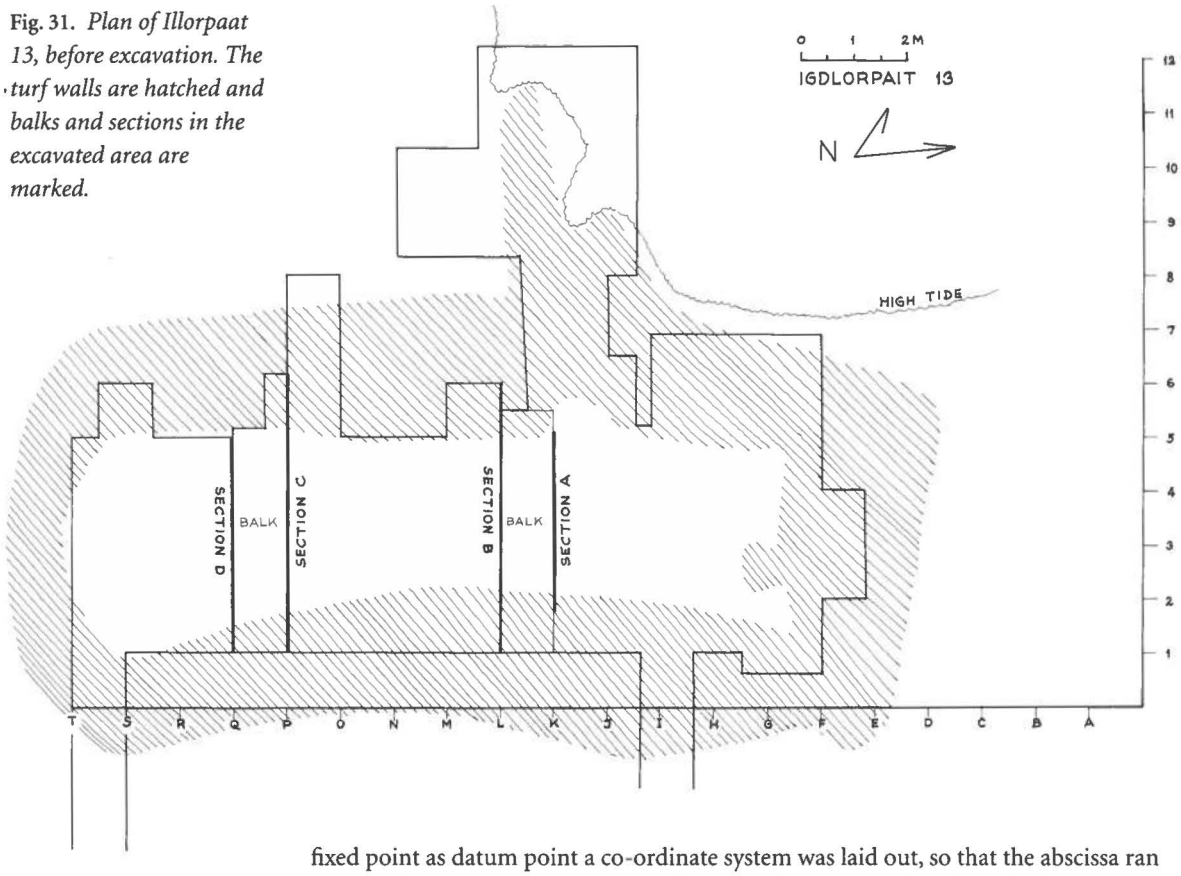


Fig. 31. *Plan of Illorpaat 13, before excavation. The turf walls are hatched and balks and sections in the excavated area are marked.*

fixed point as datum point a co-ordinate system was laid out, so that the abscissa ran westwards in a positive direction and was divided into 1 m lengths with the point indicators 1, 2, 3 etc., and the ordinate ran southwards in a positive direction and was divided into 1 m lengths with the point indicators A, B, C etc.

The structure is not measured in relation to the overall co-ordinate system into which the structures described above are tied, but it is marked on the map (Fig. 3).

The entire visible inner structure was measured from the point (1,F), whereupon the other three corner co-ordinates in the now established rectangle became (5,F), (5,T) and (1,T).

Two 1 metre wide balks were left across the site through the L- and Q-fields. The four sections now established were called A, B, C and D and were measured and drawn up after the end of the excavation.

Enlargements of the initial area of excavation are marked on the plan (Fig. 31).

Sections

The individual layers in the sections are described in the same manner as those of Illorpaat 3.

Section A (Fig. 32):

1. Black, humurous substance without macroscopic structure. Homogeneous. How-ever, in a few places narrow stripes of light coloured sand can be seen. Lies directly on the bedrock. The upper border is diffuse.
2. Dark, humurous substance with macrostructure. A little lighter in colour than **1** due to greater contents of sand. The upper border is clear.
3. Dark, heterogeneous layer containing plant fragments, wood shavings (sporad-

ic), larger pieces of wood, bones and seal hair. The wood shavings are seen as lighter stripes and plant fragments as yellower stripes. There does not appear to be any continuous horizon, but several different residual phases have created this deposit. Although the layer seems disturbed, a horizontal stratification is discernible. The primary upper border is a layer of flagstones; the structure of the layer can also be discerned on top of the flags. Slipped turfs can be seen in the 3-field.

4. Lighter coloured, brown layer of a heterogeneous composition. Slightly humified and admixed with seal hair, plant fragments, wood shavings and bones.
5. Recent turf.
6. Black and sticky layer, admixed with plant fragments, among them crowberry. At the top and downwards are stripes of wood shavings, seal hair and crowberry.
7. Light brown to yellow stripes consisting of plant fragments, i.e. matted roots and stalk fragments from grass and moss. Slightly humified. Growth horizons.
8. Strips of turf from slipping. Marked on the plan as tongues across **7** and below **5**.

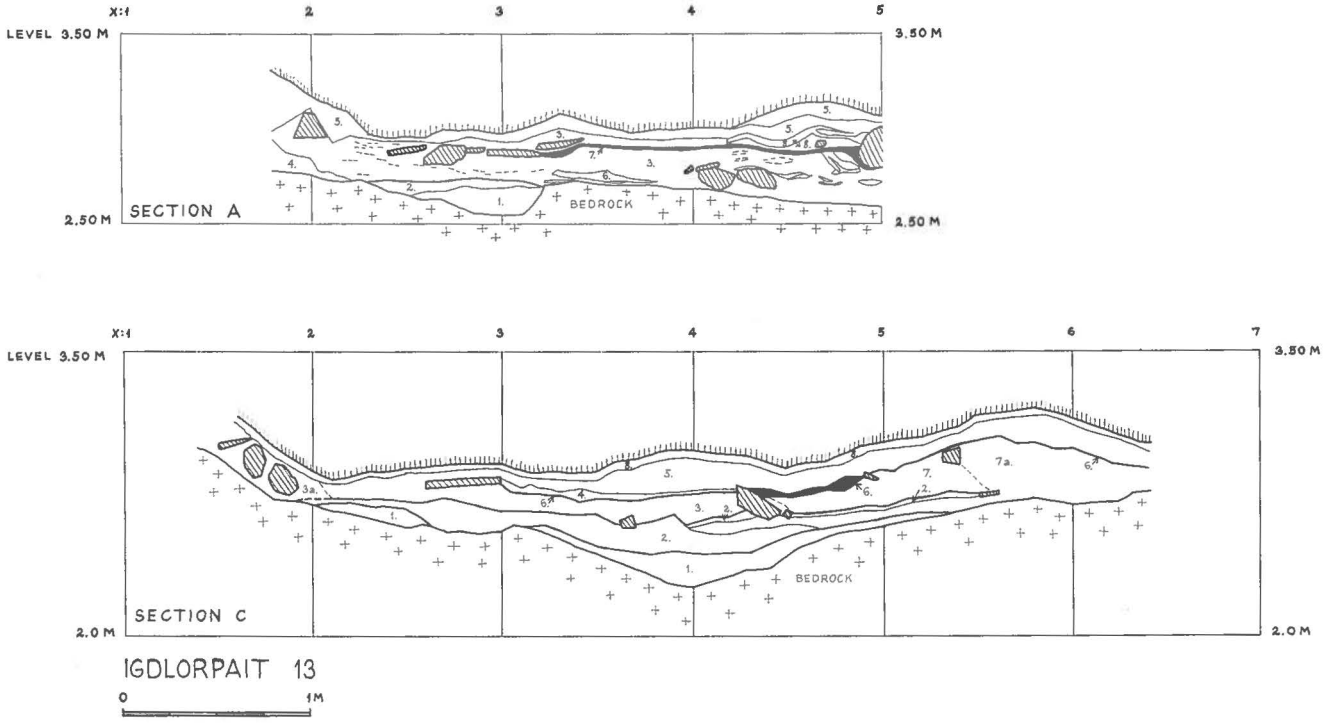


Fig. 32. *Sections A and C, Illorpaat 13. Section A layers 1-8 and section C layers 1-8 are described in the text.*

Section C (Fig. 32):

1. Black, highly humified, homogeneous layer. Discernible structure, in which a few plant fragments can be seen.
2. Dark and heterogeneous layer with bones, seal hair, pieces of wood and grass.
3. Blackish brown and somewhat humified layer of a homogeneous character with sporadic occurrence of pieces of wood, bones, stalk parts and matted roots.

3a. Large stones can be seen in this layer, which must here be described as slipped material.

4. Blackish brown and heterogeneous layer with plant fragments (grass and crowberry). Towards **6** it is brownish yellow with a higher frequency of plant fragments.

5. Dark layer with turf stripes which are black and yellow, as well as sandy stripes. Resembles **7**, but is divided from it by **6**.
6. Yellowish stripe of plant remains, i.e. root and stalk fragments. Vegetation layer.
7. Dark layer with turf stripes like **5**. Partly slipped material.

7a. Structured turf construction of the same character as **7** and **5**.

8. Recent turf.

Section B (Fig. 33):

1. Black, humurous substance without macroscopic structure. Homogeneous composition. The upper border is diffuse.
2. Brownish yellow fill with macroscopic structure. Advanced humification. The borders are sharp. Presumably the same substance as **1**, but humification is less advanced.
3. Clearly stratified zone of turfs, which appear as brown to yellowish brown flames on a background of dark and light stripes. When separated, the brown flames are seen to consist of stalk and root parts (grass and moss), while the lighter stripes are pebbles, gravel and sand brought here in the matted roots of the turfs. The layer rests directly on the bedrock and borders upwards onto recent turf. The border westwards into the house is not well defined and has the form of a flap which pushes in under **9**. The structure's character does not give an impression of a systematic construction, but is rather slippage along the bedrock.
4. Dark to blackish brown fill without any real structuring. In a few places there are some traces of turf, otherwise disturbed.
5. Recent turf.

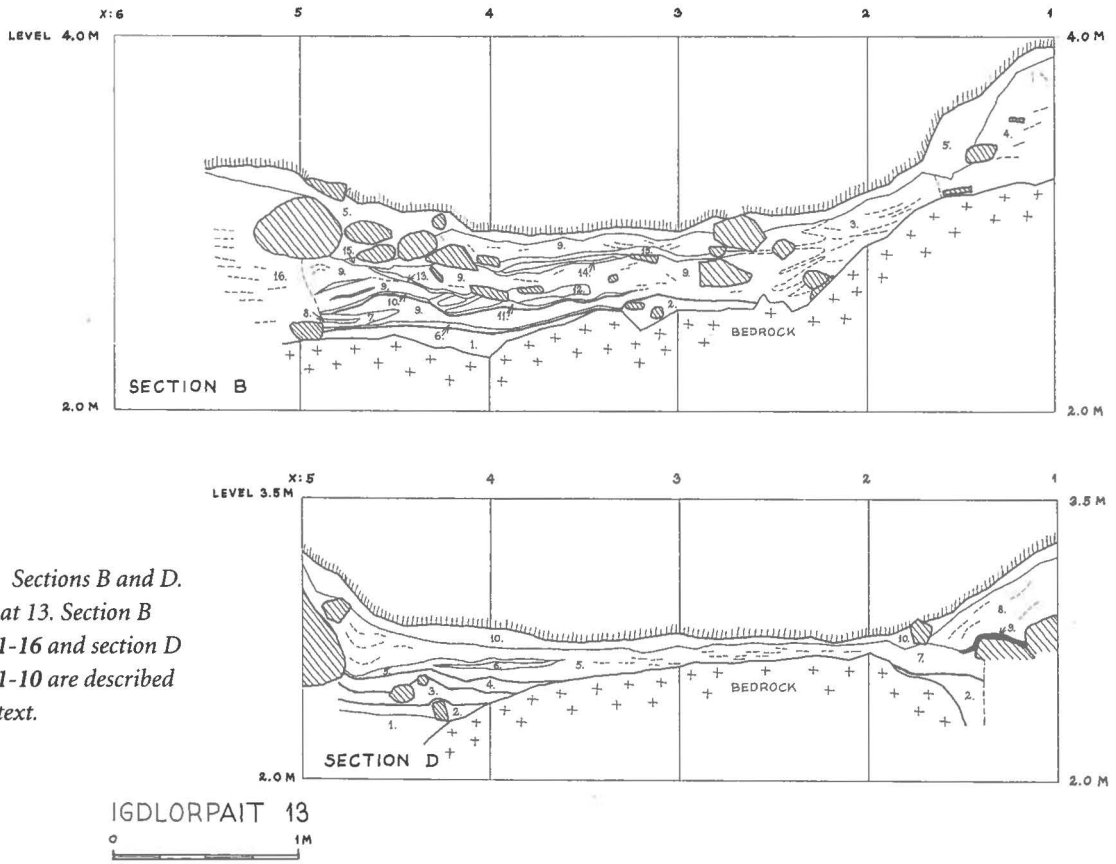


Fig. 33. *Sections B and D. Illorpaat 13. Section B layers 1-16 and section D layers 1-10 are described in the text.*

6. Clearly defined layer with well defined upper and lower borders. Consists of crowberrry remains, wood shavings, larger pieces of wood, seal hair and grass fragments. The seriation is as follows: wood shavings, bunches of crowberry, grass down towards **1**.
7. Black, structured mass admixed with fine gravel and plant remains, i.e. crowberry and grass (stalks and root parts). Well defined borders.
8. Yellow, slightly humified layer, consisting of matted plants (root and stalk parts). Seal hair tied in knots is seen in it. Well defined borders.
9. Dark, heterogeneous layer, consisting of plant remains, wood shavings (sporadic), larger pieces of wood, bones and seal hair. The elements lie almost horizontally, since they follow layer **6**. It is not easy to define the layer, as it is not confined in one horizon. It is obvious that the layer is a product of several residual phases. On the other hand, the layer appears coherent and it contains several smaller layers which are easily defined, i.e. layer **6** which shows a floor layer which has penetrated layer **9**. These layers are marked, for example, in field **5** on the section drawing. The layer corresponds with layer **3** section A.
10. Black, humified stripe. Structures of plant fragments can be seen. Towards the bottom is a *c.* 2-3 cm thick stripe of plant remains, consisting of parts of stalk and root, with bits of crowberry twig. In between are stripes of sand and gravel. Marked by a heavy line on the plan.
11. Brown stripes of clearly recognizable plant parts, i.e. grass, moss and crowberry twigs in a matted mass. The degree of humification is low. The find horizon from layer **10** continues into these. Occurrence of large pieces of wood and cultural remains.
12. Yellowish brown, slightly humified, layer. Consists of plant fragments, i.e. grass, crowberry, moss with bones and occasional wood shavings. The elements are clearly orientated horizontally.
13. Heterogeneous layer consisting of several horizons: uppermost a *c.* 5 mm thin layer of plant fragments of a brown colour, where colour and consistency suggest an admixture of blubber; then a darker humified stripe with a few plant fragments; nethermost a very thin continuous sand stripe.
14. Yellowish brown, heterogeneous layer of plant fragments mixed with wood shavings. Slightly humified and well defined.
15. Continuous, yellowish brown to light brown layer of the same character as **14**. Well defined at the bottom. Admixed with bones.
16. Regularly built turf structure, which can be followed to the broken line on the section drawing. Constitutes the border with all the described horizons in field **5**. Bones and wooden sticks are seen to lie in it.

Section D (Fig. 33):

1. Gravel.
2. Black, very humified and homogeneous layer without discernible structure. A few plant fragments can, however, be seen.
3. Black, humified layer with great admixture of bones, wood shavings, remains of crowberry, seal hairs and plant fragments. No discernible structure. The layer is not well defined.
4. Black, somewhat humified and homogeneous layer. Some plant fragments can be seen. Otherwise the layer is culturally sterile.
5. Black to brownish black layer. Humified and of a heterogeneous composition. The layer consists of bones, wood shavings, plant fragments (stalk and root parts). It encloses layer **6** and fades out in a turf-like, structured mass, i.e. **7**.

There are no discernible borders with 7. In fields 4 and 5 there is a high incidence of bones.

6. Black, homogeneous layer, somewhat humified. Admixture of plant fragments. Well defined.
7. Turf-like, structured mass without cultural remains.
8. Of the same character as 7, but clearly divided from it.
9. Yellowish brown stripe consisting of stalk and root parts. Horizon of plant remains.
10. Recent turf.

Explanation of the sections (Fig. 34):

Since the sections show the same structures measured within comparatively short distances, they have been explained together. Furthermore, the thicknesses of the deposits indicate that the site was inhabited for a comparatively short period of time.

Common to all the measured sections is the presence of a black, humified layer everywhere where the bedrock lies deep down. This can be explained as being the original vegetation surface. In a few places in the excavated area flakes of quartz, chalcedony and silicified slate were found, which could be associated with this layer, and which were of palaeo-Eskimo origin.

The uppermost deposit which could be detected in sections A, B and C clearly showed that the latest house here had an inside width of 3.5 m. The upward slope of the bedrock to the east had caused a large slippage of wall materials.

It is, however, more difficult to explain the earliest settlements at this site, since the inside of the house had been heavily dug through. Remains of several floors were thus recorded in section B, which might indicate at least four residual phases. These floor layers could only be detected in the western part of the section, which might indicate a platform structure along the east wall, or else an earlier wall structure running parallel to the latest east wall. Cleaning of the excavated area, however, indicates that the former explanation is the more likely.

The structure was originally wider, which is shown in section C, where the remains of a floor can be seen to disappear under the latest west wall. In addition, the abrupt discontinuation of the floor layers in the west wall, as shown in section B, could indicate that these layers continued prior to the latest rebuilding. This explanation is confirmed by the ground plans.

Profile D shows no floor layers, but, conversely, two heterogeneously composed layers, largely consisting of rubbish. As the walls to the east and the west can still be seen, this phenomenon must be explained as a sporadic use of the southern part of the latest house, or as a result of a transverse wall construction. The ground plans show that both explanations are equally likely.

Dating:

The material from this site has not been C-14 dated. Nor is there anything to indicate that the dwelling houses are of any considerable age. They are all communal houses, which were rebuilt in several phases. The artefacts are predominantly of Eskimo origin, but with several European objects among them. A wooden spindle whorl, igd 501, found in the earliest settlement phase, dates the dwelling houses to the second half of the 18th century, although this does not preclude a settlement earlier in that century.

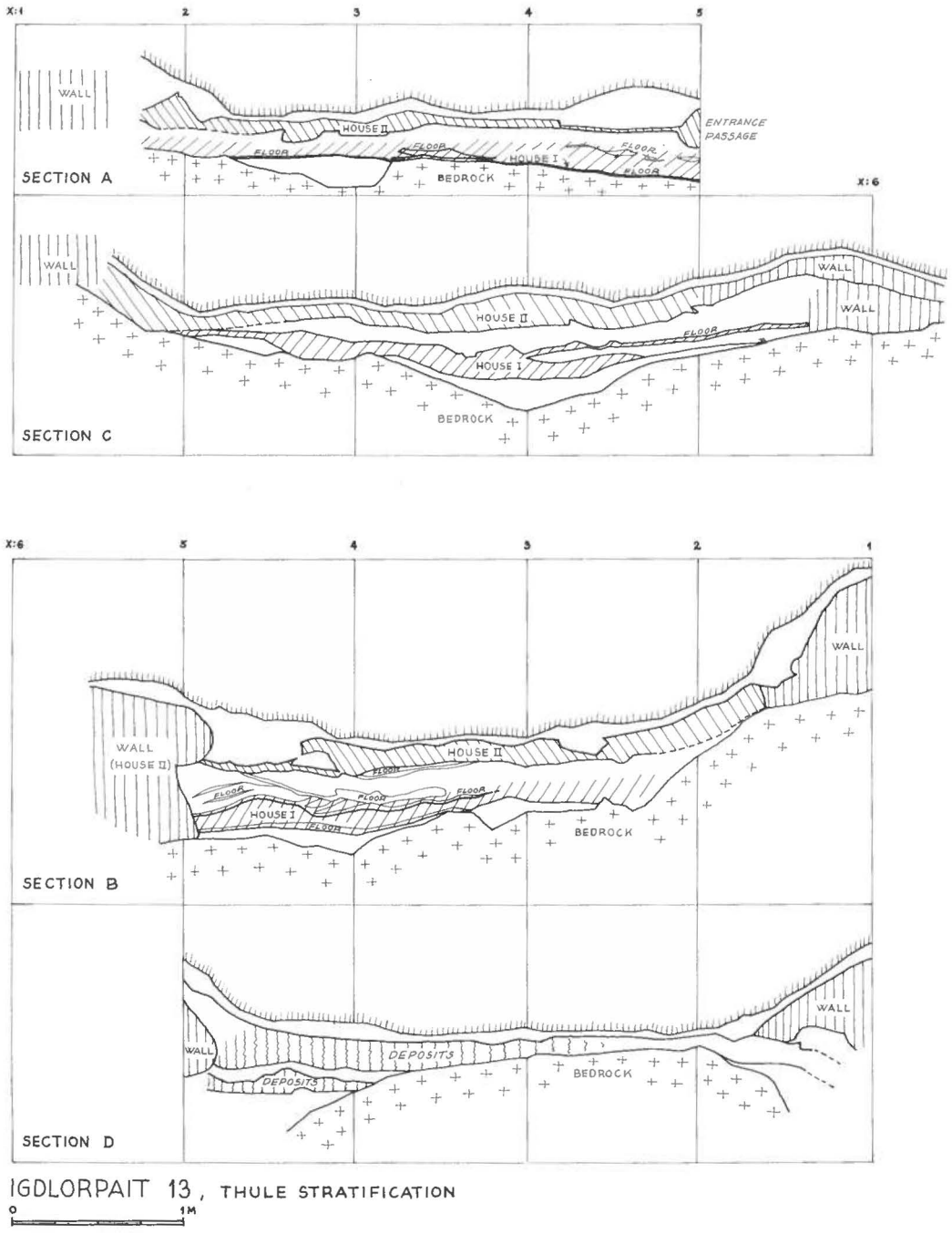


Fig. 34. *Explanation of sections A, B, C and D, Illorpaat 13. The stratigraphy of the various construction phases is marked.*

Plans

The descriptions of the following three plans follow the sections. The latest structure (II) is drawn up in two plans (1 and 2), both of which recur in the description of the sections. The earliest structure (I) is drawn up on one plan. The signatures are the same as those used in the above excavation descriptions. Other signatures are explained below.

Plan 1, house IIb, Illorpaat 13 (Fig. 35):

The plan corresponds with the layers which on the explained sections are called house II.

The ground plan shows a rectangular house with an inner length of 13 m and an inner width of 3 m on average. Flagstones occur sporadically, except in the most southerly part. The difference in level between the flagstones is 10 cm. Several wall stones are seen to have collapsed along the east wall. They do, however, lie remarkably regularly, so some may have served as foundations for the platform along the east wall. A number of large pieces of wood lie along the west wall. They may have been part of the collapsed roof. The south wall was evidently rebuilt five times; the east wall can be seen to rest on a row of flat foundation stones, as was also the case at Illorpaat 3. Long sections of the west wall are well preserved. This wall was dug through in order to explain some depressions which were visible on the surface. The examinations showed that the walls had only been breached in the P- and K-fields. In the first location two corner constructions appeared, belonging to an earlier house construction, in the other the house passage could be uncovered.

The stepping stones of the house passage lie directly on the bedrock and a couple

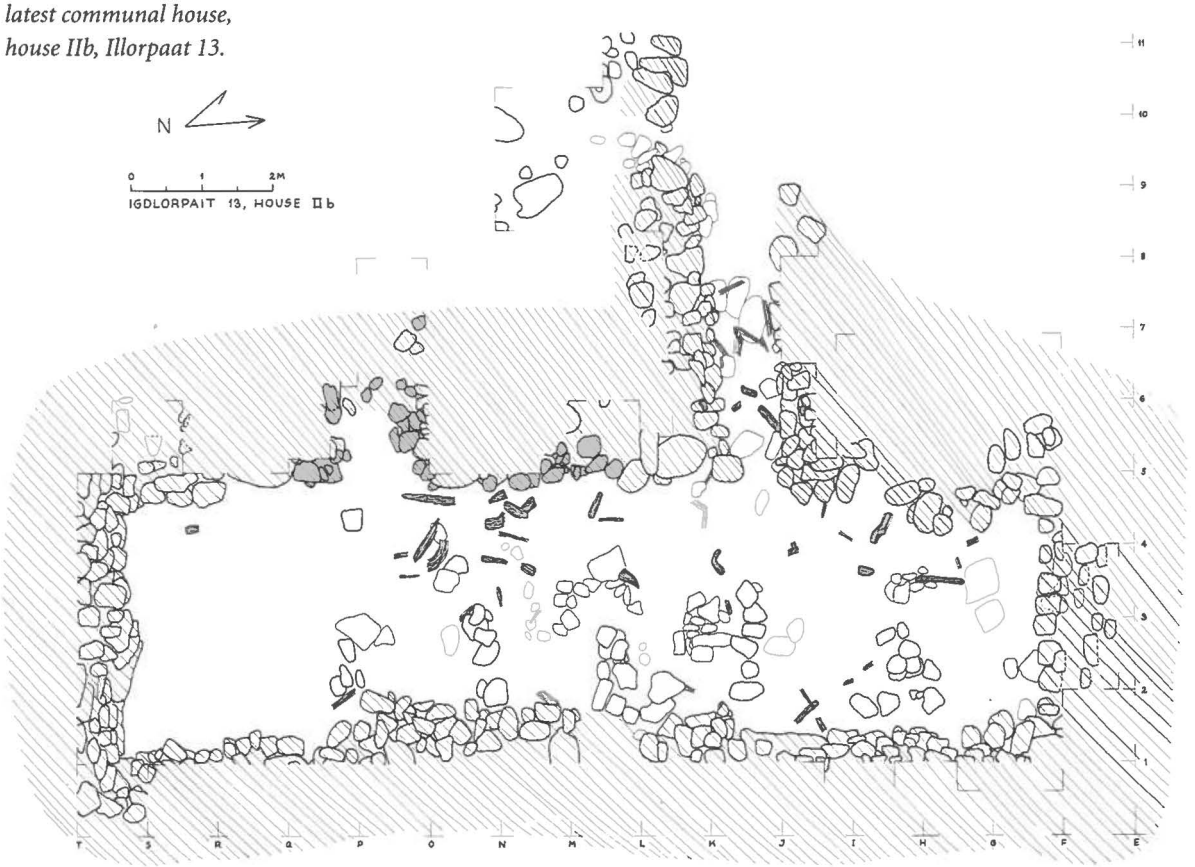


Fig. 35. *Ground plan of the latest communal house, house IIb, Illorpaat 13.*

of pieces of wood, seen between the wall stones, give a difference in height of *c.* 0.5 m, if the wood is to be interpreted as the remains of the roof.

Throughout the interior of the house there are large areas with mica and common mussel, as well as a few charcoal fragments. The artefacts are of Eskimo origin, but there were also a number of European artefacts, such as large iron rivets, bone-handled knives, glass beads, bricks, a needle and a pair of metal scissors.

The most southerly part of the house lies considerably lower than the rest. The uppermost stones in the wall are on a level with the bedrock along the inner centre section of the west wall. This is clearly a case of a later extension. In contrast, the north wall can be seen to have run further into the wall at an earlier stage.

Plan 2, house IIa, Illorpaat 13 (Fig. 36):

The plan corresponds with the layers called house II on the explained sections, as well as a little below, i.e. the area in sections A, B and C which are not hatched.

The ground plan shows a rectangular house of virtually the same extent as on plan 1. The northern part of the house has, however, become very slightly larger, as the north wall has moved a little to the north.

Fairly large pieces of wood are distributed throughout the interior of the house, along with a smaller number of flagstones, which lie at levels which differ by about 15 cm. The flagstones in the southern part, however, lie *c.* 20 cm lower.

Features here and in sections C and D indicate that the most southerly part must have been partitioned off, since a structural change could be demonstrated in the P-fields of the west wall. This alteration is marked on the plan as a hatched area with a question mark, which indicates the uncertainty of its time of construction. A soapstone pot, igd 227, broken into many pieces, was found here in the west wall and at a height which corresponds to the uppermost level. This makes it likely that a wall frag-

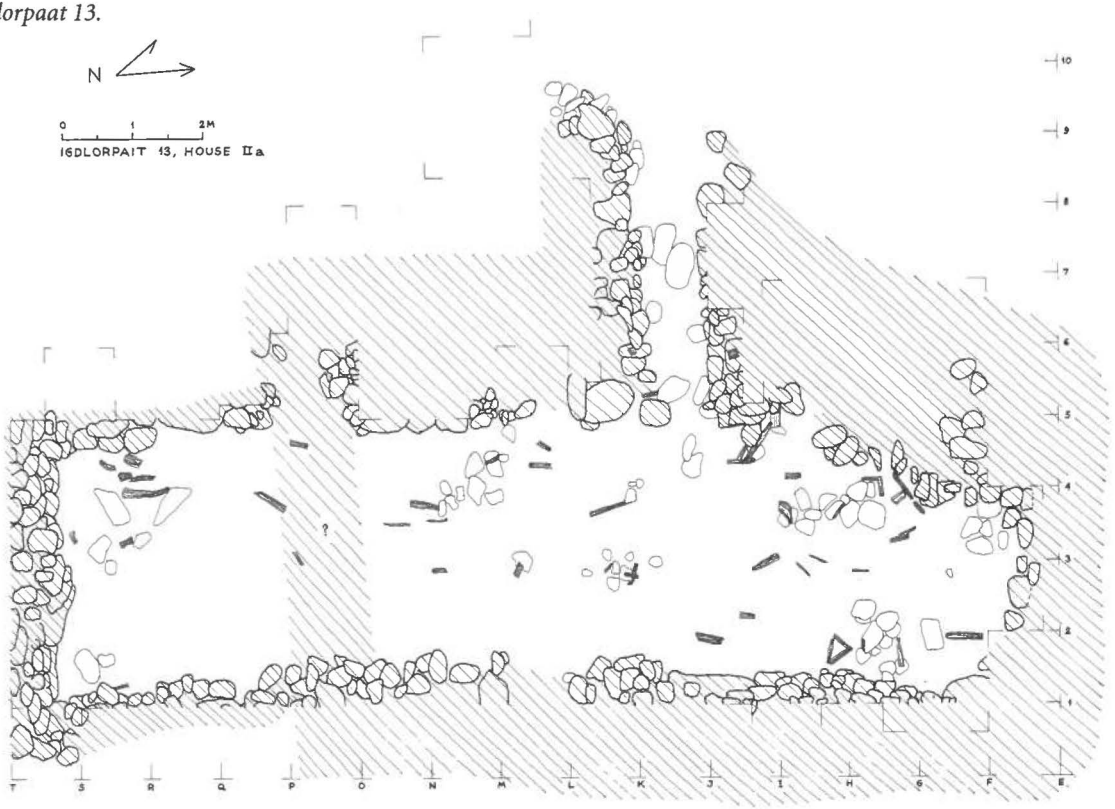


Fig. 36. *Ground plan of the building remains, house IIa, Illorpaat 13.*

ment was removed when the house was lengthened. A floor layer of the earlier house can in section C be seen to disappear under the west wall.

It does not appear that the most southerly part was inhabited for very long, if it ever was. This corresponds with the observations made at Illorpaat 3 and 9, where there were also remarkably few artefacts in the southern end of the latest houses.

There were wood shavings throughout the fill, with the greatest concentration in the northern part. There was great and evenly distributed occurrence of crowberry along the eastern and northern walls, no doubt used as platform cover. Bones were evenly distributed, with great concentration around the presumed wall course through the P-fields. Especially bones from harp seal (*phoca groenlandica*) and dog bones, as well as dog craniums (*canis familiaris*). Teeth from a domestic ox (*bos domesticus*) and a sheep (*ovis aries*) lay along the most northerly section of the east wall.

The artefacts were Eskimo, as well as European, such as glass beads, metal and bricks.

Plan 3, house I, Illorpaat 13 (Fig. 37):

The plan corresponds with the layers called house I in the described sections.

The north west corner has been uncovered on this plan and shows a construction belonging to an earlier house, the first on the site. In the interior a row of flat stones are seen between fairly large pieces of wood. The stones probably continue under the west wall and would thus be the remains of an earlier house passage. The difference in level between the stones under the wall and those inside the house is *c.* 10 cm.

The inner west wall which has been established corresponds with the extent of the floor layer under the west wall, as drawn in section C and this inner wall is marked on the ground plan. Correspondingly, the inner edge of the east wall is marked, since it



Fig. 37. *Ground plan of the earliest building remains, house I, Illorpaat 13.*

could easily be detected in a section which was cut through its northern part. The course of the north wall cannot be elucidated. The house has had an approximate size of 10 × 5 m.

The bedrock provided a very uneven building surface. This is illustrated in the contour plan, where the distance between the contours is 10 cm. Small and large stones have been used to level the ground in all the depressions below level 250 (above sea level). Furthermore, below this level there was a concentrated layer of wood shavings throughout the excavated area. It was most evident in the southern part, which had the character of regular midden material. This observation recurs in section D and that confirms that the partitioning off of the southern part of the house also took place in house I.

At high tide, the sea goes right up to level 190, as shown on the ground plan.

The artefacts are almost exclusively of Eskimo origin, but with some European among them, such as a saw of baleen, igd 677, a metal drill with a bone handle, igd 616, and the above mentioned spindle whorl, igd 501. In the southern part of the structure, the artefacts, which lie deep down in the rubbish layers, are of Eskimo origin. Only in the upper layer (also seen in section D) is there European material, such as bricks, a button and leadshot.

Itissaalik (old orthography Itivsâlik)

The island of Itissaalik lies one kilometre south of Illorpaat. The name means 'that which is *provided with* (-lik) a crossing-place' (itilleq, old orthog. itivdleq). There is a large communal house on the island and a ruin is marked in this place on Andreas Gerner's map of 1731 (Gulløv & Kapel 1979: 26-27). On the old plan the name "Narraks Øe" (Narrak's Island) is, furthermore, written by this place. This indicates that, when the plan was drawn up, it was known that it belonged to the Eskimos. An examination of the written sources has not revealed Narrak's identity, although this does not alter the fact, that the island was inhabited around the time of colonization.

There was no other visible winter settlement from the Thule culture on Itissaalik. However, remains of a dwelling from the Saqqaq culture were found under an 18th century tent ring immediately outside the east wall of the communal house. Tools and flakes of silicified slate were found everywhere in the communal house turf (Gulløv & Kapel 1973, 1988).

The structure

The communal house was built in an east-west depression, a pass which lies between the island's two mountain knolls. The house lies at the middle of the island's east coast *c.* 7 m above sea level. Before excavation it measured *c.* 10 × 5 m internally (Fig. 38).

To the west, approximately by the centre of the house, a *c.* 5 m long house passage can be seen to go out, with the faint traces of a 1 × 1 m kitchen niche. The house passage ends in a transverse wall like at Illorpaat 9. A 1.5 × 1.5 m meat cache is built into the west wall. A *c.* 5 × 4 m grassy area extended from the southern end of the house, but this could not be connected directly with the communal house construction.

This structure differs from the others described above, not only by its fairly high

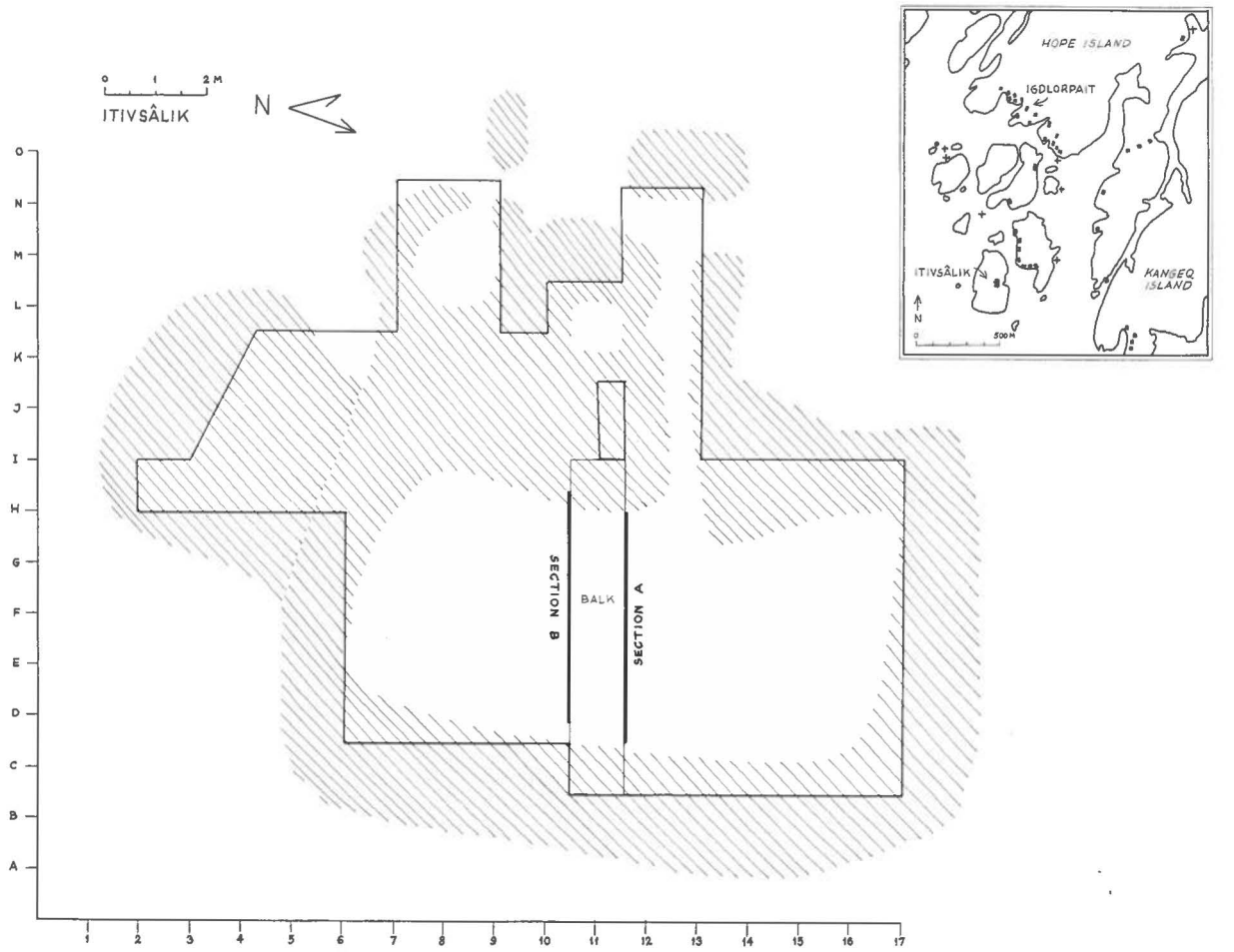


Fig. 38. *Plan of the structure on Itissaalik before excavation. The turf walls are hatched and the balk with its sections in the excavated area is marked. Inset is a map giving the location of Itissaalik.*

position above the sea, but also by its location *c.* 30 m from the coast, by the complete absence of midden remains and in that the house passage was oriented towards the west and thus towards the centre of the island.

Method

The datum point of the co-ordinate system was chiselled into bare rock WSW of the house and was marked with paint. The abscissa is defined as positive towards the north and the ordinate positive towards the west. The fixed point was marked as –253, +590 cm and was measured as lying 561 cm above sea level. The co-ordinate system was divided into 1 m lengths with the point indicators 1, 2, 3 etc. and A, B, C etc. for abscissa and ordinate respectively.

The structure is not tied into the overall co-ordinate system into which Illorpaat 3 and 9 and the midden trench are tied.

A 1 m wide balk was left across the long axis of the house, thus creating two excavation areas. The northern area comprised the interior of the house and a trench out through the house passage, as well as an extension of the excavation area to uncover the kitchen niche. The southern area comprised the interior of the house and the extensions to the south, as well as the meat cache.

The two sections of the balk were called A and B for the northern and the southern respectively and were measured and drawn after the excavation was completed.

Sections

The individual layers are described in the same way as at Illorpaat 3.

Section A (Fig. 39):

1. Bedrock.
2. Comparatively homogeneous gravel layer of a tripartite colour. Grey on top, then yellowish brown and blackish brown below. It is a leached layer with iron compounds, which at the bottom are secreted as *ferri.* The layer is sterile and was not excavated all the way to the bottom, but must be presumed to lie directly on the bedrock. It is well defined at the top.
3. Greyish black, gravelly layer, which is strongly humified. A few plant fragments can be seen. Well defined at the top.
4. Brownish, fairly homogeneous and humified layer, which borders to **3** with a black stripe containing faint traces of plant fragments, gravel and a certain amount of charcoal. The layer is moist and shiny. Constitutes the original vegetation surface. Well defined.
5. Brownish black heterogeneous layer, containing gravel and a high incidence of plant fragments, i.e. root and stalk, as well as bits of twig an a few sporadic bones. Well defined. To the west a number of turf stripes can be seen.
6. Brownish yellow stripe consisting of closely matted plant fragments and some bits of twig. The stripe varies in thickness but is well defined. Horizons of plant remains.
7. Layer with the same composition and character as **5.**
8. Stripe of light coloured sand.
9. Strongly marked stripe of matted plant fragments of recent character.
10. Layer with the same composition as **9,** only a fraction looser and darker.
11. Recent grass turf.

Section B (Fig. 39):

1. Bedrock.
2. Gravelly layer of the same character as layer **2** section A.
3. Totally humified blackish brown layer without structure. The upper part of the layer is admixed with white sand over an area of 160 cm seen from the east, which corresponds with layer **8** section A. The layer constitutes an original vegetation surface. The layer is admixed with flakes of silicified slate and bits of charcoal occur sporadically. The layer is moist, but does not give off water when squeezed, also appears shiny and has some plasticity. Well defined against layer **5.**
4. Dark and gravelly layer without structure and of the same character as **2,** but darker and of one colour. No cultural remains. Well defined against layer **3** and is marked by a few sparse plant fragments.
5. Dark brown to blackish brown, heterogeneous and humified layer with clear horizontal structuring. The layer is composed of plant remains, i.e. root and stalk, as well as a few wood shavings, and has varying contents of graves as in **2.** The amount of gravel increases towards **3.** There are artefacts in the layer, such as bits of soapstone and glass. The layer contains a layer of flagstones.
6. Lens of sand.
7. Lighter coloured, yellowish stripe consisting of very lightly humified plant

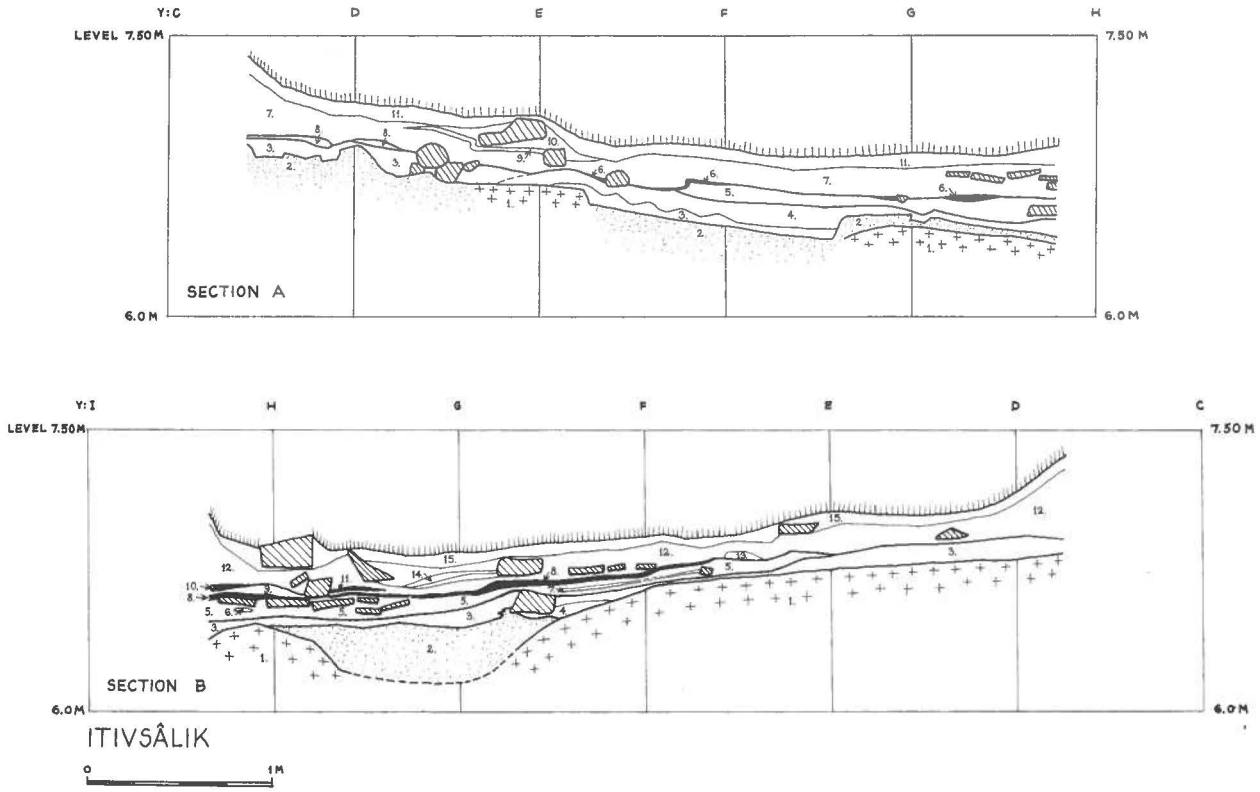


Fig. 39. *Plan of sections A and B, Itissaalik. Section A layers 1-11 and section B layers 1-15 are described in the text.*

remains and of wood shavings. Should presumably not be seen as a separate layer, but as a part of **5**.

8. Lighter yellowish stripe consisting of lightly humified plant remains with roots and stalks, as well as fragments of crowberry. Horizon of plant remains which corresponds with layer **6** section A.

9. Black, humified and heterogeneous layer of the same character as **2**. Plant parts can be seen. Well defined.

10. Yellowish layer consisting of very matted plant parts. Horizon of plant remains.

11. Of the same character as 10. Probably corresponds with it.

12. Strong, heterogeneous, dark and somewhat humified layer with lighter coloured stripes of sand and turf running through it. High incidence of plant remains, bits of crowberry, some wood shavings and a few bones. The layer contains an upper layer of flagstones. Well defined.

13. Whole turf.

14. Lighter, brownish stripe consisting of plant remains. Probably belongs to **12**.

15. Recent turf.

Explanation of the sections (Fig. 40):

The two sections are situated 1 metre apart and are therefore explained together. The thickness of the deposits indicates that the settlements here must have occurred within a comparatively short time span.

In both sections, layers **1** and **2** are the original rock surface. Layer **4** section A and layer **3** section B are both the original vegetation surface in which cultural remains from the Saqqaq culture can be demonstrated. Furthermore, the dividing line between **3** and **4** in section A looks wavy. This may be the result of turf-cutting with a

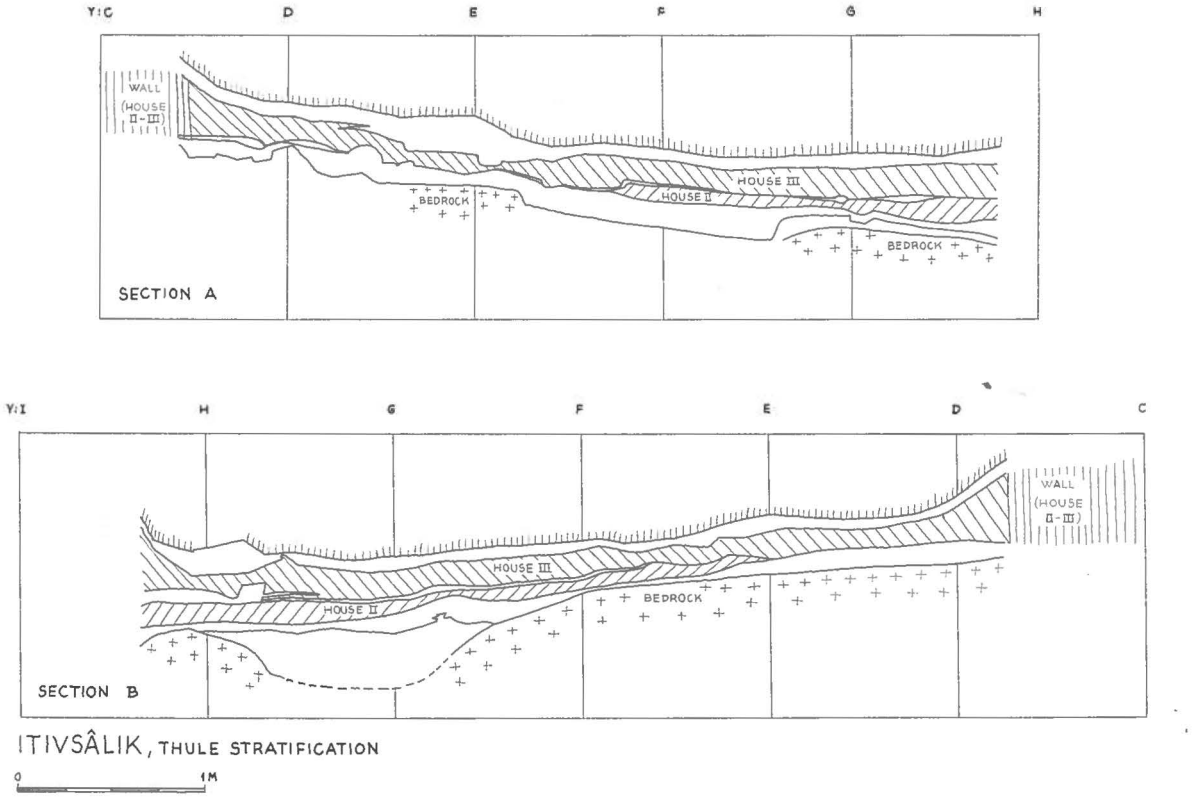


Fig. 40. *Explanation of sections A and B Itissaalik. The stratigraphy of the various construction phases is marked.*

pick. If this interpretation is true, the digging must have taken place before the subsequent settlement and thus be of palaeo-Eskimo origin (!).

At the top of section A, the building phases can be seen, sealed in by layer **11** with collapsed materials in layers **9** and **10** and similarly in section B layer **15**. Between these there are two clearly discernible residual phases, divided by culturally sterile horizons of plant remains, layers **6** section A and **8** section B.

Layer **5** sections A and B constitutes the first phase, which demonstrates the presence of the Thule culture here. The phase is called house II, because when this level was cleaned off, an even earlier house could be detected elsewhere. Layers **9** and **10** in section A show a rebuilding, which belongs to the latest Thule culture on the site, i.e. layer **7** section A, which corresponds with **12** section B. This is called house III. The east wall can be discerned in the sections, but the west wall cannot.

Dating:

The material from this site has not been C-14 dated. Nor is there anything to suggest that the dwellings, which can be seen in the sections, were of any considerable age. They are communal houses which were rebuilt a couple of times. A large part of the objects are of European origin. A pewter spoon, igd 1310, carrying the date 1739 was found below the stones of the platform in house III and thus possibly belongs to house II. Several clay-pipe stems carry the inscription *A. Ross – S.Ferslew*, e.g. igd 1283-85. These are the names of the people who ran Christianshavn's clay-pipe factory in Copenhagen in the period 1758-64. These pipe fragments were found in horizons which corresponded with house III. In the fill between the southern wall courses which demonstrate houses II and III (see the ground plan) there was a jetton, igd 1321 which is identical to those found in Hope Colony (Gulløv & Kapel 1979: 120-121). This is thus contemporary with house II.

Small coloured glass beads, which can be associated with Dutch activity, were also found in layer **5** section B. This layer may be partially admixed with waste from house I, as may be detected elsewhere (see the ground plans). The two last settlement phases, which are communal houses, can clearly be dated to the 18th century and are called II and III. The first settlement is a little earlier, presumably from the end of the 17th century or around the year 1700, and is called house I. The house type cannot be demonstrated.

Plans

The descriptions of the following three plans follows the sections. They describe the two last settlements on this site, the communal houses II and III. In addition there is house I, which could not actually be seen in the sections, but which clearly emerges on the last plan as evident building components. The signatures are the same as those used to describe the houses above. Other signatures are explained below.

Plan 1, house III, Itissaalik (Fig. 41):

The plan corresponds with **7** section A and **12** section B. The ground plan shows a rectangular house with an internal length of 10.5 m along the east wall and 8.5 along the west wall and an internal width of 6 m. The entire interior is covered by flagstones; the difference in level of the flags is *c.* 15 cm and they lie highest in the northern half. From the large stepping stone by the beginning of the house passage there is a descent of 35 cm to the first flagstone in the house passage and then an even descent

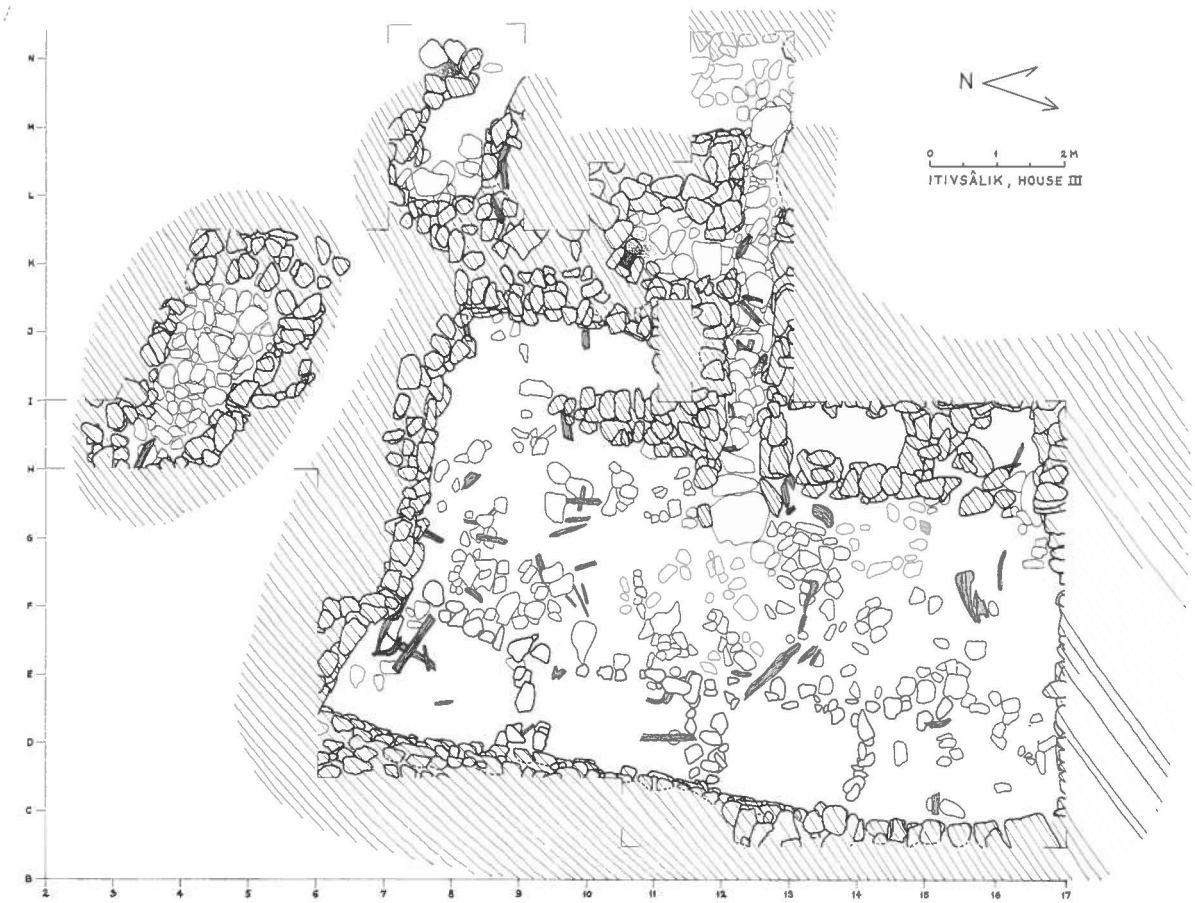


Fig. 41. *Ground plan of the latest communal house, house III, on Itissaalik.*

of 70 cm to the outermost stepping stones. The wall construction is very distinct everywhere, with clear joins at the corners; however, the south-western corner is rather more sloppily built.

The platform construction is marked along the east wall by three rows of foundation stones and a continuous row of stones marking the front edge. The construction of the window platforms can be seen at each side of the entrance, along the west wall. These, however, do not go right up to the north and south walls, where there are flagstones.

Objects of Eskimo and European origin lie scattered throughout the interior. The European objects are present in large numbers. Pieces of wood are evenly distributed across the whole of the floor area.

In the south side of the house passage there is a kichen niche. The hearth with charcoal is at the far end. Flagstones cover the floor.

Outside the house there is a meat cache built into the south-west corner. Flagstones cover the floor. A more recent hearth is located outside the south-west corner of the meat cache.

South of the house is an oval stone-built structure with an internal dimension of 3 × 1.5 m. No entrance to this room has been found. No objects were found inside it, but a single glass bead lay in the turf. This extension was presumably contemporary with the communal house itself. The flagstones lie level and *c.* 10 cm below the flagstones in the communal house. This room has probably served as some sort of cache.

Plan 2, house II, Itissaalik (Fig. 42):

The plan corresponds with **5** and **8** section A and **5** section B. The ground plan shows a rectangular house with an internal length of 10.5 m along the east wall and 9.5 m along the west wall and an internal width of 6 m. The floor area was increased by moving the south wall 1 m further out. This south wall is more compact than the former wall and the south-west corner is now very clear. The platform constructions from house III remain in the same place in this house. The front edge of the platform along the east wall is seen to run under the south wall of house III, and house II thus emerges as the original communal house with an internal dimension of 61 m2. The flagstones lie evenly distributed throughout the western half of the house, with a difference in level of *c.* 15 cm; highest in the northern half. The flagstones around the eastern platform construction must have been used in both house II and house III.

The large flagstones in the most south-westerly part of the house covered a fairly large cavity and were of a different size to the other flagstones. They probably do not belong to this building phase. The northern part of the house passage goes far into the house and is associated with a small row of stones, which runs in a north-westerly direction and continues under the stones by the window platform. This construction detail does not belong to the communal house either. A row of stones cuts across the north-western corner of the house and continues under the wall construction. This construction cannot belong to the communal house either. There must therefore have been an earlier settlement on the site.

The stepping stone in the house passage has been removed and 35 cm below there is a wooden threshold. This lies 20 cm below the flagstones inside the house.

The objects are of Eskimo and European origin, still with many of the latter.

The house passage with cooking niche is intact. Some of the flags in the passage have been removed, but without altering the even descent. The meat cache is also intact. The oval room is unaltered and the flags here lie at the same level as the ones inside the house.

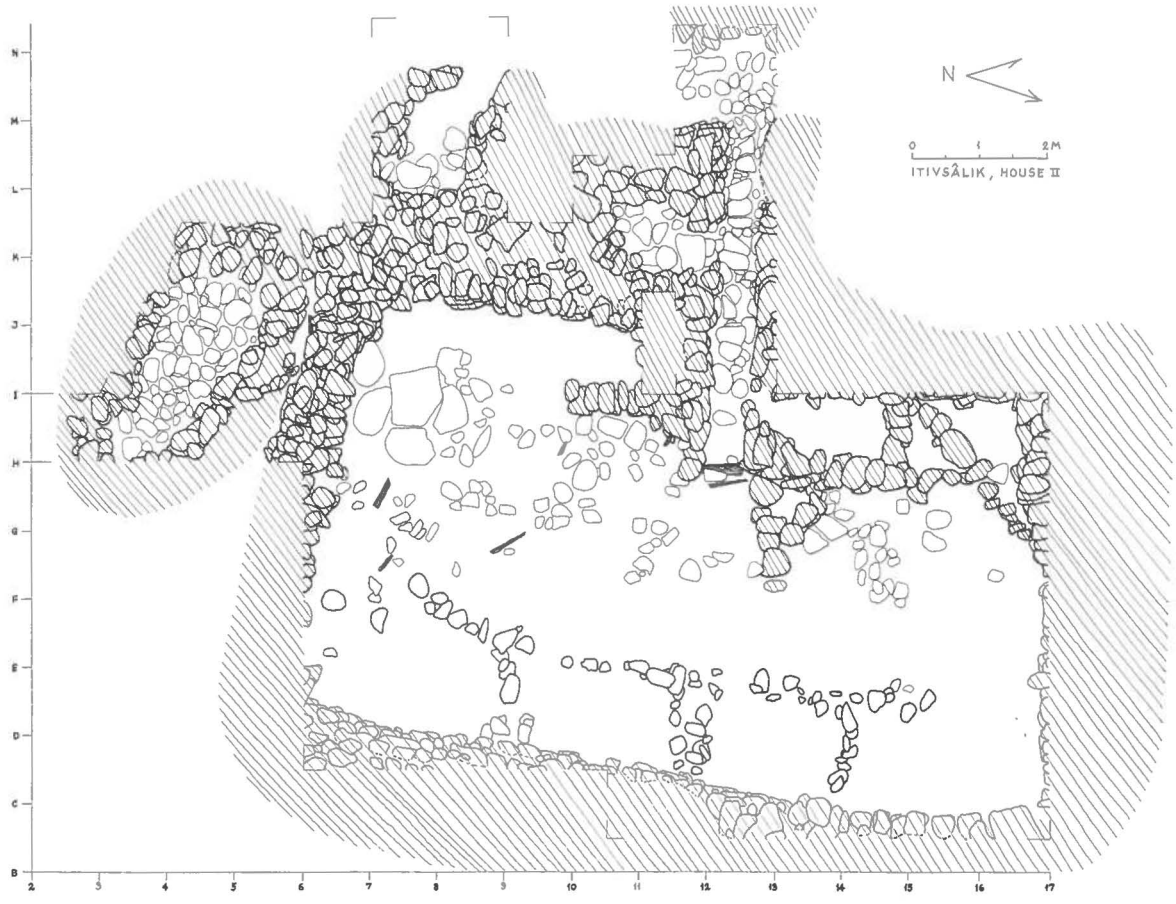


Fig. 42. *Ground plan of the earlier communal house, house II, on Itissaalik.*

On the whole these two communal houses differ from the houses at Illorpaat in many respects. The width of the houses is approximately double the width of the known communal houses in Godthåb District (e.g. Gulløv 1983). The origin of the objects also differs from those at Illorpaat. Among the 379 objects recorded in these nearly contemporary houses, 60% are of European origin. Half of the Eskimo objects are of soapstone, mostly parts of lamps or cooking pots. Fourteen lamp fragments and five toy lamps, as well as forty fragments of cooking pots and three toy cooking pots. The special nature of these finds suggests that houses II and III have served purposes other than that of an ordinary winter settlement. Hans Egede mentions that 10 to 20 lamps may be lit in a communal house (1925:365). However, the notion of a feasting house or some such cannot be excluded and this theory will be discussed after the description of the objects.

Plan 3, house I Itissaalik (Fig. 43):

There is no unambiguous correspondence between this house and the sections. It was only possible to make out faint traces of a possible earlier settlement in the most westerly part of layer **5** section B.

The ground plan shows the entrance area and the house passage of an earlier dwelling on the site. There is a 40 cm difference in level between the large flagstones and the stepping stone in the house passage. There is a suggestion of a wall construction and parts of the west wall have later been reused in the construction of the communal house. The rows of stones to the north, shown on plan 42, are repeated on this plan, but it is still not possible to explain them further. Nothing can be said of the

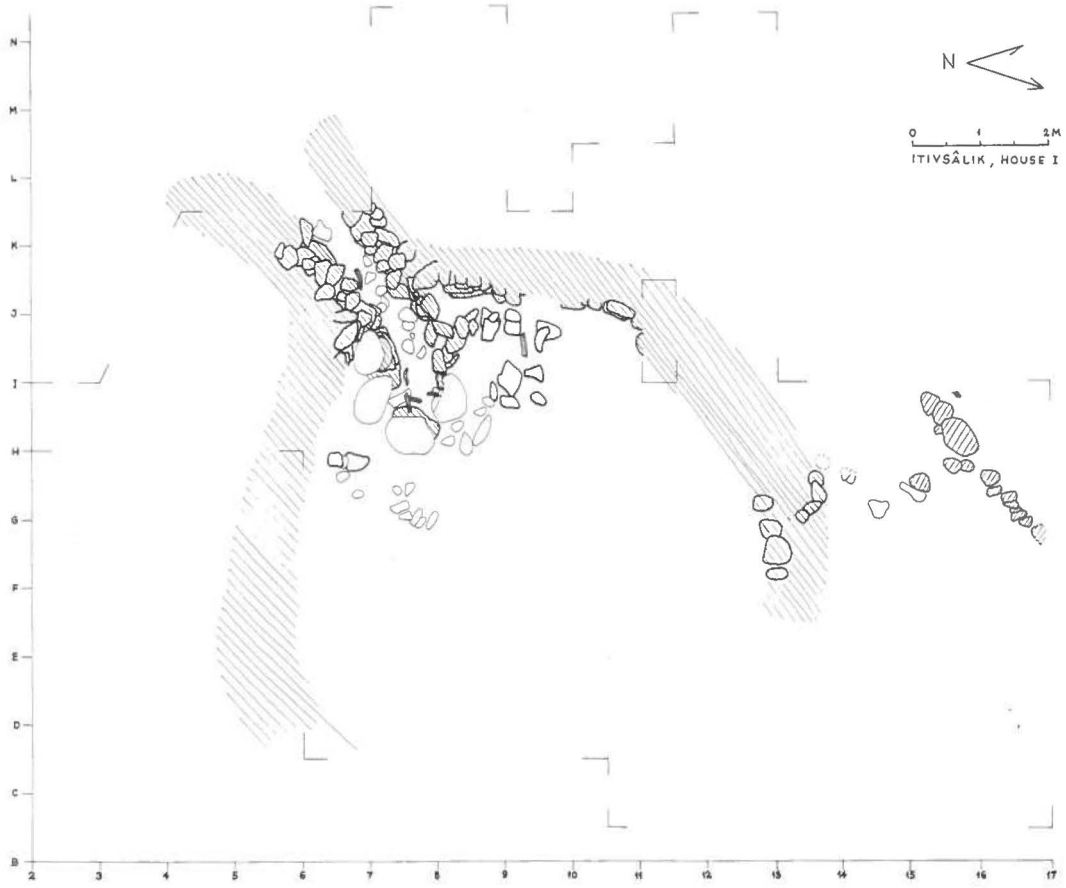


Fig. 43. *Ground plan of the earliest construction from the Thule culture, house I, on Itissaalik.*

shape of this house on the basis of the surviving traces of construction. It was, however, not a communal house, more likely a small rounded house, lying inside the hatched area on the plan.

There are few objects. A couple of small glass beads found at floor level inside the house passage might indicate a comparatively late date, but their association with the house is uncertain.

Concluding remarks. Flakes and tools of palaeo-Eskimo origin were found everywhere in the turf and in all three building phases. 294 individual pieces were recorded. It must therefore be presumed that the described house remains were situated in the immediate vicinity of a palaeo-Eskimo settlement. This hypothesis was confirmed by the examination of a later tent ring east of the site, through the 7-fields (Gulløv 1983: 112). This demonstrated the existence of a dwelling structure, consisting of a stone circle with a central hearth (Gulløv & Kapel 1973). 653 pieces of flakes and tools were found in the 1 m wide and 7 m long trench, all belonging to the Saqqaq culture (Gulløv & Kapel 1988).

Kangeq

Kangeq lies south-east of Hope Island. The name means "the ness" and refers to the rocky knolls on the island, some of which reach the height of 100 m. The most southerly knoll stands, with an almost vertical cliff face, as a huge bulwark against the often troubled sea. This is the geographical end of the Godthåb Fjord. The Kangeq settlement lies in a small inlet behind this ness.

Thick waste deposits on both sides of the inlet are evidence of many years of habitation (Fig. 44). The fauna in the sea is very varied and rich and the ice-free sea has always attracted the people, who travelled to Kangeq from north and south for overwintering (Gulløv 1976; Gulløv & Kapel 1979/80).

The place is marked on Andreas Gerner's map of 1731 (Gulløv & Kapel 1979: 26-27). In 1754 Kangeq became subject to the German Brethren Mission and it remained within this mission's sphere of interest until 1900, when the Brethren left Greenland. After this time the ecclesiastical affairs of Kangeq became subject to the Danish national church until 1974, when the settlement was abandoned and its inhabitants were moved to Godthåb. By this time the inhabited area had expanded 100 m to the south and 750 m to the north-west. The buildings numbered 41, included those owned by the state.

At the middle of the 19th century the settlement was still concentrated around the inlet (Fig. 45) and that remained the situation at the turn of the century. In the 1930s the houses on the northerly point of the inlet were abandoned and the settlement moved further inland (Gulløv 1976: 97).

The archaeological investigations on the site were undertaken in conjunction with a trial cleaning-off of the large midden sections north and south of the inlet. The primary object of the examinations was to supplement the palaeo-Eskimo studies which had been carried out in Disko Bay (Larsen & Meldgaard 1958) and in Godthåb Fjord (Meldgaard 1961). The examinations of the Thule culture on this site were therefore a secondary task for the National Museum's Archaeological Survey of Greenland in 1968 (Gulløv & Ilkjær 1969).



Fig. 44. *The thick middens in Kangeq, where sections A, B and C were examined.*

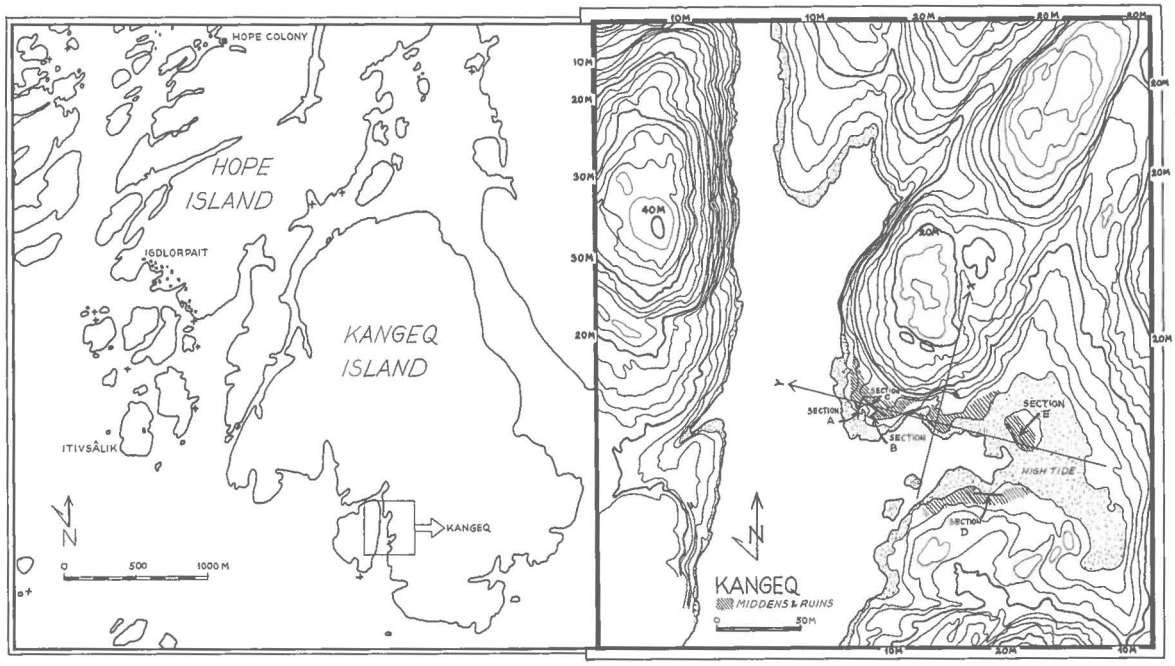


Fig. 45. *Plan of Kangeq with indications of the co-ordinate system and examined sections. The locations of the archaeological sites are marked on the left.*

The middens in Kangeq

The main sections were chosen on the point which forms the north side of the inlet and were called A, B and C. Section D, on the south side of the inlet, was cleaned off when bad weather stopped work on the point. The description of section D is not included below (but see Gulløv & Ilkjær 1969). The cleaning off of section E was abandoned, because the fill was completely without structure. According to local tradition, the watercolourist Aron's house stood above section E. This location corresponds exactly to Aron's own representation (e.g. Meldgaard 1982: 83).

Method

The cleaned-off sections were tied into a co-ordinate system, with its axis as shown on the plan (Fig. 45). The fixed point was chiselled into the rock immediately above section C and lies 5.24 m above normal high tide, i.e. *c.* 7 m above sea level. Section A meets section C at an acute angle, while section B does not meet C. The extent of section A is shown by the co-ordinates (-4.82/45.50) and (1.23/45.20). The extent of section C is from point (1.23/45.20) to point (-2.96/37.04). The extent of section B is from point (-5.73/36.10) to point (-7.85/37.80).

The excavation was hampered by permafrost immediately below the turf, which extended far beyond the eroded section (Fig. 46). The method used thus became a cleaning-off in horizontal layers, whose thicknesses were determined by how much had thawed out each day (*c.* 5-10 cm). The sections were then cleaned off vertically on projecting parts. The objects from the horizontal layers were divided into layers and measured in one level for each cleaned-off layer. These layers are not identical with the described culture-horizons in the cleaned-off sections. But because of the short distance between the plans and the sections (between 50 and 70 cm), it has been possible to project the measured-in objects onto the section plans and thereby determine their actual position. This method was primarily used in section C, since this was seen as the main section and indeed was more than 2.5 m high (Fig. 47).



Fig. 46. *The midden on the point in Kangeq before excavation.*

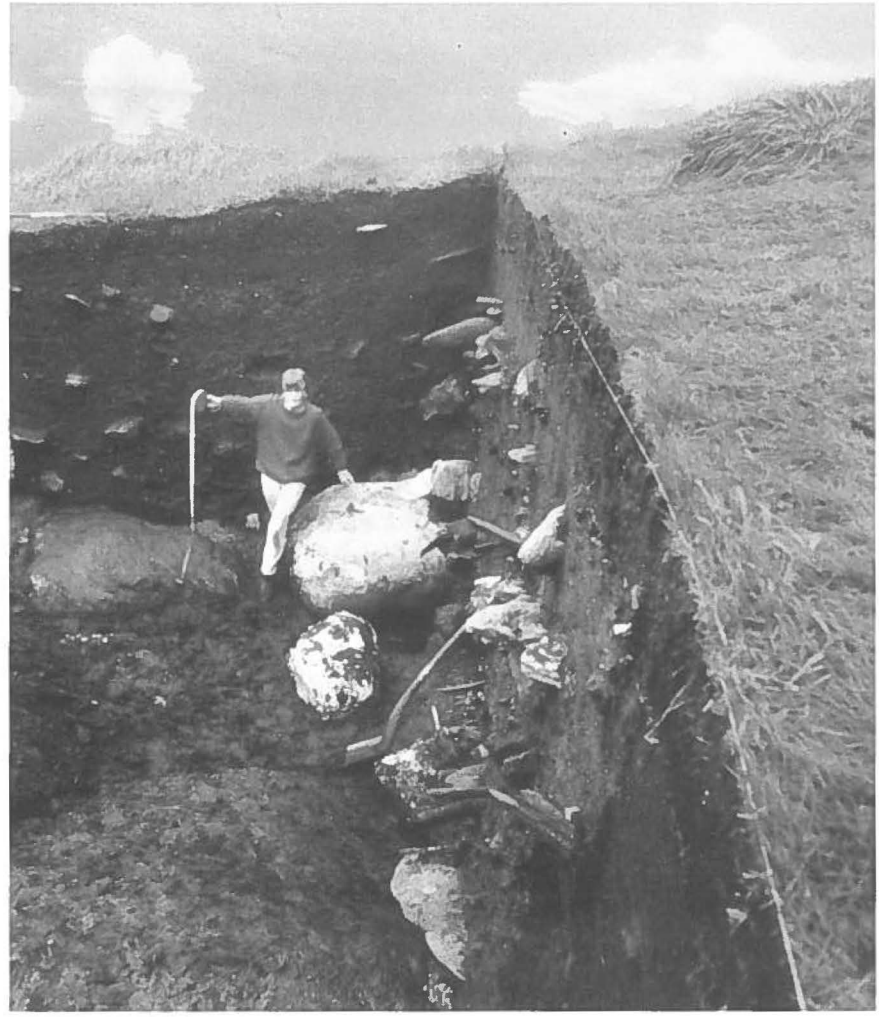


Fig. 47. *The midden on the point in Kangeq after excavation.*

Sections

The main section C is described first, then the secondary sections A and B. Since the objective of the examinations was the palaeo-Eskimo circumstances, the descriptions below can be regarded as sketches as far as the Thule culture is concerned. Together with the descriptions from Illorpaat and Itissaalik, they do, however, have a comparative value. As far as it is possible, the layers will be explained in conjunction with the descriptions.

Section C (Fig. 48):

1. Recent turf.
2. Very compact layer with many bones, sherds of glass, porcelain and pottery. The layer marks the last settlement on the point, i.e. 1936 (Gulløv 1976: 97).
3. Lightly humified, dark brown turf layer with a few sporadic cultural remains, such as bones, glass fragments and pottery sherds.
4. Dark brown, turf layer with fewer European objects. A 7-9 cm thick dense horizon of bones can be seen at the top of the layer.
5. Like **4**, but without the many bones.

Taken together, the layers **1-5** reflect the latest period of settlement, which can be dated to the last 50 years before the site was abandoned.

6. A heavily structured layer consisting of small, not continuous, waste horizons. The basic fill is dark brown turf admixed with layers of greyish black and highly humified turf, succeeded by light brown and more lightly humified turfs. In between them are horizons of wood shavings and bones. A number of objects of late Eskimo origin. 19th century.
7. Blackish brown turf layer admixed with many light brown areas. The layer appears heterogeneous and is much disturbed. Large concentration of objects with occurrence of bones, pieces of wood, skin fragments, feathers, a few whale bones and bits of baleen. 18th and 19th century.
8. A heavily structured layer consisting of small, not continuous, waste horizons. The basic fill is dark brown turf admixed with lighter coloured and slightly humified turfs. There are many pieces of wood. There are comparatively few objects in the lowest part of the layer, considering the number found in its upper parts. 16th and 17th century.

8a. Layer consisting of mussel shells (*mytilus edulis*).

9. Blackish brown turf layer which appears somewhat disturbed. However, it is possible to discern a structured succession of layers between **4** and **5** and three turf samples for C-14 dating are taken here. A number of pieces of baleen and wood can be seen in this layer. 14th and 15th century.

9a. A light coloured and cindery layer, which might indicate the location of a hearth. Around it is a turf mass containing blubber. *c.* 10 cm thick. Sample taken here for C-14 dating.

10. Greatly humified and black turf mass. Must be explained as the original vegetation surface. A hint of horizontal structuring. Sample taken for C-14 dating from the upper half of the layer.
11. Beach gravel and sand admixed with a few flakes of quartz and silicified slate.

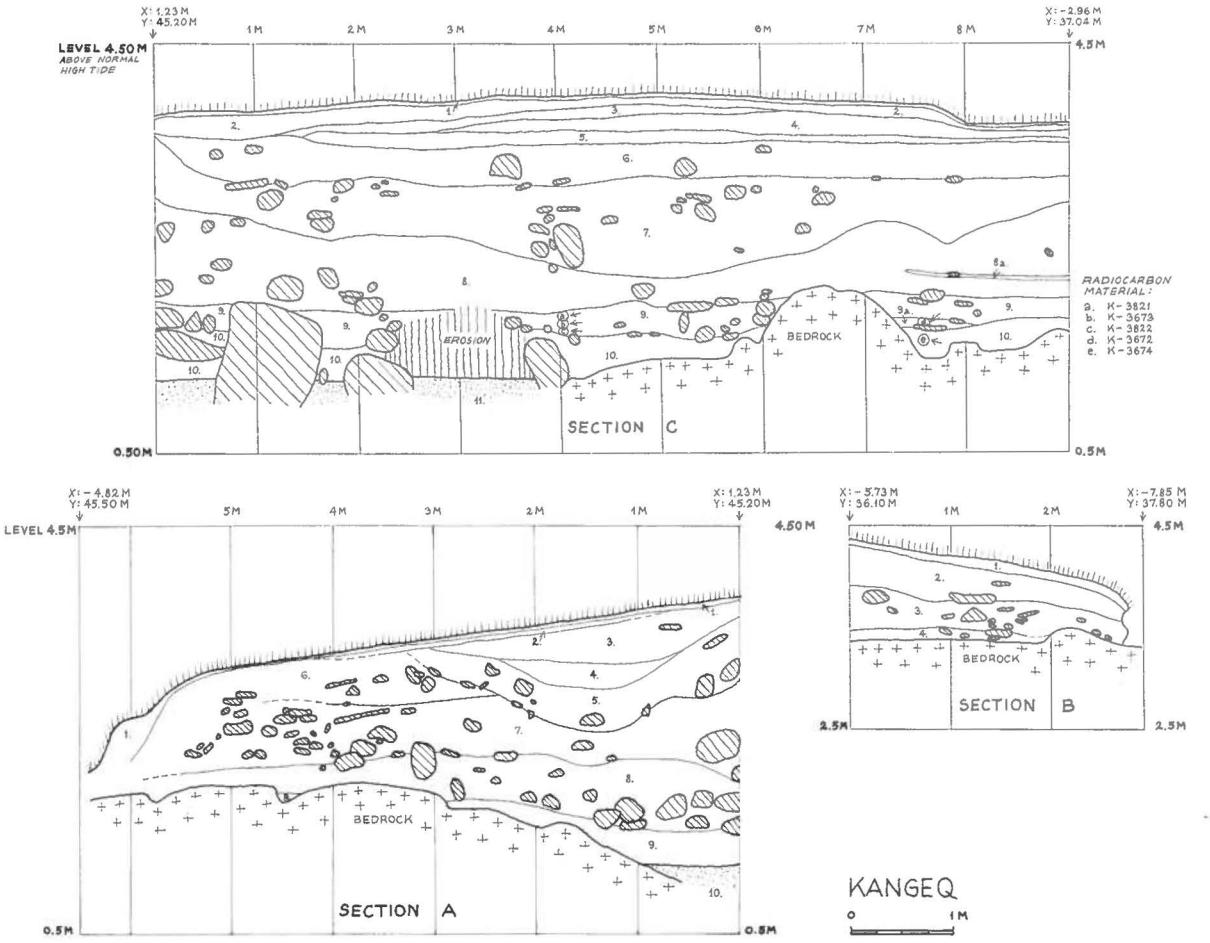


Fig. 48. *Plan of sections A, B and C. Kangeq. Section A layer 1-10, section B layer 1-4 and section C layer 1-11 are described in the text. The places where material for the C-14 tests a-e was taken are also marked.*

Section A (Fig. 48):

1. Recent turf.
2. Vegetation layer with recent waste remains.
3. Slightly humified turf layer. Greyish brown to dark brown. A few lighter coloured turfs can be seen. A few bones and glass fragments. Corresponds with layer **2** section C.
4. Light brown, concentrated waste layer consisting of wood shavings, bones, glass fragments and pottery. Corresponds with layer **4** and partly with **5** section C.
5. Lowest part of a pit-shaped depression. Structured, dark brown turf mass. Small frequency of bones and other waste. Partly passes into layer **7** section C, but no clear connection can be demonstrated.
6. A clearly structured horizon consisting of dark and greatly humified turfs and of lighter and slightly humified turfs. A horizon of wood shavings and bones is seen in the layer. There are a number of objects. The layer disapears at disturbances to the south. Mostly resembles layer **6** section C.
7. Clearly structured layer with many stones and several pieces of wood. Partly corresponds with layer **8** section C.
8. Compact waste layer of a brownish black shade. Large occurrence of bones, wood shavings, feathers and skin fragments, bits of baleen, as well as many objects. Corresponds with layer **9** section C, but there is no trace of any structure in this heterogeneous layer.

9. Corresponds with layer **10** section C. At the top of the layer it seems admixed with particles of clay and at the bottom with sand, which here (between 0 and 1 m) gives the layer a greyer shade. Three weapon heads of silicified slate were found *in situ* in this layer, one of them in the depression between 4 and 5 m. The tool types dated them to the Saqqaq culture.
10. Beach sand and gravel. No objects were found here.

Section B (Fig. 48):

1. Recent turf.
2. Dark brown turf layer with sporadic occurrence of bone. A few worked pieces of wood. Corresponds with layers **1-6** section C.
3. Greyish black, structured turf layer. Great frequency of bones and bits of wood, as well as comparatively many objects. Corresponds with layers **7** and **8** section C.
4. Corresponds with layer **10** section C. Contained a considerable amount of sand. There were no objects.

Dating:

The five places where turf samples were taken for C-14 dating are marked on the plan of section C. The dates are the subject of some uncertainty, since the admixture of older turfs may have had some influence on them. The dates are correlated for isothope-fractions and expressed in conventional C-14 years and calendar years in accordance with the calibration curves of Clark (1975), Stuiver (1982) and Stuiver & Pearson (1986).

Sample no.	Material	C-14 years	Clark (1975)	Stuiver (1982)	Stuiver & Pearson (1986)
a. K-3821	turf	1460±65	A.D. 1425	A.D. 1425	A.D. 1430
b. K-3673	turf	1330±70	A.D. 1365	A.D. 1305-1385	A.D. 1305-1380
c. K-3822	turf	1350±50	A.D. 1375	A.D. 1325-1390	A.D. 1315-1390
d. K-3672	turf containing blubber from slag horizon	1460±60	A.D. 1425	A.D. 1425	A.D. 1430
e. K-3674	humified turf	190±70	A.D. 240	A.D. 255-315	

The material taken from layer **9** section C demonstrates the Thule culture in Kangeq in the 14th century. Tools found in this layer, e.g. the side prong of a bird dart L13.3441, point to the early Thule culture. A number of objects related to the Norse culture also come from this layer (see the description of objects from Kangeq). In spite of the uncertainties associated with the use of turf samples for C-14 dating, the above dates demonstrate that layer **9** very probably is *c.* 100 years older than the settlement on Illorpaat.

If calibrated at ± 1 standard deviation (Stuiver & Pearson 1993) the datings become as follows: **K-3821:** A.D. 1405-1450. **K-3673**: A.D. 1295-1410. **K-3822**: A.D. 1305-1410. **K-3672**: A.D. 1405-1450. The Thule culture was thus present in Kangeq in the period 1300-1450 A.D.

It has not been possible to demonstrate any lengthy break in the habitation in this place, as there was at Illorpaat. Layer **8** section C, however, does contain some horizons with a low occurrence of objects and cultural remains generally, and this might

be explained by a partial absence of people. But since Kangeq enjoyed a sheltered position it was perhaps never completely abandoned, unlike the outermost coast which was left some time in the 17th century.

The date from layer **10** section C does not correspond to the dates of the Saqqaq culture, but, as the entire layer is structured horizontally, a cultural stratigraphy may be expected. In the place where sample **e** was taken from the section, around 400 waste-pieces of quartz were found and among them a broken lance head, which typologically can be assigned to the Dorset culture. Whether this dating gives the age of the find, or merely the age of the surrounding turf, is a question which will not be answered in the present discussion (Gulløv & Ilkjær 1969: Plate 3).

Descriptions of the winter dwelling

The following contains a number of observations made at known locations on the west coast of Greenland. These are descriptions of winter dwellings as observed by John Davis in 1586 (Hakluyt 1589: 788), by James Hall in 1605 (Birket-Smith 1929a: 96-97), by David Danell in 1652 (Bobé 1916: 212, 232) and by Laurens Feykes Hann in 1719 (Hann 1915: 77). To those is added information gathered by Hans Egede in 1725 (Egede 1925: 159) and by Otto Fabricius in the 1770s (Ostermann 1946: 55). The quoted passages describe the types of dwelling which were in use before, or at the time when, the large communal house emerges in the historical sources.

The aim of this exposition is to establish the time when the communal house came into use in western Greenland and to compare this information with the archaeological account above. Each description will therefore be discussed on the basis of what it relates about locality, house type and choice of building materials. Several of the cited passages are well known and have been used in the past in studies of the evolution of the Greenland house types (e.g. Steensby 1910: 322ff; 1917: 190f; Birket-Smith 1924: 144-147).

John Davis

On his second journey to Greenland in 1586 John Davis arrives at Gilbert Sound, which he says lies at 64° 15′ N. On 4th August Davis notes on the north coast of this sound:

> "Wee also sawe their houses neere the Sea side, which were made with pieces of wood on both sides, and crossed ouer with poles & then couered ouer with earth; we found foxes running vpon the hils; as for the place, it is broken land all the way that we went, and full of broken Islands" (Hakluyt 1589: 788).

Discussion of Davis:

It has been established (Bugge 1930) that Gilbert Sound is identical with Godthåb Fjord. It can be seen from the passage that Davis must have found himself at the coast, where the sea was "full of broken Islands". There are no ruins of winter-houses at 64° 15′ N (Gulløv 1983: 78), but the Kangeq area lies a mere 10 km to the south at 64° 07′ N and the observations may have been made there.

Nothing is said about the shape of the dwellings, but Davis does note that much

wood has been used in their construction, both on the sides and in the roof. They are not tents, as the dwelling is covered by earth. This is thus a remarkable description, which specifies a locality and emphasizes the large amount of driftwood, which was found on the coast and was used as building material.

Davis had already in the previous year wondered at the "reasonable quantitie of wood, both firre, spruse and iuniper", which he saw everywhere in the area and which he presumed to grow further inland (Hakluyt 1589: 778).

The archaeological description of the earliest structures on Illorpaat confirms Davis' observations. Whole heaps of large pieces of wood were excavated and in addition to these collections of wood the fill most often consisted of compact horizons of wood shavings. 55 pieces of wood were used in the 6.5 m long row of parallel planks from Illorpaat 3. When these are projected onto section C, to which they lie almost parallel at a distance of 0.5 – 1 m, they can be seen to run along the upper part of the earliest deposits on the site, i.e. layer **20** (Fig. 49). With the help of John Davis we may get a little closer to an explanation of this unique wooden construction. It can hardly be the remains of a covered house passage, as the pieces lie only *c.* 25 cm above the bedrock. But the regular structure and the cutting marks on the individual pieces (Fig. 21) may suggest European activity as in the following passage:

> "On 16th June 1587, when we were on 64 degrees latitude" (Bugge 1930: 82), "we came to an anker about 4 or 5 of the clocke after noone, the people came presently to vs after the old maner, with crying Il y a oute, and shewing vs Seale skinnes. The 17. we began to set vp the pinnace [*i.e.* a small vessel navigated with usually eight oars and sails, usually with two masts] that Peerson framed at Dartmouth, with the boords which hee brought from London. The 18. Peerson and the Carpenters of the ships, began to set on the plankes [...]. The 20. about two of the clocke in the morning, the Sauages came to the Island where our pinnace was built readie to bee launched, and tore the two upper strakes, and caried them away onely for the loue of the iron in the boords" (Hakluyt 1589: 789-790).

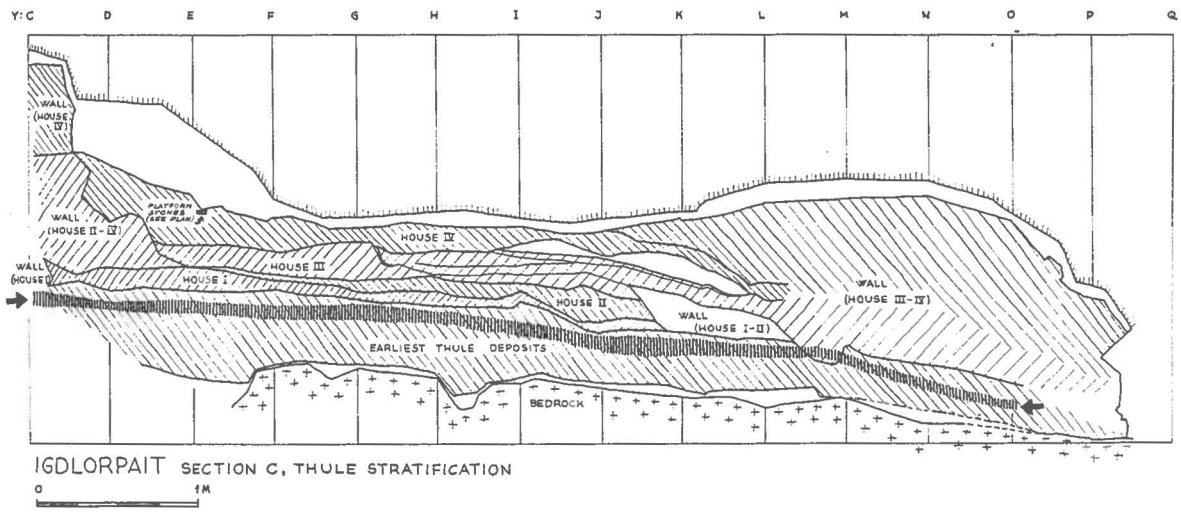


Fig. 49. *Section C, Illorpaat 3. The row of planks is projected onto the top of the waste layer from the earliest Thule culture. Their course is shown by vertical hatching between the two arrows.*

Launching a vessel of a size such as this necessitates the use of a slipway. The excavated construction, which had a maximum drop of 0.5 m, may very well have served as a slipway for a pinnace in 1587(!). The archaeological account (Illorpaat 3, plan 6) places the planks in the 16th century and their projection on section C indicates a date close to 1600 A.D. This example thus displays a fascinating conjunction between archaeology and history. What is left of the winter dwelling is the house passage, which the row of planks traversed.

James Hall

The next documented visit by Europeans to the coasts of Greenland took place in 1605. In this year King Christian IV sent an expedition under the captainship of James Hall. The observations were made at 66° 30′ N and are as follows:

> "On the ninth in the morning our captain and the captain of "Ørnen" went on their boats up the fjord, where they saw their winter-houses, which are built of whalebones with beams of whale ribs and above covered by earth, and they had square vaults or cellars below the ground, dug nearly two yards down into the field. The number of these houses was forty odd" (Birket-Smith 1929a: 96-97).

Discussion of Hall:

It has been established that the fjord in question is the Itelleq Fjord (Bobé 1916a) in the present-day Sisimiut municipality. The place that Hall had visited was finally identified at the south side of the fjord in 1977 (Meldgaard 1980a: Fig. IX A). The site was not examined archaeologically. The basic form of the houses was circular. The cellar mentioned by Hall is the visible floor area bordered by at least three platform sides. This gives it a square appearance. The building materials are said to have been exclusively whale bones and ribs. This contrasts with John Davis's description, which does not mention this building material. Nor have any whale bones been found in the archaeological excavations in the Kangeq area or in the Godthåb region generally (e.g. Gulløv 1983).

Until archaeological excavations have been undertaken along the coast of Sisimiut municipality, Meldgaard's observations of 1977 remain an indirect archaeological confirmation of James Hall's description. Frederiksen (1912: 393) also mentions the use of whale bones for house-building and yet another source may be cited to confirm that in the houses "the ribs and jaw-bones of whales had been used instead of wood" (Riis-Carstensen 1890: 40).

David Danell

In 1652 David Danell, sent by King Frederik III, arrived at the location which had been described by James Hall. Here he noted:

> "... some of their houses which they had left, and they stood deserted, and they had dug somewhat in the ground and then whale's ribs and some pieces of wood had been laid across, and they were hollow as a large baker's oven and roundish and there lay earth and sods over them with which they had been covered" (Bobé 1916: 212).

Discussion of Danell:

Even 50 years after James Hall's visit the dwelling form is unaltered. The building materials now also include some wood. This new building material has, however, hardly predominated, since Danell's report ends with the remark that "their houses are built like a baker's oven with whale ribs and some pieces of wood *supported* [my italics], on which lie earth and turf" (Bobé 1916: 232). The large piece of wood found in Illorpaat 9, house I may have functioned as a roof-support in a house of this type. But it is still to the north of the Godthåb region that whale bones are used in house constructions.

The southern borderline for the use of whale bone may be found in the Maniitsoq/Sukkertoppen municipality, where extensive archaeological exsavations have been carried out (Mathiassen 1931). However, the building materials in the rounded and circular houses investigated there did not contain anything to confirm Hall's and Danell's observations. Only in house 23 on Utoqqaat (Utorqait) was there a shoulder-blade from a Greenland whale (*op.cit.*, pp. 24-26). In the midden at Qeqertarmiut, on the other hand, there were large amounts of wood in the bottom layer, and a structure at the bottom of this midden was surrounded by a fill which "was extraordinarily rich, especially in objects of wood; twelve large pieces, up to 1.1 m long, were taken from just over the floor, presumably all that was left of the roofing" (*op.cit.*, p. 42).

These archaeological observations correspond closely to the archaeological results from Illorpaat 3, where twenty of the pieces of wood, found in the nethermost deposits from the Thule culture, were of the same length.

There appears to be a borderline south of Itilleq and north of Kangaamiut, which marks a change in the choice of building materials for the winter-houses along the coast in the 16th and 17th centuries. The archaeological excavation of the midden in Kangeq demonstrated that wood occurred and that it had been used here a couple of centuries earlier. The lowest layer from the Thule culture contains much wood, as well as some baleen, but no whale bones. We have an account from the 15th century that "on Greenland's coast human dwellings are seen, which look like ships' hulls with turned-up keels, because the inhabitants build their houses with whales' ribs, and roof them carefully with moss and heather to keep the snow and rain out" (Magnus 1555: 69). This description has not been given a location, but it has been suggested that it refers to the east coast of Greenland (GHM 1845: 473-481).

Lourens Feykes Hann

A small book written by the Dutch whaling captain Lourens Feykes Hann was published in 1720. This contains a description of Straat Davids, the costumes of the inhabitants etc., and is based on observations made on journeys to western Greenland over a period of 10 years. The following passage is the first description of west Greenlandic winter-houses made since the time of David Danell.

> "The houses they make of rocks and mixed with earth, which they then build up into a wall, 2-3 feet thick and 4-5 feet high [Dutch feet, i.e. 0.63-0.94 m thick and 1.26-1.57 m high], but quite flat on top, so that one generally runs across it. The length of their houses varies and they are built according to the smaller or greater number of house-companions, who are to live in them, and various houses are inhabited by 3-4 house-companions. The roofs of the houses are made, in the absence of wood which is often the case, of the ribs and jaws of the whale, but also of battens, when such are available, which they lay across the walls, as one does

here with the beams, and under each beam at the centre a support, in order thus to prevent the beams from bending or collapsing, and they then further cover the roofs lengthways with pieces of wood, as many as they think are needed, which they then seal with lumps of earth, so that a fairly good and strong, firm, waterproof building is obtained. In the buildings or houses there is only one room or small chamber, where they mostly always eat, sleep and keep house together" (Hann 1915: 77).

Discussion of Hann:

The description above does not represent one single observation, but is the result of several summer-journeys in the west Greenlandic waters. We know from Hann's course instructions for navigation by Greenland, that the coast where he made his observations stretches from Sisimiut to Disko Bay, i.e. 67°-70° N (Hann 1916: 41-49). The baleen whales, whose ribs and jawbones according to Hann "are used as beams in their houses" (1915: 75) were caught on this stretch. Nothing is said directly about the form of the houses, but the length varies and depends on the number of house-companions.

3-4 house-companions are mentioned, which is a minimum, since he later says that the greatest number of heathens he has found or seen living together was 300-400 (1915: 83). They usually live 5, 6, 7, 10 or 12 together as house-companions. The meaning of the term house-companions is not clear from the context, but he also uses the term household, which in the summer lives in a tent and owns an umiaq. It thus appears that a house-companion must be an adult male member of a family. We must assume that the house-companions were to a very large extent interrelated. In consequence, the description of their dwellings includes both small and large houses. The latter indeed of the same size as communal houses.

Hann's description is the first time the communal house is mentioned in the written sources about Greenland. The wood mentioned in connection with its construction is no longer as abundant as it was when John Davis made his observations 125 years earlier. Hann writes that in the summer they "leave their houses, whose roofs they largely break down or demolish, in order to take the wood with them to use in another way" (1915: 78). In this description there is an analogue with the early communal houses, which can be archaeologically demonstrated on Illorpaat, and which are contemporary with Hann's observations, i.e. Illorpaat 3, house I and Illorpaat 9, house II.

There are no traces of whale bone in the archaeological examinations in Sukkertoppen and Godthåb Districts. On the other hand, the examinations in Disko Bay (Mathiassen 1934) demonstrated extensive use of whale bones in house constructions, e.g. Illutalik (Igdlutalik) houses VI, VII, IX, in front of V and Illorsuit (Igdlorssuit) houses II, VI, as well as pieces in houses VII, VIII, IX, X, XII and XVIII. None of these houses, however, resemble the rectangular communal house, but are all circular or rounded. In several of these houses there were objects of European origin, such as pottery and glass beads, which can be associated with that Dutch activity of which Hann was also an exponent, i.e. whaling combined with bartering (Gulløv 1987; Hann 1915: 82).

Hans Egede

When Greenland was colonized in 1721, Hans Egede brought with him the description, which Hann had had printed the previous year, as well as a map of the country (Bobé 1936: 68). Shortly after his arrival in July the colony's dwelling house was completed and Hans Egede kept a meticulous diary for the next 15 years. Here we get the first description of winter-houses in Kangeq since the one provided by John Davis 135 years earlier.

In this place, Egede wrote on 6th December 1721, there were more than 100 people, 20 to 30 in each house (Egede 1925: 12). In one house he counted 45 people – men, women and children (*ibid.*, p. 13). Large amounts of wood were used in house building. However, there was heavy consumption of firewood in Hope Colony and this caused a shortage of driftwood on 27th September 1723, wherefore a number of the Greenlanders' houses were demolished and the timber removed (*ibid.*, p. 104).

But, although the general picture given by Egede primarily gives the impression of large dwellings, it is repeatedly stressed that their size is described in comparison with other dwellings, which must therefore have been smaller. Egede noted in his Greenland description of 1741 that "a number of these houses are so large that 7 to 8 families can live therein" (1925: 365). On 21st January 1722 he wrote after a visit to the Greenlanders that they "were at once willing to receive us, and lodged us in a small house by ourselves" (1925: 13).

He noted the situation at other parts of the coast in his diary on 16th January 1725:

> "Furthermore, the above-mentioned woman related that in the north, from whence she has come, the Greenlanders catch many unicorns [i.e. narwhals] on the ice in winter, and they have such large quantities of them that instead of poles and beams, of which there is a shortage, for their tents they use large unicorn horns, and for poles and beams in their houses they use whalefish ribs, which they also get many of in the summer, and which are there in greater numbers than at the usual whaling place [i.e. Nepisat by Sisimiut], which is visited by the ships of our nation" (Egede 1925: 158-159).

On 19th July 1723 Egede was given the following information about the most southerly part of western Greenland by some Greenlanders who came from there:

> "that in the south, where they live, there are many derelict stone-built houses, which the Kablunachs, i.e. the Norwegians, had inhabited earlier, but they are now deserted, so the Kalals, as they call themselves, now again live in many of these derelict dwellings" (Egede 1925: 86).

Discussion of Egede:

At Kangeq and on Hope Island the communal house was the dominant type of dwelling and there was plenty of wood for housebuilding. Egede was told about the absence of whaling at the colony as early as on 9th May 1722 by the Greenlanders, who said that no large whales came there, "but only far to the north" (1925: 23). Two years later, on 21st March, he managed to elucidate the true relationship between the migration of the whales and the whaling, when he was told by Greenlanders of the Sisimiut area that "in all these whaling places they say that whales of the right kind, which have large baleens, stay in January, February and a part of March; but at the end of March it [i.e. the whale] moves further north, where the whaling usually takes place in the summer and to where the ships go [i.e. Disko Bay]. But at the end of June

the whale moves even further north [...]. The Greenlanders also related that not until spring did a number of ships usually go to Nepisat [i.e. *c.* 20 km south of Sisimiut] in order to buy baleen and other skin wares from the savages and thereafter go north for the whaling. And when the whaling is over, a large number of ships go into Sydbay [i.e. *c.* 30 km north of Sisimiut] and some go into Nepisat, solely to trade, because other and many savages also come there from the far north, besides those who are already there in winter and summer" (1925: 120).

There is no doubt that for centuries the choice of building materials has been determined by the availability of driftwood and whale bone. These materials have also determined the form of the houses and – to a lesser extent – their size.

We do not know the form the houses had in Disko Bay, when Egede in 1725 was told of the use of whale bones in the north, but the archaeological investigations (Mathiassen 1934) have only been able to demonstrate the use of whale bones in rounded house types.

In the 56 sites which were archaeologically investigated in Julianehåb District (Mathiassen 1936) only one circular house yielded "two large whale bones" (*ibid.*, p. 21). The information of 1723, that the Eskimos live in the deserted Norse ruins, is confirmed by the presence of Eskimo structures in the Norse sites in five locations (Mathiassen 1936: 67-68). All are described as small houses. It is curious that Egede writes that they now live there *again*. Perhaps it just means that the houses are now again inhabited.

In the Norse Western settlement, in Godthåb District, Eskimo occupation can be demonstrated at three of the Norse sites (Gulløv 1983: 47-48, 155-157). One site contains seven Eskimo ruins, of which three are small and rounded and belong to the earliest Thule culture, while four are later, three of these being communal houses (*ibid.*, p. 47). But we do not know whether it is also this kind of re-use which Egede's informant had in mind in 1723.

Otto Fabricius

The last time the sources mention the geographical distribution of the building materials, i.e. whale bones or driftwood, is at the end of the 18th century (Cranz 1770,I: 227; Glahn 1771: 262). Otto Fabricius, who was a pastor in Frederikshåb District from 1768 to 1773 (Thalbitzer 1962: 7), gives in his posthumously published description of Greenland, cited below, an account of a regular trade in building materials. This historical source is the last of the series of descriptions of the winter-house on Greenland's west coast which had spanned almost two centuries:

> "North of Godthåb it is said that on an island far out at sea there is a good deal of driftwood, which is still gathered. Otherwise it is found in greater or smaller quantities in the southern part of the country, from 66th degree [i.e. Sukkertoppen District] and southwards, but in Disko Bay and further north it is not found. Therefore the so-called southerners, who live nearest to Hukken [i.e. Cape Farewell] have no shortage of it and have always the best timber in their boats, as well as wood in their houses, which they also trade with the northerners, who have need of it, so that they even furthest to the north of the country must use unicorn horns [i.e. narwhal tusks] as "timber" in their houses" (Ostermann 1946: 55).

Conclusion

The sources presented above explain two circumstances, which must be regarded in relation to the previous archaeological account. Firstly, whale bones are not found as raw material or waste. Whale bones have only ever been demonstrated in connection with tool-production (see the description of the objects), while some baleen was demonstrated in the Kangeq midden's nethermost Thule culture from the 14th and 15th centuries. Secondly, the communal house – with an average length of 11 m and a rectangular ground plan – comes into being rather suddenly, from an archaeological point of view. Earlier structures in the locality are fragmentary, e.g. below Illorpaat 3, house I, or have been rebuilt, e.g. Illorpaat 9, from house I to II. The choice of the building materials stone, turf and driftwood is unaltered.

Whale bones were used for house building on the west coast north of 66° N. During the examinations of middens in Sermermiut in Disko Bay and Inussuk (Inugsuk) in Upernavik District, the nethermost layers from the Thule culture were found to be densely packed with baleen, as well as some whale bones (Mathiassen 1958: 48, 1930: 166-170). But Terkel Mathiassen gives rise to some justified surprise, when he, in connection with Upernavik, writes that the bottom layer of the midden also contained much wood waste, often lying in veritable concentrations, which gave the impression that large amounts of driftwood were present when the Eskimos arrived at Inussuk (1930: 171).

This circumstance, which incidentally cannot be demonstrated at Sermermiut, can only be explained by the West Greenland Current, which reached as far as Upernavik in warm periods, bringing driftwood with it (Vibe 1967: 16). During cold periods the transportation lessened of *inter alia* the Baffin Bay Ice – in Greenland called the West Ice – which pushes forward from the west and which for a large part of the year covers the coast along the stretch Holsteinsborg-Egedesminde-Disko, i.e. 67°-69° N (*ibid.*, p. 26). This latter situation seems to have prevailed around the year 1700, according to the information Hans Egede got in 1724 from the coastal area around 67° N.

The large communal house, which Egede found on his travels along the coasts during his 15 years in the country, is the same dwelling type as all the examined structures in the Kangeq area. On his many visits to these houses – the first time on 6th December 1721 – he observed that all domestic activity took place in the large communal rooms (Egede 1925: 12). This would have been the case at Illorpaat 3 and 9.

On Itissaalik a cooking-place was found placed in the house passage. Egede says nothing about any such innovation. This is because the cooking niche in the house passage was not a feature in this area in Egede's day. It first appears in the documentary sources in the 1760s with the missionary H. C. Glahn in Holsteinsborg (Sisimiut) on 67° N. He writes that there are Greenlanders, *especially in the south*, who have built actual chimneys, i.e. cooking-places, in their house passages, where they cook in winter using heather, which greatly saves on the blubber (Glahn 1771: 197-198). Glahn wishes that this would become more common and furthermore emphasizes that the southerners with this construction have a great advantage over the northerners, who are in no way such *great householders* (!). The site on Itissaalik can be dated to the mid-18th century and thus corresponds to a dwelling for "great householders".

This cooking niche in the house passage is found in most of the recorded communal houses and the later trapezoid houses (Gulløv 1983). This thus indicates that people have saved on the blubber and an obvious explanation may be found in the increased supply to the European colonial stations. The cooking niche is not known in eastern Greenland, but only on the west coast. In Julianehåb it has even been dem-

onstrated archaeologically in three small structures, which are all of a late date, i.e. the 18th century, and which contain European objects (Mathiassen 1936: 45, 46, 51). This is worth noting, since the sites here must be contemporary with the use of the communal house. The same occurs in the Disko Bay, where artefacts of similarly late European origin were found in sites other than those of communal houses (Mathiassen 1934: 135,137).

Generally speaking, the communal house can be seen to have emerged first, and suddenly, on the coast in Godthåb District. The documentary sources do not mention its origins. It has been argued, on the basis of archaeological examinations, that it spread southwards from the Disko Bay (Mathiassen 1934: 172-173, 1936:120); and a spread in the opposite direction has been suggested on the basis of historical source material (Gulløv 1982, 1986b). However, three factors became crucial in this culture-historical discussion.

Firstly, the 66° N constitutes a border between preferred building materials. North of the border mainly whale bone and south of it mainly driftwood was used for house-building. Driftwood was used since the 14th century and can be archaeologically demonstrated in the areas south of 66° N. From the time of John Davis' visit, i.e. 1585 AD and onwards, the use of driftwood can also be documented in the historical source material.

Secondly, Hans Egede described the coast around 67° N, i.e. Nepisat, Sisimiut and Sydbay as the place where the Eskimo population gathered for whaling expeditions and bartered with the Dutch whalers. According to Hann (1915, 1916), this activity took place before Egede arrived in the country in 1721. Further inland there was extensive caribou hunting during the summer in the period 1650-1750 AD (Grønnow *et al.* 1983: 82-83,86).

Thirdly, the missionary Glahn states in the 1760s that the Greenlanders south of 66° were great householders, who saved on the blubber.

Common to all three factors are the ecological determinants driftwood, whales, caribou and seal, which have at all times motivated the Eskimo people's adaptation. The change in the dwelling type from "round baker's ovens" (Danell in 1652) to "large houses with a flat roof one generally runs across" (Hann *c.* 1709) took place in the course of a very few decades, when Europeans were also exploiting the local resources. Its cause must therefore be associated with external factors, i.e. the European whaling, which increased sharply in the Greenland waters from the end of the 17th Century (e.g. Gulløv 1987). The greater part of the population continued to live north and south of there, i.e. in Disko Bay and Julianehåb District (Egede 1925: 362).

The archaeological exposition cannot tell how this European presence influenced the house-building. To answer this question we must turn to a description of the objects. At present we can only demonstrate the chronological coincidence of historical events and archaeological stratigraphy.

To sum up, it can be established that the Thule culture was present in Godthåb District since the 14th century. The extent of the settlement has been discussed elsewhere (*cf.* Gulløv 1983), but is summarized here in chapter IV. In the 16th century the settlement seems to have spread to the outermost islands. In the 17th century a partial depopulation of the outer coast can be observed. In the 18th century this coast is again inhabited and the house type has changed from small houses to large, rectangular communal houses. Around the year 1800 the outer coast is depopulated and the settlement is of a more permanent character, determined by mission and trade.

III. The find material from Godthåb District

Since Godthåb District was the first to be colonized one might expect the greatest number of objects recorded in the National Museum of Denmark to have come from here. But the large archaeological excavations of Eskimo culture in Greenland undertaken in the period 1929-34 did not reach Godthåb District. A description of the Eskimo cultural history in this locality, in time and space, was not begun until Eigil Knuth excavated here in 1945. After this time the number of objects increased considerably. This material does not include the objects from the large archaeological investigations of the Norse settlements in the 1930s, -70s and -80s, nor the palaeo-Eskimo investigations, but only what has come to light with the investigations of the Thule culture and the colonial age.

In 1889 seven objects were recorded, in old burials at Uummannaq in the Godthåb Fjord. In 1890-91 19 objects were recorded, all found at Uummannaq. In 1892-93 77 objects collected by Gustav Holm were recorded, "presumbly from Godthåb District". In 1905 21 objects were recorded, collected in 1902 when the Literary Expedition under the leadership of Mylius-Erichsen was in Godthåb District. Of these, 15 are said to have come from old burials at Uummannaq, the earlier Herrnhut mission station (1861-1900), while the remaining six are not localized. In 1923 18 objects of uncertain provenance were recorded: "Godthåb, perhaps Sukkertoppen Districts", four pieces can be identified as being from the Thule culture, while the remainder are palaeo-Eskimo objects. About 10 objects were bought in Godthåb District at the start of the Fifth Thule Expedition and were recorded in 1925. Apart from these there are a number of objects of uncertain provenance which have not been included, even though they are recorded as west Greenlandic, "possibly Godthåb District".

The total recorded material from Godthåb District comprised *c.* 150 objects before the archaeological examination of the district was started in 1945. At that time a third of the recorded material came from Uummannaq.

In 1945 Eigil Knuth excavated at three localities south of Godthåb, i.e. between the Ameralik and Bukse Fjords and at two localities inside Ameralik Fjord. Some of the mummy caves at Pisisarfik in Kapissillit Fjord were also examined (*cf.* Gulløv 1983; Meldgaard 1953). 459 entries in the National Museum's records came from these investigations.

In 1952 the National Museum of Denmark's Archaeological Survey of Greenland travelled round Godthåb District and excavated at seven Eskimo localities, situated by the now abandoned villages Qoornoq, Sarloq, Kangeq and Græde Fjord/Kangerluarsussuaq, as well as at Sermitsiaq north of Godthåb (*cf.* Gulløv 1983; Meldgaard 1952; Nellemann 1952). About 150 objects came from these investigations.

In 1968 the Archaeological Survey of Greenland continued the archaeological undertaking at Kangeq, where the midden was investigated and measured (*cf.* Gulløv & Ilkjær 1969). 368 entries in the National Museum's records came from these investigations.

In 1969 and 1970 the Archaeological Survey of Greenland led the excavation of the first mission and trading station in West Greenland, Hope Colony west of Kangeq

(Gulløv & Kapel 1979), 6,129 objects, which belong to the National Museum of Greenland came from this investigation.

In 1972 and 1975 the Archaeological Survey of Greenland excavated at the settlements Illorpaat and Itissaalik west of Kangeq (*cf.* Gulløv & Kapel 1973, 1976). 4,112 objects, which belong to the National Museum of Greenland, came from these investigations.

In 1976 and 1977 the National Museum of Greenland investigated five localities in Ameralik Fjord in connection with the Inuit-Norse project (*cf.* Meldgaard 1977a). About 700 objects of Eskimo origin, which belong to the National Museum of Greenland, came from these investigations.

In 1983 and 1985 the National Museum of Greenland investigated the Brethren mission's station, Neu Herrnhut, in Godthåb (*cf.* Gulløv & Kapel 1983). 532 objects, which belong to the National Museum of Greenland, came from this investigation.

By this time the total find material from Godthåb District for use in the description of the Thule culture and the colonial age comprised *c.* 12,600 recorded finds. Each record may, however, include more than one object and the final total number of objects is therefore somewhat greater. Nearly half of this material has been published (Gulløv & Kapel 1979); and all known, recorded and examined localities in Godthåb municipality before 1981, the year when the responsibility for the Museum Service was transferred to the Grenlandic Home Rule, have also been published (Gulløv 1983).

The find material from the Thule culture in Godthåb District shall below be presented in time and space, with reference to the archaeological description of the examined localities.

The find material from Illorpaat and Itissaalik

Note: Drawings of the objects found are in scale 1:2 unless otherwise stated.

The following description comprises the objects found in the excavations of the three ruins and the midden trench on the southern side of Hope Island, as well as the ruin at Itissaalik south of there. The total material numbers 4,112 objects which have been given the serial numbers igd 1 to igd 4336 (igd: igdlorpait, old orthography for Illorpaat). This numbering also includes Itissaalik.

The Ethnographic Department's archaeological collections from West Greenland have been used as reference material. Definition and classification of the individual objects are made in accordance with the ethnographic and social categories which apply to the Thule culture (*cf.* Ford 1959; Holtved 1944). The quantitative contents of the object material can be expressed as follows:

Hunting implements number 456 objects.
Fishing equipment numbers 54 objects.
Transport numbers 65 objects.
Men's tools number 265 objects.
Women's equipment numbers 251 objects.
Household utensils number 338 objects.
Personal equipment numbers 67 objects.
Religious objects number 13 objects.
Toys and games number 184 objects.

Indeterminable and divers objects number 1,028 objects.
Miscellaneous numbers 99 objects.
European artefacts number 679 objects.
Palaeo-Eskimo material numbers 613 objects.

The chronology established in the previous chapter is used in the presentation of the find material below. The designation "early Thule" is here not related to the Canadian classifications of the Thule culture (e.g. "classic, modified and historic" (McCartney 1977)), but covers the earliest evidence of the Thule culture in this place, i.e. from the 15th century. The choice of this method of presentation also makes it possible to start a discussion of the concept "Inugsuk"-culture in West Greenland (*cf.* Mathiassen 1930), which presupposes that there had been a marked Norse influence. The nature of this influence has been called into question (*cf.* Jordan 1979), without denying that the two peoples were in Greenland simultaneously. However, the contacts between them can be re-evaluated (*cf.* Arneborg 1988, 1991).

The above mentioned objects are presented in the table below in the context established in the archaeological account. Illorpaat 3 is divided into houses IV, III, II, I and "early Thule". The midden trench is divided into layers 12, 9, 8 and 4, the last corresponding to "early Thule". The building phases which were demonstrated in Illorpaat 9, Illorpaat 13 and at Itissaalik are not divided here (see Figs. 50-54).

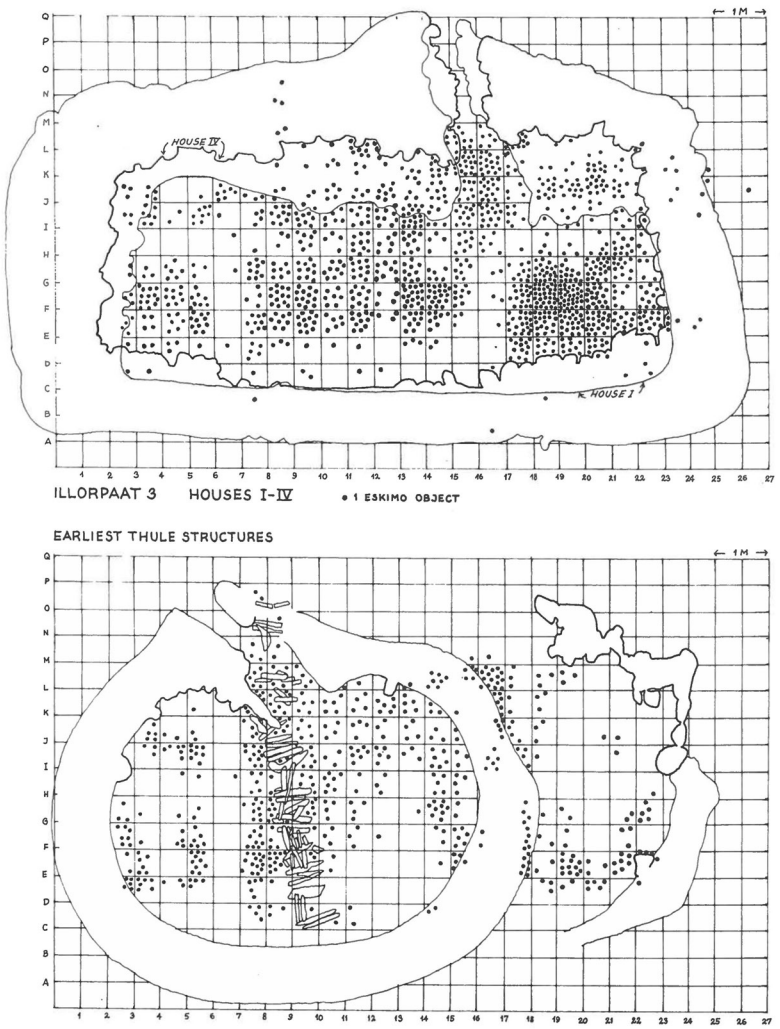


Fig. 50. *Illorpaat 3. The distribution of objects in houses I-IV and the earliest Thule culture. The contours on the lower plan do not indicate any definite extent of recognisable structures, but the maximum extent of possible structures. Each dot represents one object.*

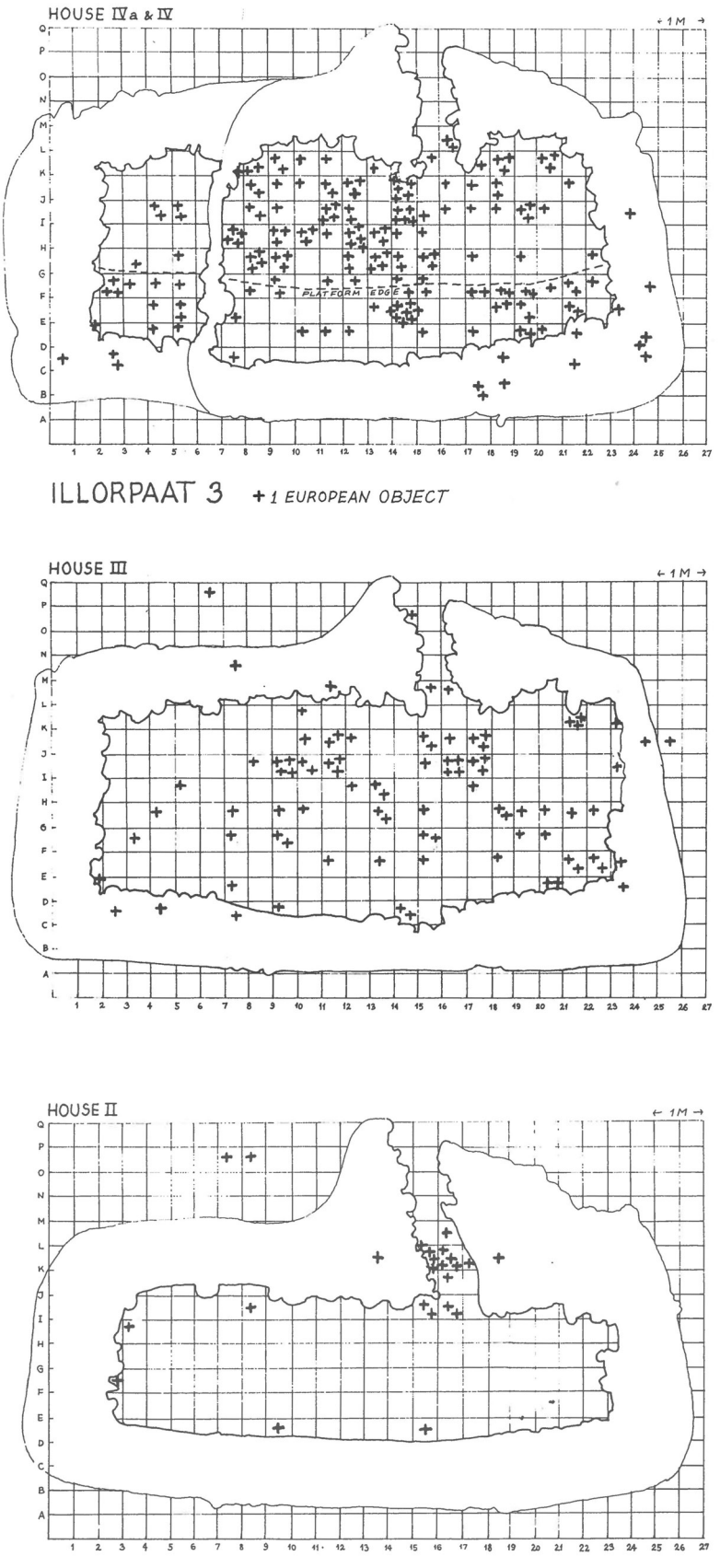
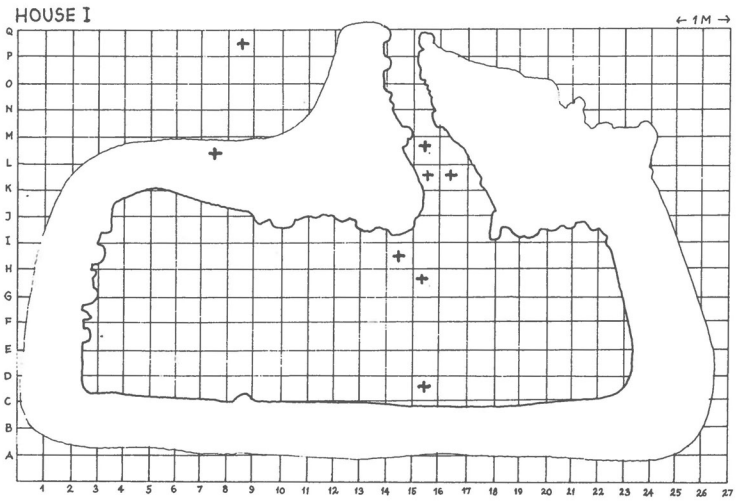


Fig. 51. *Illorpaat 3. The distribution of objects of European origin in houses I-IVa. Each cross represents one object.*



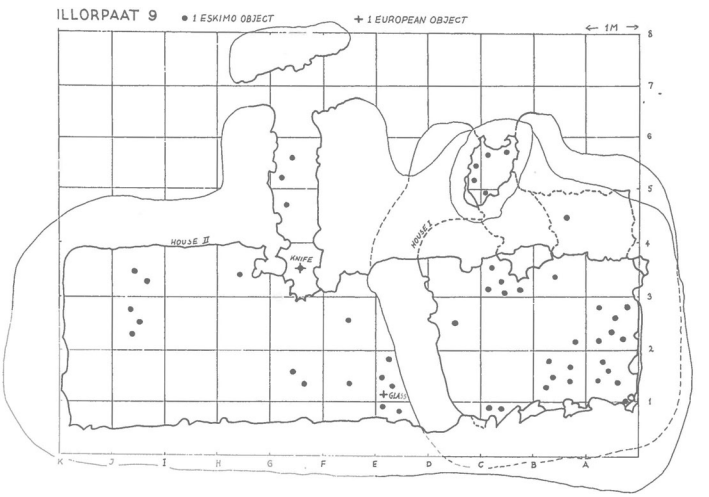


Fig. 52. *Illorpaat 9. The distribution of objects of Eskimo and European origin in houses I-II. Each dot and each cross represents one object.*

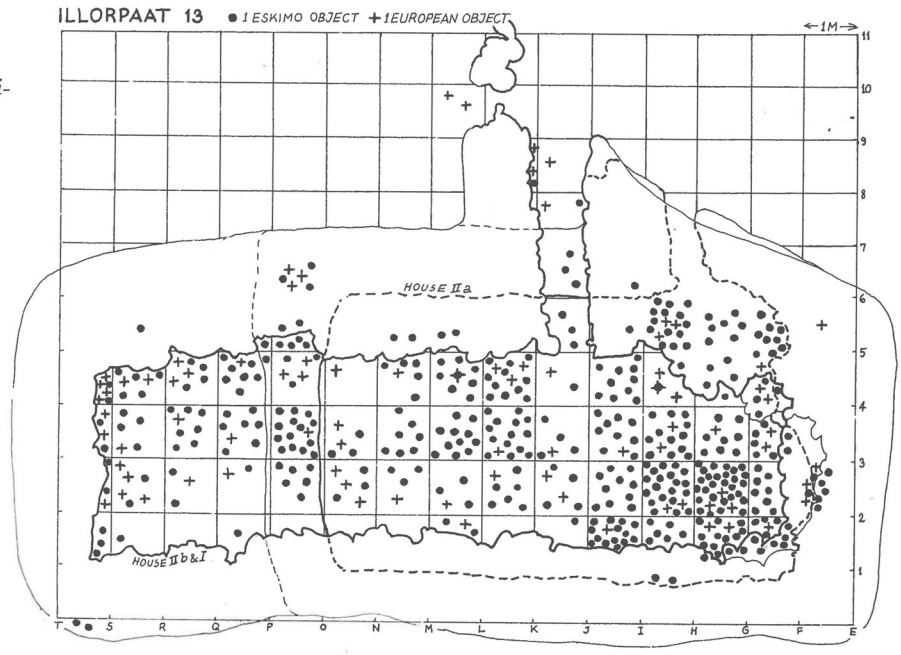


Fig. 53. *Illorpaat 13. The distribution of objects of Eskimo and European origin in houses I-IIb. Each dot and each cross represents one object.*

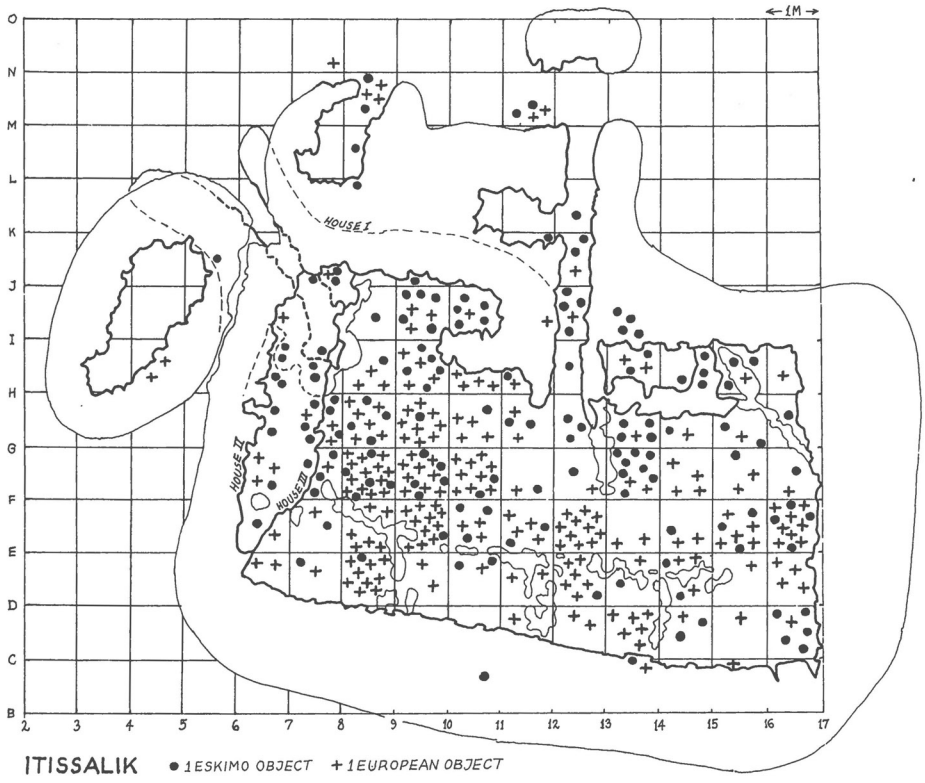


Fig. 54. *Itissaalik. The distribution of objects of Eskimo and European origin in houses I-III. Each dot and each cross represents an object.*

The find material from Illorpaat and Itissaalik:

	Illorpaat 3						Midden								
	IV	III	II	I	e.Th.	Stray finds	12	9	8	4	Stray finds	Illpt 9	Illpt 13	Islik	Total
Hunting equipment															
Throwing weapons															
Harpoon heads	–	–	1	1	2	–	–	–	3	1	–	–	–	–	8
Throwning-dart heads (rear end)	–	–	6	3	–	–	2	2	1	2	–	3	7	1	27
Bladder-dart heads (front ends)	–	1	–	–	2	–	–	–	–	–	–	–	1	–	4
Bird–dart heads (front ends)	–	–	–	1	–	–	–	–	–	–	–	–	–	1	2
Foreshafts	3	3	4	5	3	–	5	–	–	–	–	–	6	2	31
Socket pieces & Ferrules	3	2	2	3	–	–	1	–	–	–	–	–	5	1	17
Shafts for throwing–weapons	2	4	15	16	9	–	5	3	7	16	3	–	11	–	91
Finger rests	–	–	2	1	–	–	–	–	–	–	–	–	2	–	5
Side prongs for bird darts	4	6	16	10	–	–	6	–	4	8	2	–	10	–	66
Side prongs, indeterminable	1	1	6	4	–	–	2	1	1	4	–	–	2	–	22
Points of bone or antler, indeterminable	1	1	–	1	2	1	1	–	–	–	–	–	3	–	10
Throwing boards	1	1	4	6	3	–	–	–	3	6	3	–	1	–	28
Throwing–board pegs and knobs	–	1	2	–	–	–	1	–	1	3	–	–	–	–	8
Bladders and lines															
Bladder mouthpieces & Bladder nozzles	3	–	6	5	2	–	3	1	2	8	2	–	4	1	37
Line accessories	2	2	–	1	–	–	2	–	–	–	–	–	1	–	8
Toggles	1	–	1	–	2	–	–	–	–	–	–	–	–	1	5
Wound plugs	–	2	4	5	1	–	4	–	3	2	–	1	7	–	29
Wound pins	1	–	–	3	–	–	–	–	–	–	–	–	2	–	6
Bows and arrows															
Bows	1	3	1	–	1	–	2	1	6	2	–	1	2	–	20
Arrow heads	–	1	1	–	1	–	1	1	1	1	–	–	1	1	9
Arrow shafts	–	1	5	2	2	1	–	–	3	4	–	–	4	–	22
Gull hook	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1
	23	31	75	66	30	2	35	9	35	58	10	5	69	8	456
Fishing equipment															
Fish hooks	2	4	3	3	3	–	1	–	–	–	–	1	1	2	20
Sinkers	4	4	2	–	–	–	–	–	–	–	–	1	1	7	19
Needle	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1
Leister prongs	–	2	1	2	1	–	3	–	3	2	–	–	–	–	14
	6	10	6	5	4	–	4	–	3	3	–	2	2	9	54

	Illorpaat 3						Midden								
	IV	III	II	I	e.Th.	Stray finds	12	9	8	4	Stray finds	Illpt 9	Illpt 13	Islik	Total
Transport															
Kayaks															
Gunwale strakes	–	–	4	–	–	–	–	–	1	3	–	–	–	–	8
Side stringer	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1
Cross beams	–	2	2	–	2	1	–	–	–	2	–	–	–	–	9
Cockpit coaming	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1
Kayak accessories															
Rests for weapon shafts	–	–	1	–	–	–	–	–	–	–	–	–	1	–	2
Bladder supports	–	1	–	2	2	–	–	–	–	–	–	–	–	–	5
Paddles, Oars & Mounts															
Blades	–	–	–	1	3	–	–	–	–	–	–	1	–	–	5
Mounts	1	2	–	1	–	–	1	1	–	–	–	–	4	–	10
Umiaqs															
Gunwales	1	–	1	1	–	–	1	2	–	–	–	–	2	–	8
Ribs	–	–	–	1	1	–	–	–	–	–	–	–	1	–	3
Other frame parts	–	–	4	1	1	–	–	–	–	–	–	–	2	–	8
Bone nails	–	1	2	–	2	–	–	–	–	–	–	–	–	–	5
	2	6	14	8	11	1	3	3	1	5	–	1	10	–	65
Men's tools															
Knives	4	4	8	6	8	–	9	–	3	3	–	1	5	5	56
Handles & Shafts	–	–	–	1	3	–	–	–	–	1	–	1	1	–	7
Whetstones & Hammerstones	18	15	9	5	1	–	5	3	–	2	–	5	38	17	118
Whetting tools	–	–	2	1	–	–	–	1	1	–	–	–	–	–	5
Cutting boards	1	1	–	–	1	–	–	–	–	1	–	–	1	–	5
Drills, Awls & Burins	1	3	2	2	3	–	1	–	3	1	–	–	3	–	19
Mouthpieces for bow drills	–	–	–	–	–	–	–	–	–	2	–	–	2	1	5
Fire drills	–	1	3	3	3	–	2	–	–	1	–	1	7	–	21
Axes	–	1	–	2	–	–	2	–	–	2	–	2	6	2	17
Wedges	–	–	1	–	1	–	–	1	–	1	–	1	4	–	9
Shovel	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1
Saws	–	–	1	–	–	–	–	–	–	–	–	–	1	–	2
	24	25	26	20	21	–	19	5	7	14	–	11	68	25	265
Women's equipment															
Ulos	2	2	2	2	–	–	6	–	–	2	–	1	2	–	19
Scrapers	–	–	–	–	1	–	–	1	–	–	–	–	–	–	2
Bodkins & Needles	1	–	3	1	2	–	3	–	–	2	1	2	1	–	16
Pegs	1	2	13	9	10	–	5	4	8	10	–	–	20	1	83
Lamps	6	6	1	–	3	–	1	–	1	2	–	8	18	14	60
Lamp stand	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1
Wick trimmers	–	2	7	17	3	–	3	1	7	13	–	1	15	1	70
	10	12	27	29	19	–	18	6	16	29	1	12	56	16	251

	Illorpaat 3						Midden								
	IV	III	II	I	e.Th.	Stray finds	12	9	8	4	Stray finds	Illpt 9	Illpt 13	Islik	Total
Household utensils															
Spoons & Scoops	2	4	3	4	2	–	–	–	1	4	1	3	3	–	27
Dishes & Bowls	–	1	6	3	3	–	6	1	3	10	1	–	3	–	37
Cooperage (tubs, casks & beakers)	–	3	2	9	2	–	4	–	4	2	2	–	5	1	34
Cooking pots	22	21	6	5	9	–	15	6	1	4	2	4	62	33	190
Cooking pots or lamps, indeterminable	6	5	5	2	1	–	3	–	–	3	–	1	8	7	41
Meat forks	–	1	1	3	–	–	1	–	–	1	–	–	2	–	9
	30	35	23	26	17	–	29	7	9	24	6	8	83	41	338
Personal equipment															
Combs	–	1	1	–	1	–	–	–	–	–	–	1	–	–	4
Beads, Ornamental pendants & Buckles	7	8	4	–	–	–	9	–	1	1	–	2	13	5	50
Dress fragments, indeterminable	–	–	2	–	–	–	–	1	–	–	–	–	1	9	13
	7	9	7	–	1	–	9	1	1	1	–	3	14	14	67
Religious objects															
Drum handles	–	3	1	1	–	–	1	–	1	1	–	–	–	–	8
Drum frame	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1
Wooden penes	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2
Buzzer	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Amulet	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1
	–	4	1	1	–	–	1	–	3	2	–	–	–	1	13
Toys & Games															
Dolls	–	5	5	5	4	–	3	–	2	2	–	–	4	–	30
Games	–	4	–	–	1	–	4	1	–	–	1	–	2	–	13
Hunting	3	–	5	4	6	–	–	–	5	6	1	–	8	–	38
Transport	2	2	14	9	12	–	–	1	1	6	–	1	5	–	53
Women's equipment	5	2	1	–	1	–	–	–	–	1	–	–	3	5	18
Household utensils	5	5	1	–	1	–	5	–	1	2	–	–	8	3	31
Religious object	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1
	15	18	26	19	25	–	12	2	9	17	2	1	30	8	184

	Illorpaat 3						Midden								
	IV	III	II	I	e.Th.	Stray finds	12	9	8	4	Stray finds	Illpt 9	Illpt 13	Islik	Total
Indeterminable & Divers objects															
Soapstone, indeterminable	13	8	4	1	2	–	1	–	–	–	–	1	11	12	53
Clay objects, indeterminable	1	–	–	–	–	–	–	–	–	–	–	–	1	1	3
Baleen objects, indeterminable	–	2	1	2	–	–	–	–	–	–	–	–	7	2	14
Baleen knots	–	7	4	5	2	–	4	–	5	1	–	–	7	2	37
Lists & Mounts	1	8	9	4	3	–	7	1	4	6	–	2	11	–	56
Bone and antler objects, various	9	12	17	12	3	1	12	1	1	5	–	2	8	–	83
Bone objects, secondary material	22						14					–	14	2	52
Wooden objects, various	20	24	56	57	26	–	12	7	16	39	7	2	60	3	329
Wooden objects, secondary material	227						66					–	99	9	401
	43	61	91	81	36	1	36	10	26	51	7	7	218	31	

+ 36 pieces of secondary bone objects from Illorpaat 3 and the midden
+ 293 pieces of secondary wooden objects from Illorpaat 3 and the midden

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Miscellaneous															
Examples of raw material	11	9	2	–	2	–	2	–	–	3	–	–	–	4	33
Raw materials with traces of working	6	10	11	6	1	–	4	5	1	4	–	1	14	3	66
	17	19	13	6	3	–	6	5	1	7	–	1	14	7	99
European objects															
Iron	38	32	8	4	–	–	6	–	–	1	–	1	18	12	120
Bricks	17	9	5	–	–	–	–	–	–	–	–	–	14	20	65
Sheet copper/brass	6	–	–	–	–	–	–	–	–	–	–	–	8	4	18
Pewter spoon	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Stoppers	–	–	2	–	–	–	–	–	–	–	–	–	–	1	3
Gunflint & Flint	1	1	–	–	–	–	–	–	–	–	–	–	1	2	5
Bullets & Shot	2	–	–	–	–	–	–	–	–	–	–	–	2	–	4
Buttons	1	1	–	–	–	–	–	–	–	–	–	–	1	2	5
Bottle glass & Window glass	12	2	2	1	–	–	1	–	–	–	–	1	12	45	76
Pottery	16	7	1	2	–	–	2	–	–	–	–	–	1	3	32
Clay pipes	14	2	1	–	–	–	–	–	–	–	–	–	–	15	32
Glass beads	110	36	21	1	–	–	3	–	–	–	–	–	29	114	314
Spindle whorl	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Soapstone, European origin	–	–	–	–	–	–	–	–	–	–	–	–	3	–	3
	217	90	40	8	–	–	12	–	–	1	–	2	90	219	679

The total number of objects found in neo-Eskimo (within the Thule culture) context are:

Illorpaat 3						Midden								
IV	III	II	I	e.Th.	Stray finds	12	9	8	4	Stray finds	Illpt 9	Illpt 13	Islik	Total
394	320	349	269	167	4	184	48	111	212	26	53	654	379	

In addition there are 329 secondarily worked objects of bone and wood from Illorpaat 3 and the midden, making a total of: **3,499**

613 objects of palaeo-Eskimo origin were recorded, primarily in the lowest horizons of the excavations. Only one object, igd 1642, the basis of a weapon blade with lashing notches, could be determined to belong to the Dorset culture.

	Illorpaat 3	Midden	Illorpaat 9	Illorpaat 13	Itissaalik	Total
Biface blades	7	3*	–	–	7	17
Knives	–	1	–	–	2	3
Scrapers	4	–	1	–	–	5
Burins	10	9	1	–	10	30
Burin spalls	1	–	–	–	7**	8
Blades	3	–	1	–	1	5
Micro-blades	–	–	1	–	4	5
Cores	10	–	1	–	1	12
Indeterminable tools	7	–	–	–	7	14
Flakes and waste	183	61	5	10	255	514
	225	74	10	10	294	613

* one blade from the Dorset culture

** three are ground

The materials used are silicified slate, quartzite, chalcedony and quartz/rock crystal. 494 pieces or 80.6% are silicified slate. This quantitative predominance of silicified slate has been found throughout Godthåb District where investigations have been made (Gulløv & Kapel 1988: 49) and it constitutes 65.5% of the palaeo-Eskimo object material of *c.* 34,000 pieces. The investigation of the palaeo-Eskimo fireplace in front of the midden at Itissaalik (Gulløv & Kapel 1973) yielded 650 objects from the Saqqaq culture, 74% of which were of silicified slate. As there are no deposits of this material in the Godthåb area, whereas it does occur on the Nuussuaq peninsula north of Disko, a comparison of the distribution of raw materials in both districts has led to a hypothesis that there were trading contacts along Greenland's west coast in the second millennium BC (Gulløv & Kapel 1988: 56-57).

The description below comprises 3,499 objects and, together with the description of the objects from Kangeq, it forms the basis for a comparison between the Thule culture in Godthåb District and the Thule culture in West Greenland.

The 822 illustrated objects are in scale 1:2 unless otherwise stated and shown in cross section and from different sides.

Hunting equipment

This group comprises 456 objects, which have been used during the winter months, i.e. from October to April. The hunting equipment of the summer period was, however, manufactured or repaired in the winter-house, as demonstrated by the finds of bows and arrows.

The ground plans with the distributions of finds (Figs. 55-58) illustrate the recognisable ruins of the communal houses. To include earlier structures would be precarious. In other words, it is the dwellings of the 18th century which are depicted, whose lay-out and contents Egede described after his time in the country 1721-1736.

> "The men with their sons, who sit on the front of the platform, turn their backs to the women; along the wall under the windows there are also planks as platforms, where the rest of the menfolk sit" (Egede 1925: 365).

The manufacture and repair of hunting equipment may thus be expected to have taken place along the edge of the platform and it was left on the floor when the house was abandoned. That this was the case can be seen on the distribution plan of Illorpaat 3, where all four communal houses' contents of this group of objects are drawn up (Fig.55). The concentration is greatest in the right half and in the inner part of the house passage. The same is the case at Illorpaat 13 (Fig.57). The few objects of this group which were found at Illorpaat 9 (Fig. 56) and Itissaalik (Fig.58) do not alter this picture.

The number of objects does not represent the actual number of implements; but conversely one cannot establish a qualitative basis for an appraisal of the objects' composition. This would entail that the 66 found side prongs for bird darts should represent 22 implements in this category, if each was furnished with three side prongs.

If, however, each object is perceived as a functional unit, which can be clearly related to a defined implement, then it becomes possible to describe the presence of a certain implement. This method has been used on ethnographic material, where "a *technounit* is a part that makes a distinct contribution to a finished form" (Oswalt 1987: 82).

A number of objects cannot unambiguously be related to a certain implement. For example, the throwing boards are fragmentary, so it has only been possible to determine that seven of them belonged to the bird dart. Neither do all shafts survive with just the feature that would determine their relationship. It has not been possible to relate several side prongs to a specific implement, which might have been a leister or a bird dart.

The following divisions can now be established: **Harpoons** and **lances** are represented by heads, foreshafts, socket pieces, shafts, finger rests, bladder mouthpieces, bladder nozzles and line accessories, altogether 81 objects. **Bird darts** are represented by heads, ferrules, shafts, side prongs, throwing boards, shaft nails and throwing board pegs, altogether 150 objects. **Bladder darts** are represented by heads, foreshafts, shafts and bladder nozzles, altogether 25 objects. **Toggles** come in five examples. **Wound plugs** and **wound pins** come in 35 examples. **Gull hooks** come in one example. **Bows, arrow heads** and **arrow shafts** are represented by 50 objects.

A third of all the recorded objects in this group thus belong to the bird dart. Among the objects described below are also leister shafts and possible side prongs for this implement. As the leister is found in the next group, under fishing equipment, the bird dart would be represented in greater number if some parts of the leister were transferred to the fishing implements group.

The objects in this group can also be divided chronologically as follows: The com-

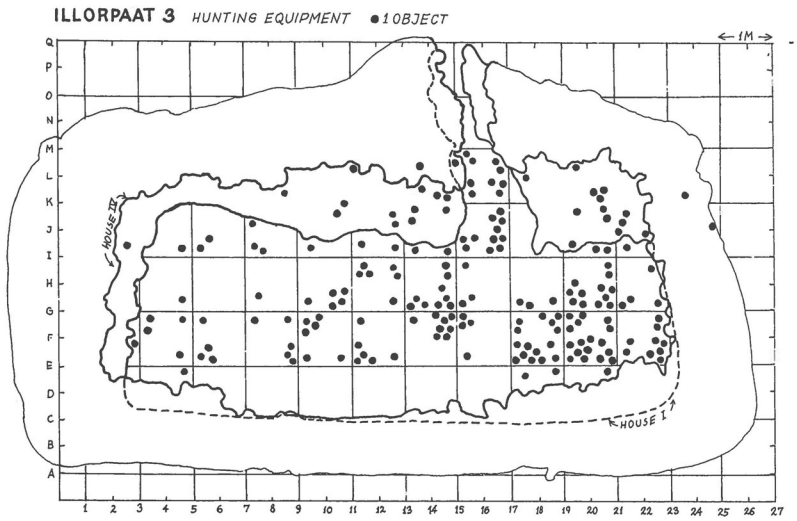


Fig. 55. *The distribution of hunting implements in Illorpaat 3, houses I-IV. Each dot represents an object.*

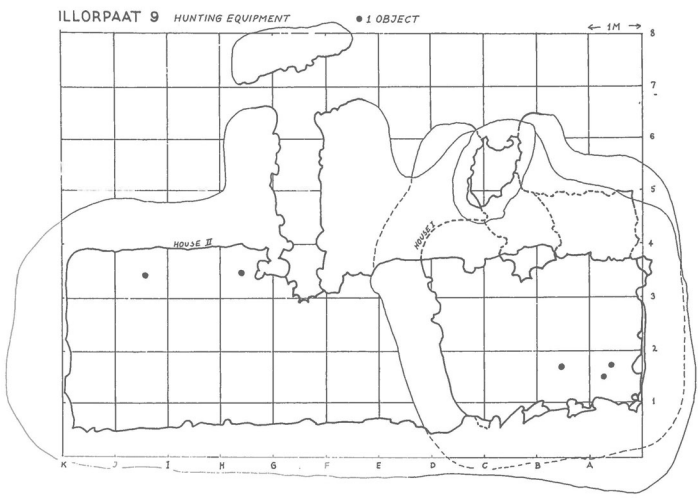


Fig. 56. *The distribution of hunting implements in Illorpaat 9, houses I-II. Each dot represents an object.*

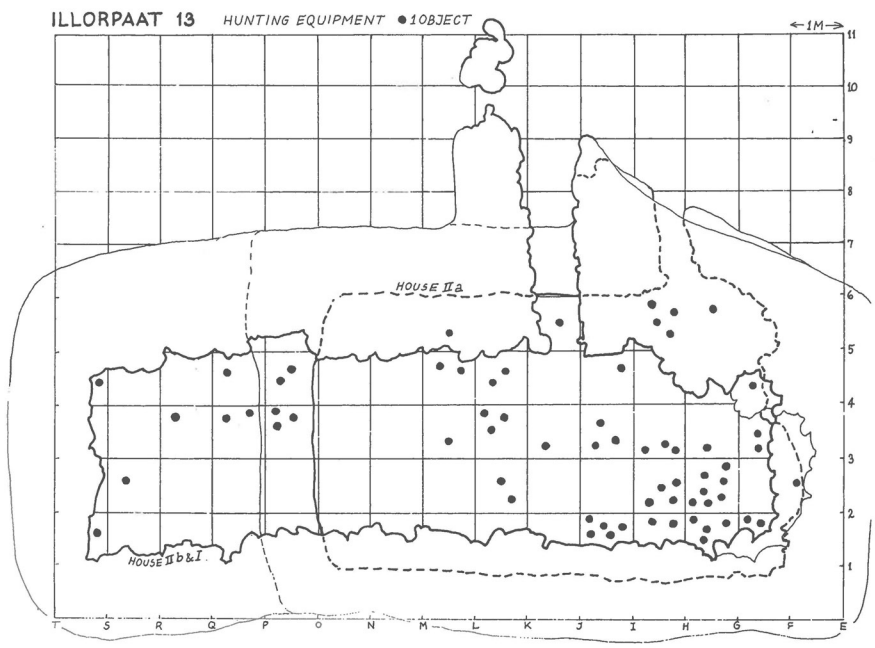


Fig. 57. *The distribution of hunting implements in Illorpaat 13, houses I-IIa. Each dot represents an object.*

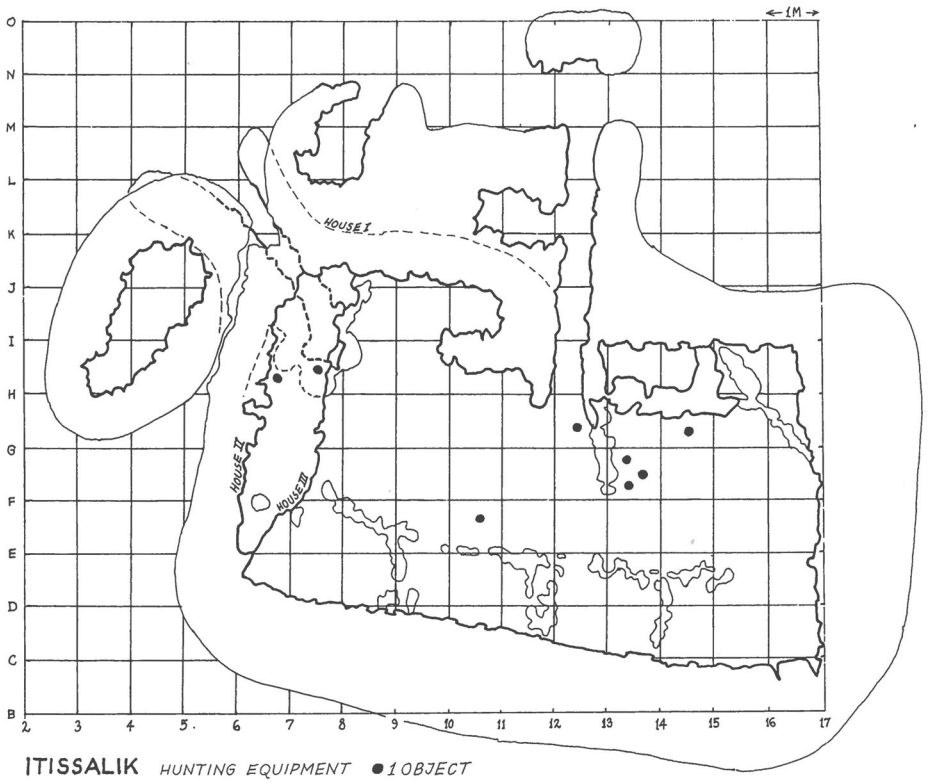


Fig. 58. *The distribution of hunting implements in Itissaalik, houses I-III. Each dot represents an object.*

munal houses, i.e. Illorpaat 3, houses I-IV, Midden layers 12 and 9, Illorpaat 9, Illorpaat 13 and Itissaalik are all dated to the period from the end of the 17th century until 1800 AD. The lowest deposits in Illorpaat 3 and midden layers 8 and 4 are dated to the period from the end of the 15th century to the beginning of the 17th. There are only very few objects from the 17th century itself.

The total object material, numbering 456 pieces, can now be placed within two periods, i.e. the 16th and the 18th centuries. 12 stray finds have not been included.

This gives the following distribution:

	16th Century		18th Century	
Harpoons and lances	19 units	16%	62 units	19%
Bird darts	35 units	29%	115 units	36%
Bladder darts	8 units	7%	17 units	5%
Wound plugs and wound pins	6 units	5%	29 units	9%
Bows, arrow heads and arrow shafts	21 units	17%	29 units	9%
Toggles and gull hooks	3 units	2%	3 units	1%
Non-related objects	31 units	24%	66 units	21%
	123 units	100%	321 units	100%

There is a tendency to a decrease in the use of bow and arrow, though the reasons for this cannot be explained. The introduction of the gun may well have played a part

here. On the other hand, it can be clearly seen in the above table that bird-hunting played a significant rôle in this geographical area. Furthermore, its importance increased in the 18th century, as can be seen from the number of recorded units.

This circumstance can also be seen if all the units, which may in all probability have been used for sealing, are reckoned together, i.e. Harpoons and Lances, Bladder darts, Wound plugs and Wound pins. This gives the following ratio:

	16th Century		18th Century	
Units used for sealing	33 units	28%	108 units	33%
Bird darts	35 units	29%	115 units	36%

The ratio of the listed units and their representation is also found in the zoological material (*cf.* Appendix I). The explanation of this cannot, however, be found in the archaeological material alone; other groups of sources must be taken into account, such as historical data and the oral tradition.

Harpoon heads

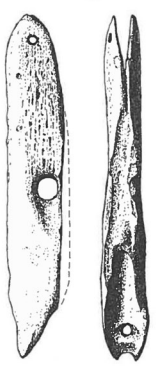
Eight harpoon heads were found. All are made of caribou antler and are more or less fragmentary. There are both thin and flat types. The thin type is here characterized by a closed shaft socket and the absence of barbs, and is represented by four pieces. One head can be described as a hybrid of the thin and the flat types; it has a closed shaft socket and a single barb. The flat type is represented by three fragments, one of which may have had barbs.

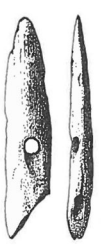
Thin heads:

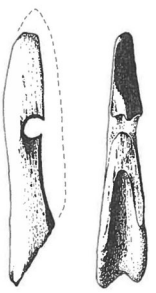
igd 4141 is 90 mm long and was found in Illorpaat house 3, house passage from early Thule by the presumed slipway (9/K). Has had a blade set at a right angle to the line hole. A piercing to the bifurcated dorsal spur has been for the fastening of a line, with which the head could be pulled free of the prey. The ventral side is split from the shaft socket upwards. Recorded as Type-4 (Mathiassen 1927:21) or Class 3 (Jordan 1979: 165).

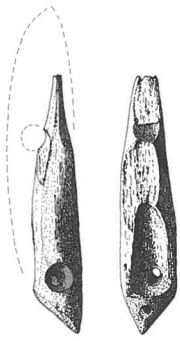
igd 3793 is 59 mm long and was found in Illorpaat 3, early Thule, on top of the pile of wood in the north-western corner of the excavation area (21/K). Without a blade and slightly compressed, but with two dorsal spurs. The most complete harpoon head in this find. Type-4 or Class 3.

igd 1992 is 65 mm long and was found in the midden, layer 8 (1/C). Without a blade, but with two dorsal spurs. The ventral side is split from the shaft socket upwards. Type-4 or Class 3.


igd 4141


igd 3793

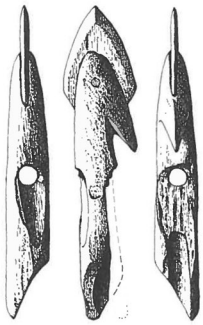

igd 1992


igd 1958

igd 1958 is 68 mm long and was found in the midden, layer 8 (1/C). The ventral side is split from the shaft socket upwards, so that also the point is lost. The hole in the shaft socket and the marking of a planned piercing in the dorsal spur might indicate that the work was never completed. Type-4 or Class 3.

Hybrid form:

igd 3958 measures 83 mm incl. the point and was found in Illorpaat 3, house I, immediately below the flagstones (20/G). Has at least one dorsal spur, one barb and a sharpened bone blade which is fastened with a bone rivet. The head is split from one side of the shaft hole up to the line hole, rendering the shape of the lower part unclear.

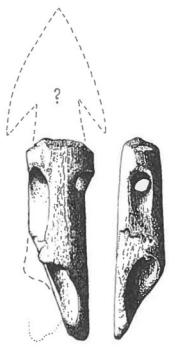

igd 3958

Flat heads:

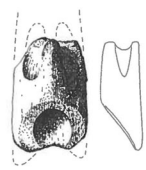
igd 2299 is 53 mm long and was found in the midden, layer 4, immediately above layer 5 (2/D). The head is broken across the shoulders and it appears that it has had two barbs. It has a closed shaft socket and at least one dorsal spur. Typologically, the head is later and placed in Class 7 (Jordan 1979: 169), while archaeologically it is among the earliest finds from the site.

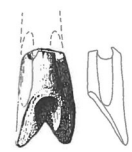
igd 3504 is 30 mm long and was found in Illorpaat 3, house II (19/F). The head is broken at the line hole and shows signs of great wear, the dorsal spurs for example are almost worn away. Can be defined as flat, with closed shaft socket. Nothing can be said about blade or barbs.

igd 2042 is 26 cm long and was found in the midden, layer 8 (1/C). The head is broken at the line hole. Can be defined as flat with closed shaft socket and with two dorsal spurs. Nothing can be said about blade or barbs.



igd 2299


igd 3504


igd 2042

The thin heads in this find are of a type which is very common on Greenland's west coast. However, they do have the blade set at a right angle to the line hole, which distinguishes them from the so-called "Inugsuk Type" (Mathiassen 1930: 182, 1931: 71-72). **igd 4141** as a type is, however, only documented by one specimen from Upernavik and one from Kangaamiut (*ibid.*). The small head, **igd 3793**, is known all along the west coast (Mathiassen 1930: pl.5(6), 1931: 72, 1936: 73) and on the east coast (Mathiassen 1933: pl.5(1)) and is thought to have been used for fishing (Mathiassen 1931: 72, 1933: 73); it can also be used for ice edge hunting. Nothing further can be said about the other two thin heads.

The hybrid form, which is only known from a couple of variants from Kangaamiut, can be defined as a flat type, without shoulders, and is split in almost the same way as the one illustrated here (Mathiassen 1933: pl.5(9) [with vestiges of barbs], 1934: pl.3(1) [without barbs]; Thalbitzer 1909: 351-352, pl.15(6) [without barbs, but with lashing groove for a foreshaft]; Larsen 1934: pl.11(2) [without barbs]; Thomsen 1917: 380) and everywhere it appears as a transitional form between thin and flat types.

The flat heads are well documented all over Greenland and they predominate in the later periods of the Thule culture; the earliest example in Greenland was found at the Uummannaq settlement in Thule (Jordan 1979: 161).

With reference to the C-14 datings and to the described stratigraphy (*cf.* **Cooking pots** and **Glass beads**) the described harpoon heads can be divided chronologically as follows:

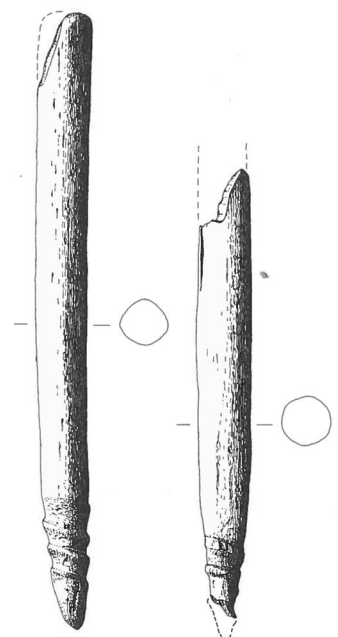
16th century	– igd 4141, 3793 and 2299
c. 1600	– igd 1992, 1958 and 2042
17th century	– igd 3958
18th century	– igd 3504

There is thus no clear chronological division between the types in this find. This must be explained as evidence of a difference in function and – in the case of the hybrid forms – perhaps as a result of influence. There is no evidence of any typological "development".

Throwing darts

A total of 27 rear ends of throwing-dart heads, i.e. bird-dart and bladder-dart heads, were found in all the examined structures.

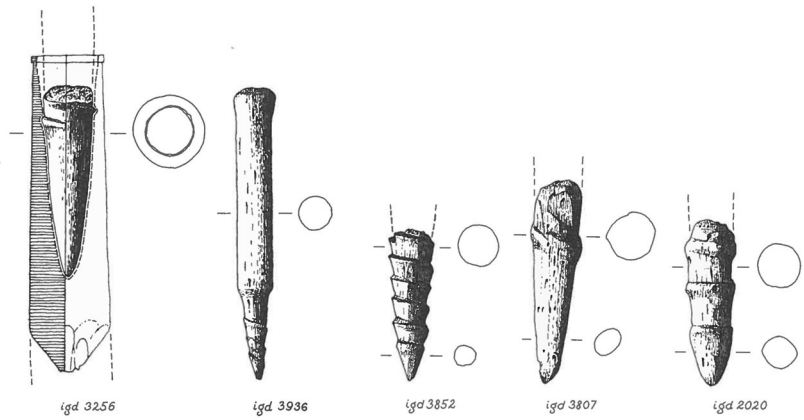
	Illorpaat 3		Midden				Illpt. 9	Illpt. 13	Islik	Total
	II	I	12	9	8	4				
Bird darts	5	3	1	–	1	1	3	4	1	19
Bladder darts	1	–	1	2	–	1	–	3	–	8
	6	3	2	2	1	2	3	7	1	27


igd 3640 igd 1536

Two of these are made of caribou antler (one bird dart and one bladder dart), the remainder are of whale bone. 18 rear parts have screw thread, all counter-clockwise. Nine rear parts have carved grooves or beads.

Normally the rear part of the bird dart is screwed into the wooden shaft. The rear part of the bladder dart is pointed and sometimes has carved beads. It is fastened to the wooden shaft by a line, which runs through two or three holes in the rear part of the dart. This is the case on two specimens. Some pieces, however, diverge from this general principle and there are some bladder-dart heads without line holes, e.g. **igd 529**; bird-dart heads without screw thread also occur, e.g. **igd 2020**.

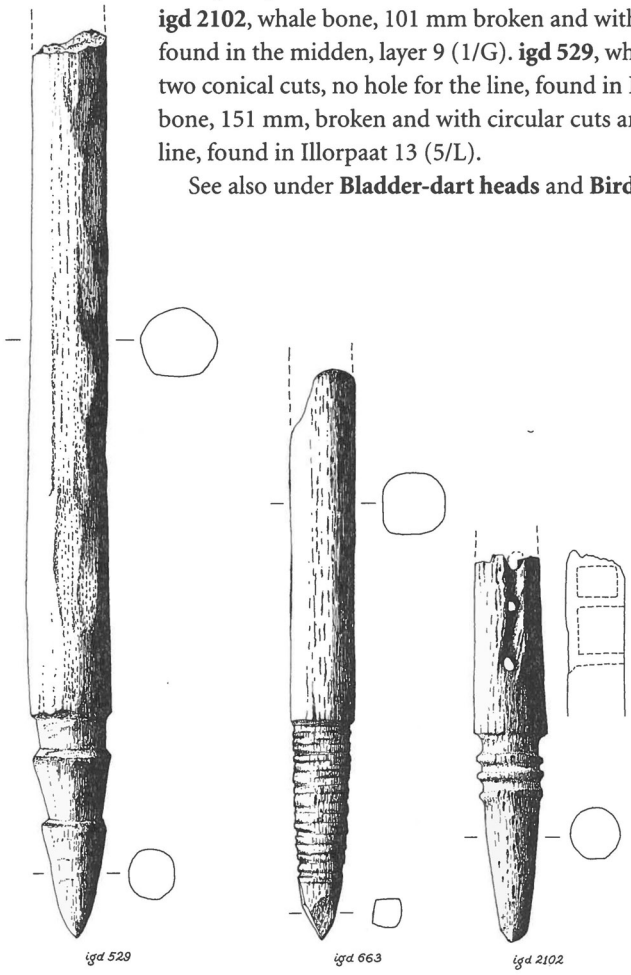
Examples of bird darts:
igd 3640, whale bone, 163 mm, complete and found in Illorpaat 3, house II (25/J). **igd 3852**, antler, 40 mm, broken and found in Illorpaat 3, house I (14/H). **igd 1536**, whale bone, 120 mm, broken and found in Illorpaat 9 (2/B). **igd 3256**, whale bone, 83 mm incl. the preserved shaft fragment into which it is screwed, broken and found in Illoorpaat 3, house II (16/H). **igd 3807**, whale bone, 53 mm, beads indicate counter-clockwise screw thread, broken and found in Illorpaat 3, house II (5/G). **igd 2020**, whale bone, 44 mm, broken and with three conical cuts, found in the midden, layer 8 (1/D). **igd 1313**, whale bone, 104 mm, broken and found at Itissaalik (14/G), illustrat-



ed together with **igd 1317** which was found in field 13/H. **igd 3936**, whale bone, 78 mm, possibly intact and found in Illorpaat 3, house I (9/L).

Examples of bladder darts:
igd 2102, whale bone, 101 mm broken and with three holes and three circular cuts, found in the midden, layer 9 (1/G). **igd 529**, whale bone, 240 mm, broken and with two conical cuts, no hole for the line, found in Illorpaat 13 (3/H). **igd 663**, whale bone, 151 mm, broken and with circular cuts and pyramidal rear end, no hole for the line, found in Illorpaat 13 (5/L).

See also under **Bladder-dart heads** and **Bird-dart heads.**



Bladder-dart heads

Four bladder-dart heads, all of whale bone, are of the heavy type with point and barbs, as documented in 1654 in Godthåb District (Meldgaard 1980: 4-6).

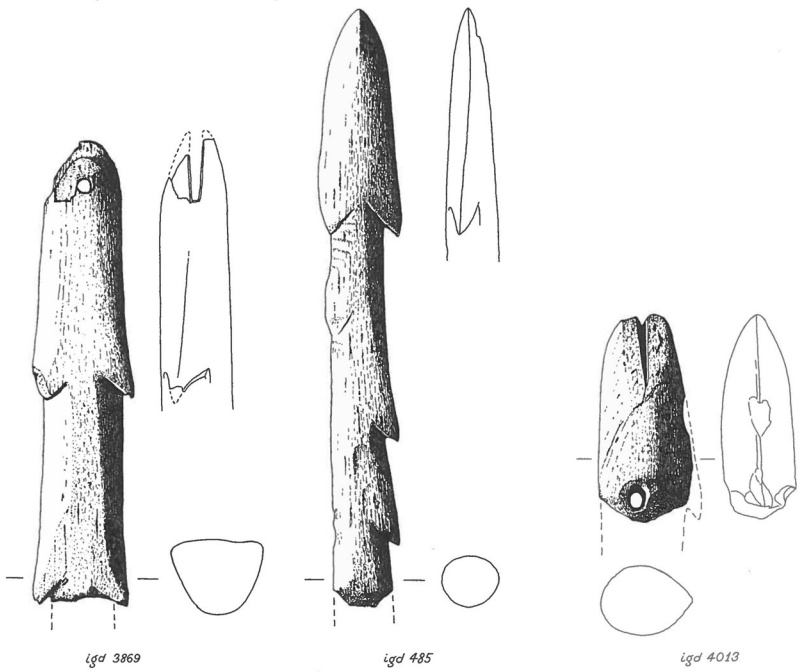
igd 3869, 123 mm, broken and found in Illorpaat 3, house III (18/E). It has had a point and several pairs of opposite barbs, two of which are still visible.

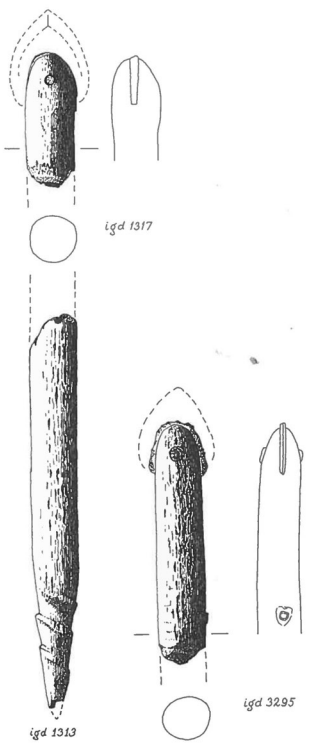
igd 485, 158 mm, broken and found in Illorpaat 13 (3/L). Two unidirectional barbs are seen placed one below the other on the head, which ends in a point with two opposite barbs.

igd 4013, 55 mm, broken and found in Illorpaat 3, early Thule (19/J). The piece has been reworked and has the beginning of a slit for a blade and has a hole. It can be seen that a barb has been cut away.

igd 4014, 86 mm, broken so that only the middle part of the head is preserved with two unidirectional barbs placed one below the other. Found in Illorpaat 3, early Thule (19/K). Not illustrated.

The type was succeeded by iron heads in the 18th century. The heavy type is said to have been used by south Greenlanders (Holtved 1962: 50-52). The prey was primarily small seals (Porsild 1914: 147).





Bird-dart heads

Two objects can be defined as heads for bird darts.

igd 1317, 36 mm, whale bone, with a bone point fastened by a bone rivet. Found at Itissaalik (13/H).

igd 3295, 65 mm, whale bone, with an iron point fastened by an iron rivet. Found in Illorpaat 3, house I (18/M). The function of the small bone rivet as the side of the head is not clear.

The head of the bird dart was replaced in the 18th century by an iron head which could be bought at the colonial stations (Holtved 1962: 55-59, 75-76; Porsild 1914: 154-155, 163-169). The iron point may have come from Hope Colony (*cf.* Gulløv & Kapel 1979).

See also under **Throwing darts.**

Foreshafts

This group comprises 31 objects. 27 are of whale bone and four of caribou antler. Both two and three line holes occur. A large number (15 pieces) have no holes and some of them may thus be a part of the bird-dart head.

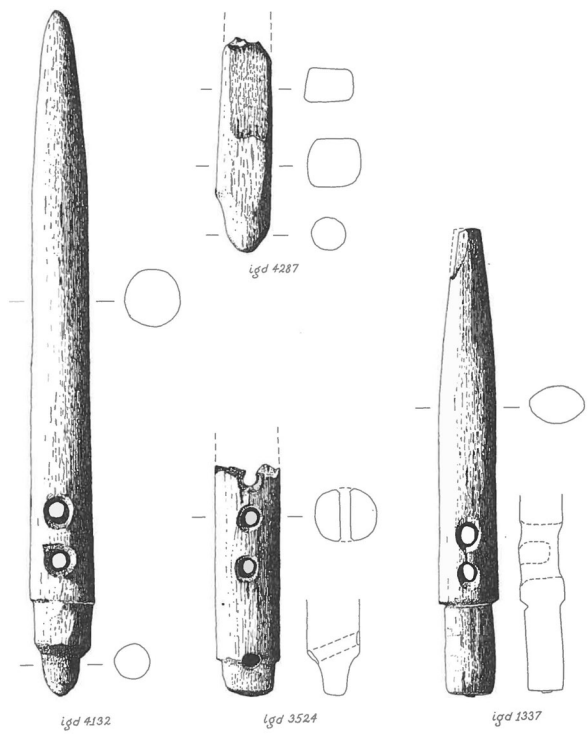
There were two fastening methods: Type I which has a knob cut in the rear end of the foreshaft for fastening to a central section. Type II, which has a pointed rear end for insertion into the shaft. This method is found on ice-hunting harpoons and lances.

	Illorpaat 3					Midden	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12			
Type I	1	1	2	2	3	–	–	1	10
Type II	2	2	2	3	–	3	5	–	17
Indeterminable types	–	–	–	–	–	2	1	1	4
	3	3	4	5	3	5	6	2	31

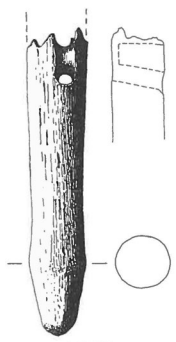
Examples of Type I:

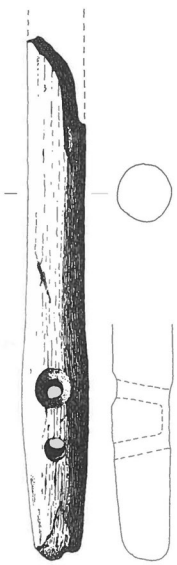
igd 4132, 182 mm, whale bone, intact and found in Illorpaat 3, house I (8/J). **igd 3524**, 61 mm, whale bone, broken and found in Illorpaat 3, house II (20/F). **igd 1337**, 125 mm, whale bone, intact and found at Itissaalik (11/F); atypical with countersunk line groove.

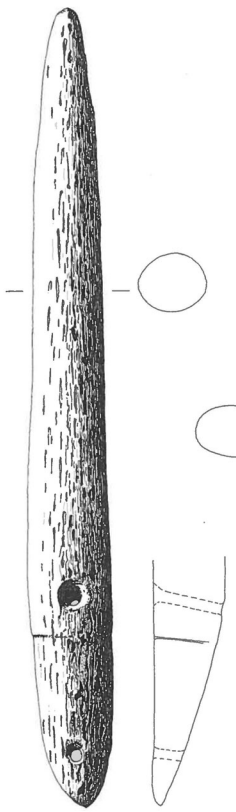
igd 4287, 57 mm, whale bone, possibly a reworked piece, stray find from Illorpaat 3, early Thule.

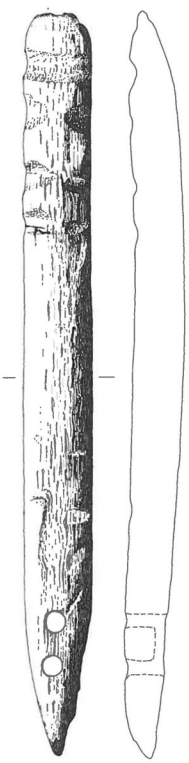


Examples of Type II:
igd 3399, 139 mm, whale bone, broken and found in Illorpaat 3, house III (5/H). **igd 631**, 81 mm, whale bone, broken and found in Illorpaat 13 (5/Q). These two examples may, with their countersunk line grooves have been parts of "the towing implements" used for attaching the seal to the kayak (*cf.* Porsild 1914: 184-189). Three pieces of Type II are possibly parts of lances, for example **igd 617**, 212 mm, whale bone, intact and found in Illorpaat 13 (6/M). **igd 3639**, 197 mm, whale bone, intact and found in Illorpaat 3, house II (23/J); the piece is reminiscent of the knife handle, **igd 4261** from early Thule (see under **Knives**).


igd 631


igd 3399


igd 617


igd 3639

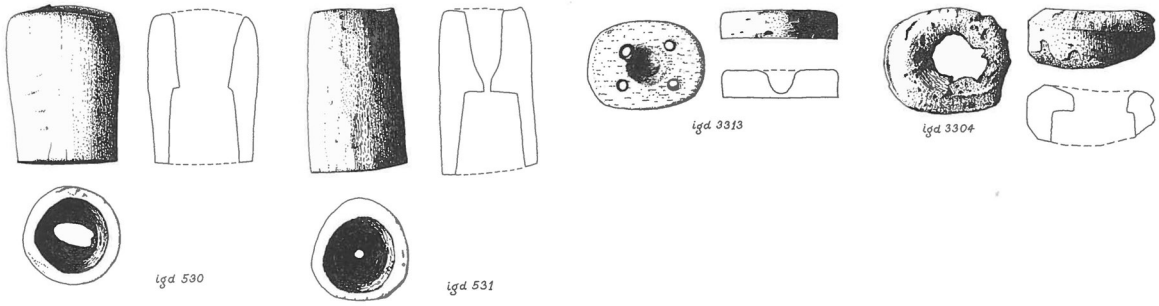
Socket pieces & Ferrules

The function of the 17 pieces was to connect the weapon shaft to the head or the fore-shaft. They are all of caribou antler, with one exception of whale bone, and can be divided into socket pieces and ferrules.

	Illorpaat 3 IV III II I	Midden 12	Illpt. 13	Islik.	Total
Socket pieces	2 – – 1	–	3	–	6
Ferrules	1 2 2 2	1	2	1	11
	3 2 2 3	1	5	1	17

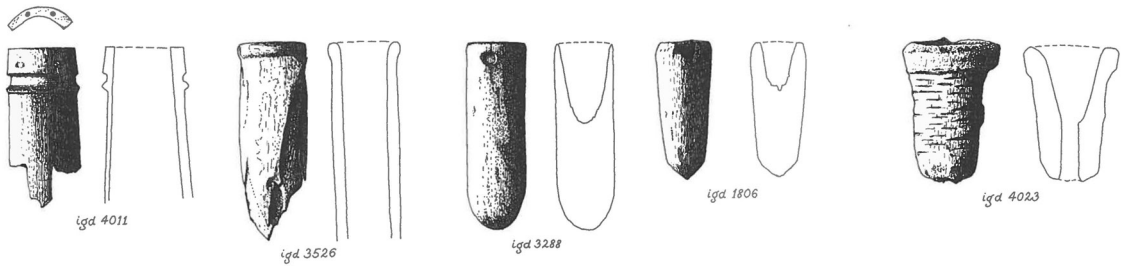
The socket pieces were all for the harpoon. The three pieces from Illorpaat 13 and one of the pieces from Illorpaat 3 furthermore functioned as a ferrule.

Examples:
igd 530, 39 mm, found in Illorpaat 13 (3/H), also functioned as a ferrule. **igd 531**, 47 mm, found in Illorpaat 13 (3/H), also functioned as a ferrule. **igd 3313**, 31 mm measured across the broadest part of the cross section, found in Illorpaat 3, house IV (20/K); the piece has been fastened by four nails. **igd 3304**, 33 mm measured across the broadest part of the cross section, found in Illorpaat 3, house IV (22/H); has also functioned as a ferrule.



The ferrules may have served many purposes, but three of the pieces have probably been used on bird darts or bladder darts (*cf.* Holtved 1962: 50).

Examples:
igd 4011, 42 mm, found in Illorpaat 3, house I (17/M), has nailholes and beads. **igd 3526**, 52 mm, found in Illorpaat 3, house III (17/L), has a bead. **igd 3288**, 49 mm, found in Illorpaat 3, house II (14/H); used for a throwing dart. **igd 1806**, 36 mm, whale bone, found in the midden, layer 12 (2/A); used for a throwing dart. **igd 4023**, 37 mm, found in Illorpaat 3, house I (18/F); used for a throwing dart.

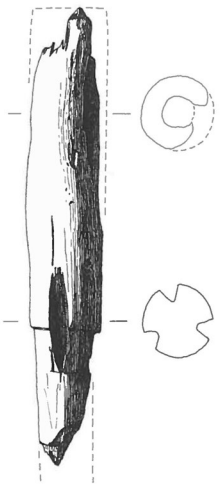


Shafts

91 shaft fragments were found at Illorpaat. 46 fragments in Illorpaat 3, 34 in the midden and 11 in Illorpaat 13. 49 fragments can be defined as belonging to throwing or thrusting weapons by means of the following characteristics: incisions for side prongs and incisions at the end for foreshafts, socket pieces or ferrules. The weapons can accordingly be defined as bird darts, bladder darts, harpoons, lances or leisters. They are made of conifer wood and shaped with a circular or oval cross section. Several fragments (42 pieces, 20 of them bird darts) have a scarf face, which may either have been made by a simple diagonal cut with or without dowels or may have been furnished with a lock.

Bird darts

This group of 40 pieces is most clearly defined by means of the carved incisions for fastening the three or four side prongs. These fragments number 12 objects. The bottoms of the incisions are flat or rounded and indicate the use of a burin tool in their manufacture. The side prongs may be fastened by one or two lashings. Nearest the base the lashing can be secured in a circular groove (e.g. **igd 4072**).



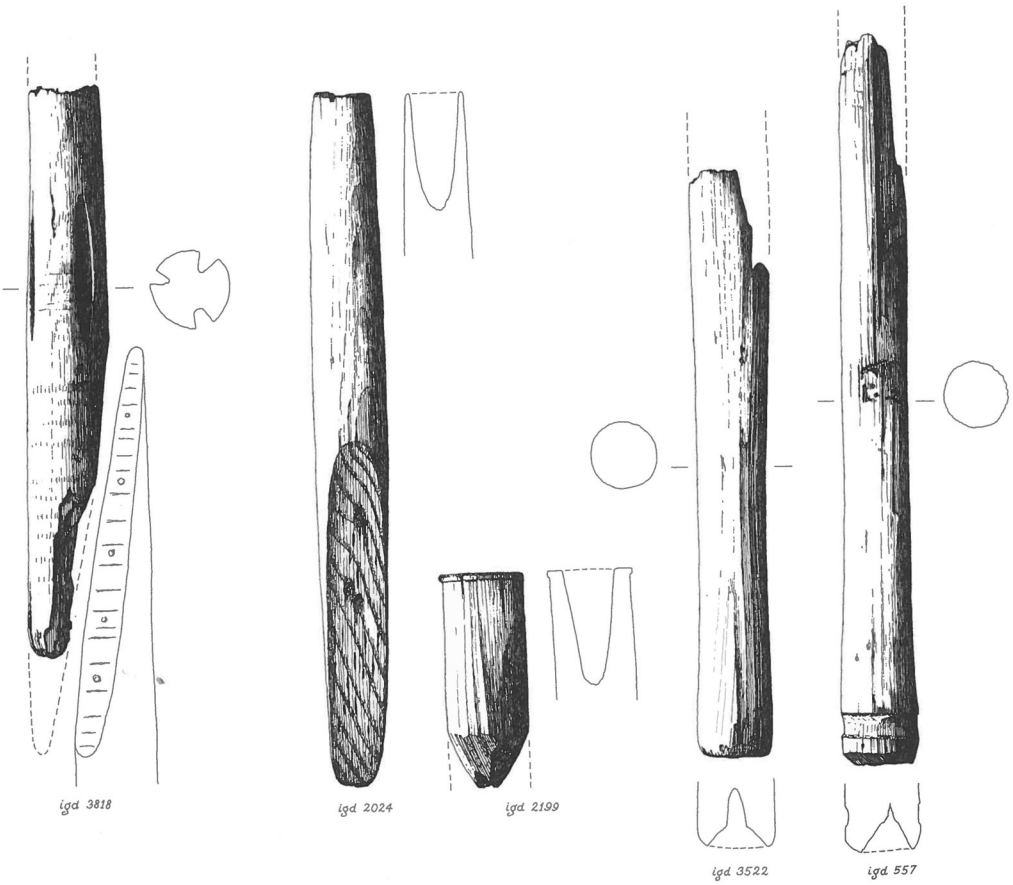
Examples: **igd 4072**, 121 mm, has a broad lashing groove at the base of the side prongs and a socket for the point close by; found in Illorpaat 3, house I (15/I). **igd 3818**, 152 mm, with scarf face, three side prongs; found in Illorpaat 3, house II (9/F).

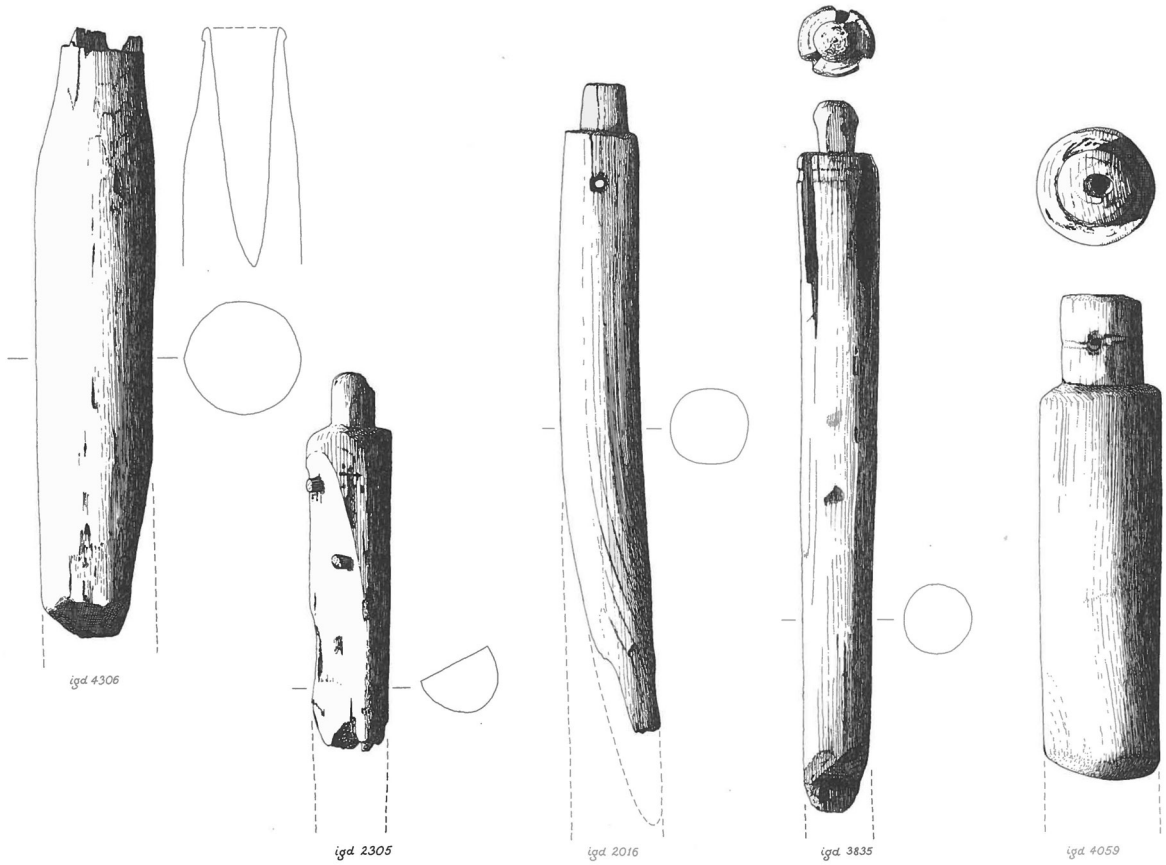
The front end of the bird-dart shaft has a socket. These fragments number 22 objects, besides **igd 4072** mentioned above.

Examples: **igd 2024**, 183 mm, simple scarf face; found in the midden, layer 8 (1/D). **igd 2199**, 57 mm, with a bead; found in the midden, layer 4 (2/H).

The rear end of the bird dart has a socket for fastening a bone nail to serve as a peg for the throwing boards (see under **Throwing board pegs**). These fragments number six objects.

Examples: **igd 3522**, 155 mm, found in Illorpaat 3, house III (21/H). **igd 557**, 193 mm, with a reinforcing lashing groove; found in Illorpaat 13 (4/J).





Bladder darts

A front end can be assigned to this group, due to its large dimensions. **igd 4306**, 161 mm, shaft diameter 31 mm; found in Illorpaat 3, early Thule (21/I).

Harpoons

Several of the many fragments of round sticks were probably from harpoon shafts. **igd 2305**, 100 mm, has a simple scarf face, incision for a ferrule; stray find from the midden.

Lances

The shaft fragments in this group have had ferrules and lashing hole. Three fragments can be assigned (**igd 2016, 3493** and **4161**).

Example: **igd 2016**, 172 mm, found in the midden, layer 4 (2/C).

Leisters

Four shaft ends all have three grooves by the front end and must be defined as parts of leisters. The use of the type for char-fishing is not known, but they may have been used for lumpsucker-fishing, which in the 18th century took place at Nepisat, i.e. "the lumpsuckers", the sound north of Hope Island (Gulløv & Kapel 1979: 27-29).

Example: **igd 3835**, 188 mm, has an incision for a ferrule at the shaft end; found in Illorpaat 3, house II (12/F).

Other shaft ends

Two shaft ends cannot be assigned to the groups above. They have incisions for a ferrule.

Example: **igd 4059**, 127 mm, with an incision for a heavy ferrule with a small hole at the end and has been reworked by a rounding of the end. Harpoon shaft (?). Found in Illorpaat 3, house I (12/J).

Indeterminable shaft fragments

The function of 40 fragments of round sticks cannot be determined with any certainty. Only their size renders it possible that they were shafts, primarily for throwing weapons.

Distribution of the groups at the excavated sites:

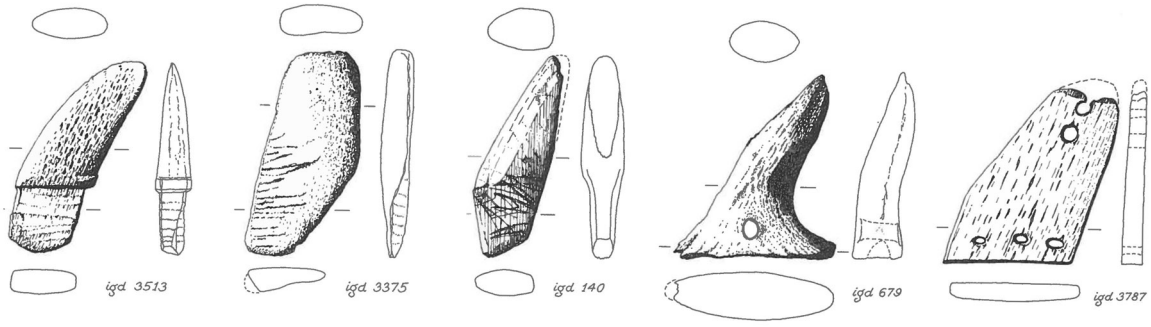
	Illorpaat 3					Midden					Illpt. 13	Total
	IV	III	II	I	e.Th.	12	9	8	4	stray finds		
Bird darts												
With side prongs, without lashing	–	1	2	2	2	–	1	1	–	–	1	10
With side prongs, with lashing	–	–	–	1	–	–	1	–	–	–	–	2
Front ends with socket	–	–	3	4	4	2	1	3	3	1	1	22
Rear ends with nail hole for throwing board	–	1	1	2	–	–	–	–	1	–	1	6
Bladder darts	–	–	–	–	1	–	–	–	–	–	–	1
Harpoons	–	–	–	–	–	–	–	–	–	1	–	1
Lances	–	1	–	1	–	–	–	–	1	–	–	3
Leisters	–	–	1	–	–	–	–	1	1	1	–	4
Other shaft ends	–	–	–	2	–	–	–	–	–	–	–	2
Indeterminable shaft fragments												
Without scarf face	–	1	5	3	2	–	–	1	5	–	2	19
With ordinary scarf face	2	–	3	1	–	3	–	1	4	–	5	19
Scarf face with lock	–	–	–	–	–	–	–	–	1	–	1	2
	2	4	15	16	9	5	3	7	16	3	11	91

The absence of shaft fragments in Illorpaat 9 can be explained by the comparatively brief period of habitation, while the absence at Itissaalik may be due to a particular function of this house, as discussed in the archaeological account in chapter II.

Finger rests

Finger rests are placed on the shaft of harpoon or lance and is used for throwing over short distances when the throwing board is not necessary. There are thumb rests and index finger rests (Holtved 1962: 39,55-56). Five specimens were found, three in Illorpaat 3 and two in Illorpaat 13. They can be either inserted into the shaft or tied to it. The materials are caribou antler and wood.

igd 3513, 58 mm of antler; found in Illorpaat 3, house III (20/F). **igd 3375**, 55 mm, of antler; found in Illorpaat 3, house III (8/J). **igd 140**, 56 mm, of wood; found in Illorpaat 13 (5/P). **igd 679**, 47 mm, of antler; found in Illorpaat 13 (6/K). **igd 3787**, 46 mm, of antler, with atypical holes on the edge; found in Illorpaat 3, house II (17/M).



Side prongs for bird darts

The side prongs for bird darts number 66 pices. One is of baleen, **igd 3817**, one is of wood, **igd 3654**, and the remainder of caribou antler. The distribution is as follows:

Illorpaat 3				Midden				Illpt. 13	Total
IV	III	II	I	12	8	4	Stray finds		
4	6	16	10	6	4	8	2	10	66

The three most important elements in the functional shaping of a side prong are: 1. The base section, which is inserted into the bird-dart shaft. This usually has a level surface. 2. The lashings, which hold the prong in the shaft socket by means of a bead or an incision at the bottom opposite the base, and in addition hold the prongs in a fixed position by means of a notch or a bead placed a little above the base on the outer side of the side prong. One of the set of side prongs on the bird dart may be pierced for just this purpose. 3. The side-prong barbs of which there may be one or several.

Among these three elements the greatest importance has been attached to the lashing method. The nethermost lashing does not occur in Ammassalik or on the southern west coast and both lashing methods are found on the rest of the west coast and in North East Greenland (Birket-Smith 1924: 354; Porsild 1914: 154-155; Holtved 1962: 77; Thalbitzer 1914: 437). The shape of the base, which in the objects under discussion is level, is a result of an improvement to the bird dart. With this, the side prong is more firmly fixed than it was with the curved base in the early Thule culture (*cf.* Mathiassen 1931: pl.1(12); the side prongs from the Kangeq midden, **L13.3364** and **L13.3441**). The barbs are all placed on the inner side, in contrast to those from

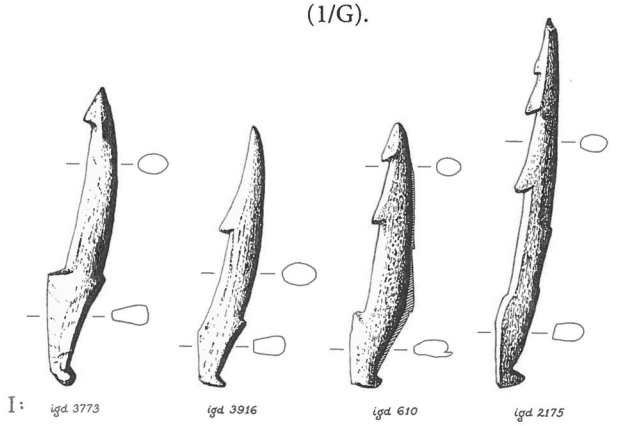
most northerly West Greenland, Thule, North East Grenland and central Canada (Mathiassen 1930: 198-199). The number of barbs vary on each bird dart. One dart type from West Greenland can have between two and five barbs (Meldgaard 1980: 8).

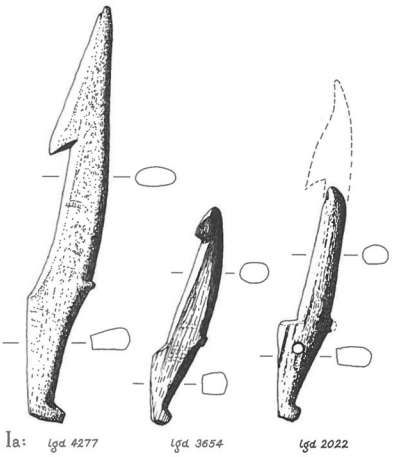
In this find there were 14 complete side prongs, the remainder being rear ends, but with parts of barb preserved. Apart from one barb, which is the most common, two prongs have two barbs and two have three. One is pierced. Three have no lashing bead at the base.

The functional principle of the lashing can thus form the basis for a typological classification of the side prongs into Types I-IV. The curved base does not occur in the find, but does occur in Kangeq, as mentioned above.

Type I. Is the main type in the find with a straight base, heel for lashing to the shaft and a simple notch for lashing into position.

Examples: **igd 3773**, 78 mm, found in Illorpaat 3, house II (21/F). **igd 3916**, 69 mm, found in Illorpaat 3, house I (15/G). **igd 610,** 71 mm, slightly damaged by compression, found in Illorpaat 13 (section A). **igd 2175**, 98 mm, found in the midden, layer 4 (1/G).



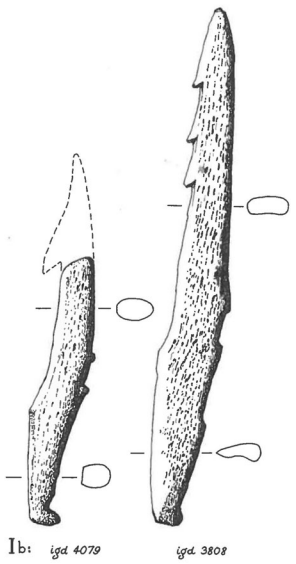


Type Ia. Is a variant with the position-lashing marked by a bead.

Examples: **igd 4277**, 110 mm, found in Illorpaat 3, house I (16/G). **igd 3654**, 58 mm, with visible traces of lashing, of wood, found in Illorpaat 3, house II (19/E). **igd 2022**, 63 mm, broken, with an eye, found in the midden, layer 8 (1/D).

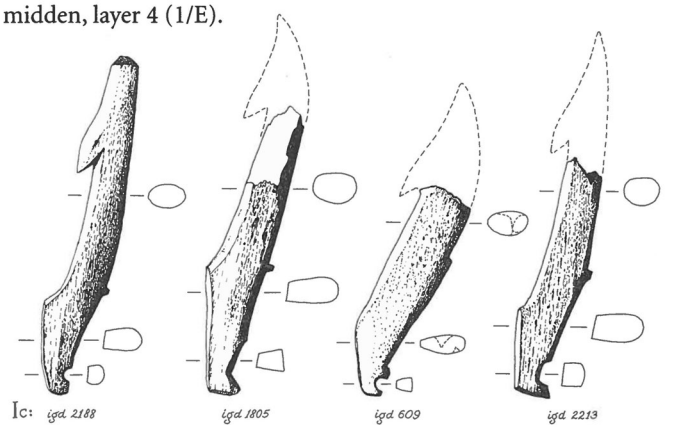
Type Ib. Is a variant with the position-lashing indicated by a concave cut.

Examples: **igd 4079**, 73 mm, broken, found in Illorpaat 3, house I (16/M). **igd 3808**, 137 mm, has two position-lashing marks (for a leister?), found in Illorpaat 3, house II (6/J).



Type Ic. Is a variant with the shaft-lashing at the heel marked by a concave cut.

Examples: **igd 2188**, 90 mm, with position-lashing in the form of a bead, found in the midden, layer 8 (1/H). **igd 1805**, 78 mm, broken, position-lashing indicated by a bead, found in the midden, layer 12 (1/A). **igd 609**, 59 mm, broken, slightly damaged by compression, position-lashing indicated by a simple notch, found in Illorpaat 13 (5/T). **igd 2213**, 63 mm, broken, position-lashing indicated by a bead, found in the midden, layer 4 (1/E).



Type II. Is characterized by the termination of the base, which uppermost ends in a notch. The function of this is to secure the side prong in the shaft socket.

Examples: **igd 3821**, 93 mm, broken, has both reinforcement at the head and a bead, found in Illorpaat 3, house II (9/G). **igd 2192**, 53 mm, broken, has lashings as in Type I, found in the midden, layer 12 (2/H).

Type III. Has no heel.

Example: **igd 3765**, 100 mm, found in Illorpaat 3, house II (20/G).

Type IV. Is represented by one particular specimen. **igd 3817**, 88 mm, of baleen, has no indication of position-lashing, found in Illorpaat 3, house II (9/F).

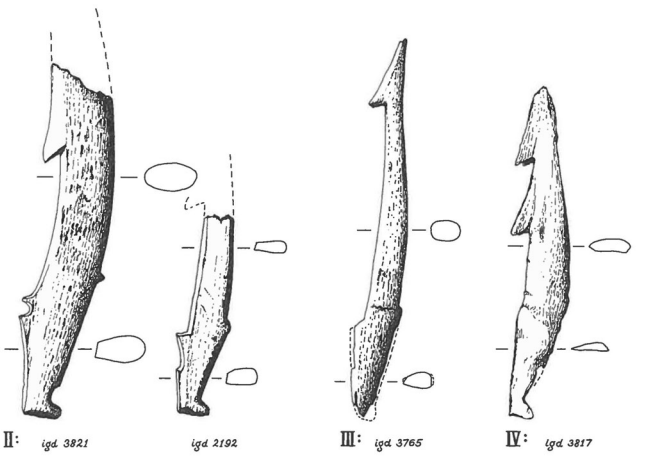


Table of the described types:

Type	Illorpaat 3				Midden				Illpt. 13	Total
	IV	III	II	I	12	8	4	Stray finds		
I	2	1	5	3	2	1	7	2	4	27
Ia	–	4	2	2	1	1	–	–	2	12
Ib	–	–	1	2	–	–	–	–	–	3
Ic	1	1	4	2	2	2	1	–	1	14
II	1	–	1	–	1	–	–	–	1	4
III	–	–	2	–	–	–	–	–	–	2
IV	–	–	1	–	–	–	–	–	–	1
frag.	–	–	–	1	–	–	–	–	2	3
	4	6	16	10	6	4	8	2	10	66

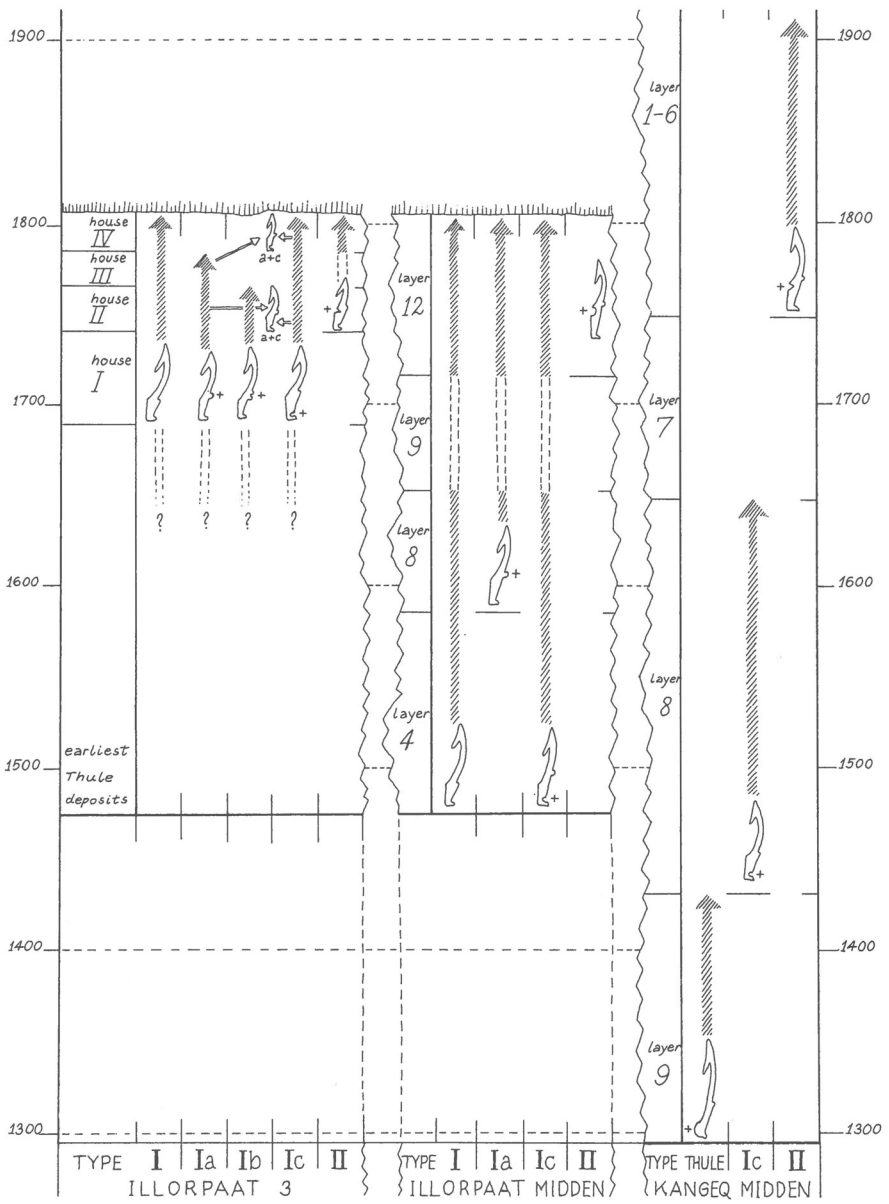


Fig. 59. *Side prongs for bird darts from Illorpaat and Kangeq, distributed in time and space. The described types are marked by crosses, which point out special functional features. The hatched arrows show the types' temporal extent. The dashed sections of the arrows indicate lack of documentation. The smaller horizontal arrows indicate hybrid forms.*

Type I can in the table be seen to have been a common type, which could be improved by a small bead for the position-lashing (**Ia**) and a deeper cut at the heel for lashing into the socket of the shaft (**Ic**). Both these elements are known from the Thule cultures earliest types in South West Greenland, together with the curved base (*cf.* Mathiassen 1931, *op.cit.*; the Kangeq midden). **Type II** is known from the central and southern west coast and from Ammassalik (Mathiassen 1931: 83). The additional reinforcement of the base by a kind of "lock" is an evident improvement of the bird dart's function. This must be seen in relation to the increasing significance of fowling the closer one gets to the area between 61º and 66º N on Greenland's west coast; an area where, in particular, a large number of razorbills overwinter on the ice-free sea.

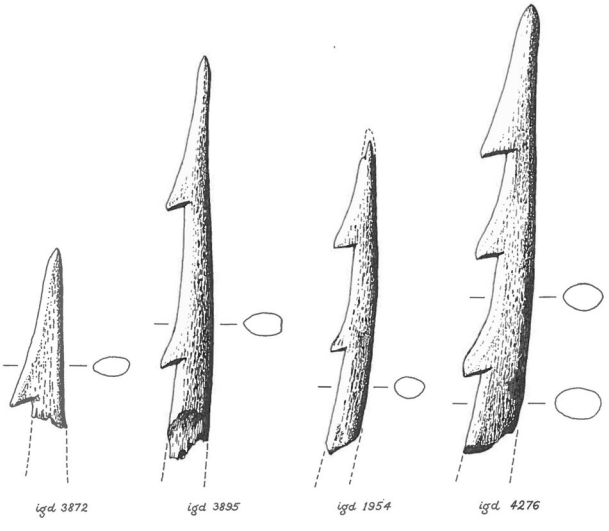
It can be clearly seen on the stratigraphic illustration (Fig. 59) that most of the improvements to the side prong take place in the 18th century; especially from the time when Illorpaat 3, house II was rebuilt.

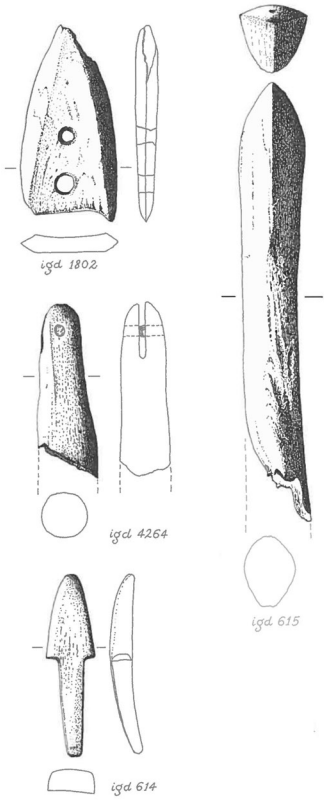
Side prongs, indeterminable

22 side prong fragments cannot be functionally determined as being from bird darts or leisters. They are all of caribou antler. One fragment from the midden is a base only, neither heel nor bead is preserved. Eight fragments have one barb left. Nine fragments have two barbs left. Four fragments have three barbs left.

Illorpaat 3				Midden				Illpt. 13	Total
IV	III	II	I	12	9	8	4		
1	1	6	4	2	1	1	4	2	22

Examples: **igd 3872**, 47 mm, found in Illorpaat 3, house I (4/G). **igd 3895**, 107 mm, found in Illorpaat 3, house I (11/H). **igd 1954**, 84 mm, found in the midden, layer 9 (2/D). **igd 4276**, 117 mm, found in Illorpaat 3, house I (16/F).





Points of bone or antler, indeterminable

The function of ten bone or antler points cannot be determined with any certainty. They are presumably parts of arrow heads, harpoon heads, bird-dart heads and bladder-dart heads.

Arrow head (?). **igd 3345**, 35 mm, of caribou antler, with a blade slit and barb, broken immediately below the barb; found in Illorpaat 3, house IV (5/F). Not illustrated.

Harpoon head (?) and harpoon blade (?). **igd 3799**, 47 mm, of whale bone, the inner part of the shaft socket and the line hole are preserved, otherwise greatly deformed by secondary incisions; found in Illorpaat 3, house I (21/L). Not illustrated. **igd 1802**, 52 mm, of caribou antler, pierced twice and with a sharpened edge; found in the midden, layer 12 (2/C).

Bird-dart head (?). **igd 3296**, 60 mm, of caribou antler, with a bone rivet, rather damaged; found in Illorpaat 3, house III (19/F). Not illustrated. **igd 4264**, 47 mm, of whale bone, with a blade slit and bone rivet; found in Illorpaat 3, early Thule (8/F).

Bladder-dart head (?). **igd 615**, 116 mm, of caribou antler, three-edged head; found in Illorpaat 13 (6/I).

Other heads (?). **igd 618**, 106 mm, of whale bone, two rudimentary barbs; found in Illorpaat 13 (4/L). Not illustrated. **igd 3191**, 51 mm, of caribou antler, lanceolate, flat head; found in Illorpaat 3, early Thule (9/M). Not illustrated. **igd 4084**, 76 mm, of caribou antler, sawn off at the end, one rudimentary barb; stray find from Illorpaat 3. Not illustrated.

Finger rest for shaft or throwing board(?). **igd 614**, 48 mm, of caribou antler, intact; found in Illorpaat 13 (1-2/I).

Throwing boards

28 parts of throwing boards were found, distributed as follows:

	Illorpaat 3					Midden			Illpt. 13	Total
	IV	III	II	I	e.Th.	8	4	Stray finds		
Rear ends (handles)	–	–	–	–	–	1	3	2	–	6
Front ends (shaft rests)	1	–	1	1	1	2	–	1	1	8
Fragments	–	1	3	5	2	1	3	–	–	14
	1	1	4	6	3	3	6	3	1	28

Fridtjof Nansen, who overwintered in Godthåb and Kangeq after crossing the inland ice, gave a description of the throwing boards and their function. Nansen distinguished between two types: I. Where the front end had a peg which fits into a bone knob in the rear end of the shaft. This type was used for the bladder dart and the bird dart. II. Where a diagonal peg on the shaft fits into a hole on the front end. A second diagonal peg fits into a hole near the grip. This was used for harpoons and lances (Nansen 1891: 33-35).

The grip has a concave depression for the thumb and a hole for the index finger. The latter feature was later replaced by a concave depression, but it is seen in its origi-

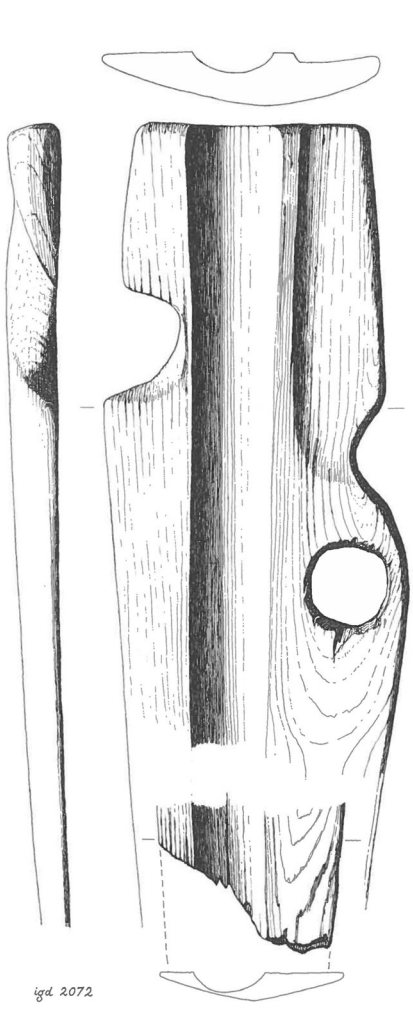
nal form on the painting from 1724 of two Greenlanders from Hope Island (Meldgaard 1980: 15). The sides and shaft rest of the front ends can have bone mounts.

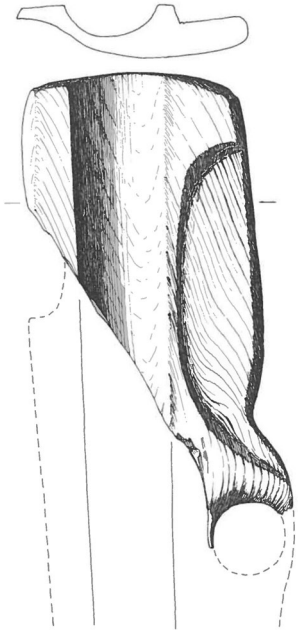
None of the found specimens were complete. A toy model of a throwing board for a bird dart (**igd 4240**) is intact. See under **Toys**.

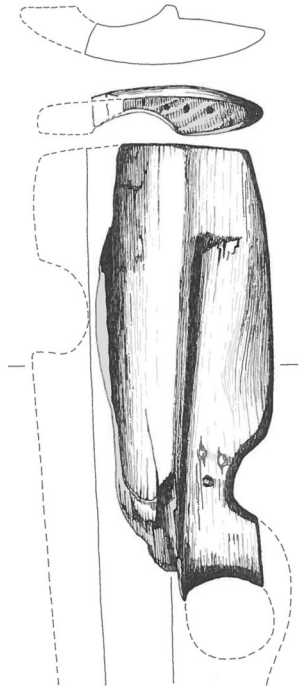
Six rear ends carry traces of grips. On eight front ends the shaft groove ends some way into the throwing board, which indicates that it was used for a bird dart (or bladder dart). Fourteen pieces of edge are preserved, eight of them with part of the shaft groove, two with part of the finger hole, and three have had mounts on the edge. Absence of piercing in the front end or through the shaft groove indicates use for a harpoon. **igd 4153** (Illorpaat 3, house I (11/K)) has a hole immediately in front of the thumb hole where a sealskin string with a bone knob had been fed through in order to fasten the throwing board to the kayak deck (*cf.* Birket-Smith 1924: 299; Thalbitzer 1914: 443), not illustrated. There are six examples of closed index-finger holds in the entire find material.

Rear ends (grips). In addition to the thumb and index-finger holds there is a depression for the other fingers in front of the latter.

Examples: **igd 2072**, 300 mm, found in the midden, layer 4 (2/C). **igd 2265**, 123 mm, found in the midden, layer 4 (2/H). **igd 2049**, 118 mm, three nails of unknown function are placed in front of the index-finger hold on the upper as well as the lower side; found in the midden, layer 8 (1/D).

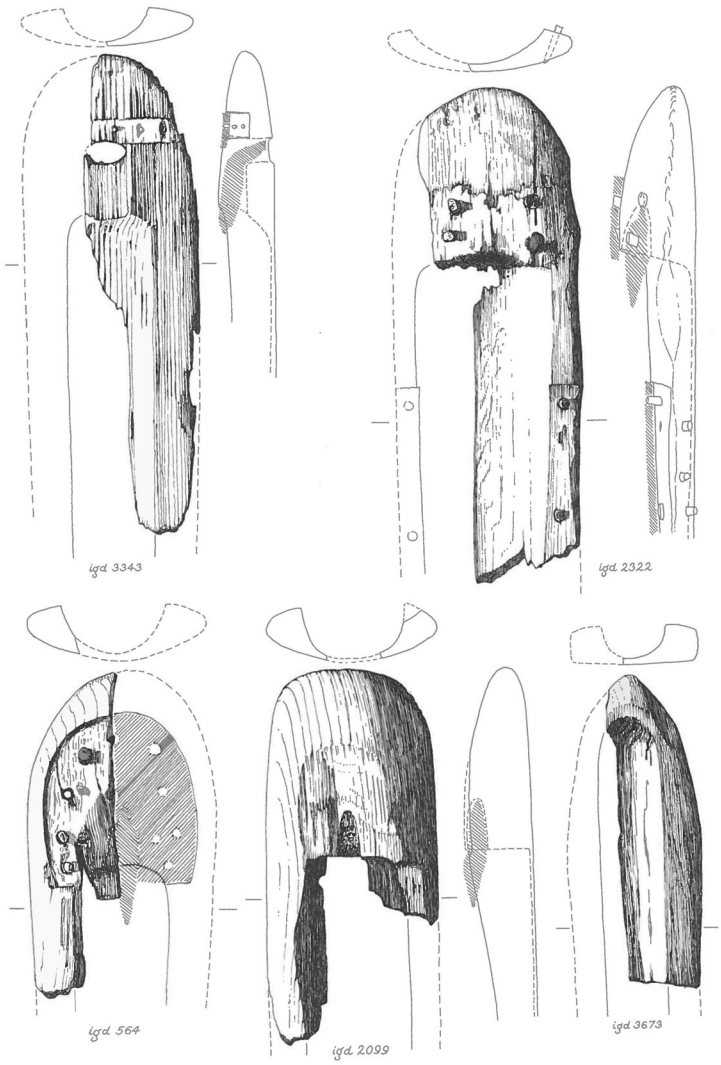




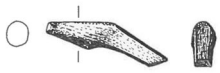


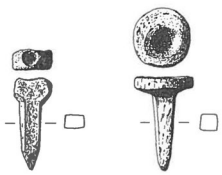
Front ends (shaft rests). All the front ends found were rounded off. Four have had mounts.

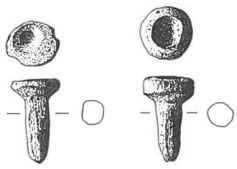
Examples: **igd 3343**, 126 mm, a rectangular hole for a bone knob can be seen; found in Illorpaat 3, house IV (22/K). **igd 2322**, 130 mm, nails for mounts, both at the position of the bone knob and some way into the upper side; stray find from the midden. **igd 564**, 86 mm, has nails for a large mount; found in Illorpaat 13 (2/I). **igd 2099**, 100 mm, has a hole for a bone knob; found in the midden, layer 8 (1/F). **igd 3673**, 83 mm; found in Illorpaat 3, house II (23/F).




igd 3753


igd 3508


igd 2005 igd 2222


igd 2273 igd 2067

Throwing-board pegs and knobs

As was described in the throwing board section, the throwing board's bone knob touches a bone peg in the shaft end of the throwing weapon. Eight examples of these two elements were found: two knobs of whale bone and caribou antler, six pegs of whale bone. The cross sections are either circular or square.

	Illorpaat 3		Midden			Total
	III	II	12	8	4	
Throwing board knob	1	1	–	–	–	2
Shaft pegs	–	1	1	1	3	6
	1	2	1	1	3	8

Examples: **igd 3753**, 35 mm, of whale bone; found in Illorpaat 3, house II (19/G). **igd 3508**, 33 mm, of antler; found in Illorpaat 3, house III (19/H). **igd 2005**, 24 mm; found in the midden, layer 8 (2/G). **igd 2222**, 25 mm; found in the midden, layer 4 (1/G). **igd 2273**, 21 mm; found in the midden, layer 4 (2/G). **igd 2067**, 22 mm; found in the midden, layer 4 (1/B).

All were probably for bird darts.

Bladder mouthpieces & Bladder nozzles

37 bladder mouthpieces, nozzles and plugs were found; for harpoon bladders and bladder darts. Their distribution is as follows:

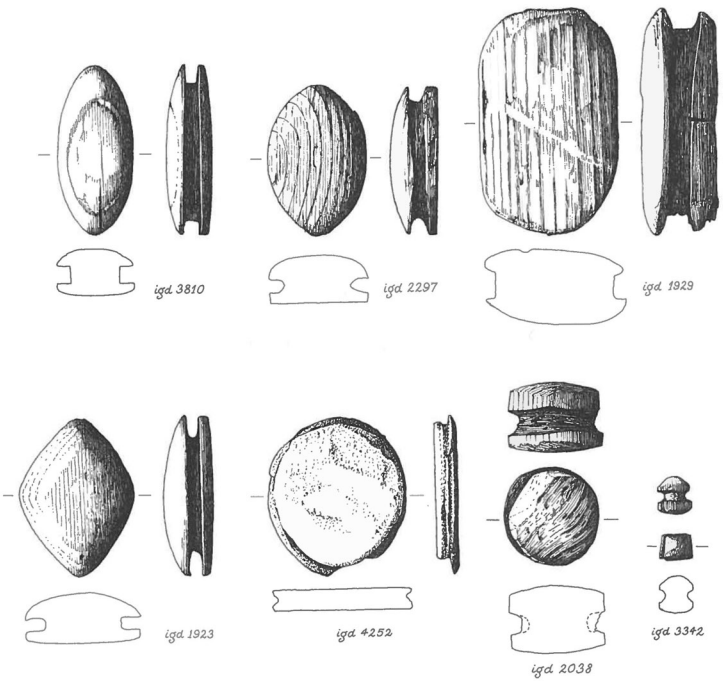
	Illorpaat 3					Midden					Illpt. 13	Islik	Total
	IV	III	II	I	e.Th.	12	9	8	4	Stray finds			
Bladder mouthpieces													
Flat	–	–	1	3	2	1	1	1	3	2	2	–	16
High	2	–	1	1	–	1	–	–	1	–	–	–	6
Bladder nozzles and plugs													
Bladder nozzles	–	–	3	–	–	1	–	–	3	–	–	–	7
Tension piece	–	–	1	–	–	–	–	–	1	–	–	–	2
Mouthpieces with hole	1	–	–	–	–	–	–	–	–	–	2	1	4
Wooden plugs (incl. one in bladder nozzle)	–	–	–	1	–	–	–	1	–	–	–	–	2
	3	0	6	5	2	3	1	2	8	2	4	1	37

Bladder mouthpieces were found in a total of 22 pieces. 18 were complete and four had one half missing. The materials were wood and caribou antler (one piece). A few still had baleen in the lashing groove.

The flat types number 16 pieces. The shapes vary from oval to circular, with a cross section which shows a slightly domed upper side and almost level underside. The surface measurements vary from 60 × 30 mm to 15 × 20 mm and the thickness from 18 mm to 5 mm.

The high types number six pieces: The shapes vary from circular to square heads which show a domed upper side and a less domed underside. The surface measurements vary from 28 mm (circular head) to 5 mm (square head) and the height (thickness) from 25 mm to 10 mm.

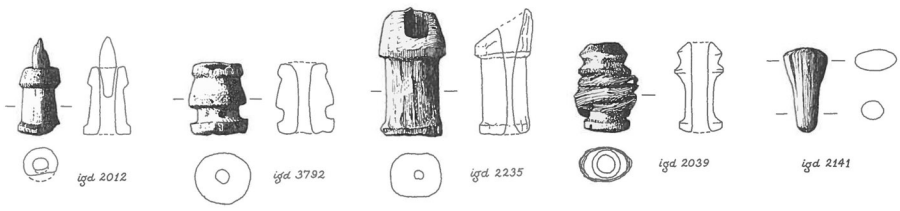
Examples: **igd 3810** is of wood and found in Illorpaat 3, house II (3/J). **igd 2297** is of wood and found in the midden, layer 12 (2/A). **igd 1929** is of wood and found in the midden, layer 4 (2/A). **igd 1923** is of wood and found in the midden, Layer 9 (1/E). **igd 4252** is of antler and is a stray find from Illorpaat 3, early Thule. **igd 2038** is of wood with baleen lashing and found in the midden, layer 12 (2/G). **igd 3342** is of wood and found in Illorpaat 3, house IV (21/L).

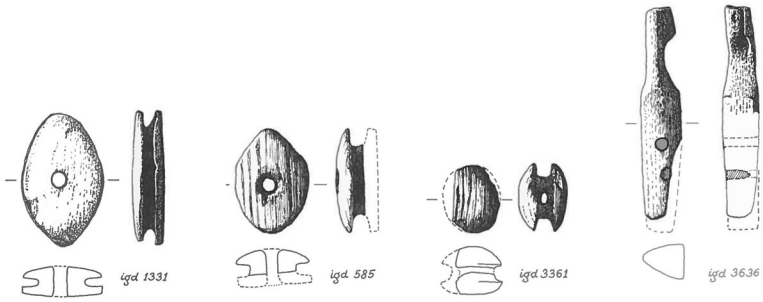


Bladder nozzles. 13 pieces of bladder nozzle were found. In addition there were two plugs. Nine nozzles were complete. The materials are wood, caribou antler and bone. On one the baleen lashing is preserved and in one there was a wooden plug. Four bladder mouthpieces were pierced and are included in this group. Two nozzles have a base with lashing holes for fastening onto the bladder–dart shaft.

Examples: **igd 2012**, 25 mm, of bone, wooden plug attached, found in the midden, layer 4 (2/B). **igd 3792**, 18 mm, of antler, found in Illorpaat 3, house II (21/K). **igd 2235**, 33 mm, of wood, found in the midden, layer 4 (2/G). **igd 2039**, 23 mm, of bone with baleen lashing, found in the midden, layer 12 (2/G). **igd 2141**, 23 mm, wooden plug, found in the midden, layer 8 (2/G). **igd 1331** is of antler, bladder mouthpiece with hole for a wooden plug, found at Itissaalik (8/I). **igd 585** is of wood, bladder mouthpiece with hole for a wooden plug, found in Illorpaat 13 (4/I). **igd 3361** is of

wood, bladder mouthpiece with hole for a wooden plug at the lashing level (?), found in Illorpaat 3, house IV (16/J). **igd 3636**, 56 mm, of antler, nozzle for bladder dart, the base partially split off and the end of the nozzle broken; found in Illorpaat 3, house II (21/J).





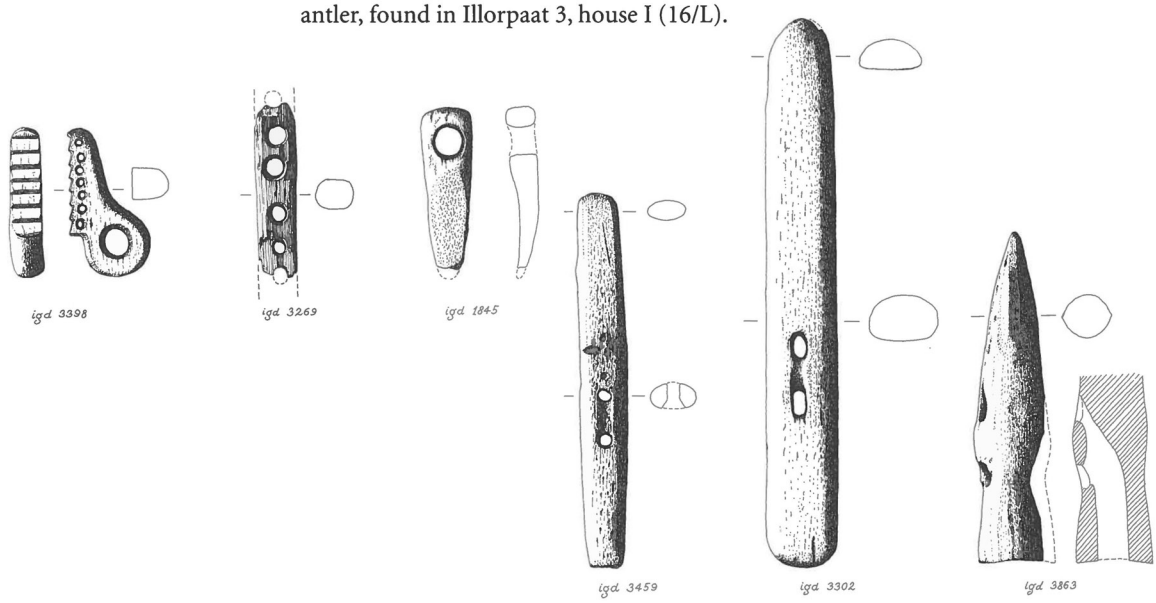
Line accessories

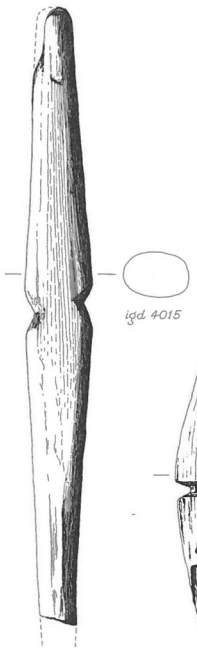
Eight objects can be associated with harpoons and towing lines.

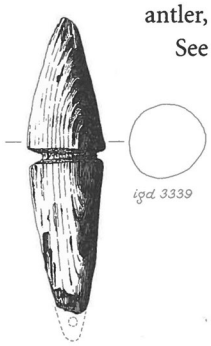
Three objects are mounts for fastening the harpoon line onto the shaft: **igd 3398**, 38 mm, of caribou antler, found in Illorpaat 3, house III (23/H). **igd 1830**, 44 mm, of antler, broken, found in the midden, layer 12 (1/C). Not illustrated. **igd 494**, 75 mm, of wood, found in Illorpaat 13 (2/T). Not illustrated.

Two buckle mounts for the line: **igd 3269**, 45 mm, of wood, broken, found in Illorpaat 3, house IV (3/F). **igd 1845**, 46 mm, of antler, found in the midden, layer 12 (1/B).

Three mounts for fastening the towing line to the kayak deck (*cf.* Porsild 1914: 153, 184-189): **igd 3459**, 98 mm, of antler, found in Illorpaat 3, house III (22/J). **igd 3302**, 145 mm, of whale bone, stray find from Illorpaat 3, house IV. **igd 3863**, 87 mm, of antler, found in Illorpaat 3, house I (16/L).





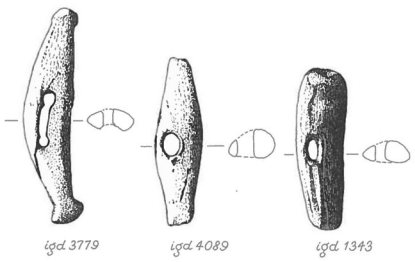


Toggles

Five objects have been used as toggles in various connections. One was found at Itissaalik, the others in Illorpaat 3.

igd 4015, 163 mm, of wood, has been used for a line, found in Illorpaat 3, early Thule (19/K). **igd 3339**, 80 mm, of wood, broken at one end where there had probably been an eye, has been used as a float with baleen snares fastened to the groove and a bait below for fowling at sea (*cf.* Holtved 1962: 81-82); found in Illorpaat 3, house IV (21/L). **igd 3779**, 56 mm, of caribou antler, found in Illorpaat 3, house II (23/F). **igd 4089**, 44 mm, of antler, found in Illorpaat 3, early Thule (17/M). **igd 1343**, 42 mm, of antler, found at Itissaalik (14/G). *Cf.* Holtved 1944, I: pl.16.

See **Bone objects, various** and **Wooden objects, various**.



Wound plugs

29 wound plugs were found 12 in Illorpaat 3, nine in the midden, one in Illorpaat 9 and seven in Illorpaat 13. They are all of wood. 14 have suspension holes. 25 have grooves or barb-like incisions, while four are smooth.

The classification of the found wound plugs into five groups is purely typological. There is no stratigraphic division between the groups, which are found both at the top and the bottom of the excavations.

Table of the found wound plugs:

Group	Illorpaat 3				Midden			Illpt. 9	Illpt. 13	Total
	III	II	I	e.Th.	12	8	4			
I	–	1	1	–	1	1	–	–	–	4
II	2	1	4	1	2	1	1	1	5	18
III	–	1	–	–	–	1	–	–	1	3
IV	–	1	–	–	1	–	–	–	1	3
V	–	–	–	–	–	–	1	–	–	1
	2	4	5	1	4	3	2	1	7	29

Group I consists of four specimens. They are all smooth and one is pierced.

Examples: **igd 2123**, 142 mm, found in the midden, layer 8 (1/E). **igd 4068**, 147 mm, found in Illorpaat 3, house I (14/M).

Group II consists of 18 specimens. They all have diagonal incisions on the domed side, while the flat underside is smooth. 12 pieces are complete. Nine pieces have been pierced.

Examples: **igd 3846**, 135 mm, found in Illorpaat 3, house I (13/H). **igd 3405**, 154 mm, found in Illorpaat 3, house III (20/J). **igd 3457**, 169 mm, with a peg, found in Illorpaat 3, house III (17/J). **igd 1548**, 120 mm, found in Illorpaat 9 (2/A). **igd 3512**, 203 mm, with a peg, found in Illorpaat 3, house II (20/F).

Group III consists of three specimens. They have barb-like incisions along the sides.

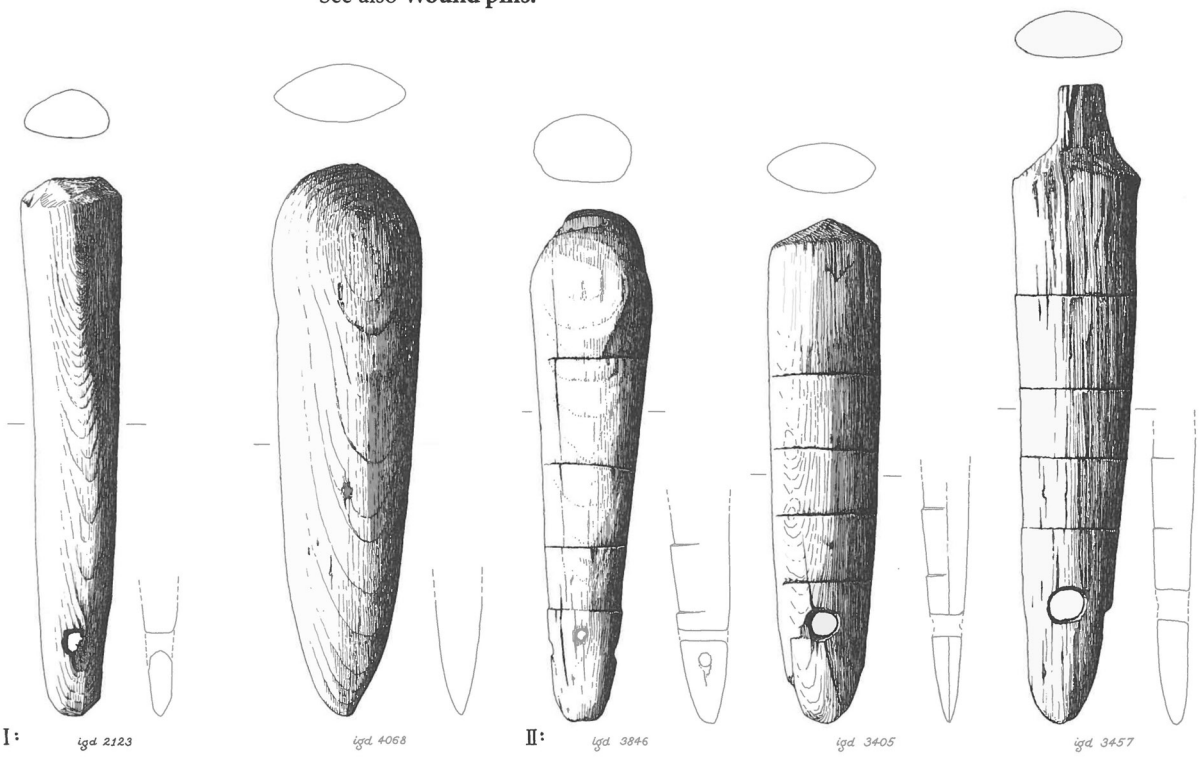
Examples: **igd 2193**, 182 mm, found in the midden, layer 8 (2/H). **igd 590,** 135 mm, found in Illorpaat 13 (3/F).

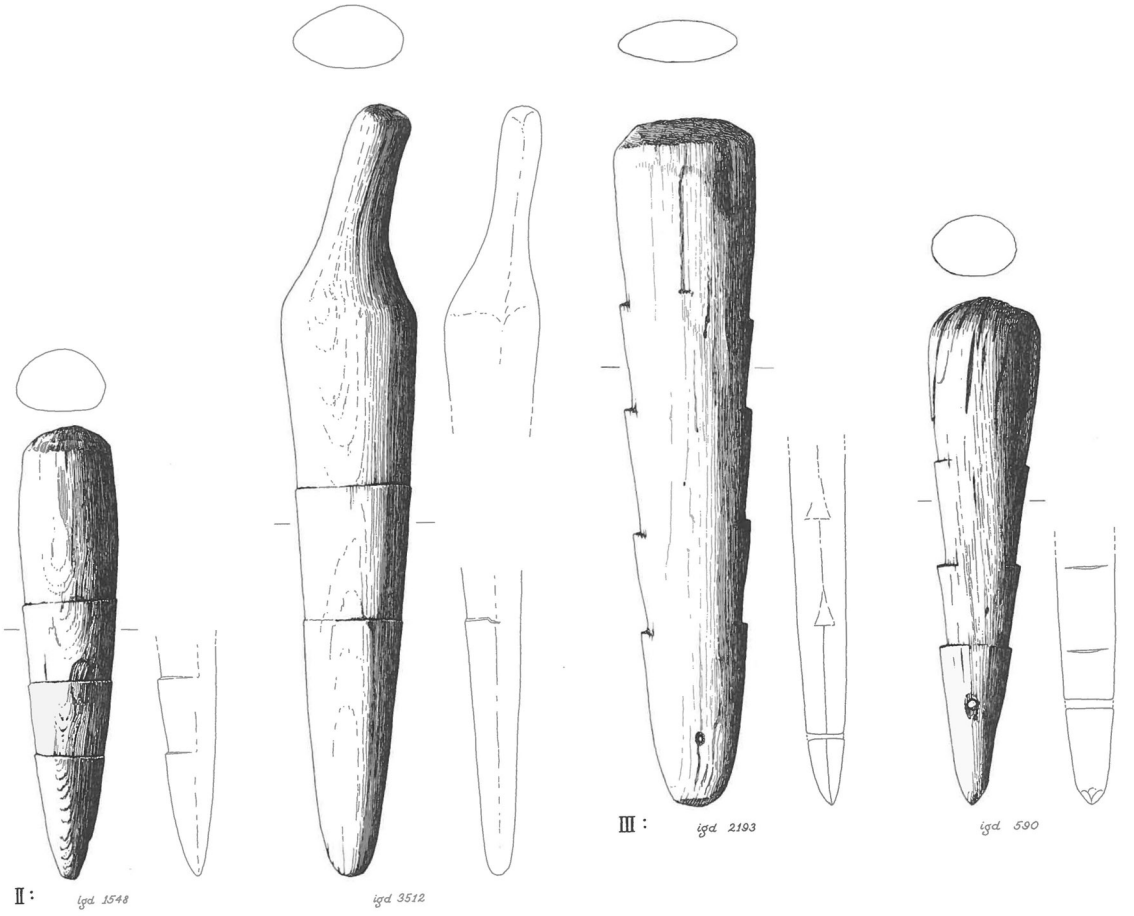
Group IV consists of three specimens. They have screw threads. One is complete and two are broken.

Example: **igd 464**, 166 mm, found in Illorpaat 13 (6/I).

Group V consists of one specimen. Atypical wound plug (?) with the hole at the rear end, which is also circled by three grooves. **igd 2240**, 125 mm, found in the midden, layer 4 (1/D).

See also **Wound pins.**



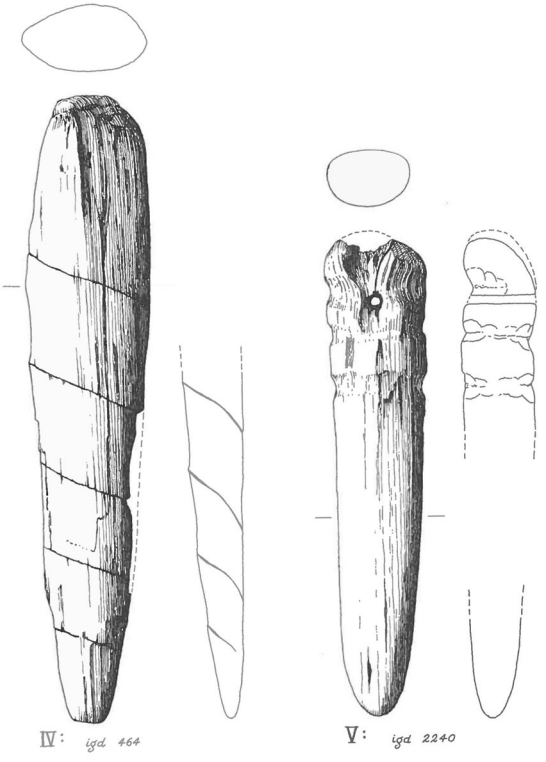


II: igd 1548

igd 3512

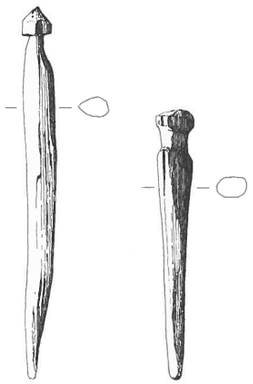
III: igd 2193

igd 590



IV: igd 464

V: igd 2240

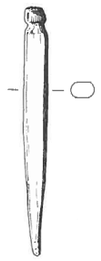


Wound pins

Six wound pins were found. Four in Illorpaat 3 (house IV, one piece, and house I, three pieces) and two in Illorpaat 13. They are all of wood. Normally this find group is associated with sealing on the ice and indeed there is no archaeological evidence of the group in South West Greenland, which is ice-free in winter (*cf.* Thalbitzer 1914: 461), and where wound plugs are the most common. Four specimens are intact and one is unfinished.

Examples: **igd 3325**, 108 mm, found in Illorpaat 3, house IV (15/L). **igd 3666**, 78 mm, found in Illorpaat 3, house I (20/F). **igd 3960**, 71 mm, found in Illorpaat 3, house I (20/H).

See also **Wound plugs**.



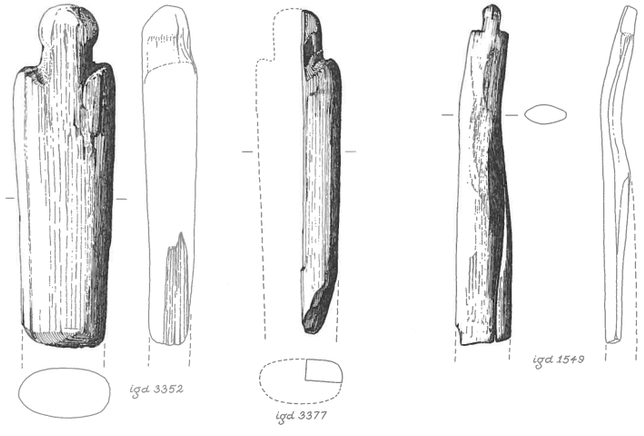
Bows

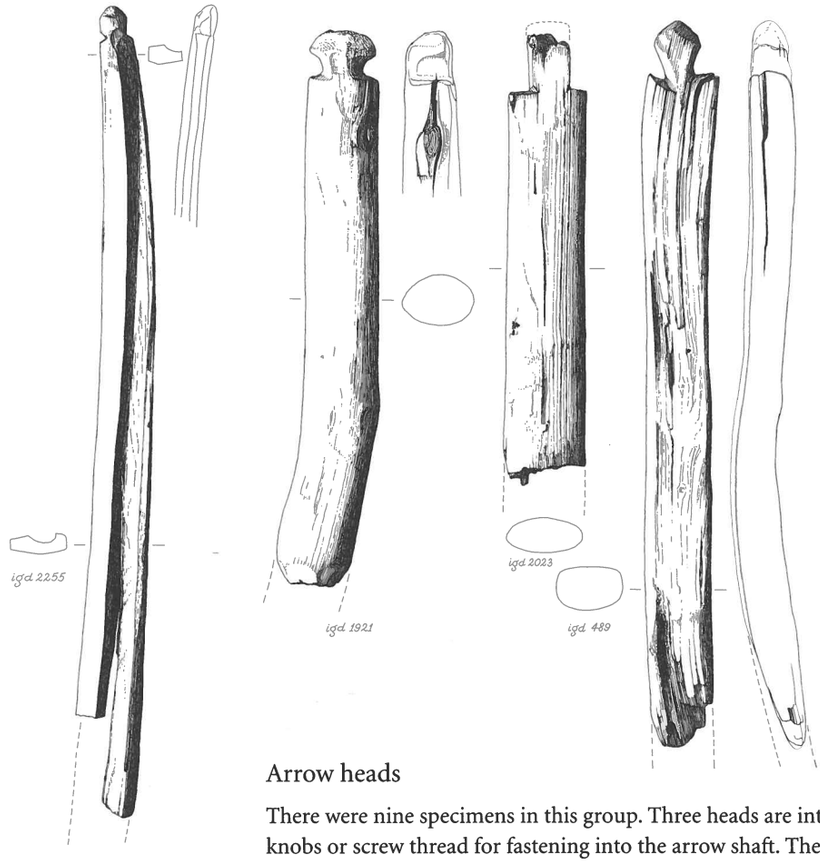
20 bow fragments can be identified. They may have been used for hunting, for drills or as toys. All the pieces are of wood. Their length varies from 36 to 250 mm.
The distribution is as follows:

Illorpaat 3				Midden				Illpt. 9	Illpt. 13	Total
IV	III	II	e.Th.	12	9	8	4			
1	3	1	1	2	1	6	2	1	2	20

Examples: **igd 3352**, 100 mm, found in Illorpaat 3, house IV (11/K). **igd 3377**, 95 mm, found in Illorpaat 3, house III (10/F). **igd 1549**, 98 mm, found in Illorpaat 9 (2/A). **igd 2255**, 235 mm, with longitudinal groove (for sinew thread?), found in the midden, layer 4 (1/H). **igd 1921**, 163 mm, found in the midden, layer 9 (1/E). **igd 2023**, 130 mm, found in the midden, layer 8 (1/D). **igd 489**, 210 mm, found in Illorpaat 13 (4/P).

The examples illustrated here represent all the types in the find; the types have all been published before now (*cf.* Porsild 1914: 158-162; Birket-Smith 1924: 339-343; Holtved 1962: 69-71) and were common in the 17th and 18th centuries.



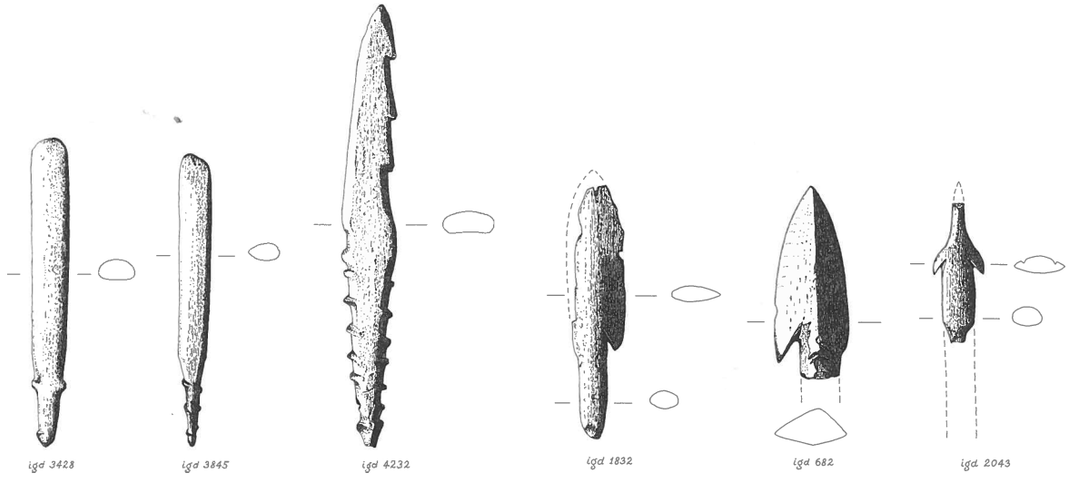


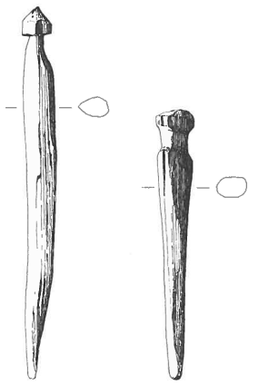
Arrow heads

There were nine specimens in this group. Three heads are intact and have either knobs or screw thread for fastening into the arrow shaft. The remainder were snapped tips. They have been used in caribou hunting and fowling (Birket-Smith 1924: 343-345; Grønow *et al.* 1983: 63-68; Porsild 1914: 161-163).

igd 3428, 90 mm, of caribou antler, found in Illorpaat 3, house III (4/G). Terminal knob and knobs for fastening. Used for caribou hunting.

igd 3845, 85 mm, of antler, found in Illorpaat 3, house II (12/M). With screw thread. Used for caribou hunting.



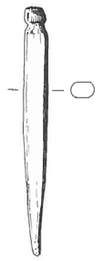


Wound pins

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See also **Wound plugs**.



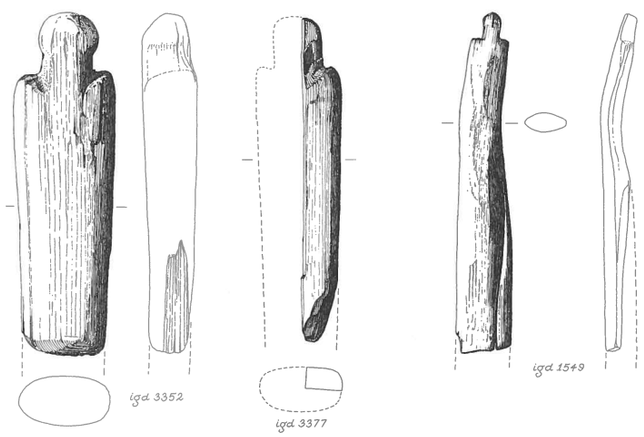
Bows

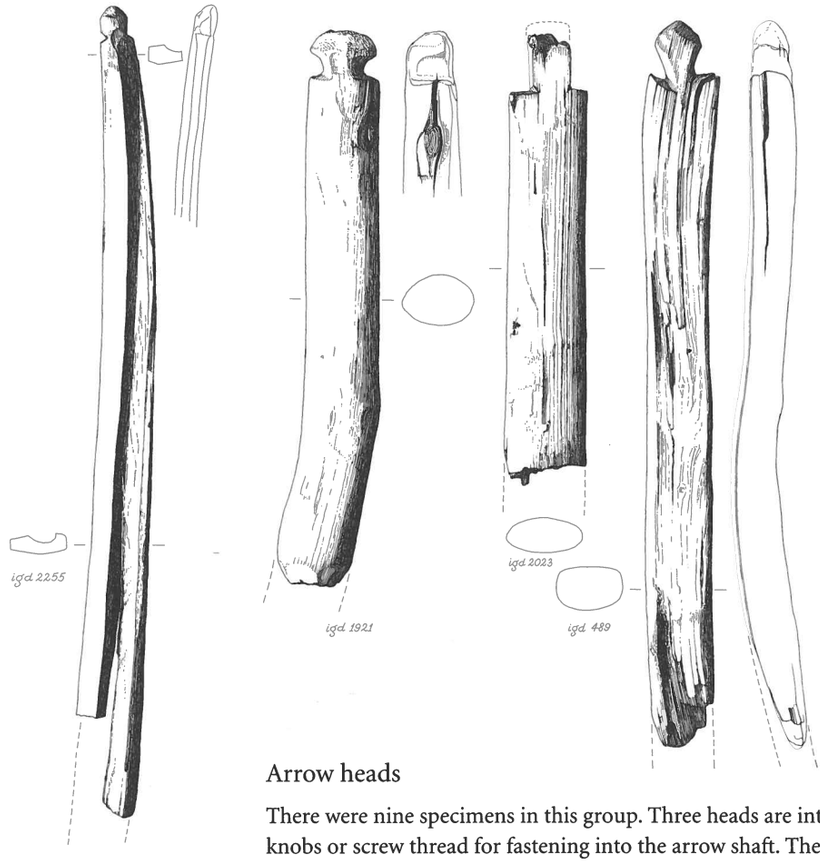
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Illorpaat 3				Midden				Illpt. 9	Illpt. 13	Total
IV	III	II	e.Th.	12	9	8	4			
1	3	1	1	2	1	6	2	1	2	20

Examples: **igd 3352**, 100 mm, found in Illorpaat 3, house IV (11/K). **igd 3377**, 95 mm, found in Illorpaat 3, house III (10/F). **igd 1549**, 98 mm, found in Illorpaat 9 (2/A). **igd 2255**, 235 mm, with longitudinal groove (for sinew thread?), found in the midden, layer 4 (1/H). **igd 1921**, 163 mm, found in the midden, layer 9 (1/E). **igd 2023**, 130 mm, found in the midden, layer 8 (1/D). **igd 489**, 210 mm, found in Illorpaat 13 (4/P).

The examples illustrated here represent all the types in the find; the types have all been published before now (*cf.* Porsild 1914: 158-162; Birket-Smith 1924: 339-343; Holtved 1962: 69-71) and were common in the 17th and 18th centuries.



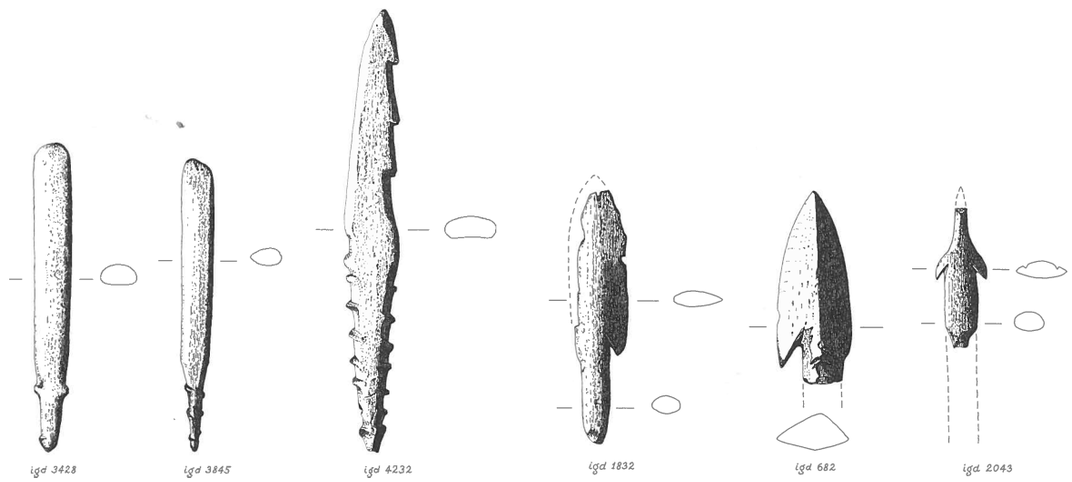


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igd 3845, 85 mm, of antler, found in Illorpaat 3, house II (12/M). With screw thread. Used for caribou hunting.



igd 4232, 128 mm, of antler, found in Illorpaat 3, early Thule (23/K). Has a long screw thread and three blunt barbs on one side. Presumably used for caribou hunting.

igd 1318, 38 mm, of bone, found at Itissaalik (7/I). Only the front end, with the remnant of a blunt barb, is preserved. Not illustrated.

igd 1832, 74 cm, of antler, found in the midden, layer 12 (2/C). With a barb and a honed edge. Presumably used for ptarmigan hunting.

igd 2004, 70 mm, of antler, found in the midden, layer 9 (2/G). Point without barbs, with sharpened edges. Not illustrated. Used for ptarmigan hunting.

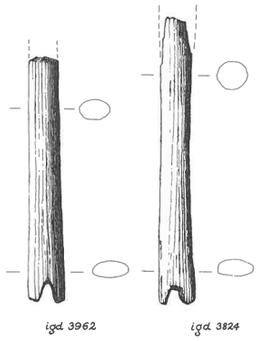
igd 2021, 43 mm, of antler, found in the midden, layer 8 (1/D). Point with one barb and one honed edge. Not illustrated, used for ptarmigan hunting.

igd 682, 55 mm, of whale bone, found in Illorpaat 13 (2/H). With a barb and sharpened edges. Was presumably also used for hunting ptarmigan.

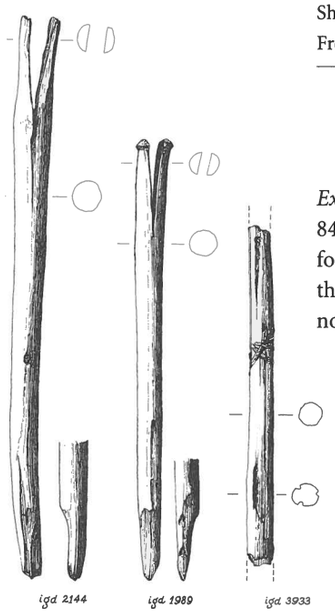
igd 2043, 40 mm, of antler, found in the midden, layer 4 (1/C). The head is broken and has two opposite barbs (*cf.* Holtved 1944,I: pl.11(29)). Was presumably also used for fowling.

Arrow shafts

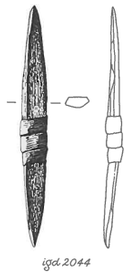
22 fragments of arrow shafts were found, all of wood with circular cross section. The biggest fragment in the find (**igd 2080**) measures 198 mm. The front ends are split (**igd 2144**) and some have a bead for fastening the head (**igd 1989**). The rear ends are flat with a v-shaped cut for the bow string (**igd 3962**). Two of the shaft fragments have baleen lashing for fastening feathers (**igd 3933** and **2047**) and another two have slits, also for feathers (**igd 3933** and **4308**).
The distribution is as follows:



	Illorpaat 3					Midden		Illpt. 13	Total
	III	II	I	e.Th.	stray find	8	4		
Rear ends	1	2	2	1	–	–	–	–	6
Shaft fragm.	–	3	–	1	1	1	1	4	11
Front ends	–	–	–	–	–	2	3	–	5
	1	5	2	2	1	3	4	4	22



Examples: **igd 3962**, 71 mm, rear end, found in Illorpaat 3, house I (21/F). **igd 3824**, 84 mm, rear end, found in Illorpaat 3, house II (10/G). **igd 2144**, 164 mm, front end, found in the midden, layer 4 (2/G). **igd 1989**, 130 mm, front end with bead, found in the midden, layer 4 (2/B). **igd 3933**, 98 mm, shaft fragment with baleen lashing and a notch for a feather, stray find from Illorpaat 3.



Gull hook

A gull hook, **igd 2044**, 70 mm, of caribou antler and bound with baleen, found in the midden, layer 4 (1/C).

Fishing equipment

This group comprises 54 objects. In addition there are four leister shafts and an indefinite number of side prongs listed under hunting implements.

The distribution of the objects found in Illorpaat 3 and Itissaalik is illustrated in Figs. 60-61. The objects lie within the floor area, in association with the side and window platforms.

The fishing equipment demonstrates that both halibut and Norway haddock were caught in deep waters, that cod was jigged, and that char and lumpsucker were caught with leister. The types occur throughout the habitation period.

When Hope Colony was established in 1721 the colonists brought 2,000 iron fish hooks with them (Gulløv & Kapel 1979: 102). But they had no luck with these hooks, and instead caught both Norway haddock and cod "with the Greenlanders' fishing tackle, one of which they bought, although they later stole it back" (Egede 1925: 19). In 1726 5,190 iron fish hooks were imported from Bergen to Hope Colony (Gulløv & Kapel *ibid.*). There are four examples of these among the ones listed below, while the use of razorbill breastbone as a barb is demonstrated by one example (Illorpaat 3, house II). Egede relates in 1722 that this was used in the absence of iron (1925: 34, 358). Despite the large supply of iron hooks, traditional fishing equipment was still in use.

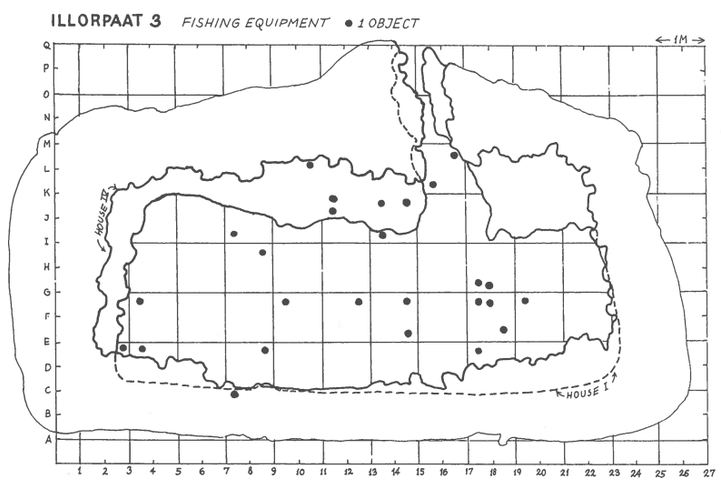


Fig. 60. *The distribution of fishing equipment found in Illorpaat 3, houses I-IV. Each dot represents one object.*

igd 4232, 128 mm, of antler, found in Illorpaat 3, early Thule (23/K). Has a long screw thread and three blunt barbs on one side. Presumably used for caribou hunting.

igd 1318, 38 mm, of bone, found at Itissaalik (7/I). Only the front end, with the remnant of a blunt barb, is preserved. Not illustrated.

igd 1832, 74 cm, of antler, found in the midden, layer 12 (2/C). With a barb and a honed edge. Presumably used for ptarmigan hunting.

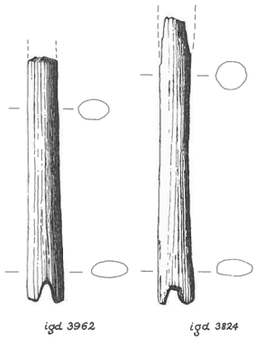
igd 2004, 70 mm, of antler, found in the midden, layer 9 (2/G). Point without barbs, with sharpened edges. Not illustrated. Used for ptarmigan hunting.

igd 2021, 43 mm, of antler, found in the midden, layer 8 (1/D). Point with one barb and one honed edge. Not illustrated, used for ptarmigan hunting.

igd 682, 55 mm, of whale bone, found in Illorpaat 13 (2/H). With a barb and sharpened edges. Was presumably also used for hunting ptarmigan.

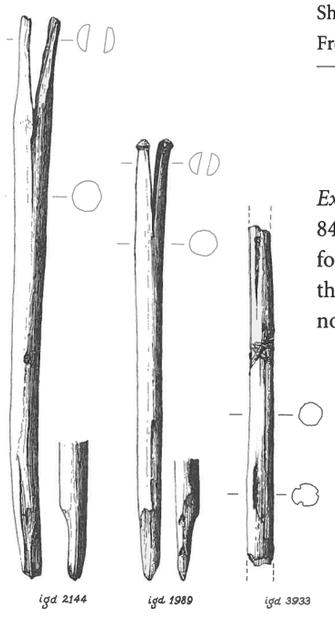
igd 2043, 40 mm, of antler, found in the midden, layer 4 (1/C). The head is broken and has two opposite barbs (*cf.* Holtved 1944,I: pl.11(29)). Was presumably also used for fowling.

Arrow shafts

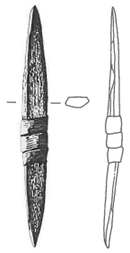

igd 3962 igd 3824

22 fragments of arrow shafts were found, all of wood with circular cross section. The biggest fragment in the find (**igd 2080**) measures 198 mm. The front ends are split (**igd 2144**) and some have a bead for fastening the head (**igd 1989**). The rear ends are flat with a v-shaped cut for the bow string (**igd 3962**). Two of the shaft fragments have baleen lashing for fastening feathers (**igd 3933** and **2047**) and another two have slits, also for feathers (**igd 3933** and **4308**).
The distribution is as follows:

	Illorpaat 3					Midden		Illpt. 13	Total
	III	II	I	e.Th.	stray find	8	4		
Rear ends	1	2	2	1	–	–	–	–	6
Shaft fragm.	–	3	–	1	1	1	1	4	11
Front ends	–	–	–	–	–	2	3	–	5
	1	5	2	2	1	3	4	4	22


igd 2144 igd 1989 igd 3933

Examples: **igd 3962**, 71 mm, rear end, found in Illorpaat 3, house I (21/F). **igd 3824**, 84 mm, rear end, found in Illorpaat 3, house II (10/G). **igd 2144**, 164 mm, front end, found in the midden, layer 4 (2/G). **igd 1989**, 130 mm, front end with bead, found in the midden, layer 4 (2/B). **igd 3933**, 98 mm, shaft fragment with baleen lashing and a notch for a feather, stray find from Illorpaat 3.


igd 2044

Gull hook

A gull hook, **igd 2044**, 70 mm, of caribou antler and bound with baleen, found in the midden, layer 4 (1/C).

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This group comprises 54 objects. In addition there are four leister shafts and an indefinite number of side prongs listed under hunting implements.

The distribution of the objects found in Illorpaat 3 and Itissaalik is illustrated in Figs. 60-61. The objects lie within the floor area, in association with the side and window platforms.

The fishing equipment demonstrates that both halibut and Norway haddock were caught in deep waters, that cod was jigged, and that char and lumpsucker were caught with leister. The types occur throughout the habitation period.

When Hope Colony was established in 1721 the colonists brought 2,000 iron fish hooks with them (Gulløv & Kapel 1979: 102). But they had no luck with these hooks, and instead caught both Norway haddock and cod "with the Greenlanders' fishing tackle, one of which they bought, although they later stole it back" (Egede 1925: 19). In 1726 5,190 iron fish hooks were imported from Bergen to Hope Colony (Gulløv & Kapel *ibid.*). There are four examples of these among the ones listed below, while the use of razorbill breastbone as a barb is demonstrated by one example (Illorpaat 3, house II). Egede relates in 1722 that this was used in the absence of iron (1925: 34, 358). Despite the large supply of iron hooks, traditional fishing equipment was still in use.

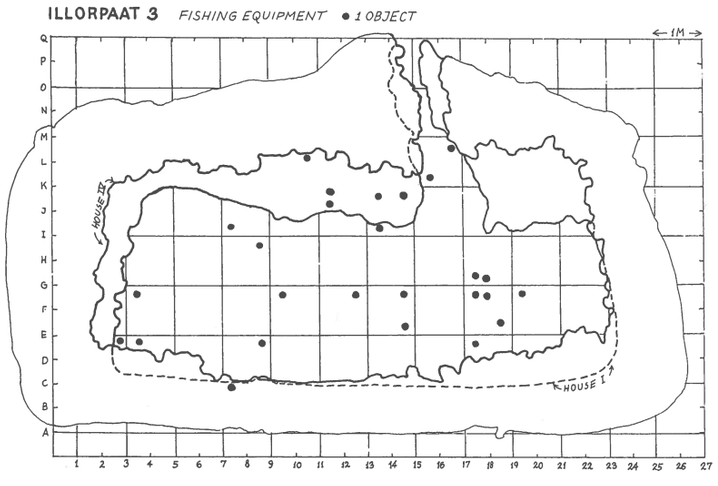


Fig. 60. *The distribution of fishing equipment found in Illorpaat 3, houses I-IV. Each dot represents one object.*

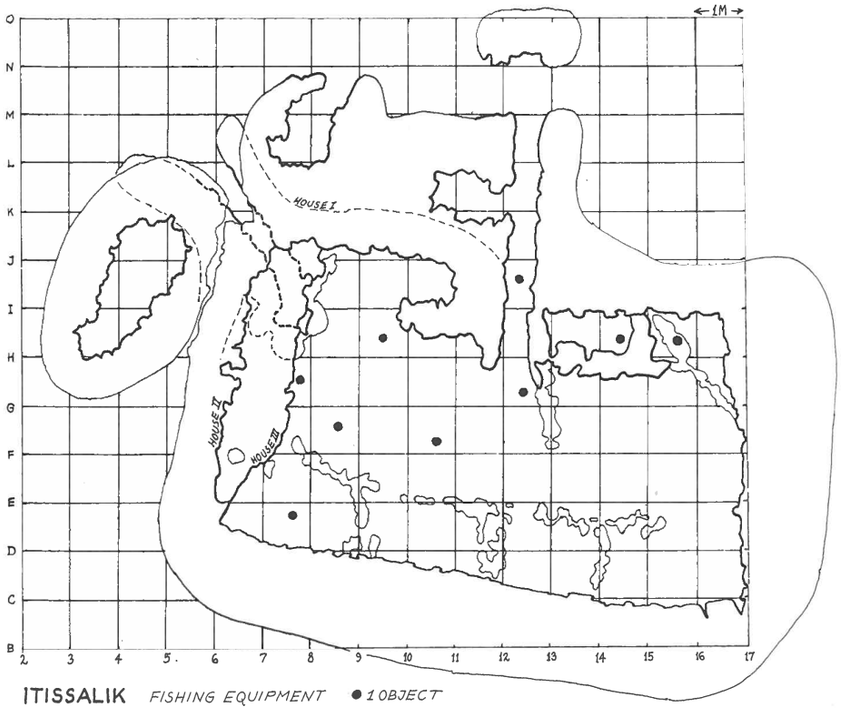


Fig. 61. *The distribution of fishing equipment found at Itissaalik. Each dot represents one object.*

Fishing implements

54 objects can be defined as being parts of fishing implements. These are hooks for catching halibut, jigs for cod and sea scorpion, sinkers and a single fish needle, as well as leister prongs used for catching char and lumpsucker. The implements and their use are described in the ethnographic sources (*cf.* Birket-Smith 1924: 358-370; Holtved 1962: 84-95).

Table of the individual finds:

	Illorpaat 3					Midden			Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	8	4				
Fish hooks												
Shanks for halibut hook	–	4	1	1	3	–	–	–	–	–	–	9
Shanks for jigs	1	–	–	–	–	1	–	–	–	–	–	2
Barbs for halibut hook	–	–	1	1	–	–	–	–	–	–	–	2
Barbs for jigs	–	–	1	1	–	–	–	–	–	–	–	2
Separate hooks	1	–	–	–	–	–	–	–	1	1	2	5
Sinkers												
For jigs, primary	2	2	1	–	–	–	–	–	–	1	3	9
For jigs, secondary	1	–	–	–	–	–	–	–	1	–	2	4
For hooks	1	2	1	–	–	–	–	–	–	–	2	6
Fish needle	–	–	–	–	–	–	–	1	–	–	–	1
Leister prongs	–	2	1	2	1	3	3	2	–	–	–	14
	6	10	6	5	4	4	3	3	2	2	9	54

Fish hooks

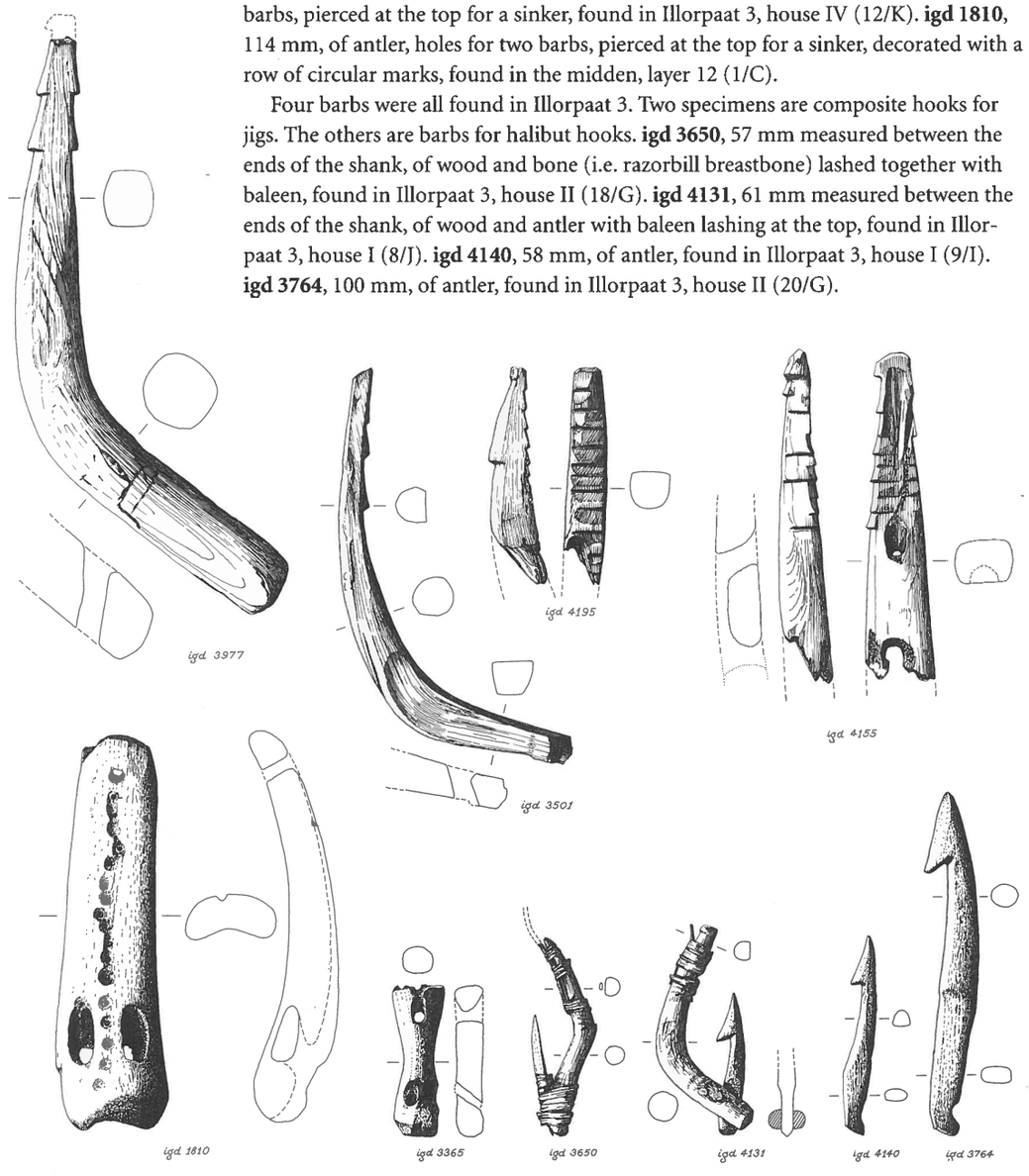
Consist of a shank of wood, bone or caribou antler into which the antler or bone barb is lashed with baleen.

Nine shanks for halibut hooks were found, all in Illorpaat 3. Three were intact and consisted of a piece of curved wood with a hole for the barb at the bottom and with the notch for securing the line at the top. Sinkers are not normally used for this implement.

Examples: **igd 3977**, 180 mm from end to end, found in Illorpaat 3, house I (3/E). **igd 3501**, 130 mm from end to end, found in Illorpaat 3, house III (18/G). **igd 4195**, 64 mm, broken, found in Illorpaat 3, house I (11/L). **igd 4155**, 98 mm, broken, pierced for a sinker (?), found in Illorpaat 3, early Thule (12/J).

Two jig shanks were found. **igd 3365**, 44 mm, of metatarsal bone, holes for two barbs, pierced at the top for a sinker, found in Illorpaat 3, house IV (12/K). **igd 1810**, 114 mm, of antler, holes for two barbs, pierced at the top for a sinker, decorated with a row of circular marks, found in the midden, layer 12 (1/C).

Four barbs were all found in Illorpaat 3. Two specimens are composite hooks for jigs. The others are barbs for halibut hooks. **igd 3650**, 57 mm measured between the ends of the shank, of wood and bone (i.e. razorbill breastbone) lashed together with baleen, found in Illorpaat 3, house II (18/G). **igd 4131**, 61 mm measured between the ends of the shank, of wood and antler with baleen lashing at the top, found in Illorpaat 3, house I (8/J). **igd 4140**, 58 mm, of antler, found in Illorpaat 3, house I (9/I). **igd 3764**, 100 mm, of antler, found in Illorpaat 3, house II (20/G).



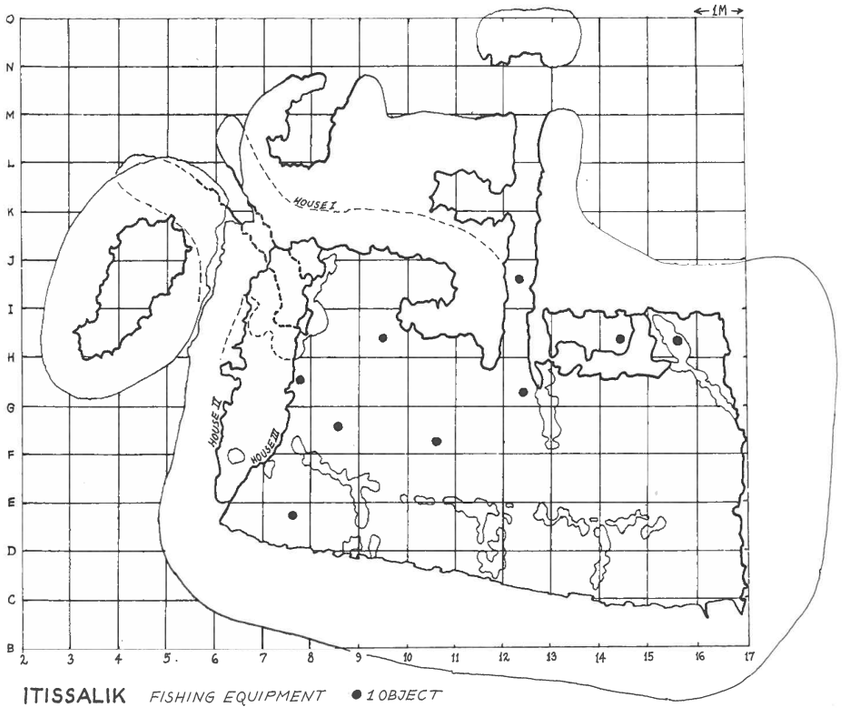


Fig. 61. *The distribution of fishing equipment found at Itissaalik. Each dot represents one object.*

Fishing implements

54 objects can be defined as being parts of fishing implements. These are hooks for catching halibut, jigs for cod and sea scorpion, sinkers and a single fish needle, as well as leister prongs used for catching char and lumpsucker. The implements and their use are described in the ethnographic sources (*cf.* Birket-Smith 1924: 358-370; Holtved 1962: 84-95).

Table of the individual finds:

	Illorpaat 3					Midden			Illpt. 9	Illpt. 13	Islik.	Total
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Fish hooks												
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Shanks for jigs	1	–	–	–	–	1	–	–	–	–	–	2
Barbs for halibut hook	–	–	1	1	–	–	–	–	–	–	–	2
Barbs for jigs	–	–	1	1	–	–	–	–	–	–	–	2
Separate hooks	1	–	–	–	–	–	–	–	1	1	2	5
Sinkers												
For jigs, primary	2	2	1	–	–	–	–	–	–	1	3	9
For jigs, secondary	1	–	–	–	–	–	–	–	1	–	2	4
For hooks	1	2	1	–	–	–	–	–	–	–	2	6
Fish needle	–	–	–	–	–	–	–	1	–	–	–	1
Leister prongs	–	2	1	2	1	3	3	2	–	–	–	14
	6	10	6	5	4	4	3	3	2	2	9	54

Fish hooks

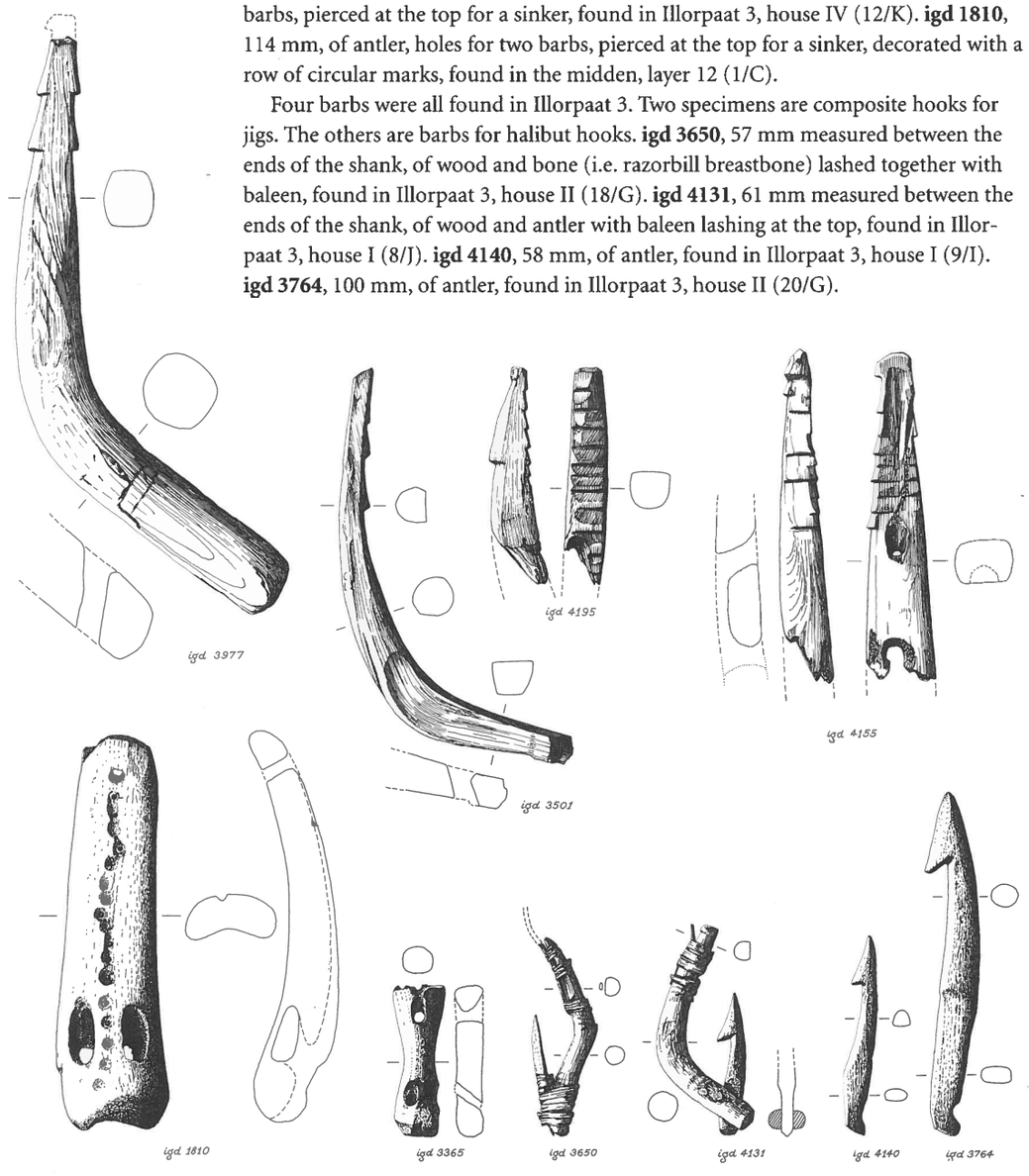
Consist of a shank of wood, bone or caribou antler into which the antler or bone barb is lashed with baleen.

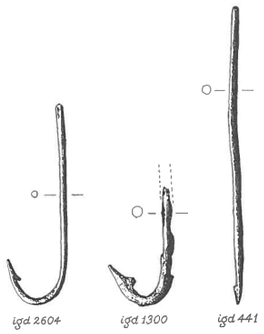
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Five separate hooks were found. One specimen is of bone and greatly eroded, so there are no traces of the barb (**igd 54**, 56 mm, found in Illorpaat 9; not illustrated). The remaining four are of iron and in their form resemble the hooks from Hope Colony (Gulløv & Kapel 1979: 102).

Examples: **igd 2604**, 58 mm from bottom edge to top, with one barb, found in Illorpaat 3, house IV (10/G). **igd 441**, 87 mm, secondarily straightened, with one barb, found in Illorpaat 13 (3/H). **igd 1300**, 35 mm from bottom edge to top, with one barb, found at Itissaalik (9/G). Not illustrated: **igd 1301**, 63 mm measured between the ends, the barb broken off, found at Itissaalik (11/G).

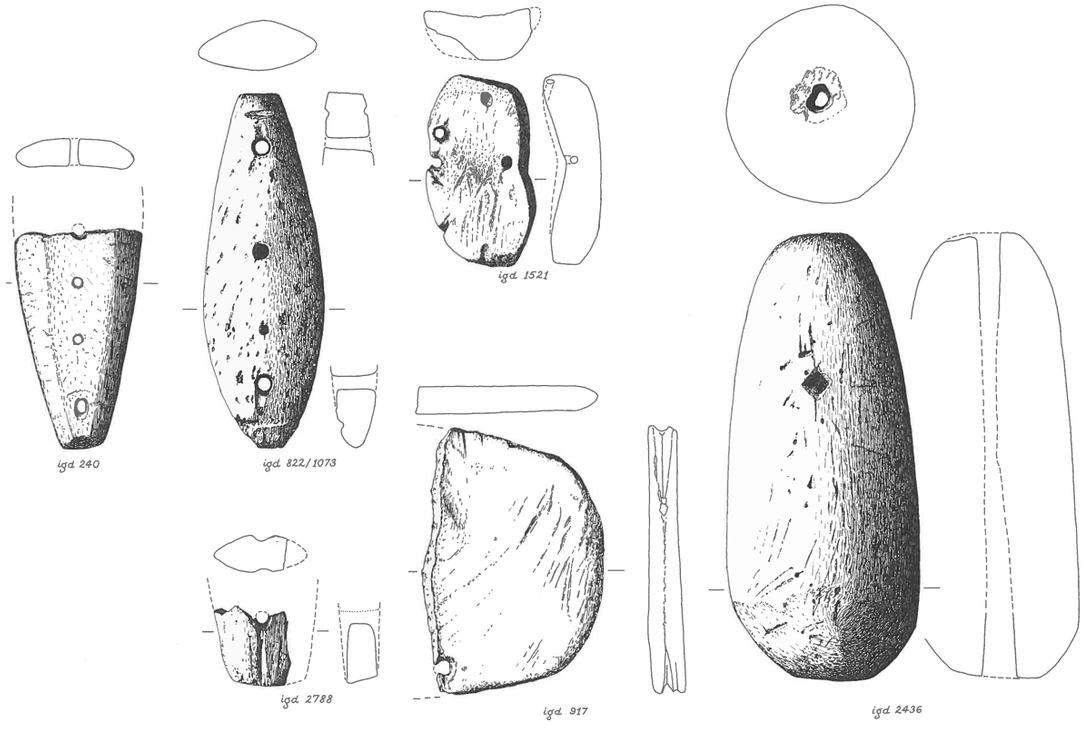
Sinkers

Normally consist of a rounded piece of soapstone with holes or grooves for lashing. Can also be made of gneiss or micaceous slate. 19 specimens were found. The most common shape is an oval with an acuminated oval cross section. The material is soapstone. The piece is fastened to the top of the jig shank. Nine pieces of this type were found. Parts of cooking pots have also been used as sinkers. Four examples of this recycled type were found. For fishing Norway haddock in deep waters a larger and heavier sinker was used. These were made of soapstone, slate or gneiss. Six examples of this type were found.

Examples of purpose-made sinkers for jigs: **igd 240**, 63 mm, broken, found in Illorpaat 13 (4/R). **igd 822/1073**, 90 mm, found in two pieces at Itissaalik (14/H & 15/I). **igd 2788**, 22 mm, broken, depression for lashing is seen, found in Illorpaat 3, house III (8/C).

Examples of secondarily worked sinkers for jigs: **igd 1521**, 55 mm long, found in Illorpaat 9 (2/B). **igd 917**, 77 mm wide, found at Itissaalik (16/I).

Example of large sinker: **igd 2436**, 130 mm, found in Illorpaat 3, house IV (11/M).





Fish needle

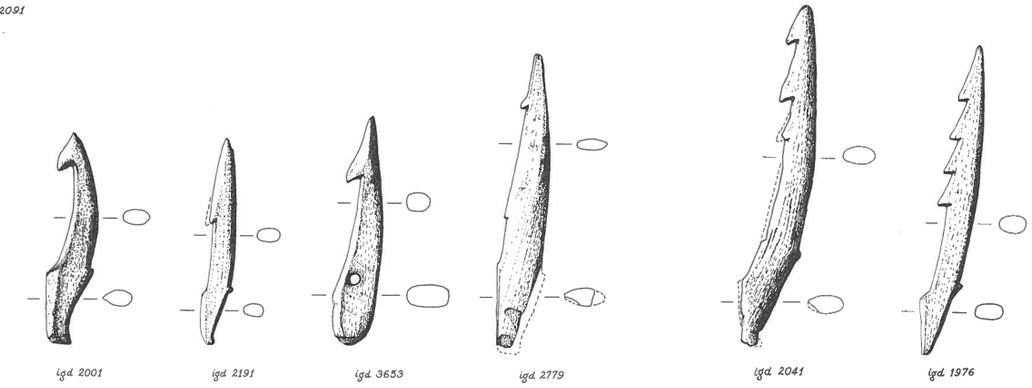
igd 2091, 148 mm, of caribou antler, found in the midden, layer 4 (2/B).

Leister prongs

14 objects are from leisters. There are seven complete and seven fragments of prongs. They were used for fishing char and lumpsucker and they are all of caribou antler. The largest fragment is 125 mm (not illustrated). On the found specimens there are one, two, three or four barbs.

Examples: **igd 2001**, 61 mm, found in the midden, layer 12 (2/G). **igd 2191**, 60 mm, found in the midden, layer 8 (2/H). **igd 3653**, 67 mm, with a hole, found in Illorpaat 3, house II (18/H). **igd 2779**, 87 mm, found in Illorpaat 3, house III (4/E). **igd 2041**, 100 mm, found in the midden, layer 4 (1/C). **igd 1976**, 92 mm, found in the midden, layer 4 (1/B).

It can be difficult to determine whether a fragment is from a leister or a bird dart. The examples described are all well known west Greenlandic types (*cf.* Birket-Smith 1924: 358-361; Holtved 1962: 93-95), though the last two examples may have served a different purpose.

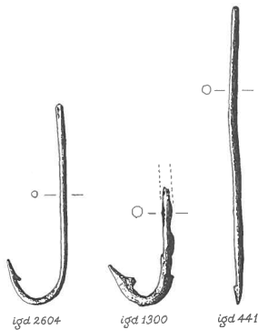


Transport

This find group comprises 65 objects. Only the kayak and the umiaq have been found. The third Greenlandic means of transport, the sledge, is documented in the written sources, which relate that the merchant Lars Dalager in 1755 arrived at the Brethren's mission station, Neu Herrnhut, on a sledge drawn by three dogs (Israel 1969: 148).

The distribution of the objects in Illorpaat 3 (Fig. 62) shows that most of them lie spread out across the floor area, while the distribution in Illorpaat 13 (Fig. 63) shows a spread along the walls in one half of the ruin. There is nothing to indicate that an actual construction of the kayak took place inside the houses, as has been maintained in another connection with reference to a 19th-century source (Petersen 1974/75: 178-179). The found fragments more likely show that parts of the vessels were repaired indoors. Nor is there anything in the available material to indicate that the kayak was given its cover indoors (*ibid.*).

About one third of the material, which chronologically is dated to the second half of the 18th century, can be associated with the kayak, i.e. Illorpaat 3, houses II-IV, the midden, layer 12, and Illorpaat 13.



Five separate hooks were found. One specimen is of bone and greatly eroded, so there are no traces of the barb (**igd 54**, 56 mm, found in Illorpaat 9; not illustrated). The remaining four are of iron and in their form resemble the hooks from Hope Colony (Gulløv & Kapel 1979: 102).

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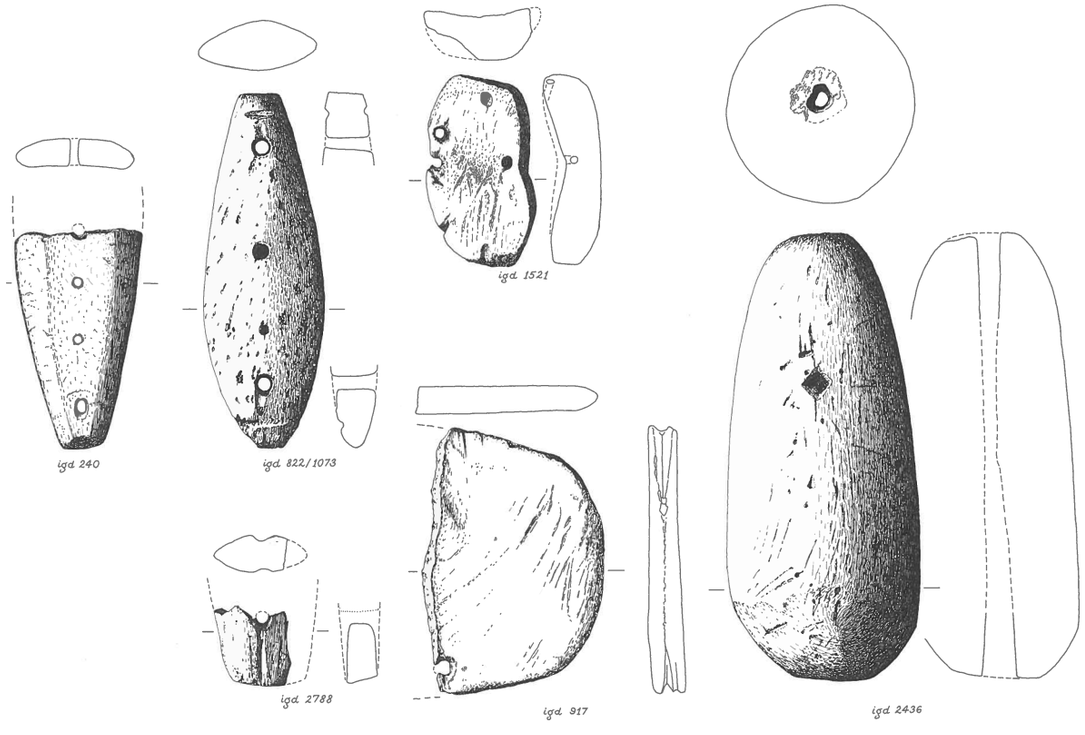
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Fish needle

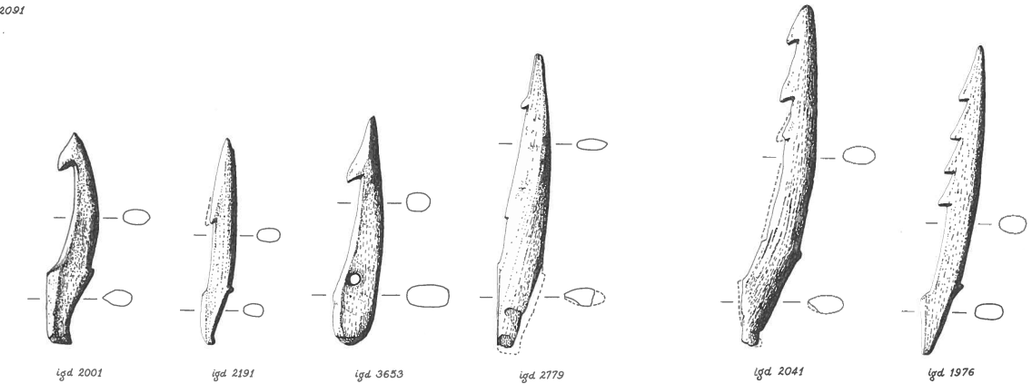
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Examples: **igd 2001**, 61 mm, found in the midden, layer 12 (2/G). **igd 2191**, 60 mm, found in the midden, layer 8 (2/H). **igd 3653**, 67 mm, with a hole, found in Illorpaat 3, house II (18/H). **igd 2779**, 87 mm, found in Illorpaat 3, house III (4/E). **igd 2041**, 100 mm, found in the midden, layer 4 (1/C). **igd 1976**, 92 mm, found in the midden, layer 4 (1/B).

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About one third of the material, which chronologically is dated to the second half of the 18th century, can be associated with the kayak, i.e. Illorpaat 3, houses II-IV, the midden, layer 12, and Illorpaat 13.

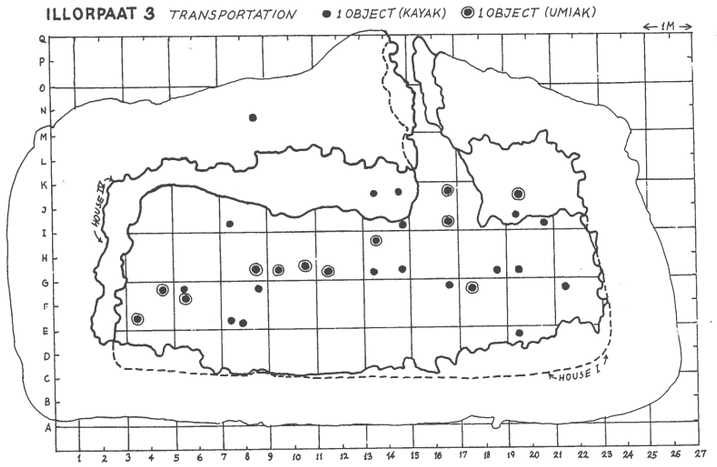


Fig. 62. *The distribution of objects related to sailing vessels found in Illorpaat 3. A dot represents an object associated with the kayak. A dotted circle represents an object associated with the umiaq.*

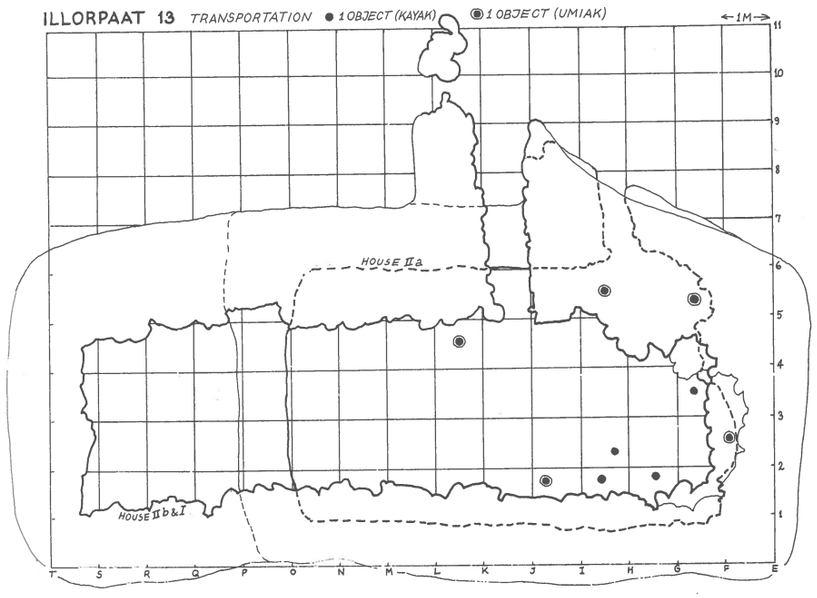


Fig. 63. *The distribution of objects related to sailing vessels found in Illorpaat 13. A dot represents an object associated with the kayak. A dotted circle represents an object associated with the umiaq.*

Kayak parts

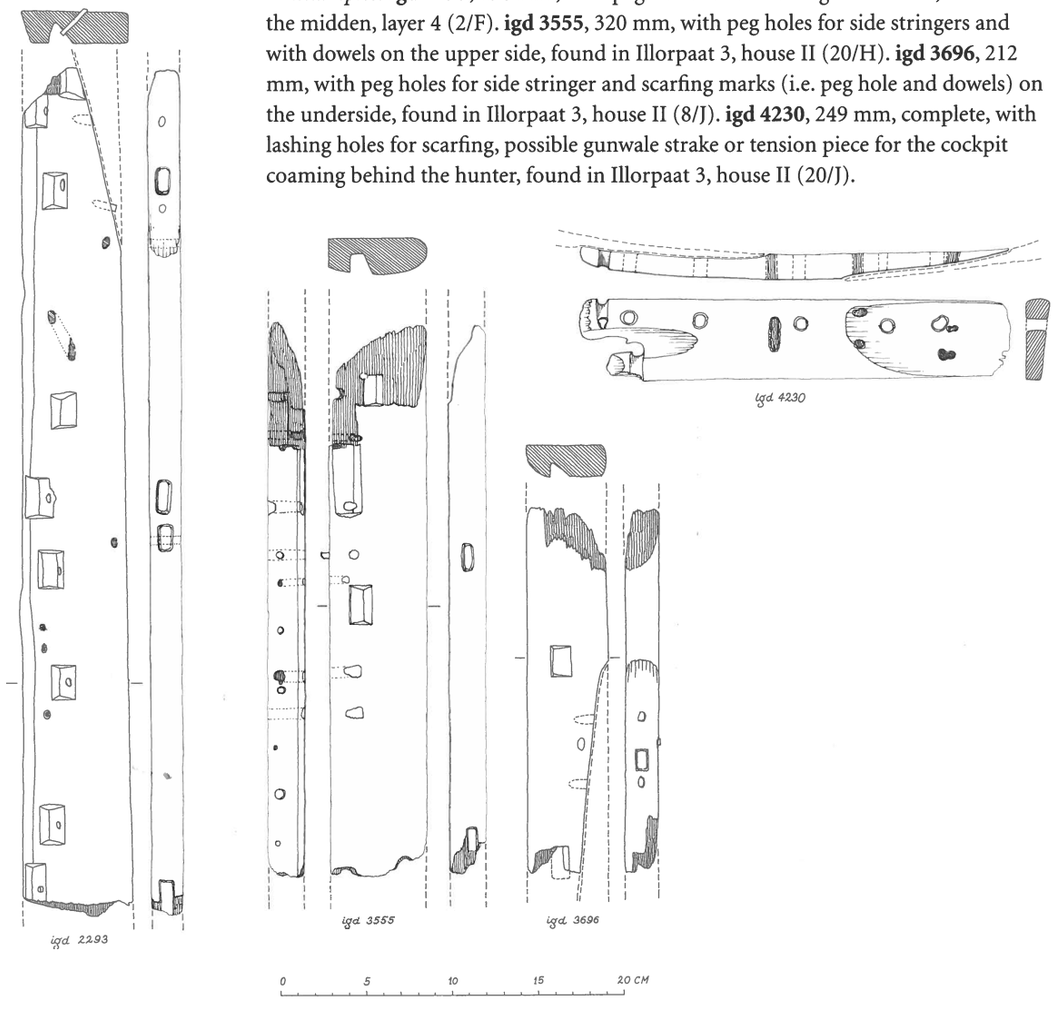
19 parts of the kayak frame were found. Eight gunwale strakes, one side or keel stringer, nine cross beams or deck beams and a complete cockpit coaming. The description is based on the west Greenlandic kayak (*cf.* Jensen 1975; Petersen n.d., 1986; Nooter 1971).

The distribution is as follows:

	Illorpaat 3					Midden			Total
	III	II	I	e.Th.	Stray find	12	8	4	
Gunwale strakes	–	4	–	–	–	–	1	3	8
Side stringers	–	–	1	–	–	–	–	–	1
Cross beams	2	2	–	2	1	–	–	2	9
Cockpit coaming	–	–	–	–	–	1	–	-	1
	2	6	1	2	1	1	1	5	19

The gunwale strakes were all found in Illorpaat 3, house II, and in the midden, layers 8 and 4.

Examples: **igd 2293**, 490 mm, with peg holes for side stringers and ribs, found in the midden, layer 4 (2/F). **igd 3555**, 320 mm, with peg holes for side stringers and with dowels on the upper side, found in Illorpaat 3, house II (20/H). **igd 3696**, 212 mm, with peg holes for side stringer and scarfing marks (i.e. peg hole and dowels) on the underside, found in Illorpaat 3, house II (8/J). **igd 4230**, 249 mm, complete, with lashing holes for scarfing, possible gunwale strake or tension piece for the cockpit coaming behind the hunter, found in Illorpaat 3, house II (20/J).



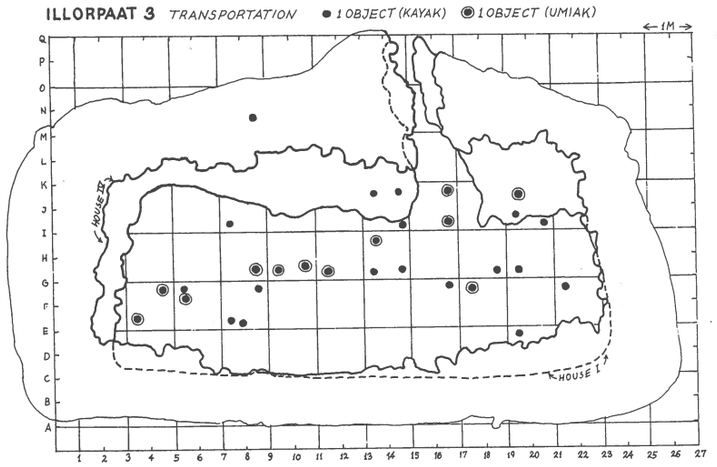


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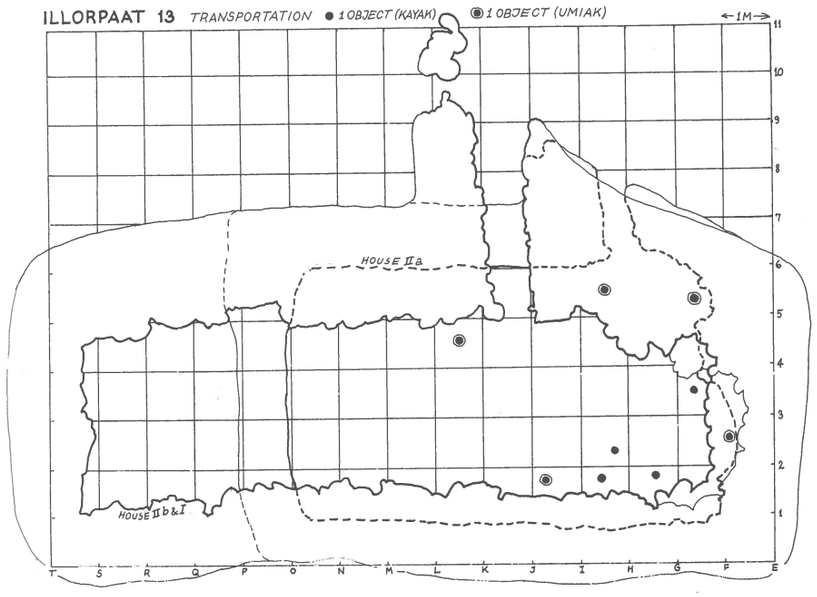


Fig. 63. *The distribution of objects related to sailing vessels found in Illorpaat 13. A dot represents an object associated with the kayak. A dotted circle represents an object associated with the umiaq.*

Kayak parts

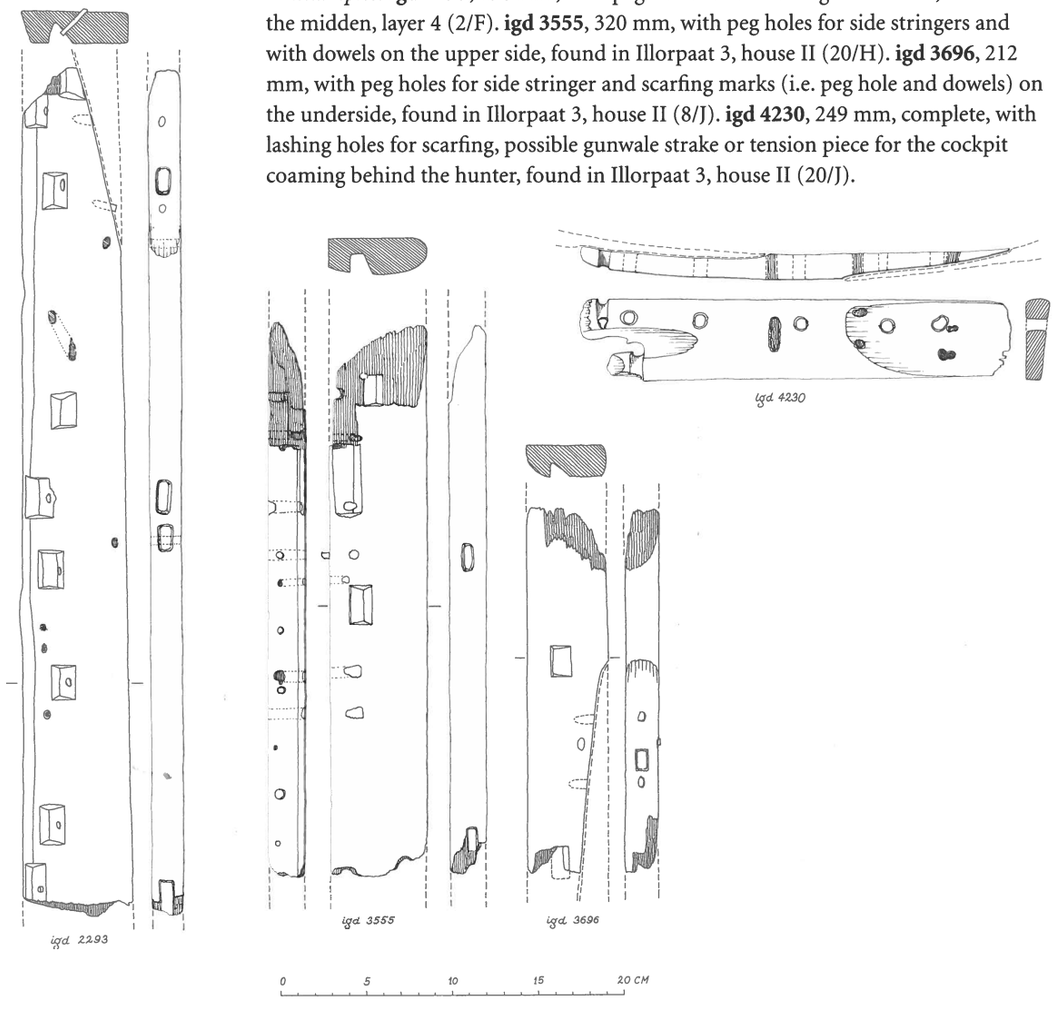
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	Illorpaat 3					Midden			Total
	III	II	I	e.Th.	Stray find	12	8	4	
Gunwale strakes	–	4	–	–	–	–	1	3	8
Side stringers	–	–	1	–	–	–	–	–	1
Cross beams	2	2	–	2	1	–	–	2	9
Cockpit coaming	–	–	–	–	–	1	–	-	1
	2	6	1	2	1	1	1	5	19

The gunwale strakes were all found in Illorpaat 3, house II, and in the midden, layers 8 and 4.

Examples: **igd 2293**, 490 mm, with peg holes for side stringers and ribs, found in the midden, layer 4 (2/F). **igd 3555**, 320 mm, with peg holes for side stringers and with dowels on the upper side, found in Illorpaat 3, house II (20/H). **igd 3696**, 212 mm, with peg holes for side stringer and scarfing marks (i.e. peg hole and dowels) on the underside, found in Illorpaat 3, house II (8/J). **igd 4230**, 249 mm, complete, with lashing holes for scarfing, possible gunwale strake or tension piece for the cockpit coaming behind the hunter, found in Illorpaat 3, house II (20/J).

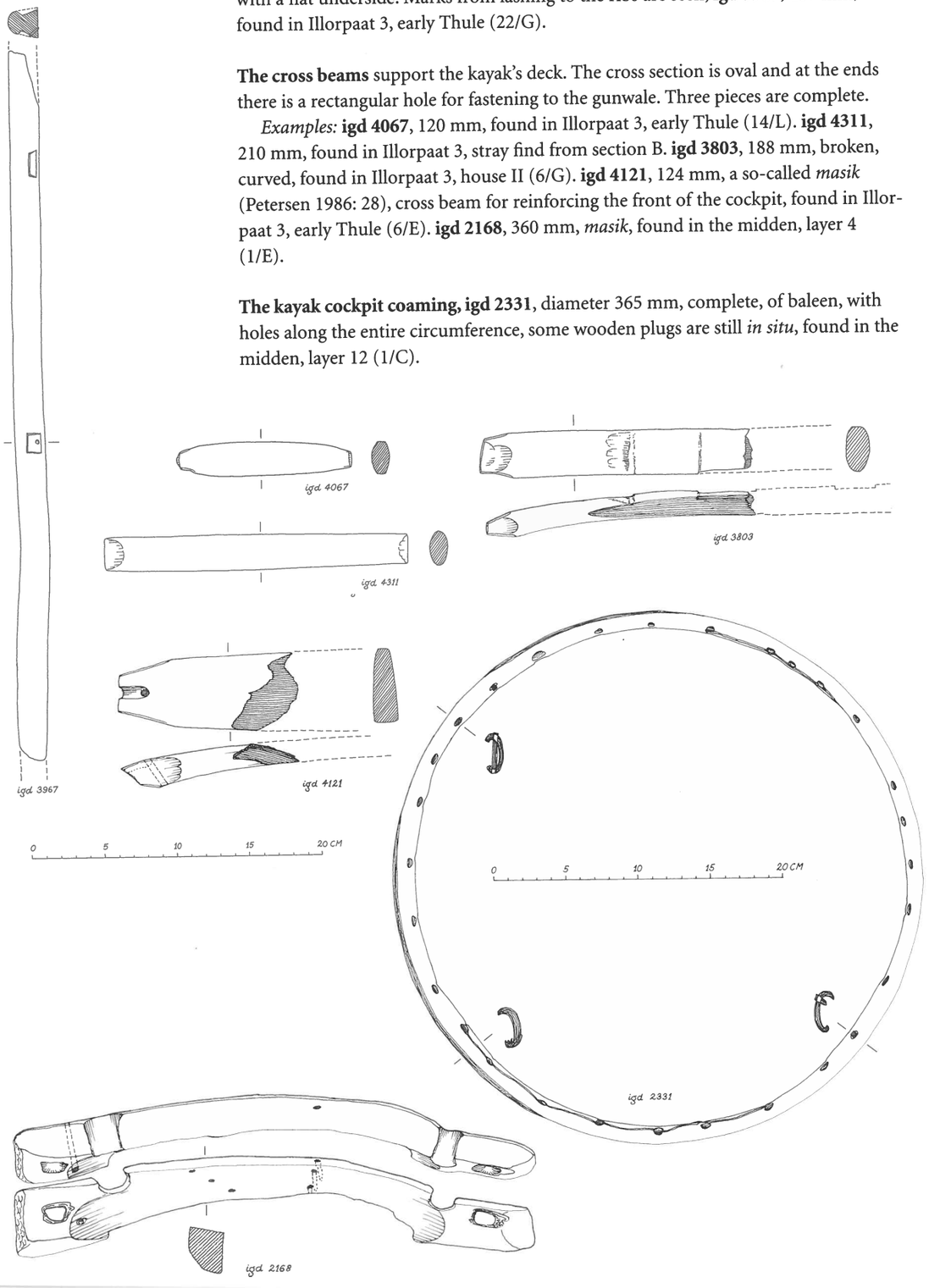


The side stringer is not as heavy as the gunwale strakes. The cross section is rounded with a flat underside. Marks from lashing to the ribs are seen, **igd 3967**, 487 mm, found in Illorpaat 3, early Thule (22/G).

The cross beams support the kayak's deck. The cross section is oval and at the ends there is a rectangular hole for fastening to the gunwale. Three pieces are complete.

Examples: **igd 4067**, 120 mm, found in Illorpaat 3, early Thule (14/L). **igd 4311**, 210 mm, found in Illorpaat 3, stray find from section B. **igd 3803**, 188 mm, broken, curved, found in Illorpaat 3, house II (6/G). **igd 4121**, 124 mm, a so-called *masik* (Petersen 1986: 28), cross beam for reinforcing the front of the cockpit, found in Illorpaat 3, early Thule (6/E). **igd 2168**, 360 mm, *masik*, found in the midden, layer 4 (1/E).

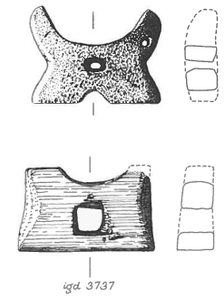
The kayak cockpit coaming, igd 2331, diameter 365 mm, complete, of baleen, with holes along the entire circumference, some wooden plugs are still *in situ*, found in the midden, layer 12 (1/C).



Kayak accessories

Seven objects were determined as being kayak accessories. Two deck fittings (rests for weapon shafts) and five bladder supports. In addition there are a number of objects which may have been part of the kayak and its equipment (see under **Bone objects, various**, e.g. kayak stand etc., and **Wooden objects, various**, e.g. double-wedge shaped twisters).

	Illorpaat 3				Illpt. 13	Total
	III	II	I	e.Th.		
Weapon-shaft rests	–	1	–	–	1	2
Bladder supports	1	–	2	2	–	5
	1	1	2	2	1	7

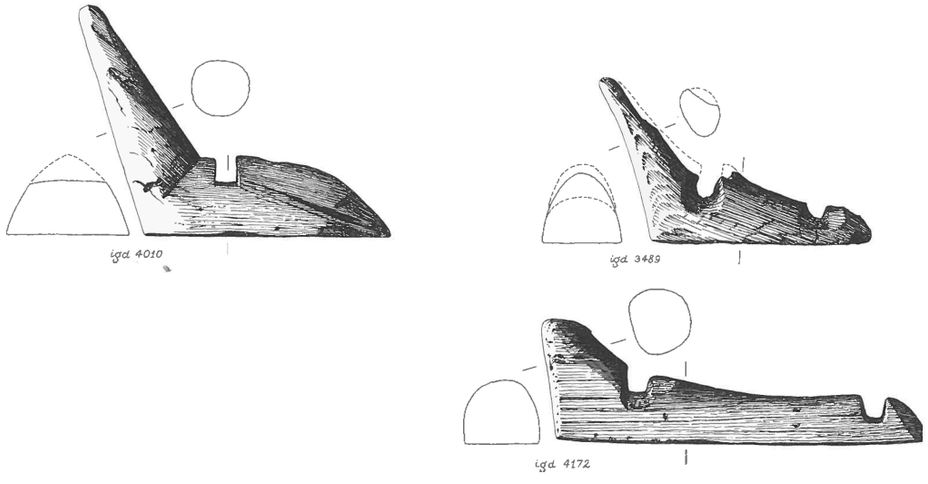


Rests for weapon shafts comprise two small fittings. **igd 613**, 38 mm wide, of caribou antler, found in Illorpaat 13 (1-2/I). **igd 3737**, 40 mm wide, of wood, found in Illorpaat 3, house II (15/K).

Bladder supports comprise five wooden objects from Illorpaat 3. Three of these are intact.

Examples: **igd 4010**, 70 mm at the base, found in Illorpaat 3, early Thule (17/M). **igd 3489**, 65 mm at the base, with two line grooves, found in Illorpaat 3, house III (14/H). **igd 4172**, 110 mm at the base, with two line grooves, found in Illorpaat 3, early Thule (9/E).

The decreasing use of the weapon rests can be seen when this find is compared with the six specimens at Kangeq. It is evident that in 19th- and 20th-century South West Greenland the rests are replaced by a method by which the equipment is fastened on immediately below the deck straps (*cf.* Jensen 1975: 22, 33).

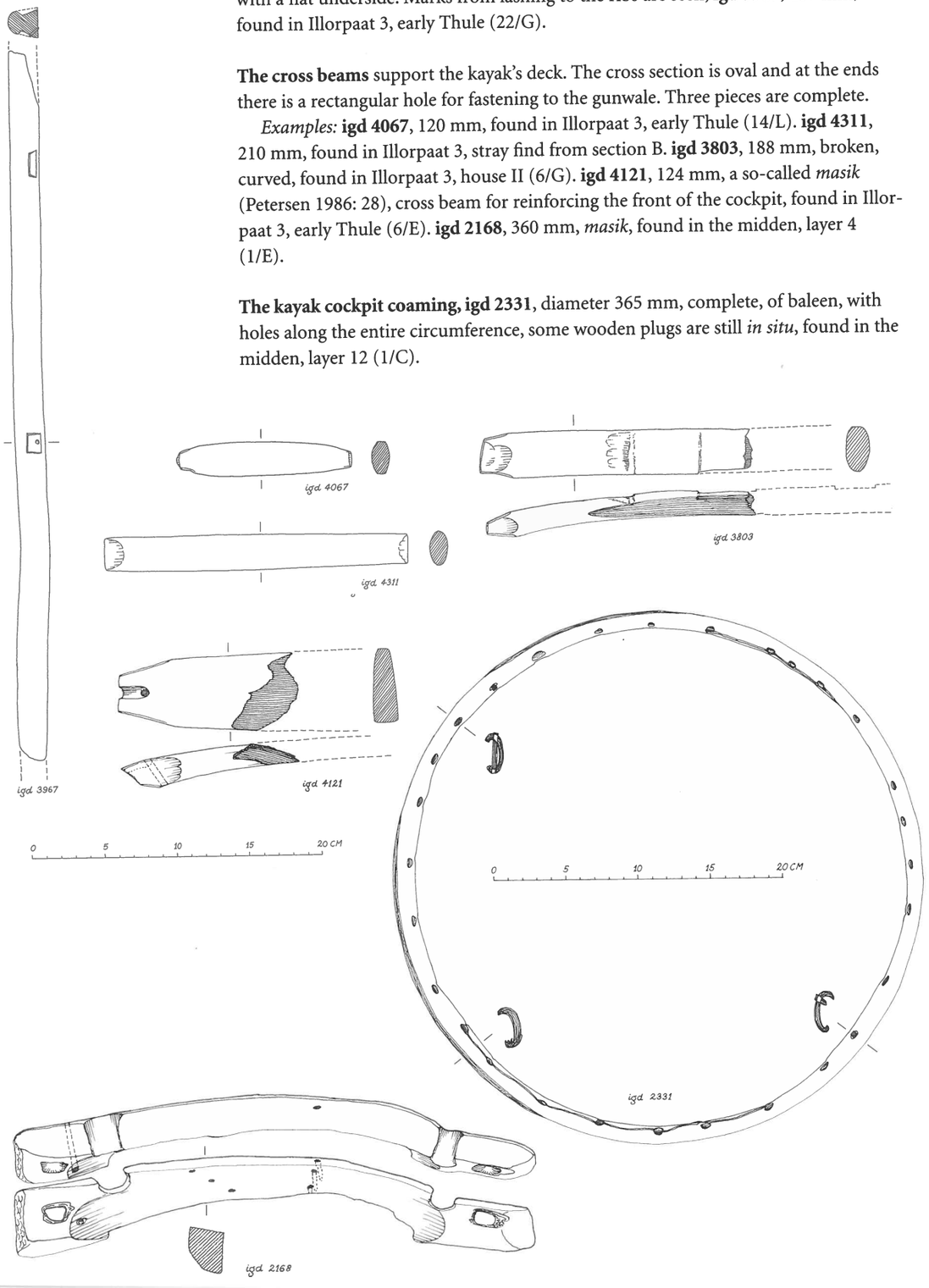


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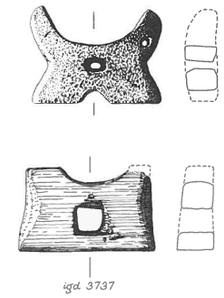
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	III	II	I	e.Th.		
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Bladder supports	1	–	2	2	–	5
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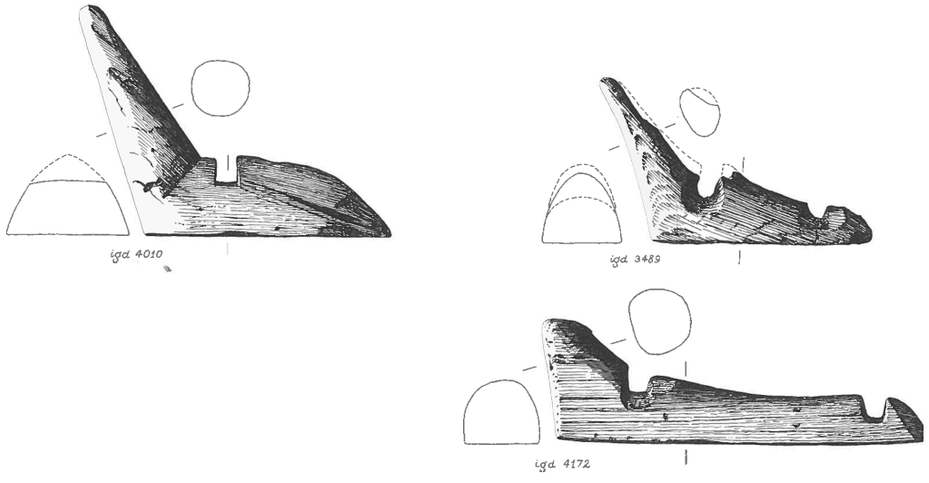


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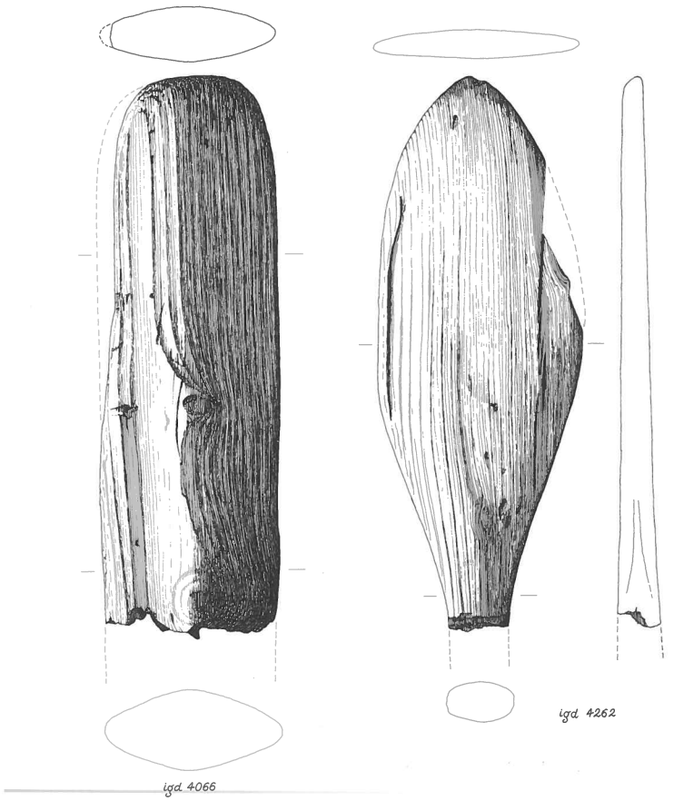
Paddles, Oars & Mounts

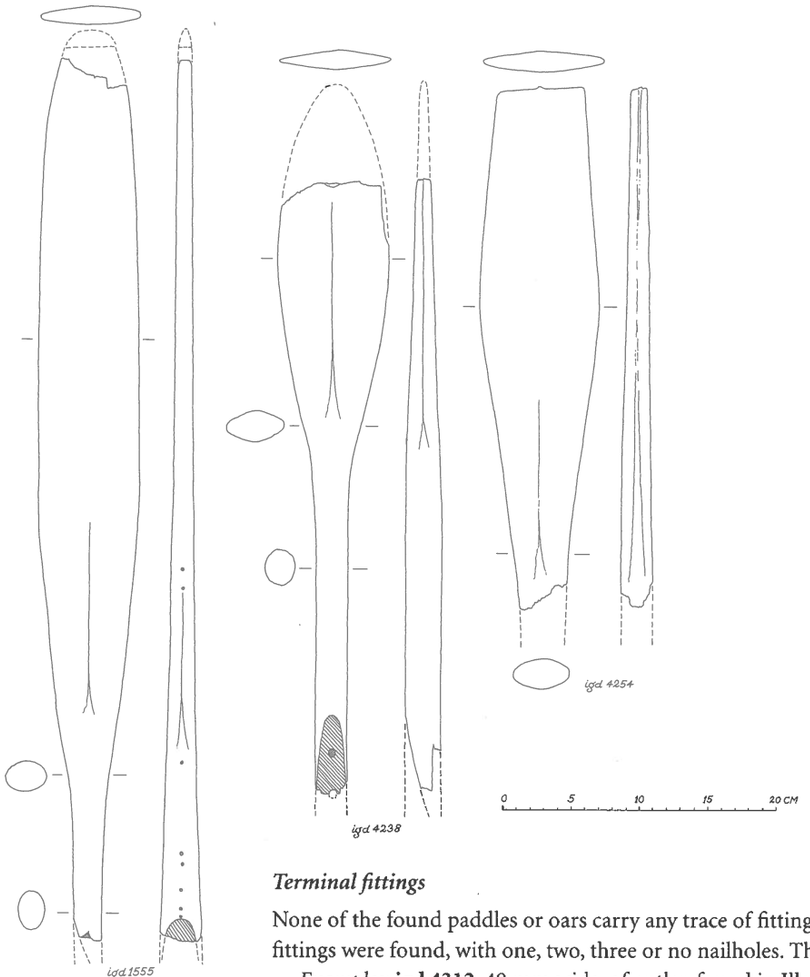
Five parts of paddles or oars were found. In addition there were 10 terminal mounts of bone and caribou antler.

	Illorpaat 3					Midden		Illpt. 9	Illpt. 13	Total
	IV	III	II	I	e.Th.	12	9			
Blades	–	–	–	1	3	–	–	1	–	5
Mounts	1	2	–	1	–	1	1	–	4	10
	1	2	0	2	3	1	1	1	4	15

Paddles

igd 4066, 164 mm long blade, no traces of mounts, found in Illorpaat 3, house I (14/K). **igd 1555**, 640 mm long blade of good workmanship, the shaft's scarf face can be seen as well as bone pins from edging mounts, the end of the blade may have had a mount, found in Illorpaat 9 (4/C). **igd 4238**, 445 mm long part of a blade and part of a shaft with scarf face, found in Illorpaat 3, early Thule (20-21/K). **igd 4254**, 380 mm long part of a blade without edging mounts, found in Illorpaat 3, stray find from early Thule. **igd 4262**, 160 mm, the oval shape might indicate an oarblade, but its size renders it probable that it was made for a boy, found in Illorpaat 3, early Thule (8/E). The toy specimens are both lanceolate and oval, have pointed or squared ends. **igd 4262** is however too big to have been a toy.





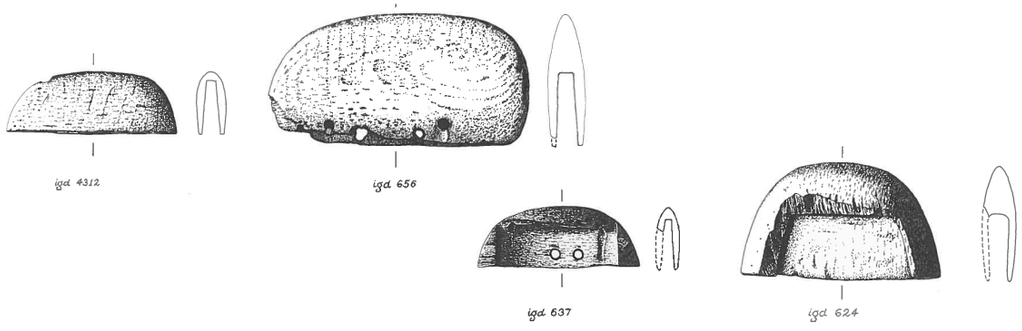
Terminal fittings

None of the found paddles or oars carry any trace of fittings. However, 10 terminal fittings were found, with one, two, three or no nailholes. Three are complete.

Examples: **igd 4312**, 49 mm wide, of antler, found in Illorpaat 3, house III (17/G). **igd 656**, 76 mm wide, of whale bone, found in Illorpaat 13 (4/G). **igd 637**, 47 mm wide, of antler, found in Illorpaat 13 (3/I). **igd 624**, 58 mm wide, of antler, found in Illorpaat 13, stray find.

It is hard to assess whether the five blades found were from paddles or oars (*cf.* Meldgaard 1980: 10-11). **igd 1555** is probably part of a kayak paddle, while **igd 4238** and **igd 4254** may be parts of oars.

See also **Toys.**



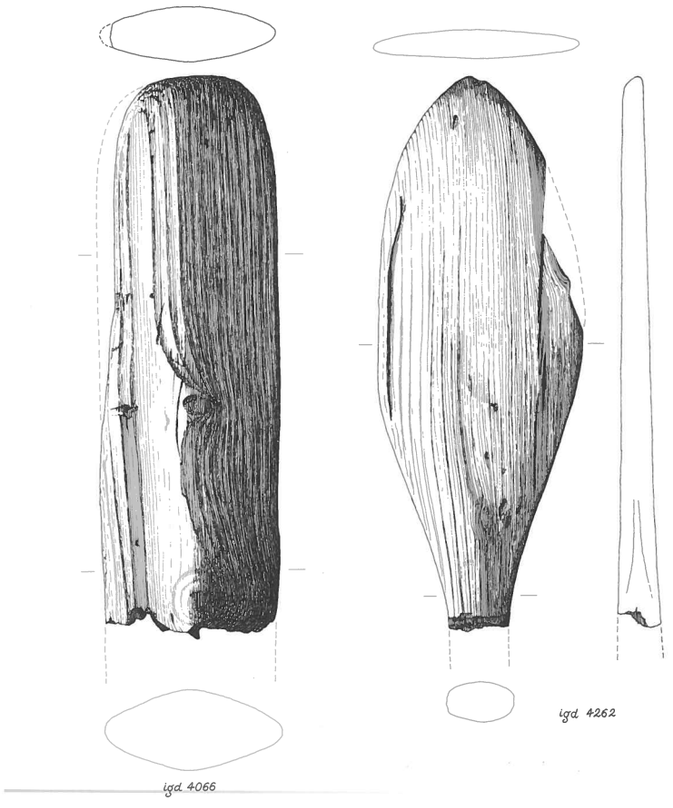
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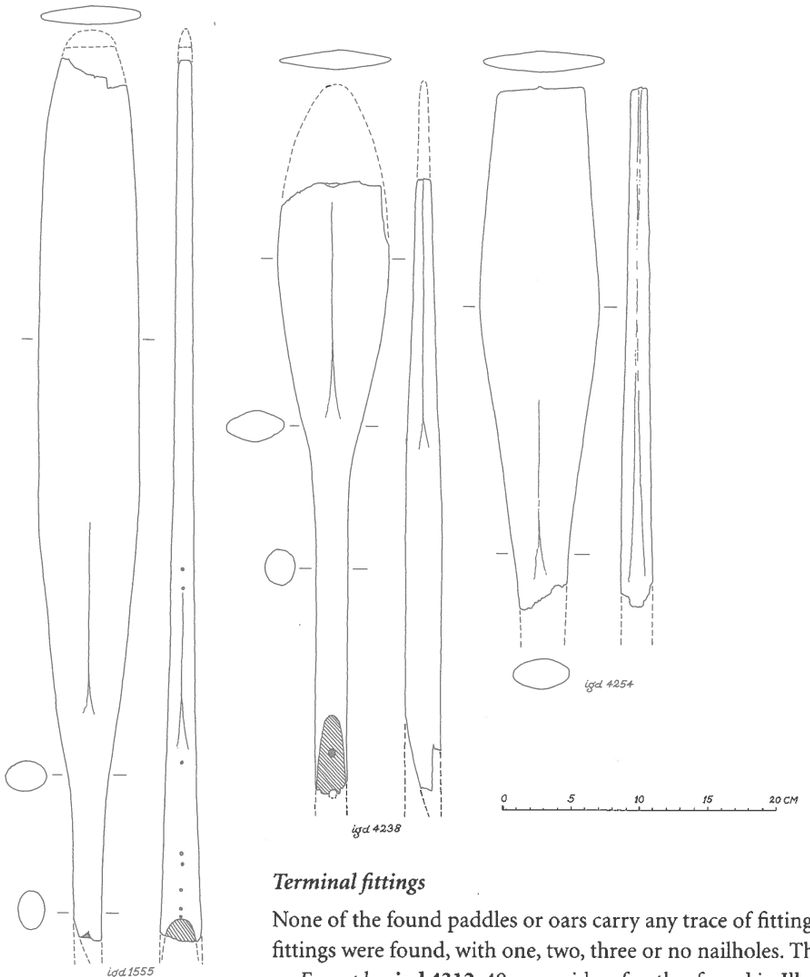
Five parts of paddles or oars were found. In addition there were 10 terminal mounts of bone and caribou antler.

	Illorpaat 3					Midden		Illpt. 9	Illpt. 13	Total
	IV	III	II	I	e.Th.	12	9			
Blades	–	–	–	1	3	–	–	1	–	5
Mounts	1	2	–	1	–	1	1	–	4	10
	1	2	0	2	3	1	1	1	4	15

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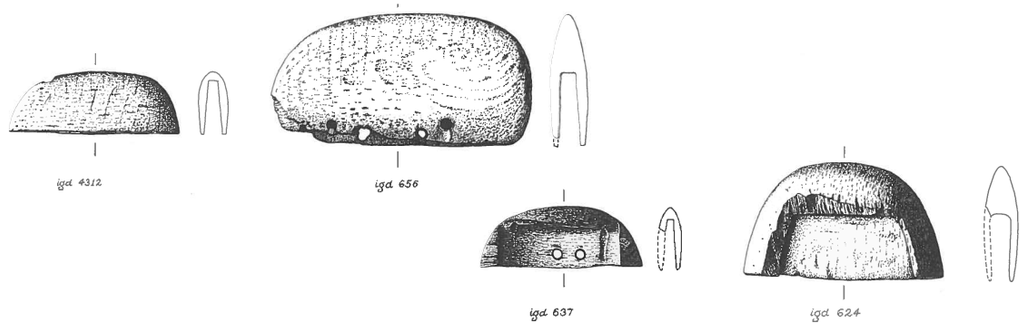
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See also **Toys.**



Umiaq parts

19 objects were from the umiaq frame. It has not been possible to determine in all the cases where in the frame the pieces may have been set. Several probable gunwale pieces have scarf faces, lashing bead and bone dowels *in situ*. The ribs have a concave incision in both ends.

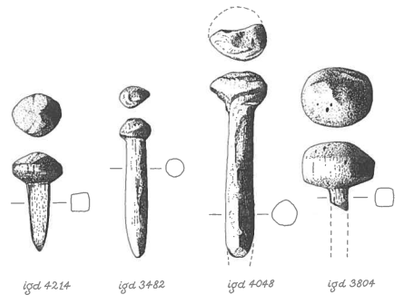
	Illorpaat 3				Midden		Illpt. 13	Total
	IV	II	I	e.Th.	12	9		
Gunwale	1	1	1	–	1	2	2	8
Rib	–	–	1	1	–	–	1	3
Other frame parts	–	4	1	1	–	–	2	8
	1	5	3	2	1	2	5	19

The found objects have been identified on the basis of the description of west Greenlandic umiaqs (*cf.* Petersen 1986). Not illustrated. It has not been possible to identify a boat type or any particular construction methods in this material. In contrast, the objects from the Kangeq midden give better information.

Bone nails

Five whale-bone nails were all found in Illorpaat 3. They have been used for constructing the umiaq (*cf.* Knuth 1952: 23,1980).

igd 4214, 29 mm, found in early Thule (8/F). **igd 3482**, 40 mm, found in house III (12/H). **igd 4048**, 54 mm (broken), found in early Thule (8/M). **igd 3804**, 20 mm (broken), found in house II (6/G). **igd 3015**, 23 mm (broken), without head, found in house II (11/H), not illustrated.



Men's tools

Men's tools comprise 265 objects, almost half of which are whetstones or whetting tools. The three parts of the fire drill are included among men's tools and number 21 items, perhaps they could equally well be placed in the find group Household utensils. No pyrite was found. Cutting and drilling tools constitute a third of the material. Iron does not occur until the 18th century, with the exception of the knife blade in Illorpaat 9 and the scratching tool from midden layer 4. Five scratching tools from the earliest horizons have a point of tooth or bone. Axes and wedges are particularly common late in the 18th century.

The distribution of the described items is shown on the ground plans (Figs. 64-67), where it can be seen that knives and whetstones are concentrated around the front edges of the platforms. This corroborates the evidence of the ethnographic sources (*cf.* Egede 1925: 365).

Apart from iron blades and bone points no object or part of tool has been found to indicate that other materials were used for cutting, e.g. stone blades. But the find of five whetting tools with caribou teeth attached might indirectly be evidence that stone blades were sharpened.

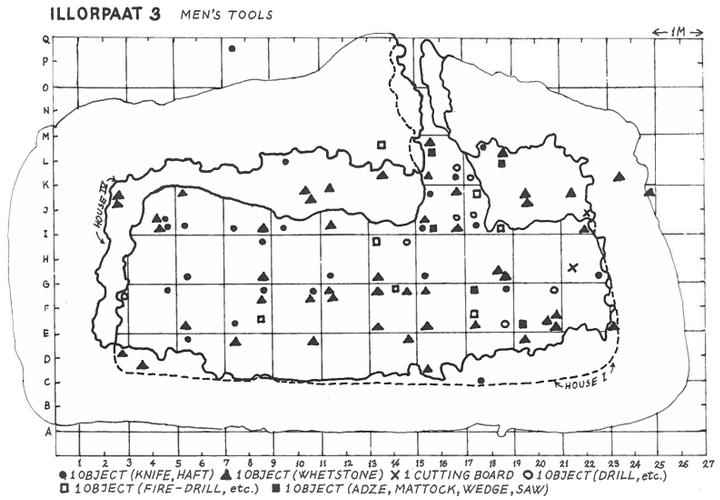


Fig. 64. *The distribution of men's tools in Illorpaat 3, houses I-IV. Each signature represents one object.*

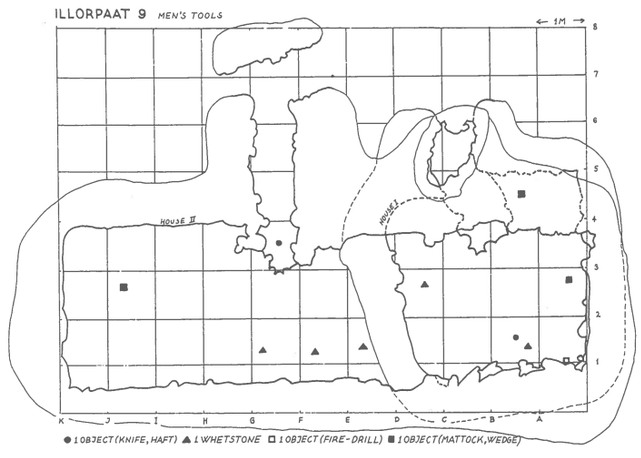


Fig. 65. *The distribution of men's tools in Illorpaat 9, houses I-II. Each signature represents one object.*

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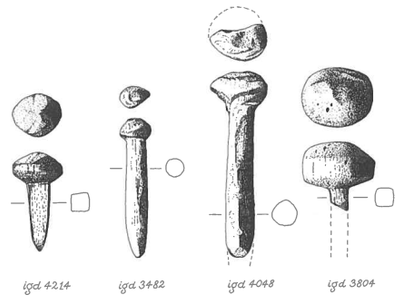
	Illorpaat 3				Midden		Illpt. 13	Total
	IV	II	I	e.Th.	12	9		
Gunwale	1	1	1	–	1	2	2	8
Rib	–	–	1	1	–	–	1	3
Other frame parts	–	4	1	1	–	–	2	8
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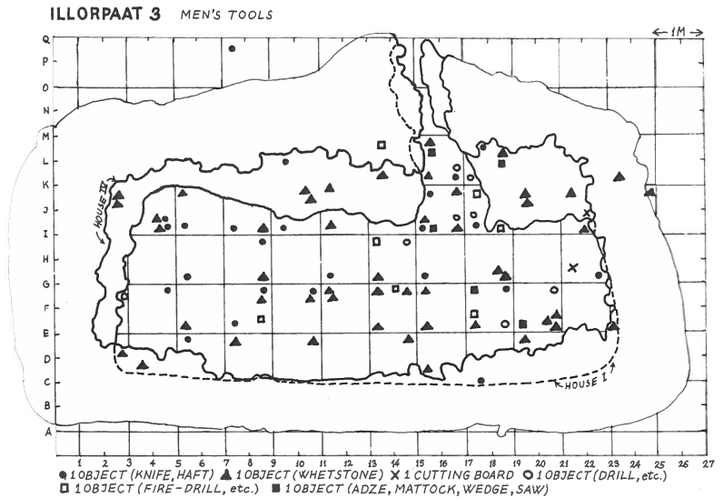


Fig. 64. *The distribution of men's tools in Illorpaat 3, houses I-IV. Each signature represents one object.*

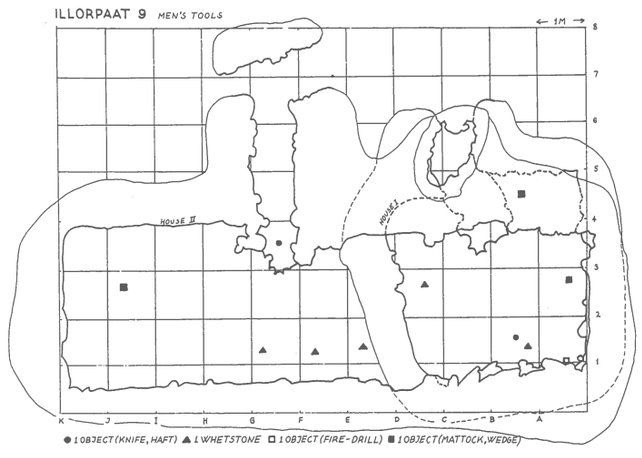


Fig. 65. *The distribution of men's tools in Illorpaat 9, houses I-II. Each signature represents one object.*

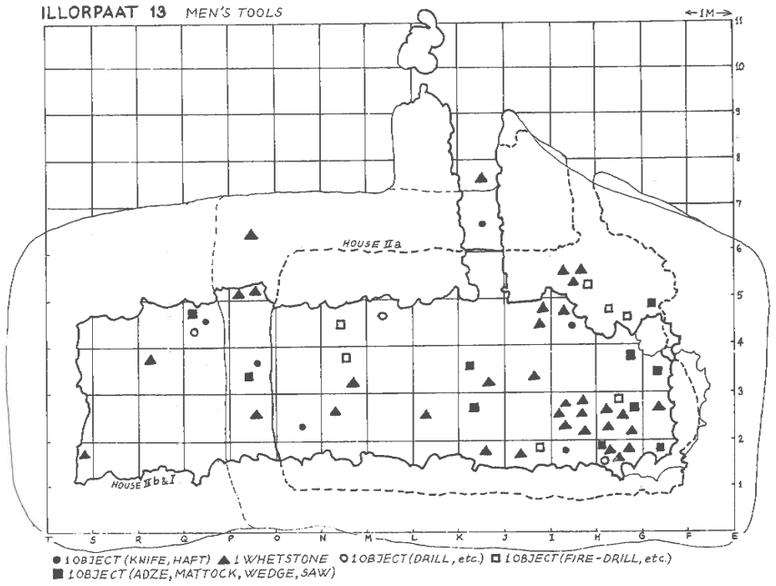


Fig. 66. *The distribution of men's tools in Illorpaat 13, houses I-IIb. Each signature represents one object.*

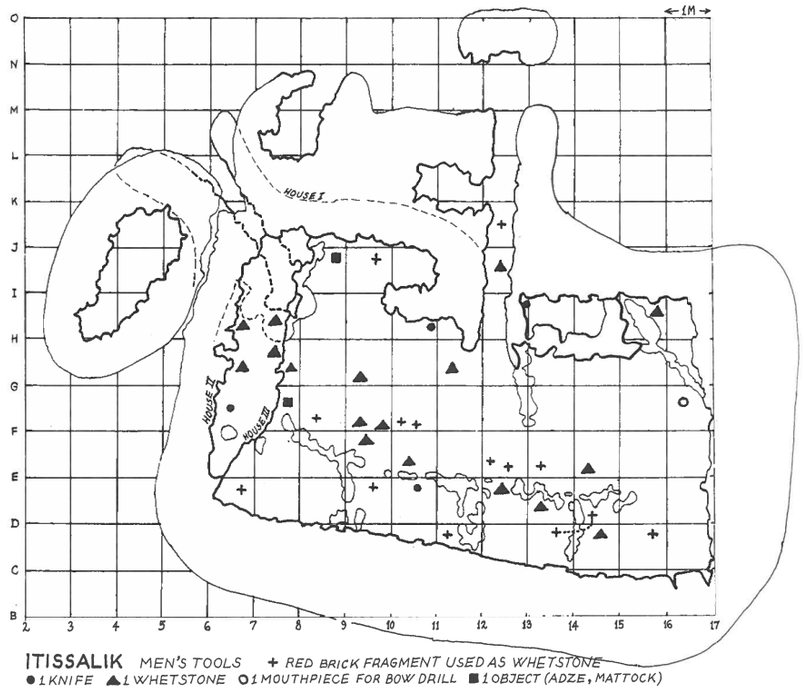


Fig. 67. *The distribution of men's tools in Itissaalik, houses I-III. Each signature represents an object. Note the brick fragments used as whetstones.*

Knives

56 knife parts were found, 45 of them are handles and the remaining 11 blades. A small knife with an iron blade was found in Illorpaat 9, but it is here grouped with handles.

The raw materials of the handles is wood (28 objects), caribou antler (14 objects), penis bone (one object), tubular bone (one object) and horn (one object). The last two items are European. The blades are of bone (two objects) and iron (nine objects).

As regards their function it is difficult to establish precisely whether the knife has been used for whittling, flensing or any other purpose. Typologically the knives can be classified by means of the hafting-method. They occur with end blade (**I**) and with side blade (**II**) and in addition there are rear ends of handles (**III**), composite handles (**IV**) and loose blades (**V**).

The end-hafted blades were set into a socket (**Ia**) or in a slit in the handle end (**Ib**). Two further handles of European manufacture are described separately (**Ic**). The loose blades are classified according to their material, bone (**Va**) and iron (**Vb**).

The distribution at the examined sites is as follows:

	Illorpaat 3					Midden			Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	8	4				
Ia	–	–	4	1	1	4	2	–	1	3	2	18
Ib	1	–	–	1	3	1	1	2	–	–	–	9
Ic	–	1	1	–	–	–	–	–	–	–	–	2
II	1	–	–	3	1	–	–	1	–	–	–	6
III	–	1	2	–	–	3	–	–	–	1	–	7
IV	–	–	–	1	2	–	–	–	–	–	–	3
Va	–	–	1	–	1	–	–	–	–	–	–	2
Vb	2	2	–	–	–	1	–	–	(1)	1	3	9
	4	4	8	6	8	9	3	3	1	5	5	56

I. Knives with end-hafted blades

Ia. The handles in this group have one or two sockets.

Three handles were of the so-called Thule type (Holtved 1944,I: 236). Two are of caribou antler and one of penis bone.

Example: **igd 3239**, 115 mm, of antler. The handle-socket is oval and somewhat compressed. Besides the function as a knife, the object may also have served as a scraping or chopping tool. Found in Illorpaat 3, house II (18/J).

Eight handles have a hole, possibly for a tang, and are without beads. Five are of wood and three of antler.

Examples: **igd 4292**, 84 mm, of wood, split. Found in Illorpaat 3, early Thule (8/E). **igd 1544**, 73 mm, of antler fitted with iron blade. A series of dots at the blade end and along one side have served as ornament on this small whittling knife. Found in Illorpaat 9 (4/G).

Six handles have a hole, possibly for a tang, and a bead to support the lashing. Three are of wood and three of antler.

Examples: **igd 629**, 33 mm, of wood, split and broken at the horizontal piercing. Found in Illorpaat 13 (5/Q). **igd 3886**, 111 mm, of wood, seems to have been split in order to fasten a tang. Found in Illorpaat 3, house I (8/F). **igd 3695**, 53 mm, of antler,

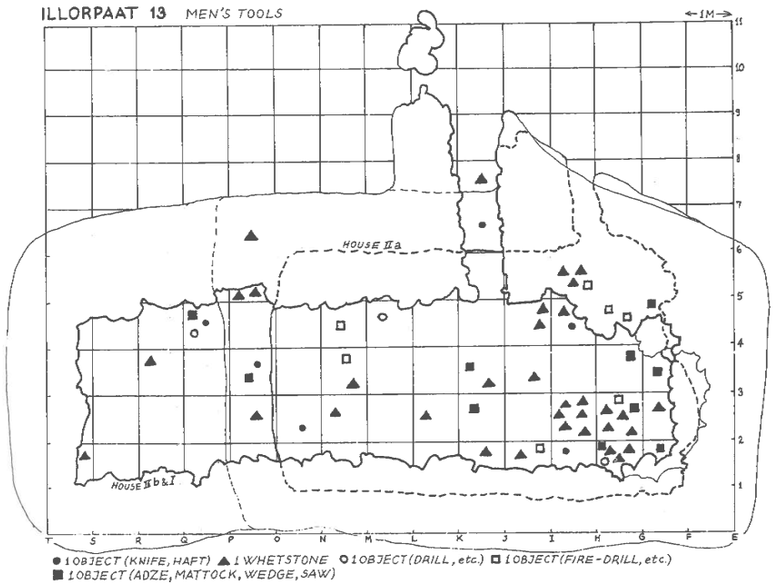


Fig. 66. *The distribution of men's tools in Illorpaat 13, houses I-IIb. Each signature represents one object.*

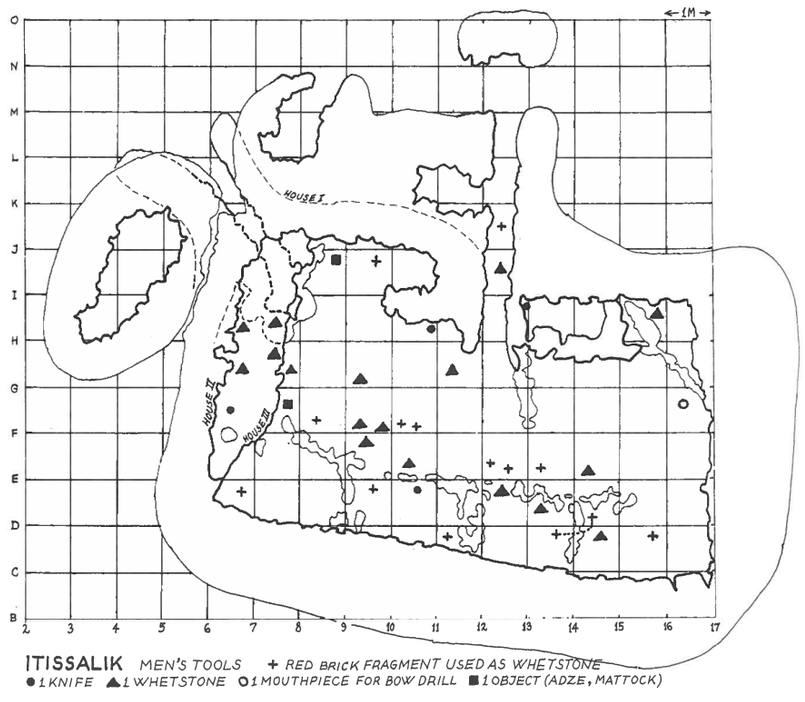


Fig. 67. *The distribution of men's tools in Itissaalik, houses I-III. Each signature represents an object. Note the brick fragments used as whetstones.*

Knives

56 knife parts were found, 45 of them are handles and the remaining 11 blades. A small knife with an iron blade was found in Illorpaat 9, but it is here grouped with handles.

The raw materials of the handles is wood (28 objects), caribou antler (14 objects), penis bone (one object), tubular bone (one object) and horn (one object). The last two items are European. The blades are of bone (two objects) and iron (nine objects).

As regards their function it is difficult to establish precisely whether the knife has been used for whittling, flensing or any other purpose. Typologically the knives can be classified by means of the hafting-method. They occur with end blade (**I**) and with side blade (**II**) and in addition there are rear ends of handles (**III**), composite handles (**IV**) and loose blades (**V**).

The end-hafted blades were set into a socket (**Ia**) or in a slit in the handle end (**Ib**). Two further handles of European manufacture are described separately (**Ic**). The loose blades are classified according to their material, bone (**Va**) and iron (**Vb**).

The distribution at the examined sites is as follows:

	Illorpaat 3					Midden			Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	8	4				
Ia	–	–	4	1	1	4	2	–	1	3	2	18
Ib	1	–	–	1	3	1	1	2	–	–	–	9
Ic	–	1	1	–	–	–	–	–	–	–	–	2
II	1	–	–	3	1	–	–	1	–	–	–	6
III	–	1	2	–	–	3	–	–	–	1	–	7
IV	–	–	–	1	2	–	–	–	–	–	–	3
Va	–	–	1	–	1	–	–	–	–	–	–	2
Vb	2	2	–	–	–	1	–	–	(1)	1	3	9
	4	4	8	6	8	9	3	3	1	5	5	56

I. Knives with end-hafted blades

Ia. The handles in this group have one or two sockets.

Three handles were of the so-called Thule type (Holtved 1944,I: 236). Two are of caribou antler and one of penis bone.

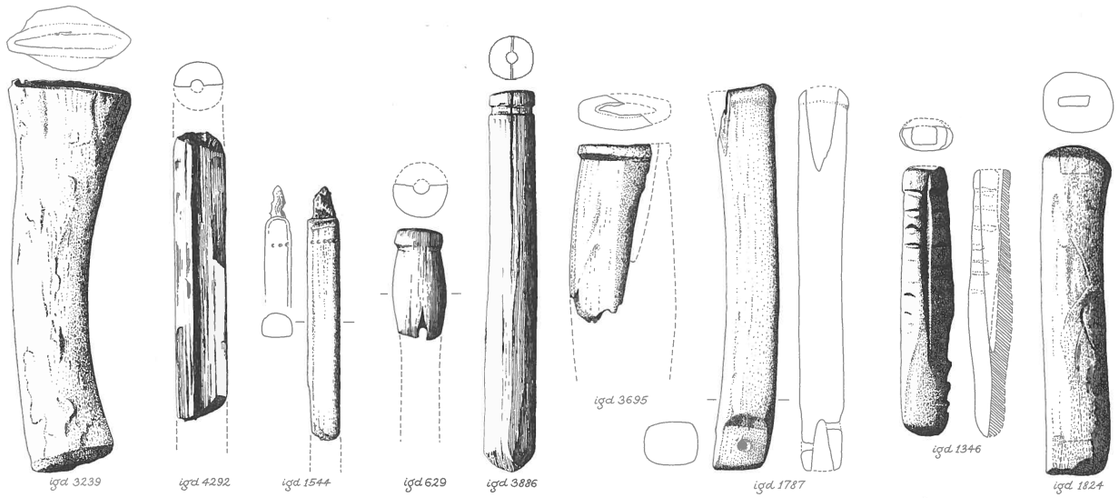
Example: **igd 3239**, 115 mm, of antler. The handle-socket is oval and somewhat compressed. Besides the function as a knife, the object may also have served as a scraping or chopping tool. Found in Illorpaat 3, house II (18/J).

Eight handles have a hole, possibly for a tang, and are without beads. Five are of wood and three of antler.

Examples: **igd 4292**, 84 mm, of wood, split. Found in Illorpaat 3, early Thule (8/E). **igd 1544**, 73 mm, of antler fitted with iron blade. A series of dots at the blade end and along one side have served as ornament on this small whittling knife. Found in Illorpaat 9 (4/G).

Six handles have a hole, possibly for a tang, and a bead to support the lashing. Three are of wood and three of antler.

Examples: **igd 629**, 33 mm, of wood, split and broken at the horizontal piercing. Found in Illorpaat 13 (5/Q). **igd 3886**, 111 mm, of wood, seems to have been split in order to fasten a tang. Found in Illorpaat 3, house I (8/F). **igd 3695**, 53 mm, of antler,



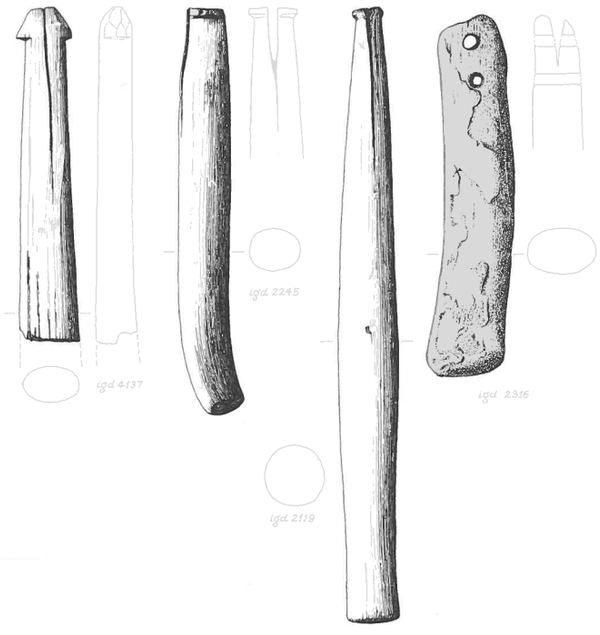
split. Found in Illorpaat 3, house II (18/M). **igd 1787**, 112 mm, of antler, a couple of rivets have been set into the rear end of the handle where a blade may also have been fitted. Found in the midden, layer 8 (1/D). **igd 1346**, 78 mm, of antler, split and with carvings on the upper side (*cf.* Gulløv & Kapel 1979: 111; Holtved 1944,I: pl.19(20)). Found at Itissaalik (13/I).

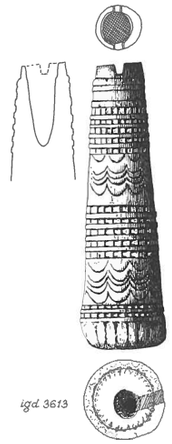
One handle has a socket at each end. **igd 1824**, 96 mm, of antler, found in the midden, layer 12 (2/A).

Ib. The handles in this group have a split at the end to receive the blade. Eight handles have a bead to support the lashing. They are all of wood.

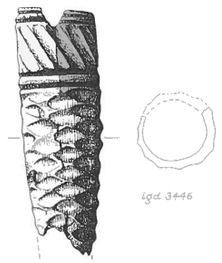
Examples: **igd 4137**, 97 mm, found in Illorpaat 3, house I (9/G). **igd 2245**, 118 mm, with a curve at the rear end, found in the midden, layer 4 (1/E). **igd 2119**, 178 mm, a little sturdier a the centre, found in the midden, layer 4 (2/D).

One handle has holes for fastening the blade. **igd 2316**, 105 mm, of antler, found in the midden, layer 12, as a stray find.





Ic. The handles in this group are European barter goods.
igd 3613, 82 mm, of horn. The handle is decorated with horizontal wavy lines alternating with bands of squares. The type is known in Greenland (Porsild 1914: 201; Mathiassen 1930: pl.23(20)) and in Europe (Baart *et al.* 1977: 336; Nat. Mus. Dk. Dept. II: no.D.11083), where it occurs from the end of the 17th century. Found in Illorpaat 3, house II (16/J). **igd 3446**, 72 mm, of tubular bone, split. The surface is decorated with acuminated oval figures and with a band of twisted depressions. The type is known in Denmark (Nat.Mus.Dk.Dept.II: no. D.3027/1966 & D.3179), where it occurs in the 17th and 18th centuries. Found in Illorpaat 3, house III (19/G).



II. Knives with side-hafted blades

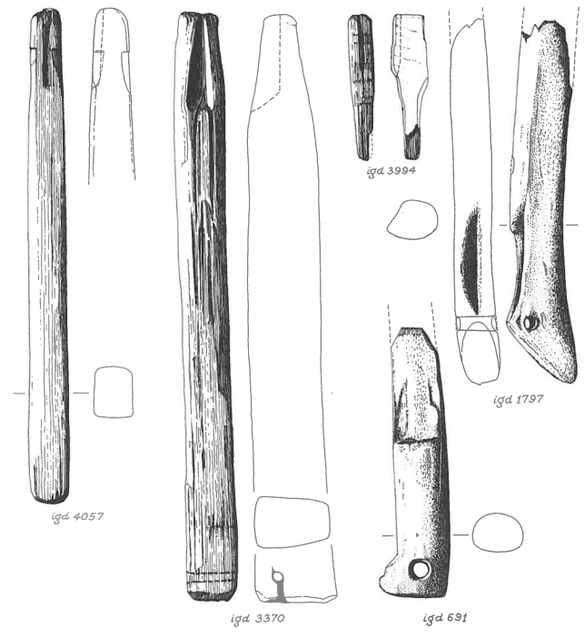
The handles in this group have a groove cut either right out by the end or a little way down the side. Six pieces were found fashioned in this way, all of them of wood.

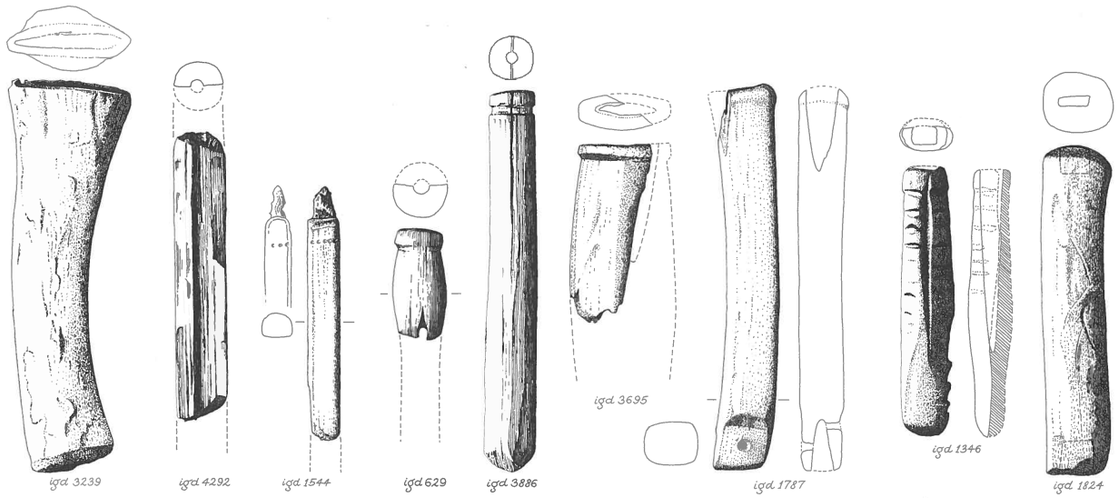
Examples: **igd 4057**, 143 mm, with a bead to support the lashing, found in Illorpaat 3, house I (11/G). **igd 3370**, 169 mm, with a diminutive bead, the rear end pierced, found in Illorpaat 3, house IV (16/H). **igd 3994**, 41 mm, lashing marks are seen on front and back, probably a sewing knife (*cf.* Holtved 1944,I: pl.21), found in Illorpaat 3, house I (5/J).

III. Handle rear ends

The handles in this group are all broken. Three handle ends have a knob and are pierced, while one is not pierced. They are all of caribou antler. Three ends are of wood and have a bead.

Examples: **igd 691**, 78 mm, of antler, pierced, found in Illorpaat 13 (2/I). **igd 1797**, 105 mm, of antler, pierced and with a carved socket for a side blade (?), found in the midden, layer 12 (2/G).





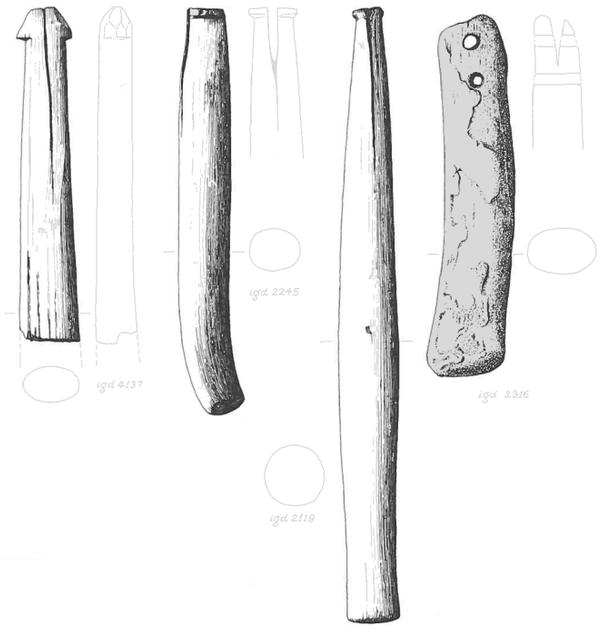
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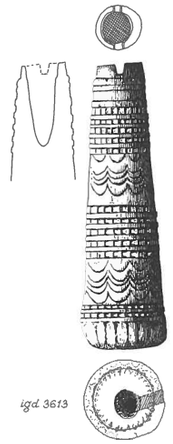
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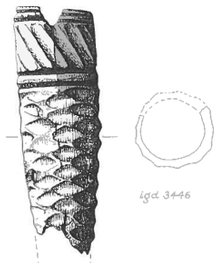
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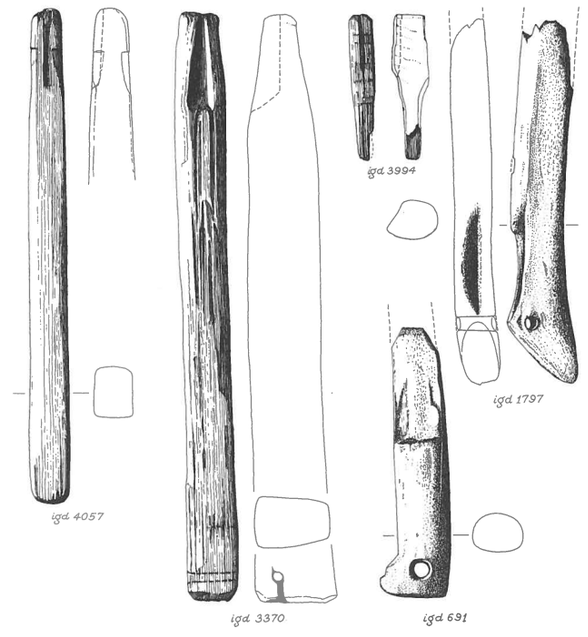
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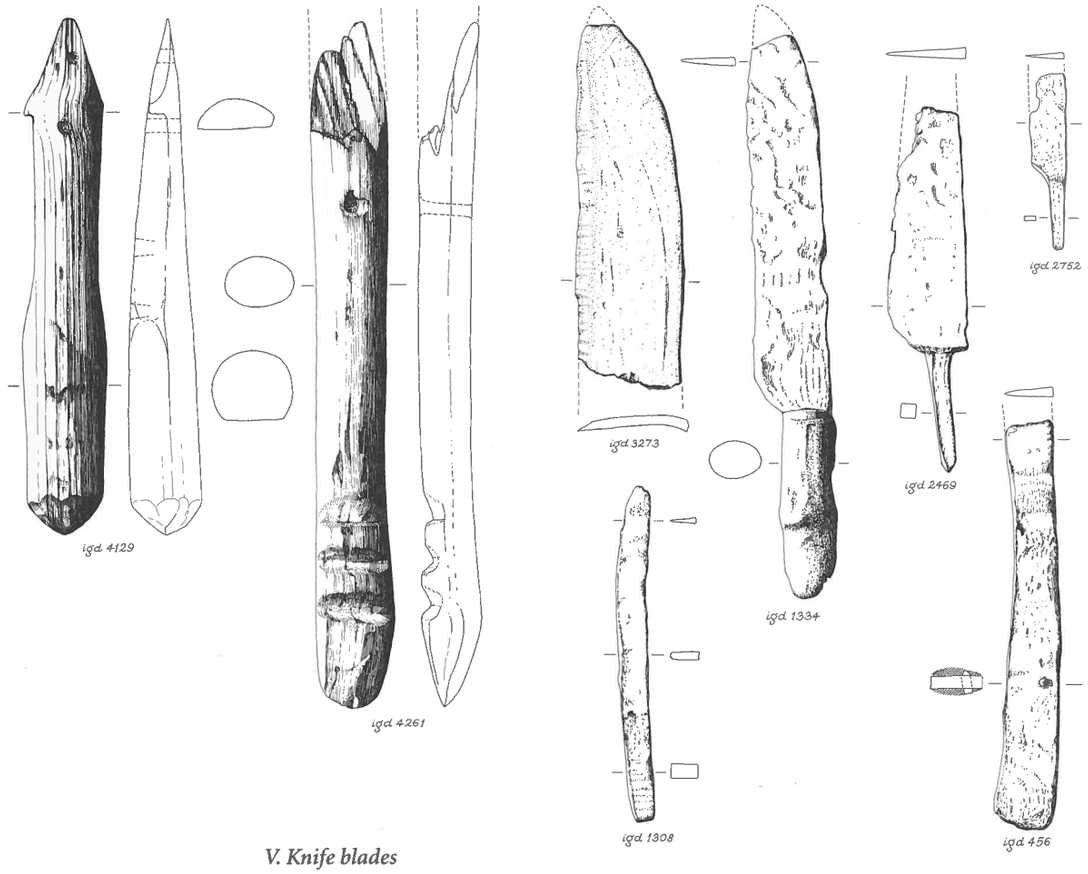
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IV. Composite knife handles

The handles in this group have functioned as extensions. They are all of wood.

Examples: **igd 4129**, 150 mm, with scarf face and four rivet holes, pointed front end with the suggestion of a bead, found in Illorpaat 3, house I (8/J). **igd 4261**, 199 mm, broken, a wooden rivet in the broken front end, three parallel incisions at the rear end (thus resembles **igd 3639** of whale bone, **Foreshafts**), found in Illorpaat 3, early Thule (15/M).



V. Knife blades

Va. Two blades in this grup are of bone. They have clearly been sharpened and have had a scraping or pressing function, presumably as snow or ice scrapers and creasers for the preparation of skins.

Example: **igd 3273**, 106 mm, broken, found in Illorpaat 3, house II (10/L).

Vb. Nine iron blades were primarily used as table knives and whittling knives. On seven blades the tang is partly preserved. On two a part of the blade remains. None of the blades were stamped. This was confirmed by x-ray screening.

Examples: **igd 1334**, 163 mm, with a bone haft, probably chiefly a table knife (*cf.* Gulløv & Kapel 1979: 124), found at Itissaalik (7/G). **igd 2469**, 106 mm, with intact tang, table knife (*cf.* Gulløv & Kapel 1979: 123), found in Illorpaat 3, house IV (5/J). **igd 2752**, 51 mm, whittling knife (*cf.* Gulløv & Kapel 1979: 124), found in Illorpaat 3, house III (10/J). **igd 1308**, 97 mm, with a long and heavy tang and worn-down blade,

whittling knife (?), found at Itissaalik (11-12/I). **igd 456**, 119 mm, with a heavy tang which had a rivet for joining the two halves of the handle, found in Illorpaat 13 (5/I).

Typologically the found knife handles do not differ from the ones found in the rest of Greenland. Stratigraphically the side-hafted knives predominate in the earliest layers, while the introduction of European iron blades with tang clearly influenced the hafting-method in the 18th century.

See also **Handles & Shafts**, **Bone objects, various** and **Wooden objects, various.**

Handles & Shafts

Seven objects can be determined to have functioned as handles or shafts. The material is wood, apart from one antler handle.

igd 4216, 103 mm, of wood, a ferrule may have been fastened to the end of the shaft, found in Illorpaat 3, early Thule (9/F).

igd 4124, 83 mm, of wood, broken above the bead, found in Illorpaat 3, early Thule (6/G).

igd 3881,105 mm, of wood, broken and split, foreshaft (?), a fragment of the skin lashing is seen in the groove, found in Illorpaat 3, house I (6/J).

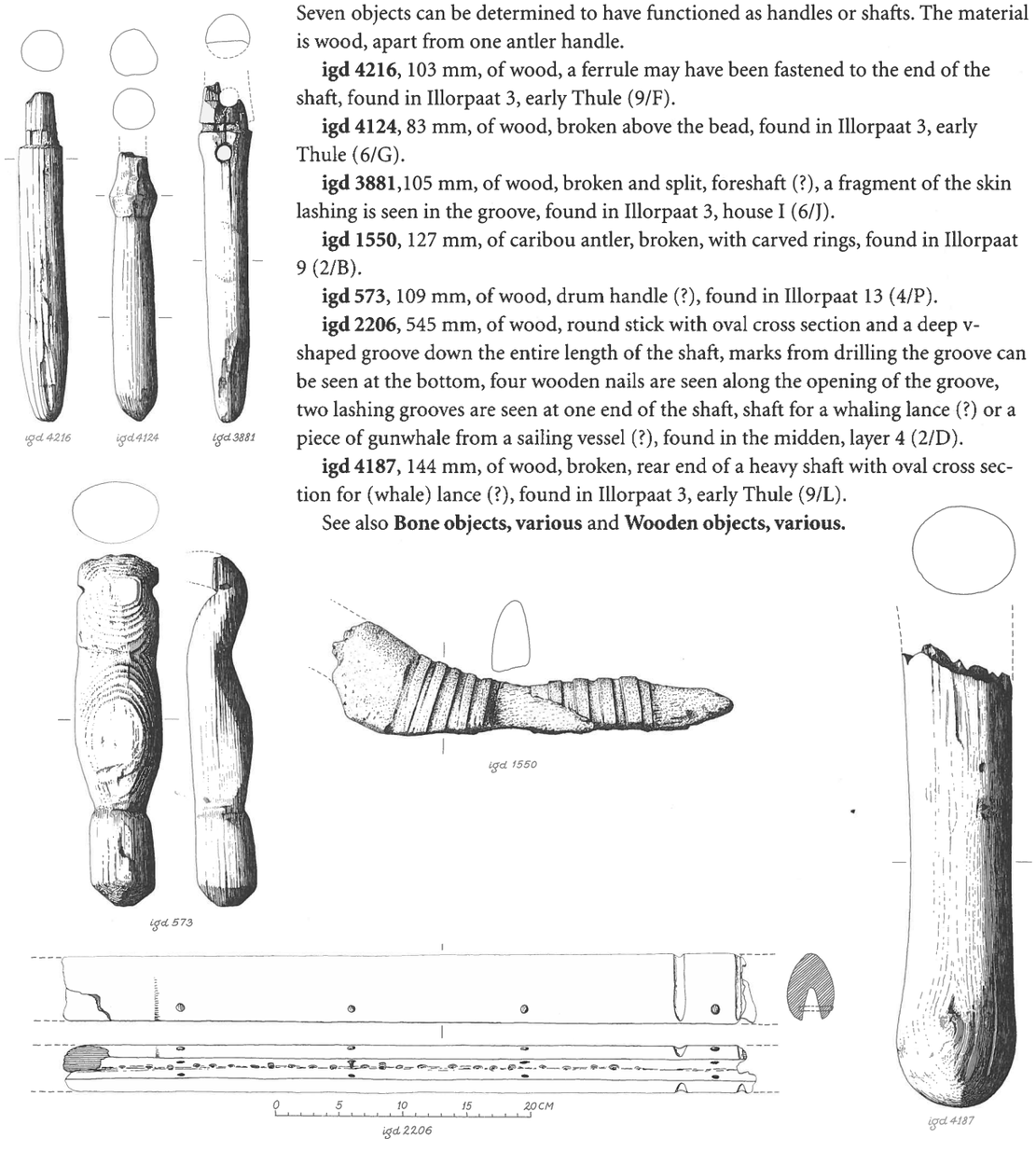
igd 1550, 127 mm, of caribou antler, broken, with carved rings, found in Illorpaat 9 (2/B).

igd 573, 109 mm, of wood, drum handle (?), found in Illorpaat 13 (4/P).

igd 2206, 545 mm, of wood, round stick with oval cross section and a deep v-shaped groove down the entire length of the shaft, marks from drilling the groove can be seen at the bottom, four wooden nails are seen along the opening of the groove, two lashing grooves are seen at one end of the shaft, shaft for a whaling lance (?) or a piece of gunwhale from a sailing vessel (?), found in the midden, layer 4 (2/D).

igd 4187, 144 mm, of wood, broken, rear end of a heavy shaft with oval cross section for (whale) lance (?), found in Illorpaat 3, early Thule (9/L).

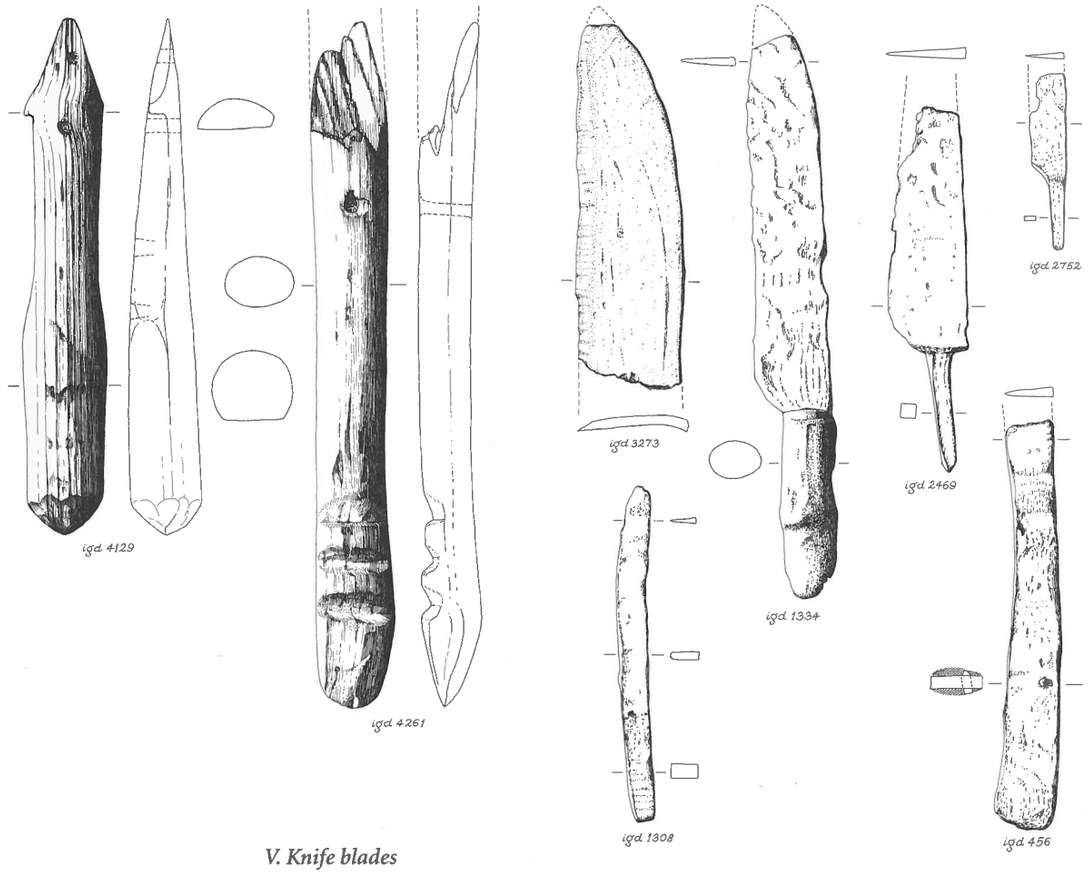
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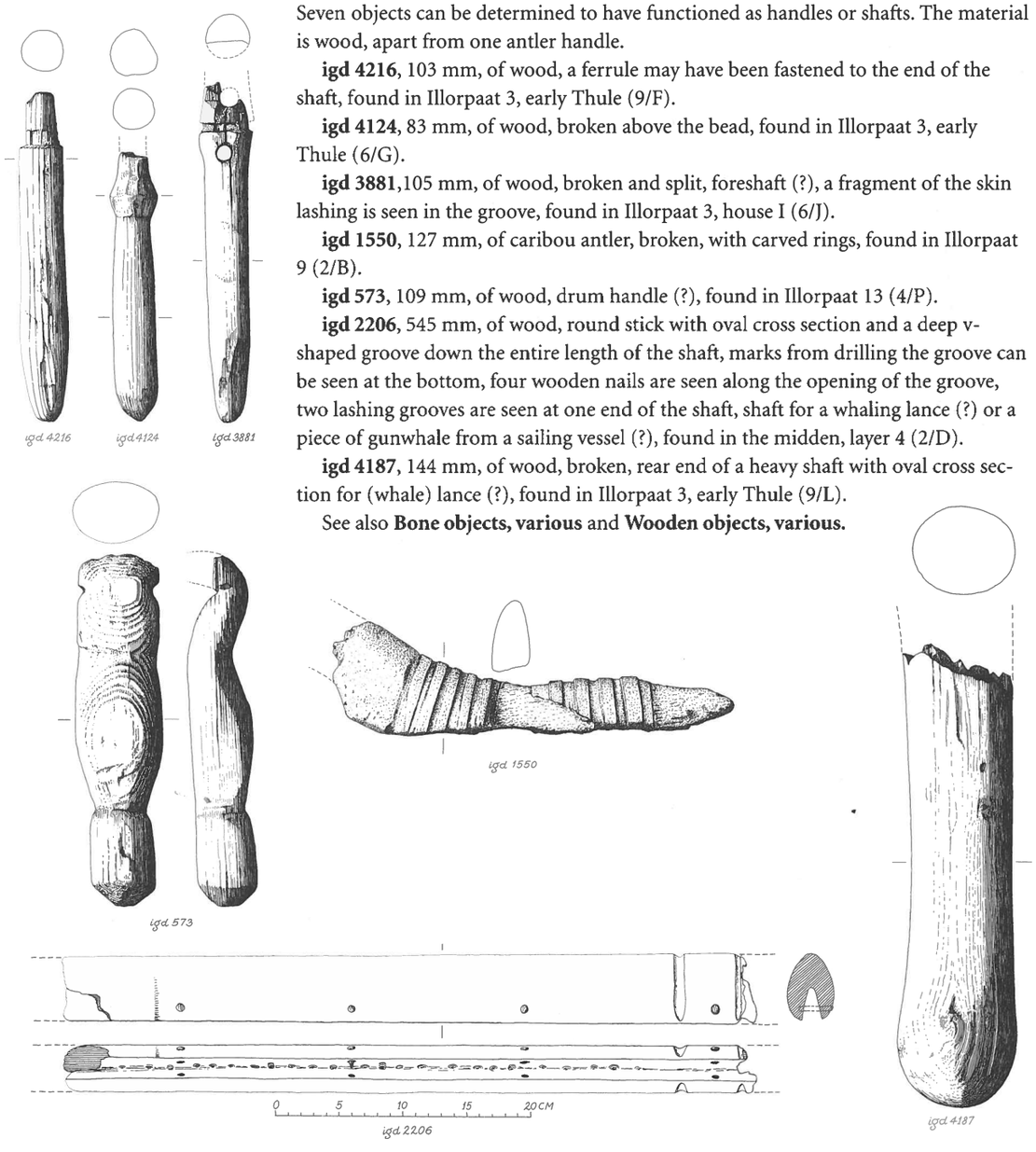
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Whetstones & Hammerstones

118 stones of various sorts of rock, incl. pumice, were used for sharpening and hammering. Grinding marks and impact marks have determined the function-classification. A large basalt block (largest measurement 280 mm) has functioned as an anvil (**igd 1299**, Itissaalik (16/I), not illustrated).

The materials are slaty amphibolite, quartzite, mica-quartzite, slaty ironstone, clay slate, igaliko sandstone, ultramafite, basalt, dark gneiss, common gneiss and pumice. The distribution is as follows:

	Illorpaat 3					Midden			Illpt. 9		Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	9	4	II	I			
Whetstones													
Slaty amphibolite	–	1	5	2	–	1	2	–	1	–	21	6	39
Quartzite	1	–	–	–	–	–	–	–	–	1	1	1[1]	4
Mica–quartzite	–	–	2	–	–	1	–	–	–	–	4	–	7
Slaty ironstone	–	–	2	–	–	–	–	–	1	–	1	1	5
Clay slate	–	1	–	–	–	–	–	–	–	–	2	–	3
Igaliko sandstone	1	1	–	–	–	–	–	1	–	1	3	1	8
Sandstone	1	–	–	1	–	–	–	1	–	–	–	2	5
Ultramafite	1	–	–	–	–	–	–	–	–	–	–	–	1
Basalt	–	1	–	1	–	1[2]	–	–	–	–	2[12]	1[2]	6
Dark gneiss	–	1[12]	–	–	–	–	–	–	–	–	1	–	2
Common gneiss	4[12]	1[12]	–	–	–	–	–	–	–	–	–	1[12]	6
Pumice	6	8	–	1	1	2	–	–	–	1	1	1	21
Hammerstones													
Basalt	–	–	–	–	–	–	–	–	–	–	–	2[23]	2
Dark gneiss	2[12]	–	–	–	–	—	1[124]	—	–	–	1[12]	–	4
Common gneiss	2[12]	1[12]	–	–	–	–	–	–	–	–	1[123]	1[2]	5
	18	15	9	5	1	5	3	2	2	3	38	17	118

[1] both sharpening and hammer function
[2] indicator boulders in the form of pebbles from the beach
[3] anvil function
[4] stray find

Director Karsten Secher (previously Greenland Geological Survey) has assisted with the definitions. Use has been made of Geological Map of the Nuuk Area (Jensen *et al.* 1986.) Information about occurrence of pumice has been supplied by Jens Rosing, former Director of the National Museum of Greenland.

Slaty amphibolite. Greenish grey to black, fine- to medium-grained rock, consisting of hornblende (greenish black) and light coloured feldspar. Transformed basalt and diabase. Is found in a fold-region on a south-west to north-east axis from Nuuk up to Isukasia by the edge of the inland ice. The slaty amphibolite has primarily been mined at Sillisit nuuat (Sitdlisit nûat) on the south side of Bjørneø (Fig. 68), where the deposits go right down to sea level (Jensen *et al.* 1986: 10).

The diagram (Fig. 69) shows that 1/3 of the found whetstones and hammerstones are of this rock, which, however does not become predominant until the 18th century.

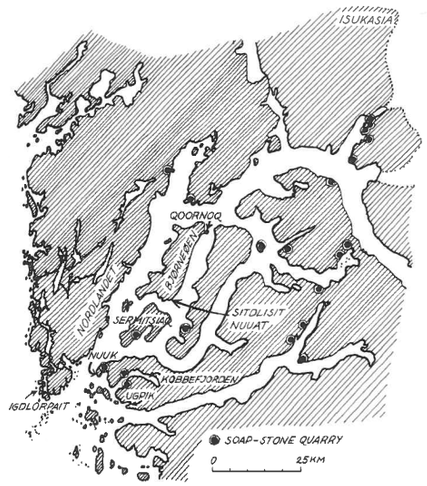


Fig. 68. *Map of Godthåb Fjord with the names of the localities from where the raw materials for whetstones found in Illorpaat and Itissaalik may have come. The known soapstone quarries are marked.*

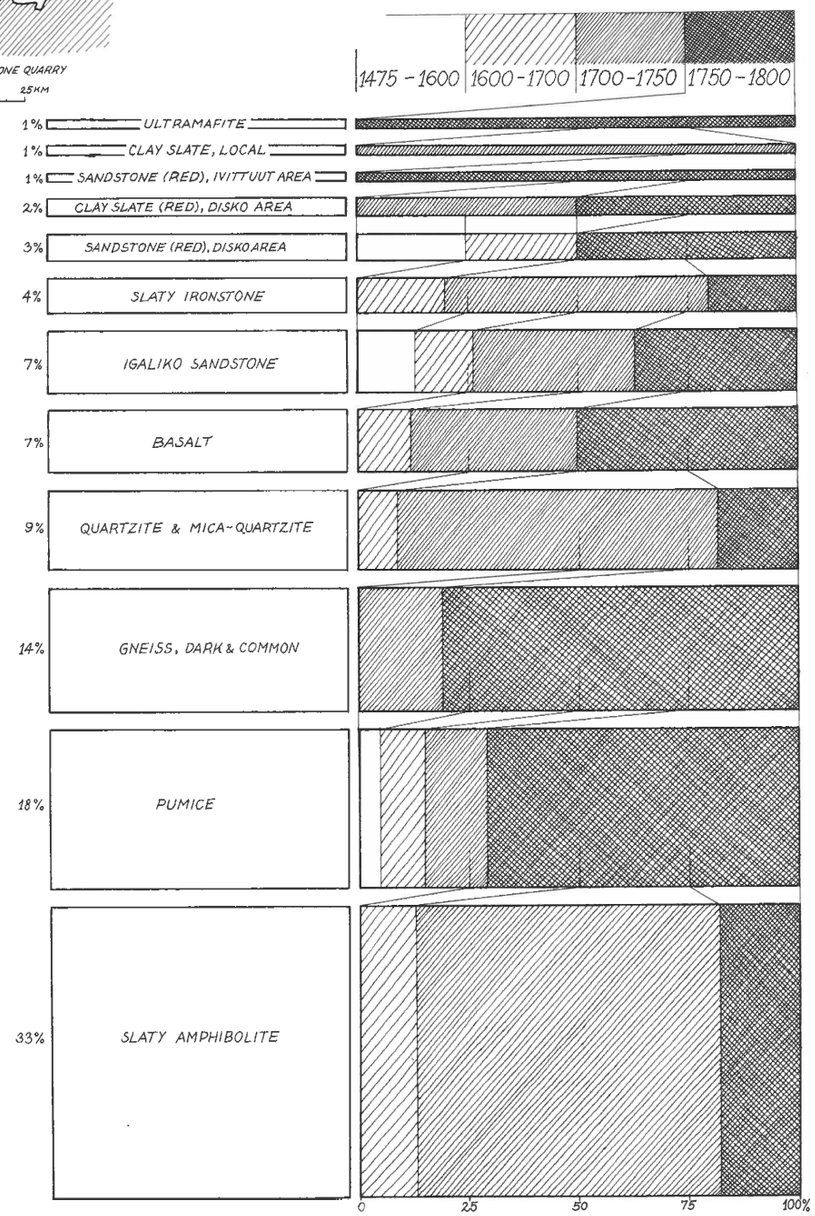


Fig. 69. *Diagram of the raw materials used for the whetstones found in Illorpaat and Itissaalik, quantitatively divided into types of rock and periods.*

Whetstones & Hammerstones

118 stones of various sorts of rock, incl. pumice, were used for sharpening and hammering. Grinding marks and impact marks have determined the function-classification. A large basalt block (largest measurement 280 mm) has functioned as an anvil (**igd 1299**, Itissaalik (16/I), not illustrated).

The materials are slaty amphibolite, quartzite, mica-quartzite, slaty ironstone, clay slate, igaliko sandstone, ultramafite, basalt, dark gneiss, common gneiss and pumice. The distribution is as follows:

	Illorpaat 3					Midden			Illpt. 9		Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	9	4	II	I			
Whetstones													
Slaty amphibolite	–	1	5	2	–	1	2	–	1	–	21	6	39
Quartzite	1	–	–	–	–	–	–	–	–	1	1	1[1]	4
Mica–quartzite	–	–	2	–	–	1	–	–	–	–	4	–	7
Slaty ironstone	–	–	2	–	–	–	–	–	1	–	1	1	5
Clay slate	–	1	–	–	–	–	–	–	–	–	2	–	3
Igaliko sandstone	1	1	–	–	–	–	–	1	–	1	3	1	8
Sandstone	1	–	–	1	–	–	–	1	–	–	–	2	5
Ultramafite	1	–	–	–	–	–	–	–	–	–	–	–	1
Basalt	–	1	–	1	–	1[2]	–	–	–	–	2[12]	1[2]	6
Dark gneiss	–	1[12]	–	–	–	–	–	–	–	–	1	–	2
Common gneiss	4[12]	1[12]	–	–	–	–	–	–	–	–	–	1[12]	6
Pumice	6	8	–	1	1	2	–	–	–	1	1	1	21
Hammerstones													
Basalt	–	–	–	–	–	–	–	–	–	–	–	2[23]	2
Dark gneiss	2[12]	–	–	–	–	—	1[124]	—	–	–	1[12]	–	4
Common gneiss	2[12]	1[12]	–	–	–	–	–	–	–	–	1[123]	1[2]	5
	18	15	9	5	1	5	3	2	2	3	38	17	118

[1] both sharpening and hammer function
[2] indicator boulders in the form of pebbles from the beach
[3] anvil function
[4] stray find

Director Karsten Secher (previously Greenland Geological Survey) has assisted with the definitions. Use has been made of Geological Map of the Nuuk Area (Jensen *et al.* 1986.) Information about occurrence of pumice has been supplied by Jens Rosing, former Director of the National Museum of Greenland.

Slaty amphibolite. Greenish grey to black, fine- to medium-grained rock, consisting of hornblende (greenish black) and light coloured feldspar. Transformed basalt and diabase. Is found in a fold-region on a south-west to north-east axis from Nuuk up to Isukasia by the edge of the inland ice. The slaty amphibolite has primarily been mined at Sillisit nuuat (Sitdlisit nûat) on the south side of Bjørneø (Fig. 68), where the deposits go right down to sea level (Jensen *et al.* 1986: 10).

The diagram (Fig. 69) shows that 1/3 of the found whetstones and hammerstones are of this rock, which, however does not become predominant until the 18th century.

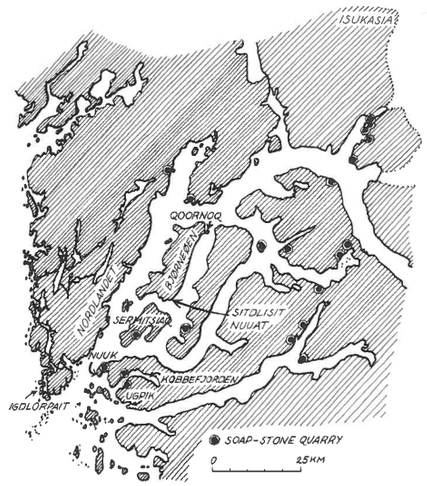


Fig. 68. *Map of Godthåb Fjord with the names of the localities from where the raw materials for whetstones found in Illorpaat and Itissaalik may have come. The known soapstone quarries are marked.*

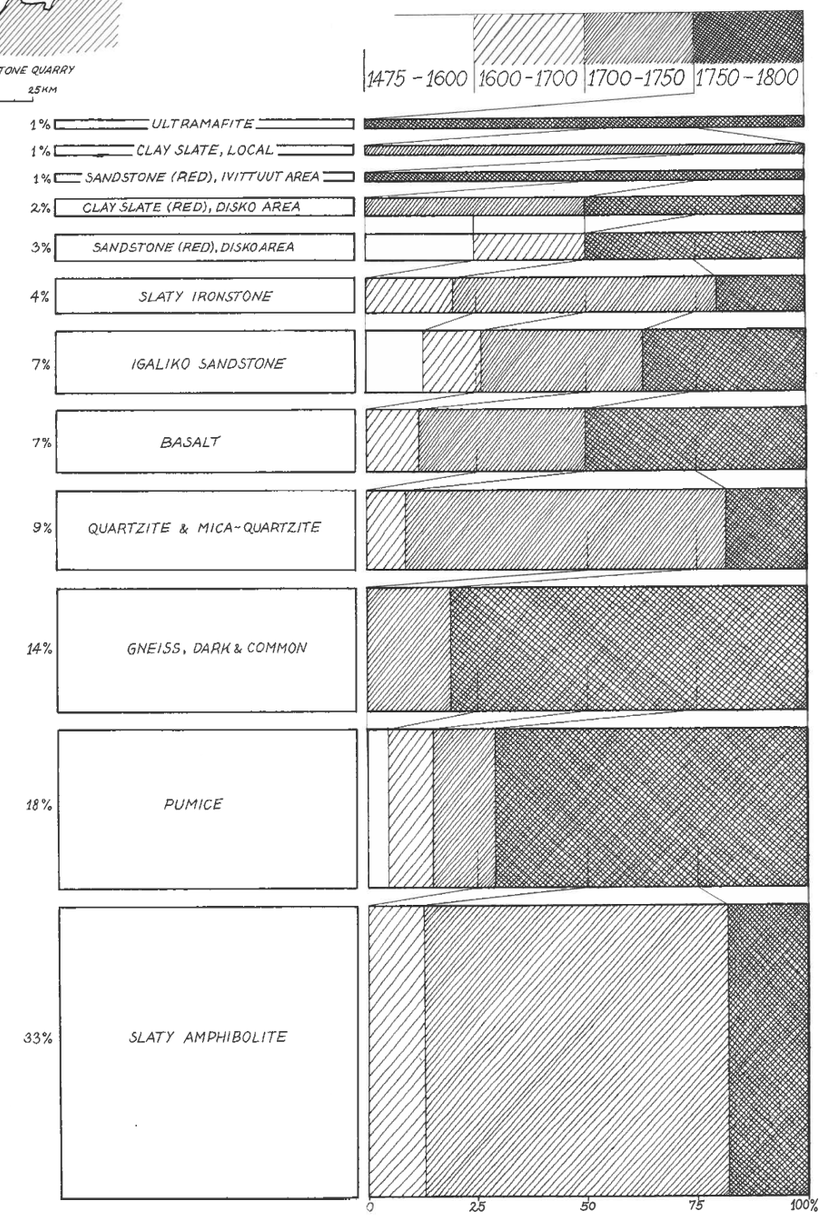
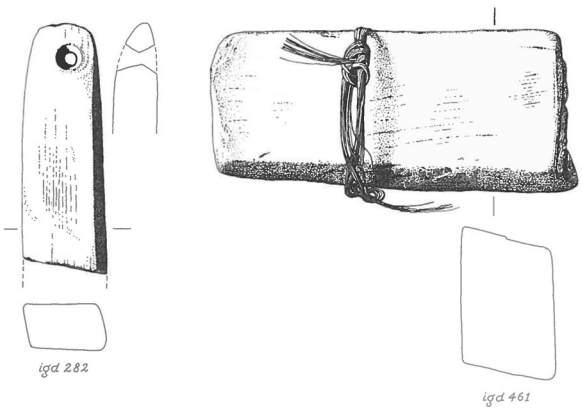


Fig. 69. *Diagram of the raw materials used for the whetstones found in Illorpaat and Itissaalik, quantitatively divided into types of rock and periods.*

Examples: **igd 282**, 66 mm, broken, with suspension hole, four grinding surfaces, found in Illorpaat 13 (6/I). **igd 461,** 96 mm, one grinding surface, secondarily used as a sinker (?) with baleen lashing, found in Illorpaat 13 (3/I).



Quartzite. Mainly consists of the mineral quartz. Is found nearly everywhere in the Nuuk region, but was presumably brought to the coast in the form of indicator boulders from the interior.

The diagram combines quartzite and mica-quartzite (Fig. 69). Three cracked pieces with several grinding surfaces and a smoothed block were found. Not illustrated.

Mica-quartzite. The same geological comments as for quartzite. The mica contents however give it a slaty structure which leaves clear grinding surfaces.

The diagram combines quartzite and mica-quartzite (Fig. 69) and shows the same qualitative distribution as the slaty amphibolite, i.e. predominance in the 18th century. Not illustrated.

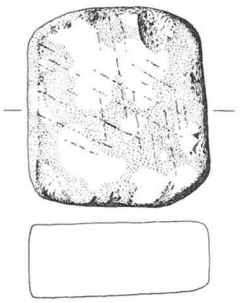
Slaty ironstone. The iron ore is found in the same fold-region as the amphibolite described above, with the highest concentration by and below the inland ice at Isukasia. But it is most likely that the found objects derive from the deposits in Kobbefjord, and Ugpik south of Nuuk (Fig. 68) (Jensen *et al.* 1986: 10).

The diagram (Fig.69) shows that the deposits were mostly exploited in the mid-18th century. Several grinding surfaces can be seen on the found, split-off sticks. Not illustrated.

Clay slate. Clay slate is found in the maritime deposits on Nordlandet (Fig. 68) and was probably not much used. It is however worth noting that the red clay slate from the Disko area makes good whetstones with a very smooth grinding surface.

The diagram shows (Fig. 69) that it was mostly used in the 18th century.

Igaliko sandstone. This special sandstone is of culture-historical interest, since it is only found in South Greenland, specifically around Igaliko, where the former Norse bishop's seat was built of this stone (*cf.* Egede 1925: 100). In the form of whetstones it must thus have been distributed northwards along the west coast to the Nuuk area, either brought along to the Western Settlement by the Norsemen themselves or by the Eskimos. Eskimo digging in the farms of the Western Settlement cannot, however, be excluded and there is historical evicence from 1654 about digging for iron (Bobé 1916: 232).



The diagram shows (Fig. 69), that this type of sandstone was used since the time of the first settlement here. In the nearby Hope Colony a specimen was found too (-Gulløv & Kapel 1979: 194). The sandstone is found in archaeological excavations right up to Thule District (Holtved 1944,I: 245), but in a comparatively late culture-historical sequence, i.e. the 16th century (Holtved 1944,II: 29).

Example: **igd 75**, 54 mm, with four grinding surfaces, found in Illorpaat 13 (6/I).

Sandstone. This stone group also comes from elsewhere, i.e. the Ivittuut area in the south and the Disko area in the north. The stones are red and have the same sharpening properties as the Igaliko sandstones. They were probably acquired in the same way.

The diagram shows (Fig. 69) that the Ivittuut sandstone occurs in the latter half of the 18th century, while the material was in use in the Disko area since the time of the first settlement there. Not illustrated.

Ultramafite. Ultramafite rock only consists of dark minerals (olivine, hornblende, garnet, talc, mica) and is usually found in association with soapstone (Jensen *et al.* 1986: 11). The stone may have been quarried at Sermitsiaq or at Silisit nuuat (Fig. 68), or at the well known soapstone quarries further inside the fjord. Its use as whetstone is atypical.

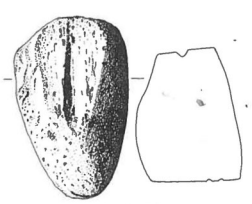
The diagram shows (Fig. 69) that it was used in the late 18th century. A block with one grinding surface. Not illustrated.

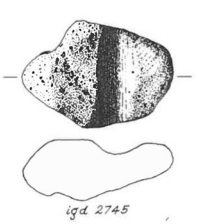
Basalt. This black and very fine-grained volcanic rock is fund in several places. Nearly all the found objects of this material would have been brought to this location in the form of indicator boulders and must therefore have been gathered on the beach. With their rounded form they were highly suitable for hammerstones and anvils.

The diagram shows (Fig. 69) that it was primarily in use in the 18th century. Not illustrated.

Gneiss. The bedrock is gneiss. It is a fine- to coarse-grained rock, often with light and dark strata, because of the varying contents of light mineral grains (quartz and feldspar) and dark grains (especially mica and hornblende) (Jensen *et al.* 1986: 14). Almost the whole of this group is from indicator boulders, which are rounded in shape and collected along the beach in this locality.

The diagram shows (Fig. 69) that by far the greatest number occur in the second half of the 18th century. Not illustrated.





Pumice. This large group originates in volcanic activity in Iceland, from where pumice has drifted ashore in several places in the Nuuk area. The greatest accumulation is found in Nuuk itself (Fig. 68), which presumably was a collecting place (Rosing, pers.comm.).

The diagram shows (Fig. 69) that pumice was always used, but with greatest frequency in the second half of the 18th century. The material could be used as a sharpening tool for arrow shafts and bone needles, among other things. Pumice from the Saqqaq culture with grinding grooves have been found at Qoornoq (Gulløv & Ilkjær 1968: pl.4).

Examples: **igd 3231,** 50 mm long, traces of grinding along both sides, found in Illorpaat 3, early Thule (6/F). **igd 2745**, 41 mm long, grinding groove on one side, found in Illorpaat 3, house III (4/D).

In general it can be established that *c.* 10% of the total number of whetstones and hammerstones originate in areas which lie up to 500 km north and south of Illorpaat. This can also be observed in the chronological division of the archaeological horizons as described in chapter II. A probable correlation between Illorpaat 3 and the midden in the 17th century has been established, see **Cooking pots**.

	1475-1600	1600-1700	1700-1750	1750-1800
from the Nuuk area	33.3%	83.3%	92.3%	86.0%
outside the Nuuk area	66.7%	16.7%	7.7%	14.0%
	100.0%	100.0%	100.0%	100.0%

There is a tendency to bring "exotic" materials into the area in the early settlement phase. In the 18th century Godthåb District was densely inhabited and local rock was widely used. The presence of rock from South Greenland, which seems to increase during the 18th century, can be related to the marked increase in the population's travel activity in this period (*cf.* Gulløv 1982, 1985).

Whetting tools

Five wooden objects had a caribou tooth affixed and were presumably used for sharpening stone-bladed knives. In one specimen, however, the tooth is lost.

igd 2282, 172 mm, the tooth is fixed without lashing, horizontal marks of wear are seen on the tooth's surface, found in the midden, layer 9 (2/F).

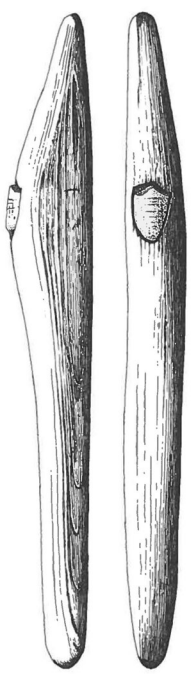
igd 3705, 77 mm, the tooth is fastened with a lashing of willow root which is reinforced with a carved bead and a groove, transverse marks of wear are seen on the tooth's surface, found in Illorpaat 3, house II (11/G).

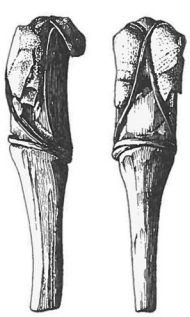
igd 3742, 92 mm, the tooth is fixed without lashing, diagonal grinding marks are seen on the tooth's surface, fire-drill marks are seen in the wood, found in Illorpaat 3, house II (18/F).

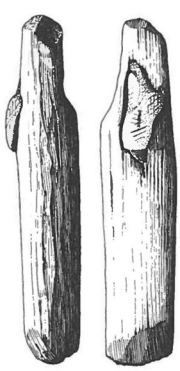
igd 4050, 65 mm, the tooth is fixed without lashing, transverse grinding marks are seen on the tooth's surface, found in Illorpaat 3, house I (9/G).

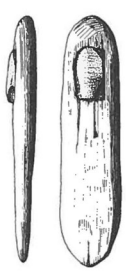
igd 2088, 64 mm, the tooth has disappeared but had been affixed with a lashing of willow root, found in the midden, layer 8 (2/H).

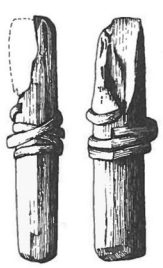
This type of tool is not otherwise known in Greenland, but an example from Baffin Island (Boas 1901: 88) has a tooth fastened by lashing.


igd 2282


igd 3705


igd 3742


igd 4050


igd 2088

The stratigraphic contexts show that the objects must be dated to the 17th century and before the mid-18th, i.e. before the hafted knives with iron blades turn up in the archaeological find material (cf. **Knives**).

Cutting boards

Four cutting boards and possibly also a scraping board were found. Three in Illorpaat 3, one in the midden and one in Illorpaat 13.

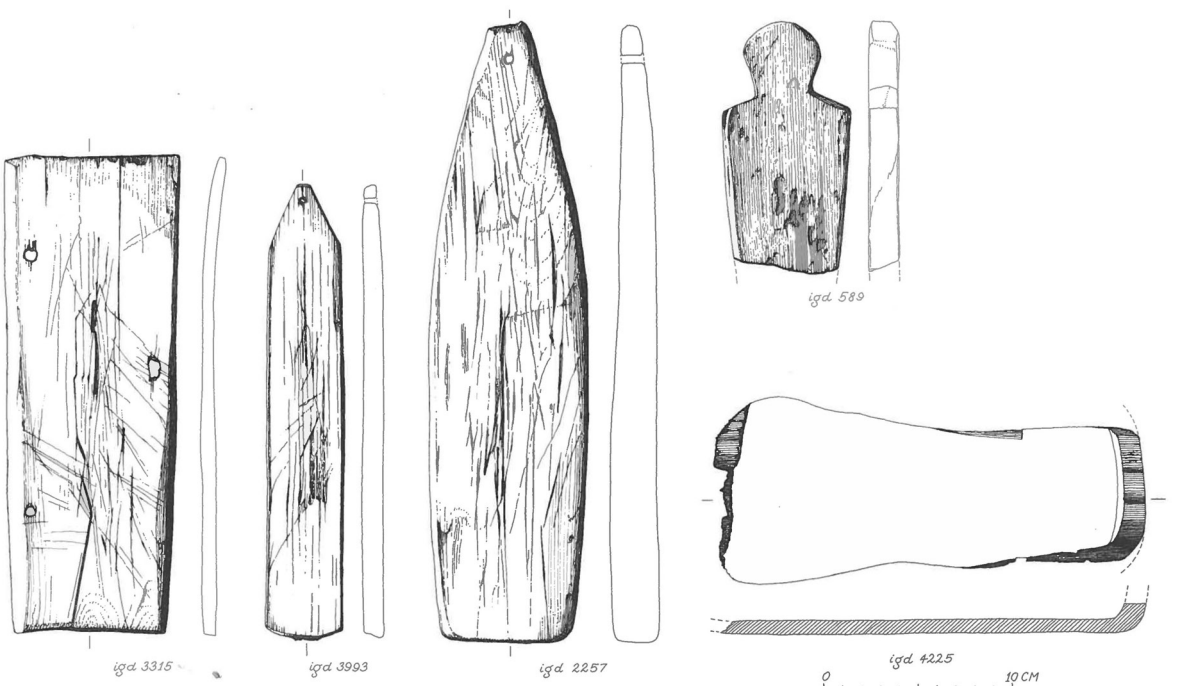
igd 3315, 125 mm, with three holes, cutting board for arrow-shaft feathers, cutting marks on both sides, found in Illorpaat 3, house IV (22/H).

igd 3993, 120 mm, with suspension hole, cutting board for arrow-feathers, cutting marks on both sides, found in Illorpaat 3, early Thule (4/J).

igd 2257, 163 mm, with suspension hole, cutting board for arrow-feathers, cutting marks on both sides, found in the midden, layer 4 (1/H).

igd 589, 66 mm, shaped like a flat doll, no traces of cutting marks (an unfinished piece?), found in Illorpaat 13 (4/L).

igd 4225, 230 mm, fragment of scraping board for harpoon bladder (?), found in Illorpaat 3, house III (23/J).



Drills, Awls & Burins

This group of 19 objects comprise tools for piercing (i.e. bow drills, hand drills and awls) and for semi-piercing (i.e. burin-like tools and engraving tools). Common to them all is the placing of the drilling or scratching bit or point at the end of the handle. These tools have no cutting function.

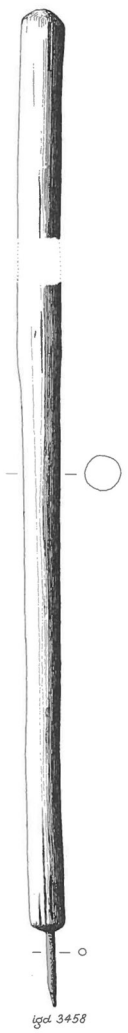
The material of the handle is conifer, whale bone and caribou antler. The points and bits are of iron, tooth and bone, including tubular bone.

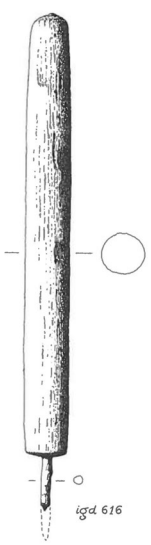
The distribution is as follows:

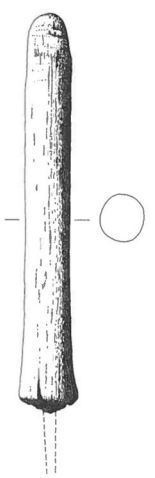
	Illorpaat 3					Midden			Illpt.13	Total
	IV	III	II	I	e.Th.	12	8	4		
Bow drills										
with metal bit	1	1	1	1	–	–	–	–	1	5
without bit	–	–	1	–	–	–	1	–	1	3
Hand drills										
or **Awls**	–	1	–	–	–	–	–	–	1	2
Burins										
with metal point	–	1	–	–	–	–	–	–	–	1
without point	–	–	–	1	–	–	–	–	–	1
Bodkins or										
Engraving tools										
with metal point	–	–	–	–	–	–	–	1	–	1
with point of										
tooth or bone	–	–	–	–	3	1	2	–	–	6
	1	3	2	2	3	1	3	1	3	19

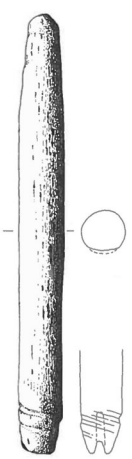
Bow drills. Three specimens have no drill bit, but marks of wear on the handle indicate that they must belong to this group.

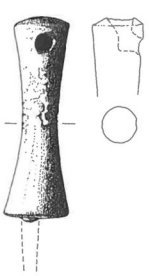
Examples: **igd 3458**, 358 mm incl. the bit, wooden handle with iron bit, found in Illorpaat 3, house III (17/J). **igd 616**, 131 mm incl. the bit, whale-bone handle with iron bit, found in Illorpaat 13 (5/M). **igd 3305**, 105 mm incl. the bit, whale-bone handle with iron bit, found in Illorpaat 3, house IV (3/G). **igd 689**, 117 mm, bone handle, the bit is missing, a suggestion of a bead (screw thread?), found in Illorpaat 13 (2/H). **igd 3631**, 53 mm incl. the bit, antler handle with iron bit, diagonal piercing at the top, atypical bow drill (?), found in Illorpaat 3, house II (17/L).



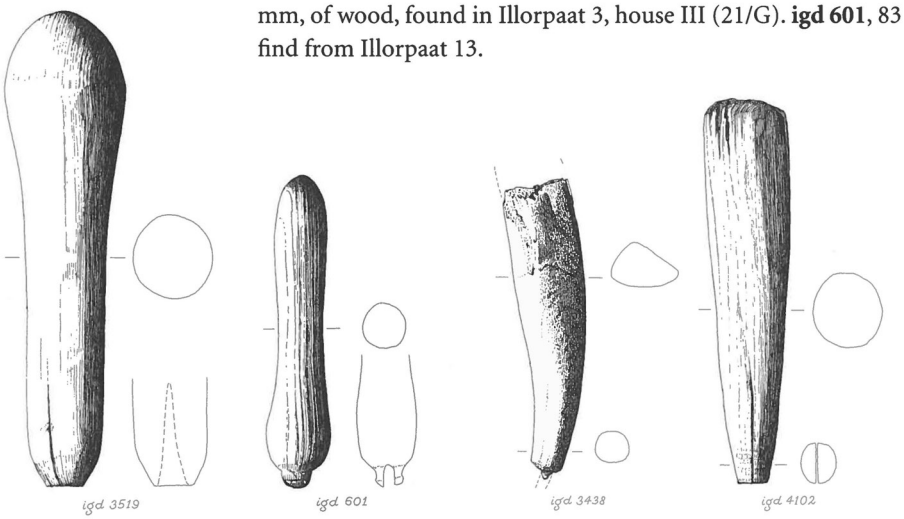








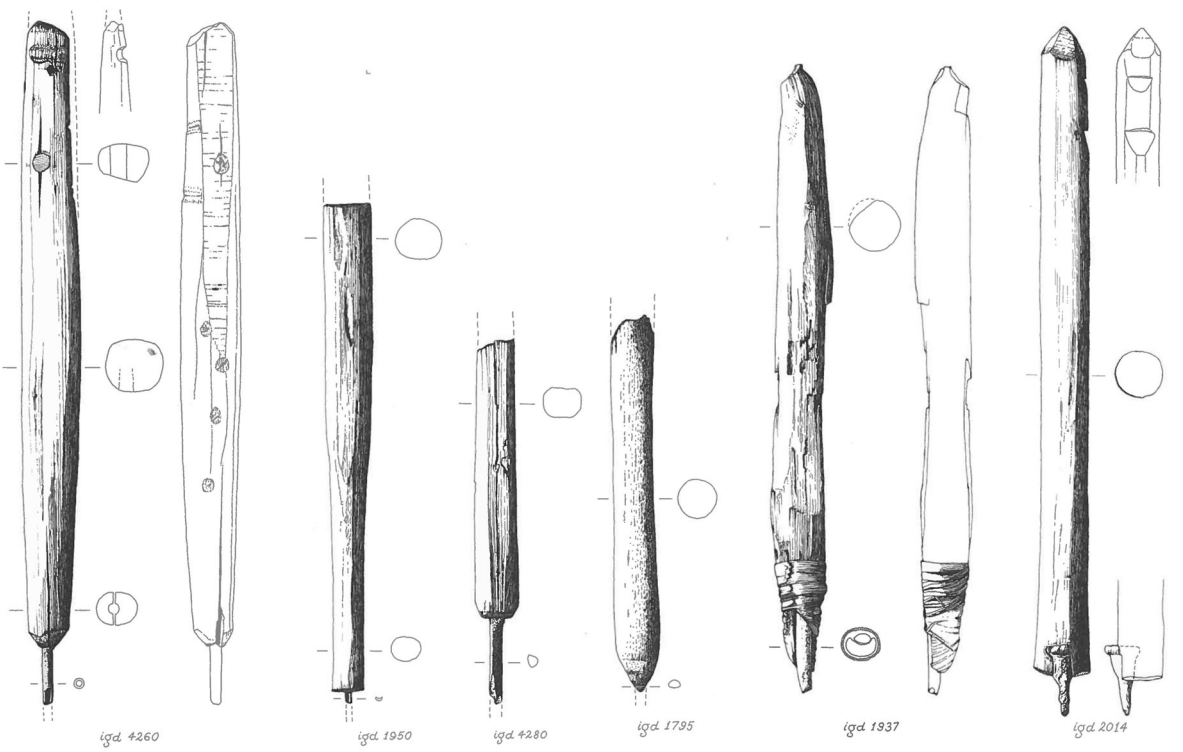
Hand drills or **Awls**. Neither of the two specimens has a bit or point. **igd 3519**, 125 mm, of wood, found in Illorpaat 3, house III (21/G). **igd 601**, 83 mm, of wood, stray find from Illorpaat 13.



Burins. It is not possible to determine with absolute certainty that these two specimens are burins. **igd 3438**, 77 mm, antler handle with iron point, found in Illorpaat 3, house III (19/F). **igd 4102**, 101 mm, wooden handle without point, found in Illorpaat 3, house I (18/J).

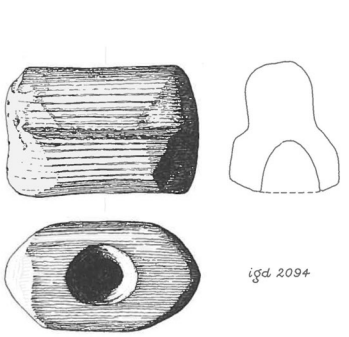
Bodkins or **Engraving tools**. Some objects in this group have probably served as drills, even though the point is of tubular bone.

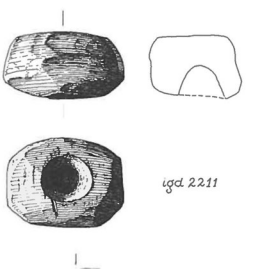
Examples: **igd 4260**, 183 mm incl. the point, wooden handle with tubular bone point, several holes and a scarf face are seen in the handle, found in Illorpaat 3, early Thule (14/L). **igd 1950**, 132 mm, wooden handle with bone point, found in the midden, layer 8 (2/C). **igd 4280**, 97 mm, broken, wooden handle with point of tubular

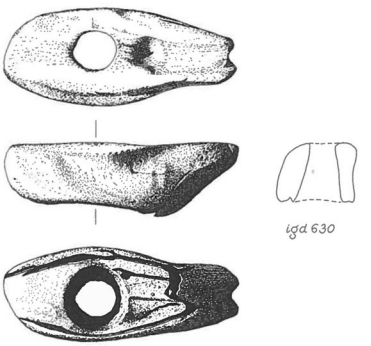


bone, found in Illorpaat 3, early Thule (16/I). **igd 1795**, 100 mm, broken, whale-bone handle with tooth point, found in the midden, layer 12 (1/G). **igd 1937**, 165 mm, wooden handle with a bone point inset and lashed with baleen, found in the midden, layer 8 (1/C). **igd 2014**, 182 mm incl. the point, wooden handle with iron point inset (must originally have been secured by baleen lashing), two notches cut in the top of the handle, found in the midden, layer 4 (1/C).

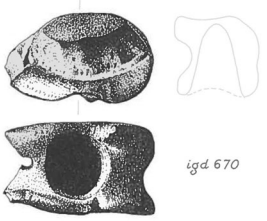
The handles with metal points or bits were all found in the upper horizons of the examined locations, i.e. after 1700 AD, with the exception of igd 2014, which was found in midden layer 4, i.e. the 16th century.

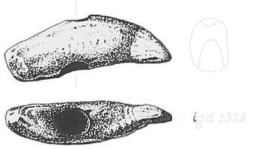






Mouthpieces for bow drills





Five items were found which could be identified as mouthpieces for bow drills. Two in the midden, two in Illorpaat 13 and one at Itissaalik.

igd 2094, 51 mm, of wood, found in the midden, layer 4 (1/D).

igd 2211, 32 mm, of wood, found in the midden, layer 4 (1/E).

igd 630, 64 mm, of antler, completely worn down and with another drilling started, found in Illorpaat 13 (5/Q).

igd 670, 39 mm, of caribou tarsal bone, strong toothmarks are seen, found in Illorpaat 13 immediately below the turf.

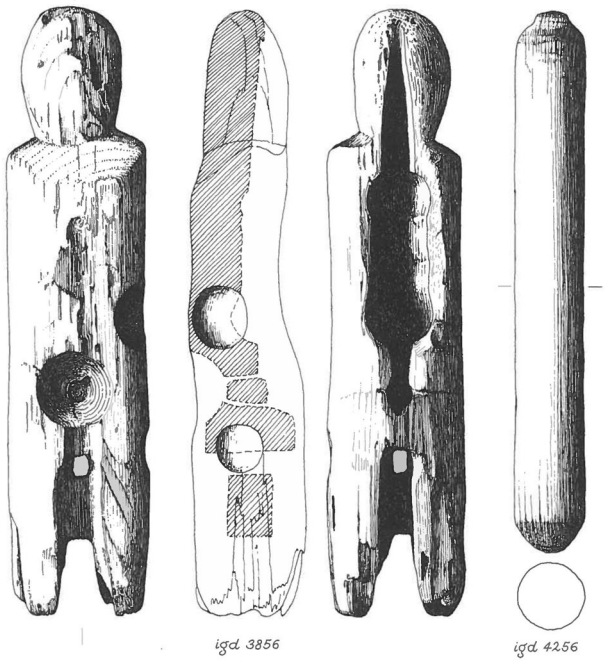
igd 1328, 43 mm, of tooth of hooded seal, hollowing on two sides, faint traces of bitemarks, found at Itissaalik (17/G).

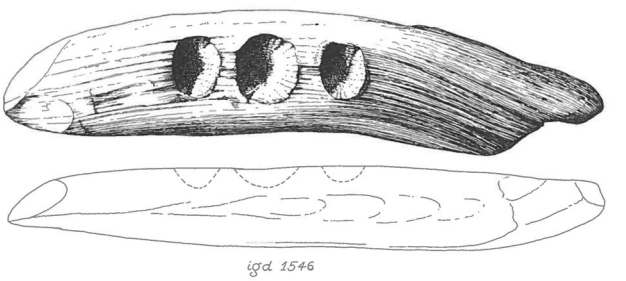
Fire drills

21 objects have been used for making fire. Nine represent the drill shank, three represent the handle and nine represent the hearth, which had often had another primary function; both handles and gunwale parts were found. Pyrite is not present in the find.

The distribution of the found object is as follows:

	Illorpaat 3		Midden		Illpt. 9		Illpt. 13	Total	
	III	II	I	e.Th.	12	4			
Shank	1	1	1	3	–	1	–	2	9
Handle	–	–	–	–	1	–	1	1	3
Hearth	–	2	2	–	1	–	–	4	9
	1	3	3	3	2	1	1	7	21





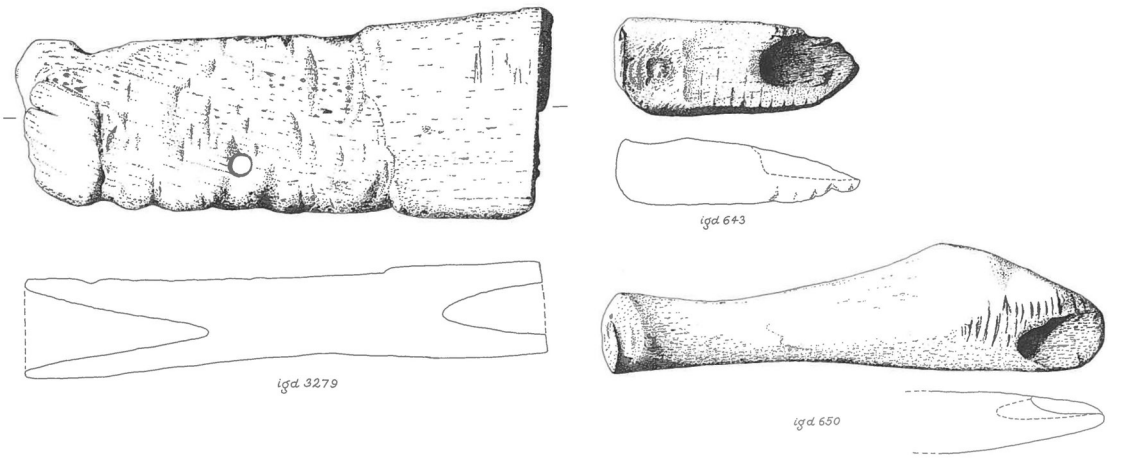
Examples: **igd 3856**, 160 mm, hearth, shaped like a doll with drill holes on both sides; has probably only been used for fire-drilling; found in Illorpaat 3, house II (14/I). **igd 4256**, 141 mm, shank, found in Illorpaat 3, early Thule (8/J). **igd 1546**, 159 mm, handle found in Illorpaat 9 (1/A).

Axes

17 objects belong to this group, which consists of three wooden handles and 14 heads of whale bone, caribou antler, caribou bone or wood. The heads are from 90 to 330 mm long. Three heads have a socket for a blade and have functioned as adzes, the remaining 11 heads have all been sharpened and have functioned as peat axes.

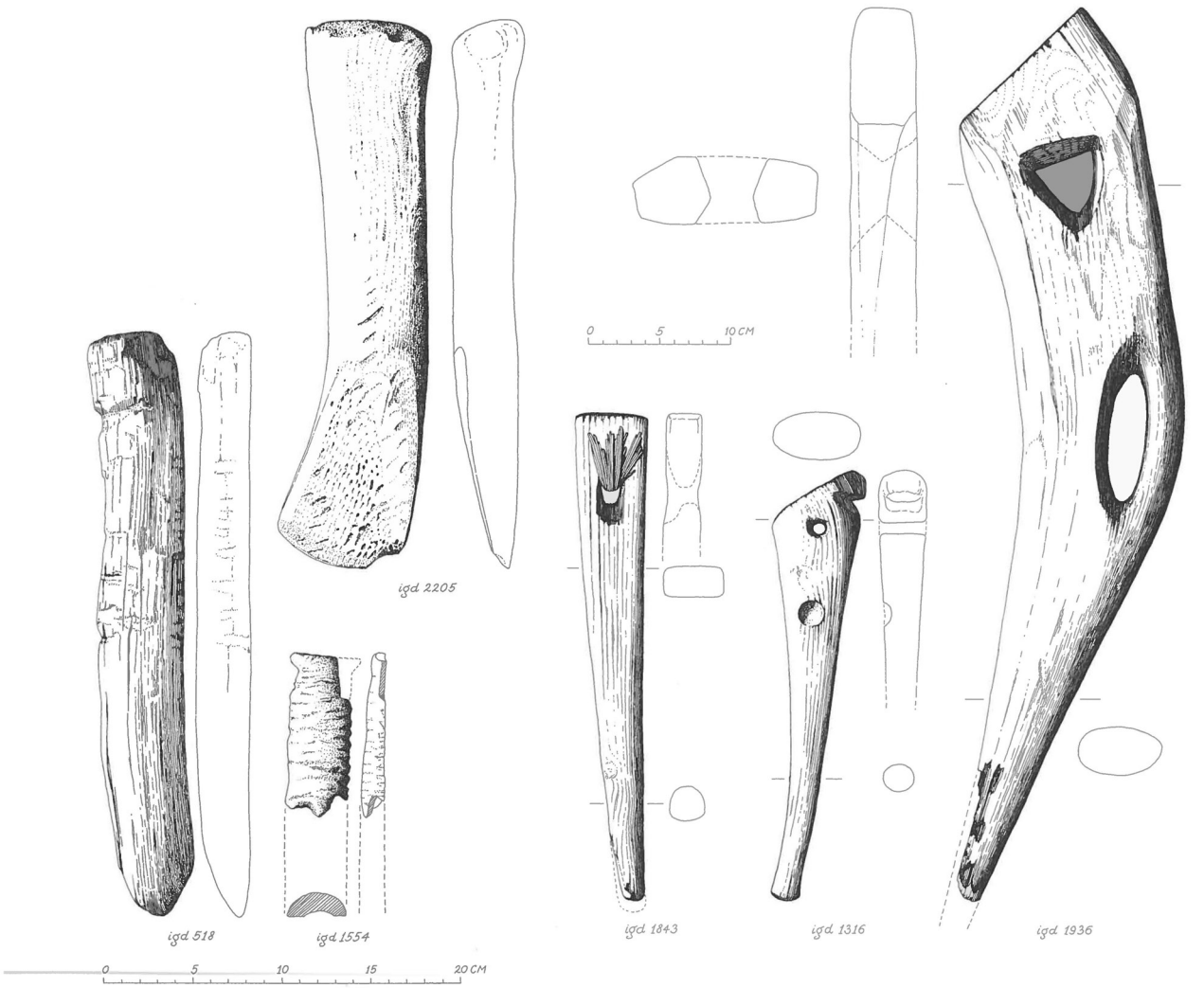
The distribution is as follows:

	Illorpaat 3		Midden		Illpt.9	Illpt. 13	Islik.	Total
	III	I	12	4				
Heads								
Adzes	–	1	–	–	–	2	–	3
Peat axes								
of whale bone	1	1	1	1	1	2	1	8
of antler	–	–	–	–	1	–	–	1
of wood	–	–	–	–	–	2	–	2
Handles (wood)								
Adzes	–	–	1	–	–	–	1	2
Peat axes	–	–	–	1	–	–	–	1
	1	2	2	2	2	6	2	17



Adze heads

Examples: **igd 3279**, 178 mm of whale bone, with sockets for blade both at the edge and the butt, found in Illorpaat 3, house I (19/M). **igd 643**, 90 mm, of antler, with socket for a blade, lashing marks, impact marks on the butt might indicate use as a wedge, found in Illorpaat 13 (5/G). **igd 650**, 185 mm, of bone, with socket for a blade, lashing marks, found in Illorpaat 13 (2/G).



Peat-axe heads

Examples: **igd 2205**, 305 mm, of whale bone, found in the midden, layer 4 (1/D). **igd 518**, 325 mm, of wood, found in Illorpaat 13 (4/G). **igd 1554**, 92 mm, of antler, broken, lashing marks, found in Illorpaat 9 (5/B).

Adze handles

Examples: **igd 1843**, 340 mm, with remains of baleen lashing, found in the midden, layer 12 (2/A). **igd 1316**, 300 mm, a secondary fire-drill hole can be seen, found at Itissaalik (9/J).

Peat-axe handle

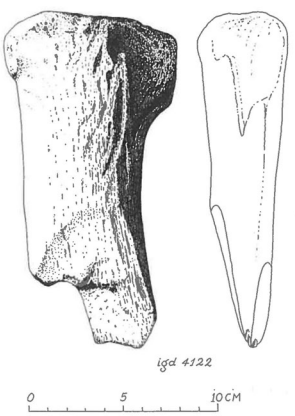
Example: **igd 1936**, 622 mm, broken, found in the midden, layer 4 (2/B).

Wedges

Nine wedges were found. The materials are whale bone, caribou antler and wood. The length varies from 48 to 179 mm.

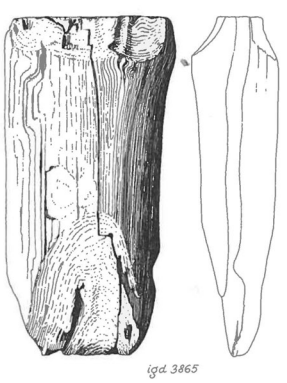
The distribution is as follows:

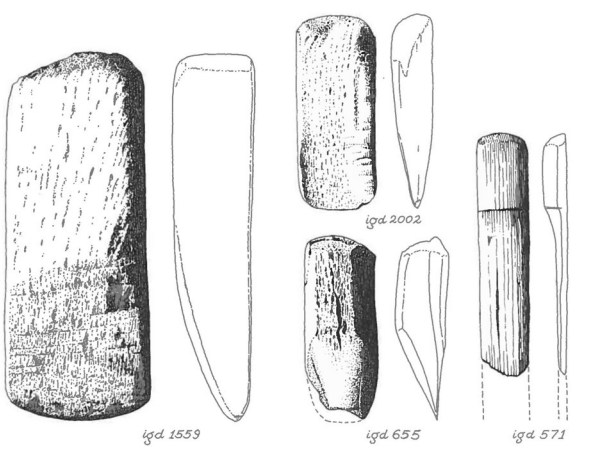
	Illorpaat 3		Midden		Illpt. 9	Illpt. 13	Total
	II	e.Th.	9	4			
Whale bone	–	1	–	1	1	–	3
Caribou antler	–	–	1	–	–	1	2
Wood	1	–	–	–	–	3	4
	1	1	1	1	1	4	9



Examples:

igd 4122, 178 mm, of whale bone, found in Illorpaat 3, early Thule (6/F). **igd 3865**, 179 mm, of wood, found in Illorpaat 3, house II (16/M). **igd 1559**, 98 mm, of whale bone, found in Illorpaat 9 (3/J). **igd 2002**, 52 mm, of antler, found in the midden, layer 9 (2/G). **igd 655**, 48 mm, of antler, found in Illorpaat 13 (3/K). **igd 571**, 64 mm, of wood, found in Illorpaat 13 (4/P).

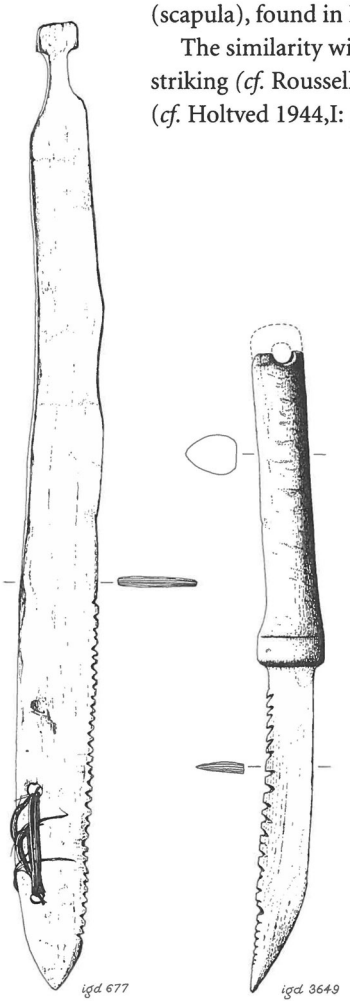


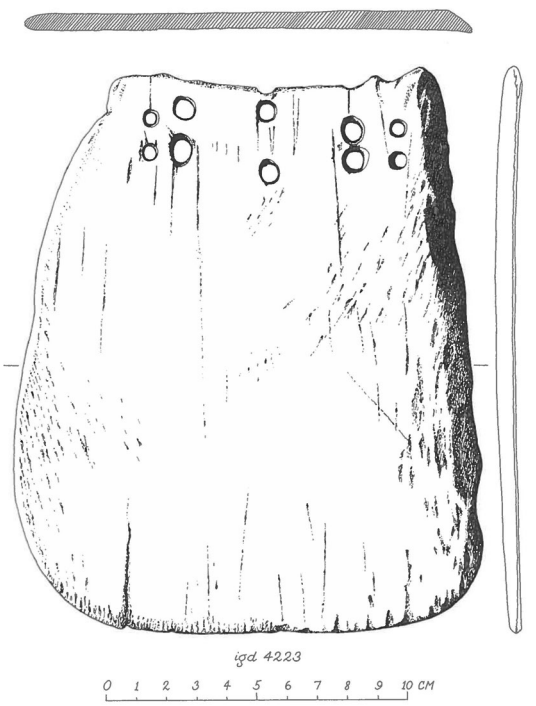


Shovel

A snow shovel or peat spade, **igd 4223**, 187 mm high and 156 mm wide of whale bone (scapula), found in Illorpaat 3, early Thule (15/K).

The similarity with shovels of this type found in the Norse Western Settlement is striking *(cf.* Roussell 1941: 261,271). The type is also known from the Thule culture (*cf.* Holtved 1944,I: pl.17).





Saws

Two saws were found. In addition there is a reworked iron sawblade, which has been used as a *ulo* blade.

igd 677, 255 mm, of baleen, baleen lashing *in situ* by two holes; has probably functioned as a meat saw (*cf.* Holtved 1944,I: pl.49); found in Illorpaat 13 (3/H).

igd 3649, 170 mm, of baleen with handle of caribou antler, with an eye at the handle end; possibly used as a meat knife; found in Illorpaat 3, house II (18/G).

See also **Ulos**.

Women's equipment

The group of women's equipment comprises 251 objects, a very large number are wooden pegs for stretching skins. Lamps and wick trimmers, however, constitute more than half of the total number of objects. The lamps were found on the floor and by the platforms, the wick trimmers were spread around on the floor area (Figs. 70-73).

> Egede writes of the women's place in the communal house:
> "On the platform or the bed-place the women usually sit and perform what they have to do by sewing and suchlike" (1925: 365). In front of the platform,
> "they have something like a small fire-place, which however is nothing but a big lamp, which is crescent-shaped, standing on a three-legged scaffold or a chair" (*ibid.*).

The many lamp fragments indicate indirectly that several lamps were in use in one house, which is confirmed by Egede's observations.

> "It is here curious, that although 10 to 20 oil lamps are alight in such a house, there is yet hardly any smoke coming from their lamps, because [...] they take dried moss, squeeze it quite hard and fine and lay it very thinly along one side of the lamp, and ignite it [...] it gives no smoke at all, unless it burns too fiercely, which they manage with a small stick with which they pull the moss to the edge of the lamp and thus prevent it from flaming up" (*ibid.*).

The found lamps are of varying sizes, which Egede does not observe. But there is a description of the lamps in the house from southernmost Greenland in 1750.

> "Regarding light and heat in the long, cold winter evenings and nights, we had, as did our family who lived in the hut with me, two or three lamps each for our room [i.e. platform section]. When these were all alight they created such ample heat as one could ever require. The same can be said for the light, for when all these lamps were alight in the whole of the hut it had more the nature of an illumination than mere lighting. We cooked our food on the largest of the lamps, and sometimes on the fireplace outside" (Walløe 1927: 55).

The lamps are thus for lighting and for cooking, which seems to be confirmed by the

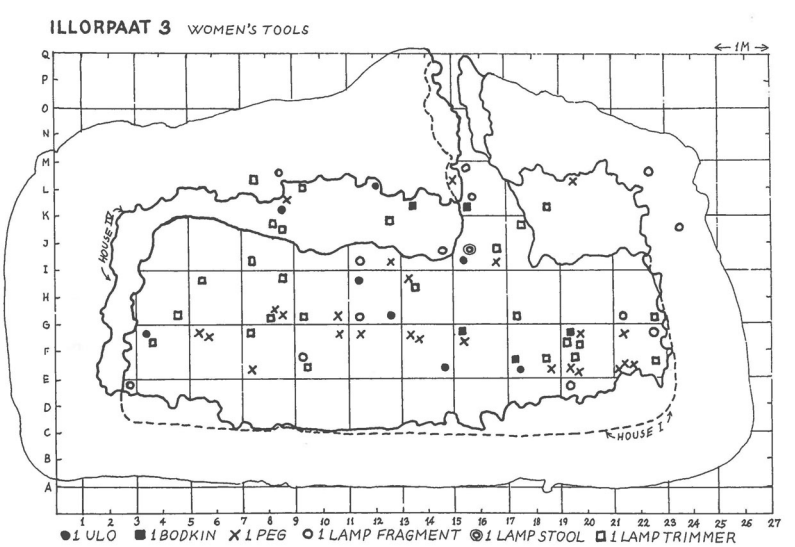


Fig. 70. *The distribution of women's equipment in Illorpaat 3, houses I-IV. Each signature represents one object.*

artefact material. The fireplace outside the room is also found archaeologically at Itissaalik; although Walløe does not say whether the fireplace was in the house passage.

The locations of the lamps in Illorpaat 9 (Fig. 71) differ from the described distribution, since three pieces were found in the grave and were probably placed there as grave goods.

Where fragments of the lamps could be pieced together their original positions are marked.

Among the *ulos* the original type with handle and blade groove predominate. The crescent-shaped sailmaker's knife with tang was not found in the excavations, but it is historically and archaeologically documented in Hope Colony (Gulløv & Kapel 1979: 125).

The ornamental bodkin is documented throughout the habitation periods, except in the final phases.

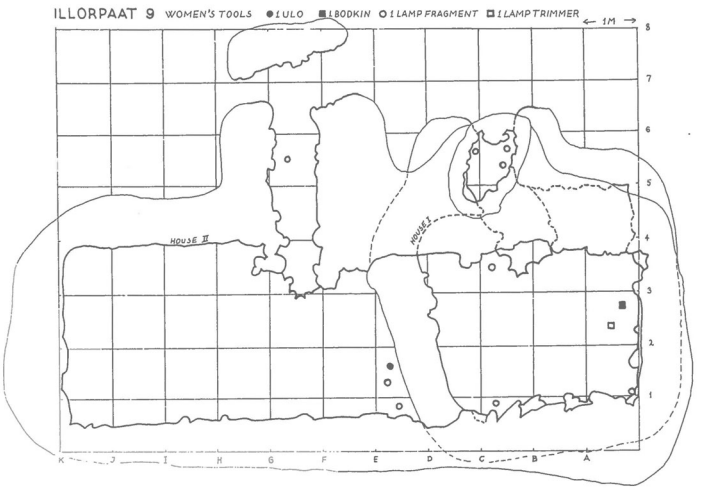


Fig. 71. *The distribution of women's equipment in Illorpaat 9, houses I-II. Each signature represents one object.*

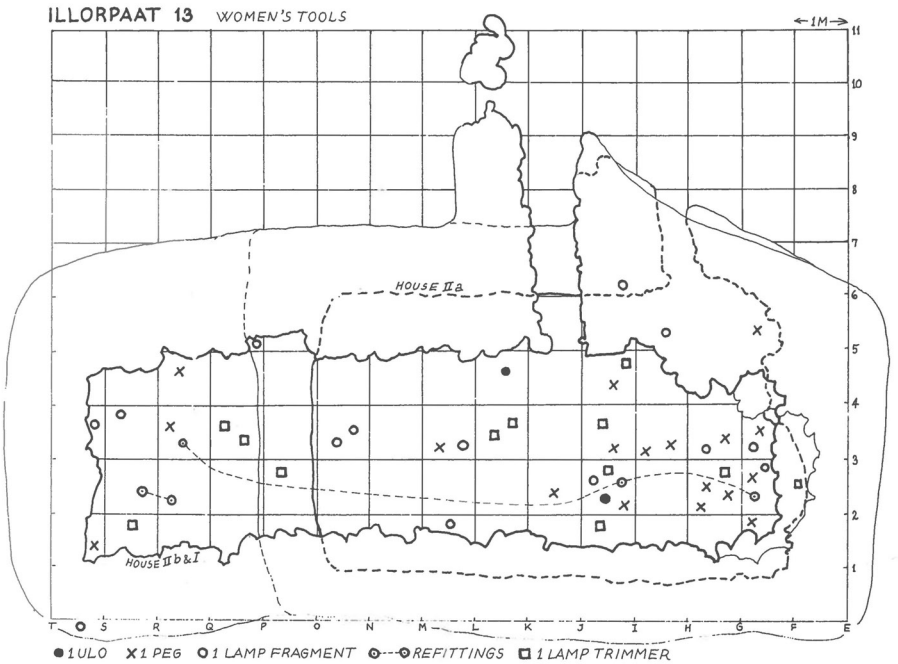


Fig. 72. *The distribution of women's equipment in Illorpaat 13, houses I-IIb. Each signature represents one object.*

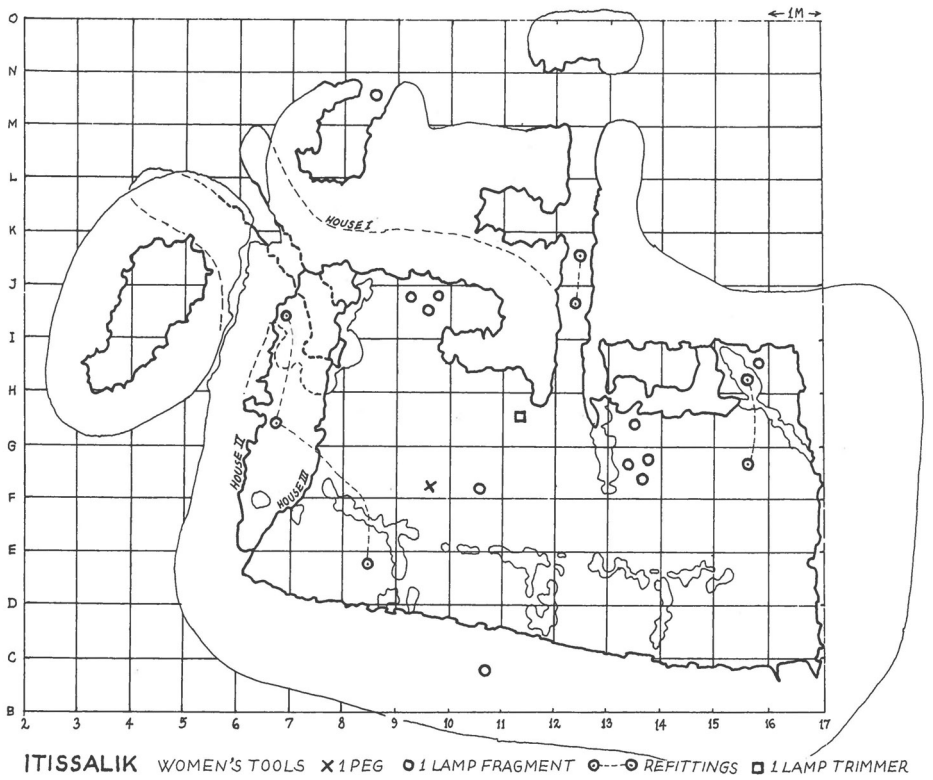


Fig. 73. *The distribution of women's equipment in Itissaalik, houses I-III. Each signature represents one object.*

Ulos

19 parts of the *ulo* were found. The materials are wood, caribou antler, whale bone and iron. One *ulo* may consist of three parts, i.e. handle with blade groove, middle piece and blade. In the present excavation most of the finds were handles with blade groove. The middle pieces are either separate units or are carved in one piece with the handle. The blades are all of iron.

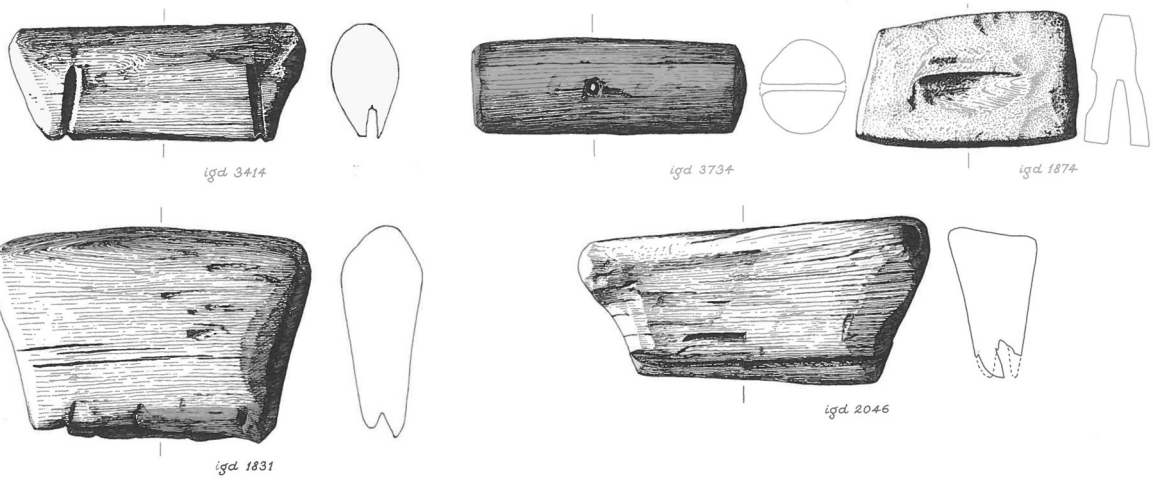
The distribution is as follows:

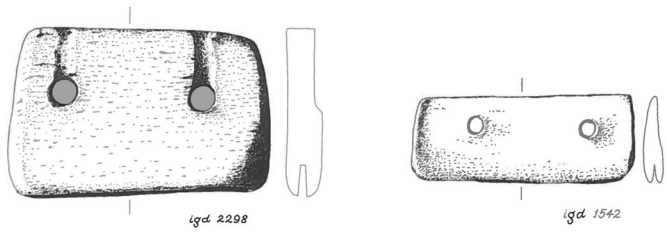
	Illorpaat 3				Midden		Illpt.9	Illpt.13	Total
	IV	III	II	I	12	4			
Handle	–	2	1	1	3	1	–	2	10
Middle pieces	–	–	–	–	1	–	1	–	2
Handles with middle piece	–	–	1	1	1	1	–	–	4
Blades	2	–	–	–	1	–	–	–	3
	2	2	2	2	6	2	1	2	19

Handles. Seven of the ten pieces are of wood, two are of antler and one of bone. Half of them have holes for fastening a blade.

Examples: **igd 3414**, 78 mm, of wood, with lashing grooves for blade, found in Illorpaat 3, house III (12/I). **igd 1831**, 85 mm, of wood, with holes for blade, found in the midden, layer 12 (1/C). **igd 3734**, 72 mm, of wood, probably the handle of a Euro-

pean sailmaker's knife (*cf.* Porsild 1914: 208; Gulløv & Kapel 1979: 125), found in Illorpaat 3, house II (16/J). **igd 2046**, 93 mm, of wood, no fastening holes, found in the midden, layer 4 (1/C). **igd 1874**, 59 mm, of bone, no fastening holes but finger-hold marks are seen, possibly originally an endpiece of a paddle blade (?), found in the midden, layer 12 (2/B).

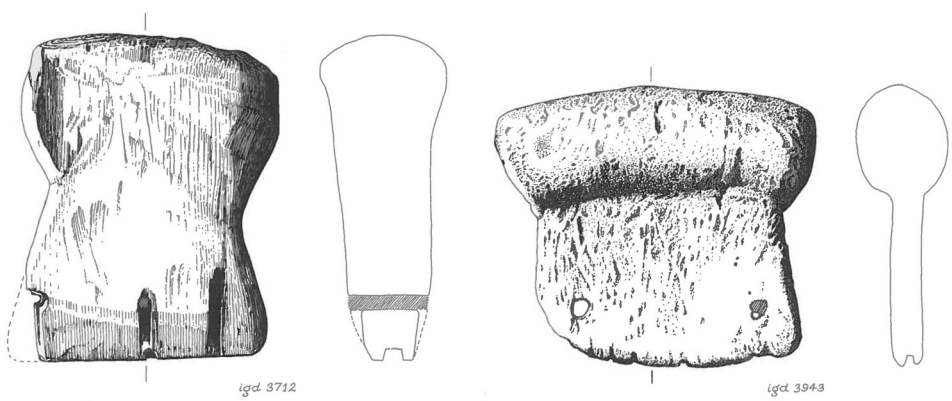


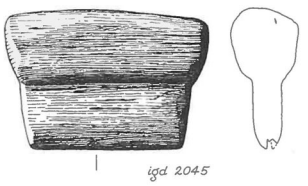


Middle pieces. One piece of whale bone and one of antler were found. **igd 2298**, 70 mm, of whale bone, with a blade groove and two lashing holes as well as a depression for fastening in a handle, found in the midden, layer 12 (1/A). **igd 1542**, 59 mm, of antler, with a blade groove and two lashing holes, found in Illorpaat 9 (2/E).

Handle with middle piece. Four specimens of this composite *ulo* were found. Two are of wood, one of whale bone and one of antler.

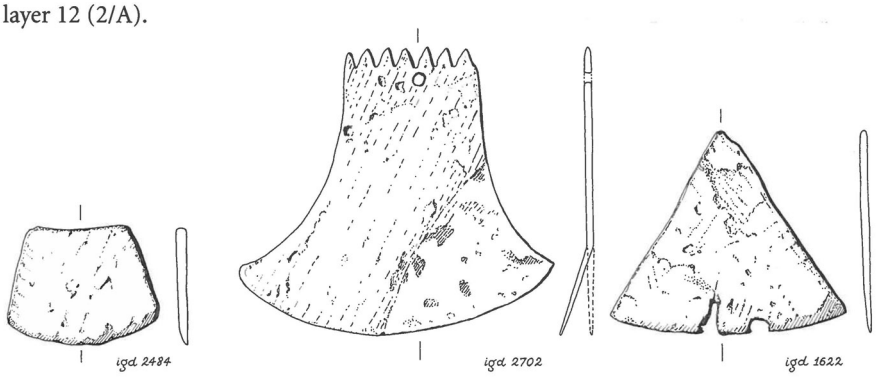
Examples: **igd 3712**, 68 mm, of wood, carved fingerholds in the handle, the lashing holes in the central section has had wooden pegs for tightening the baleen lashing, the middle piece has a blade groove, found in Illorpaat 3, house II (13/H). **igd 3943**, 85



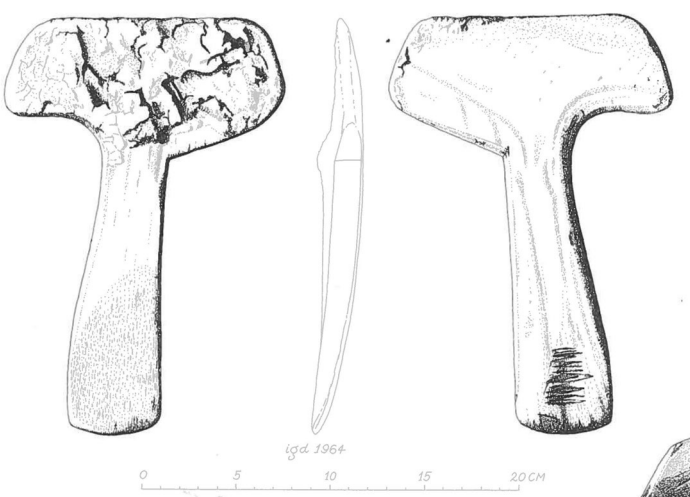


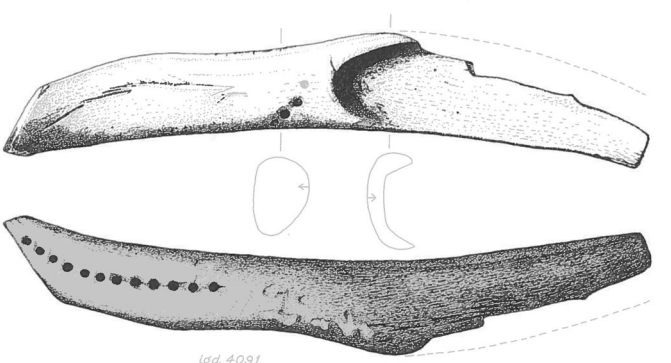
mm, of whale bone, with lashing holes in the middle piece, blade groove, found in Illorpaat 3, house I (18/F). **igd 2045**, 53 mm, of wood, no lashing holes in the middle piece, blade groove, found in the midden, layer 4 (1/C).

Blades. Three *ulo* blades of iron. **igd 2702**, 75 mm high, with a lashing hole, made from a sawblade, found in Illorpaat 3, house IV (4/G). **igd 2484**, 30 mm high, no fastening marks, clearly sharpened on one side of the edge, found in Illorpaat 3, house IV (9/L). **igd 1622**, 53 mm high, triangular piece without lashing marks, the edge is broken in two places, clearly sharpened on one side of the edge, found in the midden, layer 12 (2/A).



There is no clear chronology in the typological classification. The examples described were all found in the same horizons.





Scrapers

Two scrapers were found. Both are of caribou antler.

igd 1964, 220 mm, blubber scraper, found in the midden, layer 9 (1/D). **igd 4091**, 174 mm, probably a broken two-handed scraper with drilled holes by the grip, found in Illorpaat 3, early Thule (18/J).

Bodkins & Needles

This heterogeneous group comprises 16 objects. In some cases it is difficult to determine whether they are bodkins or needles, since most of the objects merely resemble the functional type. This is demonstrated below. The materials are caribou antler, whale bone, seal bone, bird bone and wood.

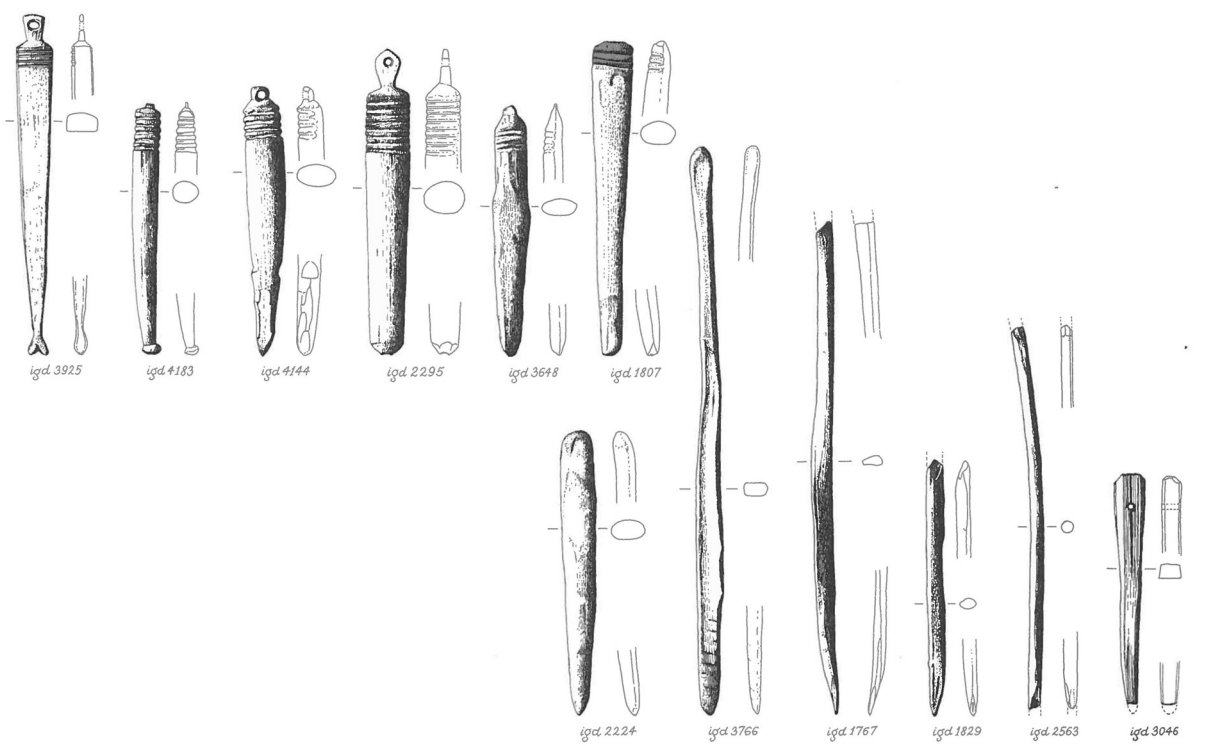
The distribution is as follows:

	Illorpaat 3				Midden			Illpt.9	Illpt.13	Total
	IV	II	I	e.Th	12	4	stray find			
Bodkins	–	2	1	2	3	2	1	2	1	14
Needles	1	1	–	–	–	–	–	–	–	2
	1	3	1	2	3	2	1	2	1	16

Bodkins

Six specimens have ornamental grooves and three have an eye. This type is well known everywhere in Greenland (Mathiassen 1930: 297; Holtved 1944,I: 259). Some of them cannot, however, have been used as bodkins, e.g. **igd 3925** and **4183**. Such objects are well known to have been used for ornament on needle skins (Holm 1887: pl.28). The type is also known from women's graves (Mathiassen 1934a: pl.1). It is also known outside Greenland (Larsen & Rainey 1948: pl.24). A few of the other eight unornamented bodkins may have served as perforating tools, i.e. awls.

Examples: **igd 3925**, 90 mm, of antler, with an eye, seal rear-flippers at the end and four grooves on the front, rectangular cross section, found in Illorpaat 3, house I



(16/G). **igd 4183,** 66 mm, of antler, a tenon at the top may have been intended as an eye, bead at the end and five grooves encircling the oval cross section, found in Illorpaat 3, early Thule (9/H). **igd 4144**, 70 mm, of antler, with an eye and four grooves almost encircling the oval cross section, three sets of barbs are reworkings cut into the end, found in Illorpaat 3, early Thule (10/H). **igd 2295**, 80 mm, of whale bone, with an eye and eight grooves encircling the oval cross section, the point may have been shortened, found in the midden, layer 4 (2/H). **igd 3648**, 66 mm, of antler, a tenon at the top may have been intended as an eye, three grooves on the upper side of the acuminated oval cross section, found in Illorpaat 3, house II (18/F). **igd 1807**, 84 mm, of antler, three grooves on the upper side of the acuminated oval cross section, found in the midden, layer 12 (2/A). **igd 2224**, 75 mm, of antler, not ornamented, found in the midden, layer 4 (2/H). **igd 3766**, 150 mm, of antler, found in Illorpaat 3, house II (20/G). **igd 1767**, 130 mm, of bird bone, awl(?), found in the midden, layer 12 (2/D). **igd 1829**, 67 mm, of bird bone, broken, awl or barb for jig (?), found in the midden, layer 12 (1/C).

Needles

Examples: **igd 2563**, 100 mm, of bird bone, shaped at the ends, function unknown, found in Illorpaat 3, house IV (14/L). **igd 3046,** 61 mm, of wood, with an eye, may have functioned as a fish hook or catching stick for the *ajaraq* game, found in Illorpaat 3, house II (16/L).

Pegs

83 wooden sticks are identified as pegs; one with a hole, must however rather be interpreted as a fish needle. They were used for stretching sealskin and fastening skins for wall-covering. The form is found with or without head. The function of seven small wooden pegs cannot be determined. Some may however have been used as plugs for the bladder mouthpiece. One has found secondary use as a wick trimmer.

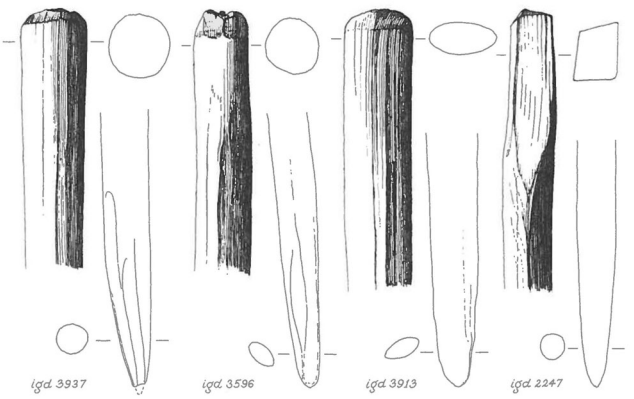
The distribution is as follows:

	Illorpaat 3					Midden				Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	9	8	4			
Large pegs (total)	1	2	13	9	10	5	4	8	10	13	1	(76)
Complete (80-304 mm)												
without head			6					8		5	1	20
with head			7					8		3	–	18
Broken (70-324 mm)												
without head			2					2		2	–	6
with head			7					4		1	–	12
points			13					5		2	–	20
Small pegs (total)	–	–	–	–	–	–	–	–	–	7	–	(7)
Complete (36-76 mm)												
without head			–					–		3	–	3
with head			–					–		2	–	2
Broken (33-39 mm)												
with head			–					–		1	–	1
points			–					–		1	–	1
	1	2	13	9	10	5	4	8	10	20	1	83

With the exception of the small pegs, the group is documented in all horizons. All the pegs have been smoothed. The points are carved with distinct edges or are smooth; both forms are equally distributed.

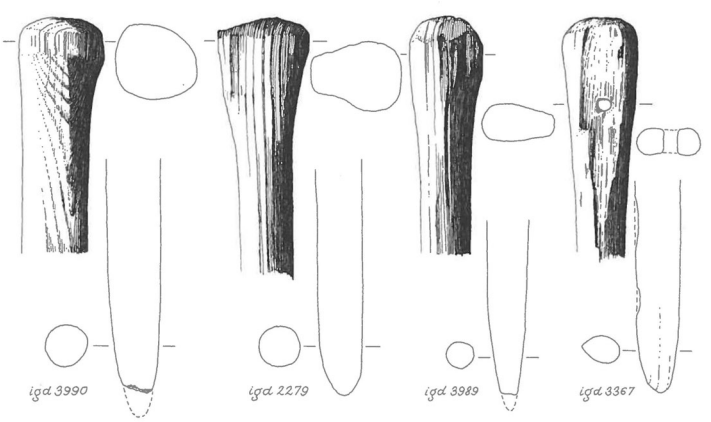
Large pegs without heads have circular, oval or rectangular cross section at the rear end.

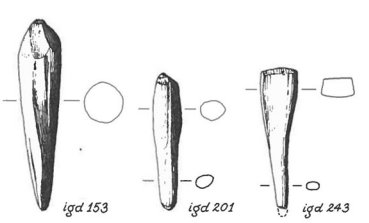
Examples: **igd 3937**, 200 mm, found in Illorpaat 3, house I (9/L). **igd 3596**, 237 mm, found in Illorpaat 3, house II (14/G). **igd 3913**, 202 mm, found in Illorpaat 3, house I (14/I). **igd 2247**, 196 mm, found in the midden, layer 4 (1/F).



Large pegs with heads have circular, oval or acuminated oval cross section at the rear end, i.e. the point.

Examples: **igd 3990**, 210 mm, found in Illorpaat 3, house I (6/G). **igd 2279**, 180 mm, found in the midden, layer 12 (2/F). **igd 3989**, 139 mm, found in Illorpaat 3, house I (6/G). **igd 3367**, 192 mm, an eye indicates use as a fish needle (?), found in Illorpaat 3, house IV (13/J).





Small pegs have circular or rectangular cross section at the rear end or the point.

Examples: **igd 153**, 51 mm, unknown function, found in Illorpaat 13 (4/I). **igd 201**, 36 mm, probably a bladder-mouthpiece plug, found in Illorpaat 13 (5/R). **igd 243**, 37 mm, probably a bladder-mouthpiece plug, found in Illorpaat 13 (3/J).

See also **Fishing equipment** and **Bladder mouthpieces & Bladder nozzles.**

Lamps

60 pieces of soapstone can all be identified as parts of lamps. The lamp fragments were found in all the examined areas. 16 pieces in Illorpaat 3, four in the midden, eight in Illorpaat 9, 18 in Illorpaat 13 and 14 at Itissaalik.

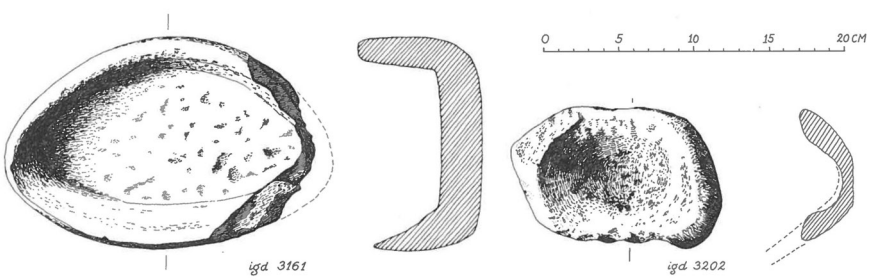
The determining features for the classification were form, incl. the distance from rim to bottom, dividing ridge and wick ledge. The shaping of the rim and the thickness of the object do not in themselves give sufficient information to distinguish them from cooking-pot fragments. The outer form of two lamps can be described as oval without wick ledge and dividing ridge, while the remainder are crescent-shaped. Table of the total lamps and fragments found:

	Illorpaat 3					Mødding			Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	8	4				
Oval	–	–	–	–	2	–	–	–	–	–	–	2
Crescent-shaped												
ledge only	–	–	–	–	1	1	–	–	–	4	–	6
ridge and ledge	–	1	–	–	–	–	–	–	1	–	–	2
ridge only	1	1	–	–	–	–	–	1	3	1	–	7
without ledge or ridge	–	1	–	–	–	–	–	–	–	–	3	4
Fragments	5	3	1	–	–	–	1	1	4	13	11	39
	6	6	1	0	3	1	1	2	8	18	14	60

Oval lamps

Three pieces were found in Illorpaat 3.

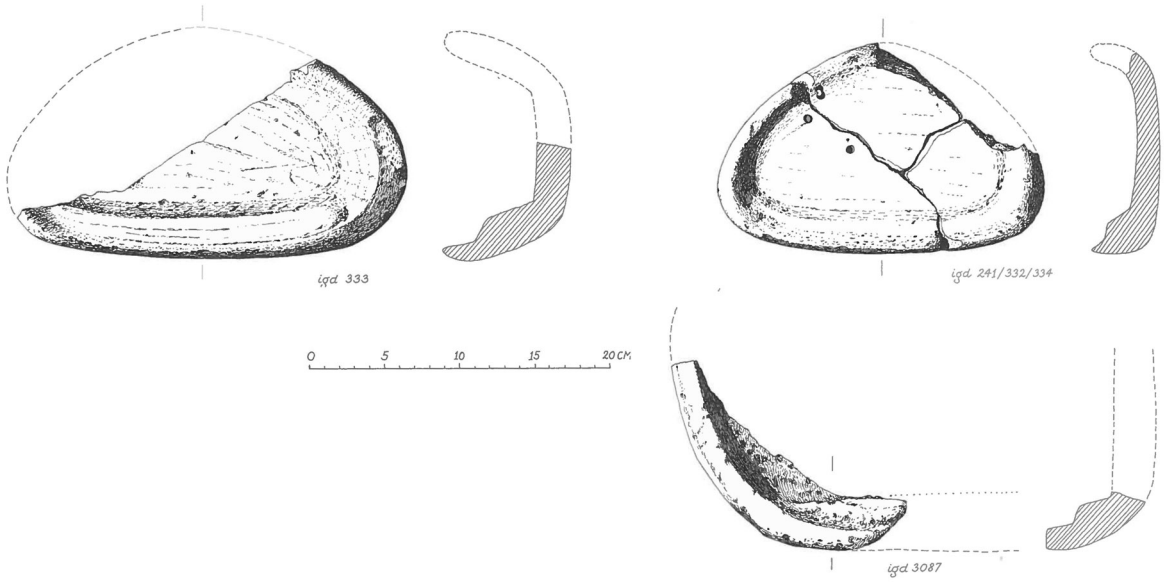
Examples: **igd 3161**, 203 mm long, 140 mm wide, 50 mm high, thin wick edge, broken, found in early Thule (18/M). **igd 3202**, 134 mm long, 87 mm wide, originally a cooking pot fragment or part of a larger lamp, found in early Thule (16/M).



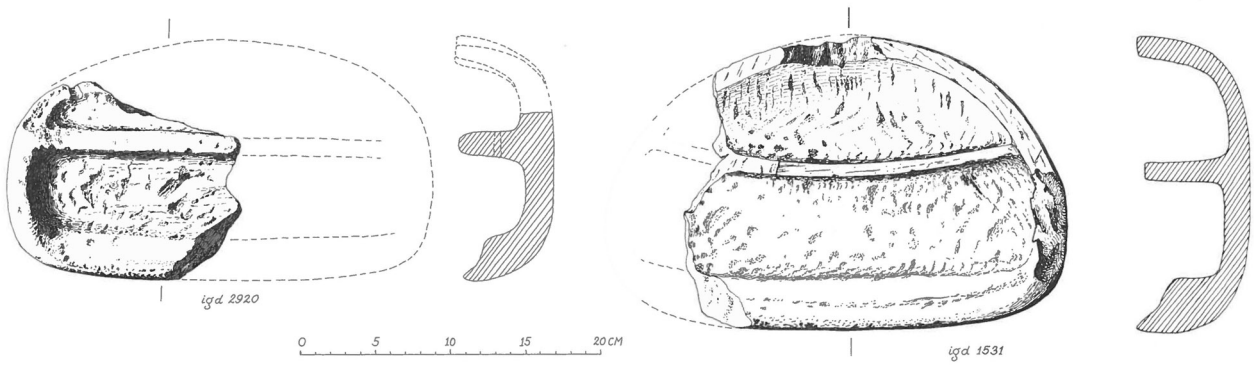
Crescent-shaped lamps

Wick ledge only. There are six examples of this, the ledge is preserved on one only.

Examples: **igd 333**, 250 mm long, 85 mm high, broken, found in Illorpaat 13 (4/H). **igd 334**, 220 mm long, 45 mm high, broken but partly scarfed together, found in Illorpaat 13 (3/G). Four of the lamps of this type are from Illorpaat 13, all with a thin back wall as seen on the two examples shown. **igd 3087**, 170 mm long, 65 mm high, found in Illorpaat 3, early Thule (18/M).



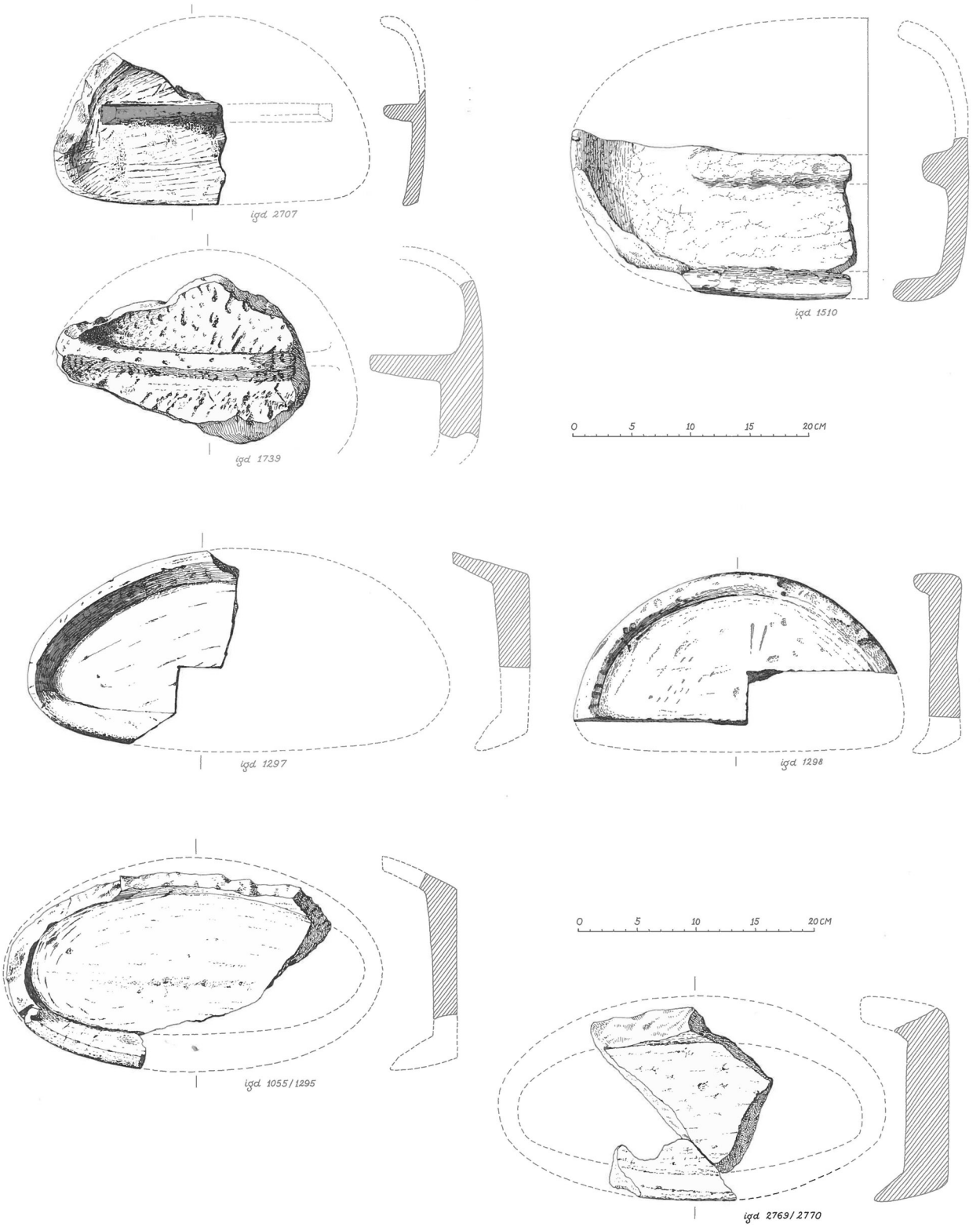
Dividing ridge and wick ledge. There are two examples of this: **igd 2920**, 152 mm long, 126 mm wide, 63 mm high, broken, found in Illorpaat 3, house III (24/K). **igd 1531**, 310 mm long, 195 mm wide, 75 mm high, almost complete, found in Illorpaat 9 (6/C).



Dividing ridge only. Seven pieces with dividing ridge were found. The wick edge however is missing on five pieces so a possible ledge cannot be determined.

Examples: **igd 2707**, 145 mm long, 130 mm wide, 35 mm high at the dividing ridge, broken, thick wick edge, thin base in the inner chamber, the dividing ridge does not quite reach the sides, found in Illorpaat 3, house IV (12/J). **igd 1739**, 95 mm high at the ridge, the base of the inner chamber is considerably thinner than that of the outer, found in the midden, layer 4 (1/A). **igd 1510**, *c.* 500 mm long, two together-glued fragments of a very large lamp with broken dividing ridge, very micaceous soapstone, found in Illorpaat 9 (1/E). **igd 1527**, 170 mm long, dividing ridge slightly lower under the outer rim, found in Illorpaat 9 (1/C), not illustrated.

Without ledge or ridge. There were four examples of this: **igd 1297**, 180 mm long, 65 mm high, sawn to pieces, found at Itissaalik (16/I). **igd 1298**, 280 mm long, 40 mm high, sawn to pieces, found at Itissaalik (16/I). **igd 1055/1295**, 275 mm long, 60 mm high, broken, found at Itissaalik (13/J-K). **igd 2769/2770**, 36 mm thick base, found in Illorpaat 3, house III (16/L).



Among the other fragments 30 are rim sherds and nine sherds of base or side. The rim is either rounded or cut square (horizontally or at an angle). The rounded forms were found in all the examined locations. The square-cut were found in Illorpaat 13 and at Itissaalik, in both places in the upper half of the excavations.

The inner form of the lamps may be flat or bowl-shaped, depending on whether the placing of the dividing ridge makes flattening difficult. The lamps from the nether horizons are pecked, while the lamps from the upper are smooth.

The greatest variation in lamp forms was found in Illorpaat 3, which also spanned the greatest length of time. The described forms have the following chronology: oval, crescent-shaped with wick ledge, crescent-shaped with ledge and ridge, crescent-shaped with ridge, oval and crescent-shaped without ledge or ridge.

The four fragments from the midden, which all are pecked, do not supplement this chronology.

In Illorpaat 9 there is the crescent-shaped lamp with ledge and ridge (house I) and subsequently only with ridge (house II). All are pecked. This house was only inhabited for a short time.

The earliest lamps in Illorpaat 13 (house I) were crescent-shaped with wick ledge, followed by fragments which all have square-cut rims; last (house IIb) a fragment with dividing ridge.

At Itissaalik neither ledge nor ridge are present. The earliest fragments have a rounded wick edge, all subsequent fragments have square-cut rims. A couple of crescent-shaped lamps have been sawn to pieces and **igd 1298** has a diminutive, rounded rim.

Chronologically, the lamps found at Itissaalik and Illorpaat 13 are distinguished from the others by their secondary reworking by means of cutting and sawing. Here the traditional technique has been abandoned.

Both the oval lamp and the lamp with dividing ridge have been found in Hope Colony (1721-28). Both forms there have suspension holes (Gulløv & Kapel 1979: 126), a feature which is not found in the material under discussion here, but is due to the usual European custom of hanging lamps. On the other hand, the contemporaneity of the two types makes me raise the question of the function of the dividing ridge.

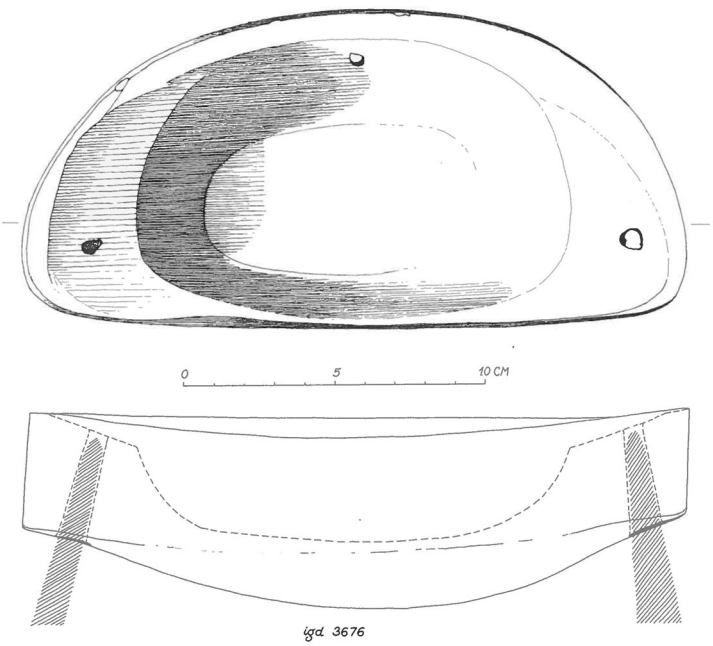
Birket-Smith established (1929) that the dividing ridge developed in step with the use of the lamp as a "cooking place". De Laguna agreed with this (1947:252). Blubber for lamps without ridges or "tongues" (*oqaqartarput*) always has to be pounded or chewed soft before use (Sandgren 1978), while the blubber for lamps with dividing ridge is softened by the heat in the inner chamber. The wick ledge has nothing to do with the ridge, as Therkel Mathiassen suggested (1927,II: 100). They served each their purpose. The dividing ridge thus does not appear to be required when the food can be cooked on the open hearth. In East Greenland, however, the lamp without ridge served as a source of light and heat and as a cooking place (*cf.* Holm 1887: pl.XII). But the kitchen niche in the house passage at Itissaalik, together with the absence of dividing ridges in the 14 lamp fragments found in the ruin, might indicate that the lamps in this house primarily served as light-sources.

A clear development of the described types cannot be discerned; we do not have enough information about the difference between lamps used for lighting and those used for cooking. Large lamps were apparently used for "cooking over" (Walløe 1927: 55), but also for lighting (*cf.* Itissaalik). Chronologically, Illorpaat 9 and 13 are placed between the nethermost horizons in Illorpaat 3 and the last settlement phase at Itissaalik, and in these two "middle" structures respectively the largest and the smallest lamps were found. In the first half of the 18th century there was thus a contemporaneity in the shape and function of the lamp, which can be associated with the changes in the Eskimo community (i.e. population movements, *cf.* Gulløv 1982, and architecture, *cf.* Glahn 1771: 197-198).

See also **Toys, lamps.**

Lamp stand

A wooden lamp stand, **igd 3676**, 220 mm long at the top, crescent-shaped, with holes for three legs, was found in Illorpaat 3, house II (16/J).



Wick trimmers

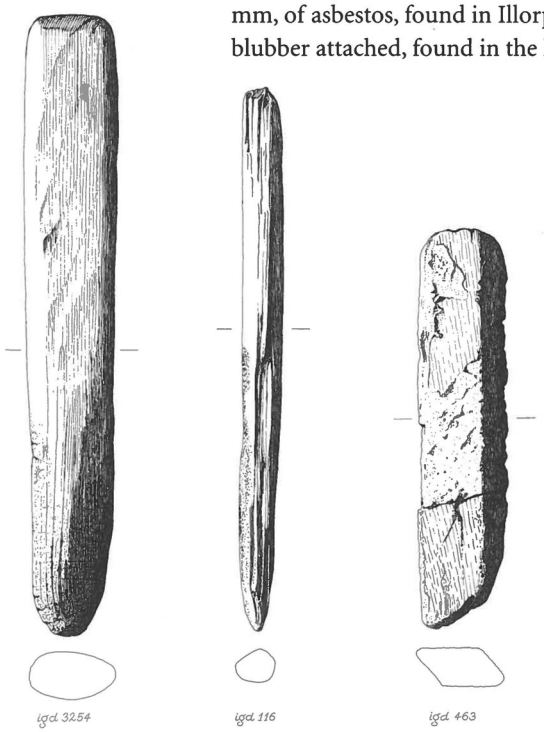
The wick trimmer is, together with the lamp and the *ulo*, part of the woman's most essential equipment. 70 pieces were found. 64 are primary wick trimmers, while six are reworked artefacts. The materials are wood, asbestos and amphibolite. Asbestos is a highly suitable material as it does not ignite when it is of a certain thickness (Porsild 1914: 221-222). Asbestos deposits occur in several places in Godthåb Fjord (Gulløv & Kapel 1979: 130). Amphibolite occurs in large parts of the archipelago, but may well have been mined at Sillisit nuuat (Fig.68), as was the raw material for whetstones.

The wooden wick trimmers are 60 to 175 mm long. The two asbestos trimmers are each *c.* 150 mm long. The amphibolite trimmers are 80 to 106 mm long.

The distribution is as follows:

	Illorpaat 3				Midden				Illpt. 9	Illpt. 13	Islik.	Total
	III	II	I	e.Th.	12	9	8	4				
Primary trimmers												
wood	2	7	15	3	3	1	6	13	1	9	–	60
asbestos	–	–	–	–	–	–	–	–	–	1	1	2
amphibolite	–	–	–	–	–	–	–	–	–	2	–	2
Secondary trimmers												
originally toggle (wood)	–	–	1	–	–	–	–	–	–	1	–	2
originally scarfing (wood)	–	–	1	–	–	–	1	–	–	–	–	2
origunally shank (wood)	–	–	–	–	–	–	–	–	–	1	–	1
originally mount (wood)	–	–	–	–	–	–	–	–	–	1	–	1
	2	7	17	3	3	1	7	13	1	15	1	70

Examples: **igd 3254**, 163 mm, of wood, found in Illorpaat 3, house I (8/J). **igd 116**, 144 mm, of asbestos, found in Illorpaat 13 (2/S). **igd 463**, 106 mm, of amphibolite, with blubber attached, found in the house passage to Illorpaat 13.



Household utensils

This group comprises 338 objects, more than two thirds of them soapstone cooking-pot fragments, which on excavation were considerably more fragmented. Just under a third of the material are spoons, scoops and containers for various purposes.

Hans Egede relates that above the lamps "hang their small cauldrons of copper, brass or soapstone, and therein they cook their food" (1925: 365); but it has been clearly demonstrated that soapstone was the preferred material, despite the supply of brass cauldrons from the Dutch whalers, which Egede observed in the 1720s. In Hope Colony pots and cauldrons of copper were also used (Gulløv & Kapel 1979: 93-94). The six fragments of copper vessels, which were found in the Eskimo sites, were, however, all from the last habitation phases, i.e. the second half of the 18th century (see under **European objects**). The copper cauldrons are poor heat conductors in comparison with soapstone, which retains heat long after it has been removed from the fire. The Greenlanders therefore gladly changed a copper cauldron back in return for the original soapstone pot, as the merchant Lars Dalager noted in 1755 (1915: 83).

Dalager mentions in the same connection that the soapstone in Godthåb Fjord is the best on Greenland's west coast (*op.cit.*, p.82). It was indeed exploited since the time of the first settlement in the region and can be demonstrated to have been present early in the Thule culture (*cf.* the description of the artefacts from Kangeq below).

Cooperage, represented by staves, can also be demonstrated from the time of the first settlement. Only one specimen, from Itissaalik, can with some degree of certainty be related to Hope Colony, where tubs and casks were used (Gulløv & Kapel 1979: 91-92). The origins of this technique seem, archaeologically, to be associated with the

presence of the Norsemen (*cf.* the description of the artefacts from Kangeq). The curved staves are characteristic of the Eskimo coopering technique, while both the Norse and the later European techniques are characterized by straight staves.

The distribution of the household utensils in Illorpaat 3 shows a spread across the whole of the floor area (Fig.74). In Illorpaat 9 a cooking pot and a scoop are seen placed in the grave outside the structure (Fig.75). In Illorpaat 13 a cooking pot (**igd 227**) is seen to consist of many fragments, concentrated at the place in the wall where an earlier rebuilding must have taken place (Fig.76). At Itissaalik several pots could be pieced together from fragments which lay both inside and outside the house (Fig.77). This is presumably due to the last rebuilding there. The pieced-together pots were found in the horizon which was associated with house II and thus demonstrate the rebuilding into house III.

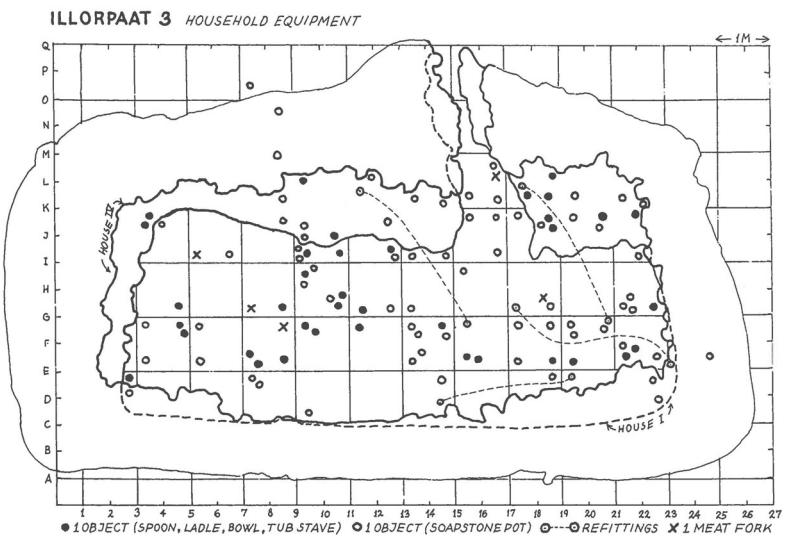


Fig. 74. *The distribution of household utensils in Illorpaat 3, houses I-IV. Each signature represents one object.*

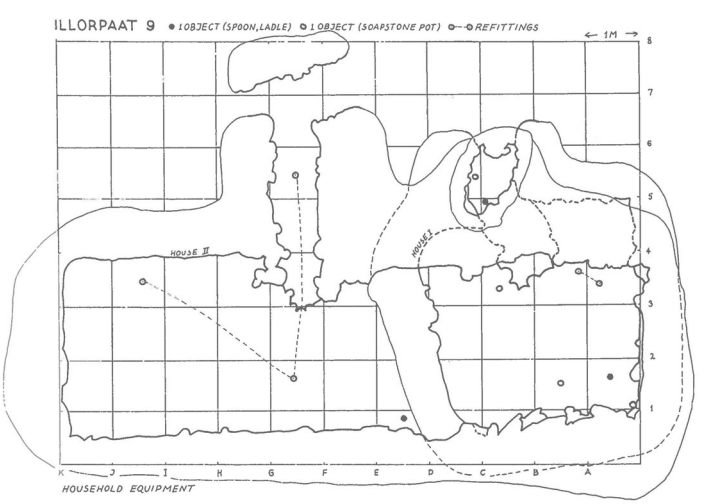


Fig. 75. *The distribution of household utensils in Illorpaat 9, houses I-II. Each signature represents one object.*

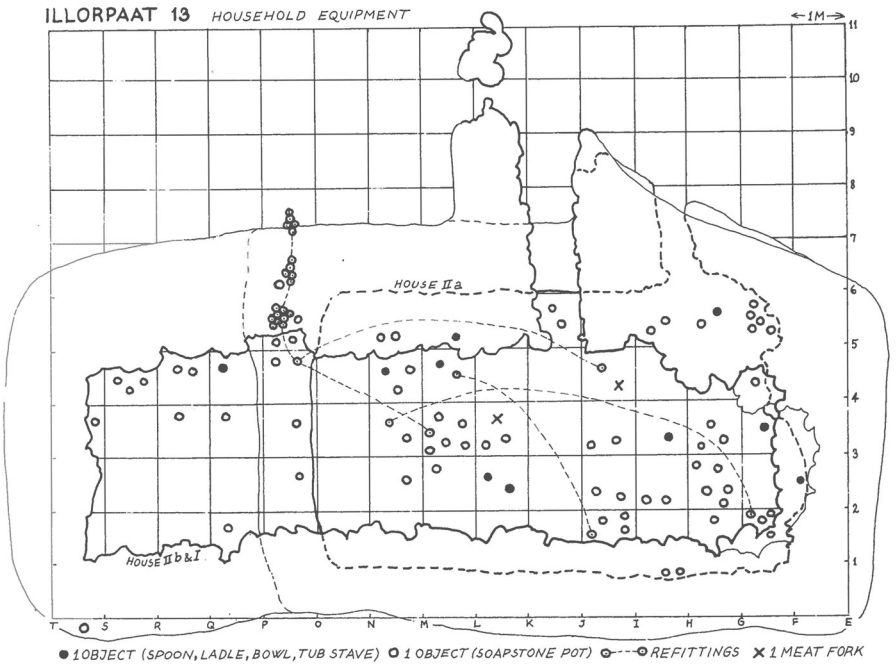


Fig. 76. *The distribution of household utensils in Illorpaat 13, houses I-IIb. Each signature represents one object.*

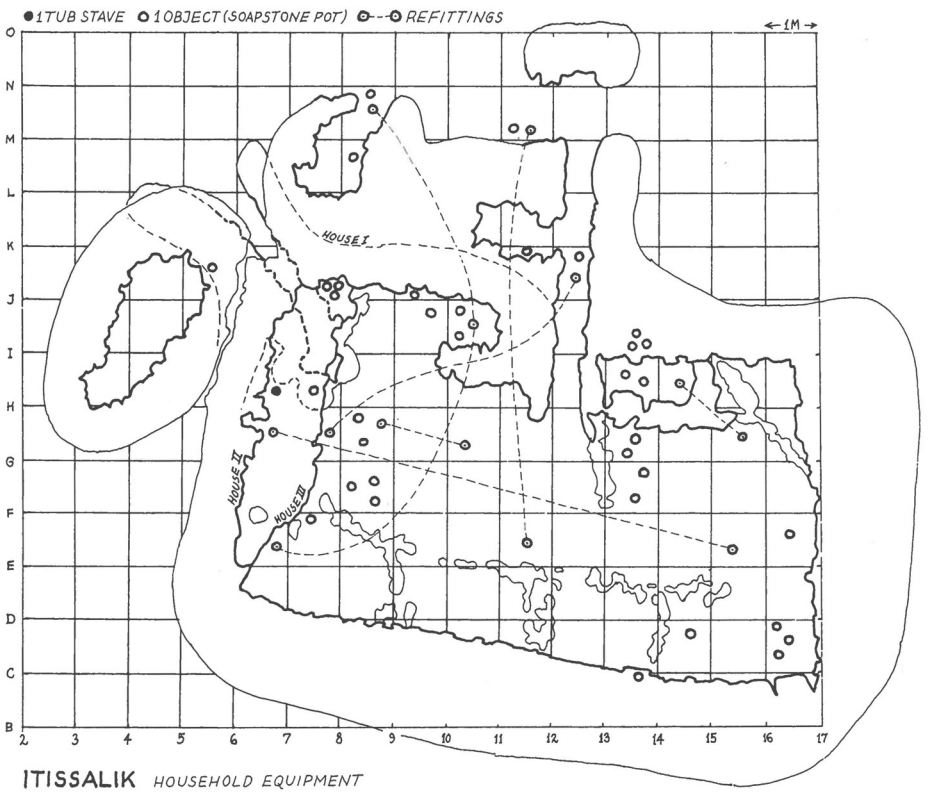


Fig. 77. *The distribution of household utensils at Itissaalik, houses I-III. Each signature represents one object.*

Spoons & Scoops

Four spoons and 23 scoops were found complete or as fragments. The materials are wood (21 pieces), caribou antler (one piece) and soapstone (one piece).

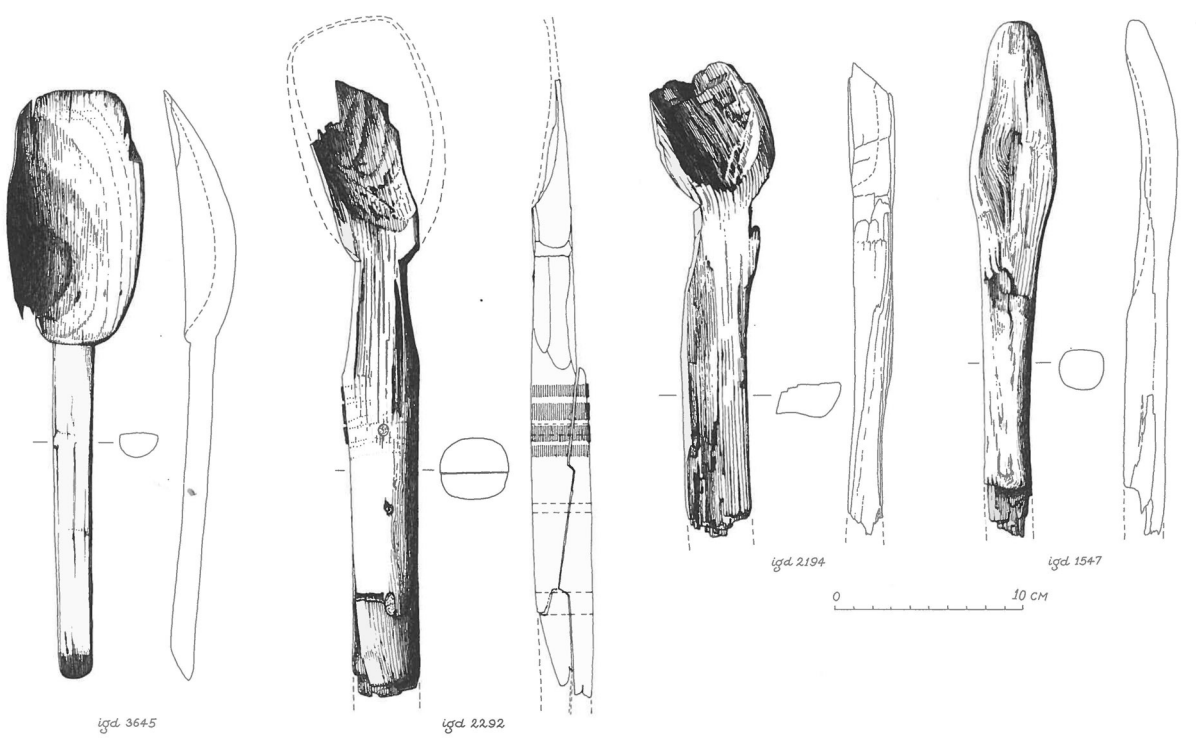
The distribution in the examined sites is as follows:

	Illorpaat 3					Midden			Illpt. 9	Illpt. 13	Total
	IV	III	II	I	e.Th	8	4	stray find			
Spoons	–	–	1	–	–	–	2	–	1	–	4
Scoops	2	4	2	4	2	1	2	1	2	3	23
	2	4	3	4	2	1	4	1	3	3	27

Spoons

All four spoons are of wood and almost complete. Judging by their size, two must be identified as spoons and two as ladles. One spoon and one ladle have sinistral bowls.

igd 3645, 156 mm long spoon, found in Illorpaat 3, house II (4/K). **igd 2292**, 165 mm long spoon, broken bowl, the handle extended by scarfing with baleen-lashing, found in the midden, layer 4 (2/E). **igd 2194**, 250 mm long ladle, coarsely worked, found in the midden, layer 4 (2/H). **igd 1547**, 275 mm long ladle or handle of a sling (?), found in Illorpaat 9 (2/A).

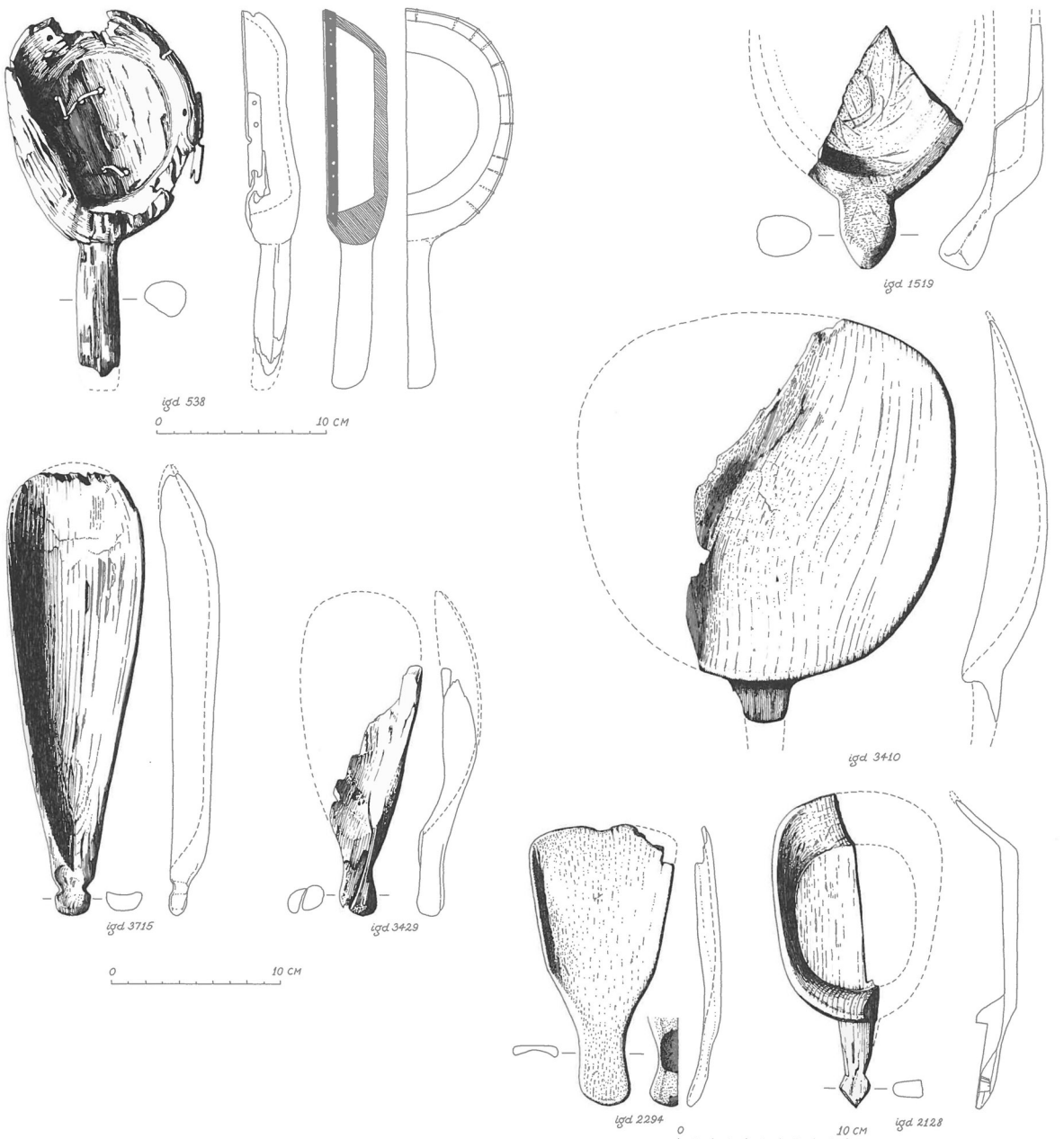


Scoops

11 of the 23 pieces have a hand-hold or finger-hold. No particular type can be distinguished. The bowl of the scoop can be round, oval to drop-shaped and trapezoid.

Examples: **igd 538**, 220 mm incl. the handle, scarfed together with baleen-lashing, mounted with an edging strip of baleen, found in Illorpaat 13 (4/G-H). **igd 1519**, 75 mm, of soapstone, broken, found in Illorpaat 9 (1/E). **igd 3410**, 120 mm, broken, found in Illorpaat 3, house III (10/I). **igd 3715**, 260 mm, found in Illorpaat 3, house II (13/J). **igd 3429**, 147 mm, broken, found in Illorpaat 3, house III (5/G). **igd 2294**, 165 mm, of antler, found in the midden, layer 4 (2/F). **igd 2128**, 182 mm, found in the midden, layer 4 (1/E).

The illustrated examples are well known in Greenland, except the drop-shaped scoop (**igd 3715**), two examples of which were found in Illorpaat 3 (houses I and II).



Dishes & Bowls

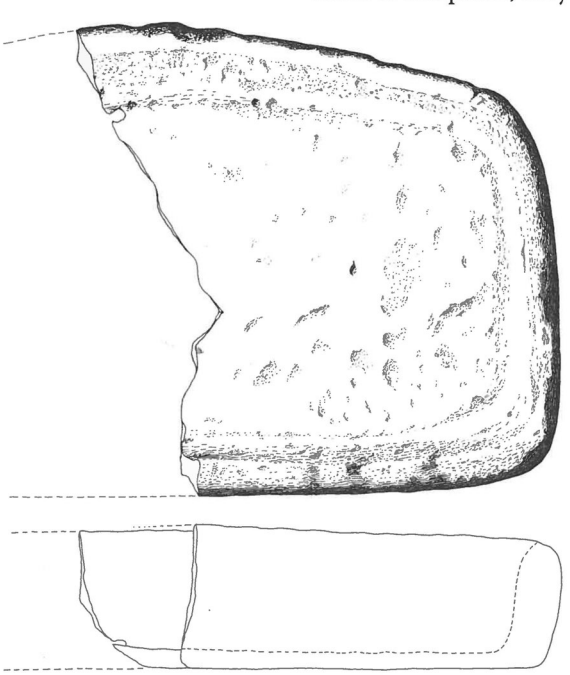
37 individual pieces can be identified as dishes or bowls. Five objects are almost intact, i.e. sides and bottoms are preserved, so their form can be described (*cf.* Birket-Smith 1924: 165-167). 24 pieces of rim and six bottoms could be distinguished. Two small bowls, boxes or cups had two baleen strips for sides. The materials are wood (coniferous wood, i.e. driftwood, and oak), baleen, bone and soapstone).

The functional differentiation between small bowls or boxes cannot be maintained overall. The identification of bowls or dishes, as opposed to scoops which were described above, has largely been based on the dimensions of the rim fragments. Border cases do however occur. Several rim fragments have holes where they have been repaired.

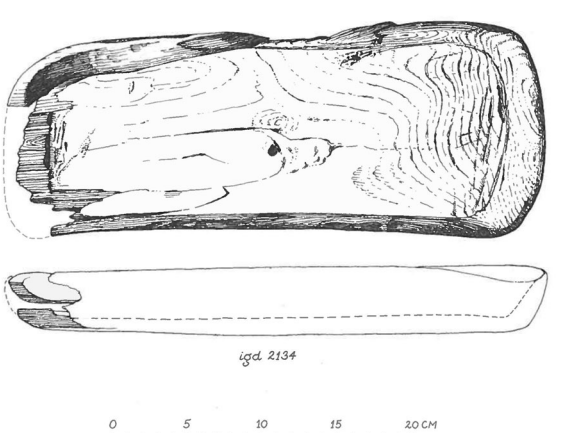
	Illorpaat 3				Midden					Illpt. 13	Total
	III	II	I	e.Th.	12	9	8	4	stray find		
Dishes	–	–	–	1	–	–	1	2	–	–	4
Bowls	–	1	–	–	–	–	–	–	–	–	1
Fragments											
rims and/or sides	1	5	3	1	6	1	1	4	1	3	26
bottoms	–	–	–	1	–	–	1	4	–	–	6
	1	6	3	3	6	1	3	10	1	3	37

Dishes

igd 3109, 310 mm long, 320 wide, has originally been *c.* 500 mm long, of soapstone, found in Illorpaat 3, early Thule (19/L). **igd 2134**, 357 mm long, of wood, found in

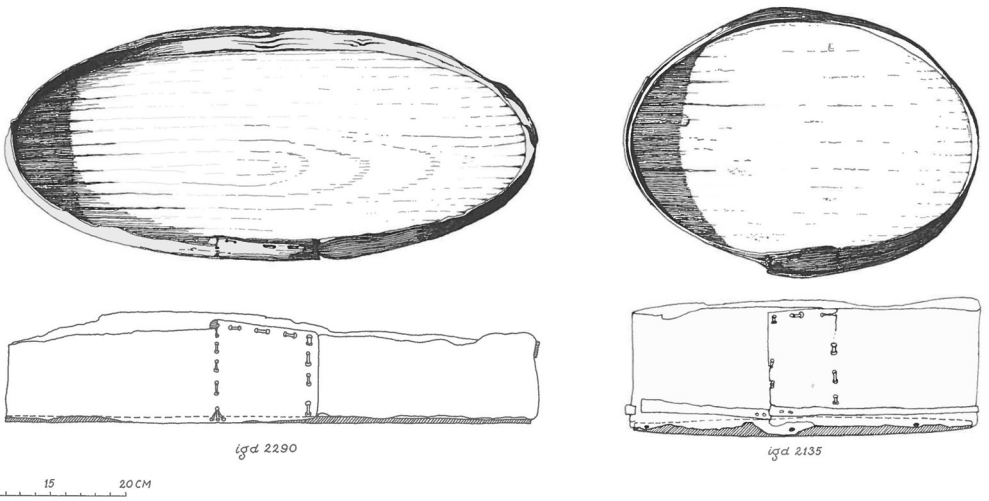


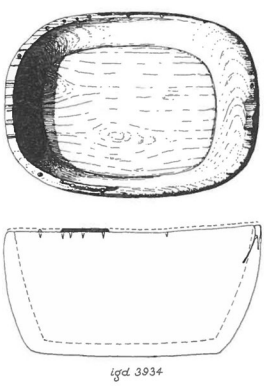
igd. 3109



igd. 2134

the midden, layer 4 (1/F). **igd 2290**, the oval wooden bottom measures 335 × 155 mm, the baleen sides slope slightly inwards and are 70 mm high, found in the midden, layer 8 (2/E). **igd 2135**, the oval wooden bottom measures 240 × 180 mm, the vertical baleen sides are 90 mm high, found in the midden, layer 4 (1/F).





Bowls

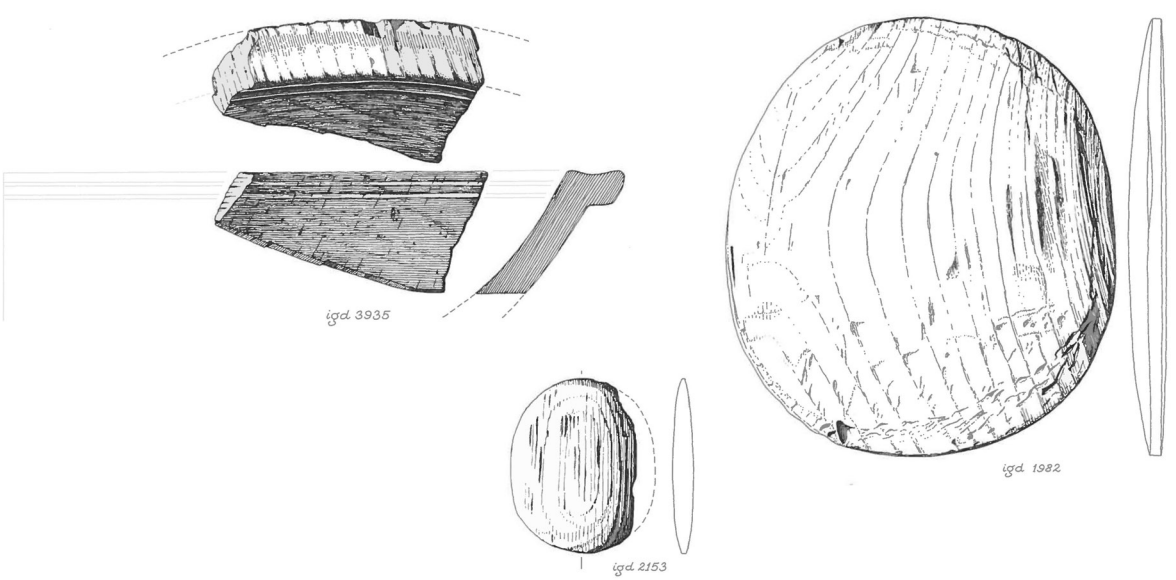
igd 3934, the almost oval wooden bowl measures 170 × 123 mm at the top, height 80 mm, the rim is mounted with a bone strip, attached by bone nails, found in Illorpaat 3, house II (11/J).

Fragments

Example of rim: **igd 3935**, fragment of a turned oak bowl, European work (Norse?), found in Illorpaat 3, early Thule (19/K).

Examples of bottoms: **igd 1982**, almost circular bottom of bowl or small tub, diameter 115 mm, found in the midden, layer 4 (2/B). **igd 2153**, almost circular bottom of a small bowl or cup, diameter 45 mm, found in the midden, layer 8 (2/H).

See also **Tubs & Casks**.



Tubs & Casks

34 objects can be identified as parts of tubs or casks (26 staves and eight bottoms). None of the staves, however, can be from casks, since the staves show that the vessels were open at the top. We must conclude that the staves have exclusively been used for tubs and were of Eskimo manufacture, i.e. drinking cups, beakers and urine tubs. One exception is the piece from Itissaalik, which is the nether end of an oak stave. It may however be possible that some of the eight bottom pieces have come from casks (the longest fragment here measures 340 mm).

The distribution of the found objects is as follows:

	Illorpaat 3				Midden				Illpt. 13	Islik.	Total
	III	II	I	e.Th.	12	8	4	stray finds			
Staves	3	1	4	1	4	4	2	2	4	1	26
Bottoms	–	1	5	1	–	–	–	–	1	–	8
	3	2	9	2	4	4	2	2	5	1	34

18 complete staves were found. Four of them had no groove (**igd 472** and **597** from Illorpaat 13 and **igd 3383** and **3384** from Illorpaat 3, house III). The following classification can be made on the basis of the stave lengths:

Small beakers, i.e. stave length from 72 to 74 mm; one stave, **igd 1885**, measured 55 mm. **Large beakers**, i.e. stave length from 93 to 105 mm. **Small tubs**, i.e. stave length from 142 to 198 mm. **Large tubs**, i.e. stave length from 200 to 265 mm.

Small beakers

Examples: **igd 1885**, 55 mm, ends in a knob, found in the midden, layer 12 (1/C). **igd 3431**, 72 mm, found in Illorpaat 3, house III (5/G). **igd 3884**, 74 mm, found in Illorpaat 3, house I (8/F). **igd 4096**, 72 mm, found in Illorpaat 3, house I (19/L).

Large beakers

Examples: **igd 1951**, 95 mm, found in the midden, layer 8 (2/C). **igd 475**, 101 mm, found in Illorpaat 13 (5/M). **igd 3383** and **3384**, both 105 mm, without groove, probably from the same beaker, or may be from a tub as the staves are broken and their original height therefor uncertain, found in Illorpaat 3, house III (22/F).

Small tubs

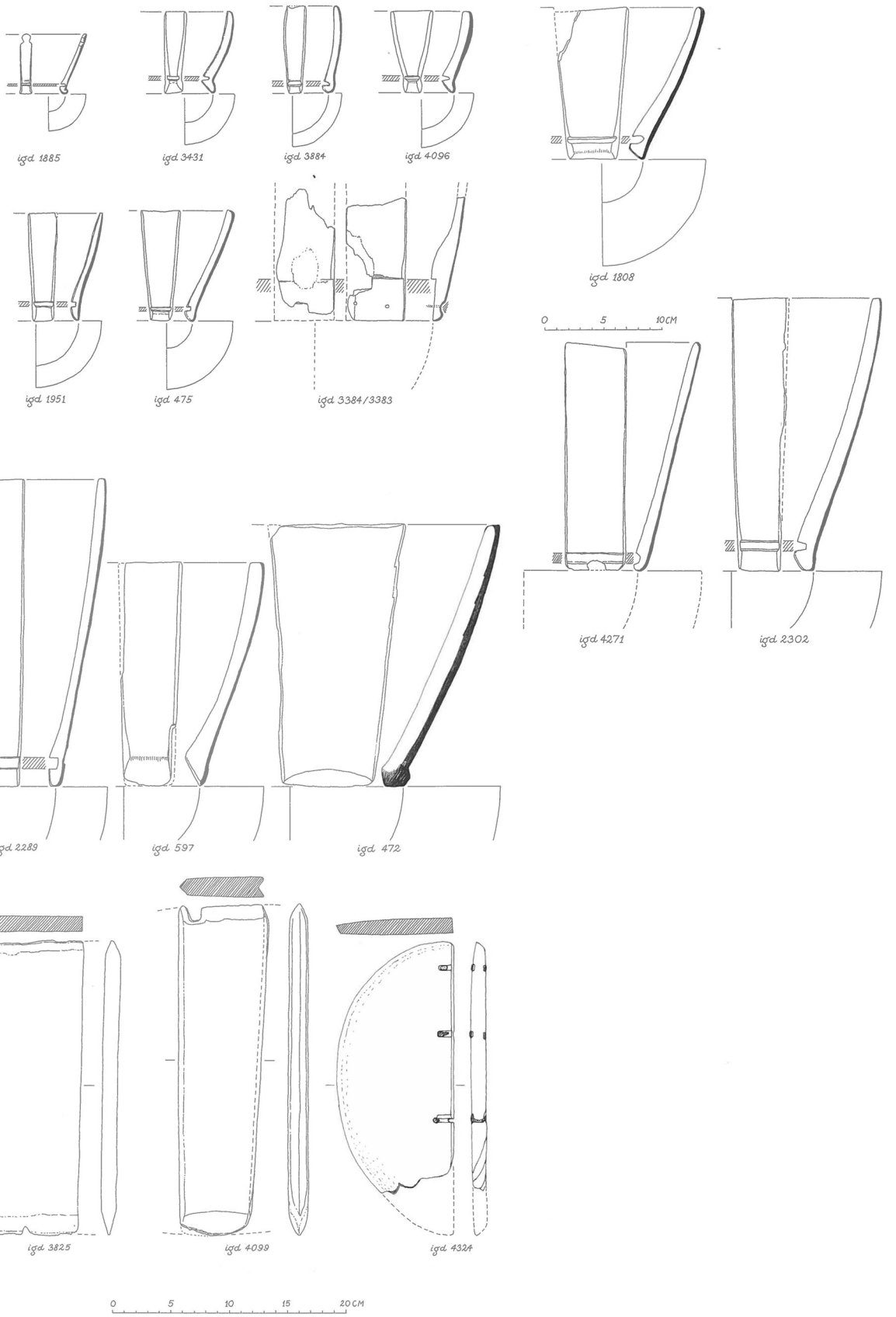
Example: **igd 1808**, 142 mm, found in the midden, layer 12 (2/A).

Large tubs

Examples: **igd 4271**, 200 mm, found in Illorpaat 3, early Thule (8/L). **igd 2302**, 242 mm, stray find from the midden. **igd 2289**, 265 mm, found in the midden, layer 8 (2/E). **igd 597**, 200 mm, without groove, stray find from Illorpaat 13. **igd 472**, 238 mm, without groove, found in Illorpaat 13 (6/H).

Bottoms

Examples: **igd 3825**, 250 mm long, 85 mm wide, found in Illorpaat 3, house II (10/G). **igd 4099**, 280 mm, with tongue and groove, found in Illorpaat 3, house I (19/K). **igd 4324**, half a bottom, 214 mm long, found in Illorpaat 3, early Thule (23/I).


igd 1885
igd 3431
igd 3884
igd 4096
igd 1808
igd 1951
igd 475
igd 3384/3383
0 5 10CM
igd 4271
igd 2302
igd 2289
igd 597
igd 472
igd 3825
igd 4099
igd 432A
0 5 10 15 20CM

Stratigraphically, the tub parts were found everywhere and can be identified as Eskimo products (*cf.* Birket-Smith 1924: 165-167) without colonial influence. **igd 4271** was found nethermost in Illorpaat 3, isolated from horizons which contained later, European artefacts.

The very curved and the straight staves are found contemporarily. Although the present find cannot explain the origins of the technique, Norse models cannot be excluded.

One exception is **igd 1315**, found at Itissaalik (7/I), of oak. Only the nethermost part with groove is preserved. The fragment is 70 mm long and 38 mm wide at the base and 42 mm wide at the fracture. The groove is placed 35 mm from the end. The end is smooth or worn, which shows that the piece may have served a secondary purpose, e.g. as a kamiut stick. It may have come from Hope Colony (*cf.* Gulløv & Kapel 1979: 91). Not illustrated.

Cooking pots

261 pieces of soapstone can be identified as parts of cooking pots or boilers. They were present in all the examined locations. 80 pieces in Illorpaat 3, 29 in the midden, 13 in Illorpaat 9, 95 in Illorpaat 13 and 44 at Itissaalik. A number of the pieces could be joined together, after which the following distribution of units could be established:

	Illorpaat 3					Midden					Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	9	8	4	stray finds				
Rim, side and bottom	1	2	2	1	4	1	–	–	–	1	2	1	2	17
Rims	13	11	2	2	2.5	8	3	0.5	4	1	1	14	13	75
Bottoms with side	6	2	2	1	1	2	1	–	–	–	1	12	5	33
Bottoms	2	6	–	–	–	2	1	–	–	–	–	10	7	28
Sides	–	–	–	1	2	2	1	–	–	–	–	25	6	37
	22	21	6	5	9.5	15	6	0.5	4	2	4	62	33	190

The two half rims from, respectively, Illorpaat 3, early Thule, and the midden, layer 8, can be joined together.

It has not been possible to reduce the number of units to less than 190, although it may be possible that several fragments come from one pot. The soapstone is of good quality. The pots have been made with cutting tools (knife? axe?) which in most cases have produced patterns of a parallel nature (*cf.* type IIC, **igd 227**).

The thickness of the bottoms varies from 2 to 15 mm. The thickness of the sides varies from 4 to 18 mm. All bottoms (78 units) are flat and meet the sides at an obtuse angle.

All the fragments with rim and bottom preserved are from oval pots. The vertical height from standing surface to rim varies from 60 to 130 mm.

There are only very few of the particular characteristics which are found outside West Greenland, i.e. external suspension holes or piercing of the rim for suspension (*cf.* Mathiassen 1931: 100). When these do occur they are stratigraphically among the latest fragments.

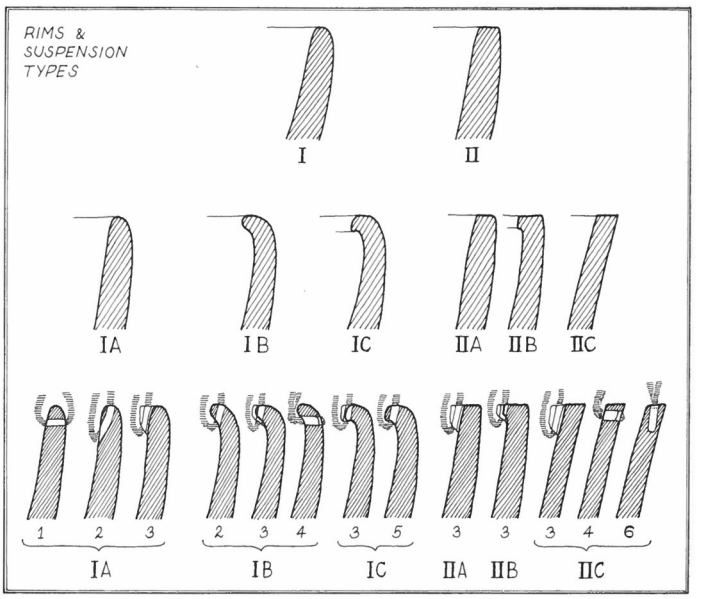


Fig. 78. *Hierarchic table of the cooking-pot rim and suspension types.*

The typological description shows the rim types (see Fig. 78) where (I) are rounded rims and (II) are square-cut rims. These rim types are subdivided into suspension types, which can be:

1. horizontal piercing of the rim from inside to outside.
2. diagonal piercing of the rim from inside to upper side.
3. vertical piercing of internal bead.
4. horizontal to diagonal piercing of the rim with a countersunk line-groove on the outside.
5. vertical piercing of inner rim bead.
6. vertical piercing directly into the mouth-rim.

The types can be described as follows (Fig.78):

Type I

Rounded rims with slightly curved sides. The terminals can be (A) more or less pronounced, (B) curve inwards, or (C) have an internal bead.

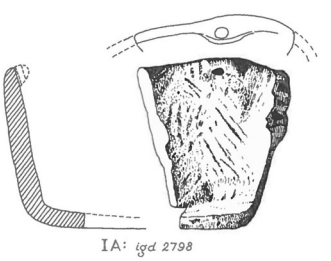
The distribution of Type I:

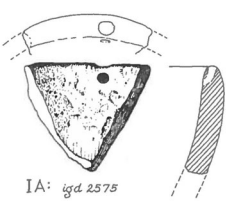
	Illorpaat 3	Midden	Illorpaat 9	Illorpaat 13	Itissaalik	Total
IA	18	10	3	7	5	43
IB	5	–	–	–	–	5
IC	1	–	–	–	1	2
	24	10	3	7	6	50

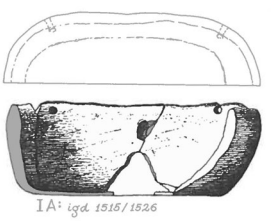
Type IA: is the most common and was found in all the examined locations. Suspension types 1, 2 and 3 occur. The distribution is as follows:

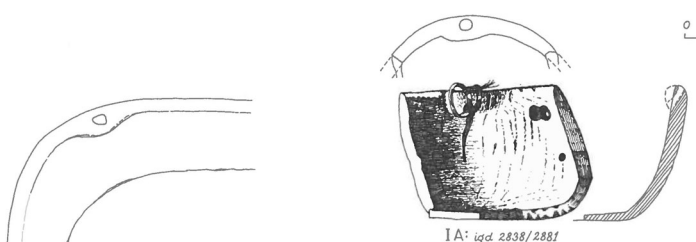
	Illorpaat 3					Midden			Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	9	stray finds				
suspension 1	–	1	–	–	–	–	–	–	2	1	1	5
suspension 2	1	–	–	–	1	–	1	–	–	–	–	3
suspension 3	1	3	1	2	1	1	–	2	–	3	1	15
rims without suspension	3	4	–	–	–	2	4	–	1	3	3	20
	5	8	1	2	2	3	5	2	3	7	5	43

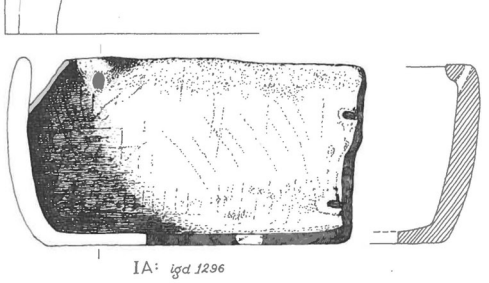
Examples: **igd 2798**, 110 mm high from standing surface to rim, maximum thickness 12 mm, suspension type 3, found in Illorpaat 3, house III (12/M). **igd 2575**, length of the rim 83 mm, thickness 15 mm, suspension type 2, found in Illorpaat 3, house IV (16/K). **igd 1515/1526**, 58 mm high from standing surface to rim, suspension type 1, found in Illorpaat 9 (4/A-B). **igd 1296**, 123 mm high from standing surface to rim, suspension type 3, found at Itissaalik (9/H). **igd 2838/2881**, 86 mm high from standing surface to rim, suspension type 3 with baleen lashing *in situ*, piercing in the side for repair, found in Illorpaat 3, house III (6-8/J). **igd 3201**, length of the rim 160 mm, the side fragment is 140 mm high, the thickness is 16 mm at the bottom and 22 mm at the rim, the suspension type is 3 but shaped as a sturdy handle, found in Illorpaat 3, early Thule (8/E), does not resemble Eskimo work and may be of Norse manufacture.

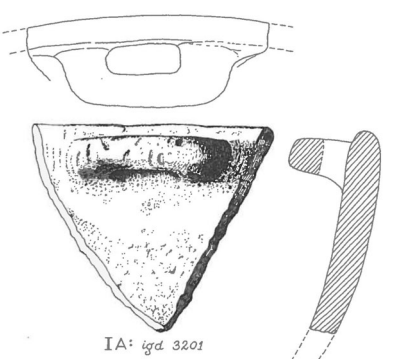








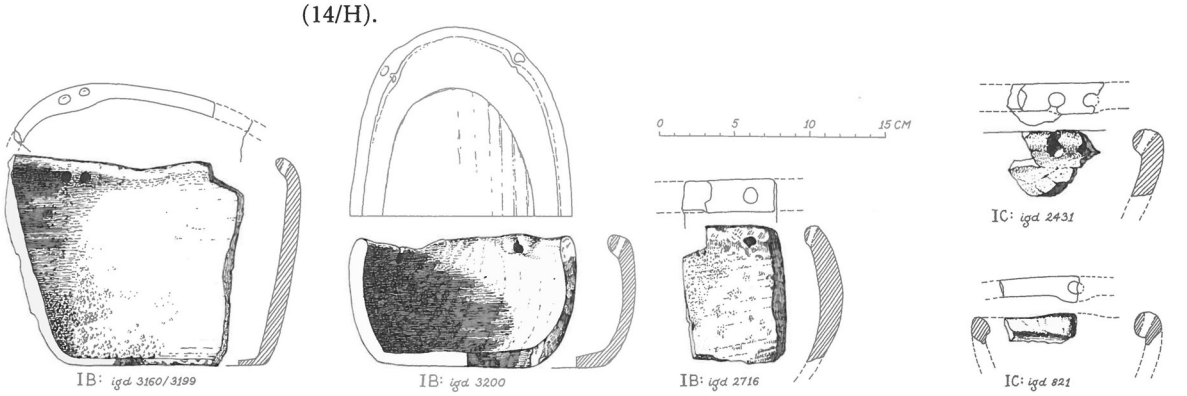




Type IB was only found in Illorpaat 3. Suspension types 2, 3 and 4 occur. The distribution is as follows:

	IV	III	II	e. Th.	Total
suspension 2	1	–	–	–	1
suspension 3	–	1	–	1	2
suspension 4	–	–	–	1	1
rims without suspension	–	–	1	–	1
	1	1	1	2	5

Examples: **igd 3160/3199**, 130 mm high from standing surface to rim, the thickness is 6 mm at the top and bottom and 10 mm in the middle, suspension type 4, found in Illorpaat 3, early Thule (9/F). **igd 3200**, 75 mm high from standing surface to rim, thickness 10 mm throughout, suspension type 3, found in Illorpaat 3, early Thule (22/J). **igd 2716**, length of the rim 45 mm, the side 90 mm high, thickness 9 mm at the bottom and 15 mm at the rim, suspension type 2, found in Illorpaat 3, house IV (14/H).



Type IC was only found in two examples, in Illorpaat 3 and at Itissaalik. In both places in the upper horizon. **igd 2431**, length of the rim 57 mm, thickness 14 mm, suspension type 5, found in Illorpaat 3, house IV (23/D). **igd 821**, length of the rim 46 mm, suspension type 3, found at Itissaalik (17/F).

Type II

The top of the rim is horizontal or cut diagonally. The sides can be (A) convex without internal rim bead, (B) convex with internal rim bead and (C) have almost straight sides (Fig.78).

The distribution of Type II:

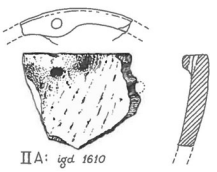
	Illorpaat 3	Midden	Illpt. 13	Islik.	Total
IIA	6	8	5	6	25
IIB	–	1 –	1	1	3
IIC	10	–	2	2	14
	16	1* 8	8	9	42

*the piece is composed of one rim sherd from Illorpaat 3 and one from the midden.

Type IIA is the most common form of type II and, apart from Illorpaat 9, it was found in all the examined locations. The suspension is only of type 3.

The distribution is as follows:

	Illorpaat 3			Midden			Illpt. 13	Islik.	Total
	IV	III	II	12	4	stray find			
Suspension	1	–	–	1	2	–	1	1	6
Rims without suspension	1	2	2	2	2	1	4	5	19
	2	2	2	3	4	1	5	6	25


IIA: igd. 1610

Example: **igd 1610**, length of the rim 70 mm, the thickness varies from 7 mm at the bottom to 10 mm at the top, suspension type 3, found in the midden, layer 12 (2/D).

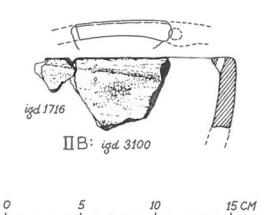
Type IIB is represented in all the examined locations, except Illorpaat 9. The suspension is only of type 3.

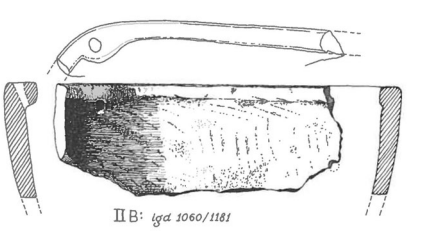
The distribution is as follows:

	Illorpaat 3 e. Th.	Midden layer 8	Illpt. 13	Islik.	Total
Suspension 3		1	–	1	2
Rims without suspension	–	–	1	–	1
	–	1*	1	1	3

* the piece is composed of one rim sherd from Illorpaat 3, early Thule, and one from the midden, layer 8.

Examples: **igd 3100**, length of the rim 60 mm, thickness 10 mm at the bottom, suspension type 3, found in Illorpaat 3, early Thule (uppermost in this horizon) (14/J) and joined with **igd 1716**, found in the midden, layer 8 (1/E). **igd 1060/1181**, length of the rim 195 mm, suspension type 3, found at Itissaalik (7/H and 16/F).




IIB: igd 1060/1181

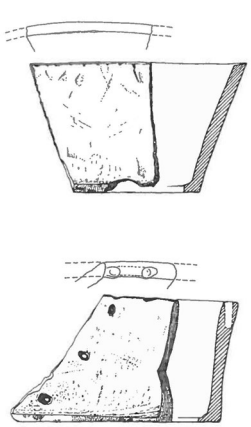
Type IIC was found in Illorpaat 3, Illorpaat 13 and at Itissaalik. The suspension types are 3, 4 and 6.

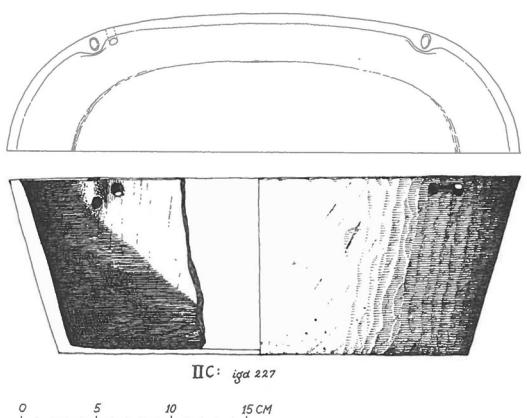
The distribution is as follows:

	Illorpaat 3			Illpt. 13	Islik.	Total
	IV	III	e.Th.			
Suspension 3	–	–	–	2	–	2
Suspension 4	–	–	–	(1)*	–	–
Suspension 6	–	–	–	–	1	1
Rims without suspension	5	4	1	–	1	11
	5	4	1	2	2	14

* the suspension is on **igd 227**, which is of type 3.

Examples: **igd 2584**, 85 mm high from standing surface to rim, the thickness at the top and the bottom is 7 mm and mid-side 6 mm, found in Illorpaat 3, house IV (21/G). **igd 227** (also composed of **igd 203, 232, 290, 319, 368** and **369**), 117 mm high from standing surface to rim, the thickness varies from 8 mm at the top to 11 mm at the bottom, the bottom is 4 mm thick, maximum external length at the top is 350 mm, the bottom measures internally 120 × 255 mm, suspension types 3 and 4 (with external countersunk line-groove), found in Illorpaat 13 (5/J, 4/M and 5-8/P). **igd 1205**, 80 mm high from standing surface to rim, suspension type 6, found at Itissaalik (12/F).





The rim types I and II were found both uppermost and nethermost in Illorpaat 3 and the midden, which are the two areas with the most comprehensive stratigraphy. By means of the described rim-shapes and suspension types a relative chronology can be established for all the 92 described rim units and the 41 examples of suspension.

The distribution of the suspension types is as follows:

	Illorpaat 3	Midden	Illpt. 9	Illpt. 13	Islik.	Total
Suspension 1	1	–	2	1	1	5
Suspension 2	3	1	–	–	–	4
Suspension 3	11	7*	–	7	4	29
Suspension 4	1	–	–	(1)**	–	1
Suspension 5	1	–	–	–	–	1
Suspension 6	–	–	–	–	1	1
	17	8	2	8	6	41

* one specimen is composed of one rim from Illorpaat 3 and one from the midden.

** **igd 227** has both suspensions 3 and 4.

The archaeological description of the examined localities makes it possible to establish a relative chronology, comprising four periods. The C-14 dates set the lower limit at 1475 AD, while the upper limit has to be set at 1800 AD, after which time the area is uninhabited.

The period 1475 to 1600 comprises Illorpaat 3, early Thule, and the midden, layers 4 and 8, *cf.* **igd 1716/3100** (Type **IIB**). The period 1600 to 1700 comprises Illorpaat 3, house I, the midden, layer 9, and Illorpaat 9. The period 1700 to 1750 comprises Illorpaat 3, house II, the midden, layer 12, and Illorpaat 13. The period 1750 to 1800 comprises Illorpaat 3, houses III and IV, and Itissaalik. The periods overlap around 1700 and 1750.

Three rims have not been included as they were stray finds from the midden. The following table is thus based on 89 units:

Rim type	IA				IB				IC		IIA		IIB	IIC				Total
Suspension (1-6) and rim without suspension (r)	1	2	3	r	2	3	4	r	3	5	3	r	3	3	4	6	r	
1750-1800	2	1	5	10	1	1	–	–	1	1	2	8	1	–	–	1	10	44
1700–1750	1	–	5	5	–	–	–	1	–	–	2	8	1	2	1*	–	–	25
1600–1700	2	1	2	5	–	–	–	–	–	–	–	–	–	–	–	–	–	10
1475–1600	–	1	1	–	–	1	1	–	–	–	2	2	1	–	–	–	1	10
	5	3	13	20	1	2	1	1	1	1	6	18	3	2	–	1	11	89

* **igd 227**

The percentile distribution of rims and suspension types in the various periods can now be established (Fig. 79).

The shapes of the pots have varied since the time of the first settlement here, and among the suspension types type 3 predominates. The shape of the suspension element as a pierced bead emphasizes that soapstone working was a highly developed craft. The question of possible Norse influence on the production technique (e.g. **igd 3201** (type **IA**)) cannot be answered on the basis of the present material, although the two population groups lived close to one another (Gulløv 1983a: 128).

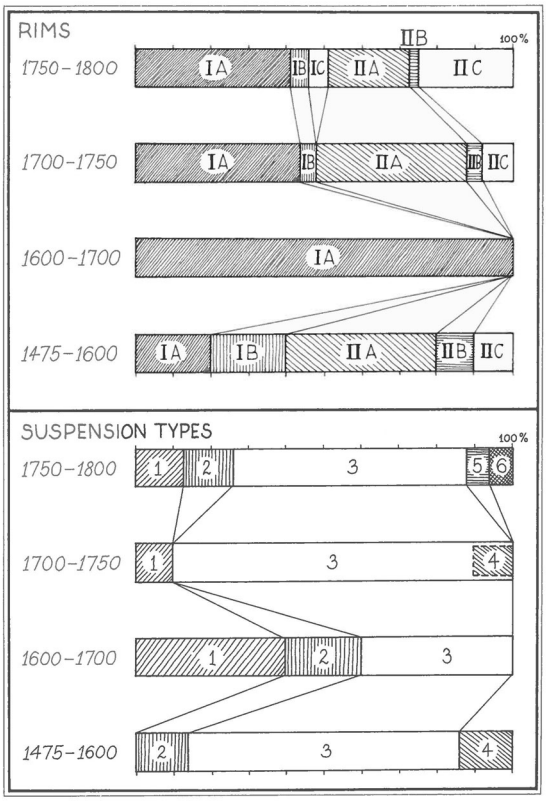


Fig. 79. *The percentile distribution of the cooking-pot rim and suspension types, distributed within the chronological periods.*

Typologically, the excellent technique has been brought along to the area from the north, or else it has developed fairly quickly here after the settlement in the 14th century (at Kangeq). The high quality soapstone quarries in various places inside the fjord (*cf.* Fig.68) speak for the latter assumption.

See also **Toys, cooking pots.**

Cooking pots or lamps, indeterminable

41 soapstone sherds have, judging by their thickness and shape, been parts of cooking pots or lamps, but the fragments cannot be identified more precisely.

The distribution of the units is as follows:

	Illorpaat 3					Midden		Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th	12	4				
Rims	5	3	1	1	1	2	1	–	7	5	26
Sides or bases	1	2	4	1	–	1	2	1	1	2	15
	6	5	5	2	1	3	3	1	8	7	41

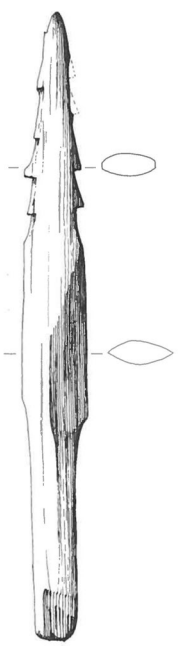
See also **Lamps** and **Cooking pots.**

Meat forks

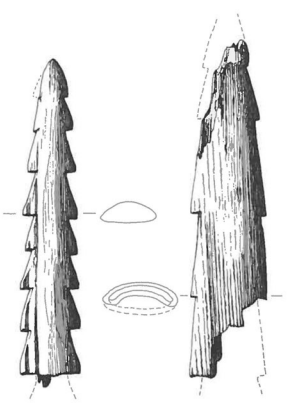
Nine wooden prongs, all with from three to seven sets of opposite barbs, have been identified as meat forks. Only one is complete. The fragments vary from 44 to 101 mm in length.

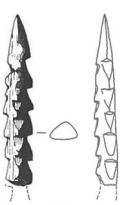
The distribution is as follows:

Illorpaat 3			Midden		Illpt. 13	Total
III	II	I	12	4		
1	1	3	1	1	2	9


igd 3888

Examples: **igd 3888**, 165 mm, complete, found in Illorpaat 3, house I (9/G). **igd 2090**, 86 mm, found in the midden, layer 4 (1/C). **igd 1913**, 89 mm, with a socket, found in the midden, nethermost in layer 12 (2/D). **igd 4087**, 44 mm, barbs on the dorsal side, found in Illorpaat 3, house I (17/M).


igd 2090 igd 1913


igd 4087

Personal equipment

Most of the 67 objects in this group are beads and ornamental pendants. The European beads belong to this group of finds, but are described separately (see **European objects**). The disc-shaped soapstone beads and the almost drop-shaped ornamental pendants occur from the time of the earliest settlement in the area (*cf.* the artefacts from Kangeq) until Illorpaat is abandoned around the year 1800.

Egede only mentions the glass beads: "Their ornament is otherwise to have divers coloured glass beads or corals hanging from their ears and around the neck and the arms" (1925: 370). Although great quantities of glass beads were shipped to Hope Colony (Gulløv & Kapel 1979: 68) this barter object does not turn up in the archaeological context until the mid-18th century.

The combs do not differ from the well-known types.

All garment fragments were found in the latest settlement phases.

The distribution of this group of objects is primarily associated with the platform structure (Figs. 80-83).

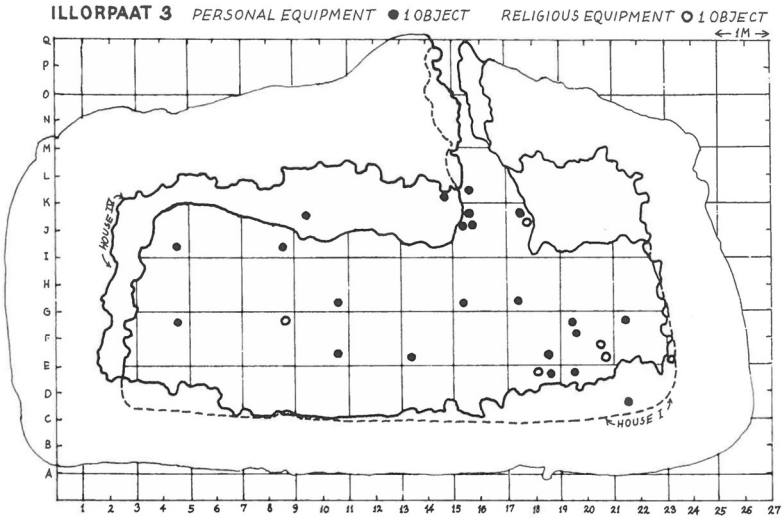


Fig. 80. *The distribution of personal and religious equipment in Illorpaat 3, houses I-IV. Each signature represents one object.*

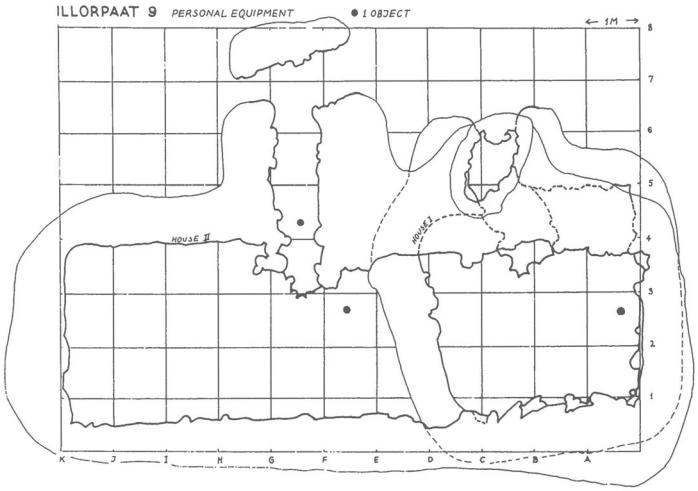


Fig. 81. *The distribution of personal equipment in Illorpaat 9, houses I-II. Each signature represents one object.*

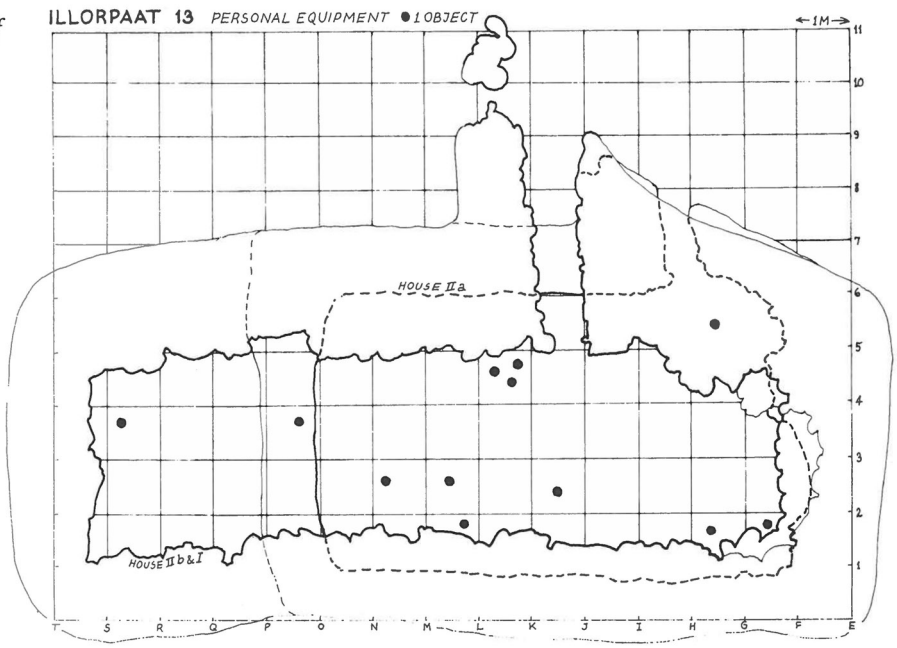


Fig. 82. *The distribution of personal equipment in Illorpaat 13, houses I-IIb. Each signature represents one object.*

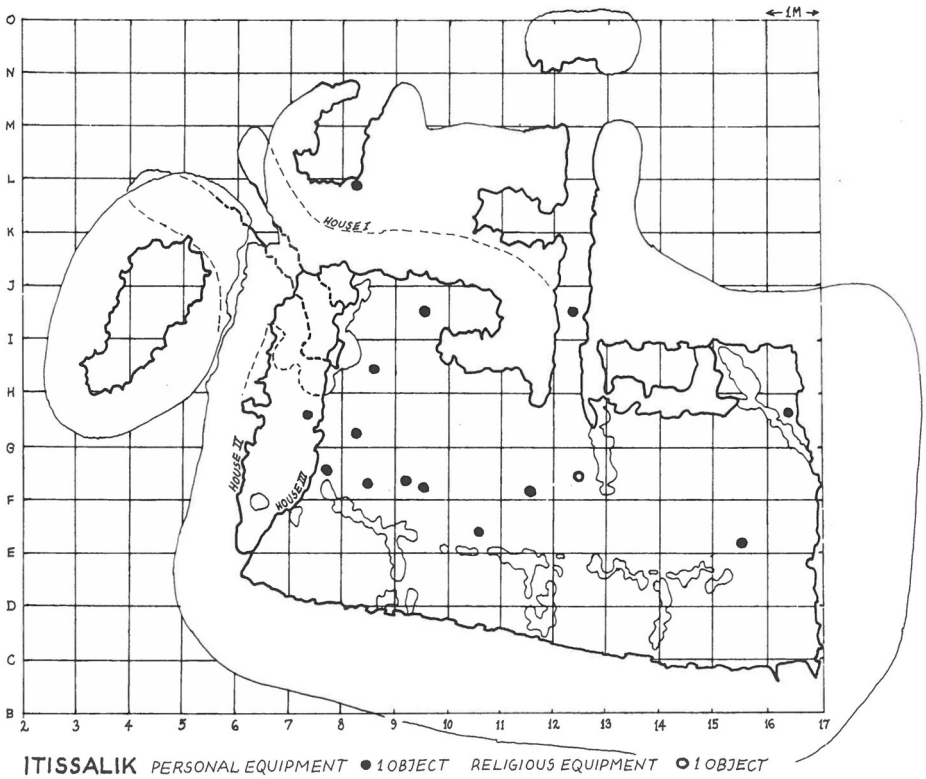


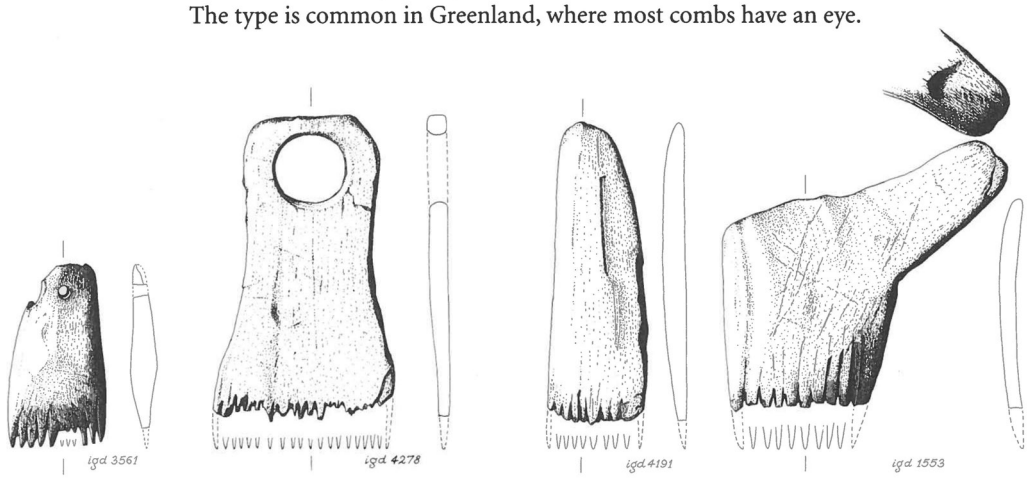
Fig. 83. *The distribution of personal and religious equipment at Itissaalik, houses I-III. Each signature represents one object.*

Combs

Four caribou-antler combs were found.

igd 3561, 48 mm, with an eye, found in Illorpaat 3, house III (19/F). **igd 4278**, 81 mm, with an eye, found in Illorpaat 3, house II (16/H). **igd 4191**, 80 mm, without eye, found in Illorpaat 3, early Thule (11/I). **igd 1553**, 37 mm wide across the teeth, with a handle (?) and with a piercing for an eye commenced, found in Illorpaat 9 (3/A).

The type is common in Greenland, where most combs have an eye.



Beads, Ornamental pendants & Buckles

This group comprises 50 objects, most of which were for personal adornment. A few beads and buckles may have functioned as line accessories. The materials are soapstone, caribou antler, bone, wood and sheet copper.

The distribution is as follows:

	Illorpaat 3			Midden			Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	12	8	4				
Beads										
soapstone	1	–	–	2	–	1	1	6	2	13
antler/tooth	1	1	–	2	–	–	–	–	–	4
bone	–	–	–	–	–	–	–	1	–	1
wood	–	–	1	–	1	–	–	1	–	3
Ornamental pendants										
soapstone	2	1	–	–	–	–	1	–	–	4
tooth	–	3	3	1	–	–	–	1	1	9
sheet copper	–	–	–	–	–	–	–	4	1	5
sheet-copper jettons	2	–	–	–	–	–	–	–	1	3
Buckles and terminals										
tooth	1	1	–	1	–	–	–	–	–	3
antler	–	1	–	3	–	–	–	–	–	4
wood	–	1	–	–	–	–	–	–	–	1
	7	8	4	9	1	1	2	13	5	50

Beads

21 pieces were found, European glass beads are not included. The forms vary between discoid, cylindrical, conical, biconical and rounded.

Discoid comprise 10 pieces, all of soapstone. The diameter varies from 7 to 13 mm, the thickness from 2 to 19 mm. Four are pierced from one side, three are pierced from two sides, while three have not been pierced and must be taken as unfinished. Examples: **igd 299**, diameter 10 mm, thickness 2-4 mm, pierced from one side, found in Illorpaat 13 (5/L). **igd 1514**, diameter 13 mm, thickness 6 mm, pierced from both sides, found in Illorpaat 9 (3/F). **igd 2672**, diameter 10 mm, thickness 3 mm, unfinished, found in Illorpaat 3, house IV (10/K).

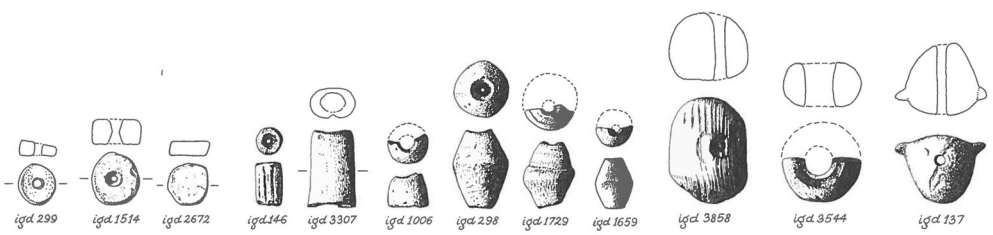
Cylindrical comprise two specimens: **igd 146**, length 12 mm, diameter 8 mm, of soapstone, parallel grooves may imitate the pattern on the cylindrical glass beads, found in Illorpaat 13 (4/S). **igd 3307**, length 20 mm, diameter 8-13 mm, of antler, found in Illorpaat 3, house IV (22/D).

Conical was found in one example: **igd 1006**, diameter 10 mm, height 9 mm, of soapstone, broken, the bead may have been biconical since the largest cross-section surface has the character of a fractured surface, found at Itissaalik (9/G).

Biconical comprise three examples: **igd 298**, maximum diameter 16 mm, length 21 mm, of soapstone, found in Illorpaat 13 (5/L). **igd 1729**, of tooth (hooded seal?) and is split, a groove encircles the bead's 14 mm diameter, length 17 mm, found in the midden, layer 12 (2/C). **igd 1659**, diameter 9 mm, length 13 mm, of tooth (hooded seal?), split, found in the midden, layer 12 (1/D).

Rounded comprise five examples, probably not all used for adornment. Three are of wood and are made from shaft offcuts, which is the most common manufacturing method. The holes in these wooden beads are from 1 to 6 mm in diameter. The other two are, respectively, of antler and bone.

Examples: **igd 3858**, diameter 20-27 mm, thickness 17 mm, of wood, found in Illorpaat 3, house II (16/K). **igd 3544**, diameter 22 mm, thickness 12 mm, of antler, broken, probably a bead for the kayak deck's cross straps (*cf.* Gulløv & Kapel 1979: 71), found in Illorpaat 3, house III (20/G). **igd 137**, diameter 18 mm, thickness 18 mm, of bone, model of a harpoon bladder (?), found in Illorpaat 13 (5/L).

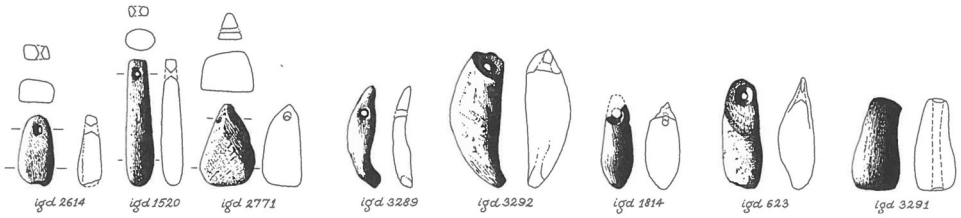


Pendants

21 pieces were found and were presumably all suspended from necklaces or the ears. The exotic material sheet copper is included as it was used for pendants in this context.

Soapstone pendants comprise four pieces and have served as earrings. Two are half finished, one has no hole, and two are complete.

Examples: **igd 2614**, 18 mm long, pierced from both sides, found in Illorpaat 3, house IV (9/J). **igd 1520**, 34 mm long, pierced from both sides, found in Illorpaat 9



(5/G). **igd 2771**, 21 mm long, pierced from both sides, half finished, found in Illorpaat 3, house III (16/L).

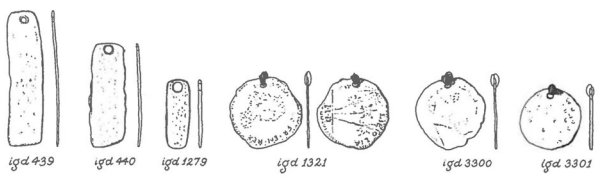
Tooth comprises nine pieces which were probably set in necklaces. Six pieces have from one to five transverse holes, while three pieces have one longitudinal hole.

Examples: **igd 3289**, 26 mm long (fox), found in Illorpaat 3, house III (18/H). **igd 3292**, 37 mm long (hooded seal), found in Illorpaat 3, house II (5/J). **igd 1814**, 23 mm long (hooded seal), the original eye is broken and a smaller hole is drilled alongside it, found in the midden, layer 12 (1/C). **igd 623**, 28 mm long (walrus), found in Illorpaat 13 (4/P). **igd 3291**, 25 mm long (hooded seal?), with a longitudinal hole, found in Illorpaat 3, house II (19/E).

Sheet copper comprises five pieces, all of which have served as earrings. They are from 14 to 35 mm long and have been pierced once.

Examples: **igd 439**, 35 mm, found in Illorpaat 13 (2/M). **igd 440**, 27 mm, found in Illorpaat 13 (2/H). **igd 1279**, 18 mm, found at Itissaalik (10/G).

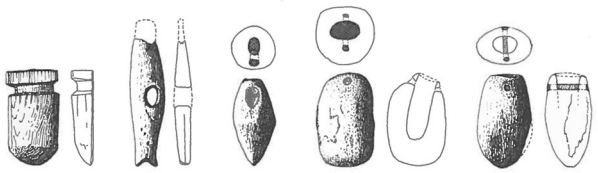
Three circular discs of sheet copper are all defined as **jettons** (Jensen 1977). They have all been pierced for use as earrings and have sinew-thread fragments preserved: **igd 1321**, diameter 18 mm, the obverse carries the inscription LVD.XV.D.G.FR.E.N. REX (i.e. Louis XV King of France) and the King's portrait in the centre; the reverse carries the inscription EX.LILIO.LIA and a motif of three lilies, which grow out of the earth, while the sun shines on them. Above the earth's surface are the small capitals RE.PF (i.e. Rechen-pfennig) and at the bottom is the signature J.J.D (*i.e.* Johan Jacob Dietzel, who became a master in 1711 and is last mentioned in 1746/48 (Neumann 1868: nr.29281)), found at Itissaalik (8/H). **igd 3300**, 18 mm diameter, obverse and reverse completely worn away, found in Illorpaat 3, house IV (14/F). **igd 3301**, diameter 15 mm, observe and reverse completely worn away, found in Illorpaat 3, house IV (S.-E. corner).



Buckles

Eight objects in this group have all functioned as a buckle or button for a line and as dress accessory. A caribou-antler toggle, two buckles without piercing of antler and wood, four line-terminal mounts of antler and tooth, and a small, domed antler disc with hole.

Examples: **igd 3511**, 24 mm, wooden buckle without hole (cf. Gulløv & Kapel 1979: 70), found in Illorpaat 3, house III (20/E). **igd 2156**, 33 mm, antler toggle (*cf. ibid.*), found in the midden, layer 12 (2/H). **igd 3542**, 23 mm, line terminal of tooth (hooded seal?) (*cf. ibid.*), found in Illorpaat 3, house III (20/G). **igd 1822**, 25 mm, line terminal



of antler, found in the midden, layer 12 (2/D). **igd 3303**, 25 mm, line terminal of tooth (hooded seal?), a small bone rivet is set across the line hole, found in Illorpaat 3, house IV (22/G).

See also **Glass beads** and **Wooden objects, indeterminable**.

Dress fragments, indeterminable

13 pieces of skin, leather, felt and wool presumably all came from garments, which cannot be identified.

The distribution of the pieces is as follows:

	Illorpaat 3 II	Midden 9	Illpt. 13	Islik.	Total
Skin	–	1	1	5	7
Leather	1	–	–	2	3
Felt	1	–	–	–	1
Wool	–	–	–	2	2
	2	1	1	9	13

Skin

The seven skin fragments are all of seal; the species has not been identified. **igd 1788** is a large piece of depilated skin; maximum measurement 410 × 240 mm; two cut-off edges are seen, together with two circular patches appliquéd onto the inner surface (diameter 25 mm); probably part of a garment; found in the midden, layer 9 (2/F). **igd 1330** is three fragments of a piece of depilated skin with a total length of 190 mm and maximum width of 50 mm; needle holes can be seen along one edge with twisted sinew thread partly preserved; found at Itissaalik (12/G); probably part of a kayak jacket. **igd 1332** is a fragment with preserved fur and is sewn together with a preserved seam and sinew thread; measures 80 × 80 mm; part of a kamik (?); found at Itissaalik (13/J). **igd 1339** is a fragment of depilated skin with seams and puckers (-kamik?); measures 100 × 55 mm; found at Itissaalik (17/H). **igd 1340** is two adjoining fragments of depilated skin with seam and offcuts (kamik?); total length 300 mm and maximum width 65 mm; presumably belong to **igd 1339**; found at Itissaalik (16/F). **igd 696** is a piece of compressed kamik(?), stitching and pucking are visible; found in Illorpaat 13 (6/H). **igd 1217** is a piece of a line, 73 mm long, found at Itissaalik (9/I).

None of the above skin fragments are illustrated.

Leather

The three leather fragments can be distinguished from the previous group because of the heavy quality and thickness of the material. **igd 3298** measures 50 × 45 mm, is 6

mm thick and has two circular perforations (7 mm); found in Illorpaat 3, house II (15/L). **igd 1341** is a rectangular offcut, 150 mm long and a maximum of 20 mm wide, thickness 2.5 mm; found at Itissaalik (9/L). **igd 1338** is a 300 mm long offcut, has acute-angled ends and measures 55 mm across the middle; 2 mm thick; along one end a row of needle holes can be seen; two runs of continuous, plaited thread have been sewn into the surface 85 mm apart; probably of European manufacture; found at Itissaalik (10/J).

None of these leather fragments are illustrated.

Felt

igd 3297 is a 120 × 50 mm fragment; found in Illorpaat 3, house II (16/K). The nearest site where felt has been found archaeologically is Hope Colony, where it is the material of a hat (Gulløv & Kapel 1979: 114-115).

Not illustrated.

Wool

Two woven fragments are probably from the same piece. **igd 1325** measures 25 × 30 mm and was found at Itissaalik (10/G). **igd 1348** measures 175 × 20 mm and was found at Itissaalik (9/H). Common to the two fragments is that the warp thread is s-spun with 2 twills and 5 picks per cm and that the weft is s-spun with one twill and 6 picks per cm. These fragments with 2/1 twill seem looser in the weave than the pieces from Hope Colony which are all 2/2 twill (*cf.* Gulløv & Kapel 1979: 188-189) and probably do not come from there. The fragments **igd 1325** and **1348** may also have been woven in Greenland, since the merchant Niels Axelsen Rasch in 1744 proposed to the Missionary College that it send 5-6 families from northern Norway to the fjords at Godthåb with sheep and cattle. Among the things that were suggested to be sent along is "a loom for weaving homespun and linen" (Ostermann 1942: 94).

Not illustrated.

The European garment fragments, which are the find's three leather pieces, one felt fragment and two woolen pieces, can all be dated to the time after 1721, when the Dano-Norwegian colonization began. The skin fragments probably all came from the upper part of the Greenlandic costume and from the kamik; the above-mentioned stitchings and seams are all in back-stitch and whip-stitch and the special sewing technique where the thread is led half-way through the skin, e.g. the circular patches mentioned in connection with **igd 1788** (*cf.* Rix 1979: 36-38). This sewing technique has been found from the 15th century onwards (Hansen *et al.* 1985: 155,197).

Religious objects

The religious equipment constitutes a very small group of 13 objects. In addition there is a buzzer-like object of bone and three probable drumsticks of wood (see under the group **Indeterminable & Divers objects**).

It is interesting that the drum can be demonstrated by archaeological means to have been in use in the second half of the 18th century, in spite of the missionaries' persistent attempts to eradicate it. Hans Egede saw the drum being used: "They have a small drum, which is a ring of wood, or a piece of whale rib with a handle, covered by a thin skin. On that one of them beats with a stick and with it sings some songs concerning either their exploits in general or his own in particular; with him the whole chorus joins in, men and women" (1925: 376-379).

The distribution of the found objects is shown on the ground plans (Figs. 80-83).

Religious objects

The 13 objects are eight drum handles, one drum frame, two wooden penes, a buzzer and an amulet. The distribution is as follows:

	Illorpaat 3			**Midden**			**Islik.**	**Total**
	III	**II**	**I**	**12**	**8**	**4**		
Drum handle	3	1	1	1	1	1	–	8
Drum frame	1	–	–	–	–	–	–	1
Penes	–	–	–	–	2	–	–	2
Buzzer	–	–	–	–	–	–	1	1
Amulet	–	–	–	–	–	1	–	1
	4	1	1	1	3	2	1	13

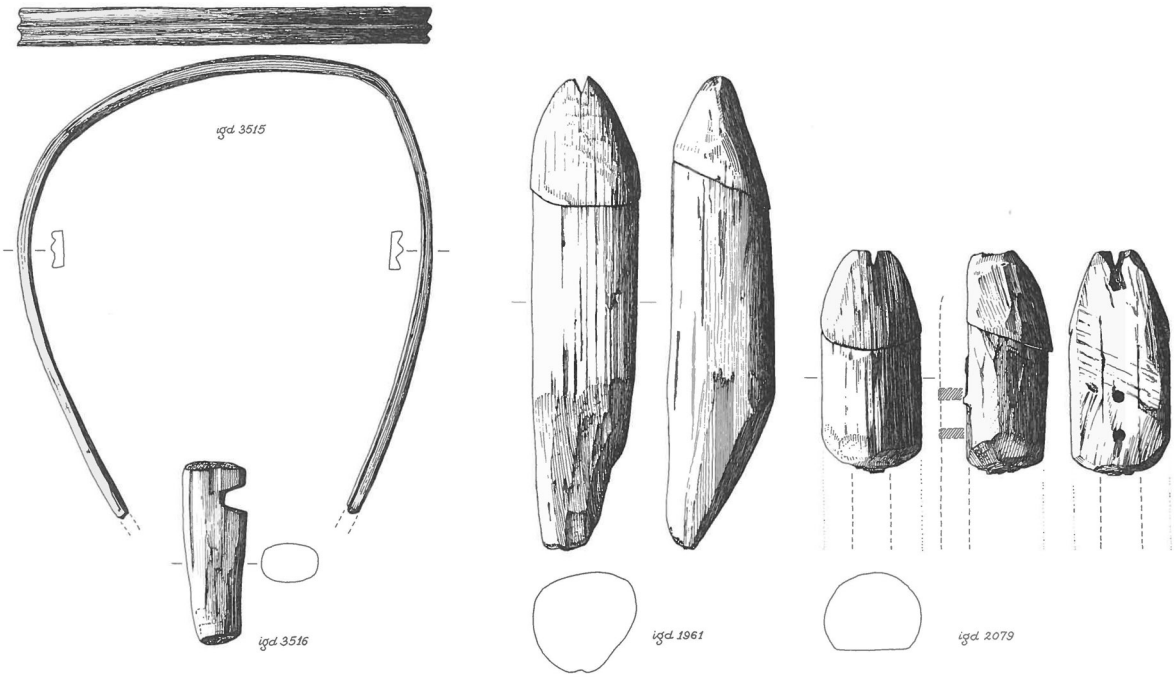
Drum handles and drum frame

The found examples are all of wood and are diminutive pieces, which might well have been toys (*cf.* the drum handle **igd 3948** under **Toys**). The handles are all shortened to a length of between 88 and 42 mm.

The first European information about the drum in the Kangeq area is given by John Davis in 1585 (Hakluyt 1589: 778). When Greenland was colonized in 1721 the drum was described as being used for purposes other than accompaniment to songs. Hans Egede thus notes in his diary of 15th January 1729: "On the 15th I travelled on official business to the Greenlanders on the old colony's island [i.e. Hope Island] and stayed there until the 19th, and taught them the word of God. In one of the houses I found occasion to upbraid some, about whom I shortly before had heard that they had recently engaged in the usual whore-game, which is of this nature: Men and married women gather as for a meeting, whereupon one of the menfolk steps into the middle of the floor and takes a drum to beat and sings a whore-song, and thereby invites one among the women to whore-play with him, whereupon he sets the drum down on the floor and goes behind a curtain, which they have hung for this purpose at one end of the house [...]" (1925: 216-217). Egede punished them for it with the cat-o'-nine-tails and this was the start of the missionaries' struggle to abolish the drum. When the German Brethren mission took over the Kangeq area as a missionary

field in the 1740s the Europeans enlisted the assistance of the converted Greenlanders, also when denouncing the drum (Israel 1969: 50). It would be tempting to see these diminutive objects as the expression of an attempt to maintain a tradition at variance with the surrounding, oppressive community (?).

Examples: **igd 3516**, 49 mm-long handle, found in Illorpaat 3, house III (21/F). **igd 3515**, drum frame with two concave grooves for fastening the skin, presumably broken at the joint, found in Illorpaat 3, house III (21/F). The two illustrated objects might have come from the same instrument.



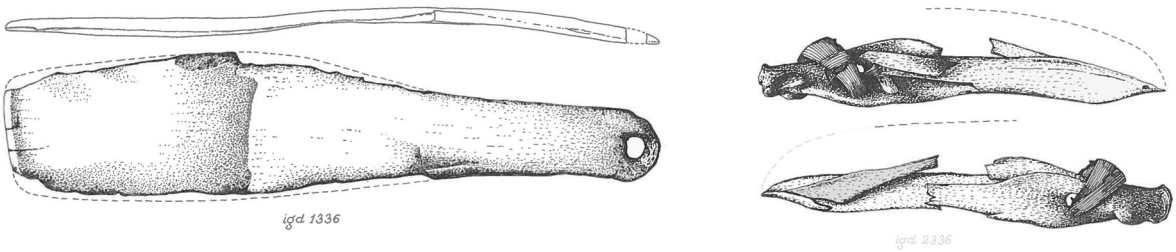
Wooden penes

Two wooden carvings are naturalistic representations of a penis. A similar piece, of bone, was found in Kangaamiut (Mathiassen 1931: 186-187). The use of these objects in a ceremonial or religious context has been demonstrated both in Greenland (Birket-Smith 1924: 402) and in Canada (Mathiassen 1928: 228). They may have been used in the context cited above, which would have been provocative to the pietist missionaries in the 18th century and would have strengthened their resolve to abolish the drum. A penis was also a piece of equipment for *mitaartut*, i.e. people who celebrate mid-winter and the Sea Woman (Kleivan 1960: 5).

igd 1961, 124 mm, found in the midden, layer 8 (1/C). **igd 2079**, 59 mm, with a scarf face and two peg holes on the underside for an extension, found in the midden, layer 8 (2/D). The description of the function of **igd 2079** is supplemented by Therkel Mathiassen's observations in Canada: "...it could be raised and lowered; when it was raised the audience had to laugh; when it was lowered, they had to look grave" (1928: 228).

Buzzer

igd 1336, 174 mm, of caribou antler, found at Itissaalik (13/G). The identification of this object is rendered somewhat uncertain, in that a buzzer usually has notches along



the edge (*cf.* Birket-Smith 1924: 421; Thalbitzer 1914: 653), although they do not necessarily have to be present (*cf.* Mathiassen 1930: pl.20(23)). Compare with **L13.3249** from the Kangeq midden.

Amulet

igd 2336, 108 mm long, mandible of a great auk tied with strips of baleen, the right side and the front part of the left side are preserved, the hindmost part is twisted 180° in relation to the front part, found in the midden, layer 4 (1/H).

Toys & Games

This group comprises 184 objects. The described objects are however not exclusively toys and games, but also includes objects which are associated with general leisure pursuits.

Hans Egede mentions drum-songs, dancing, ball games, catching games, i.e. *ajaraq*, and the game of "turning stick", in which the front end points to the winner (1925: 382). Among these only the drum, the *ajaraq* and the spinning-top are represented in the present find.

Children's play with scaled-down versions of the adult's tools can be seen in the imitations of hunting and fishing implements, women's equipment and household utensils. The kayaks and dolls have presumably served a similar purpose. Boat models have also been able to forestall capsizing accidents (*cf.* Dalager 1915: 57).

Men's tools are not represented in model form in the present find. This is because there is no educational value in a knife model as opposed to the real thing. The same

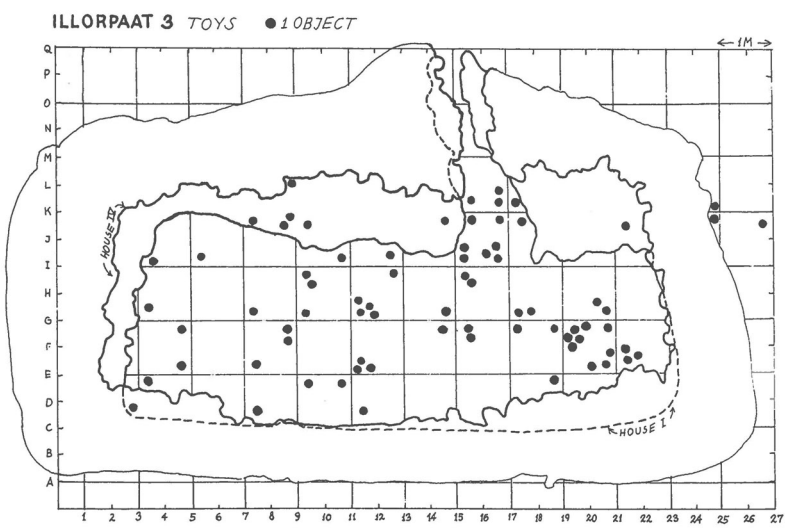


Fig. 84. *The distribution of toys in Illorpaat 3, houses I-IV. Each dot represents one object.*

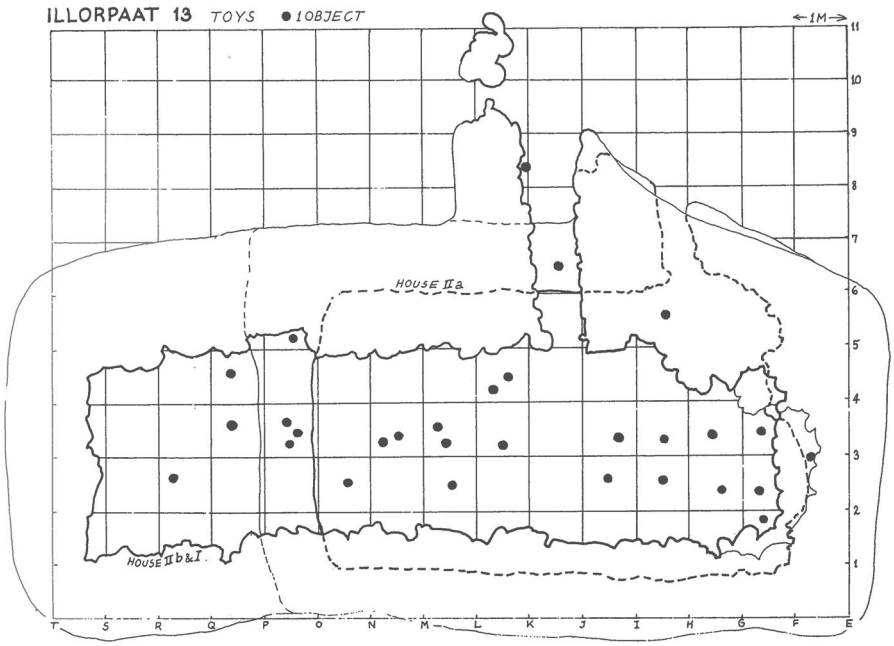


Fig. 85. *The distribution of toys in Illorpaat 13, houses I-IIb. Each dot represents one object.*

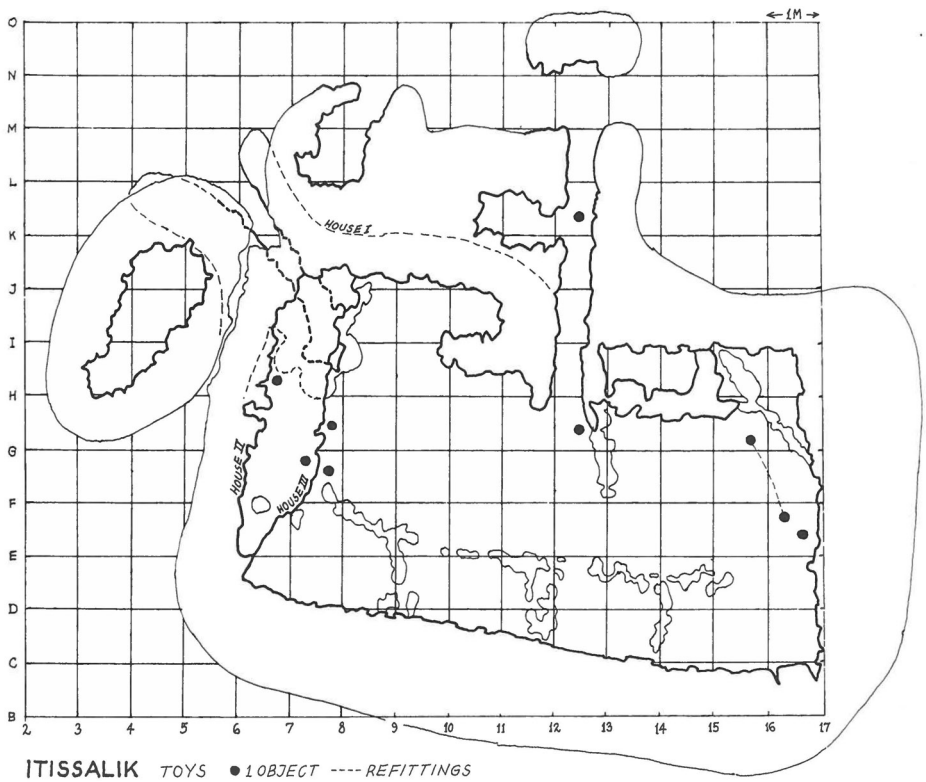


Fig. 86. *The distribution of toys at Itissaalik, houses I-III. Each dot represents one object.*

was the case with Erik Holtved's finds in the Thule District, where there was only one model of a man's tool among the 590 objects in the games and toys group (Holtved 1944,II: 56-58).

There is however a certain amount of differentiation between the sexes in this group, as half of the objects fall within the Hunting, Fishing and Transport groups, while nearly a quarter can be identified as Women's equipment and Household utensils.

The objects lie evently distributed across the whole of the floor areas in Illorpaat 3 and 13 (Figs. 84-85). In Illorpaat 9 there was only one toy, a kayak model, which might indicate that a boy had lived in the house (house I). At Itissaalik there were only models of lamps and cooking pots, situated in the house passage and along the side platforms (Fig. 86).

European influence can be seen in the Norseman-like doll, **igd 360**, a woman with a shawl, **igd 3924**, and the three-edged thrusting weapon, **igd 4265**. All from the 18th century.

Toys

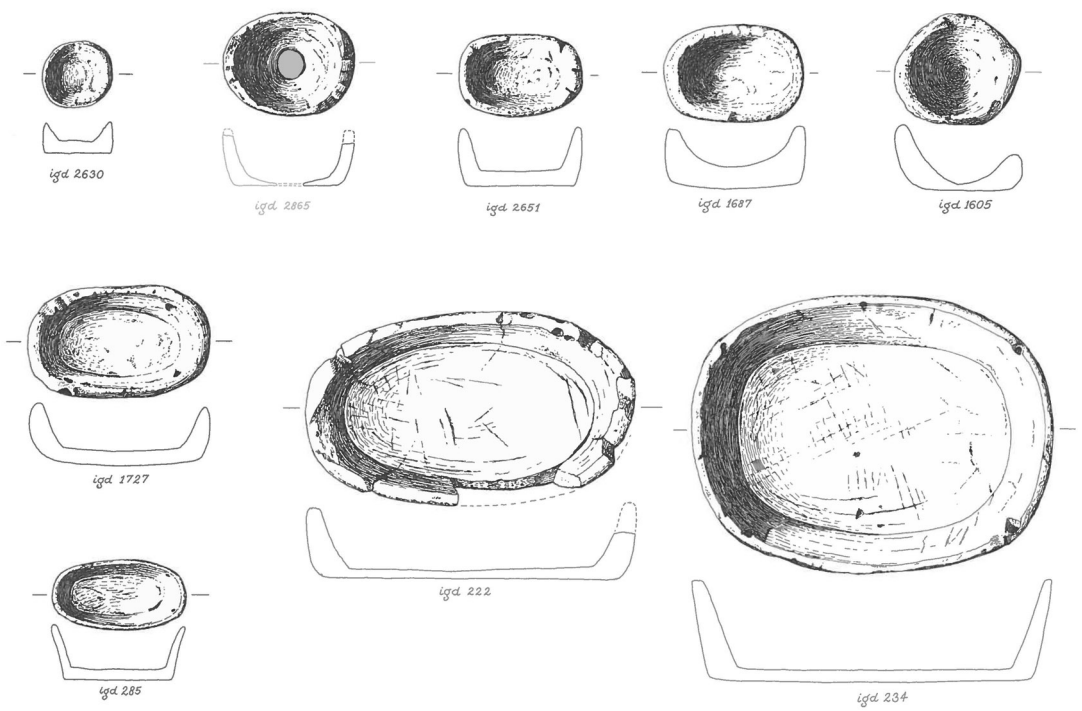
The 184 objects in this group are distributed in all the examined sites as follows:

	Illorpaat 3					Midden					Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	9	8	4	stray finds				
Cooking pots	5	4	1	–	1	4	–	1	2	–	–	8	3	29
Lamps	5	2	–	–	1	–	–	–	1	–	–	3	5	17
Dolls	–	5	5	5	4	3	–	2	2	–	–	4	–	30
Ajaraqs	–	3	–	–	–	3	–	–	–	1	–	1	–	8
Kayaks	2	2	8	7	8	–	1	1	6	–	1	4	–	40
Paddles & Oars	–	–	6	2	4	–	–	–	–	–	–	1	–	13
Harpoon bladder	–	–	–	1	–	–	–	–	–	–	–	–	–	1
Bird–dart shafts	–	–	1	1	–	–	–	–	1	–	–	1	–	4
Side prongs	2	–	–	1	–	–	–	2	4	–	–	1	–	10
Throwing boards	–	–	–	–	2	–	–	1	–	–	–	–	–	3
Harpoons & Lances	1	–	–	–	2	–	–	–	–	1	–	1	–	5
Bladder dart	–	–	1	–	–	–	–	–	–	–	–	–	–	1
Weapon points	–	–	1	–	–	–	–	2	–	–	–	1	–	4
Bows	–	–	–	–	2	–	–	–	–	–	–	4	–	6
Arrows	–	–	2	–	–	–	–	–	1	–	–	–	–	3
Sword	–	–	–	1	–	–	–	–	–	–	–	–	–	1
Ulo	–	–	1	–	–	–	–	–	–	–	–	–	–	1
Scoops	–	1	–	–	–	1	–	–	–	–	–	–	–	2
Spins	–	–	–	–	–	–	1	–	–	–	–	1	–	2
Tops	–	1	–	–	1	1	–	–	–	–	–	–	–	3
Drum handle	–	–	–	1	–	–	–	–	–	–	–	–	–	1
	15	18	26	19	25	12	2	9	17	2	1	30	8	184

Cooking pots

All the found examples display the same features as the full-size pots, i.e. flat bottoms and rounded or square-cut rims. Besides oval specimens round ones also occur. The suspension, where it is present, i.e. marked as a piercing in the rim; it would be difficult to indicate other types (e.g. bead) on the small objects. Nine pots were found, three in Illorpaat 3, three in the midden and three in Illorpat 13.

Examples: **igd 2630**, circular, maximum rim-diameter 19 mm and total height 8 mm, found in Illorpaat 3, house IV (12/F). **igd 2865**, oval with pierced bottom, length 35 mm, width 28 mm, height 15 mm, one suspension hole is seen, found in Illorpaat 3, house III (12/H). **igd 2651**, oval pot, measures 34 × 22 × 16 mm, found in Illorpaat 3, house IV (12/H). **igd 1687**, oval, measures 38 × 26 × 15 mm, found in the midden, layer 12 (1/C). **igd 1605**, circular, measures 35 × 29 × 26 mm, found in the midden, layer 12 (1/C). **igd 1727**, oval, measures 50 × 30 × 15 mm, suspension holes are seen, found in the midden, layer 12 (1/C). **igd 222**, oval with partly broken rim, measures 85 × 50 × 18 mm, suspension holes are seen, found in Illorpaat 13 (7/K). **igd 234**, oval with a suggestion of four corners, measures 97 × 73 × 27 mm, suspension holes are seen, found in the house passage of Illorpaat 13. **igd 285**, oval, measures 36 × 19 × 14 mm, suspension holes are seen, found in Illorpaat 13 (3/M).

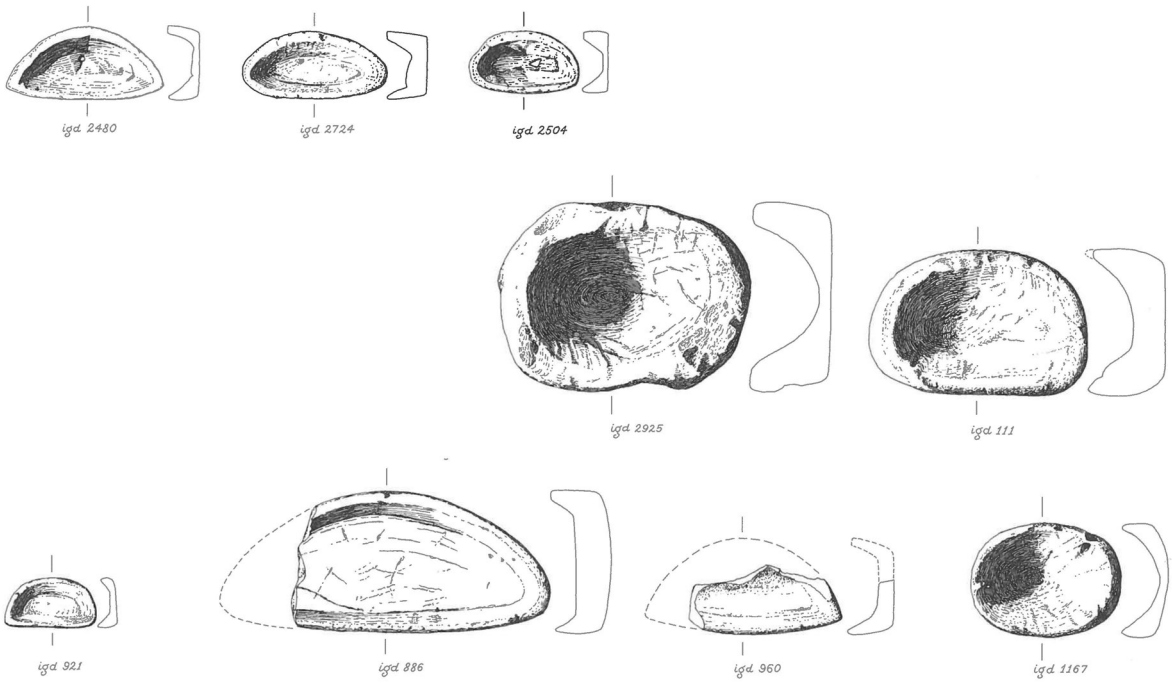


Lamps

None of the found examples has a dividing ridge, one has a wick ledge. All the finished models are crescent-shaped. On one model suspension holes are indicated (!).

Examples: **igd 2480**, 40 mm long, 19 mm wide, 7 mm high, found in Illorpaat 3, house IV (19/G). **igd 2724**, 38 mm long, 18 mm wide, 10 mm high, found in Illorpaat 3, house IV (15/K). **igd 2504**, 28 mm long, 15 mm wide, 6 mm high, found in Illorpaat 3, house IV (11/J). **igd 2925**, possibly an unfinished piece, 67 mm long, 50 mm wide, 20 mm high, found in Illorpaat 3, house III (27/K). **igd 111**, 58 mm long, with a

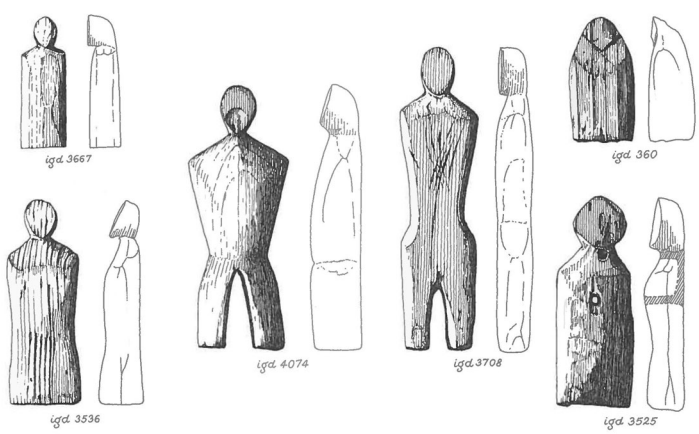
wick ledge, found in Illorpaat 13 (4/N). **igd 921**, 24 mm long, found at Itissaalik (8/H). **igd 886**, half a lamp, 68 mm long, found at Itissaalik (8/G). **igd 960**, fragment, 40 mm long, found at Itissaalik (13/L). **igd 1167**, 40 mm long, 12 mm high, suspension holes are seen, found at Itissaalik (13/H).



Dolls

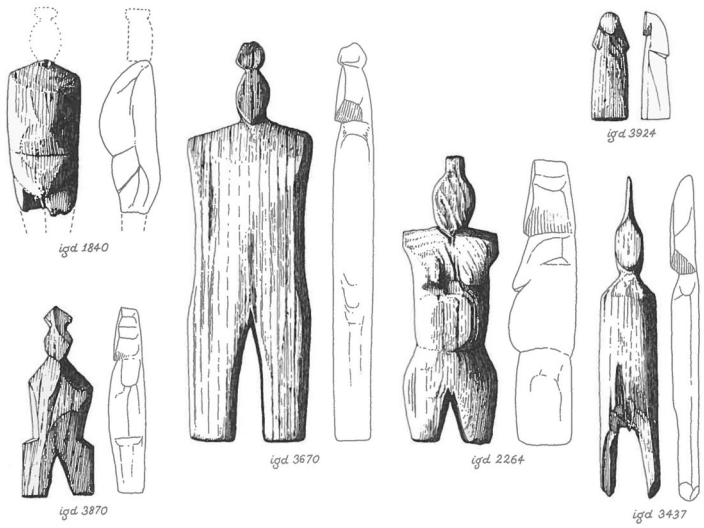
None of the wooden dolls in the finds had arms. There were male and female dolls, with or without legs. Stratigraphically they were found everywhere from top to bottom. 21 were men, 11 with legs, and nine were women, seven with legs. The size of the male dolls varied from 25 to 112 mm. The female dolls varied from 27 to 106 mm.

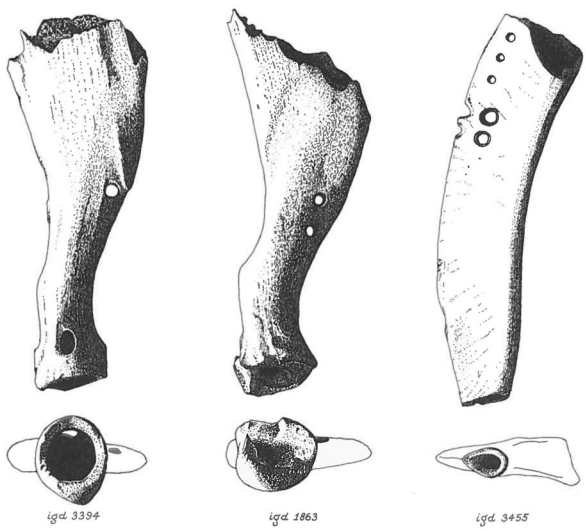
Examples of male dolls: **igd 3667**, 35 mm, found in Illorpaat 3, house II (21/F). **igd 3536**, 54 mm, found in Illorpaat 3, house III (21/H). **igd 4074**, 70 mm, found in Illorpaat 3, early Thule (15/K). **igd 3708**, 80 mm, cutting-marks on chest and back from secondary use as a cutting board (?), found in Illorpaat 3, house II (12/F). **igd 3525**, 55 mm, holes for lashing, found in Illorpaat 3, house II (8/H). **igd 360**, 34 mm, the



resemblance to a cowled Norseman has been discussed, without however denying the Eskimo character of the piece (Gulløv 1983a: 123), found in Illorpaat 13 (4/P).

Examples of female dolls: **igd 3670**, 106 mm, found in Illorpaat 3, house II (22/F). **igd 3870**, 50 mm, found in Illorpaat 3, early Thule (3/F). **igd 2264**, 75 mm, found in the midden, layer 4 (2/H). **igd 1840**, missing head and legs, 40 mm, indication of *natit* (i.e. house-garment), found in the midden, layer 4 (2/A). **igd 3437**, 87 mm, indication of the tall hood (*cf.* Mathiassen 1934: pl.1(19), 1930: pl.18(18); Holtved 1944,I: pl.40 (24,25,27)), found in Illorpaat 3, house III (20/G). **igd 3924**, 27 mm, the resemblance to a Norsewoman has been discussed, a European woman from the colonial age has been suggested because of the shawl over the shoulders (Gulløv 1983a: 123; Mathiassen 1934: pl.10(9)), found in Illorpaat 3, house I (16/G).





Ajaraqs

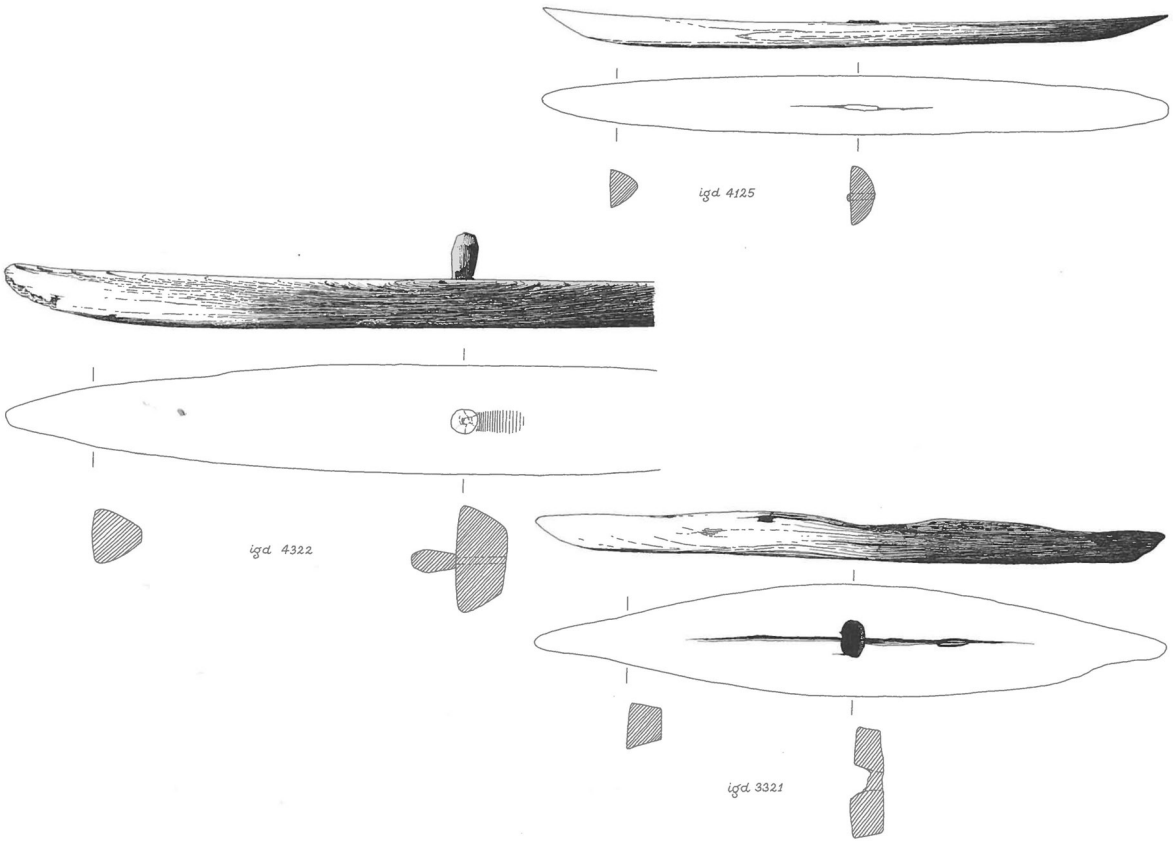
This catching game is made of seal bone (six pieces) or caribou antler (two pieces). The type is the simple version with a fastening-hole for the stick and a hole at the end of the bone or antler. The sticks for the game could not be identified with any degree of certainty, but must be among the groups of Bodkins & Needles, Bone objects, various and Wooden objects, various.

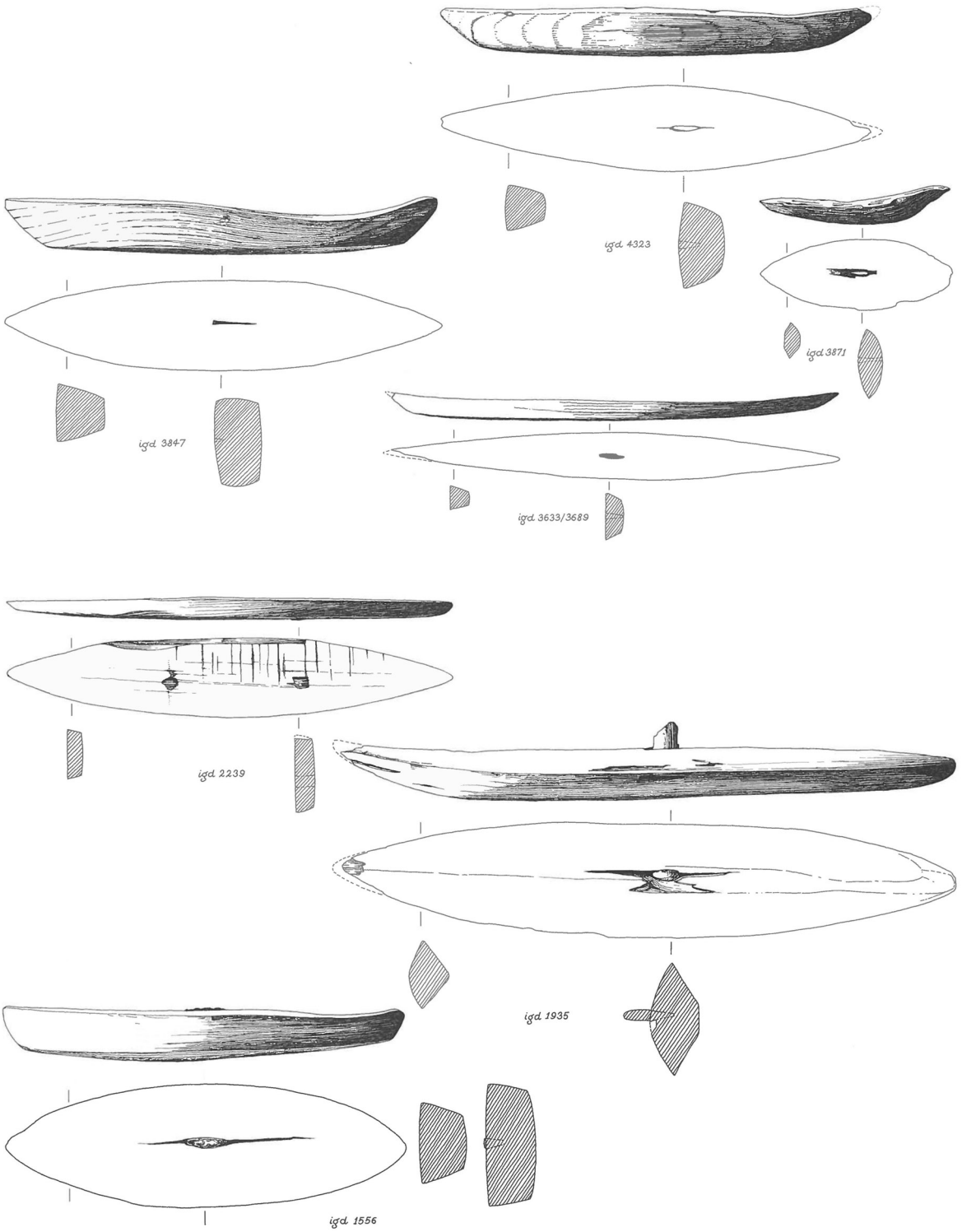
Examples: **igd 3394**, 99 mm long, of seal bone, found in Illorpaat 3, house III (9/G). **igd 1863**, 100 mm long, of seal bone, found in the midden, layer 12 (1/G). **igd 3455**, 102 mm long, of antler, found in Illorpaat 3, house III (17/J).

Kayaks

All the found toy boats were kayaks, no umiaq could be demonstrated. They have the usual characteristics of the kayak, pointed stem and stern, and on 26 models a person is marked by a flat or round wooden nail. The models vary from very broad to slender vessels. The bottoms can be flat or rounded. The deck is most often flat, but domed examples occur. These variations cannot form the basis for a chronology, since they are found in all the examined localities. A number of the models are broken. The length of the complete models varies from 53 to 200 mm. In the models there are features from almost the entire Eskimo region, which makes it difficult to come to any typological conclusion on the total find. The structure of the wood has determined the form of the final product. Similarities to types from outside Greenland must be regarded as a matter of curiosity (*cf.* Holtved 1944,I: 284).

Examples from Illorpaat 3: **igd 4125**, 168 mm, slim type, rounded bottom, raised stem, found in early Thule (8/H). **igd 4322**, missing the stern, 218 mm, slim type, rounded bottom, straight sides, raised stem, found in early Thule (17/G). **igd 3321**, 170 mm, slim type, level bottom, straight sides, pointed stem of Thule District form, found in house IV (16/G). **igd 4323**, 140 mm, broad type, rounded bottom and deck, straight sides, upcurving stern, found in early Thule (17/G). **igd 3847**, 140 mm, broad type, straight bottom and deck, rounded sides, upcurving stern, found in house I (13/I). **igd 3871**, 61 mm, broad type, rounded bottom and deck, upcurving ends, found in early Thule (4/E). **igd 3633/3689**, 146 mm, slim type, straight bottom, sides and deck, upcurving stem, found in house II (18/K-L).

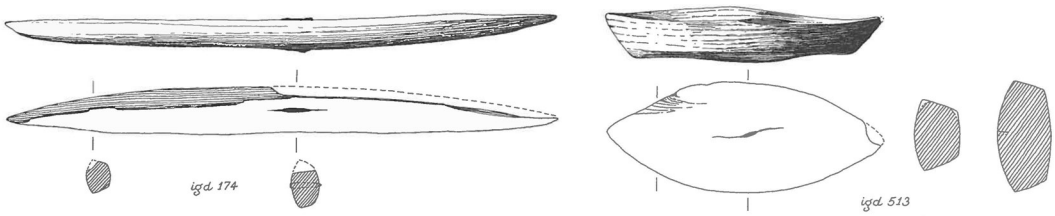




Examples from the midden: **igd 2239**, 144 mm, broad type, flat bottom, straight deck, reused wood with two holes, found in layer 4 (1/D). **igd 1935**, 200 mm, broad type, straight bottom and sides, very domed deck, upcurving stem, downcurving stern, the type is found outside Greenland (!), found in layer 4 (2/B).

The example from Illorpaat 9: **igd 1556**, 129 mm, broad type, rounded bottom, straight sides and deck, the stem and stern curve slightly upwards (4/C).

Examples from Illorpaat 13: **igd 174**, 147 mm, slim type, straight bottom and deck, rounded sides (5/Q). **igd 513**, 75 mm, broad type, possibly a dinghy, straight bottom and sides, domed deck (6/I).



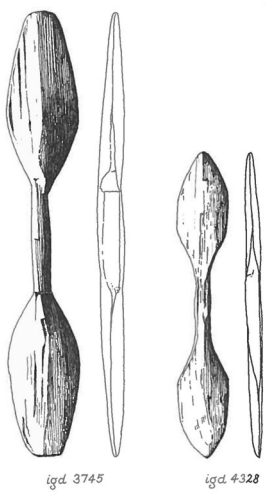
Paddles & Oars

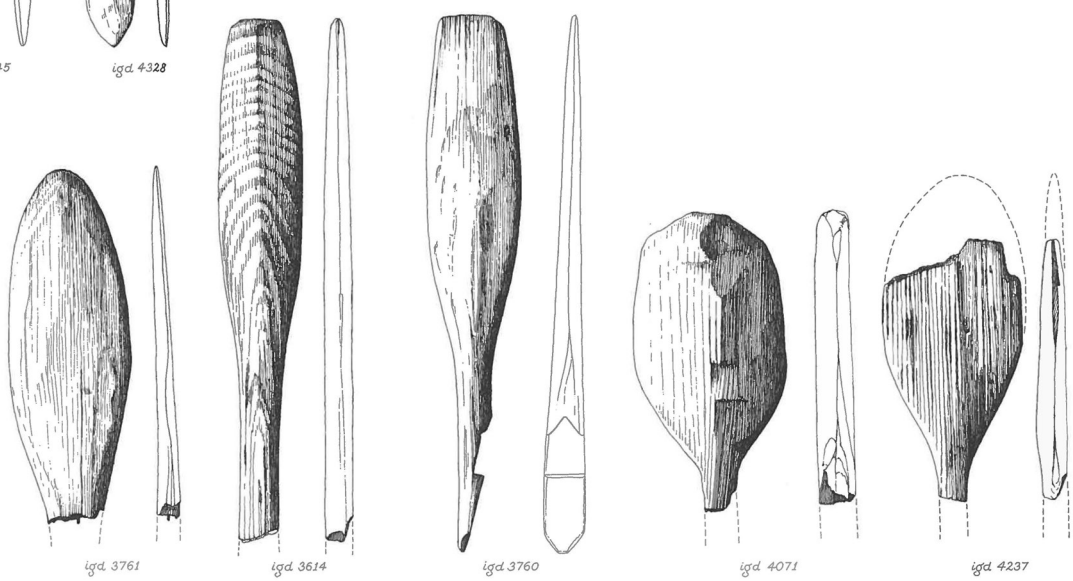
Two complete specimens of paddle (double-bladed) were found, the other eight being broken so only one blade remained. It cannot be determined whether these eight specimens represented the umiaq's steering oar or were half of a paddle. One specimen was found in Illorpaat 13, all the others in Illorpaat 3. Three umiaq oars were found. All the illustrated examples are from Illorpaat 3.

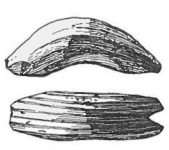
Examples of double paddles: **igd 3745**, 117 mm, with straight ends, found in house II (18/G). **igd 4328**, 80 mm, with pointed ends, found in early Thule (17/G). Examples of paddle blades: **igd 3761**, 93 mm, broken, found in house II (20/G). **igd 3614**, 137 mm, broken, found in house II (16/J).

Example of paddle or umiaq steering oar: **igd 3760**, 142 mm, with scarfing ("French lock") indicated, found in house II (20/G).

Examples of umiaq oars: **igd 4071**, 78 mm, broken, found in early Thule (15/H). **igd 4237**, 69 mm, broken, found in early Thule (21/L).

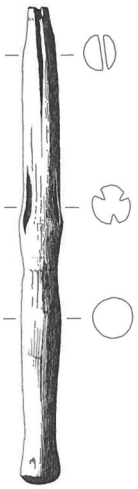






Harpoon bladder

A 40 mm long wooden figure, **igd 3961**, is interpreted as a harpoon-bladder model or seal image (?). Found i Illorpaat 3, house I (21/F).


igd. 3918

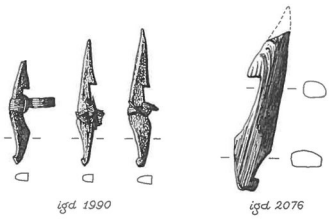
Bird-dart shafts

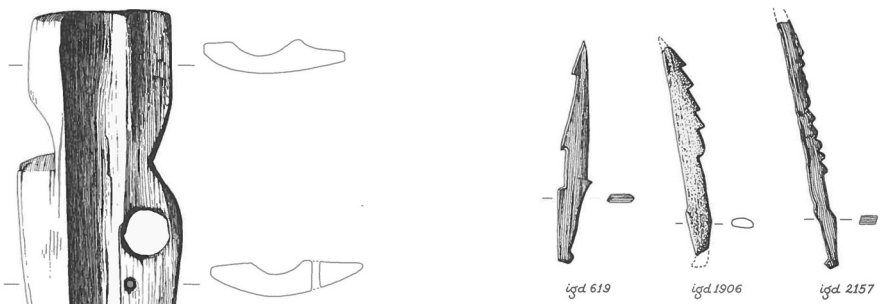
The four examples found all have grooves for side prongs. The illustrated, complete, specimen, **igd 3918**, is 127 mm long, found in Illorpaat 3, house I (15/H).

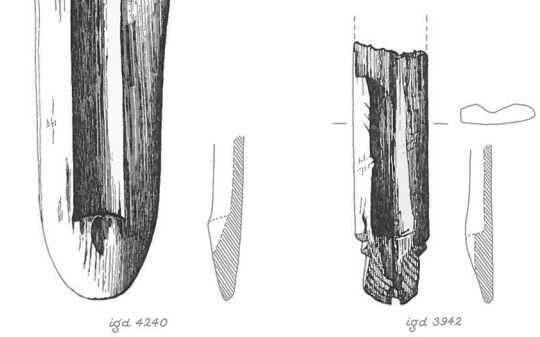
Side prongs

The found side prongs are from models of bird darts (seven pieces) and leisters (three pieces). The materials are caribou antler, wood and baleen.

Examples: **igd 1990** is three antler bird-dart side prongs with baleen lashing *in situ*, they measure 27, 34 and 37 mm, found together in the midden, layer 4 (1/C). **igd 2076**, 44 mm, of wood, for bird dart, found in the midden, layer 4 (1/D). **igd 619**, 58 mm, of baleen, for bird dart, found in the midden (2/B). **igd 2157**, 65 mm, of baleen, for leister, found in the midden, layer 8 (2/H). **igd 1906**, 55 mm of antler, for leister, found in the midden, layer 8 (2/B).


igd. 1990 igd. 2076


igd. 619 igd. 1906 igd. 2157

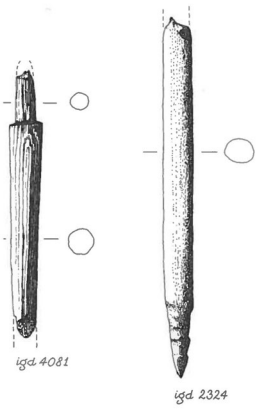

igd. 4240 igd. 3942

Throwing boards

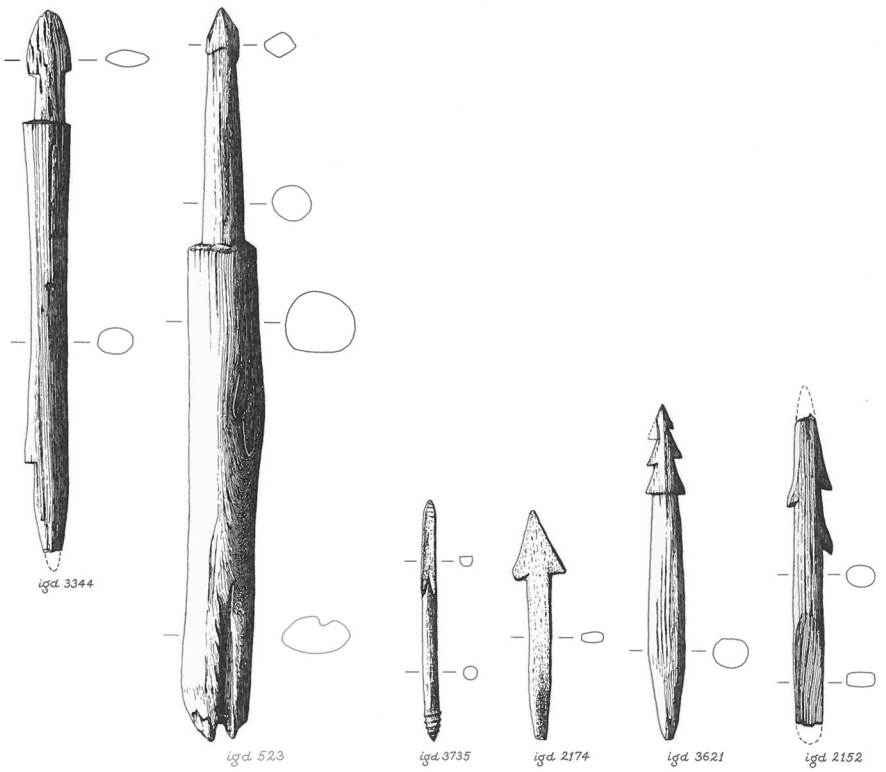
igd 4240, 169 mm, throwing board for bird dart, a highly naturalistic model, found in Illorpaat 3, early Thule (18/J). **igd 3942**, 69 mm, finely carved wood, perhaps served as an amulet case (?), found in Illorpaat 3, early Thule (18/F).

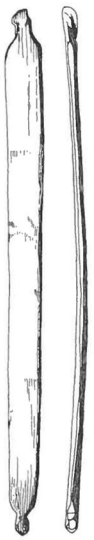
Harpoons & Lances

Three small shafts with a tenon at one end may have been models of harpoon shafts or lances. Two are of wood and one of whale bone. Two wooden lance models somewhat resemble whaling harpoons.



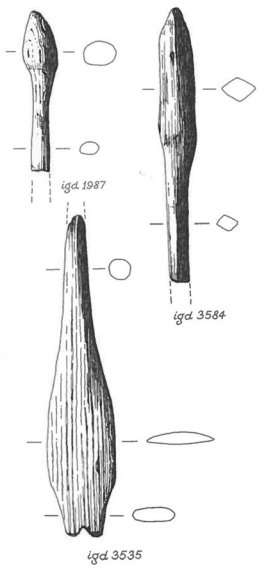
Examples: **igd 4081**, 70 mm, of wood, lance or harpoon, found in Illorpaat 3, early Thule (17/J). **igd 2324**, 94 mm, of bone, lance or harpoon (rear end of arrow shaft?), found in the midden as a stray find. **igd 3344**, 143 mm, of wood, found in Illorpaat 3, house IV (22/K). **igd 523**, 195 mm, of wood, lance or whaling harpoon, found in Illorpaat 13 (3/G).





Bladder dart

A complete model of a bladder-dart head with barbs and screw thread, **igd 3735**, is an exact copy of the real thing, 63 mm, of caribou antler, found in Illorpaat 3, house II (16/J).



Weapon points

The materials of these possible models are wood and caribou antler.

Examples: **igd 2174**, 60 mm, of antler, found in the midden, layer 8 (1/G). **igd 3621**, 88 mm, of wood, meat or blubber fork (?), found in Illorpaat 3, house II (17/J). **igd 2152**, 83 mm, of wood, tip broken, found in the midden, layer 8 (2/H).

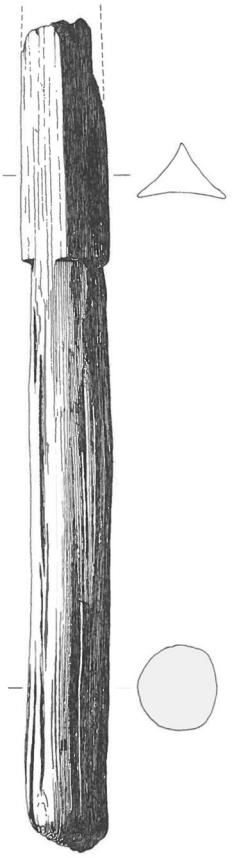
Bows

The material is wood. The terminals have the shape of a knob, as on the illustrated example, or a tenon.

Example: **igd 4295**, 137 mm, complete, found in Illorpaat 3, early Thule (8/F).

Arrows

The material is wood. Two heads and one shaft were found. **igd 1987**, 42 mm, front end, found in the midden, layer 4 (2/B). **igd 3584**, 72 mm, front end, found in Illorpaat 3, house II (10/H). **igd 3535**, 85 mm, rear end, found in Illorpaat 3, house II (21/G).


igd 4265

Sword

A wooden model sword, **igd 4265**, 217 mm, broken, found in Illorpaat 3, house I (8/D). The three edges on the blade and the concave sides in the section resemble the swords found in Hope Colony (*cf.* Gulløv & Kapel 1979: 185). The prototype must be sought in the beginning of the colonial age.

Ulo

igd 3747, 33 mm long, 19 mm high, of wood, handle, found in Illorpaat 3, house II (19/E).

Scoops

igd 2930, 25 mm long, of soapstone, found in Illorpaat 3, house III (10/E). **igd 1625** is an unfinished soapstone piece, same shape as the other, found in the midden, layer 12 (1/F).

Spins

Two wooden specimens were found, one of them broken.

Example: **igd 466**, 92 mm, found in Illorpaat 13 (3/Q).

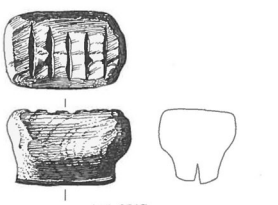
Spinning tops

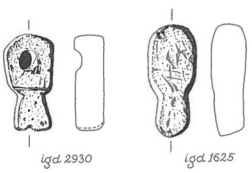
Three specimens were found, one of them broken.

Examples: **igd 3282** is a discus, 80 mm in diameter, found in Illorpaat 3, house III. **igd 2332** is a discus, 77 mm in diameter, has notches at regular intervals along the edge, found in the midden, layer 12 (field H).

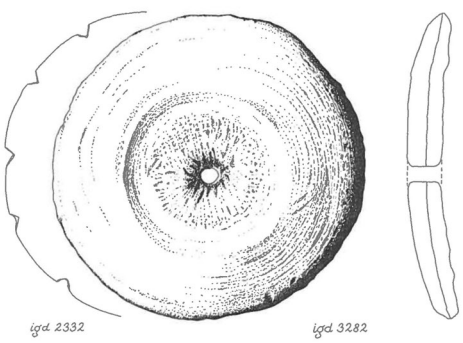
Drum handle

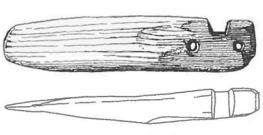
igd 3948, 66 mm, of wood, found in Illorpaat 3, house I (18/H).


igd 3747


igd 2930 igd 1625


igd 466


igd 2332 igd 3282


igd 3948

Indeterminable & Divers objects

A large number of objects, 1,028, could not be precisely identified. They are therefore described by their general function, such as baleen knots, lists, and mounts, but their application is not specified. Several carvings in bone and wood are of such remarkable shapes that any, even approximate, identification has been impossible.

The materials used tell a certain amount about raw materials and their exploitation. Soapstone was primarily used for the manufacture of lamps and cooking pots and constitutes merely 5% of the objects in this group of finds. Objects of baleen and baleen knots constitute 6%, which is a modest amount and indirectly confirms that the baleen whale is or was not present in the coastal areas of Godthåb District. Bone objects constitute 15% of this group of finds. Wooden objects are by far the most numerous, all of 73%, or almost three quarters, of the largely unidentifiable artefacts are made of wood. This is indirectly corroborated by the historical sources, which all emphasize the great amounts of driftwood that were to be found along Greenland's west coast.

Soapstone, indeterminable

53 pieces of soapstone cannot be identified with any precision. Most of the fragments can be defined as sherds from cooking pots, lamps or suchlike. These fragments may have been reworked by piercing, cutting or scratching.

	Illorpaat 3					Midden	Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12				
Sherds	7	7	3	1	1	–	–	6	10	35
Other	6	1	1	–	1	1	1	5	2	18
	13	8	4	1	2	1	1	11	12	53

Sherds

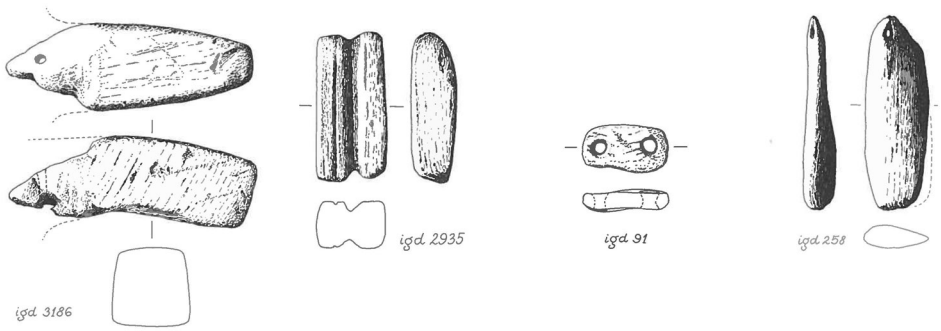
Examples: **igd 3117**, originally the rim of a cooking pot or dividing ridge of a lamp, an approximately square block pierced from all sides so that the holes meet in the centre, found in Illorpaat 3, house I (6/G), not illustrated. **igd 1626**, small pear-shaped piece like the ornamental pendant igd 2771, but without a hole, found in the midden, layer 12 (1/F), not illustrated. **igd 1506**, unfinished toy lamp (?) without hollowing, the original cooking-pot sherd suggests the crescent-shaped lamp with convex underside and concave upper, found in Illorpaat 9 (3/B), not illustrated.

Besides the described types, which come in several variations, there are quite a few sherds with incisions of more or less geometric figures or with non-figurative grooves. The figures can be described as oval or square shapes. They were all found in Illorpaat 13.

Other

A third of this indeterminable group of finds are the so-called amorphous pieces, some of them pieces of raw material with traces of shaping, such as lumps with several cut or hewn surfaces or disc-shaped pieces. Others have been worked to a greater degree and have served particular purposes.

Examples: **igd 3186**, 66 mm-long fragment of a handle, the hole in the broken end of the piece suggests a subsequent, secondary use, originally the handle of a beaker or a Norse lamp (*cf.* Roussel 1941: 267; Nørlund & Stenberger 1934: 128), found in Illorpaat 3, early Thule (11/D). **igd 2935**, 38 mm on the longest side, encircled by a groove, fishing implement (?), found in Illorpaat 3, house III (22/L). **igd 91**, 22 mm, has two holes and looks like a buckle (?), originally a side sherd (?), found in Illorpaat 13 (3/H). **igd 258**, 51 mm, a long oval screw-shape, domed upper side and flat underside, pierced at the end, buzzer (?) or pendant (?), found in Illorpaat 13 (5/K). The piece is very micaceous and resembles in form and material another piece from the same house, composed of two fragments **igd 92** (5/R) and **igd 71** (from the outer end of the house passage), not illustrated.



Clay objects, indeterminable

Three pieces of clay cannot be identified and it is doubtful whether this material had been used for a special purpose.

igd 2578, a ball with a 10 mm diameter, found in Illorpaat 3, house IV (12/J). **igd 133**, oval to pear-shaped with traces of a piercing in one end, maximum diameter 12 mm, length 18 mm, grinding marks (?) on the bottom, found in Illorpaat 13 (4/L). **igd 1098**, semisphere with a 15 mm diameter, found at Itissaalik (9/K).

None of these objects are illustrated.

Baleen objects, indeterminable

14 pieces of baleen were all worked, but their function cannot be identified precisely. The objects are classified as follows:

	Illorpaat 3			Illpt. 13	Islik.	Total
	III	II	I			
Mount-like	–	1	1	2	–	4
Plate	1	–	–	–	–	1
Side for dish	–	–	–	1	–	1
Knife–like	–	–	–	1	–	1
Offcuts	1	–	1	3	2	7
	2	1	2	7	2	14

Mount-like. Four objects have two parallel sides of varying length and resemble the baleen objects in the Lists & Mounts group. They all have holes.

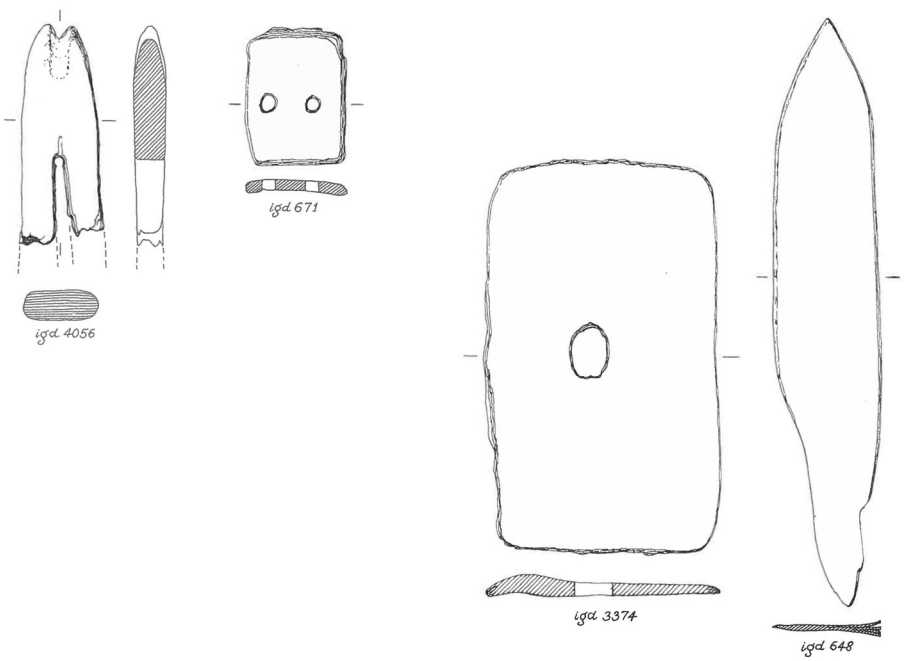
Examples: **igd 4056**, 57 mm, has a pointed end with a slit, broken at a rectangular hole, found in Illorpaat 3, house I (10/L). **igd 671**, rectangular plate with two holes, found in Illorpaat 13 (5/M).

Plate. igd 3374, rectangular plate, 103 × 62 mm, pierced in the centre, found in Illorpaat 3, house III (8/I).

Side for dish. igd 626, only the fragment with the seam holes is preserved, 58 mm high, 62 mm long, found in Illorpaat 13 (6/J), not illustrated.

Knife-like. igd 648, 155 mm, found in Illorpaat 13 (3/J).

Offcuts. Seven pieces are offcut strips or thick fragments (two pieces). One thin strip has a hole at each end. Not illustrated.



Baleen knots

37 separate baleen knots were found. 18 in Illorpaat 3, 10 in the midden, seven in Illorpaat 13 and two at Itissaalik. It is not possible to determine the use of these knots with any degree of precision. Baleen was used for lashing various items together, for fishing lines and fishing nets, or for sealing nets.

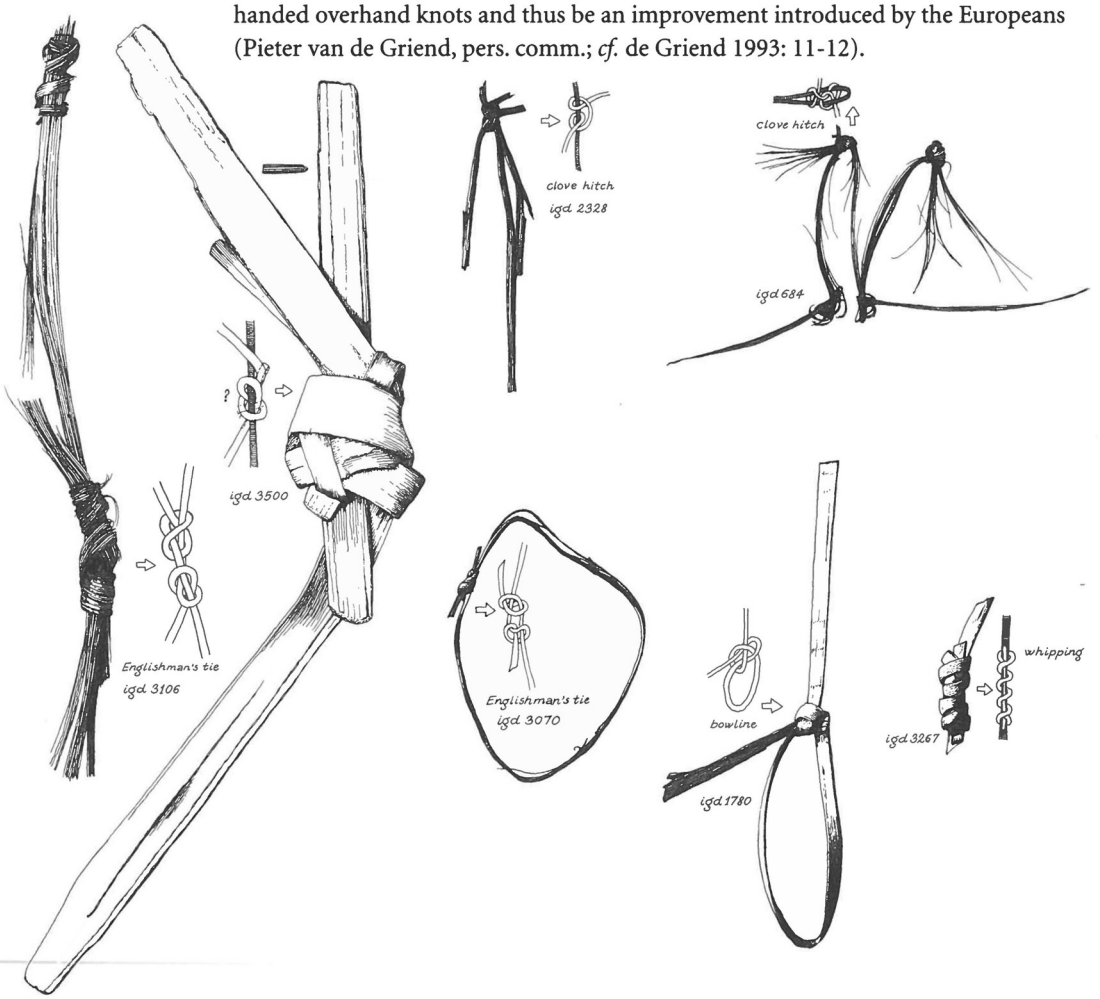
The knots can however be divided into six groups, five of which can be classified. Variants of these occur (see examples). The groups are overhand knot, clove hitch, Englishman's tie, bowline knot, whipping knot and some non-classified (*cf.* Boas 1901: 34-36). Clove hitch and Englishman's tie are here of particular interest, because they are used today in netting and may also have been used for this purpose in the past. Historians are interested in this topic. They have raised the question of the origins of seal-hunting with nets, and have suggested that this method was introduced by the Europeans in the colonial age (*cf.* Gad 1974: 110-138).

The present find does not contradict this theory, although some knots were found in horizons without European artefacts. But there is increased possibility that sealing nets were used before the colonization in 1721 (*cf.* Holtved 1944,I: 298; Porsild 1914: 176-179).

The distribution of the knots is as follows:

	Illorpaat 3				Midden			Illpt. 13	Islik.	Total
	III	II	I	e.Th.	12	8	4			
Overhand knot	–	–	2	1	–	2	–	–	–	5
Clove hitch	–	–	–	–	1	–	1	2	–	4
Englishman's tie	1	2	1	1	–	1	–	2	–	8
Bowline	–	–	–	–	1	1	–	3	–	5
Whipping	5	2	–	–	2	–	–	–	1	10
Nonclassified	1	–	2	–	–	1	–	–	1	5
	7	4	5	2	4	5	1	7	2	37

Examples: **igd 3106**, Englishman's tie (single fisherman knot based on left handed overhand knots), 200 mm long, from a net (?), found in Illorpaat 3, early Thule (17/K). **igd 3500**, non-classified, 255 mm long, net (?), found in Illorpaat 3, house III (18/G). **igd 2328**, clove hitch, 80 mm long, net (?) found in the midden, layer 12 (2/C). **igd 684**, clove hitch around an eye (sheet bend with an additional half hitch?), part of an ammassat net (?) (*cf.* Holtved 1962: 94), found in Illorpaat 13 (5/L). **igd 3070**, Englishman's tie (like igd 3106), 70 mm at the widest part, snare (?), found in Illorpaat 3, house II (23/H). **igd 1780**, bowline knot (left handed outside Boas bowline, used as loop knot), 130 mm long, found in the midden, layer 12 (2/B). **igd 3267**, whipping knot (?), 40 mm long, drying rack (?) (*cf.* Mathiassen 1930: 232), found in Illorpaat 3, house II (10/I); may also be a double fisherman knot based on two left handed overhand knots and thus be an improvement introduced by the Europeans (Pieter van de Griend, pers. comm.; *cf.* de Griend 1993: 11-12).



Lists & Mounts

56 objects could be identified as lists or mounts. Identification of the items from which they may have come has not been attempted. The materials are caribou antler, whale bone, baleen and wood.

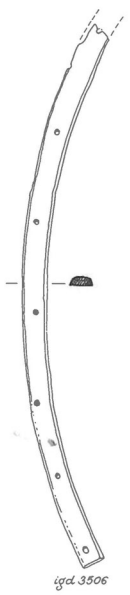
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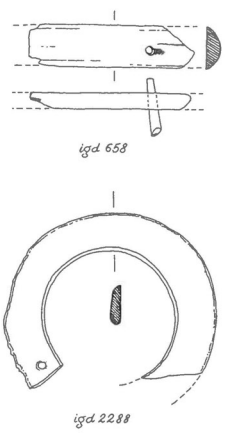
	Illorpaat 3					Midden				Illpt. 9	Illpt. 13	Total
	IV	III	II	I	e.Th.	12	9	8	4			
Lists												
Edging and ornamental lists of antler	–	3	1	1	1	1	–	1	–	–	4	12
Edging lists of wood	–	3	2	1	2	2	–	–	1	–	1	12
Other wooden lists	–	2	–	1	–	2	–	1	1	–	4	11
Mounts												
of antler	–	–	1	–	–	1	1	1	1	1	–	6
of whale bone	–	–	1	1	–	1	–	–	–	1	1	5
of baleen	1	–	4	–	–	–	–	1	3	–	1	10
	1	8	9	4	3	7	1	4	6	2	11	56

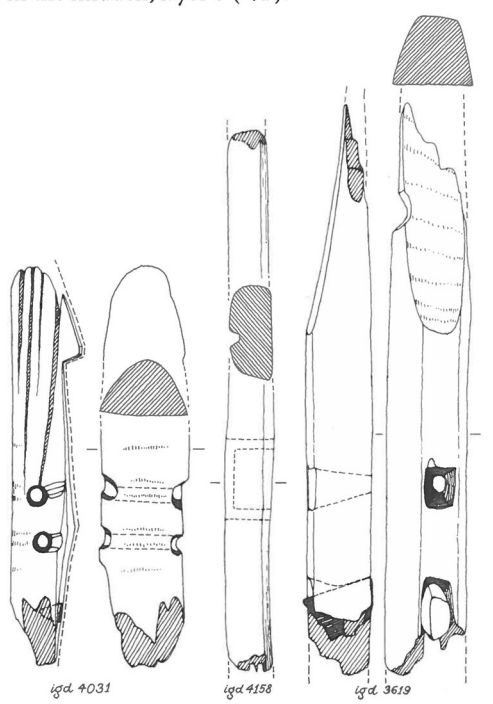
Lists

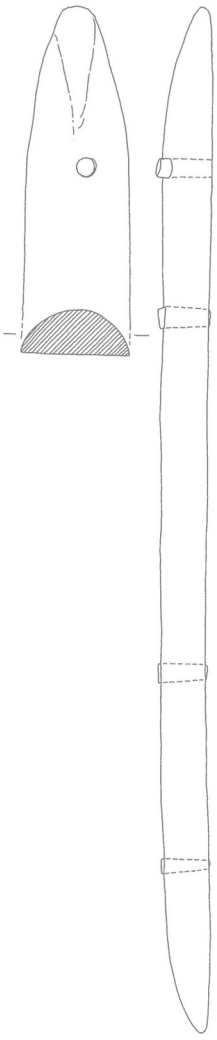
The antler lists were presumably ornamental and riveted onto tubs, bowls, throwing boards and paddles. The cross section is semicircular to semioval with flat underside. Two pieces have, respectively, a bone rivet and a wooden rivet *in situ*.

Examples: **igd 3506**, 143 mm, found in Illorpaat 3, house III (19/G). **igd 658**, 44 mm, with bone rivet, found in Illorpaat 13 (2/G). **igd 2288**, fragment of a ring with a maximum diameter of 56 mm, found in the midden, layer 8 (2/F).







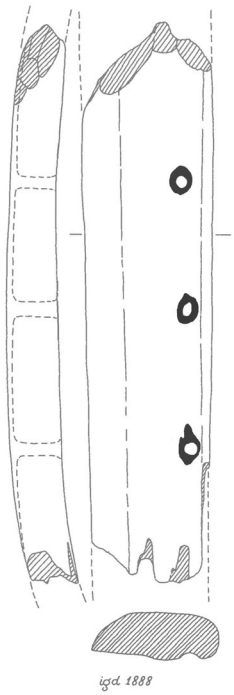


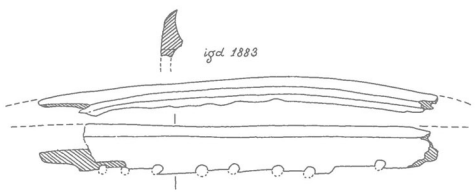
The wooden edging lists all have flat undersides and domed uppers. They had been fastened with lashing or with pegs. Five pieces have scarf faces. They are too small to have been parts of sailing vessels.

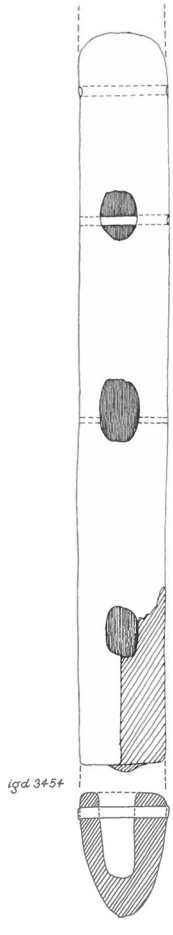
Examples: **igd 4031**, 106 mm, lashing holes through the side, scarf face, found in Illorpaat 3, early Thule (20/F). **igd 4158**, 144 mm, lashing holes placed at right angles to the surface, found in Illorpaat 3, early Thule (13/L). **igd 3619**, 150 mm, peg holes with one peg placed at a right angle to the surface, scarf face, found in Illorpaat 3, house II (17/J). **igd 4228**, 272 mm, complete, four wooden rivets, found in Illorpaat 3, house III (21/J).

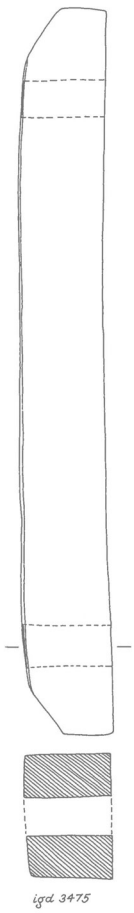
Other wooden lists are pierced pieces, pieces with peg holes in the level underside and one flat piece with small rivets along the edge. The last has also served as a cutting board (**igd 575**, Illorpaat 13 (5/L)).

Examples: **igd 1888**, 148 mm, with transverse holes, possibly a part of reinforcement for a kayak cockpit coaming, found in the midden, layer 12 (1/B). **igd 3454**, 195 mm, peg holes in the level surface, part of a drying rack (?), found in Illorpaat 3, house III (17/K); a similar piece, **igd 1891**, was found in the midden, layer 12 (2/B), not illustrated. **igd 1883**, 106 mm, fragment of a curved rack with concave outer side, split along the row of drilled holes, found in the midden, layer 12 (2/C). **igd 3475**, 191 mm, complete, square cross section, ends cut off obliquely and rectangular holes at right angles to the underside, found in Illorpaat 3, house III (3/J).









Mounts

The caribou-antler mounts come in several shapes; common features are a level underside and one or more holes.

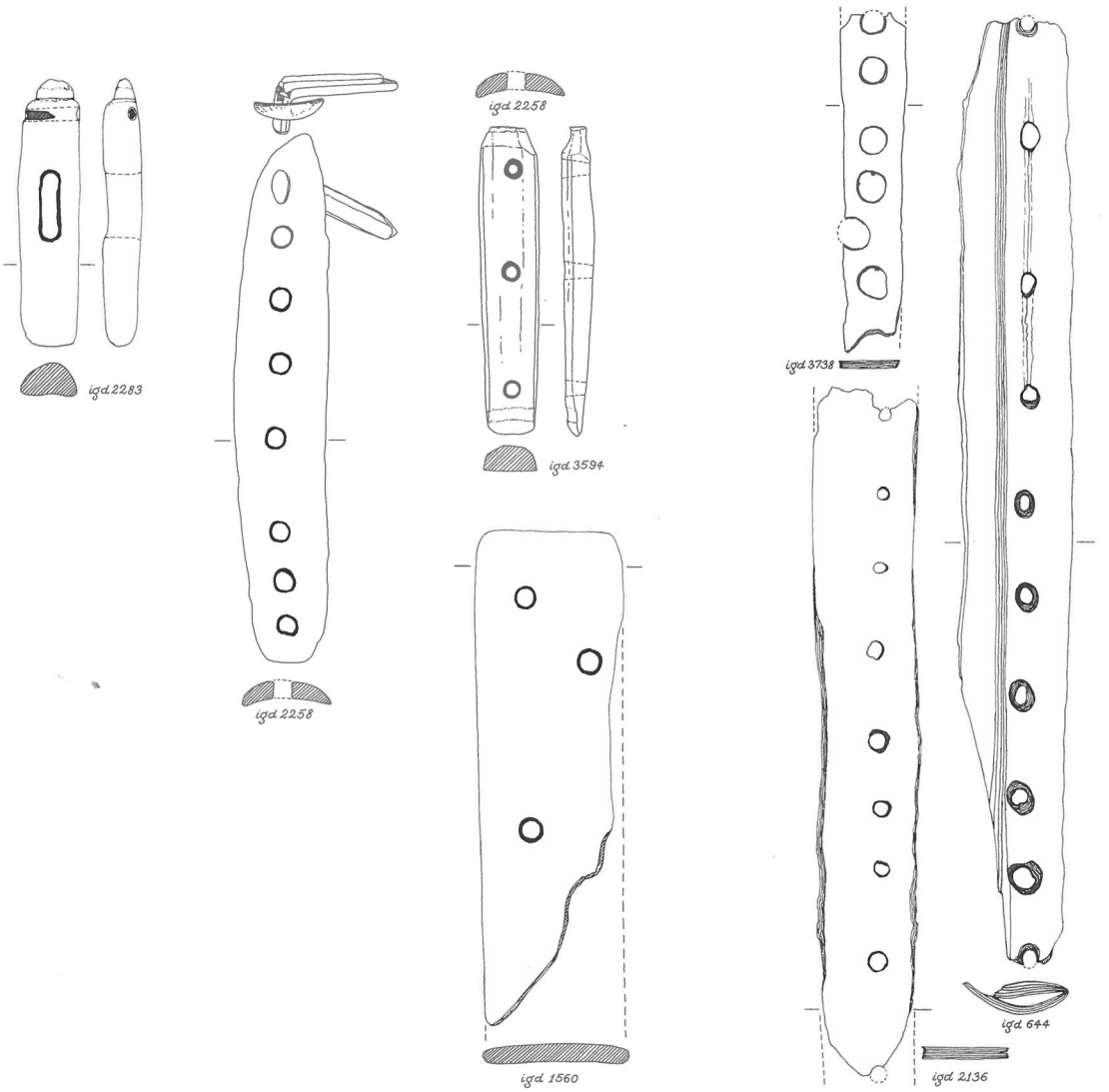
Examples: **igd 2283**, 71 mm, complete, semicircular cross section, oblong piercing at a right angle to the surface, transverse piercing with a bone nail through the tenon found in the midden, layer 9 (2/F). **igd 2258**, 140 mm, complete, semicircular cross section, holes drilled at right angles to the surface, wooden nails preserved, found in the midden, layer 4 (1/H).

The whale-bone mounts are all flat, except one which is wedge-shaped.

Examples: **igd 3594**, 82 mm, complete, wedge-shaped, three holes drilled at right angles to the surface, concave depressions cut at the ends, found in Illorpaat 3, house II (14/G): **igd 1560**, 131 mm, slightly domed plate, broken, with three holes, found in Illorpaat 9 (3/A).

The baleen mounts are all cut-off strips with rows of holes.

Examples: **igd 3738**, 89 mm, found in Illorpaat 3, house II (15/K). **igd 2136**, 182 mm, found in the midden, layer 4 (1/G). **igd 644**, 248 mm, straightened part of a kayak cockpit coaming(?), found in Illorpaat 13 (5/H). See also **Bone and antler objects, various** and **Wooden objects, various**.



Bone and antler objects, various

83 objects of bone or caribou antler cannot be identified with any precision. The find group comprises complete objects, fragments and reworked objects.

The distribution is as follows:

	Illorpaat 3					Midden				Illpt. 9	Illpt. 13	Total
	IV	III	II	I	e.Th.	12	9	8	4			
Kayak stand etc.	–	1	–	–	–	1	–	–	–	–	–	2
Line accessories	1	–	–	1	–	–	–	–	1	–	1	4
Handles	1	–	2	2	–	–	–	–	–	–	–	5
Digging sticks	2	2	–	–	–	–	–	–	–	–	–	4
Shaft ends	1	1	1	1	1	1	–	–	–	–	1	7
Shaft offcuts	1	–	1	4	–	1	–	–	–	1	1	9
Heads and side prongs	–	–	1	1	1	6	–	1	1	–	2	13
Sides of dishes	–	–	–	–	–	–	–	–	–	–	1	1
Buzzer	–	–	1	–	–	–	–	–	–	–	–	1
Other worked bone objects*	3	8	11	3	1	3	1	–	3	1	2	36
	9	12	17	12	3	12	1	1	5	2	8	82

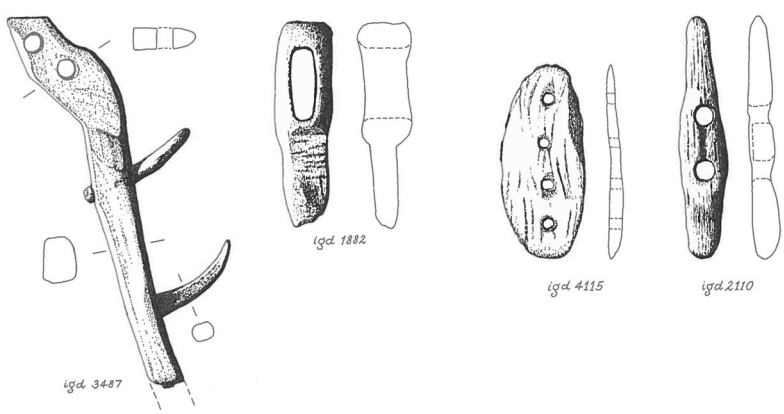
* and one stray find from Illorpaat 3.

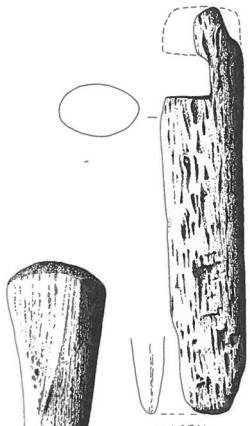
Kayak stand etc. (?). This group comprises two objects, both of which probably came from a kayak stand.

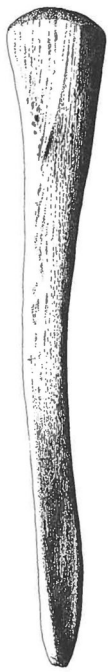
igd 3487, 106 mm, of antler, two antler supports might indicate a function as weapon-rest, broken base, found in Illorpaat 3, house III (14/G). **igd 1882**, 53 mm, of antler, the hole and the wedge-shaped base might indicate a function as a support for the rim of the kayak stand (*cf.* Thalbitzer 1914: 387ff), found in the midden, layer 12 (2/C).

Line accessories (?). Four caribou antler objects can be connected with lines and straps. Three may have been used for fastening the harpoon line to the shaft and one as a fitting for the kayak cross strap.

Examples: **igd 4115**, 51 mm, complete, found in Illorpaat 3, house I (4/F). **igd 2110**, 65 mm, complete, found in the midden, layer 4 (2/C).




igd 3711

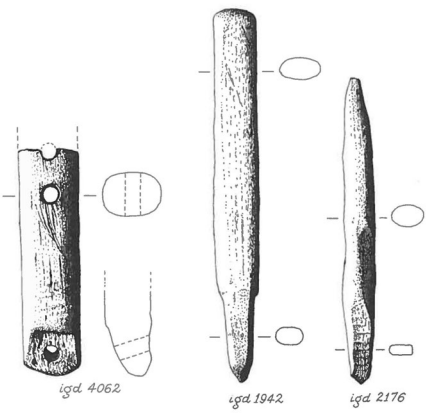

igd 3306

Handles (?). Five objects of caribou antler and whale bone have been interpreted as possible handles. Two have only the middle piece preserved with concave finger rests, while three have a right-angle incision and may be interpreted as drum handles.

Example: **igd 3711**, 108 mm, of whale bone, found in Illorpaat 3, house II (12/M).

Digging sticks (?). Four seal bones are shaped at the pointed end and probably functioned as digging sticks for gathering plant roots.

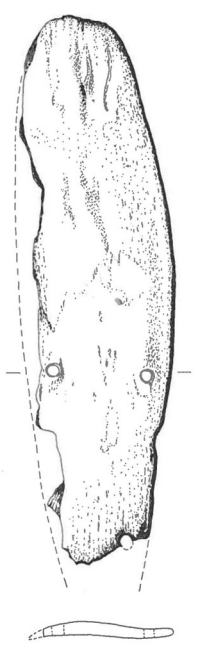
Example: **igd 3306**, 174 mm, complete, found in Illorpaat 3, house IV (3/G).


igd 4062 igd 1942 igd 2176

Shaft ends (?). Seven shaft ends of caribou antler or whale bone all have holes and are probably from throwing weapons. The rear ends which are all preserved are either rounded or wedge-shaped and very likely are from lances.

Example: **igd 4062**, 60 mm, of whale bone, broken at the third hole, found in Illorpaat 3, house I (13/I).

Shaft offcuts (?). Nine offcuts with circular or oval cross section are made of whale bone, except one which is of antler. All are probably parts of foreshafts. This material is not pierced. Not illustrated.


igd 3609

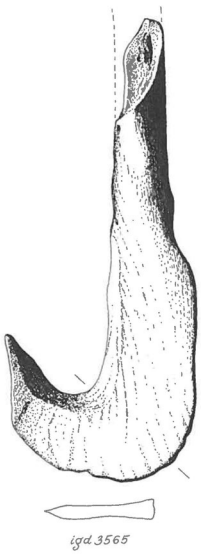
Points and side prongs (?). There are 13 objects of antler and whale bone in this group. Three pieces are probably greatly fragmented side prongs and ten are "points" with a tang, which may have functioned as arrows, leisters, bird darts, bodkins or marline spikes.

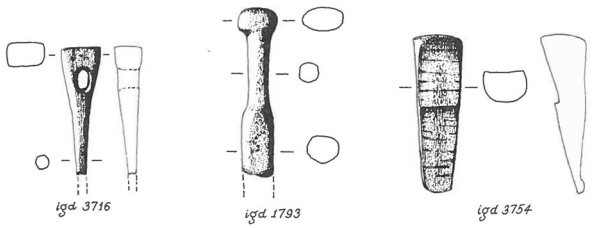
Examples: **igd 1942**, 98 mm, of antler, arrow head with a tang (?), reworked front end, found in the midden, layer 8 (2/C). **igd 2176**, 80 mm, of whale bone, leister prong with tang (?), found in the midden, layer 4 (1/G).

Sides for dish (?). **igd 622**, 285 mm long, side piece of (whale?) bone for a dish with a separate bottom, height 55 mm, thickness 3 mm, preserved with a bit of the seam fastened with three bone rivets, has four holes for bottom nails, found in Illorpaat 13 (2/G), not illustrated.

Buzzer-like (?). **igd 3609**, 145 mm of antler, screw-shaped, with three visible piercings, found in Illorpaat 3, house II (15/M).

Other worked objects. It is not possible to identify the function of 37 objects with any degree of certainty. Perforated whale-bone plates may have been shovels. Thin strips may have been edging lists. Angular offcuts with various perforations may have





served as mounts. A few pieces however have such a finished form that they merit description.

Examples: **igd 3565**, 122 mm, pelvis bone of a seal, hook-like, is sharpened on the concave side, for cutting seaweed (?); the type has been found archaeologically all over Greenland, but has only been illustrated in an example from East Greenland (*cf.* Mathiassen 1933: pl.8(9)) under the designation *Laminaria* hook; found in Illorpaat 3, house II (18/F). **igd 3716**, 34 mm, of antler, broken at the thin end, shank of a small jig (?) (*cf.* Mathiassen 1933: pl.5 (37,38)), found in Illorpaat 3, house II (14/G). **igd 1793**, 44 mm, of antler, broken, the top of a wound pin or bodkin (?) (*cf.* Mathiassen 1930: pl.7(10), pl.14(12)), found in the midden, layer 12 (2/B). **igd 3754**, 42 mm, of antler, complete, with a scarf face on the underside and a bead on the upper, functioned as a shaft fitting (?), found in Illorpaat 3, house II (19/G).

In the group of bone objects there are 52 pieces, all with cutting marks which identify them as secondary material. They are not included in the above description, but there are 22 from Illorpaat 3, 14 from the midden, 14 from Illorpaat 13 and two from Itissaalik.

Wooden objects, various

329 worked pieces of driftwood could not be precisely identified, except one probable weapon-head case, **igd 3337**. A typological classification has been attempted in the case of a number of pieces, but secondary working and other fragmentation makes it difficult to classify the function of the remainder.

The distribution is as follows:

Illorpaat 3					Midden*				Illpt. 9	Illpt. 13	Islik.	Total
IV	III	II	I	e.Th.	12	9	8	4				
20	24	56	57	26	12	7	16	39	2	60	3	329

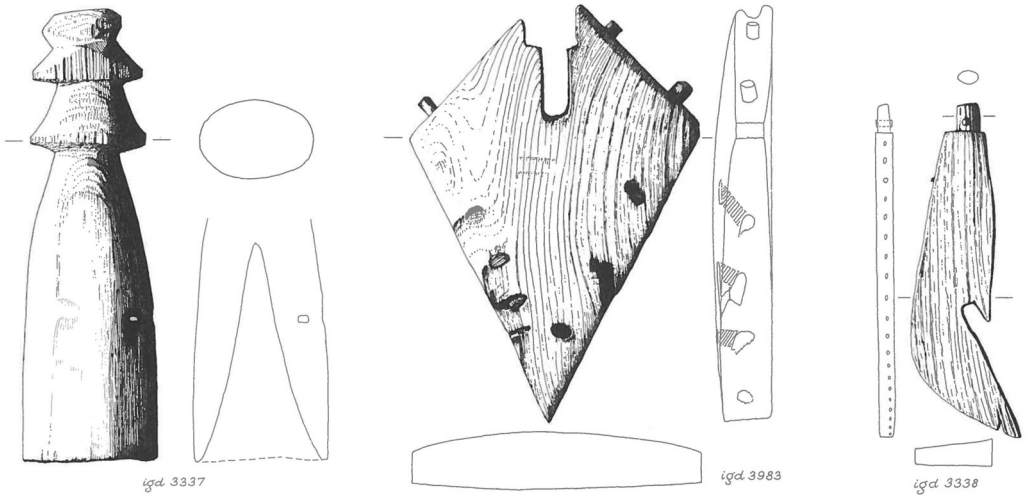
* +7 stray finds

Weapon-head case

igd 3337, 120 mm, case for throwing weapon, probably for a bladder dart because of the acuminated oval shape of the socket (?), with a hole in the side for fastening a line and three beads, the type is not otherwise found in Greenland, found in Illorpaat 3, house IV (20/J).

Junction pieces

igd 3983, 110 mm long, 76 mm wide, level underside, slightly domed upper, maximum thickness 16 mm, one end has a right-angled incision, four wooden dowels are



inserted into the two end-surfaces, along the other two sides is a row of holes with dowel fragments inset diagonally, grip for a shovel blade or handle of a wooden bucket (?), found in Illorpaat 3, house I (4/E).

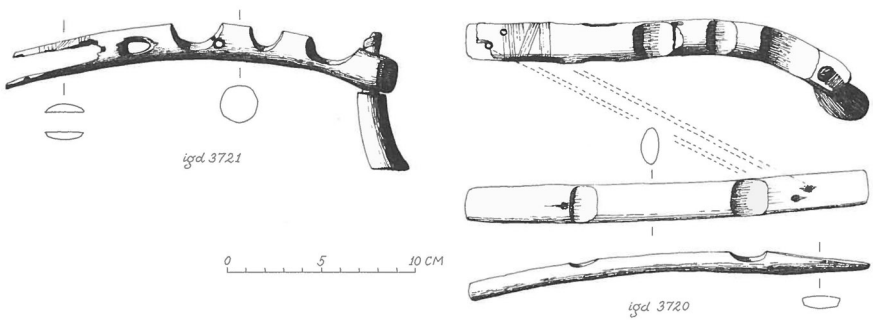
igd 3338, 90 mm long, flat and 7 mm thick, one end (has a series of small nail holes) is curved and ends in a point, the other end (without nail holes) has a notch, opposite the pointed end a tenon with circular cross section has been cut with a dowel through it, found in Illorpaat 3, house IV (21/L).

Kayak stand

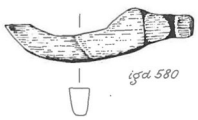
Six objects may have been associated with the kayak stand. Three may have come from the frame of the stand, while the other three may have been throwing-weapon rests.

Examples: **igd 3721**, 206 mm, circular cross section, three concave incisions and one hole, at one end a 54 mm-deep, longitudinal cut, into which **igd 3720** has been fitted with lashing and two wooden nails, at the other end a wooden foot with a baleen strip at the top has been inserted, the form of the possible kayak stand is not known, found in Illorpaat 3, house II (14/I).

igd 3720, 213 mm, oval cross section, two concave incisions on the upper side, one end with two wooden nails is carved as a wedge and fits into the cut in **igd 3721**, the other end is rounded off, found in Illorpaat 3, house II (14/I).



igd 3841, 194 mm, oval cross section, four flat-bottomed incisions on one side, one end has been carved to a point, the other end is broken, resembles the previous pieces, found in Illorpaat 3, house II (12/J), not illustrated.

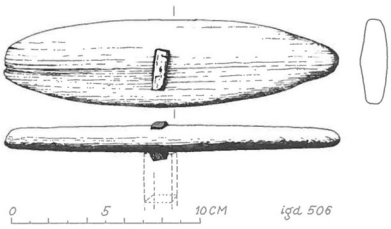


igd 580, with incisions for lashing at one end and loop-shaped at the other, functioned as a weapon rest and was fastened to one leg of the kayak stand, found in Illorpaat 13 (4/L).

The other two weapon rests, **igd 2653** and **3346**, are not illustrated and only their shape is preserved, found in Illorpaat 3, house IV (14/K and 8/F).

Ice-hunting stool

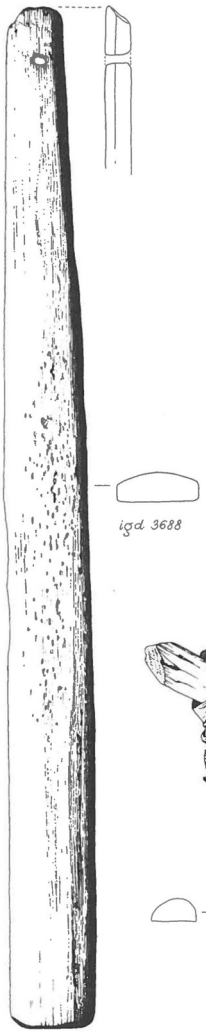
igd 506, 180 mm long, 13 mm thick, acuminated oval, a broken, rectangular piece of wood is set into the centre, may have functioned as a seat for an ice-hunting stool (*cf.* Egede 1925: 355), found in Illorpaat 13 (3/I).



Drumsticks

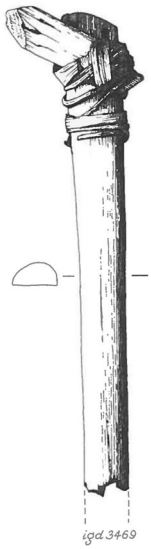
Three flat sticks have been interpreted as drumsticks. **igd 4279**, 260 mm, broken, found in Illorpaat 3, house I (16/H), not illustrated. **igd 3982**, 206 mm, broken, found in Illorpaat 3, house I (4/E), not illustrated.

Example: **igd 3688**, 269 mm, complete, level underside and slightly domed upper, with a hole in the grip, the pricking marks on both sides are due to general use or later use as a working surface, found in Illorpaat 3, house II (17/L).



Wick trimmer

igd 3469, 127 mm, split and broken round stick, a transverse stick with baleen is fastened to one end, the piece has served as a wick trimmer, found in Illorpaat 3, house III (19/G). Several of the smaller, indeterminable sticks have a diagonal groove and may thus have been wick-trimmer handles.

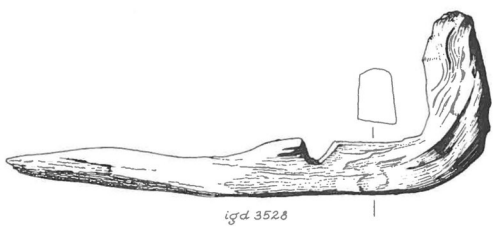


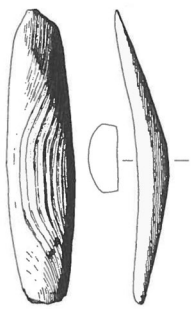
Lamp stand

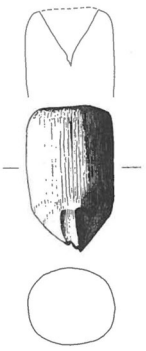
Two wooden blocks have a carved depression and may have functioned as stand or support for a soapstone lamp. **igd 1897** was found in the midden, layer 8 (1/B), not illustrated. **igd 526** was found in Illorpaat 13 (5/N), not illustrated.

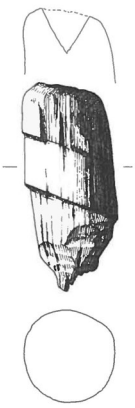
Hook

igd 3528 is a 130 mm-long hook with a rectangular cross section, a notch is cut into the upper side and may indicate that it functioned as a throwing-weapon support fixed to the kayak deck-straps, found in Illorpaat 3, house III (19/L).




igd 3904


igd 4032


igd 2220

Bow brace

igd 3904, 78 mm, curved-up ends, level underside and domed upper, functioned as a bow brace (*cf.* Holtved 1944,I: pl.10(23)), found in Illorpaat 3, house I (12/H).

Ferrules

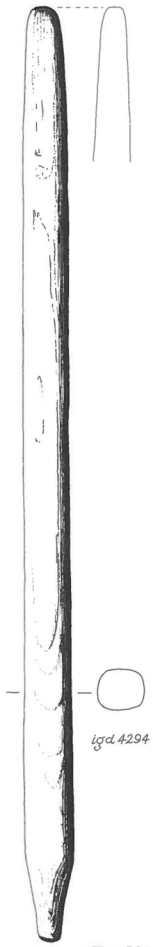
igd 4032, 39 mm-long offcut from a round stick, found in Illorpaat 3, early Thule (20/F).

igd 2220, 55 mm-long offcut from a round stick with screw-thread cut, found in the midden, layer 4 (1/G).

Foreshaft-like

Three objects are shaped like foreshafts, but have no line holes. **igd 3311**, 244 mm, found in Illorpaat 3, house IV (21/K). **igd 1858**, 186 mm, found in the midden, layer 12 (1/E).

Example: **igd 4294**, 247 mm, found in Illorpaat 3, early Thule (8/F).

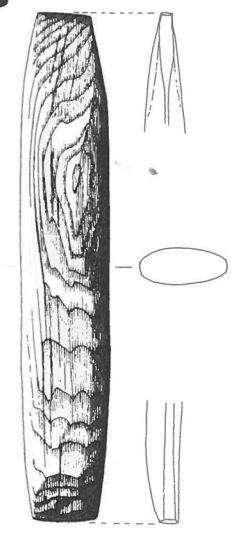

igd 4294

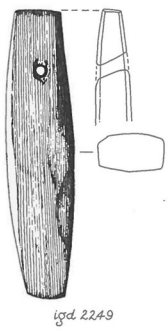
Double wedges

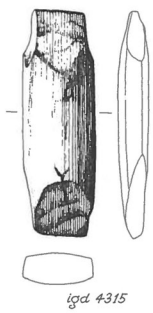
16 small double wedges have been used to splay two elements apart. Their dimensions indicate that they were not likely to have been used for deck boards in a kayak. The largest piece is 244 mm, but so slight that use in a kayak is improbable. The length of the other wedges varies from 59 to 147 mm. Two double wedges have a hole at one end. Three are broken. Two of the smallest wedges differed from the others by their solid proportions.

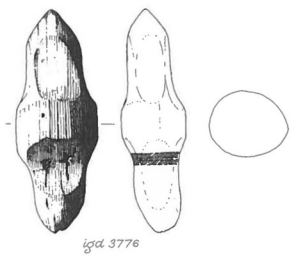
The objects were distributed as follows: Illorpaat 3, house II: five pieces; house I: five pieces; early Thule: one piece; midden, layer 9: one piece; layer 4: four pieces.

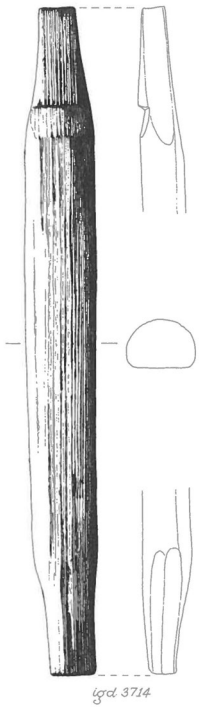
Examples: **igd 2074**, 135 mm, found in the midden, layer 4 (2/C). **igd 2249**, 77 mm, with a hole, found in the midden, layer 4 (1/F). **igd 4315**, 60 mm, found in Illorpaat 3, early Thule (6/J). **igd 3776**, 59 mm, of solid proportions, found in Illorpaat 3, house II (22/F).


igd 2074


igd 2249


igd 4315


igd 3776

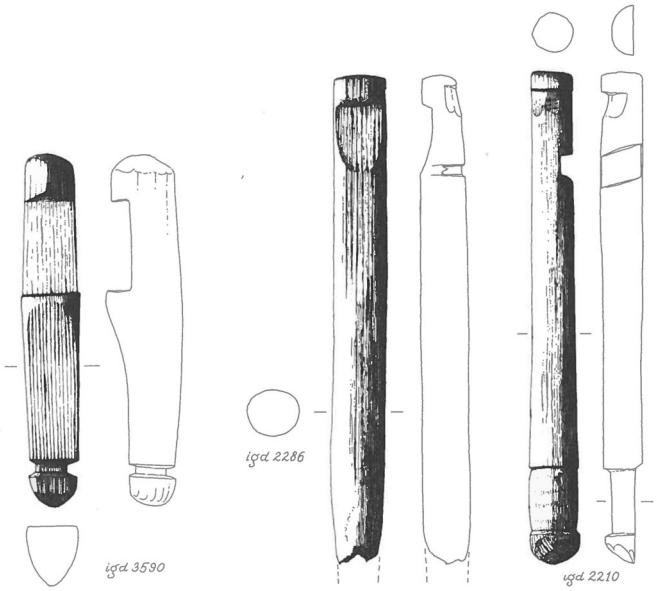


Double-wedge-shaped twisters

Seven wedge-shaped objects with a groove cut into one end are functionally identical. Their length varies from 86 to 218 mm. They resemble the wedge in a framesaw and may have been used as the release mechanism in a fox trap (*cf.* Holtved 1962: 101). The most likely function is that of a tightening key for the harpoon rest on the kayak deck (*cf.* **igd 3737, throwing-weapon rests**; H.C. Petersen 1986: 40).

The distribution of the pieces is as follows: Illorpaat 3, house III: one piece; house II: three pieces; early Thule: two pieces; midden, layer 4: one piece.

Example: **igd 3714**, 177 mm, found in Illorpaat 3, house II (13/I).



Twister-like with bead

Six small round sticks have a bead or carved ring. Functionally, they very likely have nothing in common.

igd 3590, 94 mm long with level underside and domed upper, the underside has a rectangular carving, the upper a circular one, found in Illorpat 3, house II (12/H).

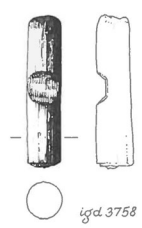
igd 2286, 129 mm, broken at the pointed end, oval cross section, diagonal cut on one side of the end, circular cut on the other side, found in the midden, layer 9 (2/E).

igd 2162, 108 mm, broken at the pointed end, same shape as **igd 2286**, but not with a circular cut, found in the midden, layer 4 (1/D), not illustrated.

igd 2210, 129 mm, with beads cut at both ends and a diagonal cut at right angles to them, found in the midden, layer 4 (1/E).

igd 603, 47 mm, with a bead cut at the end, found in Illorpaat 13 (2/J), not illustrated.

igd 389, 36 mm, broken, with a bead cut at the end, found in Illorpaat 13 (4/I), not illustrated.

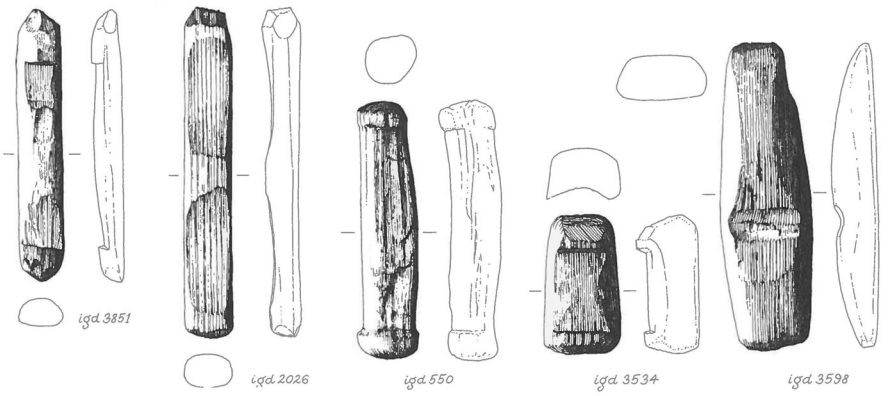


Toggles

12 objects probably functioned as toggles.

Four small sticks with circular cross section have a notch. Lengths from 41 to 69 mm. Found in Illorpaat 3, houses II and I and in the midden, layer 12.

Example: **igd 3758**, 41 mm, found in Illorpaat 3, house II (20/F).

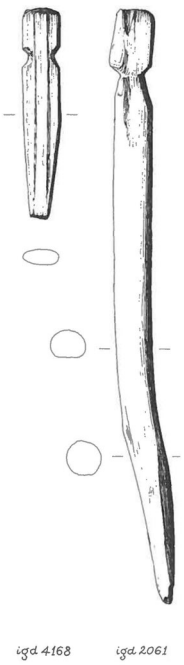


Four small pieces have been cut off diagonally at each end. Lengths from 29 to 72 mm. Found in Illorpaat 3, houses III and II and in Illorpaat 13.

Example: **igd 3851**, 72 mm, found in Illorpaat 3, house II (14/G).

Two toggles probably functioned as grips: **igd 2026**, 87 mm, with concave incisions, found in the midden, layer 8 (1/D). **igd 550**, 69 mm, with a bead carved at each end, found in Illorpaat 13 (5/S).

Two pieces probably functioned as buckles for the line or sinew-thread binding: **igd 3534**, 37 mm, carved block with concave underside and two beads on the upper, found in Illorpaat 3, house II (21/G). **igd 3598**, 82 mm, wedge-shaped with a groove cut into the upper side and a level underside, found in Illorpaat 3, house II (14/G).



Small plugs

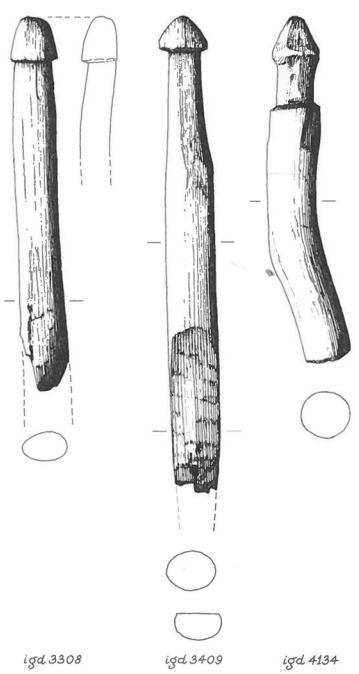
Eight small sticks all have a couple of cuts at the end and may have served as plugs or wound pins. They vary in length from 55 to 184 mm. Found in Illorpaat 3, houses III, II and I and in the midden, layers 12, 8 and 4.

Examples: **igd 4168**, 55 mm, found in Illorpaat 3, house I (16/G). **igd 2061**, 157 mm, found in the midden, layer 8 (1/F).

Plug-like with head

Eight plugs have a conical head and may have been used as throat or wound plugs. They are all broken or cut off. The length varies from 38 to 142 mm. Found in Illorpaat 3, house IV: four pieces; house III: one piece; early Thule: two pieces; at Itissaalik: one piece.

Examples: **igd 3308**, 99 mm, found in Illorpaat 3, house IV (18/G). **igd 3409**, 126 mm, with a scarf face, found in Illorpaat 3, house III (10/F). **igd 4134**, 92 mm, found in Illorpaat 3, early Thule (8/L). A function as a bow for a drill cannot be ruled out.



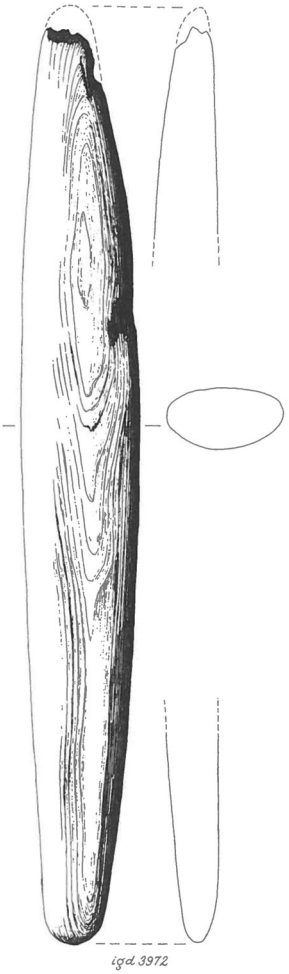
Small shafts

15 small sticks with circular cross section may have been used as arrow shafts or shafts for toy throwing-weapons. All are broken and their diameter varies from 6 to 12 mm. Found in Illorpaat 3, house I: two pieces; early Thule: one piece; midden, layer 12: one piece; layer 9: one piece; layer 8: two pieces; layer 4: six pieces; and one stray find; Illorpaat 13: one piece.

Not illustrated.

Wound-plug-like

Six long ovals with acuminated oval cross section resemble wound plugs. They have all been smoothed and have neither holes nor grooves. The length varies from 170 to



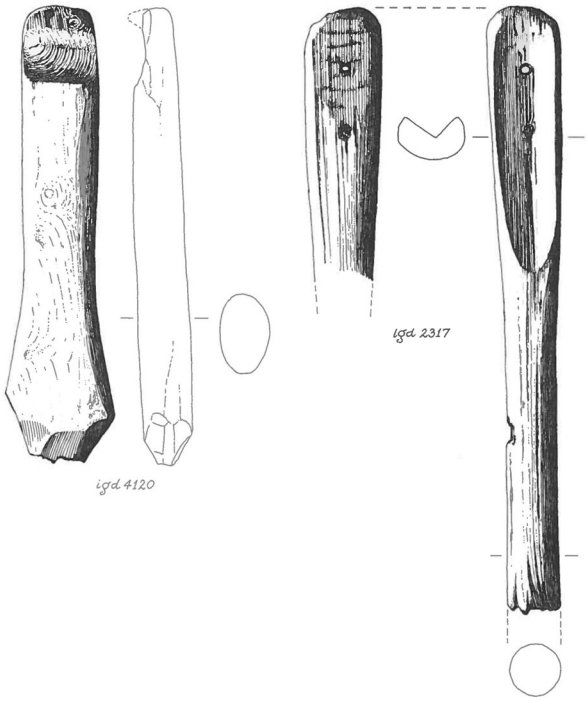
307 mm. Found in Illorpaat 3, house II: one piece; house I: two pieces; midden, layer 4: two pieces; Illorpaat 13: one piece.

Example: **igd 3972**, 242 mm, found in Illorpaat 3, house I (23/E).

Handle-like

Nine objects may have functioned as handles or grips. Found in Illorpaat 3, house II: one piece; house I: three pieces; early Thule: two pieces; midden, layer 4: two pieces; and a stray find. The pieces are all broken and have a bead or a knob at the end of the grip. One grip has a hole and is presumably a knife handle.

Examples: **igd 4120**, 119 mm, found in Illorpaat 3, early Thule (6/E). **igd 2317**, 162 mm, a cup-shaped depression has been drilled through in two places for fastening a nail to a scarf face on the underside, possibly a knife handle, stray find from the midden.



Pointed sticks

12 sticks have pointed ends and it is likely that they were used for extracting bone marrow or as toothpicks. The length varies from 72 to 155 mm. Found in Illorpaat 3, houses IV, III, II and I, in the midden, layers 12 and 4 and in Illorpaat 13.

Examples: **igd 2169**, 155 mm, complete, probably used for extracting marrow, found in the midden, layer 4 (1/F). **igd 3785**, 82 mm, broken and split round stick, probably used as a toothpick, found in Illorpaat 3, house II (17/M).

Plugs and stoppers

Nine small, finished objects are interpreted as plugs for bladder nozzle, shaft stoppers for throwing boards and the like. The length varies from 23 to 96 mm. Found in Illorpaat 3, houses III, II and I, midden, layer 4 and Illorpaat 13.

Examples: **igd 2214**, 23 mm, probably plug for bladder nozzle, found in the midden, layer 4 (1/F). **igd 2181**, 69 mm, a carved peg is seen at the blunt end, found in the midden, layer 4 (2/G). **igd 4139**, 47 mm, functional resemblance to the shaft stopper

in a throwing board (*cf.* **igd 3753, Throwing-board pegs**), found in Illorpaat 3, house I (9/I).

Models and Miniatures

19 objects are probably models used as toys and other miniature pieces. The group consists of imitations of tools (e.g. bows and knives), side prongs, discs with or without holes, balls, sailing vessels, wedges, gaming pieces and other items. Found in Illorpaat 3, house III: three pieces; house II: four pieces; house I: six pieces; early Thule: two pieces; a stray find from the midden; Illorpaat 13: three pieces.

Examples: **igd 3917**, 191 mm, acuminated oval and slightly curved disc with a peg cut at the end, the remnants of an oblong nail in the centre of the piece might indicate use as a toy boat (?), found in Illorpaat 3, house I (15/H).

igd 4179, 62 mm, preparatory work for a side prong (?), found in Illorpaat 3, early Thule (8/K).

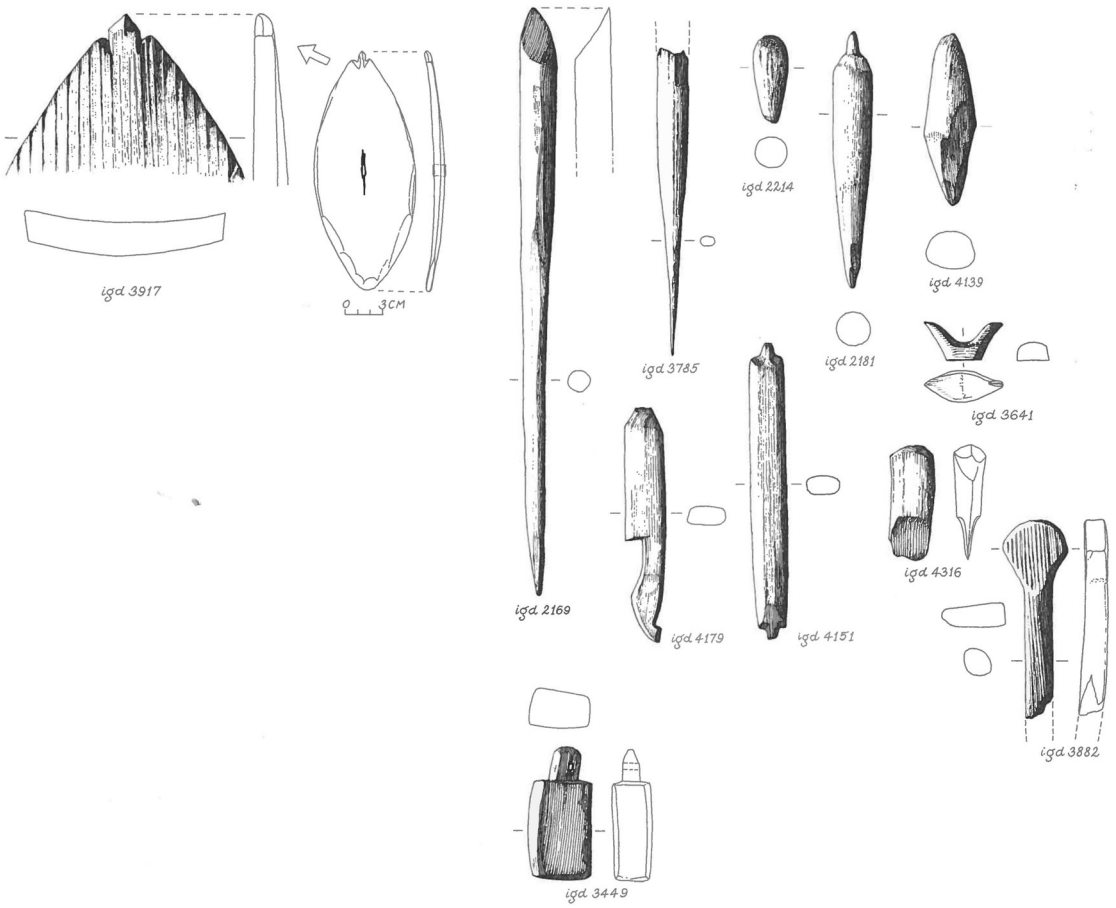
igd 4151, 78 mm, bow-like model, found in Illorpaat 3, house I (11/I).

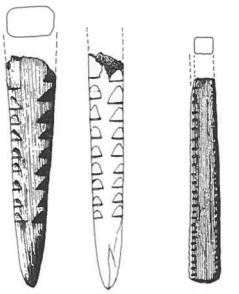
igd 3641 is a "winged" object with level standing surface and 20 mm between the "wings", gaming piece (?), found in Illorpaat 3, house II (17/K).

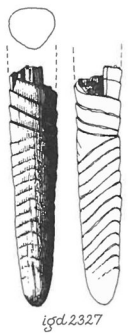
igd 4316, 30 mm-long wedge, used as a "man" in a kayak model (?), found in Illorpaat 3, early Thule (6/K).

igd 3882, 52 mm, broken handle with oval cross section, ends in a flattened finger hold, found in Illorpaat 3, house I (6/K).

igd 3449, 35 mm, rectangular block, ends in a peg with a hole, found in Illorpaat 3, house III (18/H).







Dishes and tubs

Ten objects are all flat and are probably sides, bottoms and staves from dishes and tubs. They have no grooves or any other kind of incisions to indicate what kind of vessel they might have come from. The longest piece is 302 mm, the shortest fragment 42 mm. Found in Illorpaat 3, houses III, I and early Thule, the midden, layers 12, 8 and 4 and in Illorpaat 13.

Not illustrated.

Ornamented sticks

Four sticks have carvings.

igd 3600, 62 mm, point with a rectangular cross section, broken and with closely placed notches along the edges, found in Illorpaat 3, house II (15/F).

igd 3263, 123 mm, like igd 3600 but both ends broken off, three notches are visible along both edges, found in Illorpaat 3, house I (6/H), not illustrated.

igd 2057, 54 mm, square cross section, with small closely placed notches along the edges, found in the midden, layer 8 (1/E).

igd 2327, 64 mm, point with a circular cross section, broken, with v-shaped cuts in the pointed end and a screw-thread carving at the broken end, functioned as a cleaning rod for a gun (?), stray find from the midden.

Other

168 objects could not be categorized further. These are sticks with circular cross section, which may have been shaft or handle fragments, parts of boats, etc.; sticks with oval cross section whose original purpose is unknown; scarfs where only the scarfed section is preserved; offcuts from round sticks and other cut up pieces; other indeterminable objects, a total of 106, mostly small carved pieces which may have been the products of the whittling knife.

The distribution is as follows:

	Illorpaat 3					Midden				Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	9	8	4				
Sticks													
with circular section	2	1	2	3	–	–	–	5	3	–	5	–	21
with oval section	2	1	–	–	1	–	–	–	1	–	5	–	10
Scarfs	1	1	1	2	1	–	2	2	1	–	2	–	13
Offcuts	1	1	5	5	–	–	–	1	1	1	2	1	18
Other*	5	8	19	15	10	5	2	1	7	1	29	1	103
	11	12	27	25	12	5	4	9	13	2	43	2	165
* +3 stray finds from the midden													168

In addition there are 401 pieces which have knife marks and must be classified as wood shavings or other waste material. 227 from Illorpaat 3, 66 from the midden, 99 from Illorpaat 13 and 9 from Itissaalik. These fragments are not included in the table above, but they do document the abundance of wood, which surprised the European travellers and in 1585 caused John Davis to presume that it came from forests inland (Hakluyt 1589: 778).

Examples: **igd 4154**, 126 mm, level sides and rounded edges, broken, with an eye at the end, found in Illorpaat 3, house I (12/J).

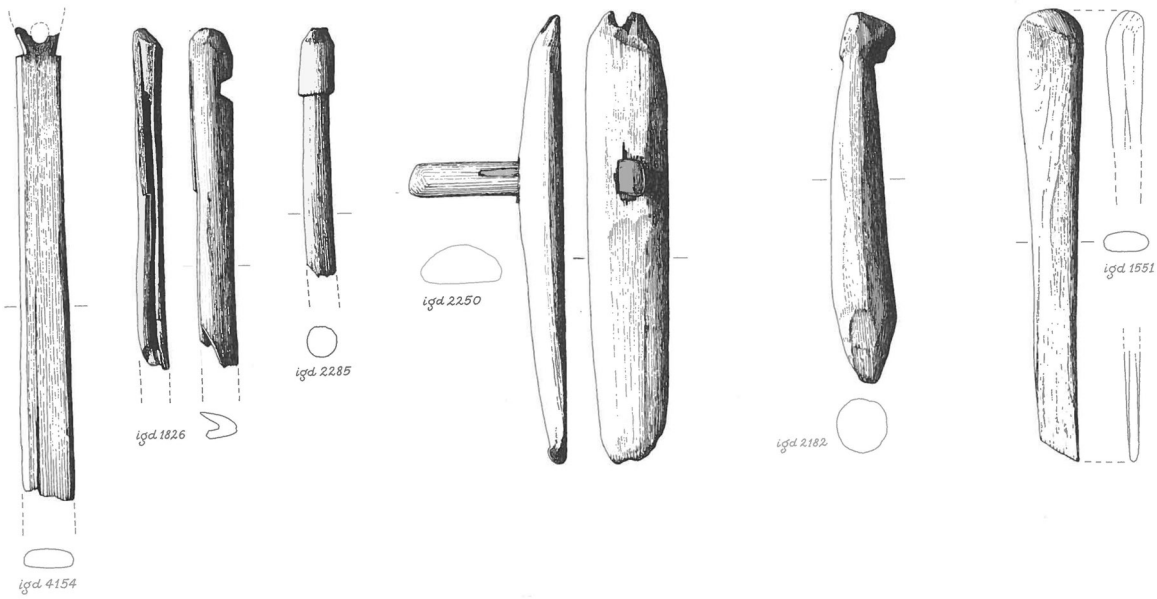
igd 1826, 90 mm, acuminated oval cross section, broken, a notch cut into the end, one edge has a longitudinal groove which may have served to protect the edge of a weapon head, found in the midden, layer 12 (1/B).

igd 2285, 65 mm, broken stick with circular cross section, a head at the end, found in the midden, layer 9 (2/E).

igd 2250, maximum length 120 mm, acuminated oval with domed upper side and level underside, a small piece of wood is set into the upper side, found in the midden, layer 4 (1/F).

igd 2182, 98 mm, drop-shaped plug with a carved head, found in the midden, layer 4 (2/G).

igd 1551, 119 mm, spatula-shaped piece cut off diagonally, rounded head, found in Illorpaat 9 (3/A).



Miscellaneous

The 99 objects in this group are included in order to demonstrate the wealth of choice of raw materials that has turned up in the archaeological investigations, and in order to show examples of the qualitative treatment given to these materials.

Some examples of raw materials have at times seemed rather exotic because they did not have any immediate functional value. This will emerge from the description below.

The pieces of raw material have all been collected because they carry traces of working, which tell of the tool used in the process. In the case of the 66 collected pieces of raw material I have attempted to render the most correct representation, although the sometimes great concentrations of wood shavings in the lowest horizons of the excavations must necessarily be taken into account. These wood shavings are due to the use of the axe. But only the raw materials and not the waste products are included.

Examples of raw materials

33 objects have been included as examples of raw materials. None of them has had any primary use as a tool, with the exception of the piece of asbestos **igd 2711**.

The collection of examples can be supplemented by pieces of soapstone, driftwood, bone, caribou antler and iron, which have, on the other hand, all been worked and used for many purposes. It is here relevant to highlight an observation concerning iron. This material was brought to Greenland by the Dutch whalers in large quantities from the 1670s onwards (Gulløv 1987) and after the colonization in 1721 it became a common commodity. But we have one source, which mentions yet another way of obtaining iron in Godthåb District. It is the evidence of those Greenlanders who were abducted by David Danell in 1654 and who said that: "...they still dig every day for nails and iron which they have worked from the houses of the Christians" (Bobé 1916: 232). Norse iron was thus also used.

The organic items in this collection are birch bark, hair, charcoal and berries, while the inorganic items are asbestos, garnet, molybdenite and mica. The distribution is as in the table below:

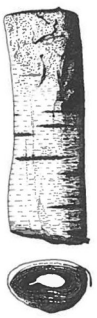
	Illorpaat 3					Midden		Islik.	Total
	IV	III	II	I	e.Th.	12	4		
Birch bark	5	4	2	–	–	–	3	4	18
Hair	–	–	–	–	2	–	–	–	2
Charcoal	–	–	–	–	–	1	–	–	1
Berry	–	1	–	–	–	–	–	–	1
Asbestos	2	4	–	–	–	1	–	–	7
Garnet	1	–	–	–	–	–	–	–	1
Molybdenite	2	–	–	–	–	–	–	–	2
Mica	1	–	–	–	–	–	–	–	1
	11	9	2	0	2	2	3	4	33

Organic materials

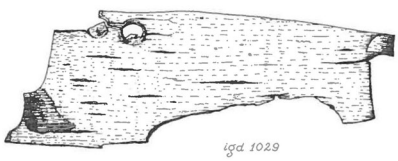
Birch bark. The material consists of three flakes and 15 rolls. They probably drifted to Greenland from Siberia with the East Greenland Current. **igd 1630** has partly burnt ends, which suggests tar-extraction; but this custom is not known in Greenland. The Greenlandic notion of large kayaks, *qajariaq*, from which birch bark drifts ashore on Greenland's coasts (Rink 1866:373), has no doubt been fostered by this special supply of material.

Examples: **igd 1630**, 62 mm long roll with burnt ends, found in the midden, layer 4 (1/D). **igd 1029**, 105 mm long flake, found at Itissaalik (9/G).

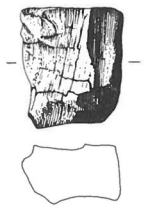
Human hair. A tuft, **igd 3105**, and a lump, **igd 3243**, of human hair were both found in Illorpaat 3, early Thule (9/K and a stray find in the same horizon). Not illustrated.



igd 1630



igd 1029


igd 1606

Charcoal. igd 1606, 28 × 32 × 15 mm, found in the midden, layer 12 (1/C). Charcoal is known to have been used since the earliest colonization (Gulløv & Kapel 1979: 90).

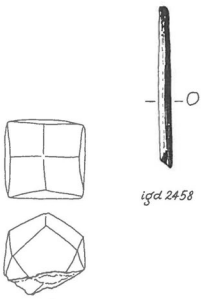
Berry. igd 3275, dried berry, diameter 6 mm, found in Illorpaat 3, house III (16/H). Dried fruit may have been brought to the country from Europe (*cf.* Gulløv & Kapel 1979: 109), but it has not been possible to identify the berry with any certainty. Not illustrated.

Inorganic materials

Asbestos. The pieces were originally rod-shaped. Three of them were, however, worked into needle-shape, while one piece, **igd 2711**, has been given a sharpened edge. Besides these, two pieces are recorded as wick trimmers (see under that group). The property of this material in relation to fire was recognized by Hans Egede in 1724 and he was requested to send samples back to Norway (Gulløv & Kapel 1979: 130). The material does not turn up in any of these excavations until the time of the colonization, the time when the south Greenlanders settled in the Godthåb Fjord, i.e. after the 1730s (Gulløv 1982). Geographically, asbestos has been demonstrated by archaeology to occur all over Greenland (Mathiassen 1930: 228, 1931: 100, 1933: 49, 1936: 92; Holtved 1944,I: 263), but only in very small amounts.


igd 2711

Examples: **igd 2711**, 105 mm, one end shaped into a wedge, a function as an adze is however doubtful as the material is soft, found in Illorpaat 3, house III (15/G). **igd 2458**, 43 mm, needle-shaped, a socket in one end may have held a point, found in Illorpaat 3, house IV (13/L).


igd 2458

igd 2521

Garnet. The bedrock in the archipelago contains many veins of garnet- and tourmaline-bearing pegmatite. A garnet, **igd 2521**, was found in Illorpaat 3, house IV (20/H). This has hardly been of any primary value for the Greenlanders, but may have been collected for the colonists. Minerals of all kinds were of great interest to the Europeans, who early on had been requested to send back: "... minerals of whatever kind which are present, not to be forgotten" (Sollied & Solberg 1932: 165). This was the message from Bergen to Hope Colony in 1726.

Molybdenite. Two small pieces of molybdenite, both **igd 2536**, were found in Illorpaat 3, house IV (12/E). This material has hardly found any local use – apart from a possible function as whetting material – but is probably also explained by the European request for mineral-collection (Sollied & Solberg *op.cit.*). In this case the mineral has an unmistakable resemblance to silver. The pieces have been analysed at the Museum of Geology, Copenhagen University. The material was identified as molybdenite, which is found in the innermost part of Godthåb Fjord at the edge of the inland ice, among other places (GGU 1973: 24). Molybdenite also occurs along the coast of Godthåb District, for example at Alaangorsuaq, Narsaq, Qarajat and Fiskenæsset (Bøggild 1953: 62). Not illustrated.

Mica. A piece of mica, **igd 2419**, was found in Illorpaat 3, house IV (14/J). In other parts of Greenland this material was used for mirrors (Holtved 1944,I: 275-276). Not illustrated.

Raw materials with traces of working

66 pieces of bone or wood are included, because they show traces of having been worked with burin, drill, knife, axe or saw. Similar traces of working can be demonstrated in the inorganic material, as can be seen in the description of soapstone, *cf.* the object-groups **Lamps, Cooking pots** and **Soapstone, indeterminable**.

The discernible traces of working are: burin marks, drilling-off holes, drilled holes,

saw marks, marks of off-cutting and point-sharpening, hewing marks and grinding marks (not included below).

The table below indicates the visible traces of working, i.e. the number of traces of working, since there are often more than one trace on the same piece of raw material.

	Illorpaat 3					Midden				Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	e.Th.	12	9	8	4				
Burin marks													
Antler	–	3	1	3	–	3	3	1	3	1	4	–	22
Whale bone	1	2	2	2	–	–	–	–	–	–	3	–	10
Drilling off													
Antler	1	3	3	–	–	–	2	–	–	–	1	–	10
Whale bone	–	1	–	–	–	–	–	–	–	–	–	–	1
Other bones	–	1	–	–	–	–	–	–	1	–	–	–	2
Knife marks (off-cutting and point-sharpening)													
Antler	1	–	–	2	–	–	2	–	–	–	2	2	9
Whale bone	–	1	2	1	–	–	–	–	–	–	1	1	6
Other bones	–	–	1	–	–	–	–	–	–	–	1	–	2
Wood	–	–	–	–	1	–	–	–	–	–	–	–	1
Axe marks													
Whale bone	–	–	–	1	–	1	–	–	–	–	2	–	4
Wood	–	1	–	–	1	–	–	–	–	–	–	–	2
Saw marks													
Antler	1	–	1	–	–	–	–	–	–	–	–	–	2
Whale bone	2	–	1	–	–	–	–	–	–	–	–	–	3
Wood	1	–	2	–	–	–	–	–	–	–	–	–	3
Drilling (other than drilling off)													
Antler	1	1	1	1	–	2	2	–	1	–	1	–	10
Whale bone	–	1	–	–	–	–	–	–	–	–	1	–	2
Other bones	–	–	–	–	–	–	–	–	–	–	1	–	1
Working-traces	8	14	14	10	2	6	9	1	5	1	17	3	90

The group "other bones" consists of four pieces, which are a caribou tibia, a penis bone of a walrus, a seal rib and an unidentifiable fragment (presumably a piece of narwhal skull).

In the first phase of working the raw material the burin and the drill were used on antler and bone, but not on wood. The axe was used on bone and wood, but not on antler. Knife and saw were used on all raw materials.

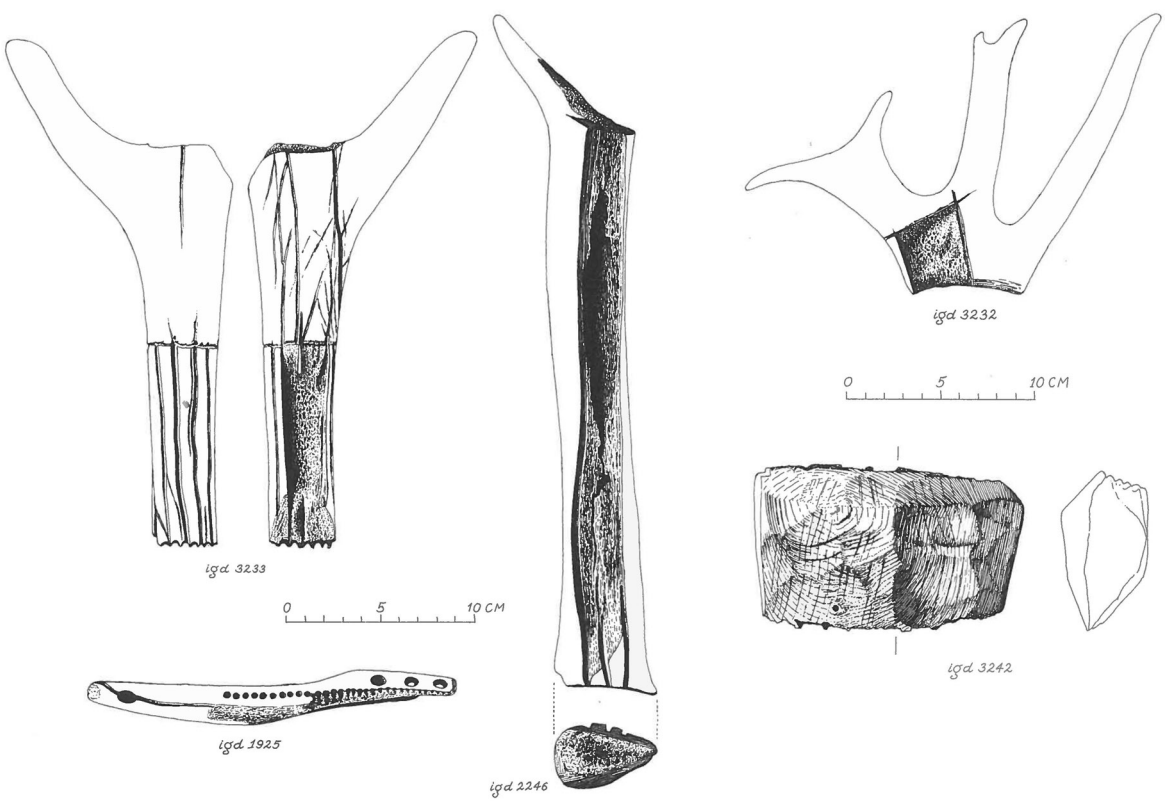
By means of the division into periods, which was applied to the find groups discussed above (e.g. **Cooking pots**), the present material can be distributed as follows:

	burin	drill	knife	axe	saw	%	(ex)
1750-1800	24% (6)	36% (9)	20% (5)	4% (1)	16% (4)	100	25
1700-1750	35% (13)	27% (10)	19% (7)	8% (3)	11% (4)	100	37
1600-1700	45% (9)	25% (5)	25% (5)	5% (1)	0 0	100	20
1475-1600	59% (4)	25% (2)	12.5% (1)	12.5% (1)	0 0	100	8
	(32)	(26)	(18)	(6)	(8)		90

It can be seen from this that the saw is not adopted as a tool until the 18th century and that the burin technique is gradually superseded, but does not completely disappear. The division into periods cannot, however, inform on the introduction of European tools, when the groups of objects are furnished with iron blades and iron points, *cf.* the object groups **Drills, Awls and Burins**, **Knives, Axes** and **Saws**. On this point we must anticipate a divergence between the historical and the archaeological data, as has clearly been demonstrated in other historical localities, where the objects appear in the sources before they become archaeological artefacts (Kilmarx 1986; Brain 1979).

There does not seem to have been any preference for the various parts of the caribou antler in this material, as there was in other localities (*cf.* Corbin 1975). This is primarily due to the long distance from the hunting area to the winter dwelling where the antlers were to be used (*cf.* Grønnow *et al.* 1983: 78-79), so all parts of antler were used for fashioning tools.

Examples: **igd 3233** is a piece of antler with marks from burin and drilling off; the parallel burin marks are called *qiporqissaq* after the pattern on the baleen whale's belly



(Jens Rosing, pers. comm.); the total length of the piece is 290 mm from the drilling-off to the antler prong; found in Illorpaat 3, house III (18/G).

igd 2246 is a piece of antler with burin marks and burin off-cut; total length from off-cut to antler prong is 360 mm; found in the midden, layer 4(1/E).

igd 1925 is a piece of antler with burin marks, drilling-off holes and perforations, the last are for a later tool function; length 195 mm; found in the midden, layer 9 (1/F).

igd 3232 is a piece of antler with burin marks where a plate has been cut out; the length between the outer prongs is 225 mm; found in Illorpaat 3, house I (14/H).

igd 3242 is a wooden block, roughly hewn with an axe and wedge-shaped, with a maximum length of 145 mm; found in Illorpaat 3, house III (3/K).

European objects

The distribution of the found European objects is shown on the ground plans above (Figs. 51-54). There are separate distribution plans for the major find groups, such as iron, bricks, glass, pottery and beads. These predominantly show a scattered distribution along the platform edges and on the floor area.

The objects are typical manifestations of a trading relationship, i.e. barter objects and payment for goods. This is the contact with Hope Colony in the period 1721-28, with Godthåb in the period after 1728 and with Neu Herrnhut in the period after 1733. But, judging from the found brick fragments, objects must also have been gathered in Hope Colony after it was abandoned.

The find material contains no objects which with certainty can be dated to the 16th or 17th century and the European objects do not appear in large quantities until just before the mid-18th century. In contrast to this archaeological situation, the historical sources tell of local Greenlandic demand for goods, e.g. knives, as soon as Hope Colony was established in 1721 (Gulløv & Kapel 1979: 125). This demand was created by the Dutch whalers who proved very competitive in the early colonial period. Egede emphasised in April of 1722 that the competition was furthermore very unequal, as a Dutchman one day did more trade with a single umiaq than the colonists had done since their arrival the previous July (1925: 20).

In an account of 1722, which Egede published in his brief Description of Greenland, he mentioned the following commodities: "...blubber, baleen, unicorn horns, reindeer skins, fox pelts and seal skins, in return for which they demand from us and the Dutchmen striped and flowered shirts of ordinary cloth, stockings, mittens, brass and tin kettles, knives, compass saws, sewing needles and other small wares. In addition also wooden casks, as well as battens and boards, and chests, small and large" (1925: 34). Later he added "fishing hooks, mirrors...pewter plates and bowls and suchlike, for all of which they pay well" (1925: 391).

In 1721 24 kinds of commodity were brought into the country and in 1727 this supply had increased to 34 articles (Gulløv & Kapel 1979: 204-205). In the find material under discussion the group of objects which can be ascribed to trade or barter number 34 different commodities, and they thus qualitatively represent the situation in the 18th century. Some of the groups in the find material however only appear quite late in the 18th century, such as Sheet copper and sheet brass, Bullets and gunflint and Clay pipes. As regards tobacco, Egede noted that the Greenlanders did not like it, nor the smoke from it (1925: 372). Tobacco did not become popular as a stimulant until the middle of the century, and then in the form of snuff (Dalager 1915: 44).

It can be seen from the available sources that the Greenlanders considered the bartered goods to have utility value at the time of the earliest contacts. The Dutch iron goods and guns were thought to be of inferior quality to the Danish (Dalager 1915: 45,78). By the mid-18th century the supply had become adapted to the demand and various fashions arose in the colonies: "The menfolk start to wear neckerchiefs, buckles on their shoes and handsome garters. It is now also common to see them with pockets in their trousers, in which they keep their snuff-box and handkerchief. The women on the other hand you see with a kind of neckerchief ... and are furthermore covered from top to bottom with sewn-on bows of wide silk ribbons" (Dalager 1915: 44).

Contrary to expectations, the glass beads do not appear in large numbers in the archaeological horizons until comparatively late. This may be because glass beads were introduced in those places on Greenland's west coast which the Dutch whalers usually frequented in the spring. This is partly correct, as we know that the whalers brought glass beads with them (Gulløv 1987). It is not supported by Egede's evidence, since he nowhere in his notes, made over a period of 15 years (from 1721 to 1736), mentions any Greenlandic demand for glass beads. But on the other hand, when glass beads are mentioned they are said to be given as little presents, e.g. for the first time in 1721 (Gulløv & Kapel 1979: 68). Even on the deathbed it was the sewing needle which was the woman's greatest object of desire, as Egede noted in 1722 (1925: 50).

Glass beads were however also known in Godthåb District in Egede's days. In 1722 he wrote that "beads, one or more, hang from their ears, also as ornament on their clothes and shoes etc." (1925: 36) and in his Description of Greenland of 1741 he says that "their adornment is otherwise to have various coloured glass beads or corals hanging in their ears and around their neck or arms" (1925: 370). But the archaeological finds do not indicate the time they were first introduced, as will be seen in the descriptions below. The dating of the present find material is thus subject to discussion, since the period from manufacture in Europe until when it was used and discarded in Greenland must be taken into account (*cf.* Kilmarx 1986).

As regards the Norse objects in the find, only few can be said to be of primary origin. These are a rim of an oak bowl from the 16th-century horizon, found in Illorpaat 3 and described under Household utensils, a spindle whorl and the rim of a dish, both of soapstone, from Illorpaat 13 and described under Soapstone, European origin. Apart from these, the scratching tool with inset nail from midden layer 4 and possibly the shovel blade from the 16th-century horizon, found in Illorpaat 3 and described under Men's tools may possibly be associated with the Norsemen. The ornamental bodkins described under Women's equipment, found in Illorpaat 3, houses II, I and early Thule and in midden layer 12, may have been based on Norse models. The soapstone cooking-pot fragment from Illorpaat 3, early Thule, recurs in excavations of Norse farms, but was also found in one of the Eskimo houses which was built into the Norse farm at Qoornoq (see the object material from there, below). The coopering technique, described under Household utensils, which was demonstrated in nearly all the examined structures from the 16th century onwards, points to Norse inspiration. In addition the soapstone beaker- or lamp-fragment described under Soapstone, indeterminable, seems to be of Norse origin.

None of the 39 objects, however, can be said to constitute proof of direct contact between Eskimos and Norsemen. In this connection it is worth noting that ornamental bodkins and the coopering technique are found everywhere in the Thule culture in Greenland, but not outside the country. These two diagnostic types are discussed in connection with the find material from Kangeq, where they are dated to the 14th century.

Iron

There were 120 objects of this material in all the examined localities. Several have been discussed elsewhere in connection with the Eskimo find groups, but will be described below *in extenso*, in order to complete the description of this rare metal in an Eskimo context. The proximity of Hope Colony and the increased European presence throughout the 18th century can be seen clearly from the survey below.

	Illorpaat 3				Midden		Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	12	4				
Nails and Spikes	13	7	2	3	–	–	–	7	6	38
Rivets and Bolts	1	2	2	–	–	–	–	–	–	5
Drifts/Round bars	1	2	–	–	–	–	–	1	1	5
Drills/Needles	3	–	–	–	–	–	–	–	–	3
Hafted points	1	2	1	–	–	1	–	1	–	6
Knives	2	2	–	–	1	–	1	1	3	10
Fish hooks	1	–	–	–	–	–	–	1	2	4
Axes and Hammers	–	1	–	–	–	–	–	1	–	2
Scissors	–	–	–	–	–	–	–	1	–	1
Ulo blades (and saws)	2	–	–	–	1	–	–	–	–	3
Files	1	1	–	–	–	–	–	–	–	2
Bird-dart heads	–	–	–	1	–	–	–	–	–	1
Weapon blades	1	–	–	–	–	–	–	–	–	1
Buckles and Mounts	3	1	–	–	–	–	–	–	–	4
Various	9	14	3	–	4	–	–	5	–	35
	38	32	8	4	6	1	1	18	12	120

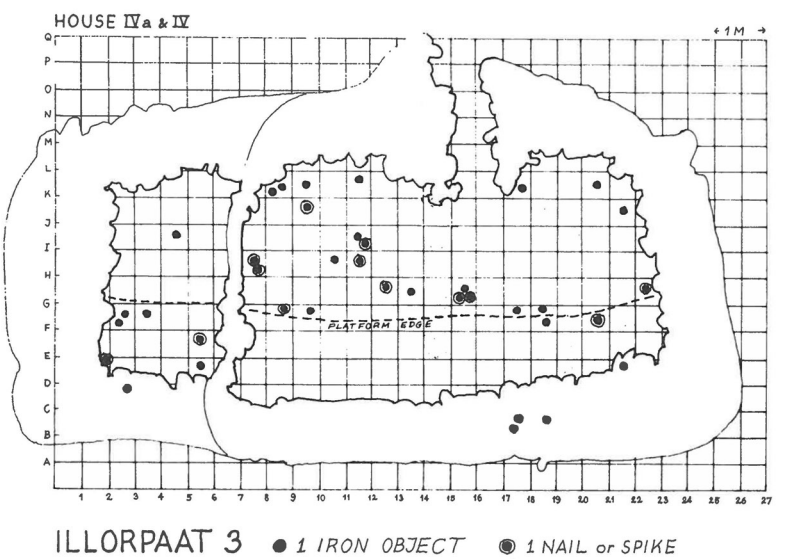
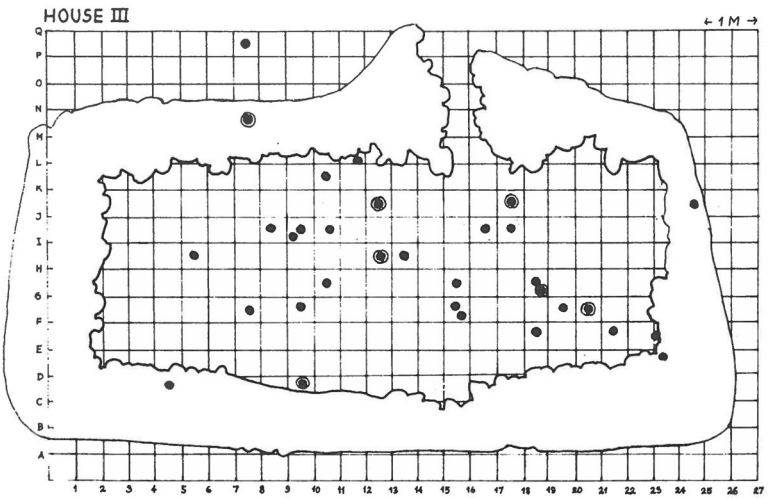
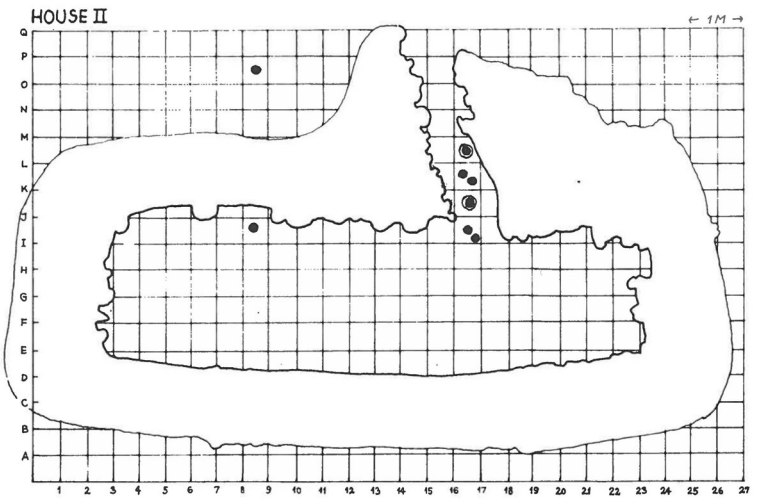
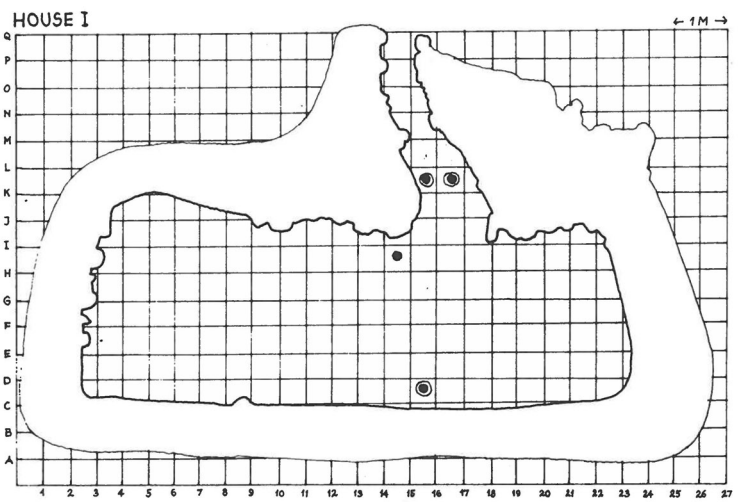


Fig. 87. *The distribution of iron objects in Illorpaat 3, houses I-IV. Each dot represents one object. Nails and spikes are marked with a circle round the dot.*


HOUSE III
← 1 M →


HOUSE II
← 1 M →


HOUSE I
← 1 M →

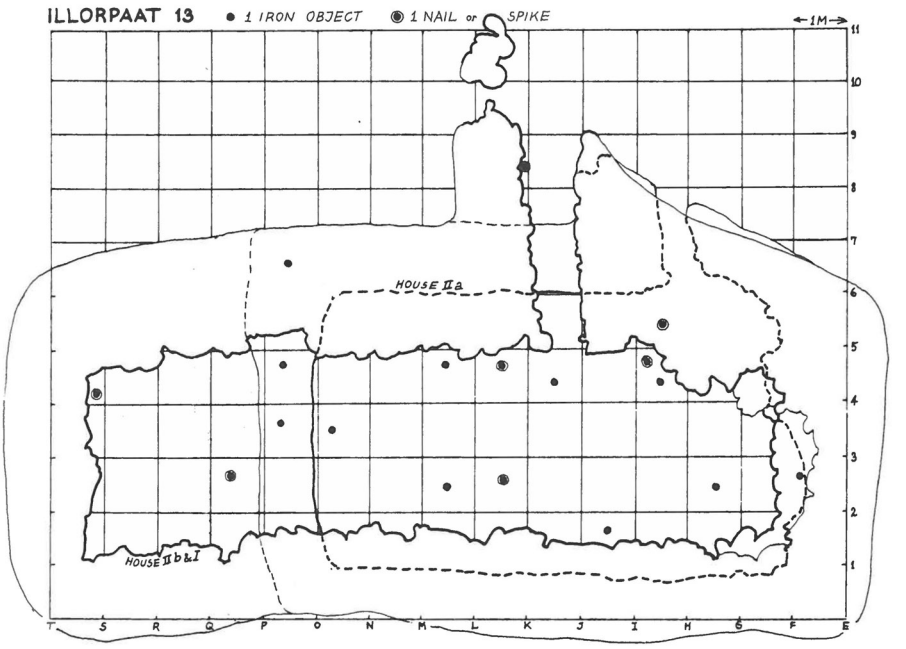


Fig. 88. *The distribution of iron objects in Illorpaat 13, houses I-IIb. Each dot represents one object. Nails and spikes are marked with a circle round the dot.*

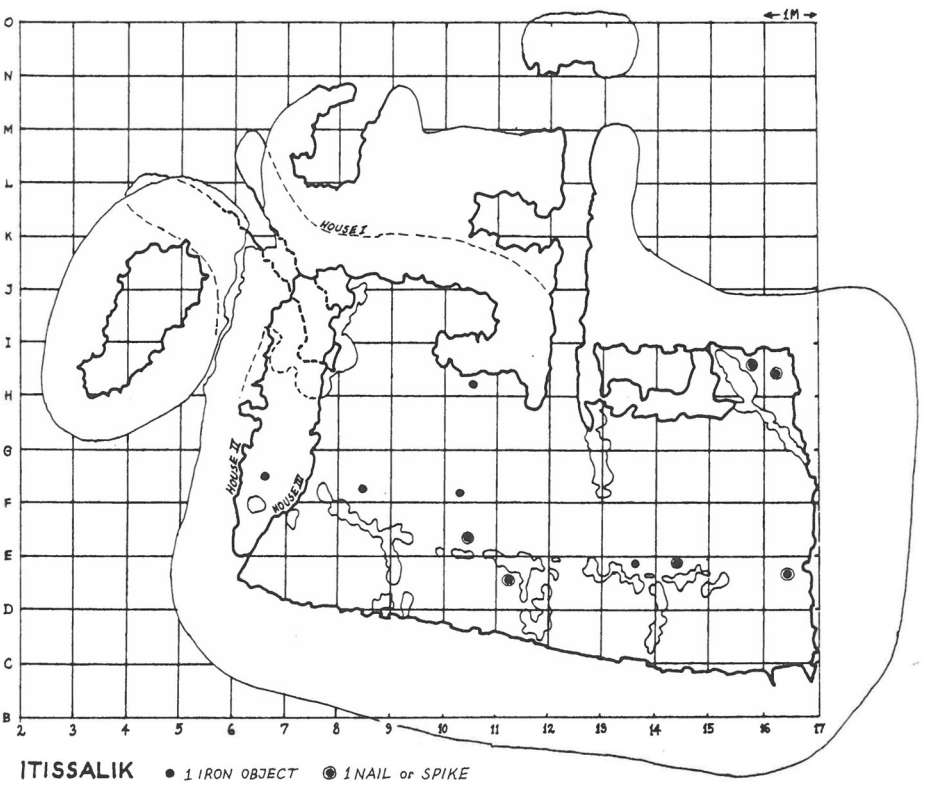


Fig. 89. *The distribution of iron objects at Itissaalik, houses I-III. Each dot represents one object. Nails and spikes are marked with a circle round the dot.*

Nails and Spikes

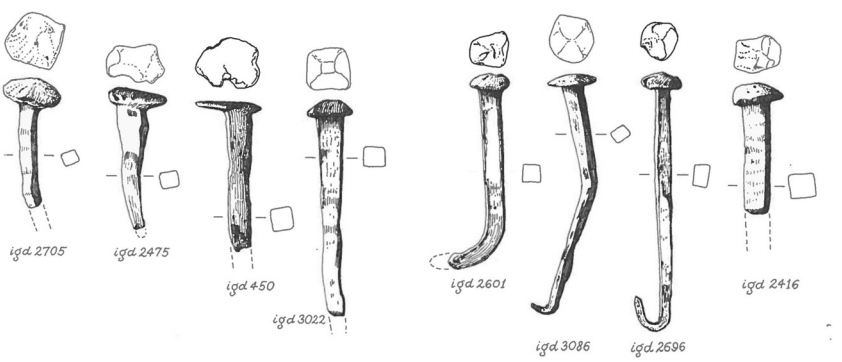
The length of 125 mm has been chosen to distinguish nails from spikes (Gulløv & Kapel 1979: 136-137). In the case of broken objects the other dimensions have determined the definition. Thus the find contains 33 nails and five spikes. They are of the same dimensions as the nails and spikes known to have been used in the construction of Hope Colony, 1.5″ (39 mm), 2.5″ (65 mm), 3.0″ (78 mm) and 8.0″ (209 mm). The rest are broken and were found with or without heads. The nail fragments are divided into two separate groups, which are called, respectively, thin (i.e. maximum width 2.5 – 4.0 mm) and thick (i.e. maximum width 4.5 – 7.5 mm).

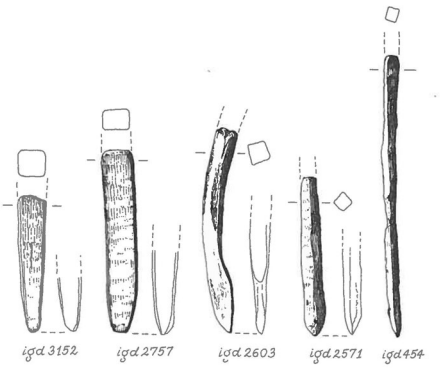
The distribution of the described nails and spikes is as follows:

	Illorpaat 3				Illpt. 13	Islik.	Total
	IV	III	II	I			
Nails							
1.5″	1	–	–	–	–	–	1
2.5″	1	–	1	–	–	–	2
3″	1	–	–	1	–	–	2
Various, with head	2	–	–	–	1	–	3
Various, without head, thin	4	3	1	–	2	1	11
Various, without head, thick	4	4	–	2	1	3	14
Spikes							
8″	–	–	–	–	1	–	1
Various, with head	–	–	–	–	2	1	3
Various, without head	–	–	–	–	–	1	1
	13	7	2	3	7	6	38

Several nails have found secondary use in the Eskimo find contexts. For example, flattened nails have been used as knives (*cf.* **igd 1308**, under **Knives**), bent nails as fish hooks, as well as other functions as drill bits and scratching tools (*cf.* **igd 2014**, under **Drills, Awls & Burins**).

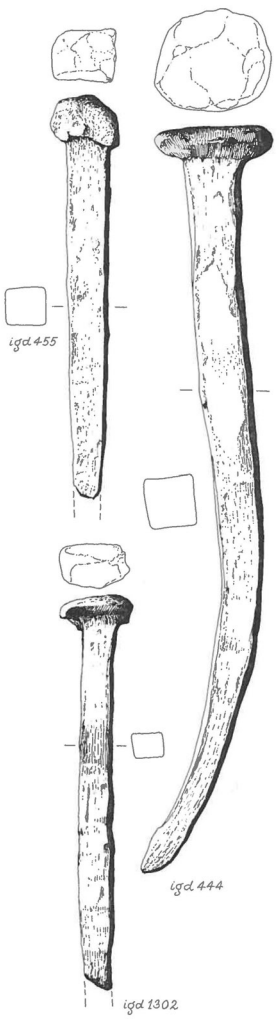
Examples of nails: **igd 2705**, 33 mm, broken, large head, found in Illorpaat 3, house IV (23/H). **igd 2475**, 1.5″ (39 mm), large head, found in Illorpaat 3, house IV (6/F). **igd 450**, 40 mm, broken, large head, found in Illorpaat 13 (3/Q). **igd 3022**, 2.5″ (65 mm), small head, found in Illorpaat 3, house II (17/H). **igd 2601**, 2.5″ (65 mm), small head, found in Illorpaat 3, house IV (8/I). **igd 3086**, 3.0″ (78 mm), small head, found

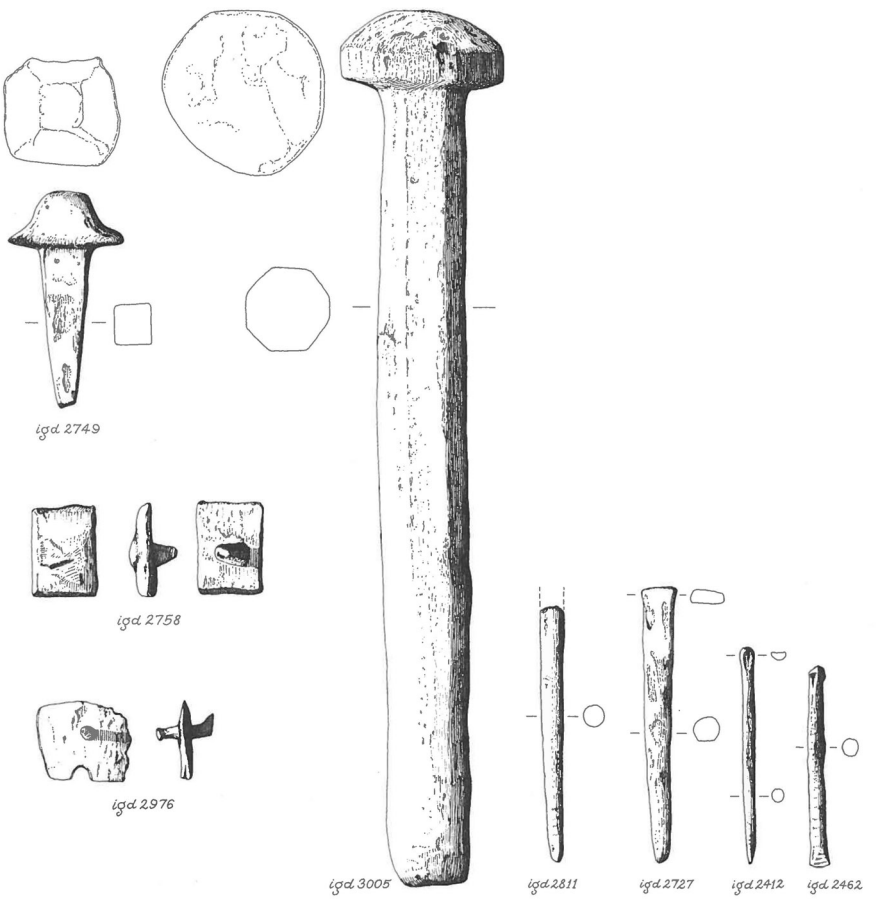




in Illorpaat 3, house I (17/L). **igd 2696**, 3.0″ (78 mm), small head, fish hook?, found in Illorpaat 3, house IV (16/H). **igd 2416**, 34 mm, broken, small head, found in Illorpaat 3, house IV (2/E). **igd 3152**, 36 mm, broken, without head, thick, found in Illorpaat 3, house I (16/L). **igd 2757**, 49 mm, broken, without head, thick, found in Illorpaat 3, house III (13/I). **igd 2603**, 53 mm, broken, without head, thick, hammered flat for a secondary purpose, found in Illorpaat 3, house IV (12/I). **igd 2571**, 41 mm, broken, without head, thin, secondary use as a bradawl or the like, found in Illorpaat 3, house IV (16/H). **igd 454**, 74 mm, broken, without head, thin, secondary use as a barb on fish hook or jig, found in Illorpaat 13 (5/L).

Examples of spikes: **igd 455**, 106 mm, spike, found in Illorpaat 13 (5/I). **igd 1302**, 103 mm, spike, found at Itissaalik (11/F). **igd 444**, 8.0″ (209 mm), spike, found in Illorpaat 13 (6/I).





Rivets & Bolts

There are five objects in this heterogeneous group, all from Illorpaat 3.

igd 2749, 58 mm, rivet, point broken, found in house III (11/J). **igd 2466**, 10 mm, rivet, point and head missing, found in house IV (18/G), not illustrated. **igd 2758**, rivet with rectangular head, 24 × 17 mm, from a small clinker-built boat (?), found in house III (10/G). **igd 2976**, 15 mm, rivet, set in a thin piece of iron with half a hole in its edge, originally part of a weapon head (?), found in house II (17/J). **igd 3005**, 232 mm, bolt, from a larger boat (?), found in house II (9/P).

Drifts/Round bars

Five pieces of thin round bars were found and have been interpreted as drifts or drift-like. Three of them have a pointed end.

igd 2684, 110 mm long, 8-mm cross section, found in Illorpaat 3, house IV (16/H), not illustrated. **igd 2811**, 67 mm, broken end, found in Illorpat 3, house III (5/D). **igd 2727**, 73 mm, pointed, flattened at the other end, found in Illorpaat 3, house III (12/M). **igd 452**, 40 mm, broken end, found in Illorpaat 13 (4/O), not illustrated. **igd 1309**, 135 mm long, 7-mm cross section, found at Itissaalik (14/E), not illustrated.

Drills/Needles

Three thin iron points are interpreted as drills or needles. They were all found in Illorpaat 3, house IV.

igd 2470, 46 mm, with semicircular cross section, originally a nail (?) (14/H), not illustrated. **igd 2412**, 57 mm, circular cross section, one end pointed, the other flattened (3/G).

igd 2462, 53 mm, circular cross section, made wedge-shaped at one end, bradawl (?) (19/G).

Hafted points

Six objects were treated in the group **Drills, Awls & Burins**.

Bowdrills: **igd 3305**, Illorpaat 3, house IV (3/G). **igd 3458**, Illorpaat 3, house III (17/J). **igd 3631**, Illorpaat 3, house II (17/L). **igd 616**, Illorpaat 13 (5/M).

Burins: **igd 3438**, Illorpaat 3, house III (19/F).

Bodkins or engraving tools: **igd 2014**, midden, layer 4 (1/C). This tool has a nail inset as a scratching point and, on the basis of its shape and size, cannot be associated with Hope Colony. The find contexts demonstrate that the age of the nail must be pre-colonial.

Knives

Ten objects can clearly be classified as knives. All have been described under that group. Nine European blades, with or without tang, and a hafted blade can all be stratigraphically placed in the latest phases of the settlement. The types are also found in Hope Colony. One purely Eskimo knife, **igd 1544**, which is also the only piece of metal from Illorpaat 9, is so worn down that the type cannot be identified. The knife may be of Dutch or of Norse origin.

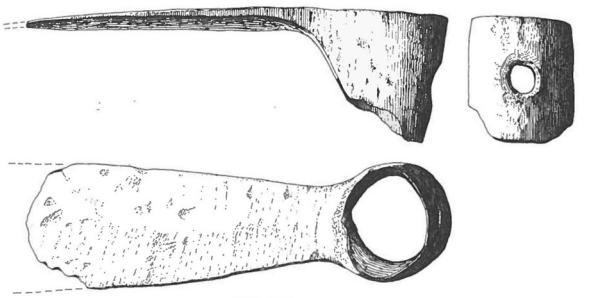
Fish hooks

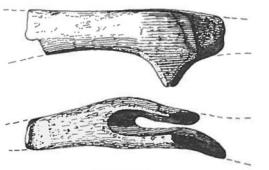
The four fish hooks all came from the latest phases of the settlement and are described under the group Fishing equipment. They are of the same shape as those found in Hope Colony, which is known to have bought 2,000 hooks of various sizes in 1721, while in 1726 the number of hooks bought had increased to 5,190 (Gulløv & Kapel 1979: 102).

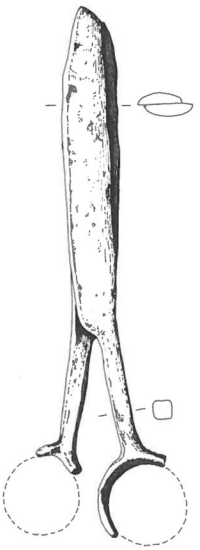
Axes & Hammers

Two objects can be identified as an axe head and a hammer head.

igd 448, 112 mm long, 33 mm high peen, with a hole for a handle-nail, worn down, with transverse edge, found in Illorpaat 13 (3/F), the type is not found in Hope Colony, but is known in North America (*cf.* Brain 1979: 147). **igd 2810**, 53 mm long, fragment of a small hammer head, found in Illorpaat 3, house III (25/K), the type is not found in Hope Colony.


igd 448


igd 2810


igd 458

Scissors

igd 458, 140 mm long, found in Illorpaat 13 (2/J). The only scissors in the find material. The introduction of scissors in a European context is dated to the time of the foundation of Hope Colony in 1721 (Gulløv & Kapel 1979: 165).

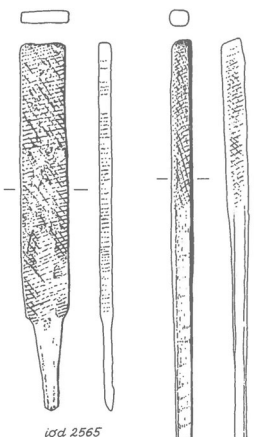
Ulo blades (and Saws)

Three pieces of iron had been used as blades for the *ulo*. They were all found in the last settlement phase and are described under the group *Ulos*. None of the found blades seem to have had a tang, as does the sailmaker's knife which the Eskimos asked for at Hans Egede's arrival (*cf.* Gulløv & Kapel 1979: 125). Sharpened flat bars were probably used as blades, just as the only iron sawblade in the find, **igd 2702** (see under *Ulos*), was re-used as an *ulo* blade.

Files

This group consists of two files. They are of the same types as those found in Hope Colony, whose accounts of 1727 record the purchase of 400 files from Hamburg in the previous year (Gulløv & Kapel 1979: 101).

igd 2565, 97 mm, flat file, cross-cut and with a tang, found in Illorpaat 3, house IV (21/L). **igd 2883**, 131 mm, round file, cross-cut and with a long tang, found in Illorpaat 3, house III (18/J).


igd 2565

igd 2883

Bird-dart heads

A head for a bird dart has an iron point fastened by an iron rivet. Described under the group Bird-dart heads. Found in Illorpaat 3, house I (18/M). After the colonization it became common to buy such "bird-irons" in the shops (Holtved 1962: 75) for use on bird darts and bladder darts. The find contexts – the earliest communal house in Illorpaat 3 – demonstrate that this has not yet become common.


igd 2710


igd 2474

Weapon blades

igd 2710, 101 mm-long weapon blade (sword?) with triangular cross section and concave sides, found in Illorpaat 3, house IV (12/J). Weapon blades with triangular cross section are known from Hope Colony (Gulløv & Kapel 1979: 185). A wooden sword model was found in Illorpaat 3, house I, described under the group **Toys.** This metal fragment is however very slight compared to the mentioned examples from the early colonial age. The fragment may thus be a stiletto or the like. Swordblades were still mentioned in 1782 as a trading commodity (Gad 1976: 33).

Buckles & Mounts

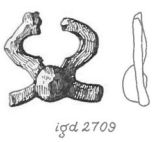
The four objects in this group were all found in Illorpaat 3.

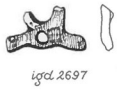
igd 2474, spherical, diameter 28 mm, total height 42 mm, has grooves from top to bottom, a knob has been set into one end, in the other a conical foot has been inserted with a hole into the inside of the sphere, found in house IV (3/D). The piece may have been placed at the end of a weapon shaft or have served as a stand for a container, candlestick or the like.

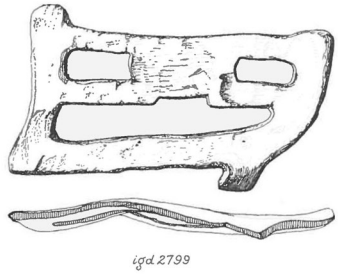
igd 2709, part of a buckle consisting of two curved branches held together by a rivet, 25 mm between the branches, found in house IV (9/L).

igd 2697, maximum length 21 mm, like **igd 2709**, but fragmentary, with a rivet hole, found in house IV (19/C).

igd 2799, mount of uncertain function, no trace of a tang and can therefore hardly be a buckle, found in house III (24/F).


igd 2709


igd 2697


igd 2799

Various

35 pieces of iron cannot be identified with any degree of certainty. They can be classified by their shape into nail-like pieces, hoop iron, knife-blade-like, a block, an eye and tiny fragments. The distribution is as follows:

	Illorpaat 3			Midden	Illpt. 13	Total
	IV	III	II	12		
Nail-like	2	4	–	2	2	10
Hoop iron	3	–	1	1	2	7
Knife-blade-like	2	5	–	–	1	8
Block	–	1	–	–	–	1
Eye	1	–	–	–	–	1
Fragments	1	4	2	1	–	8
	9	14	3	4	5	35

The **nail-like** pieces all have square or rectangular cross section. Bent, hammered flat and twisted pieces occur.

Examples: **igd 447**, 119 mm, square cross section in the middle, remains of a barb (?) at the tip and a bead with oval cross section at the end, found in Illorpaat 13 (3/M). **igd 457**, 97 mm between the curved ends, broken leg of callipers (?) with rectangular cross section, found in Illorpaat 13 (5/K).

The **hoop irons** are from 7 to 38 mm wide, are all level and straightened and are from 3 to 6 mm thick.

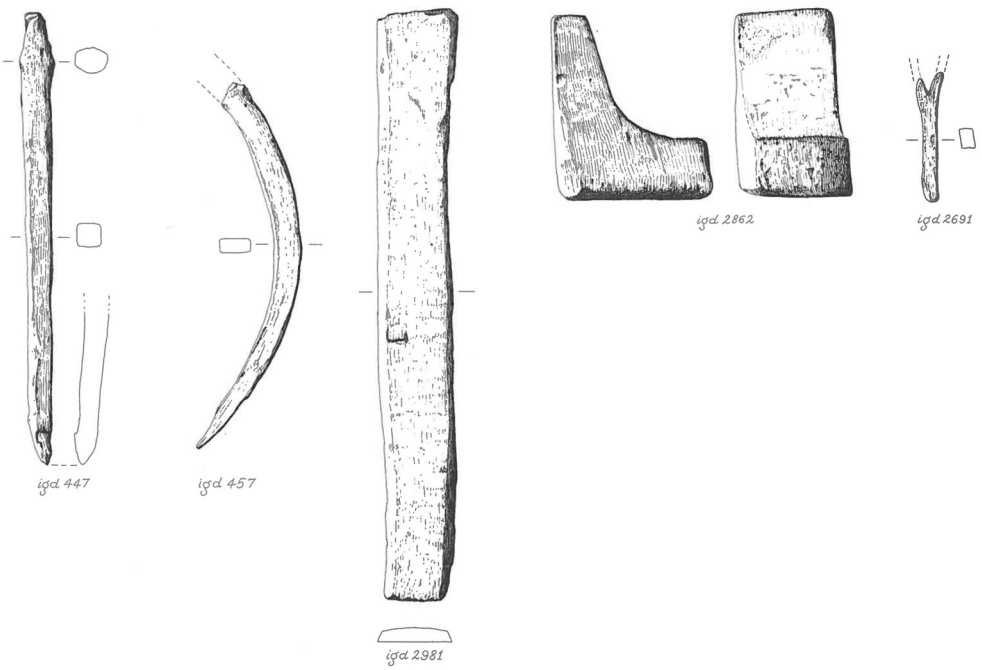
Example: **igd 2981**, 156 mm long, 20 mm wide, 4 mm thick, level underside, slightly domed upper with diagonally cut edges, found in Illorpaat 3, house II (17/L).

The **Knife-blade-like** are smallish, very worn, flat pieces, which may originally have been knifeblades. Not illustrated.

A **block, igd 2862**, rectangular with concave inner side, found in Illorpaat 3, house III (16/G).

A broken **eye-shaped iron, igd 2691**, may originally have functioned as a cotter pin, found in Illorpaat 3, house IV (18/C).

The **iron fragments** are too fragmentary to be described and must have come from larger pieces. Not illustrated.



Bricks

65 complete and fragmented yellow and red bricks were found. None came from the midden or Illorpaat 9. The pieces from Illorpaat 9, which have previously been thought to be bricks (*cf.* Gulløv & Kapel 1979/80: 371), are pieces of dried red clay of no cultural significance.

The yellow bricks are, with two exceptions, all of the same firing-type and of the same type as those found in Hope Colony, there classified as type I (Gulløv & Kapel 1979: 82). One complete brick, **igd 1198** (Itissaalik (17/D)) measures 200 × 87 × 40 mm. The exceptions are **igd 2598** (Illorpaat 3, house IV (10/H)), which is lightly fired, homogeneous, with a red sheen, and **igd 2599** (Illorpaat 3, house IV (20/H)), which

has been harder fired, homogeneous, with greater size of grain and 105 mm wide. These types of brick were not represented in Hope Colony.

The red bricks are medium fired and hard fired. Only the latter type was also found in Hope Colony, there classified as type V. The only complete, medium fired brick, **igd 1347** (Itissaalik (17/F)), measures 210 × 105 × 40 mm. The hard fired bricks were found in two examples, one of which is complete and measures 210 × 95 × 65 mm (composed of **igd 2492, 2595, 3043** & **3056**, Illorpaat 3, houses IV & II (4/G-H & 17/L-M)), while the other is broken and measures 95 × 65 mm (**igd 2491**, Illorpaat 3, house IV (12/E)).

The distribution is as follows:

	Illorpaat 3			Illpt. 13	Islik.	Total
	IV	III	II			
Yellow						
Medium fired						
(Hope Colony, type I)	10	8	5	1	2	26
With red sheen	1	–	–	–	–	1
Harder fired	1	–	–	–	–	1
Red						
Medium fired	3	1	–	13	18	35
Hard fired						
(Hope Colony, type V)	2*	–	–	–	–	2
	17	9	5	14	20	65

* one is composed of fragments found in houses IV and II, i.e. the house passage of house IV, which lies at the same level as house II and is common to houses II-IV.

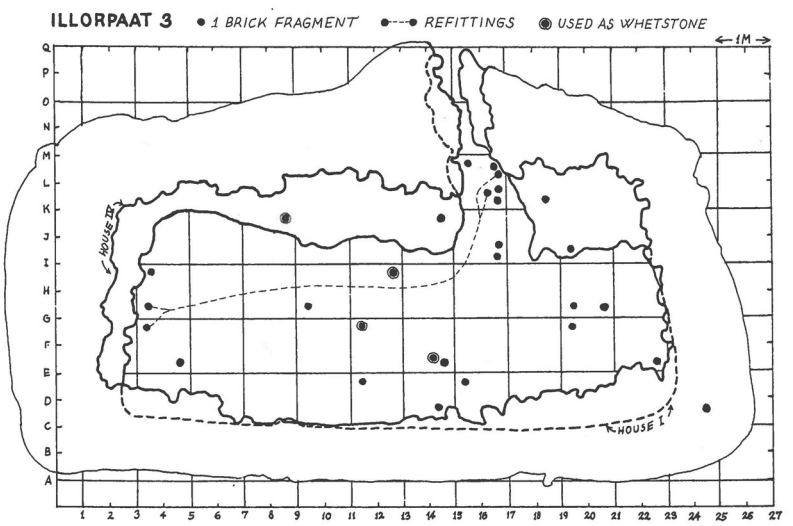


Fig. 90. *The distribution of brick fragments in Illorpaat 3, houses II-IV. Each dot represents a fragment. Joined pieces are connected by a broken line. A circle shows that the fragment has been used as a whetstone.*

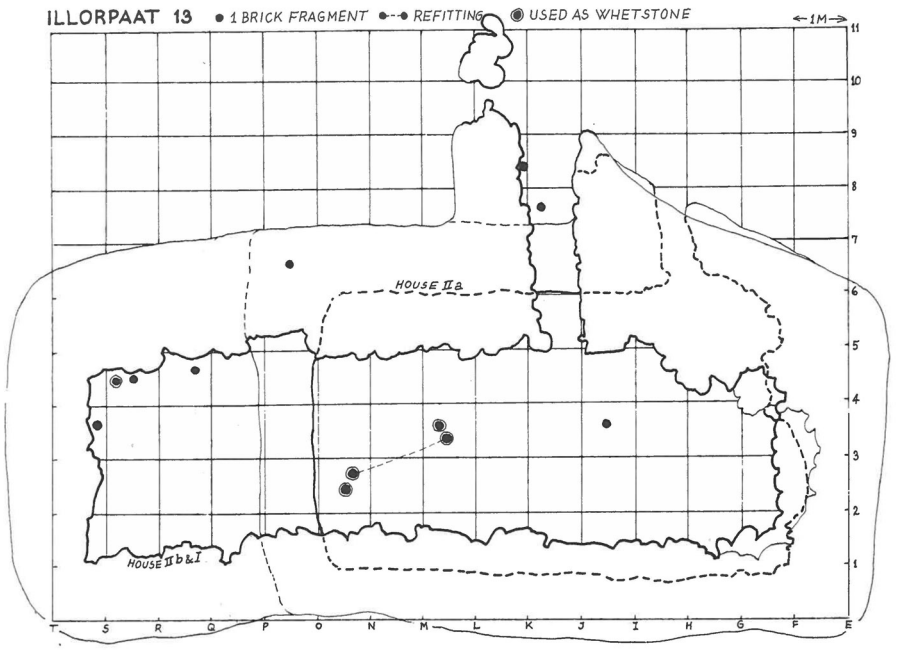


Fig. 91. *The distribution of brick fragments in Illorpaat 13, houses I-IIb. Each dot represents a fragment. Joined pieces are connected by a broken line. A circle shows that the fragment has been used as a whetstone.*

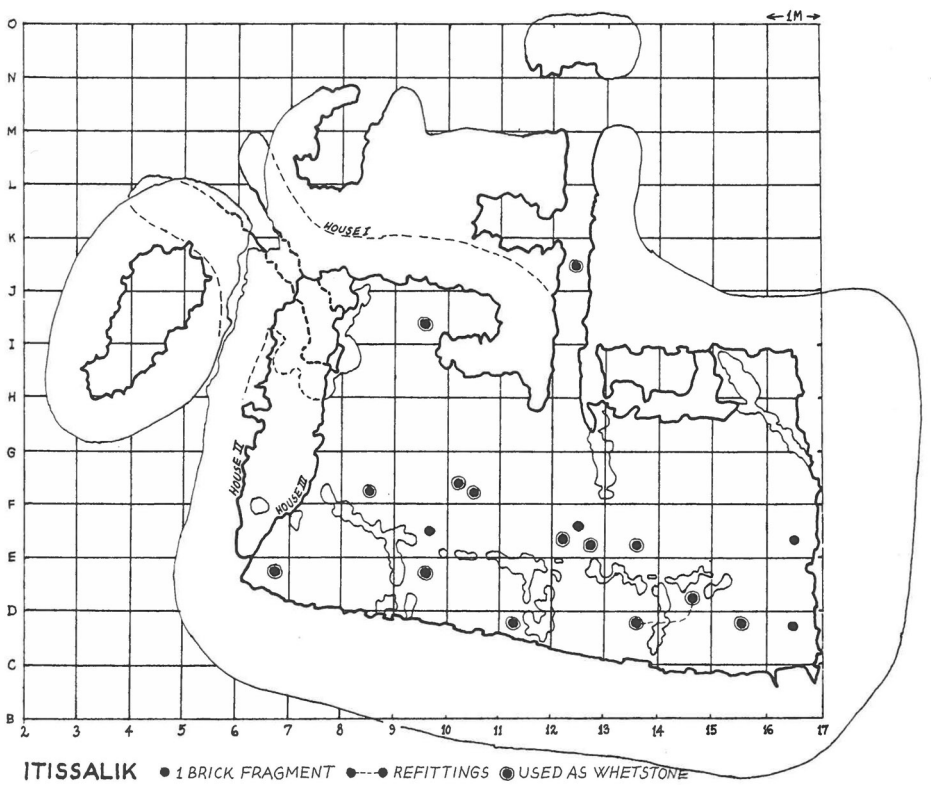


Fig. 92. *The distribution of brick fragments at Itissaalik, houses II-III. Each dot represents a fragment. Joined pieces are connected by a broken line. A circle shows that the fragment has been used as a whetstone.*

It is known that 12,200 bricks, primarily from Schleswig-Holstein, were used in the construction of Hope Colony (Gulløv & Kapel 1979: 83). The greater majority of these were yellow bricks, of a type which was also found in the present excavation (*cf.* Illorpaat 3, houses II & III). Further materials would have been imported for the foundation of Godthåb in 1728 and later for Neu Herrnhut in 1733, and from this time on the red bricks are among the find material in the Eskimo communal houses (*cf.* Illorpaat 3, house IV, Illorpaat 13 and Itissaalik).

The medium-fired bricks have found secondary use as whetting and grinding tools. Several pieces have grinding surfaces – there may be up to four – and concave and convex surfaces are also evidence of secondary use for whetting. One piece (**igd 1028**, Itissaalik (9/G)) has a v-shaped wear-mark from the sharpening of needles or arrow shafts. This secondary use only occurs in the latest settlement phases, before the area is abandoned, and then mostly at Itissaalik.

One yellow and three red fragments have been used as grinding tools in Illorpaat 3, house IV. Four red fragments with grinding surfaces were found in Illorpaat 13. At Itissaalik 13 red fragments had grinding or whetting surfaces.

This use of brick for grinding corresponds closely to the use of pumice, which was mostly used in the second half of the 18th century (see under **Whetstones**).

None of these fragments are illustrated. The found pieces were distributed all over the floor area in Illorpaat 3 (Fig. 90). In Illorpaat 13 all the fragments lie in the southern half of the house, the latest extension (Fig. 91). At Itissaalik the fragments lie along the platform edge (Fig. 92).

Sheet copper & Sheet brass

18 objects of copper alloy were found in the structures' latest habitation phases. A number of these are discussed elsewhere. The distribution of the total find material is as follows:

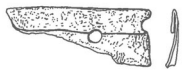
	Illorpaat 3 IV	Illpt. 13	Islik.	Total
Jettons (sheet copper)	2	–	1	3
Earrings (sheet copper)	–	4	1	5
Plates (sheet copper)	3	2	1	6
Hook (copper)	1	–	–	1
Point (copper)	–	1	–	1
Buckles (brass/copper)	–	1	1	2
	6	8	4	18

Jettons

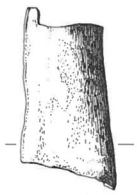
Three gaming-counters all have a hole and a little sinew thread preserved from their suspension. They are all described under the group **Beads, Ornamental pendants & Buckles.**

Earrings

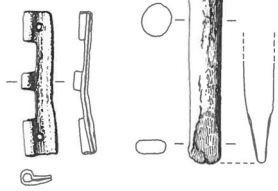
Five small, rectangular plates of sheet copper all have a hole and have thus been used as ornamental pendants. They are all described under the group **Beads, Ornamental pendants & Buckles.**


igd 2703

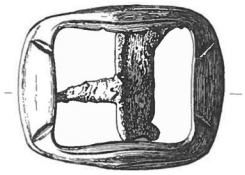

igd 973


igd 443


igd 3287


igd 459

igd 442


igd 1333


igd 3573

Plates

Six sheet-copper plates have presumably been parts of copper vessels. Four of them are very small and 0.5 mm thick.

igd 2489, 9 × 27 mm, found in Illorpaat 3, house IV (14/H), not illustrated. **igd 2687**, 10 × 23 mm, found in Illorpaat 3, house IV (1/D), not illustrated. **igd 2703**, 15 × 38 mm, has a turned-in edge and two holes, found in Illorpaat 3, house IV (9/K). **igd 973**, 15 × 20 mm, with a hole made by a nail or the like, found at Itissaalik (9/N). **igd 443**, 48 mm long, 0.75 mm thick, curved, heated and hammered flat, has possibly been a ferrule, found in Illorpaat 13 (picked up from in front of the structure). **igd 608**, 28 × 67 mm, 1.0 mm thick, hammered flat, found in Illorpaat 13 (3/K), not illustrated.

Hook

igd 3287, copper/bronze, maximum length 30 mm, has presumably had an eye which has broken off, used on a European garment, found in Illorpaat 3, house IV (5/J).

Point

igd 442, 90 mm, copper/bronze, massive, with circular cross section, one end broken, the other end hammered into a wedge-shape, found in Illorpaat 13 (5/I).

Buckles

igd 459, 38 mm, hinge for a brass buckle, probably used for a European garment, found in Illorpaat 13 (3/I). **igd 1333**, 44 × 54 mm, shoe buckle of brass/copper with an iron pin, the type is well known (Baart *et al.* 1977: 174) and is also found in Hope Colony (Gulløv & Kapel 1979: 83), found at Itissaalik, latest settlement phase (14/D).

Pewter spoon

igd 1310 is a 203 mm-long pewter spoon. The edges along the ends of the handle have disintegrated, so it must be judged to have been longer. The spoon is of the so-called "rat's-tail" type, has an egg-shaped and deep bowl and a circular master's stamp on the upper side of the handle. The shape of the stamp indicates a North German provenance (*cf.* Hintze 1923), but it has not been possible to identify the maker. The date in the stamp appears to be 1739, but the last figure may be 8.

The spoon was found at Itissaalik (15/E), immediately in front of the platform edge. The chronological placing – the first communal house to be built – demonstrates that this house must have been inhabited for comparatively many years. The period before the spoon was lost must have been at least 10 to 15 years long. The missionary Glahn relates (1771: 217) that besides the wooden spoons, which the Greenlanders make themselves, they also have pewter spoons, which they buy from the Danes.

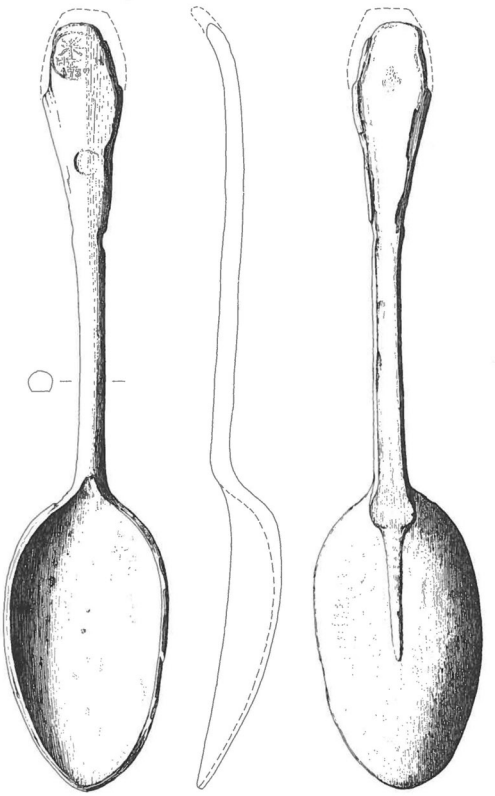
Stoppers

Three objects of cork or pitch probably functioned as stoppers.

igd 3573 is a large fragment of a cork stopper, which measures 35 mm on its longest side, found in Illorpaat 3, house II (8/P).

igd 3634 is a small fragment of a cork stopper, which measures 15 mm on its longest side, found in Illorpaat 3, house II (18/L); may well have been a part of the first fragment and have come from Hope Colony where similar stoppers have been found (Gulløv & Kapel 1979: 184). Not illustrated.





igd 1310



igd 1003

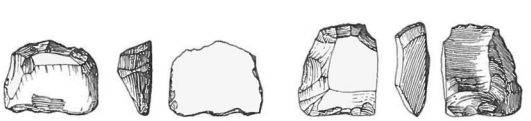
igd 1003 is a conically shaped piece of pitch with a length of 23 mm, found at Itissaalik (17/F). The material has been known locally since the time of colonization in 1721 and was used for caulking sailing vessels (Gulløv & Kapel 1979: 148). It cannot however be established whether this piece has had a primary function in relation to ship-repair (e.g. filling a knothole) or whether the shaping was Eskimo work.

Gunflint & Flint

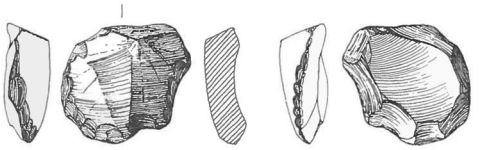
Five pieces of flint were found. The raw material of three pieces was a grey flint, presumably of Scandinavian origin, while the raw material of the other two pieces is a yellow-brown flint which presumably came from France (*cf.* Emy & de Tinguy 1964; White 1975; Witthoft 1966).

igd 1196, gunflint with a very wedge-shaped cross section, is yellow-brown and presumably comes from France, found at Itissaalik, latest settlement phase (13/J).

igd 2852, gunflint with slightly wedge-shaped cross section, parallel upper and underside, is yellow-brown and presumably comes from France, found in Illorpaat 3, house III (24/J-K).



igd 1196 igd 2852


igd 1010


igd 2514


igd 66

igd 1010, flint, concave underside and convex upper which, together with its size, excludes the possibility that it was used as gunflint; grey flint which was presumably of Scandinavian origin, found at Itissaalik (11/E).

igd 2514, probably gunflint, so worn down that it cannot be classified typologically, is grey and presumably comes from Scandinavia, found in Illorpaat 3, house IV (11/I).

igd 66, probably gunflint, so worn down that it cannot be classified typologically, is grey and presumably comes from Scandinavia, found in Illorpaat 13 (3/O).

Only the gunflint **igd 1196** can be related to the types found in Hope Colony, i.e. type IV (Gulløv & Kapel 1979: 110), while the flint **igd 1010** with the concave underside was also found in Hope Colony where the type was used as strike-a-lights (*op.cit.*, p.108).

Bullets & Shot

Four lead bullets were found in two of the structures' latest habitation phases and are thus dated to the latter half of the 18th century. At that time the flintlock was widely distributed among the Greenlandic population and this is also corroborated by the found gunflint.

The merchant Lars Dalager noted in 1755 that nowadays one has to stop selling more flintlocks to the Greenlanders, as otherwise Greenland will be ruined, for "every Greenlander, who has a supply of gunpowder and lead, does nothing else from the beginning of May and to the end of October than to lie creeping around in the mountains hunting reindeer, wherefore the animals become quite extinct" (1915: 80).

igd 3285, bullet, 14 mm diameter, partly hollow as a result of the casting technique, found in Illorpaat 3, house IV (19/D).

igd 460, bullet, 12.5 mm diameter, casting trace in the form of a burr, found in Illorpaat 13 (5/O).

igd 3286, bullet, 12 mm diameter, found in Illorpaat 3, house IV (25/G).

igd 189, shot, 5 mm diameter, casting trace in the form of a broken knob, found in Illorpaat 13 (3/S).

The dimensions of the lead bullets correspond to the medium calibres found in Hope Colony, while the dimensions of the shot correspond to the largest specimens found there (*cf.* Gulløv & Kapel 1979: 84).


igd 3285

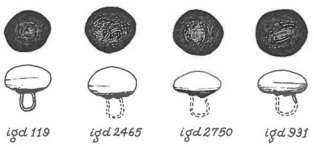

igd 460

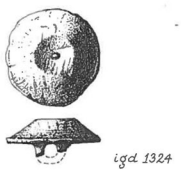

igd 3286


igd 189

Buttons

Five European buttons were found. Four of them are black glass buttons with embedded metal eye, a type which had been common in sailors' dress since the beginning of the 17th century (Baart *et al.* 1977: 183), and which constitutes half of the buttons found in Hope Colony (Gulløv & Kapel 1979: 85).





igd 119 is a black glass button with embedded iron eye preserved, the head is twisted and has a 12 mm diameter, found in Illorpaat 13 (5/T).

igd 2465 is a black glass button with the remains of an embedded iron eye, twisted head with a 13 mm diameter, found in Illorpaat 3, house IV (22/D).

igd 2750 is a black glass button with the remains of an embedded iron eye, twisted head with a 13 mm diameter, found in Illorpaat 3, house III (10/H).

igd 931 is a black glass button with the remains of an embedded iron eye, twisted head with a 13 mm diameter, found at Itissaalik, earliest communal house (7/J).

igd 1324 is a turned bone button with an integral eye and a 25 mm diameter, found at Itissaalik, earliest communal house (10/G). Corresponds to **h 1549** from Hope Colony (*cf.* Gulløv & Kapel 1979: 86).

Although the found types were common in 18th-century European dress, they may well have come from Hope Colony.

Bottle glass & Window glass

Most of 76 glass fragments could be identified as bottle glass, while a small number must originally be from windows. The found sherds were distributed as follows:

	Illorpaat 3				Midden	Illpt. 9	Illpt. 13	Islik.	Total
	IV	III	II	I	12				
Bottle glass	12	2	1	1	1	1	8	45	71
Window glass	–	–	1	–	–	–	4	–	5
	12	2	2	1	1	1	12	45	76

Bottles

Just under two thirds of the sherds on this group were found at Itissaalik. Nine of the sherds from Illorpaat 3 came from the latest habitation phase in house IV. Half of the total number of sherds are from thick dark green glass bottles, while the remainder are from bottles with thinner walls and of a lighter colour, i.e. light green, blue-green and clear glass. The number of blisters in the material varies.

The sherds from Itissaalik (Fig. 95) can be divided into six material-groups, which also hold for their different colours. Group I consists of nine sherds, representing at least three bottles, the colour is dark green and the evenly distributed blisters are lenticular. Group II consists of 11 sherds, representing one bottle; the colour is green, a little lighter than those in Group I, and the evenly distributed blisters are circular. Group III consists of two sherds, representing one bottle; the colour is yellowish green and there are a very few and very small blisters. Group IV consists of 18 sherds, representing at least one bottle; the colour is a clear light green and there are a few and very small lenticular blisters in the material. Group V consists of four sherds, representing at least one bottle; the colour is a clear, light blue and few and very small lenticular

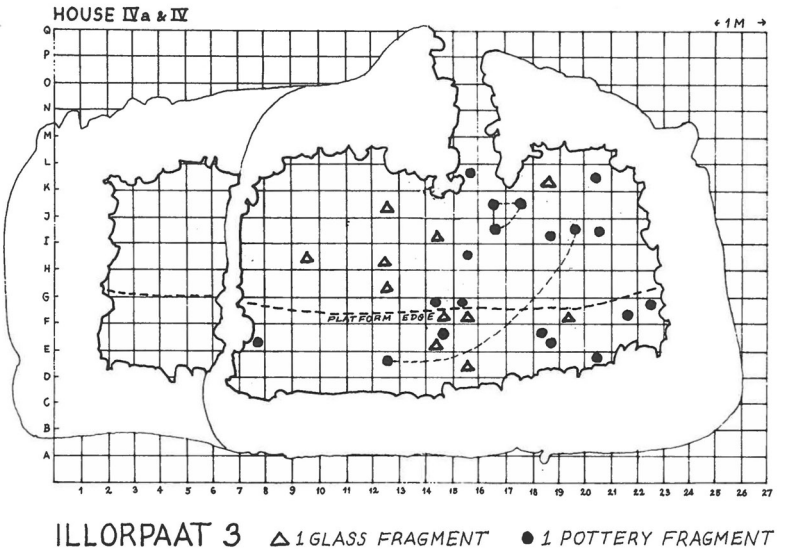
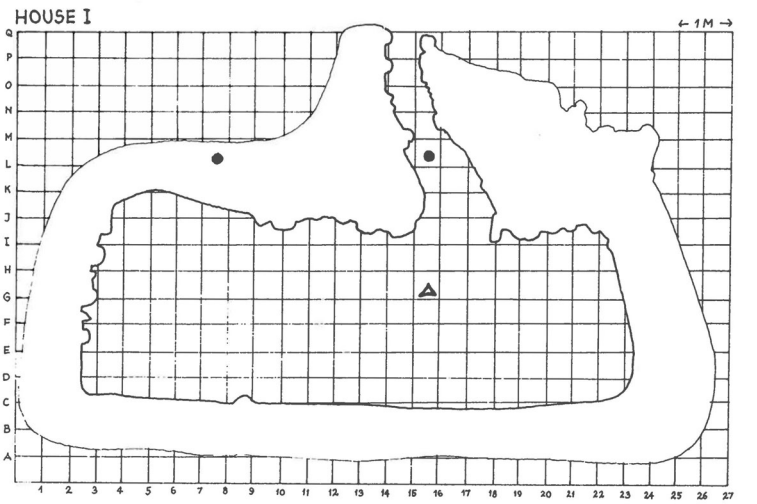


Fig. 93. *The distribution of glass sherds and pottery sherds in Illorpaat 3, houses I-IV. Each signature represents one sherd. Joined sherds are connected by a broken line.*



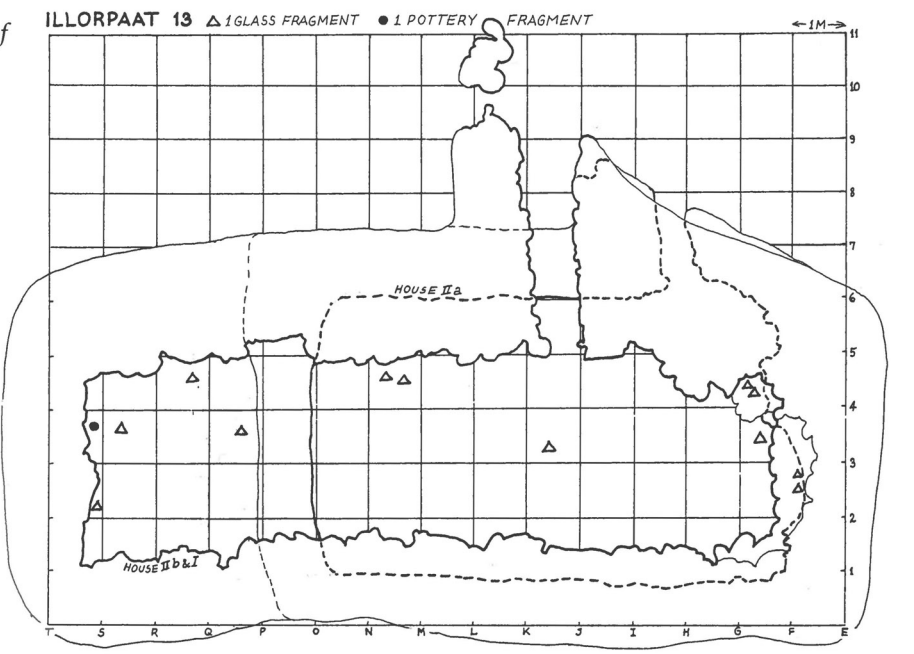


Fig. 94. *The distribution of glass sherds and pottery sherds in Illorpaat 13, houses I-IIb. Each signature represents one sherd.*

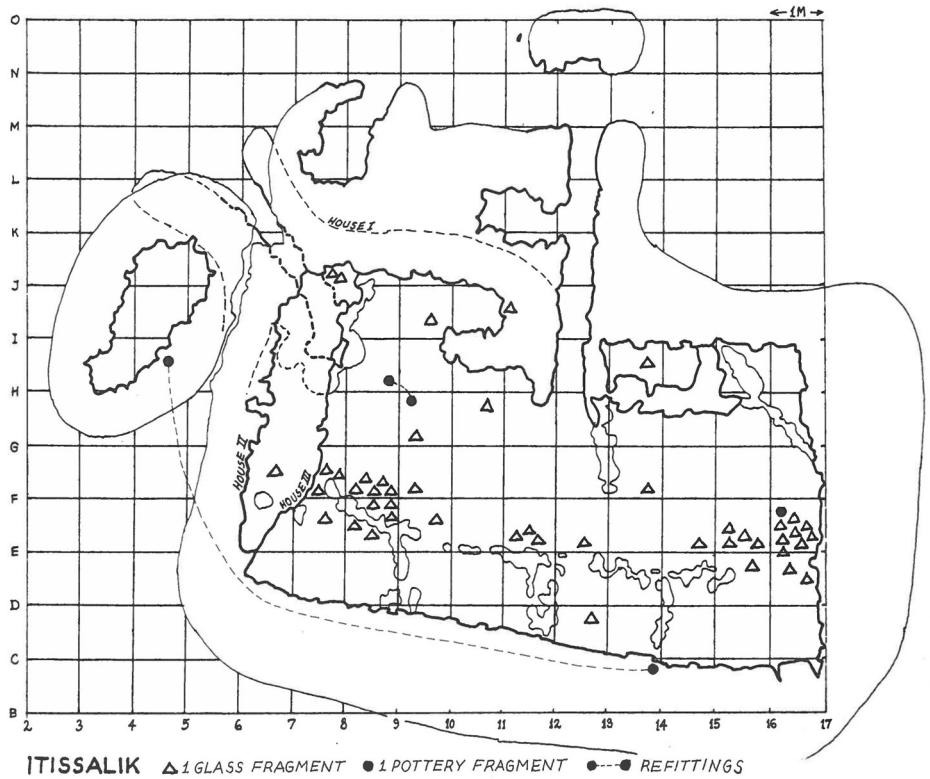


Fig. 95. *The distribution of glass sherds at Itissaalik, houses II-III. Each signature represents one sherd. Joined sherds are connected by a broken line.*

blisters are seen. Group VI consists of one sherd of clear glass and there are a very few and very small circular blisters.

Group Ia consists of one sherd, **igd 958** (17/E), which is the top of a short-necked bottle with rim-ring (*cf.* Jones & Sullivan 1985). The height of the fragment is 50 mm, the inner mouth-diameter is 17 mm and the maximum thickness, at the fracture, is 3 mm. The type was found in Hope Colony (*cf.* Gulløv & Kapel 1979: 79) and it was probably of English or Dutch manufacture.

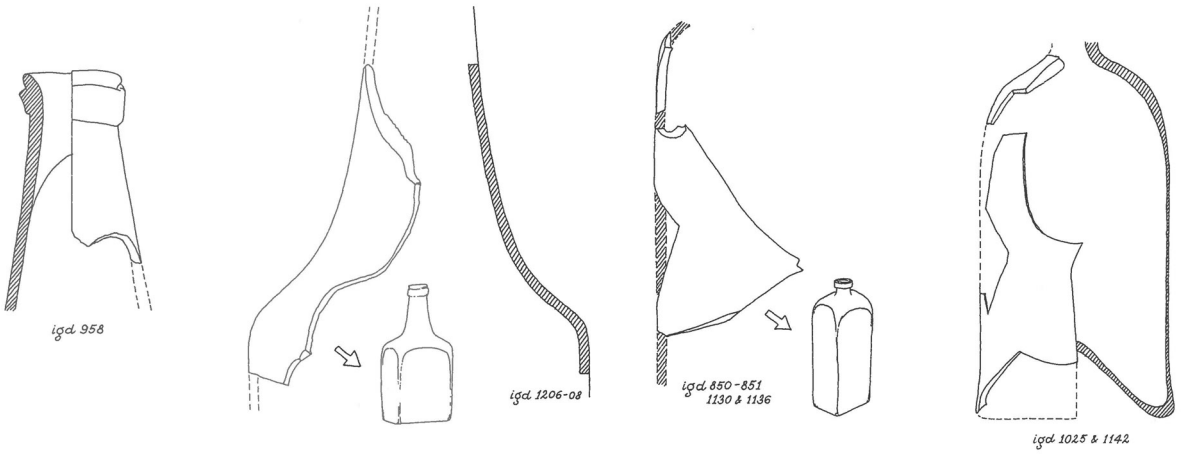
Group Ib consists of three sherds, **igd 1206-08** (12/F) which together form the shoulder section of a bottle with a slender neck and two or more flat sides. The height of this section is *c.* 75 mm and the thickness is an even 3 mm. Nothing can be said of its provenance.

Group Ic consists of five sherds, **igd 850-51** (17/F), **1043** (13/D), **1130** (16/E) and **1136** (14/I), which all have two flat sides set at right angles to each other. The pieces probably represent one bottle, presumably with a square cross section; the shape is known from Hope Colony (*cf.* Gulløv & Kapel 1979: 81). The pieces are an even 2.5 mm thick. The bottle may have come from Norway, but English or Dutch provenance cannot be excluded.

Group II can be joined from five units, which show the body of a round bottle with 1.5-3.0 mm-thick walls. Found in 10/G, 16/F and 17/E-F. Nothing can be said about its origins. Not illustrated.

Group III consists of two side sherds of a bottle body, 2.0-3.5 mm thick. Found in 10/F and 13/F. Nothing can be said of its origins. Not illustrated.

Group IV can be joined from seven units which show the body, e.g. **igd 1025**, and a fragment of the shoulder, **igd 1142**, of a thin-walled bottle with vertical sides and a circular cross section. The body is 0.5-1.0 mm thick, while the maximum thickness



measured at the fracture-surface towards the neck is 3.5 mm. The diameter of the body is 50 mm. The distribution is as follows: four sherds in 8/F-G, one sherd in 8/K, ten sherds in 9/F-G, one sherd in 10/J, one sherd in 11/H and one in 14/G. Thin-walled bottles are known from Hope Colony, where a specimen with the same dimensions was found (Gulløv & Kapel 1979: 81).

Group V come from a bottle, slightly smaller than that in Group IV. The sherds are 0.5 mm thick, but otherwise nothing can be said about the form or the origin. Found in 15-16/F, 10/H and 12/J. Not illustrated.

Group VI are 1.5-2.5 mm thick. Found in 7/G. Nothing can be said of their origin. Not illustrated.

The sherds from Illorpaat 3 (Fig. 93) are described with reference to the groups from Itissaalik.

Group Ib consists of a fragment of a standing surface from a bottle with a dome-shaped bottom, **igd 2594**, found in house IV (20/G). The diameter of the standing surface is *c.* 90 mm.

Group II consists of three sherds, representing at least two bottles. **igd 3174** is the inside of a bottle bottom, found in house IV (16/G). The other two are from the same house (13/H and 15/G) and not illustrated. The thickness varies from 2.5 to 5.0 mm.

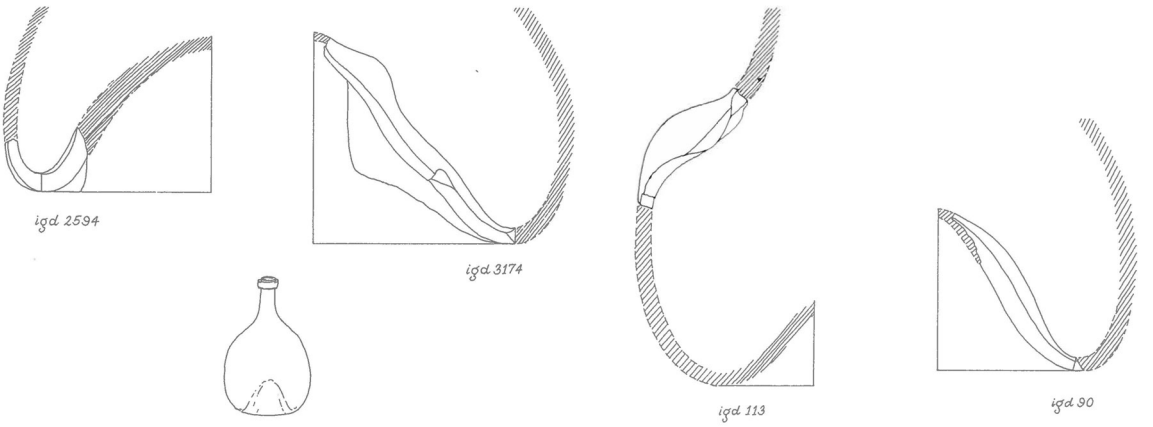
Group IV consists of five sherds, which may represent as many bottles. The thickness is 0.5-2.0 mm. Found in house IV (10/I, 13/I and 13/K), house III (23/H) and house I (16/H). The last fragment probably came from Hope Colony. Not illustrated.

Group V consists of one sherd which is very curved and 1.5 mm thick. Found in house II (16/L). Not illustrated.

In addition six sherds were found, but nothing can be said of their form since they have the nature of chips. The colours are dark green to light green, the thickness varies from 3 to 5 mm and the material is slightly blistered. Found in house IV (15/F, 15/J, 16/E and 19/L) and house III (15/P). Not illustrated.

The sherd from the midden is curved and probably comes from a spherical bottle. The colour is a clear, light green and thus completely corresponds to Itissaalik group IV. The thickness is 3.5 mm. Found in layer 12 (2/B). Not illustrated.

The sherd from Illorpaat 9 is slightly curved and comes from a small bottle. The colour is a clear, light green and thus corresponds completely to Itissaalik group IV. The thickness is 1.5 mm. Found in 2/E. Not illustrated.



The sherds from Illorpaat 13 (Fig. 94) are all dark green with a few circular blisters, except one sherd with many lenticular blisters. The colour of the sherds is the same as those in Itissaalik group I. The shapes and colours render it probable that the sherds represent at least six bottles. **igd 113** (5/G) is a sherd from the body of a small bottle, probably of the "Ronde Boutellie"-type of Norwegian manufacture (*cf.* Gulløv & Kapel 1979: 81); thickness 4.5-6.0 mm; lenticular blisters. **igd 90** (4/G) is a very curved base sherd from a large bottle; thickness 4-8 mm. A neck sherd from 3/F with a thickness of 2.5-3.5 mm is not illustrated. Five body sherds come from at least three bottles with a thickness of 2.5 mm (two sherds from 5/N), 3.0 mm (one sherd from 5/G) and 3.5 mm (two sherds from 3/F and 4/K); not illustrated.

Windows

Five pieces of plane glass are interpreted as sherds from windows. The material is completely clear with a faint light green tinge in four of them and a bluish tinge in the fifth.

igd 3012 is 1.25 mm thick, greenish tinge, few and very small blisters, found in Illorpaat 3, house II (16/J). **igd 77** is 1.25 mm thick, greenish tinge, no visible blisters, found in Illorpaat 13 (4/Q). **igd 94** is 1.5 mm thick, bluish tinge, no visible blisters, found in Illorpaat 13 (5/R). **igd 161** is 1.25 mm thick, greenish tinge, no visible blisters, found in Illorpaat 13 (3/T). **igd 190** is 1.25 mm thick, greenish tinge, no visible blisters, found in Illorpaat 13 (4/S).

None of the found window sherds are illustrated. The sherd from Illorpaat 3, house II, may have come from Hope Colony (*cf.* Gulløv & Kapel 1979: 195).

None of the described bottle fragments can, with any degree of certainty, be connected with the contemporary, high-necked French bottle types (*cf.* Brian 1979: 88-91). Nor can the bluish bottle fragments be connected with the contemporary, light blue-green, French bottles, "flacons" (*cf.* Brain 1979: 92-93). Their most likely origins lie in Scandinavia, although a Norwegian provenance does not become possible until after 1739, when the Norwegian glass industry was established (Gulløv & Kapel 1979: 81). German, Dutch or English origins are also possible.

Pottery

32 pottery sherds represent Scandinavian products, other European goods and porcelain from the Far East (Figs. 93-95). The material consists of glazed red ware, porcelain, faience and stoneware.

The distribution is as follows:

	Illorpaat 3				Midden	Illpt. 13	Islik.	Total
	IV	III	II	I	12			
Glazed red ware								
Cooking pots	6	4	1	1	–	–	–	12
Plates	4	3	–	–	2	–	–	9
Porcelain	6	–	–	–	–	1	–	7
Faience	–	–	–	–	–	–	2	2
Stoneware	–	–	–	1	–	–	1	2
	16	7	1	2	2	1	3	32

Glazed red ware

This group consists of 21 sherds, representing at least 16 objects. There are both cooking pots and plates. The glaze is everywhere a thin lead glaze, brown colours predominating on the cooking-pot sherds and yellowish colours on the plates.

Cooking pots. Most of the sherds are so small that the shape of the pot cannot be identified. The survey below is therefore based on the shape and colour of the surface. All the pot sherds were found in Illorpaat 3.

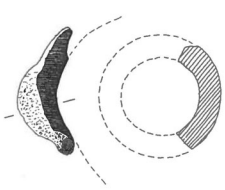
– Three small side sherds with a yellowish brown glaze on the inner side, smooth surface and a thickness of 6 mm were found in house IV (16/I and 23/G) and house II (3/G). Probably products from Scandinavia or Schleswig. Not illustrated.

– A side sherd with internal, reddish and yellowish brown glaze, found in house IV (15/G), and a rim sherd with the same glaze continuing onto the outside, found in house I (8/M), both have a smooth surface, thickness 5 mm. The origin cannot be identified but the material resembles that from Hope Colony (*cf.* Gulløv & Kapel 1979: 148ff). Not illustated.

– A side sherd with reddish brown glaze on the inner side and partly also on the outer, smooth surface and a thickness of 4-6 mm was found in house III (16/K). Possibly of Dutch origin. Not illustrated.

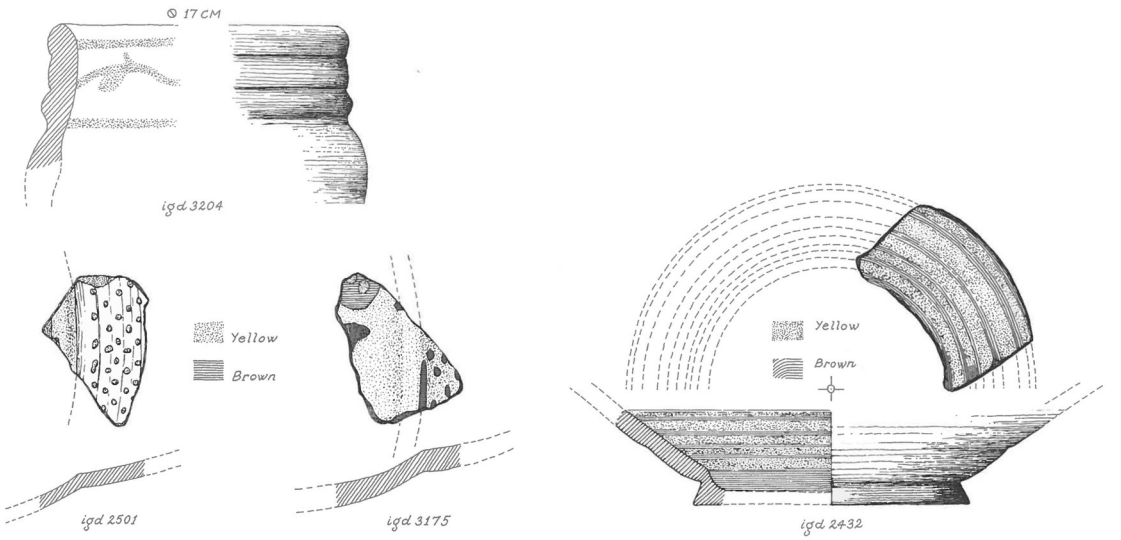


– Three sherds with reddish brown, shiny glaze is fluted on both sides. The glaze is the same on both sides. The thickness is 3.5-6.0 mm. Found in houses IV (16/L) and III (8/D and 14/H). Probably Scandinavian work. **igd 2792** is a part of a bottom sherd with a broken leg, found in house III (8/D). The two other sherds are not illustrated. **igd 2429/2444** is a fragment of a handle or a leg from a large pot. No glaze is preserved. Found in house IV (13/E and 20/J).



– A side sherd with black-purple glaze on the outside and yellow-brown on the inside, smooth surface, thickness 5 mm, found in house IV (19/F). Origin unknown. Not illustrated.

– **igd 3204** is a rim sherd of a hard fired cooking pot with external, concentric raised lines and on the inside traces of glaze showing concentric lines and a wavy line.



Thickness 5.5-8.0 mm. Found in house III (18/I). Probably of Dano-Norwegian manufacture.

Plates. Six of the found sherds had dot ornament and a yellowish glaze. The same glaze is found on two unornamented sherds. It cannot be established, however, whether the sherds came from the same piece. One sherd has alternating red-brown and yellowish, concentric circles along the edge of the plate. The sherds were found in house IV (16/G, 19/F, 19/J and 21/E), house III (14/H, 16/F and 20/H) and in the midden, layer 12 (1/B and 1/C).

Examples: **igd 2501** has a yellowish white glaze preserved on the inner face of the plate and dots of the same glaze along the upper edge. Thickness 4 mm. Found in house IV (19/F). Origin unknown, possibly Norwegian. **igd 3175** has yellow glaze with brown dots on the edge of the rim and a fragment of a brown drawing preserved on the inside of the plate. Thickness 5 mm. Found in house III (16/F). Origin unknown. **igd 2432** is a rim and bottom with standing surface. Concentric circles of alternating red-brown and yellow stripes on the upper edge. Thickness 5 mm. Found in house IV (21/E). Origin unknown, possibly Norwegian.

Porcelain

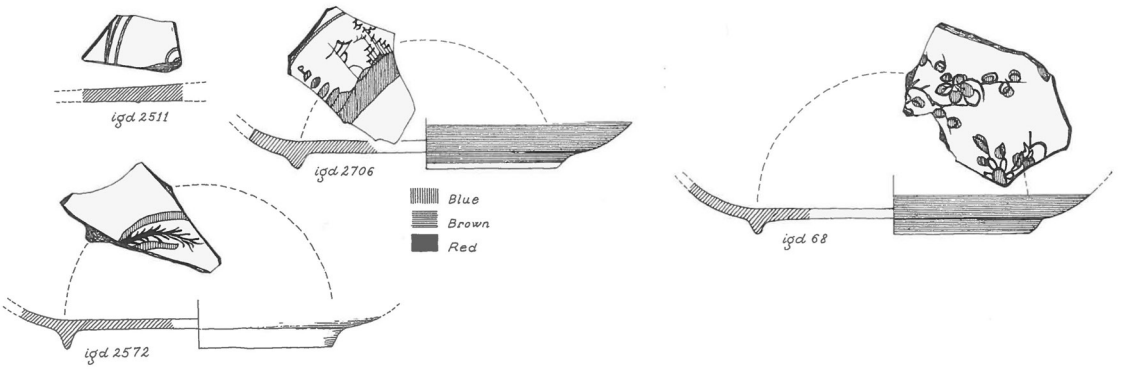
Seven sherds represent small plates or saucers, except one which is a heavy side sherd with a thickness of 7 mm. Six sherds come from Illorpaat 3, house IV, while the last came from Illorpaat 13. It is probably Chinese porcelain brought to Greenland by Dutch whalers.

– **igd 2443/2855/2887** (17-18/K and 17/J) and **igd 2636** (15/F) are undecorated and come from the rim of a saucer. Thickness 1.5-2.5 mm. Not illustrated.

– **igd 2508** (8/F) is a side sherd from a jar or the like with remnants of blue decoration on the outside. Thickness 7 mm. Not illustrated.

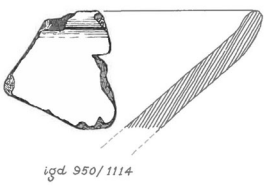
– **igd 2511** (21/J) is a bottom sherd from a plate or small bowl with internal blue line decoration. Thickness 3.5-4.5 mm.

– **igd 2706** (21/L) is a bottom sherd with the rim of the standing surface preserved. The inside of the plate is blue and is decorated with a pagoda motif. The outside of the edge is light brown from iron compounds. Thickness 3 mm. Similar motifs came into the English porcelain industry after 1750 (Watney 1963), but this sherd is Chinese or Japanese.



– **igd 2572** (22/G) is a bottom sherd with the rim of the standing surface preserved. Only the inside of the plate is decorated, with blue lines and a red plant branch. Thickness 2.5 mm. A similar motif is found early in German porcelain manufacture (Honey 1934), but this sherd is Chinese.

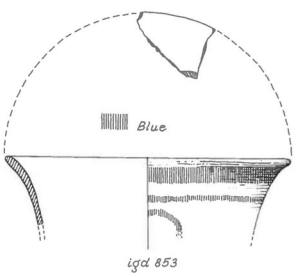
– **igd 68**, Illorpaat 13 (4/T), is a bottom sherd with the rim of the standing surface preserved. The inside of the plate is decorated with flower and leaf ornament in shades of blue. The outer part of the edge is dark brown from iron compounds. Thickness 2.5 mm. Similar decoration is found on the Chinese porcelain in British Virginia in the mid-18th century (Noël-Hume 1962: 180-181).



Faience

Two sherds were found at Itissaalik. Both have brown-yellow body and white tin glaze.

igd 950/1114 (5/I and 14/C) is the rim of a plate without decoration on the thick tin glaze. Thickness 6 mm. Probably of Dutch manufacture. The joined sherds were both found under the surface turf of the wall and, in theory, could have been lost during an excursion to Itissaalik in the 19th century, or could derive from the latest rebuilding there.



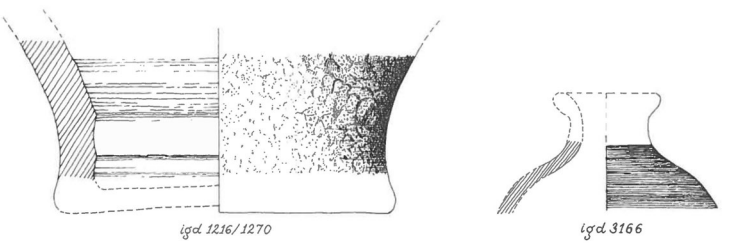
igd 853 (17/F) is the rim of a thin-walled cup with external blue decoration. The tin glaze is thin with a few blue particles and the light blue decoration is slightly blistery and has partly seeped into the ground glaze. Thickness 2 mm. Probably made in the Netherlands (Delft).

Stoneware

Two sherds were found in, respectively, Itissaalik and Illorpaat 3, house I.

igd 1216/1270, found at Itissaalik (9/I and 10/H), is the base of a large pitcher or Hollands jar. The body is grey and almost vitrified. The outside surface is covered by a thick salt glaze, which is mottled from brown to greenish. Thickness 10 mm. Probably of German origin, possibly Dutch.

igd 3166, found in Illorpaat 3, house I (16/M), is the neck of an unglazed jar with grey body. Thickness 4.5 mm. In form it corresponds to similar types from Hope Colony (*cf.* Gulløv & Kapel 1979: 160), from where it probably came. Of North German origin.



Pipes

32 pieces of clay pipes were found in Illorpaat 3 and at Itissaalik. No pipes were found in any of the other examined localities. The form and the stamp on a few pieces prove that Dutch, English and Danish pipes are represented in the find material. The place of manufacture of a number of stems can be identified on the basis of the treatment of the surface; despite disagreement about this method (*cf.* Oswald 1975: 115; Düco 1981: 373) only certain identifications are included in the table.

Survey of all the found parts of clay pipes:

igd no	find-spot		bore diam.	head	stamp	remarks
2405	house IV, top	(5/E)	3.0 mm	+	–	–
2440	– –	(20/J)	2.5 mm	–	–	–
2493/3150	– –	(25/E & 17/M)	2.1 mm	+	+	English (3150 from house passage to house I which is also the passage of house IV)
2515	– –	(11/I)	1.5 mm	–	–	Dutch
2525	– –	(3/D)	2.0 mm	–	–	Dutch
2544	– –	(18/G)	2.1 mm	–	+	Dutch
2545	– –	(24/J)	2.1 mm	–	–	Dutch
2554	– –	(10/I)	2.0 mm	–	–	Dutch (cuts in surface)
2596	– –	(10/H)	2.1 mm	–	+	Dutch (secondary mouthpiece)
2597	– –	(10/H)	2.5 mm	–	–	– (secondary mouthpiece)
2662	– –	(15/K)	2.1 mm	–	–	Dutch
2679	– –	(13/K)	2.5 mm	–	–	Dutch
2623	house IV, bottom	(22/F)	2.5 mm	–	–	– (secondary mouthpiece)
2638	– –	(15/F)	2.5 mm	–	–	Dutch
2818	house III	(26/K)	2.5 mm	–	–	English
2819	–	(14/F)	2.1 mm	–	–	Dutch
2961	house II	(10/E)	2.0 mm	–	–	Dutch
841	Itissaalik	(13/G)	–	+	–	Dutch
891/1090/1173	–	(15/F, 14/D & 13/F)	2.0 mm	+	+	Dutch
938	–	(17/G)	2.4 mm	–	+	Danish ("Ross")
1042	–	(13/D)	–	+	–	Dutch
1085	–	(11/G)	2.4 mm	–	+	Danish ("Ross-Ferslev")
1102	–	(10/H)	2.2 mm	–	–	Dutch
1113	–	(12/G)	2.0 mm	–	–	Dutch
1158	–	(13/F)	–	+	–	–
1159	–	(13/F)	2.5 mm	–	–	–
1172	–	(13/F)	2.6 mm	–	+	Danish ("Stubbekøbing")
1225	–	(11/H)	2.6 mm	–	–	–
1234	–	(9/G)	2.4 mm	–	–	–
1283	–	(10/G)	2.4 mm	–	–	–
1284	–	(10/G)	2.5 mm	–	+	Danish ("Ross-Ferslev")
1285	–	(10/G)	2.1 mm	–	–	Dutch

Remarks on the table: Most of the pipes from Illorpaat 3 were found in house IV and this has therefore been divided into an upper and a lower part, for use in the discussion of dating methods. The bore diameter of the pipe stem is noted for use with the existing dating formulae; though the diameter of **igd 2405** is subject to some uncertainty, since a measurement can only be taken at the base of the bowl. It is noted whether the piece consists of a part of a bowl and whether there is decoration or master's stamp. The remarks note the origin and – in the case of the Danish pipes – the place of manufacture; in addition some secondary features are noted, such as cutting marks and bite marks.

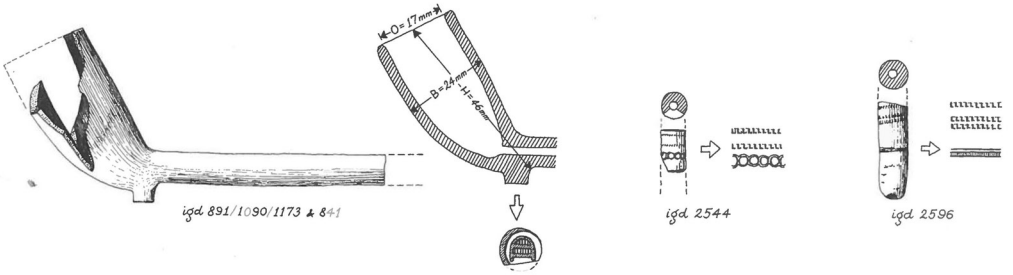
Dutch pipes

The diameter of the stem's smoke canal is 1.5, 2.0, 2.1, 2.2 and 2.5 mm. One bowl carries a master's stamp and two stems are decorated.

igd 891/1090/1173 together constitute the bowl's front side, bottom with heel and an undecorated part of the stem. **igd 841** is a piece of the back of the bowl from the same pipe. The surface is burnished. The master's stamp in the heel is the "Birdcage" (Düco 1976: 14), which according to the pipemakers' guild's register in Gouda of 1724-1865 (Laansma 1960) first appears in 1730, when Jan Soffire uses "de boogkorf". In 1732 the mark appears as "het boog- of vinckekorfje" and the master as Jan Sofvree. Two other masters are registered in the lists with this mark, i.e. Antoony Sofree in 1730 with "het boogkorfje" and Toomus Sofvree in 1731 with the same mark. Master Jan can be traced throughout the period 1746-1759 with "het boogkorfje" and later, in the period 1759-1768, as Jan Soufre with "de boogkooi" and in 1768-1781 as Jan Soufreu with "boogkouw", while Master Jan in the period 1782-1803 is noted as deceased and the "de boogkooi" mark is deleted from the guild register. It is thus most likely that the present stamp has belonged to Master Jan in Gouda.

igd 2544 is a fragment of a stem with decoration the form of which is also found among the pipes of Dutch origin in Hope Colony (Gulløv & Kapel 1979: 145) and was first manufactured in 1640 (Friederich 1975:66). Variants are also found in 1760 (*ibid.*).

igd 2596 is a secondary mouthpiece, made after the pipe had been broken. The decoration is worn away by biting, so only the encircling bands are preserved. Corresponds to the above.

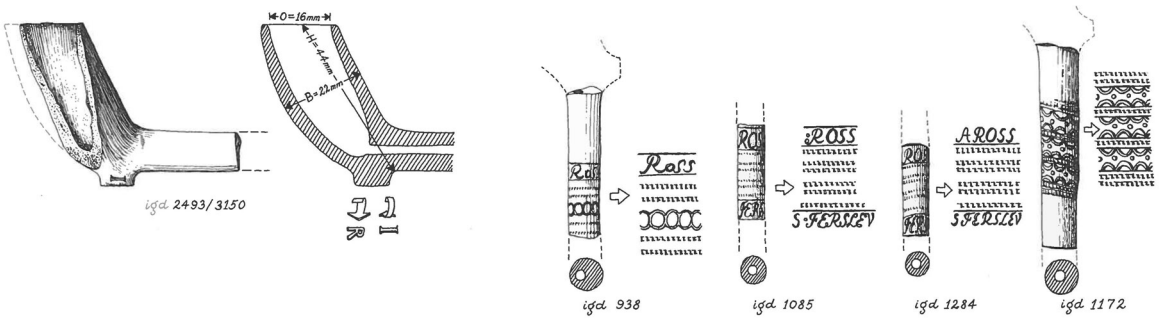


English pipes

The stem's smoke canal is measured as 2.1 and 2.5 mm. One pipebowl with master's stamp survives and the stems are undecorated.

igd 2493/3150 are the front of the bowl, bottom with heel and an undecorated piece of the stem. The surface is chalk-white and unpolished. The surface of the mouth-rim lies parallel to the longitudinal axis of the stem, which distinguishes the English pipes from the 18th-century Dutch ones (Oswald 1975: 115). The master's stamp is set on both sides of the heel in the form of letters. An "I" can be seen on the

left, while an indistinct but probable "R" is placed on the right. The form originates in the "London" type and as such is also found in the York pipes from 1710-40 (Lawrence 1979: 70-71) and the Hull pipes, where the letters identify the masters, John Read and John Robson who were both active in 1754 (Watkins 1979: 88, 91, 94). The type also occurs in the year 1760 (Friederich 1975: 85). In spite of the uncertainty connected with the interpretation of the stamps, this English pipe was probably made in the mid-18th century.



Danish pipes

The stem's smoke canal is measured as 2.4, 2.5 and 2.6 mm. Four decorated stems are preserved.

igd 938 is a decorated stem with a pattern of Dutch inspiration and carries the name of Ross. In 1753 Alexander Ross together with Jonas Colin took over the pipe manufacture in Copenhagen from Samuel Burton, an Englishman who had started production on Christianshavn in 1748. Ross continued the manufacture of pipes on Christianshavn from 1758 to 1764 together with Severin Ferslew, after which date the manufacture ceased (Ahlefeldt-Laurvig 1980: 221-222).

igd 1085 is a decorated stem with a banded ornament and carries the names "·Ross" and "S·. Ferslev". Dated to the period 1758-1764 (*ibid.*, p. 230).

igd 1284 is a decorated stem with banded ornament and carries the names "A Ross" and "S Ferslev". Dated to the period 1758-1764. It must be noted that also the letter "w" appears in Fersle<u>w</u> (*ibid.*, p. 230-231).

igd 1172 is a decorated stem with bands and garlands, which identifies the piece as a product of the factory in Stubbekøbing on Falster (Ahlefeldt-Laurvig 1980: 242). The production was started by Daniel Christian Rasmussen Smidt in 1767 and continued by his son Johannes Christianssøn Smidt from 1781 till 1798 (*ibid.*, p. 250).

Datings

As regards the described examples, a more precise dating is probably impossible. Danish and Norwegian copies of English pipes (Ahlefeldt-Laurvig 1980) and Dutch pipes (Alsvik & Pettersen 1943) cannot be used for dating, but there are no such copies in the present material where the provenance of the pipes is clear. Dating by the masters' marks gives a very broad time margin, but the two examples from the Netherlands and England can reduce this to the middle of the 18th century.

The chronology in Illorpaat 3 is explained as follows: house I is in use around the time of colonization in 1721, nails, bottle glass, pottery and a cow's tooth were found here; house II demonstrates a rebuilding phase which points to the time of the smallpox epidemic in 1733-34; house III is dated to the time around 1750; house IV is the last habitation phase and is last mentioned as inhabited in 1796 (Israel 1969: 63, 138).

Itissaalik is mentioned as inhabited in 1731 and was abandoned some time during the last decades of the century.

No statistical datings can be made on the basis of the present material, but when it is compared to the pipes from Hope Colony, where *c.* 1,500 pieces were measured (Gulløv & Kapel 1979: 235-239), a certain amount of information can be obtained. Dating on the basis of the diameter of the smoke canal alone is too uncertain and misleading. In this way the Dutch pipes from house IV would be dated to 1670-1770, from house III to 1700 and from house II to 1710. Similarly, the Dutch pipes from Itissaalik would be dated to 1695-1710. The English pipes from houses III and IV should thus be dated to 1689 and 1728 respectively (*cf.* Binford 1962: 19-21; Friederich 1975: 75; Gulløv & Kapel 1979: 236-237).

Dating by the bowl's cubic capacity, which was a method developed by Friederich on the basis of 15,000 measured pipes (1975: 11-12) and tested on the *c.* 2,000 pipe fragments from Hope Colony (Gulløv & Kapel 1979: 237) turned out to be a comparatively precise dating method. The only preserved Dutch pipe with a measurable bowl, **igd 891/1090/1173** & **841** gave the following figures: o = 17 mm, h = 46 mm, b = 24 mm. This results in the cubic capacity 18768 mm^3, which on Friederich's type 4 curve corresponds to *c.* 1775 (Friederich 1975: 76-77). This gives a correspondence between the Gouda guild registers (i.e. 1768-1781, Jan Soufreu, "boogkouw") and the archaeological stratigraphy at Itissaalik. The only preserved English pipe with a measurable bowl, **igd 2493/3150**, gave the following figures: o = 16 mm, h = 44 mm, b = 22 mm. The cubic capacity becomes 15488 mm^3, which on Friederich's type 4 curve corresponds to *c.* 1755 (*ibid.*). There is thus a clear correspondence between the Hull pipes from 1754, Friederich's own typological dating to 1760 and the archaeological stratigraphy, which dates house IV to the period 1750-1786. If the period from the date of manufacture to date of loss is taken into account, the dating will lie towards the end of the period, i.e. uppermost in house IV.

Beside this purely chronological contribution, the datings of the found clay pipes demonstrate that the Greenlanders first started to use pipe tobacco around the earliest colonial stations in the second half of the 18th century, or after 1770 if the distribution period is included in the calculation. This means that about 50 years passed before the Greenlanders adopted this foreign custom; but then it must have spread fast.

Tobacco does not appear among the commodities in greatest demand in Godthåb's accounts for the period 1756-72 (Gad 1969: 681-682), although the consumption increased from 63 Danish pounds to 333.25 (*ibid.*, p. 417). This was presumably mainly in the form of snuff which was introduced in the 1750s, since it was added that only a few people smoked (*ibid.*). The sale of pipes is only mentioned twice in Godthåb's accounts, that is six dozen long and eight dozen short pipes in the year 1757-58 and five dozen, of unspecified length, in the year 1758-59 (*ibid.*). We do not know the provenance of these pipes, though Danish products cannot be excluded since the country produced pipes; also a sample of two pounds of Norwegian snuff was sent to Greenland in 1766 (*ibid.*).

Tobacco was used as payment for birds and fish and is first mentioned as such by the Herrnhuts in 1763 (Israel 1969: 89) and by the Danish merchant at Fiskenæsset south of Godthåb in 1768 (Gad 1969: 399). Merchant Dalager had bought 50 guns back from the Greenlanders in 1758, in an attempt to reduce the unbridled hunting of caribou and had, among other means, used tobacco as payment (*ibid.*, p. 403), probably in the form of snuff.

Addiction to tobacco soon showed up all along the coast. The price of tobacco doubled in 1778 and theft of tobacco was noted in Upernavik (*ibid.*, p. 580). In 1781 the reduced payments of tobacco in return for the Greenlandic products led the pro-

ducers in Upernavik to refuse trading (Gad 1976: 321). In 1795 the Greenlanders in Julianehåb complained of the bad quality of the tobacco (*ibid.*, p. 308). But tobacco had come to stay, both as snuff and for smoking.

Glass beads

314 glass beads were found in the excavated localities. The beads are classified within the main groups: "drawn" and "wire-wound" (*cf.* Kidd & Kidd 1970: 50-53; Good 1977: 29-31). These types are known to have been among the most used commodities from Amsterdam (Baart *et al.* 1977: 225).

The distribution is shown in the table below, where Illorpaat 3, house IV is divided into two phases which correspond to IVa (top) and IV (bottom):

	Illorpaat 3					Midden	Illpt. 13	Islik.	Total
	IVt.	IVb.	III	II	I	12			
Drawn	47	52	32	21	1	3	24	102	282
Wire-wound	10	1	4	–	–	–	5	12	32
	57	53	36	21	1	3	29	114	314

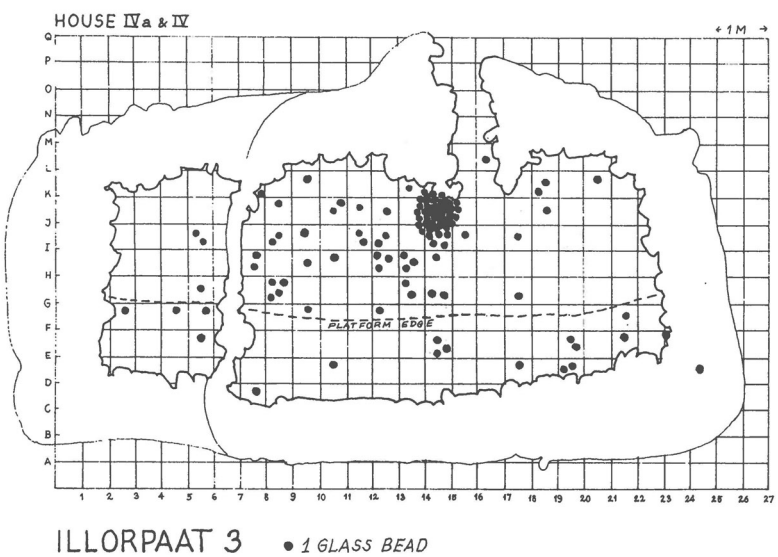
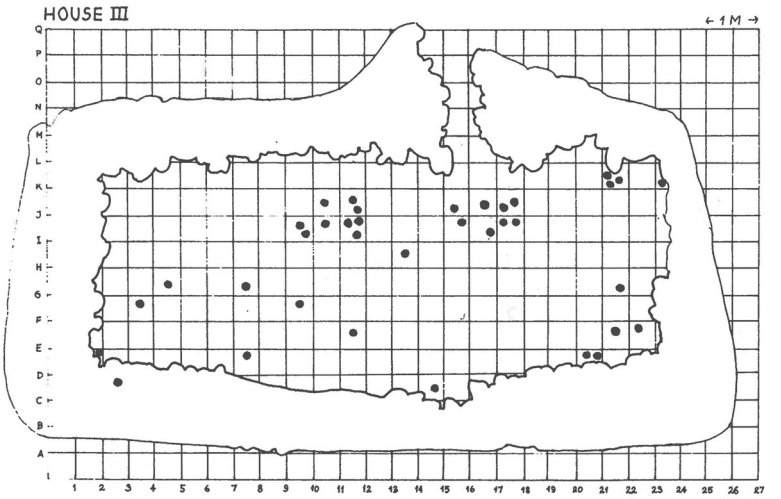
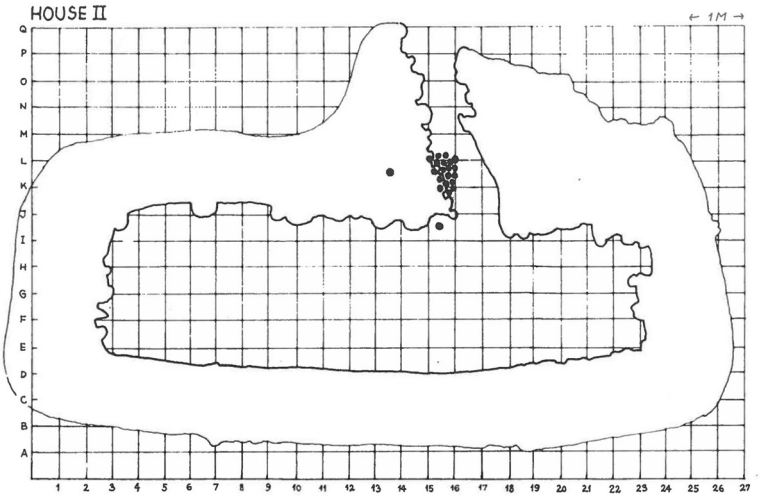
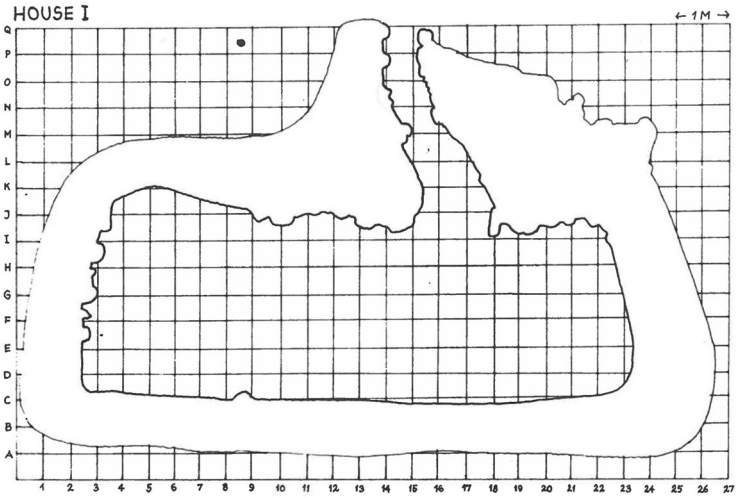


Fig. 96. *The distribution of glass beads found in Illorpaat 3, houses I-IV. Each dot represents one bead.*


HOUSE III
← 1M →


HOUSE II
← 1M →


HOUSE I
← 1M →

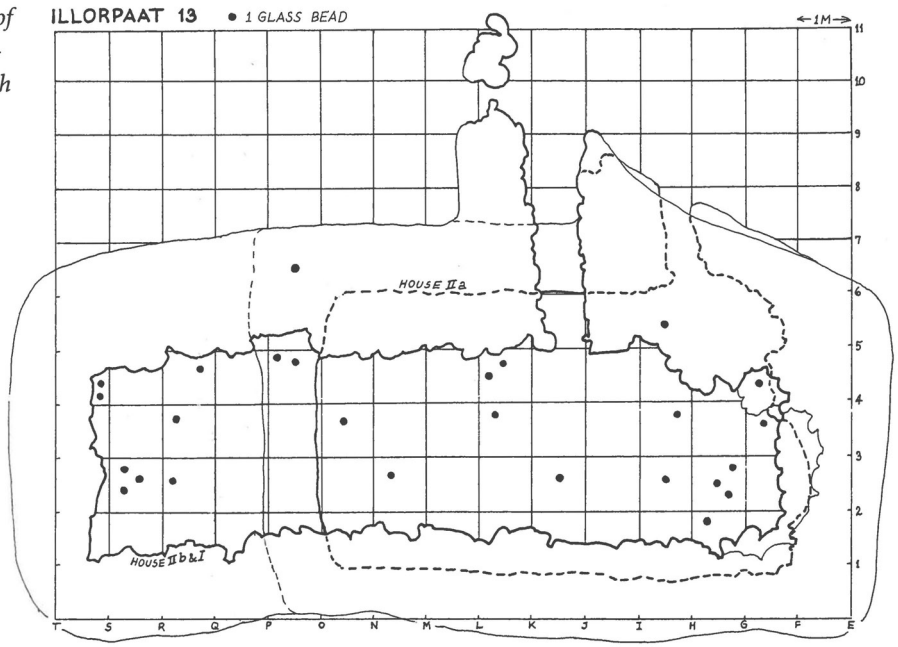


Fig. 97. *The distribution of glass beads found in Illorpaat 13, houses I-IIb. Each dot represents one bead.*

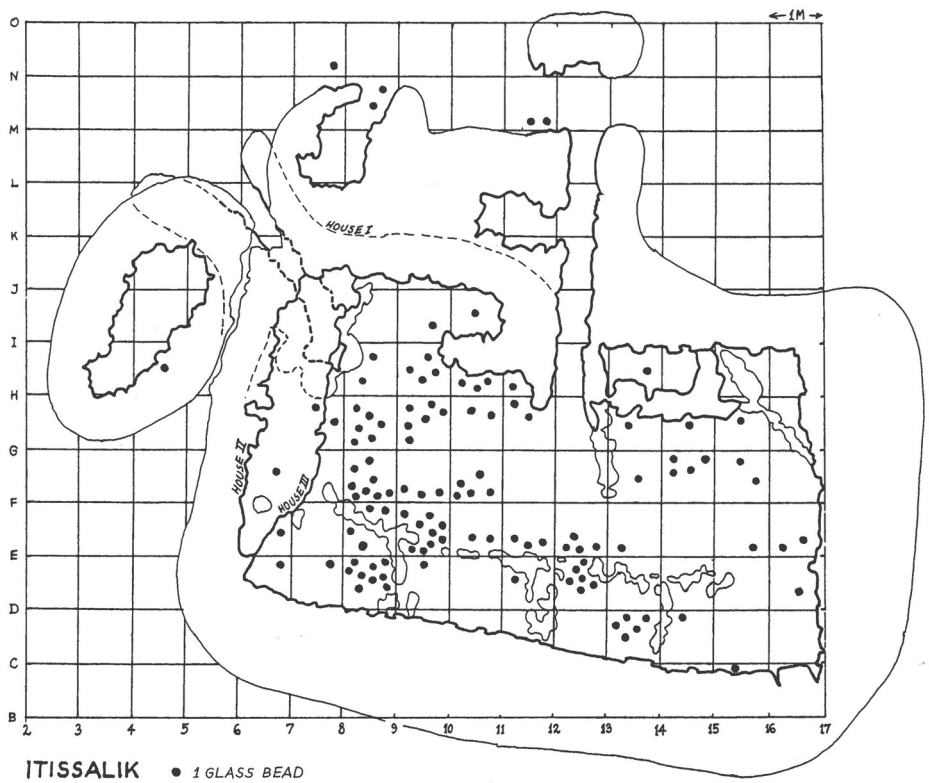


Fig. 98. *The distribution of glass beads found at Itissaalik, houses I-III. Each dot represents one bead.*

In addition to the main classification, which is based on the manufacturing method and which is enlarged on below, another series of criteria have been used in the general description of glass beads. These are size, form, colour and degree of transparency.

The size (Kidd & Kidd 1970: 66) is that of the diameter: 'very small' is less than 2 mm, 'small' is 2 to 4 mm, 'medium' is 4 to 6 mm, 'large' is 6 to 10 mm and 'very large' more than 10 mm.

The forms were defined by Beck (1927: 6) and Sleen (1967: 32) as 'tubular', 'round' or 'spherical', 'rounded discs' ("donut"), 'round' or 'spherical with flat poles', 'oval' or 'barrel-shaped'.

The colours depend on the chemical composition. The 186,200 glass beads in the Tunica Collection (*cf.* Brain 1979: 96-133) has been used as a partial guide for the classifications below, in tandem with the analyses of the beads from Hope Colony (Gulløv & Kapel 1979: 231-234).

The degree of transparency (Kidd & Kidd 1970: 66) is defined as 'matt', 'clear' and 'transparent'.

The **drawn beads** can be divided into four classes, each consisting of two types with several variants. The classes and types follow the classification in normal use (*cf.* Kidd & Kidd 1970).

Class I is tubular with rounded ends. Type **A** is of simple construction, i.e. one layer of glass without decoration. Type **B** is of complex construction, i.e. one layer of glass with surface decoration.

Class II has rounded ends formed by tumbling in red-hot sand and ashes (Good 1977: 30). Type **A** is of simple construction. Type **B** is of complex construction.

Class III is tubular with broken ends. Type **A** is of composite construction, i.e. has two or more layers of glass without decoration. Type **B** is of composite construction, i.e. has two or more layers of glass with surface decorations.

Class IV has rounded ends. Type **A** is of simple construction. Type **B** is of composite construction.

The **wire-wound beads** (**W**) can be divided into three classes on the basis of construction, form and decoration. The types within each class are described on the basis of differentiation in form and decoration. The variants are noted in the descriptions.

Class WI is of simple construction and simple form. Type **A** is 'spherical'. Type **B** is 'disc-shaped' ("donut"). Type **C** is 'oval' or 'barrel-shaped'.

Class WII is of simple construction and altered shape, i.e. faceted, moulded, profiled etc. Type **A** is faceted (e.g. "pentagon"). Type **B** is profiled (e.g. "melon"). Type **C** is tubular with five cut facets which form a pentagonal cross section; this type is however not found in the present material (*cf.* Brain 1979, type C; Kidd & Kidd 1970, type WIIf), Type **D** is flattened.

Class WIII is of complex construction, i.e. layered, with inlay and other forms of decoration. Type **A** is 'spherical', 'spherical with flat poles' and 'oval' or 'barrel-shaped'. Other types are not represented in the present material.

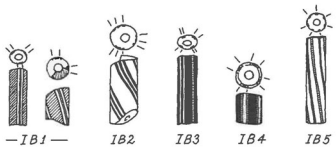
Descriptions of the drawn beads (Classes I-IV)



I A 1. **8 beads.** Small to medium; opaque; white. Lengths 9.0-10.00 mm. Diameters 3.5-5.0 mm. Piercings 0.5-1.5 mm.
Find contexts: 1 in Illorpaat 3, house IVa; 1 in house III; 2 in Illorpaat 13; 4 at Itissaalik.
Comment: Demonstrated archaeologically in North America after 1725 (Brain 1979: 100 ("variety IA1")).

I A 2. **2 beads.** Medium; transparent; light blue. Lengths 13.0 mm. Diameters 4.0-4.5mm. Piercing 2.0 mm.
Find contexts: 2 in Illorpaat 3, house IVa.
Comment: Demonstrated archaeologically in North America from 1650 (Brain 1979: 100 ("variety IA3")).

I A 3. **1 bead.** Medium; opaque; green. Length 10.0 mm. Diameter 5.0 mm. Piercing 1.5 mm.
Find context: Illorpaat 13.
Comment: Demonstrated archaeologically in North America in the Tunica Collection, 18th century (Brain 1979: 100 ("variety IA6")).



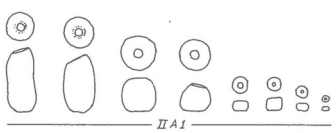
I B 1. **2 beads.** Medium; opaque; light blue with either longitudinal or twisted stripes, consisting of white bands with a red central line. Lengths 15.0 mm. Diameters 4.5-6.0 mm. Piercing 2.0 mm.
Find contexts: 2 in Illorpaat 3, house IVa.
Comment: Demonstrated archaeologically in North America in the Tunica Collection, 18th century (Brain 1979: 101 ("variety IB2")).

I B 2. **6 beads.** Medium to large; opaque; white to light blue with three sets of twisted lines, each consisting of three blue lines. Lengths 11.0-30.0 mm. Diameters 5.5-7.0 mm. Piercings 1.5-2.5 mm.
Find contexts: 2 in Illorpaat 3, house IVa; 1 in house IV; 1 in house III; 1 at Itissaalik.
Comment: A similar variant was found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 67, 232).

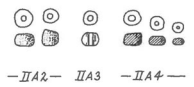
I B 3. **1 bead.** Medium; opaque; black with longitudinal stripes, alternating between one red and two white stripes. Length 18.0 mm. Diameter 5.0 mm. Piercing 2.0 mm.
Find context: Illorpaat 3, house IVa.

I B 4. **1 bead.** Large; opaque; black with four longitudinal, yellow stripes with red edges. Length 8.0 mm (rounded at the ends). Diameter 6.5 mm. Piercing 2.0 mm.
Find context: Itissaalik.

I B 5. **1 bead.** Medium; opaque; light blue with twisted stripes in the sequence: red – blue – red – blue – red – blue – blue. Length 23.5 mm. Diameter 5.5 mm. Piercing 2.0 mm.
Find context: Itissaalik.



II A 1. **108 beads.** Small, medium and large; opaque; white. Lengths 1.0-17.0 mm. Diameters 2.0-9.0 mm. Piercings 0.5-2.5 mm.
Find contexts: 10 in Illorpaat 3, house IVa; 41 in house IV; 7 in house III; 1 in house I; 11 in Illorpaat 13; 38 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1600 (Brain 1979: 101 ("variety IIA1")). A similar variant was found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 66-67). Were manufactured in Amsterdam (Karklins 1975: 69). The small beads were disc-shaped, the medium are spherical and oval, the large are barrel-shaped and oval.



II A 2. **8 beads.** Small, medium and large; opaque; yellow to brown-yellow. Lengths 1.5-8.0 mm. Diameters 2.5-9.0 mm. Piercings 0.5-3.0 mm.
Find contexts: 2 in Illorpaat 3, house IVa; 1 in house I; 5 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1700 (Brain 1979: 101 ("variety IIA2")). Several beads are somewhat eroded, which may be due to the dissolution of the yellow antimony. The small beads are flat, the medium are spherical with flat poles, as are the large beads.

II A 3. **1 bead.** Medium; clear. Length 3.5 mm. Diameter 4.5 mm. Piercing 1.5 mm.
Find context: Illorpaat 3, house IVa.
Comment: Demonstrated archaeologically in North America from 1670 (Brain 1979: 101 ("variety IIA3")). Disc-shaped.

II A 4. **27 beads.** Small to medium; opaque; light blue. Lengths 2.0-4.0 mm. Diameters 3.0-5.0 mm. Piercings 0.5-1.5 mm.
Find contexts: 11 in Illorpaat 3, house IVa; 3 in house IV; 11 in house III; 2 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1699 (Brain 1979: 101-102 ("variety IIA4")). A similar variant was found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 66-67). Were manufactured in Amsterdam (Karklins 1975: 71). Disc-shaped.



II A 5. **4 beads.** Medium to large; transparent; blue opal (two large and one medium) and dark blue (one medium). Lengths 2.5-10.0 mm. Diameters 4.0-10.0 mm. Piercings 1.0-3.5 mm.
Find contexts: 3 in Illorpaat 3, house IVa; 1 in Illorpaat 13.
Comment: Demonstrated archaeologically in North America from 1600 (Brain 1979: 102 ("variety IIA6")). Similar variants were found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 66-67). Were manufactured in Amsterdam (Karklins 1975: 71). The medium sized are disc-shaped, the large are barrel-shaped or oval.

II A 6. **13 beads.** Small, medium and large; transparent; light blue. Lengths 1.5-9.0 mm. Diameters 2.0-8.0 mm. Piercings 0.5-2.0 mm.
Find contexts: 3 in Illorpat 3, house IVa; 2 in house IV; 3 in house III; 2 in the midden, layer 12; 2 in Illorpaat 13; 1 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1600 (Brain 1979: 102-103 ("variety IIA7")). Similar variants were found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 66-67). The small beads are disc-shaped, the medium are disc-shaped or spherical, the large are oval.

II A 7. **1 bead.** opaque; green. Length 3.0 mm. Diameter 5.0 mm. Piercing 1.5 mm.
Find context: Itissaalik.
Comment: Demonstrated archaeologically in North America in the Tunica Collection, 18th century (Brain 1979: 103 ("variety IIA14")). Disc-shaped.

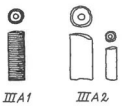
II A 8. **17 beads.** Small; transparent; green. Length 2.0 mm. Diameter 2.5 mm. Piercing 0.5 mm.
Find contexts: 17 in Illorpaat 3, house II.
Comment: Demonstrated archaeologically in North America from 1680 (Brain 1979: 103 ("variety IIA15")). Disc-shaped.

II B 1. **1 bead.** Large; opaque; black with eight longitudinal, white stripes. Length 8.0 mm. Diameter 9.0 mm. Piercing 2.5 mm.
Find context: Illorpaat 13.



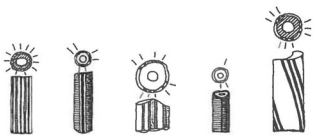
Comment: Demonstrated archaeologically in North America from 1670 (Brain 1979: 103-104 ("variety IIB1")). Spherical with flat poles.

II B 2. **1 bead.** Large; transparent; yellow with two (?) longitudinal, white stripes. Length 6.0 mm. Diameter 8.0 mm. Piercing 1.5 mm.
Find context: Illorpaat 3, house IVa.
Comment: Spherical with flat poles. Broken lengthways.



III A 1. **3 beads.** Small to medium; opaque; clear green transparent core, red-brown opaque shell. Lengths 9.0-13.0 mm. Diameters 3.5-4.5 mm. Piercings 1.0-1.5 mm.
Find contexts: 1 in Illorpaat 3, house II; 2 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1590 (Brain 1979: 105 ("variety IIIA1")). Were manufactured in Amsterdam (Karklins 1975: 74).

III A 2. **31 beads.** Small to medium; opaque; white with an outer layer of clear glass. Lengths 7.0-13.0 mm. Diameters 3.0-5.5 mm. Piercings 0.5-2.0 mm.
Find contexts: 4 in Illorpaat 3, house IVa; 2 in house III; 5 in Illorpaat 13; 20 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1650 (Brain 1979: 105 ("variety IIIA2")).



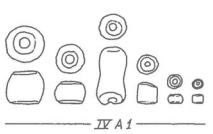
III B 1. **1 bead.** Medium; opaque; light blue core; white shell with six red and six blue longitudinal stripes. Length 15.0 mm. Diameter 5.5 mm. Piercing 3.0 mm.
Find context: Illorpaat 3, house III.

III B 2. **1 bead.** Medium; opaque; clear green transparent core, red-brown opaque shell with three longitudinal brown-purple stripes with white edges. Length 16.0 mm. Diameter 4.5 mm. Piercing 2.0 mm.
Find context: Illorpaat 3, house III.

III B 3. **1 bead.** Large; opaque; white opaque core, clear shell with three longitudinal fields of yellow and red-brown stripes in no particular pattern. Length 9.0 mm. Diameter 9.0 mm. Piercing 2.5 mm.
Find context: Itissaalik.

III B 4. **1 bead.** Medium; opaque; clear green, transparent core, red-brown opaque shell with three longitudinal, thin, black, unsymmetrical stripes. Length 11.0 mm. Diameter 4.5 mm. Piercing 1.5 mm.
Find context: Itissaalik.

III B 5. **6 beads.** Large; opaque; light blue core, white shell with three sets of twisted lines, each set consisting of three blue lines. Lengths 7.0-23.0 mm. Diameter 6.0-8.0 mm. Piercings 2.5-3.5 mm.
Find contexts: 1 in Illorpaat 3, house IVa; 1 in house III; 1 in house II; 1 in the midden, layer 12; 2 at Itissaalik.



IV A 1. **18 beads.** Small, medium and large; opaque; white core with clear shell. Lengths 1.5-9.0 mm. Diameters 3.0-10.0 mm. Piercings 1.0-3.0 mm.
Find contexts: 3 in Illorpaat 3, house IVa; 1 in house IV; 1 in house II; 1 in Illorpaat 13; 12 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1600 (Brain 1979: 105-106 ("variety IVA1")). The small heads are disc-shaped, the medium are oval, the large are spherical (some with flat poles) and oval.



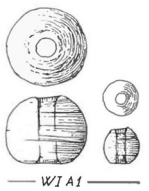
IV A 2. **15 beads.** Small, medium and large; opaque; light green transparent core, red-brown opaque shell with a thin covering of clear glass. Lengths 1.5-5.0 mm. Diameters 3.0-7.5 mm. Piercings 0.5-2.5 mm.
Find contexts: 3 in Illorpaat 3, house IV; 4 in house III; 8 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1600 (Brain 1979: 106 ("variety IVA2")). A similar variant was found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 66-67). Were manufactured in Amsterdam (Karklins 1975: 77). All sizes are discs and spheres with flat poles. One of the large beads, **igd 951** from Itissaalik, was found with a heavy leather thong threaded through the hole.



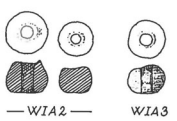
IV B 1. **1 bead.** Large; opaque; clear green, transparent core, red-brown opaque shell with three brown stripes with white edges. Length 7.0 mm. Diameter 8.0 mm. Piercing 2.0 mm.
Find context: Itissaalik.
Comment: Sphere with flat poles.

IV B 2. **1 bead.** Large; opaque; clear green transparent core, red-brown opaque shell with four (?) black stripes with white edges. Length 6.0 mm. Diameter 8.0 mm. Piercing 2.0 mm.
Find context: Itissaalik.
Comment: Sphere with flat poles. The bead is split lengthways so only two of the longitudinal stripes can be seen.

Descriptions of the wire-wound beads (Class WI-WIII)



WI A 1. **2 beads.** Very large; transparent; white opal. Lengths 9.5-18.0 mm. Diameters 10.0-21.0 mm. Piercings 3.0-5.0 mm.
Find contexts: 2 in Illorpaat 3, house IVa.
Comment: Demonstrated archaeologically in North America from 1680 (Brain 1979: 107 ("variety WIA1")). Similar variants were found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 66-67). Were manufactured in Amsterdam (Karklins 1975: 79). Spherical.



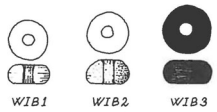
WI A 2. **3 beads.** Large to very large; the two very large are light blue and transparent, the large is turquoise blue and opaque. Lengths 7.0-9.0 mm. Diameters 9.0-11.0 mm. Piercings 2.5-3.5 mm.
Find contexts: 2 (1 light blue and 1 turquoise blue) in Illorpaat 13; 1 (light blue) at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1719 (Brain 1979: 107 ("variety WIA2")). Were manufactured in Amsterdam (Karklins 1975: 80). The light blue beads are slightly crookedly wound spheres with flattened poles, the turquoise blue is spherical with flat poles.

WI A 3. **3 beads.** Large; transparent; amber-coloured. Lengths 7.5-9.0 mm. Diameters 9.0-10.0 mm. Piercing 2.5 mm.
Find contexts: 2 in Illorpaat 3, house IVa; 1 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1700 (Brain 1979: 107-108 ("variety WIA3")). Similar variants were found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 66-67). Spherical with flat poles.



WI A 4. **4 beads.** Very large; opaque; black. Lengths 8.0-12.0 mm. Diameters 10.0-14.0 mm. Piercings 3.0-3.5 mm.
Find contexts: 1 in Illorpaat 3, house IVa; 1 in Illorpaat 13; 2 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1700

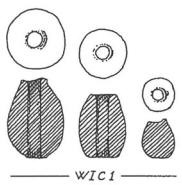
(Brain 1979: 108 ("variety WIA6")). The type was also found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 66-67), where it probably arrived via Denmark or Norway (*op.cit.*, p. 234). Were manufactured in Amsterdam (Karklins 1975: 79). Crookedly wound sphere with flattened poles and sphere with flat poles.



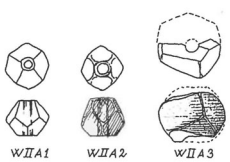
WI B 1. **1 bead.** Very large; transparent; white opal. Length 5.0 mm. Diameter 11.0 mm. Piercing 3.0 mm.
Find context: Illorpaat 13.
Comment: Demonstrated archaeologically in North America from 1680 (Brain 1979: 108 ("variety WIB1")). Was manufactured in Amsterdam (Karklins 1975: 80). Disc-shaped.

WI B 2. **1 bead.** Very large; transparent; amber-coloured. Length 6.5 mm. Diameter 11.5 mm. Piercing 3.5 mm.
Find context: Illorpaat 3, house IVa.
Comment: Demonstrated archaeologically in North America from 1700 (Brain 1979: 108 ("variety WIB3")). Was manufactured in Amsterdam (Karklins 1975: 80). Disc-shaped.

WI B 3. **2 beads.** Very large; opaque; black. Lengths 5.5-6.5 mm. Diameters 11.0-13.0 mm. Piercing 3.0 mm.
Find contexts: 1 in Illorpaat 13; 1 at Itissaalik.
Comment: A similar variant was found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 66-67) where it probably had come from Denmark or Norway (*op.cit.*, p. 234). Disc-shaped.



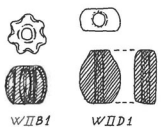
WI C 1. **3 beads.** Large to very large; the two very large are transparent, the large is opaque, all three are light blue. Lengths 10.0-21.0 mm. Diameters 9.0-15.0 mm. Piercings 3.0-4.0 mm.
Find context: Itissaalik.
Comment: Demonstrated archaeologically in North America from 1719 (Brain 1979: 109 ("variety WIC2")). Oval or barrel-shaped.



WII A 1. **4 beads.** Very large; clear. Lengths 9.0-10.0 mm. Diameters 11.0-12.0 mm. Piercings 2.5-3.0 mm.
Find contexts: 2 in Illorpaat 3, house IVa; 1 in house III; 1 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1699 (Brain 1979: 110 ("variety WIIA2")). A similar variant was found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 67). Were manufactured in Amsterdam (Karklins 1975: 80; Gulløv & Kapel 1979: 232-233). "Pentagon".

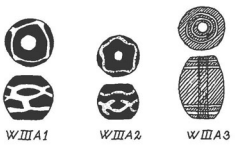
WII A 2. **3 beads.** Very large; transparent; dark blue. Lengths 9.0-10.0 mm. Diameters 10.0-11.0 mm. Piercing 3.0 mm.
Find contexts: 1 in Illorpaat 3, house III; 2 at Itissaalik.
Comment: Demonstrated archaeologically in North America from 1650 (Brain 1979: 110 ("variety WIIA3")). Were manufactured in Amsterdam (Karklins 1975: 80). "Pentagon".

WII A 3. **1 bead.** Very large; transparent; amber-coloured. Length 10.0 mm. Diameter 16.5 mm. Piercing 3.5 mm.
Find context: Illorpaat 3, house IV.
Comment: Demonstrated archaeologically in North America from 1680 (Brain 1979: 110-111 ("variety WIIA4")). A similar variant was found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 67). Was manufactured in Amsterdam (Karklins 1975: 80; Gulløv & Kapel 1979: 232-233). "Pentagon". Half broken lengthways and at the ends.



WII B 1. **1 bead.** Very large; transparent; dark blue. Length 10.0 mm. Diameter 10.5 mm. Piercing 3.0 mm.
Find context: Itissaalik.
Comment: Demonstrated archaeologically in North America from 1699 (Brain 1979: 112 ("variety WIIB3", clear)). The type was manufactured in Amsterdam (Sleen 1967: 110). "Melon".

WII D 1. **1 bead.** Very large; transparent; turquoise green. Length 14.0 mm. Diameter 6.0 mm and 11.0 mm. Piercing 3.0 mm.
Find context: Illorpaat 3, house IVa.
Comment: Flattened (Karklins 1985: 97-98 ("WIIb")).



WIII A 1. **1 bead.** Very large; opaque; black with white wavy lines. Length 11.0 mm. Diameter 13.0 mm. Piercing 4.0 mm.
Find context: Illorpaat 3, house IVa.
Comment: Demonstrated archaeologically in North America from 1699 (Brain 1979: 112 ("variety WIIIA4")). A similar variant was found in Hope Colony 1721-28 (Gulløv & Kapel 1979: 67). Was manufactured in Amsterdam (Sleen 1967: 53, 111; Karklins 1975: 81). Spherical with flat poles.

WIII A 2. **1 bead.** Very large; opaque; black with yellowish-white wavy lines. Length 9.0 mm. Diameter 11.0 mm. Piercing 2.5 mm.
Find context: Illorpaat 3, house III.
Comment: Demonstrated archaeologically in North America from 1699 (Brain 1979: 112 ("variety WIIIA5")). Was manufactured in Amsterdam (Karklins 1975: 81). Spherical with flat poles.

WIII A 3. **1 bead.** Very large; transparent; dark blue with two sets of encircling white stripes at each end. Length 15.5 mm. Diameter 12.0 mm. Piercing 3.0 mm.
Find context: Illorpaat 3, house III.
Comment: Barrel shaped.

Table of the found beads:

	Illorpaat 3					Midden	Illpt. 13	Islik.	Total
	IVa	IV	III	II	I	12			
Drawn									
Class I									
type **A** 1	1	–	1	–	–	–	2	4	8
2	2	–	–	–	–	–	–	–	2
3	–	–	–	–	–	–	1	–	1
type **B** 1	2	–	–	–	–	–	–	–	2
2	2	2	1	–	–	–	–	1	6
3	1	–	–	–	–	–	–	–	1
4	–	–	–	–	–	–	–	1	1
5	–	–	–	–	–	–	–	1	1
Class II									
type **A** 1	10	41	7	1	–	–	11	38	108
2	2	–	–	–	1	–	–	5	8
3	1	–	–	–	–	–	–	–	1
4	11	3	11	–	–	–	–	2	27
5	3	–	–	–	–	–	1	–	4
6	3	2	3	–	–	2	2	1	13
7	–	–	–	–	–	–	–	1	1
8	–	–	–	17	–	–	–	–	17
type **B** 1	–	–	–	–	–	–	1	–	1
2	1	–	–	–	–	–	–	–	1
Class III									
type **A** 1	–	–	–	1	–	–	–	2	3
2	4	–	2	–	–	–	5	20	31
type **B** 1	–	–	1	–	–	–	–	–	1
2	–	–	1	–	–	–	–	–	1
3	–	–	–	–	–	–	–	1	1
4	–	–	–	–	–	–	–	1	1
5	1	–	1	1	–	1	–	2	6
Class IV									
type **A** 1	3	1	–	1	–	–	1	12	18
2	–	3	4	–	–	–	–	8	15
type **B** 1	–	–	–	–	–	–	–	1	1
2	–	–	–	–	–	–	–	1	1
	47	52	32	21	1	3	24	102	282

	Illorpaat 3			Illpt. 13	Islik.	Total
	IVa	IV	III			
Wire-wound						
Class WI						
type **A** 1	2	–	–	–	–	2
2	–	–	–	2	1	3
3	2	–	–	–	1	3
4	1	–	–	1	2	4
type **B** 1	–	–	–	1	–	1
2	1	–	–	–	–	1
3	–	–	–	1	1	2
type **C** 1	–	–	–	–	3	3
Class WII						
type **A** 1	2	–	1	–	1	4
2	–	–	1	–	2	3
3	–	1	–	–	–	1
type **B** 1	–	–	–	–	1	1
type **D** 1	1	–	–	–	–	1
Class WIII						
type **A** 1	1	–	–	–	–	1
2	–	–	1	–	–	1
3	–	–	1	–	–	1
	10	1	4	5	12	32

Datings

All the found beads can clearly be assigned to an 18th-century context. The wound beads occur late and in far smaller number than the drawn beads (10% wound against 90% drawn). In the 18th-century Tunica Collection the wound beads constituted *c.* 2.5% of the 186,200 glass beads (Brain 1979: 98). The monochrome beads (IA, IIA, IIIA, IVA1, WI and WII) are far more numerous than the polychrome beads (IB, IIB, IIIB, IVA2, IVB and WIII). 271 monochrome beads (86%) against 43 polychrome (14%). The tubular beads numbered 66 (21%) and occur just as early as the other drawn beads.

Dating of glass beads is a difficult task and depends on the place of manufacture and chemical composition. The monochrome, small beads ("seeds") were produced in Venice since the 16th century (Good 1977: 29) and the drawn types with a clear core and red-brown shell is said to have been produced in Venice since the end of the 16th century and later on in Amsterdam (Brain 1979: 97); this type is often called "cornaline d'Aleppo" and "bugle-beads" (Kidd 1979: 57, 58); the latter term however only refers to the tubular form (*ibid.*).

John Davis brought beads, nails and playing cards with him as trading goods on his journey in 1587 (Bugge 1930: 75). In this case the beads must have been "bugle-beads" if they were manufactured in England. Production of this type can be documented from 1579 onwards (Kidd 1979: 64). But at the time when beads are mentioned in Davis' logbook he was in the Baffin Island region.

When David Danell in 1654 sailed in the Godthåb District the Greenlanders asked for glazed *corals* (Olearius 1656: 175), a term which also covers glass beads (Kidd 1979: 54), though the type cannot be identified.

Any certain archaeological determinations can only be made after the time of colonization in 1721 and several of the types from Hope Colony are known to have been manufactured in Amsterdam, but a local Dano-Norwegian production is also possible (*cf.* Gulløv & Kapel 1979: 233-234). Dutch whalers brought in beads before 1721 (Gulløv 1987: 91), presumably made in Amsterdam. The Dutch production reached its peak in the 18th century (Kidd 1979: 36-38) and after that Venice dominated the market again (Kidd 1979: 17-28).

Beads of the "cornaline d'Aleppo" type (IIIA1, IVA2 and IVB1-2) are among the earliest beads to have been produced in Europe, but here they appear after 1730 (at Itissaalik) and are known to have been made in Amsterdam, although the soda contents in the corresponding beads from Hope Colony differ markedly from the normal soda contents of the Amsterdam beads (Gulløv & Kapel 1979: 231-232). This difference is presumably due to Italian glass makers having been in charge of the production, whereby the soda contents were increased and the potash contents decreased, as is characteristic of Venetian ware (Karklins 1985: 114; Kidd 1979: 36; Sleen 1967: 108).

A classification of the 45 bead variants in the find material demonstrates that 22 variants were manufactured in Amsterdam. This group will presumably grow larger in future, when increased archaeological source material is available. Of the individual beads, 205 of the total number of 314 pieces were made in Amsterdam.

The Amsterdam production peaked in the beginning of the 18th century (Kidd 1979: 36-38) and this must be the reason for the large number of beads from there which were found in Hope Colony and the neighbouring Greenlandic settlements. The following tentative chronology has been used for the archaeological dating of the glass beads: After 1720 (Illorpaat 3, house I), after 1730 (Itissaalik), after 1740 (Illorpaat 3, house II), after 1750 (Illorpaat 13), after 1760 (Illorpaat 3, house III), after 1770 (Illorpaat 3, house IV). No upper time limit has been set, since the aim is to establish the time when the bead variant was introduced into the Eskimo archaeological context.

1720- 8 beads (IIA2).

1730- 265 beads (IA1, IB2, IB4, IB5, IIA1, IIA4, IIA6, IIA7, IIIA1, IIIA2, IIIB3, IIIB4, IIIB5, IVA1, IVA2, IVB1, IVB2, WIA2, WIA3, WIA4, WIB3, WIC1, WIIA1, WIIA2, WIIB1). The 15 Amsterdam variants are underlined and number 194 beads.

1740- 17 beads (IIA8).

1750- 7 beads (IA3, IIA5, IIB1, WIB1). The two Amsterdam variants are underlined and number five beads.

1760- 4 beads (IIIB1, IIIB2, WIIIA2, WIIIA3). The Amsterdam variant, one bead, is underlined.

1770- 13 beads (IA2, IB1, IB2, IIA3, IIB2, WIA1, WIB2, WIIA3, WIID1, WIIIA1). The four Amsterdam variants are underlined and number five beads.

When this knowledge is compared to the bead finds at Kangaamiut north of Godthåb (Mathiassen 1931: 116, 119, pl.7) none of beads can be much earlier than 1730. Similarly, the beads from Disko Bay (Mathiassen 1934: 159, 161, pl.10) are hardly much earlier than 1750. Several of these beads were found in structures other than communal houses (e.g. Frederiksen 1912: 394) and thus raise the question of the contemporaneity of the various Greenlandic house types, including the round or cloverleaf-shaped house. A contemporaneity of this nature has been demonstrated in Godthåb District (Gulløv 1983: 214).

Glass beads manufactured in Amsterdam and brought to Greenland by Dutch

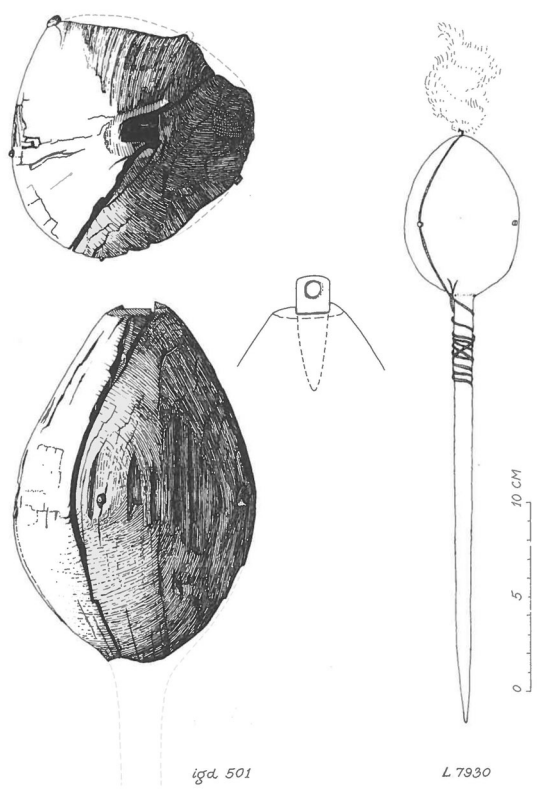
whalers seem to have been introduced somewhat later than hitherto presumed (*cf.* Mathiassen 1936: 120). Whaling plays no part in Godthåb District and therefore the glass beads which occur in early contexts must have been introduced into the area from the north, in connection with Dutch activity. The establishment of Hope Colony in 1721 seems not to have affected the occurrence of glass beads at Illorpaat and Itissaalik.

Spindle whorl

A spindle whorl of coniferous wood, **igd 501**, was found in Illorpaat 13 (6/F). The object is broken, as the staff can be seen to have broken off. The spindle has thus been carved in one piece. In this it resembles closely a similar specimen in the National Museum of Denmark, **L.7930**, of conifer and bought in Atto, previously Egedesminde District, by Kaj Birket-Smith in 1918.

The spindle from Atto is 310 mm long, of this 85 mm is the ball. A large nail has been driven into the top and three wooden pegs are placed round the ball to steer the thread. The found spindle whorl, **igd 501**, is 92 mm long and 64 mm in diameter; at the top a rectangular piece of bone with a drilled hole has been fixed (lost during conservation) and five molars from harp seal are placed round the ball.

Birket-Smith maintains (1924: 109) that the spindle was introduced from Denmark or Norway. As the result of a study this theory has been refuted (*cf.* Gulløv 1982a: 73-81). It has now been established that the spindle – in its found form – came from the German Brethren missionaries, who introduced sheep-breeding in 1759 and taught the Greenlanders to spin. The study of the use of the distaff in Greenland (*op.cit.*) furthermore shows that the material used was dog's hair.



Conversations with the Danish weaver Lise Warburg concerning this study led to the following conclusions:

– The spindle from Atto had preserved z-spun thread. This must have come from hanging the spindle freely from the left hand and starting it with the right hand.

– The found distaff with an eye for the thread must have had a fixed rotation point in a ceiling or the like in order to be z-spun, which may have been the case in, for example, ships or at the platform edge in a communal house. Otherwise the thread would have been s-spun (*cf.* Warburg 1980). The found spindle whorl and the culture-historical dating give a considerable chronological contribution to Illorpaat, which must still have been inhabited after 1759.

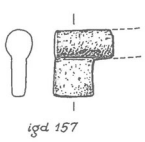
Soapstone, European origin

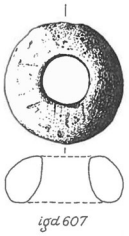
Three soapstone objects appear to have had a European prototype or are of European origin. They were all found in Illorpaat 13.

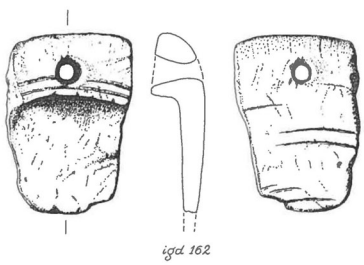
igd 157 (4/I) is the tip of a key model, 15 mm long, 17 mm high. Keys were well known since the foundation of Hope Colony in 1721 (Gulløv & Kapel 1979: 129).

igd 607 is a spindle whorl of Norse origin, diameter 31 mm, well known from the Norse Western Settlement inside Godthåb Fjord (Roussell 1936: 133). Found in collapsed wall material.

igd 162 (3/O) is a rim sherd from a circular object, e.g. dish, pot or the like, probably of Norse origin, 47 mm long, 33 mm wide, with a piercing and concentric circles.







The find material from Kangeq

The survey of the material from Illorpaat has established a basis for a comparison between it and the find material from the midden in Kangeq.

The material numbers 368 objects, which have the museum numbers **L13.3210b-L13.3490, L13** denoting Godthåb District. The objects, by far the majority from section C, are all stratigraphically placed in the relative chronology which was established for section C in the previous chapter.

The description follows the classification which was used for Illorpaat and Itissaalik. The quantitative contents then become:

Hunting equipment comprises 83 objects.
Fishing equipment comprises 7 objects.
Transport comprises 20 objects.
Men's tools comprise 42 objects.
Women's equipment comprises 31 objects.
Household utensils comprise 74 objects.
Personal equipment comprises 15 objects.
Religious objects comprise 2 objects.
Toys and games comprise 41 objects.
Indeterminable objects comprise 26 objects.
European objects comprise 27 objects.

The following survey does not include those paleo-Eskimo objects which were the main objective of the investigation in 1968 (*cf.* Gulløv & Ilkjær 1969).

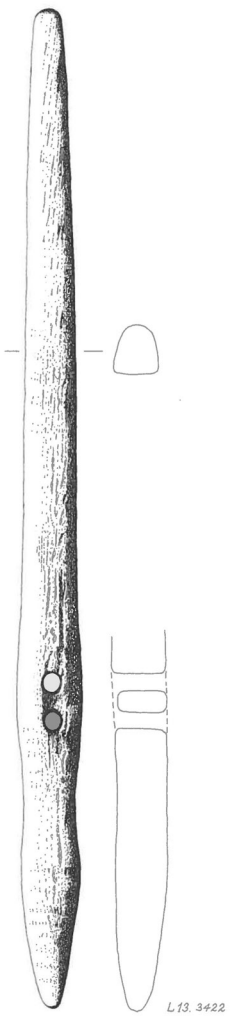
The distribution in the layers is as follows:

	Layers						Total
	1-6	7	7-8	8	8-9	9	
Hunting equipment							
Harpoon blade	–	–	–	–	1	–	1
Foreshafts	1	3	1	1	5	–	11
Socket pieces & Ferrules	1	1	1	1	1	–	5
Shafts for throwing weapons	–	2	8	3	2	–	15
Finger rest	–	–	–	–	1	–	1
Line support	–	–	–	–	1	–	1
Points of bone and antler, indeterminable	–	–	–	3	–	–	3
Throwing boards	–	–	–	–	2	–	2
Side prongs for bird darts	3	–	–	1	–	2	6
Bladder mouthpieces & Bladder nozzles	–	–	3	–	1	–	4
Wound plug	–	1	–	–	–	–	1
Towing tackle	–	–	1	–	–	–	1
Toggles	–	–	1	1	3	–	5
Scrapers & Clubs	–	–	3	–	2	–	5
Eye shields	–	–	–	–	2	–	2
Arrow heads	–	4	–	1	–	4	9

	Layers						Total
	1-6	7	7-8	8	8-9	9	
Arrow shafts	1	–	1	–	4	–	6
Bows	–	–	1	1	2	–	4
Sinew-thread twisters	–	–	1	–	–	–	1
	6	11	21	12	27	6	83
Fishing equipment							
Sinkers	3	–	–	–	1	–	4
Fish hook	–	–	–	–	1	–	1
Leister prongs	–	–	–	–	2	–	2
	3	–	–	–	4	–	7
Transport							
Kayak gunwales	–	3	–	–	–	–	3
Kayak side stringers	–	–	–	2	–	–	2
Kayak cross beams	1	–	–	1	–	–	2
Line support on kayak deck	–	1	–	–	–	–	1
Shaft rests on kayak deck	1	–	2	–	3	–	6
Paddle blades	–	–	1	–	1	–	2
Rib for umiaq	–	–	1	–	–	–	1
Bottom rib for umiaq	–	–	–	1	–	–	1
Nails for umiaq	–	–	–	2	–	–	2
	2	4	4	6	4	–	20
Men's tools							
Marline spike	–	–	–	–	1	–	1
Axes	1	–	6	–	2	–	9
Wedge	–	–	–	–	1	–	1
Bow drills	–	–	1	–	1	–	2
Mouthpiece for bow drill	–	–	–	1	–	–	1
Cutting boards	–	3	–	–	1	–	4
Handles & Shafts	–	–	2	–	1	–	3
Whetstones & Hammerstones	3	–	6	2	7	–	18
Fire drills	–	–	–	3	–	–	3
	4	3	15	6	14	–	42
Women's equipment							
Lamps	3	2	3	1	2	–	11
Wick trimmers	2	–	–	2	–	–	4
Pegs	–	2	4	–	3	–	9
Ulos	4	2	–	1	–	–	7
	9	6	7	4	5	–	31
Household utensils							
Cooking pots	5	10	21	2	6	–	44
Scoops	–	1	–	–	2	–	3
Dishes & Bowls	–	3	6	2	1	–	12
Tubs & Beakers	–	1	–	3	–	2	6
Meatforks	2	–	2	–	–	–	4
Lamp stand	–	–	–	–	1	–	1

	Layers						Total
	1-6	7	7-8	8	8-9	9	
Drying racks	–	–	1	–	1	–	2
Hooks	1	–	1	–	–	–	2
	8	15	31	7	11	2	74
Personal equipment							
Combs	1	–	–	–	–	–	1
Mica (mirrors)	–	–	–	2	–	7	9
Beads, Ornamental pendants & Buckles	–	1	–	1	3	–	5
	1	1	–	3	3	7	15
Religious objects							
Buzzer	–	–	1	–	–	–	1
Amulet case	–	–	–	–	1	–	1
	–	–	1	–	1	–	2
Toys							
Dolls	1	–	5	2	1	–	9
Games	1	–	1	–	1	–	3
Hunting	1	–	5	4	2	–	12
Transport	–	–	2	1	3	–	6
Women's equipment	5	–	3	–	–	–	8
Household utensils	–	–	1	–	2	–	3
	8	–	17	7	9	–	41
Indeterminable & Divers objects							
Wooden objects, indeterminable	–	1	5	6	1	–	13
Soapstone, indeterminable	7	–	–	–	–	–	7
Strips & Mounts	–	–	3	–	3	–	6
	7	1	8	6	4	–	26
European objects							
Glass beads	5	–	–	–	–	–	5
Clay pipes	10	–	–	–	–	–	10
Pottery	2	–	–	–	–	–	2
Sewing needle	1	–	–	–	–	–	1
Button	1	–	–	–	–	–	1
Bullet	1	–	–	–	–	–	1
Iron rivet	–	–	1	–	–	–	1
Norse objects	–	–	–	–	–	6	6
	20	–	1	–	–	6	27
Total number of recorded objects found in Neo–Eskimo contexts	68	41	105	51	82	21	368

Hunting equipment

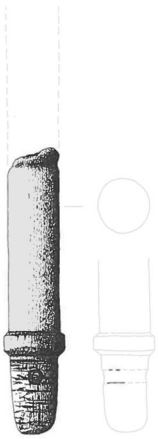

L13. 3422

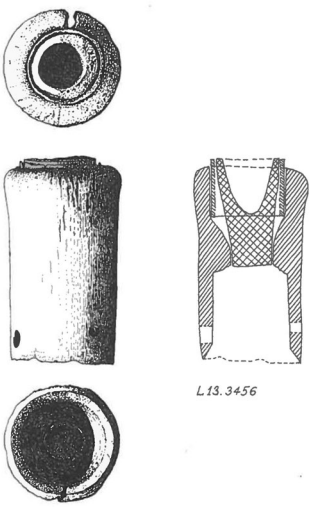
Harpoon blade

L13.3400 is an unfinished antler harpoon blade, 45 mm long, from layers 8-9. Corresponds to **igd 1802**, but without the holes. Not illustrated.

Foreshafts

11 foreshafts were found, seven of whale bone and four of antler. With one exception, the fastening method was type II as described at Illorpaat. The type I specimen, **L13.3477** of whale bone and from layers 1-6, has a ring carved immediately above the knob, which has a hole with a bone nail as reinforcement. The piece may have been used for a bladder dart. The only complete, and the largest, specimen, **L13.3422**, is 264 mm long, of whale bone and from layers 8-9. Corresponds to **igd 631** and **3399**. Two examples of antler are rear ends with one hole for the line and came from layer 7. The other nine foreshafts are not illustrated.


L13.3477


L13.3456

Find contexts:	1-6	7	7-8	8	8-9	Total
Type I	1	–	–	–	–	1
Type II	–	3	1	1	5	10
	1	3	1	1	5	11

Socket pieces & Ferrules

Five objects have functioned as middle pieces for the harpoon, the lance or the bladder dart. They are all of antler. It is not certain that one of the objects functioned as a ferrule, as only half a cylinder is preserved. Two of the middle pieces have a ferrule corresponding to **igd 1806** set into the end of the foreshaft. One of these, **L13.3456**, 52 mm long from layers 6-7, also has a bone ring inset between the outer and the inner ferrule, acting as a wedge. The found examples correspond to **igd 530** and **531**. The other four are not illustrated.

Shafts for throwing-weapons

15 fragments of shafts were found; all with circular cross section. Eight fragments are from bird darts and six of these have sockets for side prongs (three on each) and grooves encircling the shaft for fastening the base of the side prongs, one fragment is a front end with socket and bead, cf. **igd 2199**, and one fragment is a rear end with a socket for a nail support, *cf.* **igd 3522.** The shape of the bird dart thus corresponds exactly to Illorpaat.

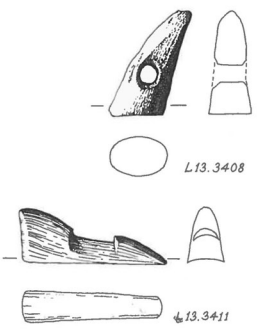
Two shaft fragments came from the lance and have a peg for a ferrule and holes made to fasten the foreshaft; corresponds to **igd 2016.**

A shaft fragment of somewhat oval cross section has an antler peg for fastening to the throwing board. Presumably a harpoon shaft.

Four fragments have scarf faces and cannot be identified further.

Find contexts:	6-7	7-8	8	8-9	Total
Bird darts					
With side prongs and lashing groove	1	3	1	1	6
Front end with socket	–	–	1	–	1
Rear end with hole for nail for throwing board	–	–	–	1	1
Lances	–	2	–	–	2
Harpoon	–	1	–	–	1
Indeterminable shaft fragments	1	2	1	–	4
	2	8	3	2	15

Not illustrated.



Finger rest

L13.3408 is an antler finger rest with one hole made. 28 mm high. Found in layers 8-9.

Line support

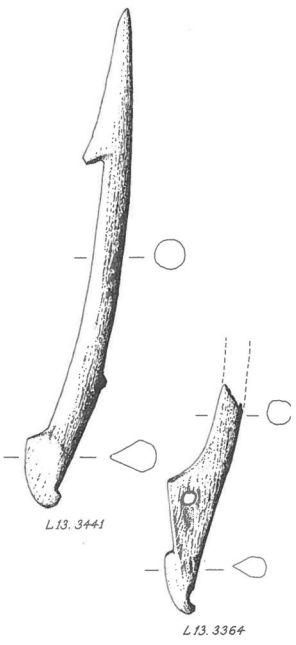
L13.3411 is a wooden line support with lashing notch and concave underside. 38 mm long. Found in layers 8-9.

Points of bone and antler, indeterminable

Three points from layer 8, two of antler and one of whale bone, are all not quite finished work. The lengths are between 101 and 142 mm. They have a tang, resemble **igd 2176**, and could thus have been leister prongs. Not illustrated.

Throwing boards

Two broken rear ends (grips) of throwing boards were found. One is of the same shape as **igd 2265**, the other flattens out into an oval "wing" and must be considered an unfinished piece. It is not possible to determine which type of throwing-weapon it belonged to. Not illustrated.



Side prongs for bird darts

Six side prongs were found. All were of antler. Three complete specimens had one barb, while the other three were rear ends. The classification follows the same principle as that established at Illorpaat.

Type Ic. Found in one complete example, **L13.3340**, 140 mm long. Solid specimen with straight and broad base, large concave cut at the heel and position-lashing indicated by a notch. Not illustrated.

Type II. Found in three examples, one of which is complete, **L13.3478**, 87 mm long. All three have a notch at the end of the base and position-lashing indicated by a bead. Not illustrated.

Original Thule type. Is characterized by a curved edge-shaped base. Two examples were found. **L13.3441** is complete and 135 mm long with position-lashing in the shape of a notch. **L13.3364** is broken and 61 mm long; the side prong above the base has been levelled off to support the shaft and has been pierced for fastening the lashing; no visible bead for holding the prong fast on the outer side; above the heel a concave cut can be seen.

Find contexts:	**1-6**	**8**	**9**	**Total**
Type Ic	–	1	–	1
Type II	3	–	–	3
Original Thule type	–	–	2	2
	3	1	2	6

Bladder mouthpieces & Bladder nozzles

Four objects can be assigned to this group of finds. Three wooden bladder mouthpieces, one whole and two halves, were found in layers 7-8. An antler bladder nozzle, corresponds to **igd 2012**, was found in layers 8-9. Not illustrated.

Wound plug

The only wound plug found in the midden has a broken point and is 135 mm long. A hole is seen in the point. The cross section is oval with grooves cut diagonally on one side. Corresponds to type II from Illorpaat and is almost identical to **igd 3846**. Not illustrated.

Towing tackle

A 149 mm-long, smoothed, acuminated oval piece of wood with oval cross section and pointed ends is an accessory for the tow line, used for fastening it to the kayak deck. One piercing and another one commenced indicate that the work was not finished. Corresponds functionally to **igd 3302**. Not illustrated.

Toggles

Five objects have been identified as toggles. Four are of wood and one of antler. The antler toggle is 151 mm long, from layers 8-9, with two holes joined by a depression and thus corresponds to **igd 2110** (Bone and antler objects, various). Three wooden toggles measure 52 mm (layers 8-9), 81 mm (layer 8) and 100 mm (layers 7-8) in length. The two smallest have flat undersides and a ring cut into the centre of the domed upper side and corresponds approximately to **igd 3598** (Wooden objects, vari-

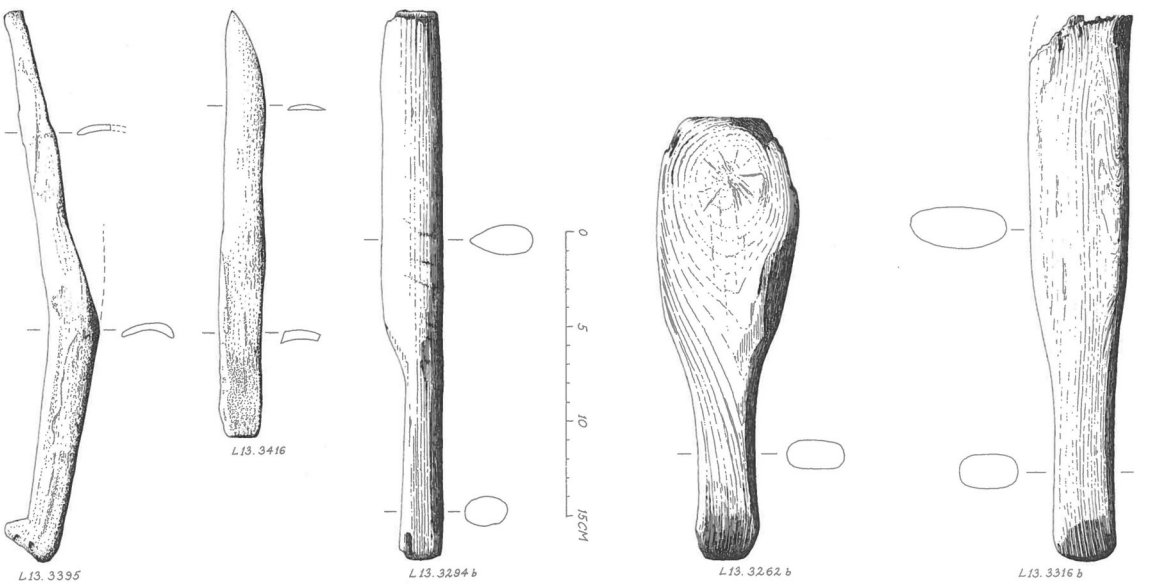
ous) (*cf.* Holtved 1944,I: pl.8(16)), while the longest has a circular cross section and a ring cut all around the middle. The last toggle is curved, 140 mm long, from layers 8-9 and has pointed ends, each with an incised ring. The cross section is oval and it is drilled through in the centre. Not illustrated.

Scrapers & Clubs

Five objects have functioned as scrapers for ice or snow and as clubs used in fishing. All have a grip. Similar objects were not found at Illorpaat or Itissaalik.

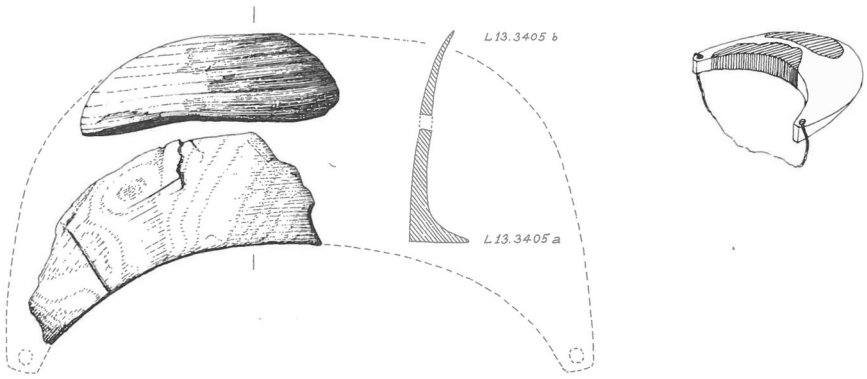
The scrapers are of wood and antler. **L13.3395** is of antler and 293 mm long, from layers 8-9. **L13.3416** is of antler and 225 mm long, with a sharpened edge along both sides of the point, from layers 8-9. **L13.3294b** is of wood and 291 mm long, oval cross section with sharpened edge, from layers 7-8.

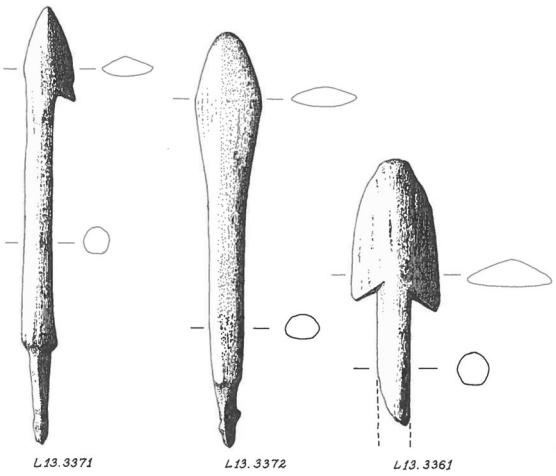
The clubs are both of wood. **L13.3262b** is 235 mm long with flat upper and undersides, from layers 7-8. **L13.3316b** is 290 mm long, slightly curved with acuminated oval cross section, from layers 7-8. The wooden clubs have been described at Kangeq in connection with halibut fishing: "One grips the wooden club, which lies at the back of the kayak, and gives it [i.e. the halibut] a couple of violent knocks on the brain" (Nansen 1890: 638).



Eye shields

Two wooden fragments, **L13.3405a** & **b** have been interpreted as, respectively, the forehead rest and the outer rim of eye shields. The forehead rest is 16 mm high. The larger fragment is 80 mm long. Eye shields are well preserved in West and East Greenland (Birket-Smith 1924: 191-192; Thalbitzer 1914: 592-597) and are mentioned in historical sources from James Hall's first Greenland expedition in 1605 onwards (Kisbye-Møller 1985: 134; Bielke 1990: 60, 101). This find is the first from an archaeological context and comes from layers 8-9, i.e. 15th and 16th centuries.





Arrow heads

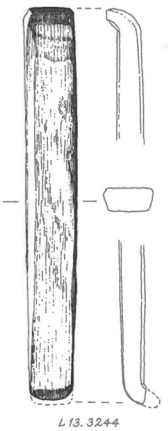
Nine arrow heads were found. Seven of antler and two of wood. The two wooden heads (from layers 7 and 9) resemble the toy arrows which were described in Thule (*cf.* Holtved 1944,I: pl.41(26)); only the point is preserved; the longest fragment measures 142 mm; not illustrated.

Two of the heads are of antler and complete, they have lanceolate points, one of them with a barb (L13.3371), and rear ends with a circular cut and respectively bead and staggered knobs. **L13.3371** is 115 mm and **L13.3372** 110 mm, both from layer 9. The features mentioned here are also found in **igd 3428**.

The other five are broken. **L13.3361** from layer 9 is a lanceolate head with two barbs of the same shape as **igd 682**, which however only has one barb. **L13.3348** from layer 8 is a preparatory work, 144 mm long, the head has been worked on both sides, rear end conical, not illustrated. **L13.3266c** from layer 7 is 97 mm long and has two staggered knobs at the end, not illustrated. **L13.3254** from layer 7 is 115 mm long, has a conically formed rear end, not illustrated. **L13.3483** from layer 7 is 122 mm long and has two staggered knobs, not illustrated.

Arrow shafts

Six shaft fragments were found, of these five were rear ends with a notch for the bowstring and one a middle piece with a cut-off for lashing. All the pieces correspond exactly to Illorpaat. The lengths are from 55 to 188 mm. Not illustrated.


L 13. 3244

Bows

Four ends from bows with a tenon for fastening the string correspond exactly to Illorpaat. **L13.3391** from layers 8-9 is 365 mm long, has a rectangular cross section and is the most solid fragment. The piece has two fire-drill holes which might indicate secondary use as a hearth for a fire drill. **L13.3323** from layer 8 is 266 mm long with rectangular cross section and the same shape as the last-mentioned. **L13.3359** from layers 8-9 is 235 mm long with oval cross sections, more delicate than the previous two, possibly a toy. **L13.3275** from layers 7-8 is 255 mm long with a level inner side and domed outer, slender, possibly a bow drill. None of these objects are illustrated.

Sinew-thread twister

L13.3244 is a wooden sinew-thread twister, 105 mm long and from layers 7-8.

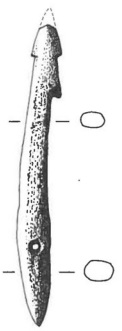
Fishing equipment

Sinkers

Three soapstone sinkers for jigs correspond closely to the oval, pierced forms from Illorpaat, *cf.* **igd 240** and **822/1073**. All are broken and from layers 1-6. A cylindrical piece of soapstone from layers 8-9, 38 mm long and 33 mm in diameter, has a groove in the centre and has been used as a sinker. None of the described sinkers are illustrated.

Fish hooks

A wooden shaft for halibut fishing is broken. The fragment is 93 mm long and corresponds to **igd 4195** from Illorpaat. Not illustrated.


L 13. 3375

Leister prongs

Two leister prongs of antler were found. **L13.3375** is complete, 78 mm long, has two barbs on the inside and one on the outside. The rear end is pointed and pierced once. **L13.3410** is broken and only the point with seven barbs is preserved, not illustrated.

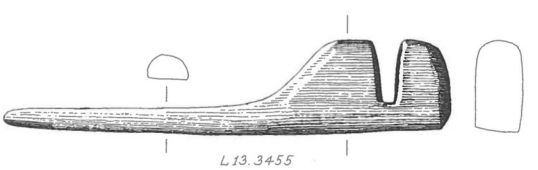
Transport

Kayak parts

Seven pieces can be described as parts of the kayak frame. Three gunwale strakes, two side stringers and two complete cross beams (410 and 385mm long) correspond exactly to Illorpaat. Not illustrated.

Line support

L13.3455 is a wooden line support, 118 mm long.

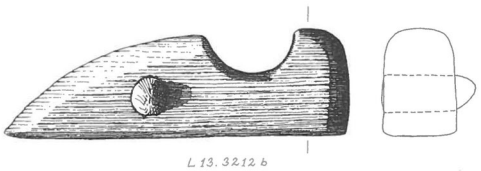

L 13. 3455

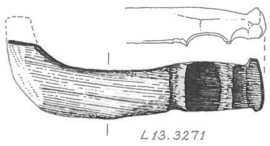
Shaft rests

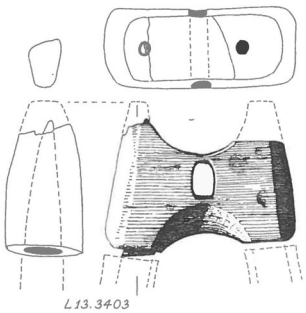
L13.3212b is a shaft rest from layers 1-6, 91 mm long, with a transverse nail. The type is also found in Disko Bay (Mathiassen 1934: pl.1(11)), Upernavik (Mathiassen 1930: pl.8(23)) and Thule (Holtved 1944,I: pl.18(15)). **L13.3235a** is a wooden rest from layers 7-8, broken, 72 mm long, identical to the previous one, not illustrated.

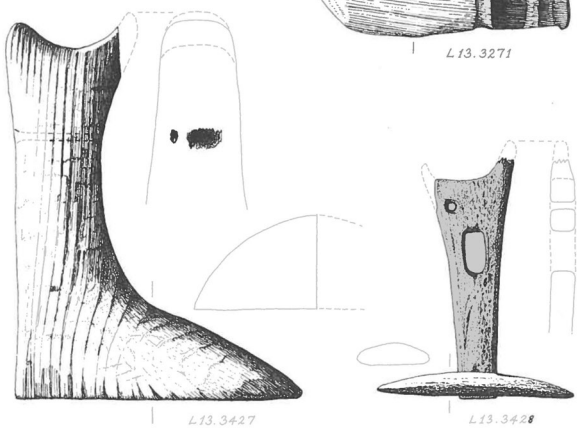
L13.3271 is a wooden rest from layers 7-8, 70 mm long, for fastening to the leg of the kayak stand, corresponds to **igd 580** (Wooden objects, various); *cf.* the similar piece from Kangaamiut, which has erroneously been described as the handle of a toy drum (Mathiassen 1931: pl.6(18)). **L13.3403** is a wooden rest from layers 8-9 with inset wooden pegs for fastening to the leg, 50 mm long, broken; partly corresponds to **igd 3737,** but has a more elegant shape. **L13.3427** is a wooden rest from layers 8-9, possibly for mounting on firm ground. The base is oval, 80 × 65 mm, and the height 102 mm. The "leg" has been drilled through, possibly for fastening a line. The piece is very atypical and mostly resembles a rest for an ice-hunting harpoon. Comparisons have not been possible. **L13.3428** is a shaft rest of antler from layers 8-9, composed of two parts. The oval base measures 51 × 20 mm, the height is 65 mm. A similar piece was found in Kangaamiut (Mathiassen 1931: pl.3(2)), Disko Bay (Mathiassen 1934: pl.1(10), pl.4(19)), Upernavik (Mathiassen 1930: pl.21(12,13)) and Thule (Holtved 1944, I: pl.18(20,21)).

The very neatly fashioned shaft rests are seen to disappear from use during the 16th century and are replaced by rests which lie closer to the deck. This change is completed in the 18th century.







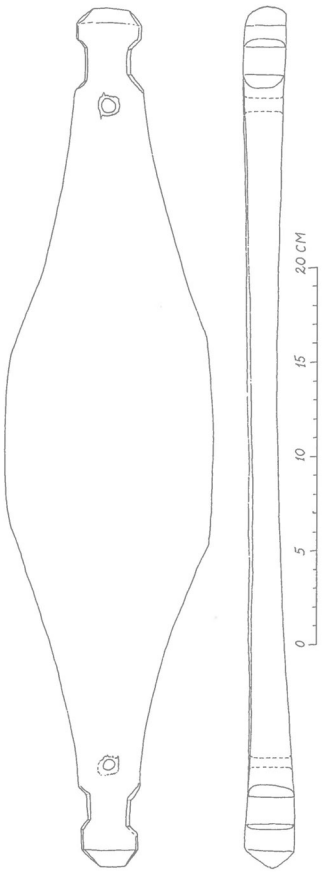


Paddle blades

Two blades for paddles correspond to Illorpaat. One is broken in the middle, but is of the same shape as **igd 1555** or **igd 4254** and comes from layers 7-8. The other is lanceolate with an acute-angled cut for fastening a shaft and in form corresponds to **igd 4238**, which however is not composite, and comes from layers 8-9. Not illustrated.

Umiaq parts

Two pieces come from the umiaq frame. **L13.3240** is a broken rib with a concave end-surface, a transverse hole drilled through and two lashing notches, from layers 7-8, not illustrated. **L13.3308**, from layer 8, is a bottom rib, 455 mm long, 110 mm maxi-

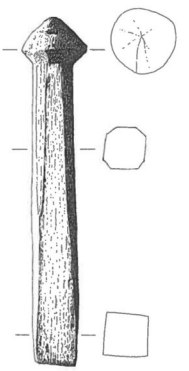


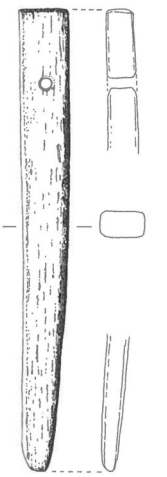
L13.3308

mum width, 15 mm thick in the middle and 25 mm at the ends, with a lashing notch and pierced at the ends; its form corresponds to the early types (*cf.* Knuth 1952, 1980).

Nails

Two whale-bone nails for fastening the umiaq's bottom ribs are considerably more solid than those from Illorpaat. **L13.3370** is complete and 92 mm long. **L13.3345** is broken and 57 mm long, not illustrated.


L13.3370


L13.3376

Men's tools

Marline spike

L13.3376 is a whale-bone marline spike and is 122 mm long.

Axes & Wedge

10 objects were found. Four handles, five heads and a wedge. The materials are wood, whale bone and antler.

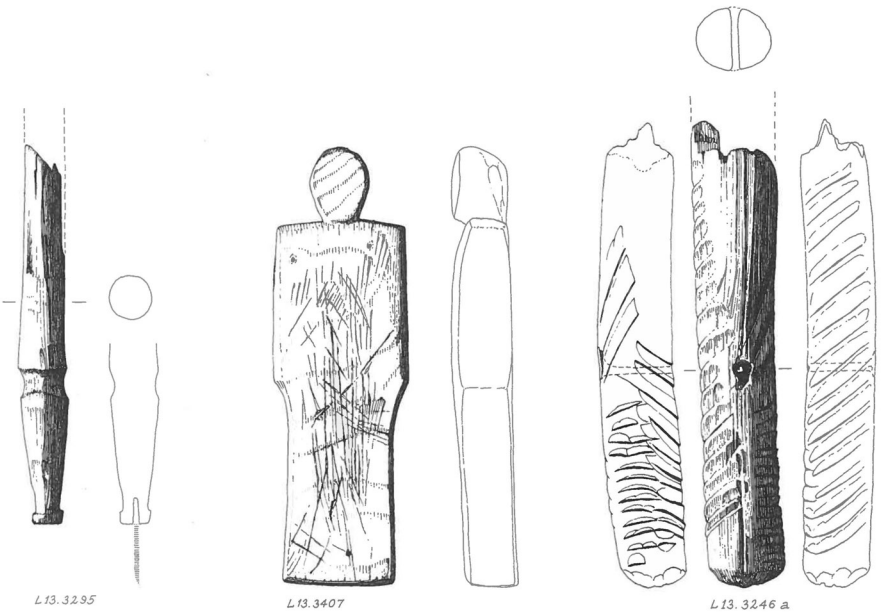
Three heads, all of antler, have a socket and lashing notch and thus correspond to Illorpaat. They have functioned as adzes and measure from 87 to 148 mm. Two heads have been sharpened like **igd 2205** and have served as peat axes. They are both of whale bone and both measure 255 mm.

The handles are all of wood. Three functioned as adzes and measure 350, 297 and 195 mm from the lashing surface to the handle end. They are represented by the types **igd 1316** and **1843**. A peat-axe handle, broken, is identical to **igd 1936.**

A whale-bone wedge corresponds to **igd 1559**.

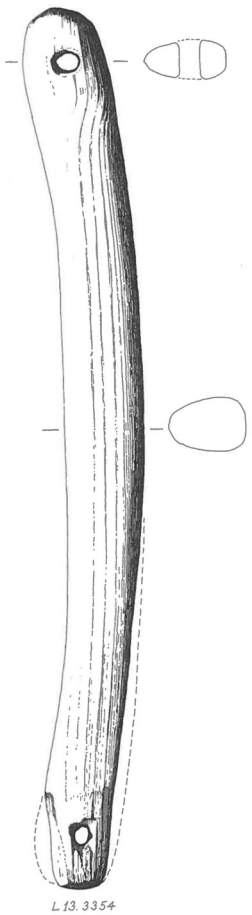
Find contexts:		**1-6**	**7-8**	**8-9**	**Total**
Axe heads	Adzes	1	2	–	3
	Peat axes	–	2	–	2
Axe handles	Adzes	–	1	2	3
	Peat axes	–	1	–	1
Wedges		–	–	1	1
		1	6	3	10

None of the described objects are illustrated.



Bow drills

Two handles for bow drills can be demonstrated. **L13.3295** is of wood, broken, 100 mm long and found in layers 7-8. Has a bead at the end for reinforcing the lashing-on of the drill bit. A groove is cut round the handle for the bowstring. The other piece is of whale bone, broken so only the rear end is preserved, 131 mm long and found in layers 8-9, not illustrated.



Mouthpiece for bow drill

A wooden mouthpiece with biting grooves at the sides corresponds to **igd 2094.**

Cutting boards

Four cutting boards used for cutting bird feathers all have cutting marks on both sides. Two have suspension holes, are 92 and 94 mm long, came from layer 7 and correspond in shape to **igd 2257** and **3993**; not illustrated. One has two sets of notches at the end for fastening a suspension medium, 92 mm long and from layer 7; not illustrated. **L13.3407** is shaped like a male figure, 117 mm long and from layers 8-9.

Handles & Shafts

Three objects must be interpreted as shafts. **L13.3246e**, from layers 7-8, is a broken handle, 117 mm long, presumably of a knife, without bead at the blade groove, of the same form as the end-hafted **igd 2245**; not illustrated. **L13.3246a**, from layers 7-8, is a possible shaft, broken and 123 mm long. Ornamented with incised grooves of the same type as **igd 2327** (Wooden objects, various). Oval cross section and pierced at the middle. **L13.3354** is a wooden handle, 234 mm long, and pierced at each end. Found in layers 8-9 and in shape corresponds to a quiver handle from Thule (Holtved 1944,I: pl.12(17,20)), but was probably a bow for a drill.

Whetstones & Hammerstones

18 stones of various kinds of rock, incl. pumice, had been used for sharpening and hammering. 17 stones have served as whetstones, while one primarily had a hammering or crushing function. The materials are slaty amphibolite, basalt, quartzite, Igaliko

sandstone, red clay slate, slaty ironstone and pumice. This thus does not differ from Illorpaat.

Find contexts:	1-6	7-8	8	8-9	Total
Slaty amphibolite	3	3	1	2	9
Basalt	–	1	1	–	2
Quartzite	–	–	–	2	2
Igaliko sandstone	–	1	–	–	1
Clay slate, red	–	–	–	1	1
Slaty ironstone	–	–	–	1	1
Pumice	–	1	–	1	2
	3	6	2	7	18

The slaty amphibolite often appears in the form of rods, all of whose four sides have been used for grinding. None of the pieces have suspension holes. The lengths vary from 67 to 99 mm. Not illustrated.

The basalt pieces are rounded. One of the stones is almost spherical and has been used as a whetstone; maximum measurement is 70 mm (from layer 8). The other stone is wedge-shaped with triangular cross section and a maximum length of 75 mm, and has been used as a hammerstone, since crushing-marks can be seen on both ends (from layers 7-8). Not illustrated.

The quartzite pieces have, respectively, three and four grinding surfaces and their maximum lengths are 23 and 33 mm. The piece with the four grinding surfaces also has a grinding groove in one of the surfaces. Not illustrated.

The Igaliko sandstone is broken, has four grinding surfaces and rectangular cross section. Maximum length 68 mm. Not illustrated.

The red clay slate, which comes from Erik's Fjord in South Greenland, has three grinding surfaces, is broken and has a rectangular cross section; maximum length 85 mm. Not illustrated.

The slaty ironstone is a rod with parallelogrammic cross section and a maximum length of 107 mm. It has unmistakable grinding marks on one surface. The piece is very ferruginous with cracks in the surface. Not illustrated.

The pumice stones have no grinding surfaces, but one piece (from layers 7-8) has a grinding groove. Not illustrated.

In summary, the survey shows that half the stones are slaty amphibolite, as was also the case at Illorpaat. The red clay slate and the Igaliko sandstone are both connected with the south, but the nature of the contact cannot be described further. The clay slate from the 14th to the 16th century (layers 8-9) may come from Eskimo digging in the Norse farms in Godthåb Fjord, while the Igaliko sandstone from the 18th century (layers 7-8) may have been brought to Kangeq at the time when the immigrant South Greenlanders came into the area (*cf.* Gulløv 1987).

Fire drills

Three pieces belong to this group and are two pieces of hearth and one handle; not illustrated.

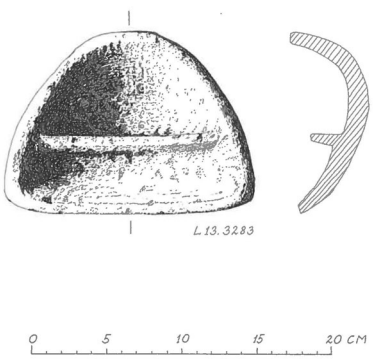
Women's equipment

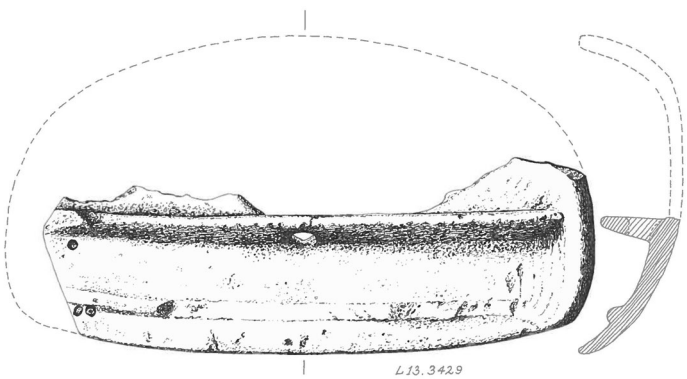
Lamps

11 fragments were found. All are of the crescent type described at Illorpaat and Itissaalik.

Find contexts:	1-6	6-7	7-8	8	8-9	Total
Without ridge and wick ledge	–	1	1	–	–	2
With wick ledge and dividing ridge	–	–	–	–	1	1
Only with dividing ridge	–	1	2	–	–	3
Fragment with dividing ridge	2	–	–	–	1	3
Fragments	1	–	–	1	–	2
	3	2	3	1	2	11

There are no special features in these pieces. **L13.3283** from layers 7-8 is the only complete specimen in the find, 168 mm long and 120 mm wide, and corresponds to **igd 2707**. **L13.3429** from layers 8-9 is the largest fragment in the find, 363 mm long, has been a little longer, but the end and the back are broken off; three scarfing holes are seen; the wick ledge is shaped as a small ridge, partly broken off, and the dividing ridge is pierced through and thus corresponds to **igd 2920**. None of the other fragments are illustrated.





Wick trimmers

Four wick trimmers, two of wood (from layer 8) and two of asbestos (from layers 1-6) were found. Not illustrated.

Pegs

Nine wooden sticks with pointed ends and circular cross section have been used for stretching skin. Five are large and solid with a length of between 211 and 403 mm. The longest has an eye. Only one has a head. One very slender and pointed stick with oval cross section, 175 mm long, complete with eye and without head, may have functioned as a fish needle. Two small points of broken pegs are coarsely worked; the fragments are 80 mm long.

Find contexts:	7	7-8	8-9	Total
large pegs	2	1	2	5
fish needle(?)	–	–	1	1
small pegs	–	3	–	3
	2	4	3	9

None of the described objects are illustrated.

Ulos

The objects are seven parts of the *ulo*. One complete *ulo* from layer 6 has a cylindrical antler handle and a blade with tang from a sailmaker's knife. No traces of stamp could be made out. One *ulo* blade of iron from layer 7 is very corroded. Four handles with blade groove and without lashing holes correspond to those at Illorpaat. Three pieces are of whale bone and of the same type as **igd 1831** and one handle is of wood and of the same type as **igd 3414**. A middle piece of antler with blade groove and two lashing holes corresponds to **igd 1542**.

Find contexts:	3	6	7	8	Total
complete *ulo*	–	1	–	–	1
ulo blade	–	–	1	–	1
handles, whale bone	2	–	–	1	3
handle, wood	1	–	–	–	1
middle piece	–	–	1	–	1
	3	1	2	1	7

None of the described objects are illustrated.

Household utensils

Cooking pots

44 units could be formed by joining fragments. No complete cooking pots were found.

Find contexts:	1-6	6-7	7-8	8	8-9	Total
Rim, side and bottom	–	2	2	–	1	5
Rims	3	6	7	1	4	21
Bottoms with sides	1	1	1	1	–	4
Sides	1	1	11	–	1	14
	5	10	21	2	6	44

These pieces do not differ from those at Illorpaat. Rim type IIA with straight-cut edge predominates:

	1-6	6-7	7-8	8	8-9	Total
type IA	–	1	1	–	1	3
type IIA	3	7	8	1	3	22
type IIB	–	–	–	–	1	1
	3	8	9	1	5	26

Among the suspension types, type 3, where the suspension hole goes vertically through an inner bead, predominates:

	6-7	7-8	8-9	Total
type 3 (rim type IIA)	5	2	–	7
type 2 (rim type IA)	–	–	1	1
	5	2	1	8

None of the described units are illustrated.

Scoops

Three handles for scoops were found. Two are of wood and correspond to Illorpaat, e.g. **igd 2128**, one of them has a depression cut in the upper side for the thumb. The third handle is of soapstone and corresponds to **igd 1519**, although the Kangeq piece has a depression for the thumb. The wooden handles were found in layers 8-9, while the soapstone handle came from layer 7. Not illustrated.

Dishes & Bowls

12 objects must be assigned to this group. Four rim fragments from small wooden bowls correspond to Illorpaat, e.g. **igd 3934**, and one fragment similarly has a strip of antler fastened with 20 mm-long bone nails. Eight wooden bottoms of dishes and small containers can be demonstrated. All had presumably had baleen sides. Two are circular and correspond to **igd 1982** and **2153**. The other six are oval, two of them have baleen sides preserved and are of the same dimensions as **igd 2290**. The maximum measurements of the remaining four are 270, 130, 110 and 93 mm.

Find contexts:	7	7-8	8	8-9	Total
bowls (rims)	2	2	–	–	4
dishes with baleen sides	–	2	–	–	2
bottoms (circular)	–	–	1	1	2
bottoms (oval)	1	2	1	–	4
	3	6	2	1	12

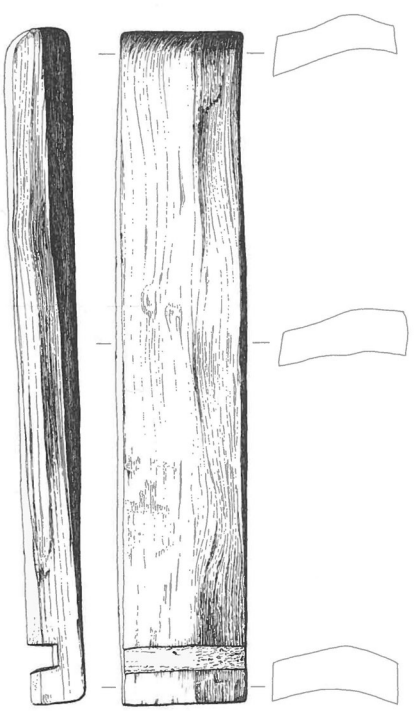
None of the described objects are illustrated.

Tubs & Beakers

Six wooden staves must be considered to have been parts of small tubs or beakers. Four are complete and of the other two one has been cut short and one is broken. With reference to Illorpaat, three staves are from small beakers (lengths from 50 to 80 mm) and three staves are from small tubs (lengths from 178 to 184 mm).

Find contexts:	**7**	**8**	**9**	**Total**
small staves	1	2	–	3
larger staves	–	1	2	3
	1	3	2	6

One of the small staves has a longitudinal, central ridge on the outside, which makes the cross section look triangular with a slightly concave inner side; not illustrated. On one of the larger staves, **L13.3356**, 178 mm long, the bottom groove is placed on the outside. The piece is complete and the concave curve of the inner surface is due to working and not to nature. There is no functional explanation of this construction detail and it may be the result of a misunderstanding on the part of the maker. The piece was found in layer 9, i.e. is from the 14th century, but is hardly of Norse origin. It is more likely that the shape results from a misunderstood Eskimo imitation of a Norse model. The stave technique and thus cooperage is documented archaeologically throughout the Thule culture in Greenland; in North East Greenland only by one late example (*cf.* Larsen 1934: 151), but in Thule District as far back as the 13th century (Holtved 1944,II; 54). Outside Greenland the technique has not yet been demonstrated in the Thule culture. The Eskimos may therefore have learnt the technique from



the Norsemen, although it was known earlier in the Arctic, e.g. in the Dorset culture (*cf.* Maxwell 1984: Fig.6 (j)).

The other staves are not illustrated.

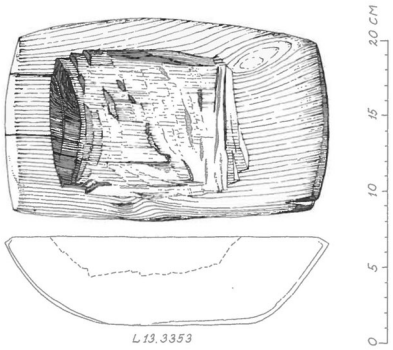
Meat forks

Four objects have been used as meat forks. Two are of wood with, respectively, five and three sets of opposite barbs. One is complete, from layers 7-8, 276 mm long with five barbs and corresponds exactly to **igd 3888**. The other is broken, from layers 1-6, 101 mm long with three barbs and corresponds to **igd 1913**. Two are of antler. One is broken, from layers 1-6, 76 mm-long fork-shaped piece with two prongs. The other is complete, from layers 7-8, 159 mm-long prong with cut-off rear end, marrow extractor (?).

None of the described objects are illustrated.

Lamp stand

A wooden block, **L13.3353**, with the outer sides cut smooth and an inner hollowing commenced, has been intended as a lamp stand. The surface measures 135 × 217 mm and the height is 55 mm.



Drying racks

Two broken wooden objects, respectively 263 and 256 mm long, are interpreted as parts of drying racks. One piece has five circular holes (16 mm diameter) in a row. From layers 7-8. The cross section is rectangular. The other piece has five drilled holes (17 × 10) in a row. From layers 8-9. The cross section shows one level and one domed side. Not illustrated.

Hooks

Two objects have functioned as hooks. One piece of antler with two prongs and two piercings has been used for hanging something in the house; 271 mm long, 170 between the antler prongs; from layers 7-8. A broken piece of wood, 141 mm long, with an inset antler prong without barbs has been used as a blubber hook; from layers 1-6. Not illustrated.

Personal equipment

Comb

An antler comb with five teeth, an eye and two beads at the end is 95 mm long, 35 mm wide across the teeth, 20 mm wide across the beads. Not illustrated.

Mica (Mirrors)

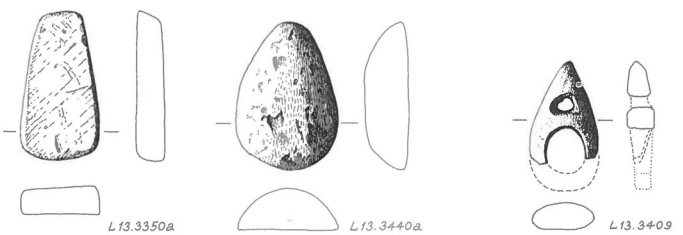
Nine pieces of mica, all shaped along the sides, are interpreted as mirrors. The largest fragment is 58 mm. One specimen is complete, cut to an oval shape, 33 × 25 mm, and corresponds to similar finds from Thule District (*cf.* Holtved 1944,I: pl.36(27)), about which it is noted that similar finds have not been made earlier, with the exception of a single specimen from North East Greenland (*op.cit.*, p. 276). Not illustrated.

Beads, Ornamental pendants & Buckles

Four objects have served as personal adornment and dress accessories. Two disc-shaped soapstone beads have diameters of 12 mm (from layer 7) and 9 mm (from layers 8-9) and are also found at Illorpaat. Not illustrated.

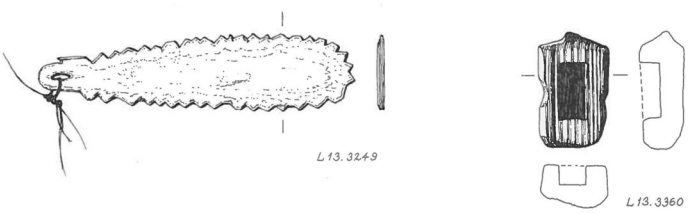
Two soapstone ornamental pendants are unfinished work as they have not been pierced. In their finished form they would have corresponded to Illorpaat **igd 2614** and **2771**. **L13.3350a** from layer 8 is 39 mm long, 20 mm wide at the bottom and 6 mm thick. **L13.3440a** from layers 8-9 is 39 mm long, 27 mm wide at the bottom and 12 mm thick with a level underside.

L13.3409 from layers 8-9 is an antler buckle for a kayak jacket. The type is not found at Illorpaat or Itissaalik.



Religious objects

Two objects have been associated with the spiritual culture. **L13.3249** from layers 7-8 is a buzzer of baleen with serrated edges, 83 mm long, 20 mm wide, with a baleen string through an eye. **L13.3360** from layers 8-9 is a small wooden block, hollowed and with a lashing notch on the outside; measures 30 × 20 × 13 mm. Was probably an amulet case which could be closed with a lid (*cf.* Mathiassen 1930: pl.17(9)).



Toys

41 objects can all be explained as toys or games. An *ajaraq* and a soapstone gaming piece represent the games.

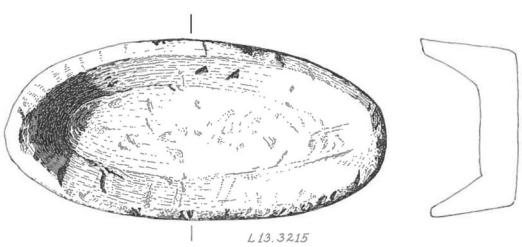
Find contexts:	1-6	7-8	8	8-9	Total
Cooking pots	–	1	–	2	3
Lamps	4	3	–	–	7
Lamp stand	1	–	–	–	1
Dolls	1	5	2	1	9
Ajaraq	–	–	–	1	1
Sailing boats	–	2	–	–	2
Paddles	–	–	1	3	4
Bird–dart shafts	–	–	2	–	2
Side prongs	–	2	–	1	3
Throwing boards	1	1	–	–	2
Wing for harpoon	–	–	1	–	1
Knife	–	–	1	–	1
Handles	–	2	–	1	3
Top	–	1	–	–	1
Gaming piece	1	–	–	–	1
	8	17	7	9	41

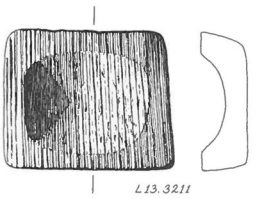
Cooking pots

An almost complete model and two fragments of small cups were found. No suspension holes can be seen. The complete model from layers 8-9 has the same shape as **igd 2651.** The cup fragments have thin bottoms; one, from layers 8-9, has the rim preserved with a straight-cut edge and an indication of a groove running round the outside 5 mm below the rim, as is known from Norse products (*cf.* Nørlund & Stenberger 1934: 123; Roussell 1936: 198). Not illustrated.

Lamps

Two complete lamps were found in layers 1-6, together with five unfinished pieces on three of which a commenced hollowing is marked, while the other two are disc-shaped pieces for working up. One complete model is crescent-shaped, 41 mm long, 27 mm wide, also found in Illorpaat; not illustrated. The other complete model, **L13.3215**, is oval, 102 mm long, 48 mm wide, corresponds in size to the cooking-pot model **igd 222**, only this piece has a diagonally cut wick front edge and a thick bottom which distinguishes it from the cooking-pot model. None of the found models have wick ledge or dividing ridge. None of the five preparatory works are illustrated.





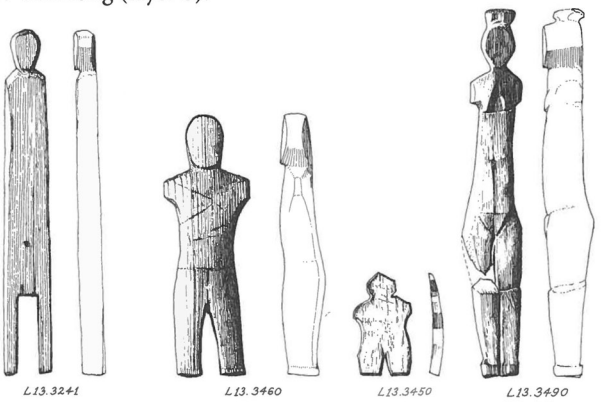
Lamp stand

L13.3211 is a square plate, 47 × 38 mm, with a carved depression. Probably represents a lamp stand.

Dolls

The found dolls, one of which is of baleen and the others of wood, do not vary typologically from Illorpaat. All have legs. Six are male and three are female. The lengths vary from 27 to 97 mm. The male dolls do not have sexual organs. One is missing the head and two have pieces of arm marked. One female doll has indications of sexual organs, kamiks and topknot. One has indications of where the house trousers were sitting, as well as sexual features, and on one the hip is marked at the top edge of the kamiks. They all have pieces of arm indicated, as on **igd 2264**.

Illustrated examples of minor divergences from Illorpaat: **L13.3241** is 91 mm long with the navel marked (layers 7-8). **L13.3460** is 70 mm long with arms and feet marked (layers 7-8). **L13.3450** is of baleen and 27 mm long (layers 7-8). **L13.3490** is 97 mm long (layer 8).

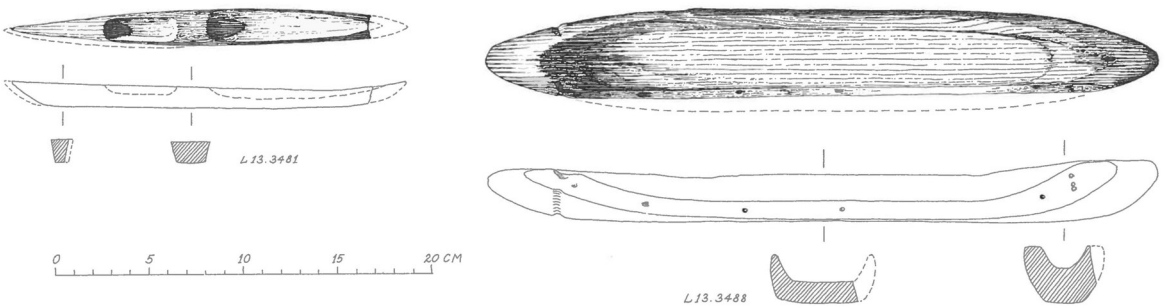


Ajaraq

An *ajaraq* of seal bone with one lashing hole for the string corresponds exactly to **igd 3394**. Not illustrated.

Sailing boats

Two wooden boat models differ from Illorpaat in important aspects, in that they do not have decks. The author Jens Rosing mentions (pers. comm.) this feature as being a very old one in Greenland, where it is called qaleqángitsut, i.e. that without deck cover, and is still found in boat models. **L13.3481** is a kayak model of a slender type with a flat bottom and broken stern, 190 mm long; similar kayak models without deck are

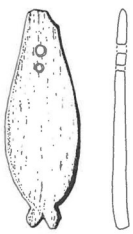


known from Thule (Holtved 1944,I: pl.42(17,18)). **L13.3488** is an open flat-bottomed vessel, 356 mm long, missing one side which has been repaired with wooden nails; a circular incision round one end has presumably been for fastening a line, so that the boat could be pulled along; similar models, though not nearly as slender, are known from Thule (Holtved 1944,I: pl.42(2,3)).

Paddles

Four oar blades are all paddle blades. All except one have pointed ends. One complete paddle from layer 8 resembles **igd 4328** in form, but is 351 mm long. Among the other three only one blade is preserved. The longest fragment is 200, very slender and lanceolate. One fragment resembles **igd 3614** and is 68 mm long. One fragment, 80 mm long, is shaped as a parallelogram, the length of the blade is 45 mm and the width 25 mm. Not illustrated.

Bird-dart shafts

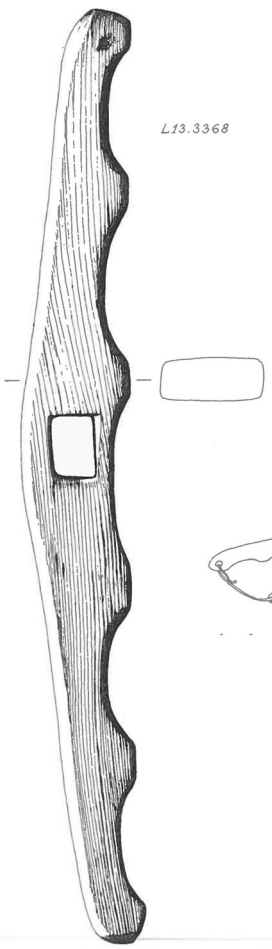

L13. 3342

Both pieces are broken, 117 and 207 mm long; the type is as **igd 3918**. Not illustrated.

Side prongs

Three side prongs are all from bird darts. Two are of wood, 52 mm long, with one and two barbs, and one is of antler, 67 mm long, with one barb. Only on one is the heel preserved. Corresponds to Illorpaat. Not illustrated.

Throwing boards


L13.3368

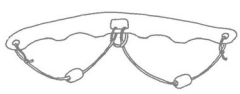
Both are of wood. One from layers 1-6 corresponds to **igd 4240** but is broken, while the fingerholds and the shaft socket are complete, 91 mm long. The other, from layers 7-8, is a full-length preparatory work, 202 mm long, with a notch for the index finger and the shaft socket marked. Not illustrated.

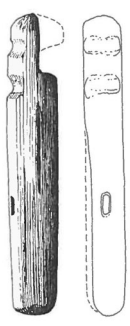
Wing for harpoon

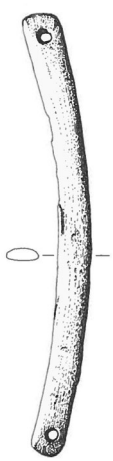
L13.3342 is an antler wing for a harpoon, 58 mm long.

Knife

A wooden object, 202 mm long, resembles a split paddle blade, but has been sharpened and finished by an incision between blade and handle. May be a knife model, although men's tools are not normally found as miniatures, *cf.* Illorpaat and Itissaalik.




L13.3458


L13.3292

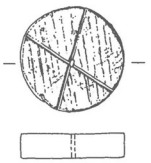
Handles

Three handles have served three purposes. **L13.3458** from layers 7-8 is of wood, 79 mm long, presumably a drum handle. **L13.3292** from layers 7-8 is of antler, 117 mm long, has holes at the ends, presumably a model of a quiver handle or a bow drill. **L13.3368** from layers 8-9 is of wood, 247 mm long, presumably suspension for "thought-game" (*cf.* Thalbitzer 1914: 654).

Top

An oval whale-bone disc, 74 × 99 mm and 15 mm thick, has a hole drilled in the centre and has functioned as a top, *cf.* Illorpaat **igd 2332** and **3282**. Not illustrated.

Gaming piece


L13.3217

L13.3217 is a circular soapstone disc, 27 mm in diameter and 7 mm thick, has a cross scratched on both sides and is drilled through the middle. Presumably a gaming piece corresponding to similar finds of wood from Hope Colony (*cf.* Gulløv & Kapel 1979: 109).

Indeterminable & Divers objects

Wooden objects, indeterminable

13 objects cannot be identified further.

A heavy strip of wood without holes, broken, 360 mm long, with oval cross section, with small, closely set notches along one edge (layers 8-9).

A slender wooden stick with a rectangular hole at the end, broken, 336 mm long, one side domed and the other side level; possibly a drumstick (layer 8).

Five small pieces of wood, 73 to 114 mm long, cut or broken, have circular to oval cross sections, with scarfing and wedge-shape on two of the pieces (layer 8)

A broken point with an eye at the end and oval cross section, 83 mm long, resembles an *ajaraq* stick (layers 7-8).

A broken stick with a kind of handle preserved, *cf.* **igd 3882** (Wooden objects, various), and an oval cross section, 115 mm long (layers 6-7).

A piece, broken, 76 mm long with the remains of an eye preserved at the end (*cf.* **igd 4154**) rectangular cross section and with notches cut (*cf.* **igd 3600**) along all four edges (layers 7-8).

A rectangular plate, 84 × 31 mm and 5 mm thick, is possibly the lid of a small box (layers 7-8).

Two balls, 28 mm in diameter, originally offcuts from sticks, are possibly bola balls (?) (layers 7-8).

None of the described objects are illustrated.

Soapstone, indeterminable

Seven pieces of soapstone cannot be identified further. Three pieces are presumably originally lamp fragments. Two may be fragments of cooking pots. One piece has parallel sides and triangular cross section. One piece is a thick, oval disc with three holes.

None of these pieces are illustrated.

Strips & Mounts

Six objects are edging strips and mounts. Three edging strips, two of antler and one of whale bone, are 97 to 192 mm long, with oval upper side and level to concave underside; correspond to Illorpaat **igd 658**, **3506** and **3594**. Two wooden strips have oval cross section, are 55 and 77 mm long, one has a longitudinal groove along one side (drum frame?). An antler mount, 99 mm long, with one hole at the end and nine holes through the surface, partly corresponds to **igd 3609** (Bone and antler objects, various), buzzer?

Find contexts:	**7-8**	**8-9**	**Total**
Antler edging strips	2	–	2
Whale-bone edging strips	1	–	1
Wooden strip	–	1	1
Drum frame(?)	–	1	1
Mount (buzzer?)	–	1	1
	3	3	6

None of the described objects are illustrated.

European objects

Glass beads

Five glass beads, four of them wire-wound and one drawn. When compared with Illorpaat and Itissaalik the types can be described as **WIA**1 (1 bead), **WIB**1 (1 bead), **WIC**1 (1 bead), a later white, opaque, drop-shaped and a later drawn, dark blue, transparent tubular bead with six facets of Venice type. Not illustrated.

Clay pipes

10 undecorated clay-pipe stems, two of them mouthpieces, could not be identified further. Not illustrated.

Pottery

Two sherds, one of a porcelain plate with a brown exterior and blue flower ornament on the inside, the other a fragment of a fluted red ware jar with red-brown glaze on both sides. Not illustrated.

Sewing needle

An iron needle, 50 mm long. Not illustrated.

Buttons

A late pewter button with four sewing-holes and a diameter of 16 mm. Not illustrated.

Bullet

A lead bullet with a diameter of 16 mm. Not illustrated.

Rivet

The head of an iron rivet. Not illustrated.

Apart from the rivet head, which may be 18th century, all the European objects described above were found in clear 19th-century contexts.

Norse objects

Six objects can be said to be of Norse origin or copies of Norse products. All are from layer 9.

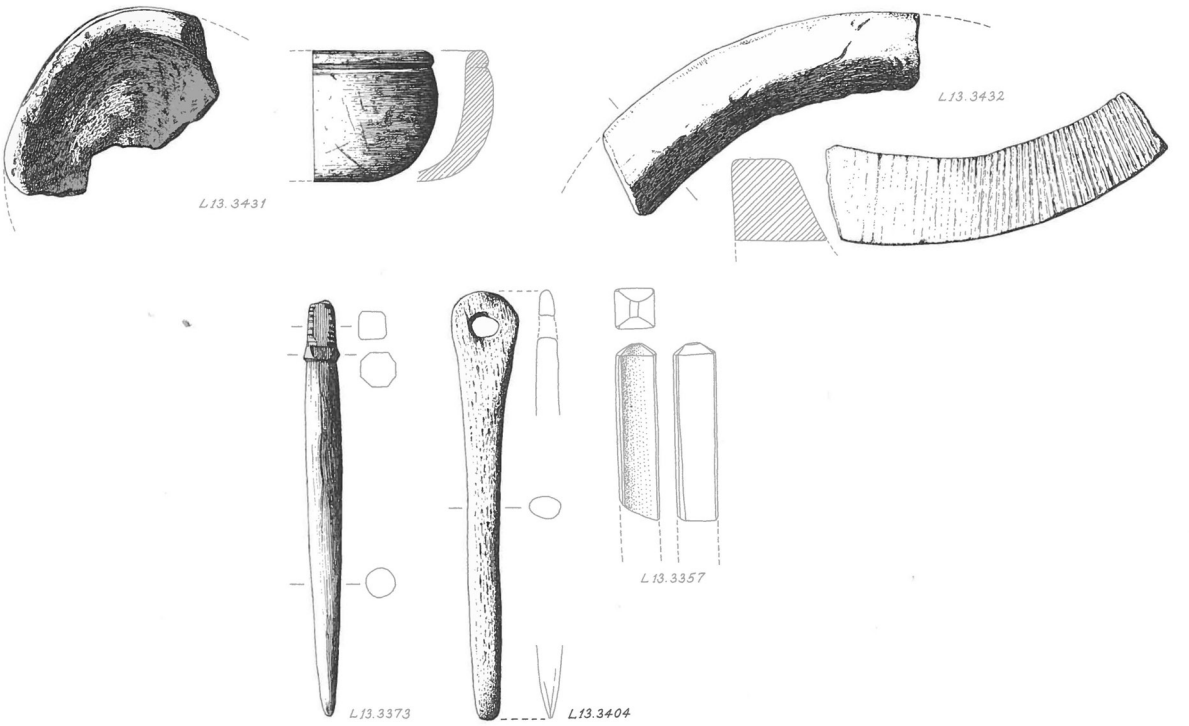
L13.3431 is a soapstone beaker with a rounded rim and a groove cut along the outside of the rim; height 35 mm. Similar shapes are well known from Scandinavia, *cf.* Hedeby (Resi 1979: 45).

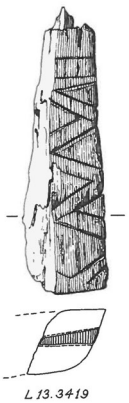
L13.3432 is a heavy rim of a cooking pot with straight-cut upper edge, the piece has been cut or sawn off parallel to the rim 23 mm down, the marks of the saw are seen as fine parallel grooves. This technique is not known from the Eskimo find material, but is well known from Scandinavia, *cf.* Borgund (Lossius 1977: 66-67).

L13.3373 is a wooden ornamental bodkin, 109 mm long, with a circular cross section in the middle and square section on top, where a bead and small notches finish the bodkin. The bodkin must be seen as the prototype of the antler bodkins with circular incisions at the top which were found in Illorpaat. The diagonally cut top end might indicate that the bodkin was originally longer and had had an eye. Ornamented bodkins were common in Scandinavia, *cf.* Hedeby (Schwarz-Mackensen 1976: 32-33).

L13.3404 is an antler needle, 113 mm long, with a wedge-shaped point and flattened head with an eye. The type is known from the Norse Western Settlement (Roussell 1936: 122, 181) and was used for needlebinding (Hoffmann 1967: 425-428).

L13.3357 is a whetstone for needles, of red clay slate from Erik's Fjord in South Greenland, with a square cross section, faceted edges and one pyramidal end preserved, 45 mm long, broken. Known from the Norse settlements (Nørlund & Stenberger 1934: 134-135; Roussell 1936: 112-113).





L13.3419 is a 76 mm-long piece of wood with parallelogrammic cross section, presumably the rim of a wooden tub, or a handle for one such, since there are two wooden dowels set through the piece. On one side a zig-zag relief has been cut, which is a feature well known from the Norse settlements, where it is found on wood (*cf.* Roussell 1936: 202) on horn (*cf.* Roussell 1941: 247) and on soapstone (*cf.* Nørlund & Stenberger 1934: 123), but is also – as a Norse object – demonstrated in Eskimo context (*cf.* Mathiassen 1934: pl.7(25)).

The cask staves, including **L13.3356**, are, as mentioned above, closely connected with the Norse community. The most northerly that cask staves have been found is in Inglefield Land, Inuarfigssuaq house 13 (**L3.1457**), where the leg of a brass cooking pot of Norse origin was also found (Holtved 1944,I: 37, pl.44(4)). Two other ruins on this settlement contained objects of Norse origin, houses 3 and 30 (*op.cit.*, pp. 108-109). Holtved dates the habitation phase of these ruins to the 13th century (1944,II: 39,59). A C-14 dating (K-4470) of a willow twig from the floor layer in house 3, Inuarfigssuaq, gave 1300± 65 AD. Calibrated according to Stuiver (1982) the date lies in the period 1295-1375 AD. This corresponds to the datings of layer 9 in the Kangeq midden. On the basis of this modest material nothing can be said about contacts with the still extant Norse settlements; but it is very likely that there were contemporary Eskimo settlements in South West Greenland and the Thule area around the year 1300.

The find material from Umiivik, Niaquusat and Tuperluk

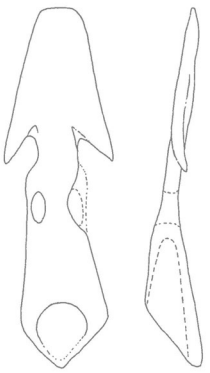
In the innermost branch of the Ameralik Fjord, called Ameralla, archaeological examinations of Eskimo structures have taken place in five localities. The examinations at Eqaluit of structures from the summer period, i.e. tent rings, tent foundations and stone-built smoking chambers, demonstrated re-use of the site (Gulløv 1983: 159), which historically could be traced back to the second half of the 18th century (Thorhallesen 1914: 50-51). The excavation of the communal house below the Norse Niaquusat farm was carried out in 1977, as a part of the Inuit-Norse project (Meldgaard 1977a; Gulløv 1983: 162), and the artefacts from the house, which had half eroded away, clearly pointed to an 18th-century context (Meldgaard, pers. comm.).

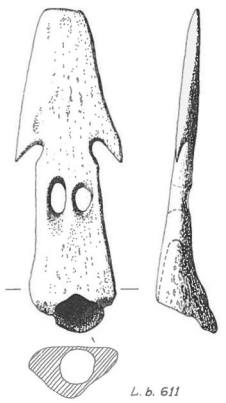
For a qualitative assessment of the settlement in this branch of the fjord, the artefacts from Umiivik (i.e. the place where the umiaq is pulled ashore) have been chosen. A trial excavation was made in the midden here in 1945, **L13.1-49** (Gulløv 1983: 160-161), which was supplemented by a quaternary zoological investigation in 1976 (Møhl 1982). There are also artefacts and a list of zoological species (M. Meldgaard 1977; Gulløv 1983: 162-163) from the summer-camp site at Niaquusat (i.e. head-like) which was examined by Morten Meldgaard in 1977. From the all-year settlement Tuperluk (i.e. the tent-place) we have material from a trial excavation in 1945, **L13.50-61** (Gulløv 1983: 159-160) supplemented by a quatenary zoological investigation in 1976 (Møhl 1982).

A common feature of the three localities is their clear orientation towards the resources in the fjord and the inland area, where bones of the harp seal (*Pagophilus groenlandicus*) and the caribou (*Rangifer tarandus*) predominate among the determined species (Møhl 1982: 287-290). The exploitation of the living resources was reflected in the worked bone material, which with one exception consisted of antler. The investigations could furthermore demonstrate that the settlement period had not been of long duration (Møhl 1982: 289) and that more than half of the artefacts were of European, post-colonial origin.

The distribution of the material is as follows:

	Umiivik			Niaquusat	Tuperluk			Total
	midden	tent ring	grave	tent ring	A	B	C	
Hunting equipment								
Harpoon heads	1	–	–	2	–	–	–	3
Arrow heads	6	–	1	–	–	1	–	8
Wound plugs	–	2	–	–	–	–	–	2
Throwing-board peg	–	–	–	1	–	–	–	1
Fishing equipment								
Head for fish spear	–	–	–	2	–	–	–	2
Leister side–prong	–	–	–	1	–	–	–	1
Transport								
Paddle mounts	2	–	–	–	–	–	–	2
Men's tools								
Knives	3	–	–	3	–	–	–	6
Whetstones	2	–	–	1	–	–	–	3
Pyrites	1	–	–	–	–	–	–	1
Women's equipment								
Ulos	–	–	–	2	–	–	–	2
Bodkin	1	–	–	–	–	–	–	1
Wooden plugs	–	1	–	–	–	–	1	2
Lamp	–	–	–	–	1	–	–	1
Household utensils								
Cooking pots	1	11	–	–	–	–	–	12
Personal equipment								
Comb	–	–	1	–	–	–	–	1
Toys								
Cooking pots	–	2	–	3	–	–	–	5
Lamps	–	–	–	2	–	–	1	3
Indeterminable & Divers objects								
Bone objects, various	12	–	–	3	–	–	–	15
Strips & Mounts	1	–	–	–	–	–	–	1
Wooden objects, various	1	–	–	–	–	–	–	1
Soapstone, indeterminable	–	1	–	–	–	2	–	3
Miscellaneous								
Raw materials with traces of working	1	–	–	–	–	–	–	1
European objects								
Iron	–	5	–	2	–	–	–	7
(iron used as knife and *ulo* blades)	(3)	(–)	(–)	(5)	(–)	(–)	(–)	(8)
Sheet copper/brass	–	–	–	1	–	–	1	2
Gunflint	–	5	–	–	–	–	–	5
Buttons	2	–	–	2	–	–	–	4
Bottle glass	26	4	–	–	1	–	–	31
Pottery	20	6	1	–	1	–	–	28
Clay pipes	–	1	–	2	–	–	1	4
Glass beads	52	3	–	20	–	–	–	75
	132	41	3	47	3	3	4	233


NA-3-77-39


L. b. 611

Hunting equipment

The harpoon heads are all flat with closed shaft sockets and two barbs. All are of antler. The specimen from Umiivik has had a blade slit. The type is illustrated by a head from Niaquusat, **NA-3-77-39**, and it has also been found in other localities in the Godthåb Fjord complex, *cf.* **Lb.611**, a head found in a grave on Uummannaq Island. Typologically they all belong to a final development phase of the West Greenlandic harpoon heads (Jordan 1979: 161,169) and have not been found outside West Greenland (Mathiassen 1930: 306, pl.23(3)). The type without a blade slit has as yet only been found in Godthåb Fjord.

The arrow heads have lanceolate points and one or two barbs. The rear ends have a shaft tang with knobs; one example has a screw thread. The same shape is found in Kangeq and Illorpaat. The material is antler, except the grave find which is a lanceolate head of black sharpened slate.

The wound plugs have a suspension hole and oval cross section.

The throwing-board peg is of antler and was also found at Illorpaat.

Fishing equipment

The fish-spear heads have four pairs of barbs, two line holes and a terminal knob for placing in a shaft socket or a socket piece. Antler.

The leister side-prong has one barb and corresponds to Illorpaat. Antler.

Transport

The paddle mounts have two holes and correspond to Illorpaat. Antler.

Men's tools

The knives are all iron blades with tang, or with two halves of the handle riveted together.

The whetstones are slaty amphibolite which occurs locally in Godthåb Fjord and most frequently in 18th-century Kangeq and Illorpaat.

Pyrites were not among the find material from the outer coast.

Women's equipment

The *ulo* is represented by a sailmaker's knife with tang, which has been archaeologically and historically demonstrated on the outer coast from 1721 (*cf.* Gulløv & Kapel 1979: 125). A cross-piece is of antler (*cf. ibid.*, p. 112).

An antler bodkin has a hole drilled in the flattened end.

The plugs are small wooden sticks with circular cross section.

The lamp has neither dividing ridge nor wick ledge, is comparatively large, 280 × 140 × 60 mm, and is similar to those at Illorpaat and Itissaalik of a comparatively late type.

Household utensils

Fragments of rim are preserved on a few of the cooking-pot sherds. These are rounded with internal suspension and thus correspond to the forms most frequently found on the outer coast.

Personal equipment

The comb found in a grave is of antler with suspension hole and six teeth. The type is known from the outer coast.

Toys

The soapstone cooking pots are oval to round in cross section, with internal suspension holes where these can be seen. One specimen from Umiivik, with a circular cross section, has a groove cut round the outside, *cf.* Kangeq. The types with suspension are well known on the outer coast.

The soapstone lamps are crescent-shaped without any other distinguishing features and are also found like that on the outer coast.

Indeterminate & Divers objects

The majority are pieces of antler cut to a point, in addition there are a shaped piece of wood with a piercing as if for a toggle (?) and a couple of shaped coapstone sherds.

Miscellaneous

Several pieces of antler from Niaquusat are raw material; however, only one piece of cut-off end with a hole in the thick end-surface is included here.

European objects

Iron was found in the form of blades for knives and*ulos*. In addition there were nails, bolts, clamps and the cogwheel and axle from the works of a clock (Umiivik).

Sheet copper and sheet brass came from a tub (Tuberluk) and from a mount or buckle, with the monogram of King Frederik the Fourth (reigned 1699-1730) surrounded by elephants and ornament (Niaquusat).

Gunflint is probably Scandinavian and is demonstrated on the outer coast after 1750.

Buttons are the well known black glass button with an iron eye, as was found at Illorpaat and Itissaalik after 1750 and in Hope Colony (Gulløv & Kapel 1979: 85-86). In addition a flat bone button with four eyes of a late type from Niaquusat.

The bottle sherds are greenish and clear, as also found on the outer coast, although the forms cannot be identified. The sherd from Tuperluk is composed from ten fragments of an apparently thick-bellied green bottle.

The pottery sherds consist of white faience and glazed, patterned earthenware. The types are hardly earlier than the second half of the 18th century and must be considered Dutch and English import goods and Danish products.

The clay pipes are too fragmented to allow for an identification of form and measurements.

The glass beads are also found among the types of the outer coast, only here in smaller numbers. A third are wire-wound and large, which at Illorpaat and Itissaalik was seen to be a comparatively late feature. All the wire-wound beads were found in the midden at Umiivik.

Chronology

Niaqaasat is the oldest. The brass buckle arrived in Greenland after the colonization in 1721 and must have fallen out of use soon after Frederik IV's death in 1730. In 1733-34 a smallpox epidemic laid most of the district waste, after which time resettlement took place inside the fjords around the year 1740 (Gulløv 1982, 1986b). The buckle thus dates the site to before 1734, although the place could have been used at a later date.

Umiivik was inhabited for a comparatively short period (Møhl 1982: 289) and judging by the European find material this period presumably lay within the second

half of the 18th century. Furthermore, a later settlement of short duration must have taken place, since the ruin has been rebuilt.

Tuperluk consists of a heavy wall-course with a trapezoid grund plan (structure A) and two smaller structures (B and C). The find material does not demonstrate any particularly great age, probably the 19th century. During the archaeological investigation here in 1976 a soapstone tile was uncovered in the upper floor layer of structure A. In it was scratched: Jonas-Niels 1852 (Møhl 1982: 287).

The find material from Qarajat

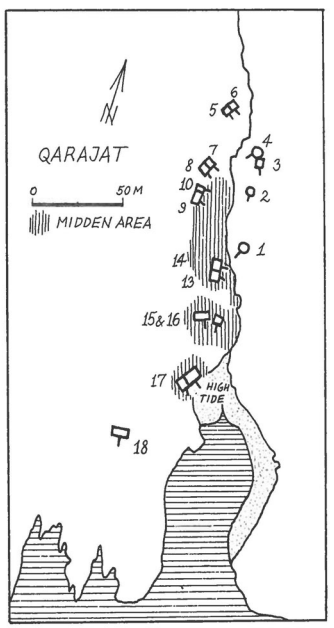


Fig. 99. *Survey of Qarajat with the locations of the 18 winter-houses marked.*

The settlement of Qarajat (i.e. the bays) lies on the mainland coast *c.* 10 km south of the mouth of the Ameralik Fjord on both sides of a north-south running river (Gulløv 1983: 25-29). 11 of the 18 winter-house ruins here (Fig.99) were investigated archaeologically in 1945 and the whole site was measured (Knuth 1945).

The investigations showed that the earliest, visible ruins lay along the east side of the river and the latest, visible ruins and the midden area lay along the west side. Very little organic material was preserved in the investigated structures, while nothing can be said in general about the midden areas which were only examined in front of houses 13 and 14.

House 1 (Fig.100) is dug into the ground and contained a couple of crumbling bones. It had been inhabited during two periods, since two tiled floor layers could be demonstrated. There were several caches on both sides of the house passage.

House 2 (Fig. 100) is dug down, contained no bones and no humus layer. There seem to have been several caches in the structure east of the ruin, where a fireplace was also demonstrated. Corresponds to house 1, only a little smaller.

House 3 (Fig. 100) is a later rectangular ruin built into an earlier, circular one. A human skull lay inside the house to the left of the entrance and a couple of human bones along the back wall.

House 4 (Fig.100) is dug into the ground, no bones and no humus layer could be demonstrated. The platform edge is marked by stones.

Houses 5 and 6 (Fig.100) are two later ruins built into an earlier communal house. No objects were found in the structures, which had several layers of flagstones.

Houses 7 & 8 (Fig.100) are two later ruins built into an earlier structure which was originally a communal house. A human skull and skeletal parts were found in the southern end of house 8 in front of the platform edge. Two flagstone layers could be demonstrated in both ruins.

Houses 9 & 10 (Fig. 100) are two later ruins, house 10 being the latest extension, built in the northern part of the original house 9. A few bones were found. Two flagstone layers could be demonstrated in house 10.

House 18 (Fig.100) is a later ruin without humus layer. A grave, which terminates the settlement, was placed in the fireplace in front of the ruin and contained three human skeletons.

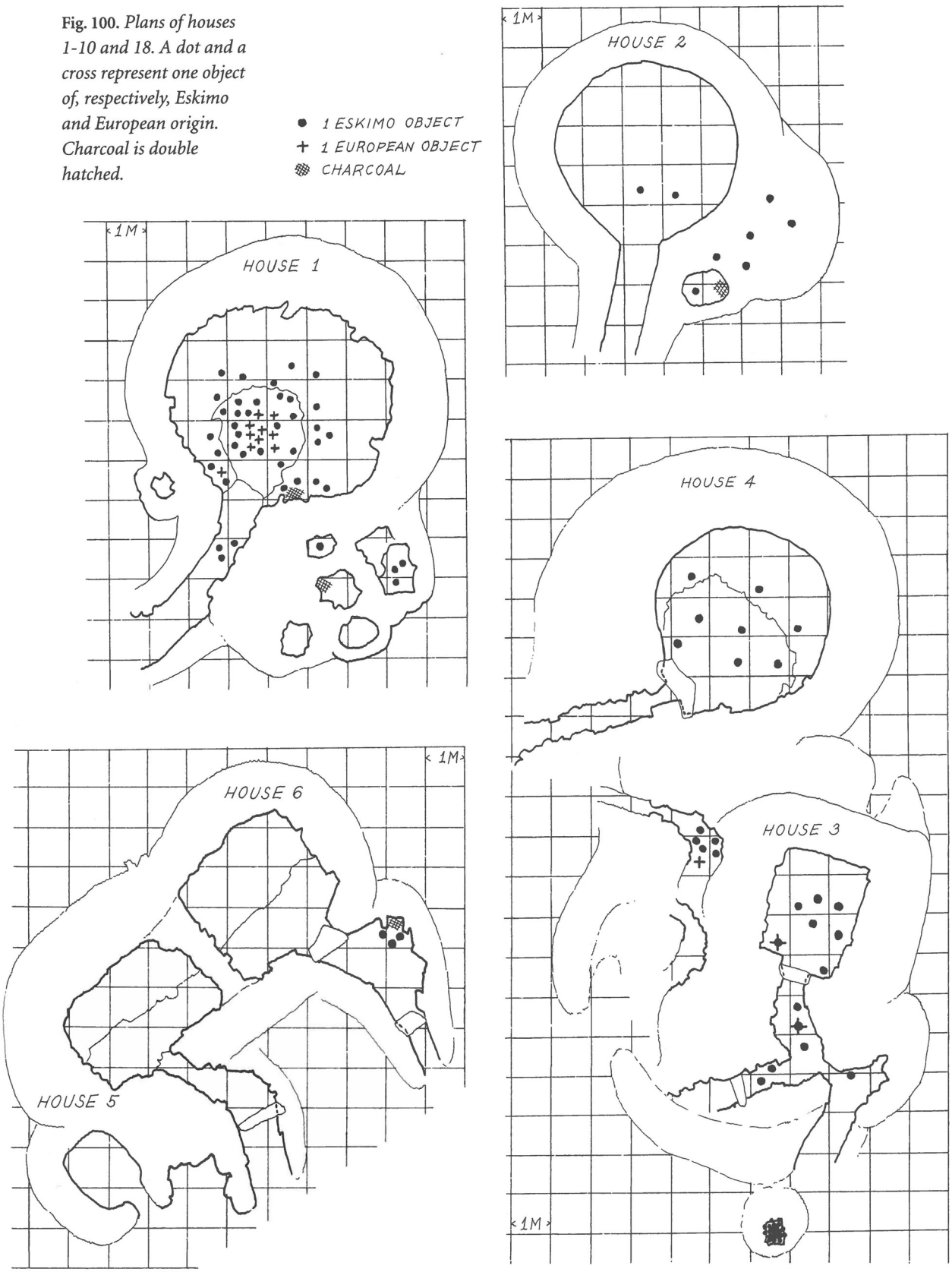
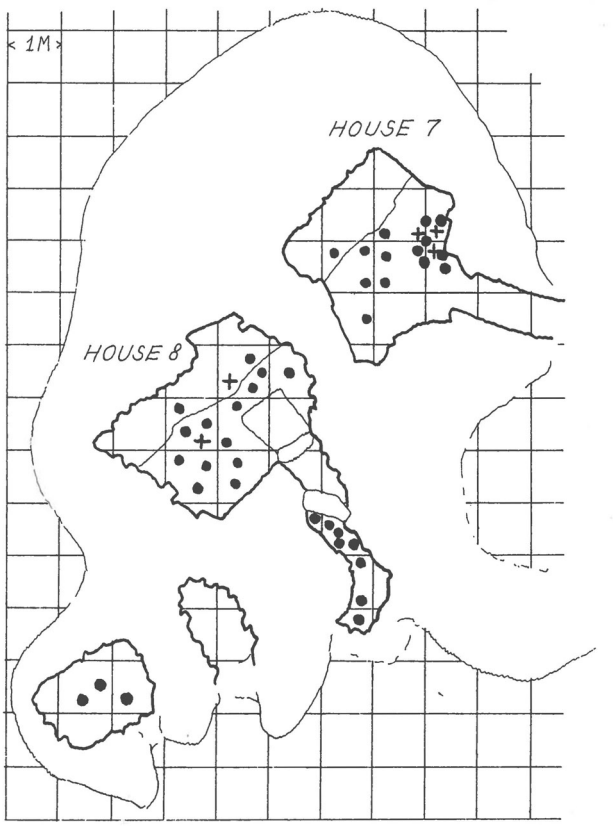
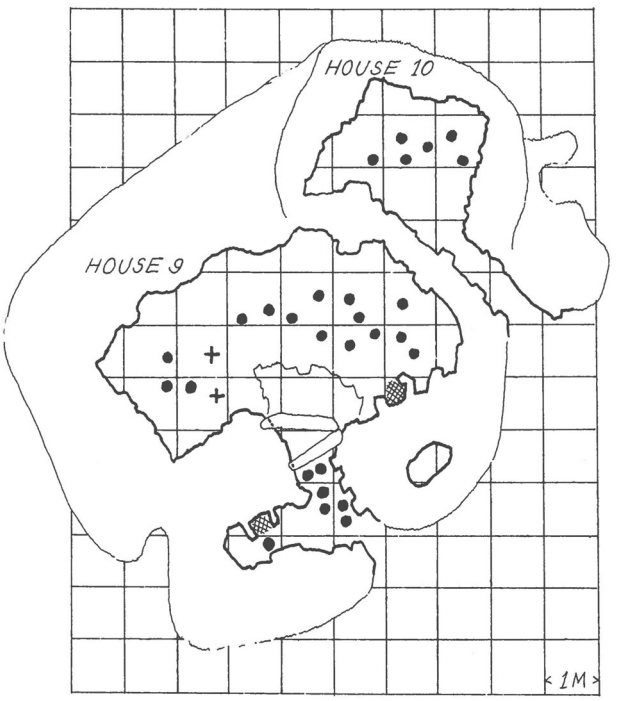
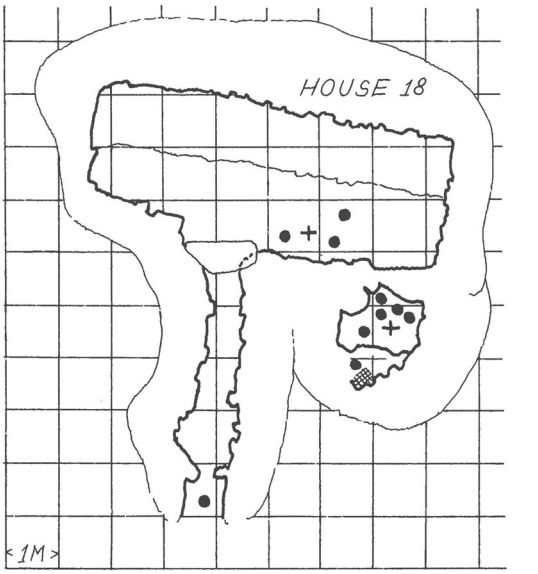


Fig. 100. *Plans of houses 1-10 and 18. A dot and a cross represent one object of, respectively, Eskimo and European origin. Charcoal is double hatched.*







QARAJAT
● 1 ESKIMO OBJECT
+ 1 EUROPEAN OBJECT
▨ CHARCOAL

The total artefact material, **L13.62-234**, was very sparse and mostly consisted of whetstones, 48 of them pumice, and soapstone cooking-pot sherds. The European objects numbered 29 pieces which, except one Norse spindle whorl, were all of post-colonial origin.

The distribution of the described find material is as follows:

	House										Midden	House	Total
	1	2	3	4	5	6	7	8	9	10	13/14	18	
Hunting equipment													
Harpoon blade	–	–	–	–	–	–	1	–	–	–	–	–	1
Bird-dart head	–	–	1	–	–	–	–	1	–	–	1	–	3
Bladder-dart head	–	–	–	–	–	–	–	–	1	–	–	–	1
Men's tools													
Whetstones	2	1	34	5	–	–	4	4	4	1	6	4	65
(of these pumice)	–	(1)	(31)	(5)	–	–	(1)	–	(2)	–	(5)	(3)	(48)
Axe blade	–	–	1	–	–	–	–	–	–	–	–	–	1
Mouthpiece for bow drill	–	–	–	–	–	–	–	–	1	–	–	–	1
Women's equipment													
Lamps	3	1	1	–	–	–	–	–	3	1	1	2	12
Ulos	–	–	2	–	–	–	–	–	–	–	–	–	2
Household utensils													
Cooking pots	33	3	3	3	–	2	6	16	9	4	3	1	83
(repair-patch)	–	(1)	–	–	–	–	–	–	–	(1)	(1)	–	(3)
(through–going suspension hole)	(6)	–	–	–	–	–	–	–	–	–	–	–	(6)
(internal suspension in bead)	(1)	–	–	(1)	–	(1)	–	(1)	(2)	(2)	–	–	(8)
(internal handle)	(2)	–	–	–	–	(1)	–	–	–	–	–	–	(3)
Personal equipment													
Mica (mirrors)	–	–	1	–	–	–	1	–	1	–	–	1	4
Toys													
Cooking pots	–	–	–	–	–	–	–	–	1	–	–	–	1
Lamps	–	–	–	–	–	–	–	–	1	–	1	–	2
Indeterminable & Divers objects													
Bone objects, various	–	1	2	–	–	–	1	4	1	–	–	1	10
Stone, indeterminable	–	–	–	–	–	–	–	1	–	–	–	–	1
Soapstone, indeterminable	–	–	–	–	–	1	–	–	–	–	–	–	1
Miscellaneous													
Asbestos	1	–	–	–	–	–	–	–	–	–	–	–	1
Bird feathers	1	–	–	–	–	–	–	–	–	–	–	–	1
Graphite	–	–	–	–	–	–	–	–	–	–	1	1	2
Palaeo-Eskimo	2	1	–	–	–	–	1	1	3	2	–	3	13
European objects													
Iron	1	–	–	–	–	–	3	–	1	–	–	–	5
(iron used as blade for knife and *ulo*)	–	–	(2)	–	–	–	(2)	–	–	–	–	–	(4)
Bricks	9	–	–	–	–	–	–	–	–	–	–	–	9
Sheet copper/brass	–	–	–	–	–	–	–	–	–	–	–	1	1
Gunflint	–	–	–	–	–	–	–	–	–	–	6	–	6
Lead bullets	–	–	–	–	–	–	–	–	1	–	–	1	2
Glass	–	–	–	–	–	–	–	1	–	–	2	–	3
Pottery	–	–	–	–	–	–	–	–	–	–	1	–	1
Glass bead	–	–	1	–	–	–	–	–	–	–	–	–	1
Norse spindle whorl	–	–	–	–	–	–	–	1	–	–	–	–	1
	52	7	46	8	0	3	17	29	27	8	22	15	234

Hunting equipment

The harpoon blade is of grey slate with two holes of the same type, shape and size as **igd 1802** of bone (Points of bone and antler, indeterminable).

The heads of bird dart and bladder dart are all well-known types and also found at Illorpaat. Only the rear ends are preserved. The tangs are conical, except on one bird dart which has screw thread. The materials are antler, walrus penis-bone and whale bone.

Men's tools

The whetstones are mostly pumice, 28 pieces of which were found in the cache in front of house 3. Four whetstones were of igaliko sandstone, one of which was found in house 1, two in house 8 and one in house 10. The remainder were of local rocks, mostly amphibolite.

The axe blade was of stone and for setting in an adze head.

The mouthpiece for bow drill is of seal bone with a biting-groove and thus corresponds to Illorpaat.

Women's equipment

The lamps were all crescent-shaped and seven pieces had dividing ridge. A lamp with a high dividing ridge came from house 1, a 510 mm-long lamp from house 2 and two fragments from house 18. The type thus does not differ from Kangeq, Illorpaat and Itissaalik.

The *ulos* were both found in house 3 and in its associated house passage. It is the sailmaker type, of iron, which is known from the outer coast (Gulløv & Kapel 1979: 125). The *ulo* from the inside of house 3 is hafted with a wooden handle.

Household utensils

Soapstone cooking-pot sherds are demonstrated in all the examined structures, except house 5. The most common suspension type is shaped as an internal bead with a hole. The type with direct piercing of the rim from outside in predominates among the pieces from house 1. The internal handle found in three specimens is not a normal Eskimo construction, but it is found in the Norse find material (*cf.* Roussell 1936: 198; Nørlund & Stenberger 1934: 122). Is known from Illorpaat, *cf.* **igd 3201**. The three repair-pieces, i.e. repair-patches, are also found in Norse contexts (*cf.* Roussell 1941: 255; Nørlund & Stenberger 1934: 124).

Personal equipment

Mica occurs locally and was used for mirrors. Also found in Kangeq for the same purpose.

Toys

The cooking pot has four through-going suspension holes, as was also found in Illorpaat.

The lamps are fragmented and one has the dividing ridge placed close to the front edge. The type is also found in double the size in Kangeq, **L13.3283** (Women's equipment).

Indeterminable & Divers objects

The bone and antler objects are six pieces of antler with cutting marks and four pieces of whale bone, one of them is pierced and the others are wedge-shaped.

One piece of semispherical, black rock with a hole at the top cannot be identified further (button?).

A disc-shaped piece of soapstone with hollowing on both sides has been a preparatory work for an unidentified object.

Miscellaneous

A small piece of asbestos, fashioned into a point at one end. The material is demonstrated on the outer coast, but only for use as wick trimmers.

A bunch of bird feathers was found in the middle of house 1 in front of the platform edge.

Graphite was found in two places, but its cultural significance cannot be determined.

Palaeo-Eskimo objects were found in seven structures, but in a very small numbers. A scraper and a flake of quartz in house 1; a coarsely worked piece of green-striped chalcedony (?) or quartzite in house 2; a flake of greenish quartzite in house 7; a flake of siliceous slate in house 8; a flake and a micro-core of quartz and a piece of green quartzite in house 9; a flake of siliceous slate with retouch and a flake of green-striped quartzite in house 10; two scrapers, one of quartz and one of green quartzite, and a weapon blade of siliceous slate in house 18.

European objects

Iron was found in *ulo* blades and presumably also two knife blades (in house 7). In addition a *c.* 70 mm-long rod with a central rivet head was found inside house 1 to the left of the door. A short hoop with a flat, round head at one end and a square nut at the other was found in house 7 together with the two presumed knife blades. In house 9 there was a corroded lump of iron.

Nine pieces of fired, yellow brick were found on the latest flagstone floor in house 1. Correspond to type I from Hope Colony (*cf.* Gulløv & Kapel 1979: 82), which was also found at Illorpaat and Itissaalik.

A fragment of a copper blade with a hole at one end.

Six pieces gunflint, origin not identified but gunflint was found on the outer coast in the second half of the 18th century.

Lead bullets have also been demonstrated on the outer coast in the same context as gunflint.

Glass was represented by a small piece of smoke-coloured sherd in house 8 and two pieces of very curved sherds with bluish and brownish sheen, presumably from bottles, both found in the midden in front of house 13/14.

Pottery occurs in the form of 12 pieces of an earthenware brown-glazed dish with yellow and green lines, found in the midden in front of house 13/14.

A light blue, faceted, wire-wound glass bead in the isolated house passage west of house 3.

A Norse soapstone spindle whorl was found in house 8.

Chronology

Qarajat has been mentioned in the Godthåb church registers since 1733 (Knuth 1945) and can be followed throughout the 19th century until the last family moved away in 1905, i.e. houses 15 and 16 (Gulløv 1983: 29).

The dug-down houses, 1, 2 and 4, are the earliest. The pierced rims of the cooking

pots in house 1 is an old feature (Mathiassen 1931: 100), but the structure can be seen to have been inhabited up to as late as the 18th century, judging from the find of brick fragments on the latest floor layer. The internal handles might indicate knowledge of Norse technique. These houses all lay on the east side of the river. House 3 on the other hand is probably not very old judging by the find material, but is apparently built in an earlier house, which presumably had a circular ground plan, remnants of which can still be seen.

The investigated structures along the west side of the river are all originally communal houses, which must have been rebuilt into smaller houses in the 19th century. The find material supports this interpretation. Both internal handles and repair-patches of possible Norse origin were found here, which might indicate that the Norse settlements inside the fjords were visited and investigated in later times. Such a visit is historically documented to have taken place in the mid-17th century (*cf.* Bobé 1916: 232).

It thus appears that we can establish that the settlement at Qarajat moved across to the west side of the river some time in the first half of the 18th century. Greenlandic tradition relates (Rink 1871: 93-95) that revenge killing at that time wiped out the Qarajat population, an event which would necessitate that the settlement be moved, provided that it were to be re-established in the neighbourhood (Gulløv 1988: 194).

The find material from Qeqertat Timerliit Illue

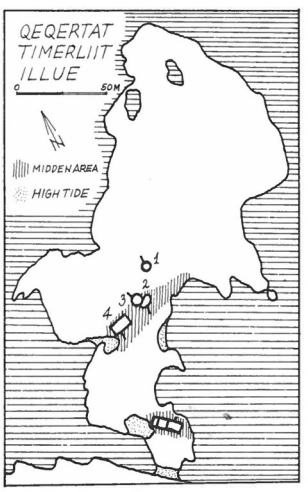


Fig. 101. *Survey of Qeqertat Timerliit Illue with the examined ruins 1-4 and the other complexes marked.*

On an island at the north side of the mouth of Buksefjord, Kangerluarsunnquaq, immediately to the west of the Utoqqarmiut settlement, lies the settlement of Qeqertat Timerliit Illue, i.e. the houses on the islands nearest the coast (Gulløv 1983: 21-22). There are two complexes of ruins there, with visible and primarily recent structures (Fig.101). The northern of the two, was archaeologically examined in 1945 and the whole island was measured then (Knuth 1945).

Apart from the most northerly house which lay isolated, the individual structures were difficult to discern, as several and later structures, mainly tent rings, were lying close together in the dense and vigorous vegetation of lyme grass (Fig.102). One exception was the communal house (house 4), whose midden also contained the largest number of artefacts.

House 1 (Fig. 102) is dug down; wood shavings filled the deepest and central part of the interior and there was only a thin layer of humus on the ruin's single, flagstone floor. No bones.

House 2 (Fig. 102) was built early on the site, judging by the surrounding high wall remains of later buildings. A cache seems to have been built into the north wall of the ruin at a later date, so that the house's original form appears to have changed. Only one layer of flagstones was found inside the house on which lay a human skull without skeletal parts. Only a few bones elsewhere. In the house passage under later walls, a fireplace of house 2 with few artefacts was uncovered.

House 3 (Fig. 102) appeared as a circular structure, somewhat disturbed by later constructions. No bones. Interpreted by Knuth as a possible feasting house, *i.e. qassi* (Gulløv 1988: 186).

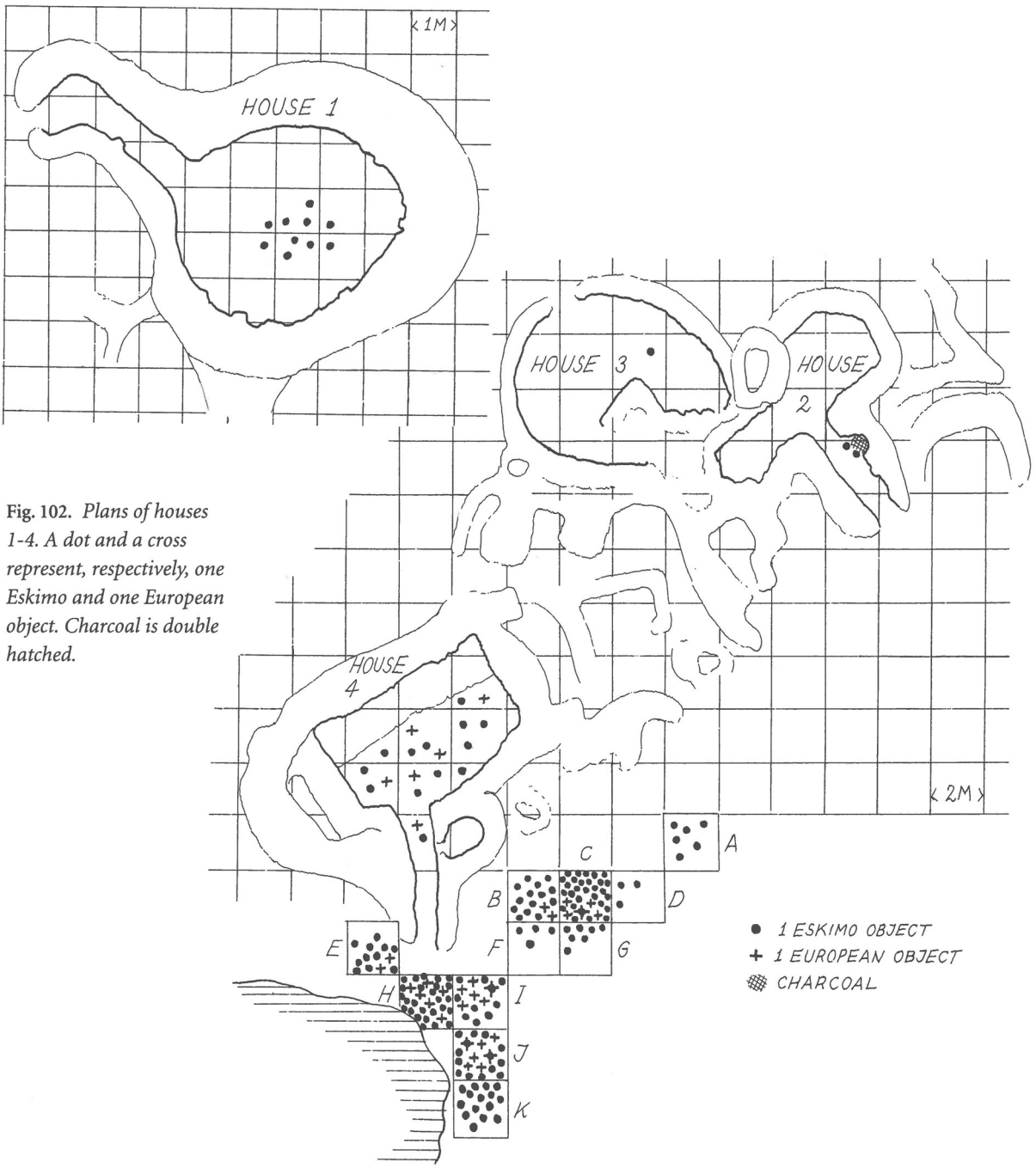


Fig. 102. *Plans of houses 1-4. A dot and a cross represent, respectively, one Eskimo and one European object. Charcoal is double hatched.*

House 4 (Fig. 102) is a communal house, originally 9 m long but subsequently shortened. A layer of flagstones was uncovered and a clear platform construction could be demonstrated. A possible fireplace was found in the house passage, not excavated. 24 m2 midden was excavated in front of the ruin. No bones were recorded.

Only a few artefacts were found in the ruins and by far the majority were excavated from the midden in front of house 4. The European find material was exclusively of post-colonial origin. **L13.241-431.**

The distribution of the described find material is as follows:

	House				Midden in front of house 4											Total
	1	2	3	4	A	B	C	D	E	F	G	H	I	J	K	
Hunting equipment																
Harpoon foreshafts	–	–	–	2	–	1	–	–	1	–	–	–	–	–	–	4
Harpoon blade	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1
Bird-dart head	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1
Nozzle-fitting for bladder dart	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1
Ferrules	–	–	–	–	–	1	–	–	–	–	–	–	1	–	–	1
Weapon head	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Side prongs for bird darts	–	–	–	–	–	–	2	–	–	–	–	2	–	–	1	5
Throwing–board pegs	–	–	–	–	–	–	2	–	–	–	–	–	–	–	–	2
Bladder nozzle	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Line accessory	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1
Towing tackle	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1
Arrow heads	–	–	–	–	–	–	–	–	–	–	–	1	–	1	1	3
Fishing equipment																
Barb for hook	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1
Sinker	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1
Side prongs for leister	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	2
Transport																
Paddle mounts	–	–	–	–	–	1	–	–	1	–	–	–	–	–	1	3
Men's tools																
Whetstones	1	–	–	2	–	–	–	–	1	–	–	–	–	–	–	4
Knives	–	–	–	–	–	–	1	1	–	1	–	1	–	–	1	5
Drill handle	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Mouthpiece for bow drill	–	–	–	–	–	1	–	–	–	–	–	1	–	–	–	2
Wedge	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1
Women's equipment																
Ulos	–	–	–	–	–	–	–	–	1	–	–	1	–	–	–	2
Lamp	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1
Thimble holder	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1
Bodkin	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1
Plugs	6	–	–	–	1	1	–	–	1	1	–	–	–	–	1	11
Household utensils																
Scoops & Spoons	1	–	–	–	–	1	–	–	–	–	1	–	–	–	–	3
Bowl	–	–	–	–	–	1	–	–	–	–	–	–	–	–	–	1
Cooking pots	2	2	–	7	3	3	–	–	–	–	–	–	1	–	1	19
Personal equipment																
Tooth bead	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1
Mica (mirrors)	–	–	–	–	–	–	–	–	1	–	–	4	–	–	–	5
Religious object																
Drum handle	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Toys																
Lamps	–	–	–	–	–	–	1	–	–	–	–	1	–	–	–	2
Cooking pot	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1

	House				Midden in front of house 4											Total
	1	2	3	4	A	B	C	D	E	F	G	H	I	J	K	
Indeterminable & Divers objects																
Soapstone, indeterminable	–	–	–	–	–	–	1	–	–	–	–	1	–	–	–	2
Strips & Mounts	–	–	–	–	–	1	11	–	1	–	4	2	1	2	5	27
Bone and antler objects, various	–	–	1	–	–	2	4	1	1	2	1	11	3	7	4	37
Wooden objects, various	–	–	–	–	1	–	1	–	3	–	–	–	1	–	–	6
Miscellaneous																
Asbestos	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1
European objects																
Iron	–	–	–	1	–	–	–	–	1	–	–	–	1	1	–	4
(iron used as knife blades etc.)	–	–	–	–	–	–	(1)	–	–	–	–	–	(1)	(2)	–	(4)
Sheet copper/brass	–	–	–	2	–	–	–	–	–	–	–	–	–	–	–	2
Glass	–	–	–	1	–	2	1	–	–	–	–	1	–	–	–	5
Pottery	–	–	–	–	–	–	2	–	–	–	–	–	4	1	–	7
Clay pipes	–	–	–	1	–	–	–	–	–	–	–	–	–	1	–	2
Glass beads	–	–	–	1	–	–	1	–	1	–	–	5	–	2	–	10
	10	2	1	19	6	16	33	3	13	4	7	32	15	19	15	195

Hunting equipment

The harpoon foreshafts are all of antler, they have a knob at the end and up to four line holes. Also found at Illorpaat, but only with up to three holes.

The harpoon blade is of antler, broken, has a preserved hole and sharpened edge. Corresponds to **igd 1802** (Points of bone and antler, indeterminable).

The bird-dart head is of antler, broken, only the rear end with screw thread is preserved. Also found at Illorpaat.

The nozzle fitting of antler also occurred at Illorpaat, *cf.* **igd 3636.** This specimen is complete with seven lashing holes.

The ferrules or socket pieces are of antler and correspond to Illorpaat. The example from field I has iron rivets for fastening it round the wooden shaft, on the same principle as **L13.3456** from Kangeq.

The weapon head cannot be identified further, but it has split along the furrow in which an iron blade had been placed.

The side prongs for bird darts are of antler and have one or two barbs. One specimen has holes for position-lashing. The types do not differ from Illorpaat.

The throwing-board pegs are of antler and were also found at Illorpaat.

The bladder nozzle is of soapstone (!) with a beautifully carved circular bead and eight transverse holes. Has not before been found archaeologically in Godthåb District.

The line accessory is an antler shaft-fitting, *cf.* **igd 3398.**

The towing tackle is an antler line-fitting with toggle function, it has two holes, *cf.* **igd 3302** and **3459.**

The antler arrow-heads are broken. A rear end with screw thread and a front end with barb are preserved. Do not differ from the types on the outer coast.

Fishing equipment

The barb for a fish hook is of antler and is also found at Illorpaat.

A soapstone sinker with one hole is broken. Corresponds to the examples from Illorpaat which have been fastened to the shank of the jig.

The side prongs for the leister are of antler and have, respectively, one and four barbs.

Transport

The paddle mounts are of antler and whale bone, broken. The two antler mounts each have two rivets *in situ*. The type is also found on the outer coast.

Men's tools

The whetstones are two pieces of pumice (from house 4) and local rocks.

The knife handles are all of antler. Two have a suspension hole (fields D and K). One has a lashing bead by the blade slit and has longitudinal groove ornament (field D). One knife has a greatly corroded iron blade (field C, deep down). All are endhafted. The types are also found on the outer coast.

The drill handle is of antler and has had an iron bit. Also found on the outer coast.

The mouthpieces for bow drills are of antler. One has a suspension hole (field B). Suspension holes in mouthpieces are not found on the outer coast.

The wedge is of antler. Has been interpreted by Knuth as an ice pick.

Women's equipment

The *ulos* are represented by an antler handle from a sailmaker's knife and are as such well known on the outer coast.

Only one, coarsely worked, soapstone lamp-sherd with dividing ridge was found.

A thimble holder of antler had one prong missing. The same type as those known from other localities along the west coast (cf. Mathiassen 1931: pl.4(5)).

Bodkin of antler with a large eye.

The plugs vary in length and have circular to oval cross section.

Household utensils

The group of scoops and spoons consisted of one scoop handle of wood (house 1), a fragment of a wooden scoop (field B) and a spoon fashioned from a seal skull (field G).

Bowls are represented by a small wooden bottom of a beaker.

The cooking-pot fragments consist of rim and bottom sherds without any further characteristics. An example of internal suspension from a bead was found in house 2.

Personal equipment

A bead of a pierced tooth from harp seal.

Mica is known locally and is used for mirrors in the Kangeq find material.

Religious object

A drum handle of antler with a rivet *in situ*.

Toys

The lamps are both without dividing ridge and with dividing ridge along the rear edge.

The cooking pot is oval without any further characteristics.

Indeterminable & Divers objects

The soapstone pieces are shaped but without any identifiable form.

The strips and mounts mostly have holes. 24 pieces are of antler and the rest of whale bone.

Most of the bone and antler objects have been made pointed and may thus have been intended as weapon points. A few of the pieces in this group may be knife handles, judging by the incision at the end (for a blade?). 31 were of antler and the rest of whale bone.

The wooden objects had cutting marks, a few were pierced.

Miscellaneous

Asbestos occurred in the form of a rod. The material is known locally.

European objects

Besides being used for blades or rivets, iron occurred in the form of nails (house 4 and field E), a plate (field I) and scissors: one arm with the remains of a loop (field J).

Sheet copper and sheet brass were represented by five fragments from one and the same thin-walled tub and by a skin-lined thimble (*cf.* Gulløv & Kapel 1979: 189).

The glass sherds came from green bottles, which are known from the time of the earliest colonization (Gulløv & Kapel 1979: 78-81).

The pottery sherds were of red ware with yellow-brown glaze (fields I and J) and white faience with yellow glaze (field C).

The clay-pipe fragments were parts of stem, but cannot be identified further.

The glass beads are drawn (one each in fields C, E and J and three in field H) and wire-wound (one each in house 4 and field J and two in field H). Large, matt white, blue "raspberry" and regular tubular beads were found.

Chronology

No specific objects have been decisive for determining the lower chronological limit of the settlement. Houses 1, 2 and 3 must, however, be presumed to be the earliest. The find material from house 4 and its midden points towards a comparatively late period, which, apart from the hafted knife from field C, must be placed in the first half of the 19th century. The knife, which presumbly comes from the original communal house, is dated to the 18th century.

The find material from Erssaa

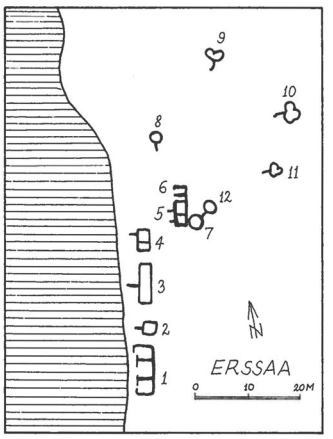


Fig. 103. *Survey of Erssaa. The earliest houses (7-12) lie some way off the coast. The later houses (1-6) lie along the coast. House 1 is being heavily eroded.*

On the south-western tip of Sadelø (Sermitsiaq), 10 km north of Godthåb, lies the settlement of Erssaa, i.e. its cheek (Gulløv 1983: 60-63). Three of the 12 recorded winter-houses were examined archaeologically in 1952 and the whole of the site was measured (Meldgaard 1952; Nellemann 1952).

The late and latest ruins with square and rectangular ground plans lie close to the coastline and are partly eroded by the sea (Fig. 103). The earliest ruins with circular and rounded ground plans lie in a semicircle around a depression in the terrain. Parts of later structures 5 and 6 are built on top of structure 7.

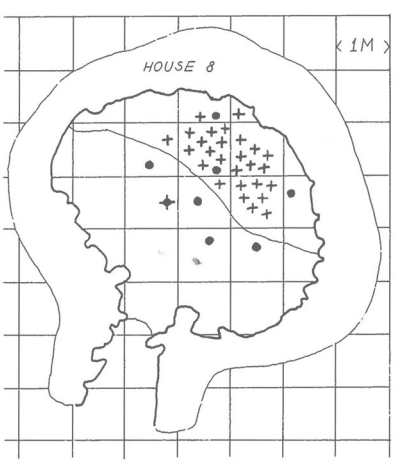
House 8 (Fig. 104) is dug down and a tent ring of a slightly later date was demonstrated inside the ruin, though clearly divided from it by a layer of dark humus. The recorded artefacts were found on and below the flagstone floor of the original house.

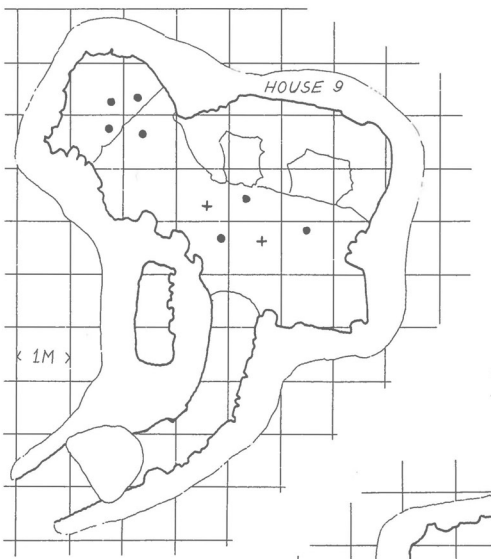
House 9 (Fig. 104) is a dug-down double house with side platform and with a hollow space beneath the main platform. On the side platform there were the remains of a caribou skin and a human skeleton. A lintel was found *in situ* in the house passage. In the cache to the west was the jawbone of a caribou. Flagstones lay scattered on the floor and on the main platform. Only one construction phase could be identified.

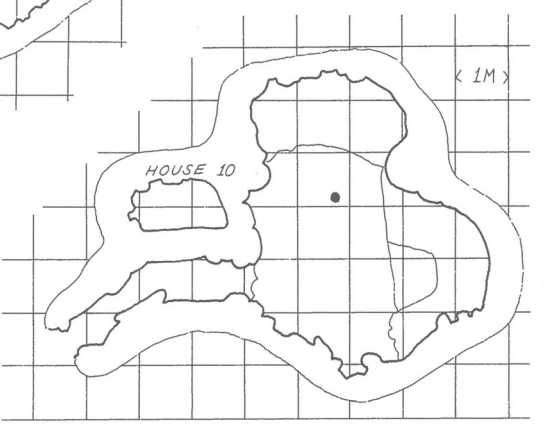
House 10 (Fig. 104) is a dug-down double house of the same type as the previous one. Flagstones were only found on the platforms and in the cache. No bones.

The artefacts were sparse and the European objects can all be dated to the time around the colonization, i.e. the first quarter of the 18th century.

Fig. 104. *Plans of houses 8-10. A dot and a cross represent, respectively one Eskimo and one European object.*







● 1 ESKIMO OBJECT
+ 1 EUROPEAN OBJECT

The distribution of the described find material is as follows:

	House 8	House 9	House 10	Total
Men's tools				
Whetstones	2	1	1	4
Women's equipment				
Ulos	1	2	–	3
Lamp	–	1	–	1
Household utensils				
Bowl	–	1	–	1
Cooking pots	5	–	–	5
Indeterminable & Divers objects				
Soapstone, indeterminable	–	2	–	2
Miscellaneous				
Palaeo–Eskimo	2	–	–	2
European objects				
Iron	(1)	–	–	(1)
Clay pipe	1	–	–	1
Glass beads	26	2	–	28
	37	9	1	47

Men's tools

The whetstones are of (local?) sandstone, and one of them has a suspension hole (house 8); of red igaliko sandstone(?) (house 9) and of the local amphibolite (house 10).

Women's equipment

The *ulo* is represented by a sailmaker's knife with tang, as is known from the earliest time of contact (*cf.* Gulløv & Kapel 1979: 125) and by two handles.

The lamp is a small crescent-shaped type without any further characteristics.

Household utensils

Bowls were represented by an oval bottom and a fragment of the rim from the same vessel made from one piece of wood. Known from Illorpaat, *cf.* **igd 3934**.

The cooking-pot fragments had internal suspension from bead.

Indeterminable & Divers objects

Two pieces of soapstone of unknown function. One is 50 mm long with a square cross section, the other is 30 × 70 mm, polished smooth on one side, where an H-shaped figure had been scratched.

Miscellaneous

Two flakes of quartz are identified as palaeo-Eskimo waste.

European objects

Iron only occurred in association with *ulos*.

A 30 mm-long stem of an undecorated clay pipe was found, but no further identification has been attempted.

The glass beads consisted of 21 drawn and 7 wire-wound beads. All types are represented at Illorpaat and Itissaalik and can – with the exception of one specimen of type **IIA**7 – be identified as Amsterdam variants. The drawn beads are all small and in blue, green and white colours. The wire-wound are faceted with blue and amber-yellow colours or disc-shaped to spherical in dark red, clear and black colours. The earliest types at Illorpaat are found here too in types **IIA**1, **IIA**4, **IIA**7, **WIA**4 and **WIIA**2, which comprise 24 beads. The other types are **WIB**1 and **WIIA**3, which comprise 4 beads. The two beads from house 9 are both of type **WIIA**2.

Chronology

Houses 1-6 are the latest on Erssaa and can be dated to the 18th century (Egede 1925: 232) and later, judging by the rebuilding of the communal houses. The only original communal house is house 3, which has a cooking niche in the house passage (Gulløv 1983: 61), as is also known at Itissaalik.

Houses 7-12 are the earliest and are of a completely different shape to the later group. The find material does not allow for the setting of a lower time limit. On the other hand, the European object material proves that there must still have been a settlement in the 18th century. This has to be the case for house 8, while there is some uncertainty about the upper dating of house 9, since the two glass beads were found when the heather-turf, which covered the ruins prior to excavation, was taken up. The vegetation, however, showed no signs of later disturbance and the house itself only had one habitation phase, so we must presume that the beads from the turf roots originally lay on the flagstones. The constructions of houses 9 and 10 have obvious features in common, which place them typologically in the same period.

But there was most likely also a settlement here in the 17th century. David Danell, on his third visit to Greenland, came some way into Baal's Revier, as the Godthåb Fjord was then called; but he did not find anchorage because of the ice and had to set out to sea again (Bobé 1916: 228). He took four Greenlanders with him, whose friends and relations were still alive in 1722, as Hans Egede was told by two Greenlanders who lived inside the fjord (1925: 60). The only places which lie some way inside the fjord and where unmistakeable 17th-century ruins are recorded are Qeqertat by Saarloq and Erssaa. Only Erssaa, however, has been examined archaeologically.

The upper time limit for the end of the settlement in the earliest group must be set at 1733-34, when a smallpox epidemic raged in Godthåb District. The only winter settlement on Sadelø at that time was stricken by the disease on 14th February 1734 (Egede 1925: 280). The find of the human skeleton on the side platform in house 9 has been connected with this epidemic. The majority of the glass beads found at Erssaa, of the same types as those found at Illorpaat houses I-II, support this comparatively late dating.

After the smallpox epidemic, the communal house became the preferred form of dwelling at Erssaa. Egede, however, mentions in 1730 that there were two houses with 14 families (i.e. 84 persons) at Sermitsiaq (1925: 232). The communal house was in earlier use on the outer coast, e.g. Illorpaat 3, house I and Illorpaat 9, so investigations at Erssaa have demonstrated that two completely different dwelling types were in use at the same time in the 18th century.

The find material from Qoornoq

Qoornoq (i.e. the narrowing) lies half way into Godthåb Fjord by the north-easterly part of Bjørneø, Qoornup Qeqertarsua. The locality is rich in palaeo-Eskimo, Norse and neo-Eskimo structures. In the middle of the village of Qoornoq (abandoned 1972) lies a low, grass-covered mound, which at an archaeological investigation was identified as a *c.* 40 × 20 m Norse farm, the most westerly farm of the Western Settlement (Meldgaard 1952; Nellemann 1952).

Seven Eskimo winter-houses have been built in this structure (Fig. 105) and three of them were excavated in 1952. On the same occasion a small excavation was carried out in yet another ruin and a part of the midden was examined (Gulløv 1983: 47-48).

House 1 (Fig. 106) is a dug-down, rounded house whose form has partly been determined by the adjoining walls of the Norse house. There was the course of a platform to the east of the sunken house passage. One layer of flagstones could be demonstrated.

House 2 is a tent ring constructed of turf and lying outside the Norse farm. It is not included in the following.

House 3 (Fig. 106) is a dug-down, partly oval house, which to some extent follows the walls of the Norse house. Courses of platforms could be seen at both ends, but not along the back wall. The house passage is sunken. One layer of flagstones was demonstrated. On the platform in the south-eastern part of the house lay a human skeleton.

House 4 (Fig.106) is a dug-down, circular house, which was built later than house 3, since its back wall and the east side of the sunken house passage overlies it. One flagstone layer was demonstrated.

House 5 (Fig. 105) is a dug-down house, which was only cursorily examined. Its form, however, indicates that it might be a somewhat late house.

The three other ruins are all communal houses from the latter half of the 18th century. In the southern one a cooking place was immediately demonstrated in the house passage, as is also known from Itissaalik.

The investigation of the midden produced a cow's tooth and several bones of cow and sheep (Meldgaard 1952).

The find material universally consisted of artefacts from early Thule culture without any late European objects. In addition there were a number of Norse objects, which probably came from the Norse farm. A number of soapstone sherds from houses 1, 3 and 5 were on the spot identified as Norse and left behind by the archaeologists (Nellemann 1952).

No further investigations have been made of the Norse farm itself, whose extent and general shape resembles the "centralized farm" investigated in other places in the Western Settlement (*cf.* Andreasen 1982; Roussell 1941: 172).

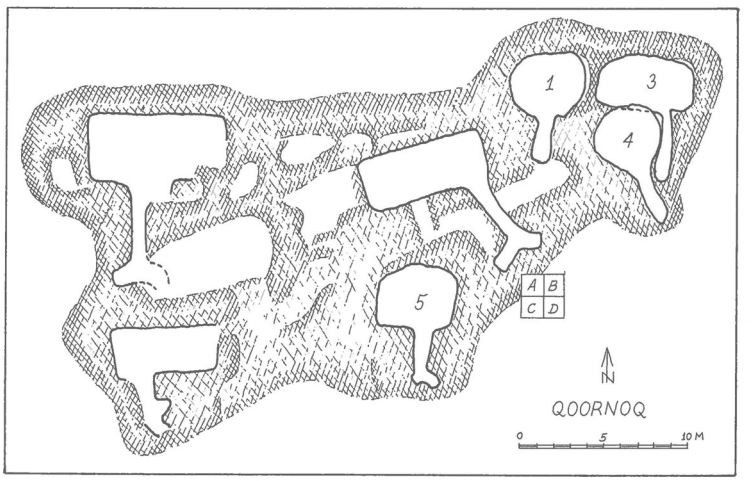


Fig. 105. *Survey of the Norse farm at Qoornoq with the built-in Eskimo winter-houses. The walls of the Norse farm are double hatched. The examined Eskimo houses are marked by numbers, the midden fields by letters.*

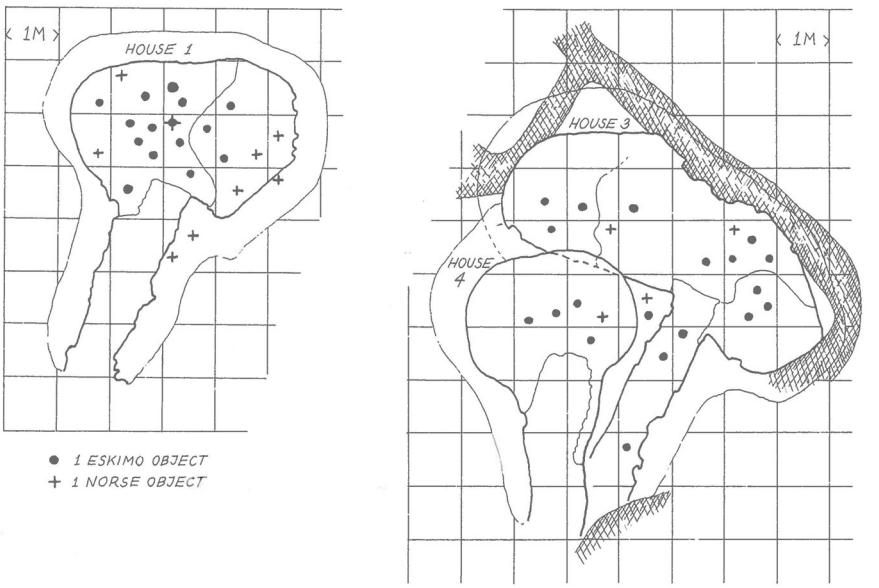


Fig. 106. *Plans of houses 1, 3 and 4. The walls of the Norse farm are double hatched. A dot and a cross represent, respectively, one Eskimo and one European object.*

The distribution of the described find material is as follows:

	House		between	House		Midden				Total
	1	3	3 & 4	4	5	A	B	C	D	
Hunting equipment										
Harpoon heads	1	–	–	–	–	–	–	–	1	2
Foreshafts	1	1	–	–	–	–	–	–	–	2
Harpoon wing	–	1	–	–	–	–	–	–	–	1
Finger rest	–	–	–	–	–	–	1	–	–	1
Side prongs for bird dart	–	–	–	–	–	–	2	–	–	2
Arrow heads	–	1	–	–	–	1	3	–	–	5
Fishing equipment										
Side prongs for leister	–	1	–	–	–	1	2	–	–	4
Transport										
Mounts for kayak deck	–	–	–	–	–	–	–	–	1	1

	House		between	House		Midden				Total
	1	3	3 & 4	4	5	A	B	C	D	
Men's tools										
Knives	–	1	–	–	–	1	2	–	1	5
Whetstones	2	1	–	–	–	–	1	–	–	4
Women's equipment										
Ulo	–	–	–	–	–	–	–	1	–	1
Bodkins	–	–	–	–	–	–	3	–	1	4
Lamps	2	1	1	–	–	–	–	–	–	4
Household utensils										
Bowl	1	–	–	–	–	–	–	–	–	1
Cooking pots	5	1	–	3	10	–	–	–	–	19
Personal equipment										
Bead	–	–	–	–	–	–	1	–	–	1
Toys										
Lamps	–	2	–	–	–	–	1	–	–	3
Cooking pots	–	1	–	1	–	1	–	–	–	3
Arrow head	–	–	–	–	–	–	1	–	–	1
Indeterminable & Divers objects										
Bone objects, various	3	3	–	–	–	1	2	–	1	10
Miscellaneous										
Palaeo-Eskimo	1	4	–	–	–	1	1	–	–	7
Norse Objects										
Tubs	6	1	–	–	–	–	–	–	–	7
Lamp	1	–	–	–	–	–	–	–	–	1
Bowl	–	1	–	–	–	–	–	–	–	1
Spindle whorls	–	–	1	1	1	–	1	–	–	4
Stone bead	1	–	–	–	–	–	–	–	–	1
Igaliko sandstone	–	–	–	–	1	–	–	–	–	1
	24	20	2	5	12	6	21	1	5	96

Hunting equipment

The two antler harpoon heads can be described as one thin, with one barb, iron point set parallel to the line hole (house 1) and one flat, without barb or point (field D). Typologically, both heads are also found among the earliest from Greenland (*cf.* Mathiassen 1931: 71-72; Jordan 1979: 161, 166).

The foreshafts are broken, have circular cross section, and the base on one head (house 1) is shaped as a truncated cone. The types are also found on the outer coast.

The harpoon wing is of antler, oval, and measures 110 × 40 mm; it has a cut at one end and three holes, one with a bone nail *in situ*. Resembles **L13.3342** from Kangeq (Toys).

The antler finger rest has four lashing holes and is also found at Illorpaat.

The side prongs for bird darts both have two barbs.

The arrow heads are of antler. The specimen from house 3 has two unilateral barbs and a blade socket set at a right angle to the barb surface; the type is not among the find material from the outer coast. The arrow heads from the midden all have a conical base, two examples have knobs for fastening, one example has a smooth conical

base and the only example with the point preserved has one barb. The types are known from the outer coast.

Fishing equipment

The side prongs for the leister are all of antler with two or three barbs. Known like this from the outer coast.

Transport

A deck mount or "decorative piece" with a hole (Meldgaard 1952) for the kayak is of antler.

Men's tools

All the knives are handles, which have had blades or other insets. The specimen from house 3 is of antler with the tip of a tooth set into the handle end. The handles from the midden are of bone or antler. One has an iron blade (Norse iron?) (field A), one of the handles from field B is ornamented with transverse lines; the specimen from field D is also ornamented and has two holes, one of which may have been for suspension. The types are known from Illorpaat, with the exception of the ornament and the inset tooth.

The whetstones are of slaty amphibolite, which is found locally immediately south of Qoornoq on the south side of Bjørnø. An igaliko sandstone from house 3 may be of Norse origin.

Women's equipment

The *ulo* is represented by a bone handle.

The bodkins are of antler with knobs at the rear end instead of grooves. One example has four opposite knobs, as was also found in Disko Bay (Mathiassen 1934: pl.7(6)), though without an eye. Two examples have an eye and the four knobs placed on one side only. One has a human figure carved at the end, which is known from Ammassalik and elsewhere (Mathiassen 1933: pl.10(2,3)).

The lamps are – apart from small crescent-shaped lamp from the area between houses 3 and 4 – all very large and crescent-shaped with high dividing ridge and a wick ledge. They thus correspond to the large lamp **L13.3429** at the bottom of the Kangeq midden, except for its hole through the dividing ridge. The lengths are *c.* 350 mm.

Household utensils

An oval soapstone bowl measures 100 × 80 mm and the sides are 50 mm high.

The cooking pots are all very fragmented; a few large rim sherds are preserved, one of them with internal handle from house 5 corresponds to **igd 3201** from Illorpaat. Several fragments have repair-holes for lashing together, while nothing can be said about the suspension type. Several sherds from houses 1 and 3 were not brought back.

Personal equipment

A soapstone bead, double cone, corresponds to **igd 298** from Illorpaat.

Toys

The toy lamps are crescent-shaped with dividing ridge (house 3) or without (field B).

The cooking pots are very small and do not differ from the smallest specimens at Illorpaat.

A small piece of antler, 610 mm long, cut to a point at both ends is interpreted as a toy arrow-head.

Indeterminable & Divers objects

All the indeterminable objects of bone and antler must be described as preparatory work. They are all small pieces with cut notches or sharpened ends.

In the midden there were "many bird bones in bird bones throughout the layer from top to bottom" (Meldgaard 1952). They are not included in the total count, but six pieces were brought back. It has not been possible to explain the function of these objects. Use as a "plunger" for pushing marrow out has been suggested (Grønnow & Meldgaard 1988: 421). The pieces may also have been used as blow-pipes or other toys, but there is no documentation for this. These bird bones in bird bones are widespread in time and space and are found throughout the Eskimo Arctic. The pieces have thus been demonstrated in the Saqqaq culture (Grønnow & Meldgaard, *op.cit.*), the Ipiutak culture (Larsen & Rainey 1948: pl.27(21)) and the Thule culture (Collins 1952: 61; Mathiassen 1931: pl.6(12)).

Miscellaneous

The palaeo-Eskimo objects are three quartz flakes, two quartzite flakes, one siliceous slate flake and a quartzite convex side-scraper.

Norse objects

Iron occurs in the form of a harpoon blade (house 1) and a knife blade (field A), but they have not been analysed and their Norse origin has therefore not been established. The find of the objects in the former Norse farm however indicates that Norse iron may well have been used.

The Norse cooking pots are represented by coarse fragments of rims and sides; both thin and thick pieces occur. A characteristic feature of these is the decoration, which consists of two furrows encircling the outside of the rim. Internal suspension holes occur. These features are also found in those Norse farms which have been examined archaeologically (*cf.* Nørlund 1929: 151; Roussell 1936: 198).

A soapstone block with a depression has been interpreted as a Norse lamp. Similar finds were made in the Norse Western Settlement (*cf.* Roussell 1936: 141).

A small soapstone bowl, 65 × 55 mm and 25 mm high. In the bottom there is a mark from it having been carved from a larger block.

The spindle whorls are all of soapstone; one has been ornamented with dots, as is also known from the Western Settlement (*cf.* Roussell 1936: 133).

A stone bead, 20 mm in diameter, was found in loose turf in the fill around the house passage and has no certain connection with house 1. Has been interpreted as Norse work (Nellemann 1952).

A large block of Igaliko sandstone presumably came from the Norse farm.

Chronology

The three communal houses are the latest, their cooking niches in the house passage pointing to the later half of the 18th century. In the 1770s Eigil Thorhallesen told about Qoornoq that many people lived there and lived well (1914: 45).

Among the examined ruins, houses 1 and 3 must be considered the earliest because of the harpoon head from house 1 and the partial location of house 3 below house 4. Nothing can be deduced from the shapes of the houses, since their walls to some

extent follow the rooms in the Norse farm. House 4 must be presumed built in the same period as the two previous ones. Nothing can be said about house 5, though the cooking-pot fragment with large internal handles is also found at Illorpaat, **igd 3201**, and at Qarajat houses 1 and 6, but there only as a type and not of the same size; in the former place in a 15th-16th century context, in the latter in an 18th century context. The comparison with Qarajat, however, is probably not relevant, if only for the reason that no objects relating to the Dutch whalers nor to the Dano-Norwegian colonists have been found in the investigated ruins and midden section in Qoornoq.

A lower date limit cannot be set for this fjord settlement. Though it must be presumed that it is close to the earliest date of the winter settlement at Kangeq, i.e. the 14th-15th century. It seems that there were people in this place in the 16th century too, but we cannot establish whether they lived there or only dug in the abandoned Norse farm. During the 18th century there was again settlement. A similar exploitation of a Norse farm – not investigated archaeologically – is recorded at Pisissarfik Mountain a few kilometres east of Uummannaq Island (Gulløv 1983: 156-157).

The find material from other examined sites

In 1874 the printer Lars Møller excavated at Kangeq and at Illorpaat and Illutalissuaq. The last place lies out on the Kook Islands south of the other two (Gulløv 1983: 126-127). The purpose of excavating these three sites was to examine the character of the kitchen middens in Greenland and compare their stratigraphy with the Danish kitchen middens.

The project was set up by the zoologist, Professor Japetus Steenstrup, who wished to use the results of these excavations in support of his theory that the kitchen midden is a timeless, universal phenomenon. A few years earlier, in 1871, the commercial assistant Carl Fleischer from Jakobshavn had examined the midden a Qajaa, also at the request of Japetus Steenstrup (Meldgaard 1983: 84). The artefacts collected cannot today be assigned to the individual excavations and **L2.355-389** are recorded in the National Museum of Denmark's registers under the general term "Kangeq". Lars Møller's report is at the Zoological Museum in Copenhagen.

There have been investigations or minor excavations at another eight localities in connection with the National Museum of Denmark's Archaeological Surveys of Greenland in 1945, 1952 and 1975 and the National Museum of Greenland's excavations in 1976, 1977 and 1983.

Aligortooq

The site, whose name means "which has many rock crystals", lies a few kilometres north-west of Qarajat (Gulløv 1983: 20, 29). It has been described as "a large settlement almost as big as Qarajat [...] protected by low islands in front [...] furthest east is an old-looking house with crowberry and a little lyme grass [...] house passage in the centre of the house" (Knuth 1945a: 37). The ruin was excavated in 1945 and in the eastern side room a fragment of a lamp with dividing ridge and a whetstone were found (**L13.235-236**); in the side room east of the house passage (cooking place?) there were two soapstone sherds (**L13.237a,b**); in the house passage there was a larger fragment of a lamp with dividing ridge and three lashing holes (231 mm along the

front edge), a rim sherd from a soapstone cooking pot, and a sopstone sherd (**L13.238-240**). There are no measurements of this ruin, which according to the description resembles the double houses at Erssaa "...thereafter some large complexes, which have had many buildings on top of each other until quite late in time. Behind the first complex lay two very small, round houses, one of which had heather on the walls. The most westerly of these was excavated, but no finds were made. Behind the other complex lay an apparently larger, round house with very broad and obliterated walls" (Knuth, *ibid.*). Knuth relates that he bought a lamp with traces of a row of knobs at the wick ledge, which came from this settlement (1945a: 7).

Illunnguit

Illunnguit, which means "the small houses", is a small settlement opposite Qoornoq on the west side of Storø, Qeqertarsuaq (Gulløv 1983: 45-46). Trial excavations were carried out by Nellemann (1952). A circular house was totally excavated and had a few flagstones, but nothing else was found.

Kanajutsiaat

The site, whose name means "the rather large sea scorpions", lies north of Saarloq on Nordlandet's, Akia's, east coast and contains two late ruins with trapezoid ground plans (Gulløv 1983: 64-65, 67), corresponding to house A at Tuperluk in Ameralik Fjord. Remains of wall up to a height of 2 m are preserved. A trial excavation demonstrated platform constructions along the side and end walls, flagstone floor area and house passage, no really sunken house passage but merely a 60 cm-high step and a fireplace out in the L-shaped house passage (Meldgaard 1952). The find material included objects of European origin, i.e. glass, porcelain and gunflint, samples of which were brought back; they all point to a clear 19th-century context (Meldgaard, *op.cit.*).

Nipaatsoq

In the Norse farm of Nipaatsoq (i.e. the quiet place), which was excavated in 1976-77 (Meldgaard 1977a), a couple of arrow heads were earlier (Meldgaard 1952) found in the turf in room IV, which has been interpreted as the larder (Andreasen 1982: 178). The heads, **KNK991x626** and **KNK991x627**, are 160 and 180 mm long. They are the same types, but a little longer, as the Kangeq **L13.3371** and **3372**, which are dated to the period 1300-1450. A C-14 dating of turf with a little charcoal from the top-2 cm cultural layer of the midden outside the house, which denotes the end of the settlement here, gave the date 1405 AD, which is calibrated ±1 standard deviation to the period 1320-1430 (K-3061).

This coincidence of types and datings between Kangeq and Nipaatsoq might indicate that the caribou inland were sought and exploited by the newly arrived Eskimo population immediately after the farm had been abandoned. The many cairn systems in Godthåb Fjord's caribou regions are also thought to be comparatively early (Rosing 1988: 69-79) and C-14 datings of the tufts of moss, with which some of the cairns were dressed in order to simulate wigs (*op.cit.*, p. 70), have given the dates 1600 ±75 and 1400 ±100 (AAR-63 and 64, Institute of Physics, University of Aarhus). These

dates are calibrated ±1 standard deviation to the periods 1450-1645 and 1290-1440. Arrow heads with screw thread cannot be demonstrated in the archaeological material from Godthåb District until the 16th century, e.g. **igd 4232**, and must be considered to be an original Eskimo invention (*cf.* Porsild 1915: 1-16).

Pisuffik

Pisuffik, i.e. the places where one crosses, lies *c.* 60 km north of Illorpaat and is known from 18th-century European sources and the Greenlandic oral tradition (Gulløv 1986). The site was visited in connection with the National Museum's Archaeological Survey of Greenland in 1975 (Gulløv 1983: 135-145), when a 230 mm-long arrow head, **igd 1575**, was found in the midden of house 64V1-IV-8B. It had an iron point, two unilateral barbs and conical base (*cf.* Porsild 1914: 163, fig.23; with screw thread and one barb). The head can be clearly dated to the 18th century. Pisuffik has, however, been inhabited for a long time, being the neighbour of the nearby Dutch whaling harbour, Delftsche Haven, mentioned since the beginning of the 17th century (Egede 1925: 130; Gulløv 1987: 77, 89). But it is likely that there was a settlement here also in the 16th century and possibly earlier, since there are thick cultural deposits (*cf.* Gulløv 1983: 142-143).

Saarloq

Saarloq, i.e. the patch worn thin, is an abandoned settlement (in 1952) north of Godthåb on the east coast of Nordlandet, Akia (Gulløv 1983: 63-65). Two old, rounded ruins lie to the west of the settlement. One is nearly twice the size of the other and is according to the Greenlandic tradition a *qassi*, i.e. a men's house or feasting house (Gulløv 1988: 186). Trial excavations in both ruins yielded no finds (Gulløv 1983: 63; Meldgaard 1952).

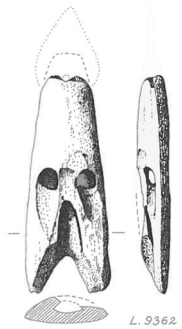
Serfat

Serfat, i.e. the black guillemots, is a small settlement south of Grædefjord, Kangerluarsussuaq, which contains a communal house and a small, rounded house situated *c.* 60 m from the coastline and *c.* 15 m above high tide (Gulløv 1983: 35). A total excavation of the small house demonstrated a circular ruin with the front edge of a platform and sunken house passage, as well as a few flagstones, but no other finds (Meldgaard 1952).

Uummannaq

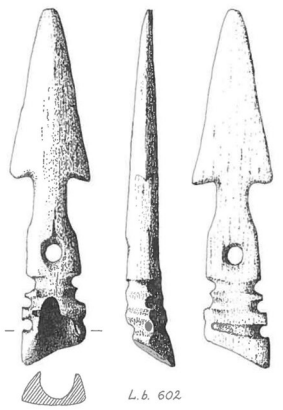
Uummannaq, i.e. the heart-shaped, lies halfway into the Godthåb Fjord at the mouth of Kapisillit Fjord (Gulløv 1983: 72-73). An archaeological survey has been carried out (Meldgaard 1952) and the settlement has been measured (Gulløv & Kapel 1983). The geologist Giesecke mentioned in 1808 that the place had once been a winter settlement and good hunting grounds for the Greenlanders, but is now uninhabited (1910: 154); this information must be seen in relation to Thorhallesen's remark in the 1770s about Qoornoq, where many Greenlanders had lived and lived well. On the

mainland east of Uummannaq lies the settlement of Iffiartarfik, i.e. the place where one collects grass (Gulløv 1983: 156-157). This is where the Brethen mission in 1751 established themselves in the open air, beneath the Pisissarfik Mountain with its 17th-century mummy-caves (Meldgaard 1953). The artefacts **L13.432-450** come from here. The Brethren congregation re-established themselves at Uummannaq in 1861 and the place was inhabited until its disestablishment in 1951. *C.* 50 artefacts came from old graves on the island, most of which can be dated to the 18th and 19th centuries. Three harpoon heads are, however, of particular typological and chronological interest and must be described here.



Lb.611 is a flat 18th-century harpoon head without a point, with two barbs, closed shaft socket and one dorsal spur, and thus corresponds to **NA-3-77-39** from Niaquusat (see p. 321).

L.9362 is a flat harpoon head of Thule-5 type with a point, two spurs and closed, acuminated oval shaft socket, which needs a foreshaft with corresponding cross section. This has not yet been found in Godthåb District and it has not been possible to demonstrate such a shaft among the recorded foreshafts from West Greenland. It is, however, known from the Dorset culture (*cf.* Holtved 1944,I: pl.1 (10,11)) and from the bottom layer of Comer's midden in Thule District (*op.cit.*, pl.6(14)); the latter however having a head with more oval than acuminated oval cross section (*op.cit.*, p. 198). This head cannot give a relative dating but it does represent a tradition of considerable age.



Lb.602 is a thin harpoon head of Thule-2 type. The specimen is worn. The lashing holes for fastening the foreshaft in the shaft socket are worn down into sharp points. The shaft socket itself shows a tendency towards complete closure. The lashing holes and incipient closure of the shaft socket place the head comparatively late in Therkel Mathiassen's classic harpoon spectrum (1927,II: 14ff). The head has no blade, but it is still one of the classic weapon types of the Thule culture and it thus adds to the documentation of early Thule culture in Godthåb District. **Lb.602** has been published before (Solberg 1907: 67), but is not found in the revised survey of the West Greenlandic harpoon-head typology, and classic Thule culture has thus not been identified further south than Disko Bay (Jordan 1974, 1984; Maxwell 1985: 270-272). We cannot establish when it was placed in the grave at Uummannaq, but presumably it happened during the earliest Thule-culture period in Godthåb District, i.e. 1280-1405 in Kangeq and 1290-1440 inland.

Summary

On the basis of the survey above, the archaeological find material can be placed geographically and chronologically. Geographically, the region is divided into outer coast, outer fjord and inner fjord. The border between the outer coast and the inner fjord areas is formed by Sermitsiaq and Qoornup Qeqertarsua with their more than 1 km-high mountain tops.

On the outer coast there is archaeological material from Kangeq, Illorpaat and Itissaalik, as well as historical documentation from Pisuffik. In the outer fjord there is archaeological material from Erssaa, Kanajutsiaat, Qarajat and Qeqertat Timerliit Illue, as well as historical documentation from Saarloq. In the inner fjord there is archaeological material from Qoornoq, Niaquusat, Nipaatsoq, Tuperluk, Umiivik and Uummannaq.

The find material can now be chronologically grouped as follows:

The 14th century is represented in Kangeq, layer 9.

The 15th century is represented in Kangeq, layer 9 and its continuation, layer 8. Illorpaat 3, earliest Thule, begins here as does the Illorpaat midden, layer 4. Qoornoq, houses 1 and 3 are inhabited.

The 16th century is represented in Kangeq, layer 8. Illorpaat 3, earliest Thule, and the midden, layer 4. Qoornoq, houses 1, 3 and 4 are inhabited.

The 17th century is represented in Kangeq, layer 8 and its continuation, layer 7. Illorpaat 3, earliest Thule ceases here. The Illorpaat midden, layers 8 and 9. Illorpaat 9, house I. Itissaalik, house I (?). Qarajat, houses 1, 2 and 4. Erssaa, houses 8, 9 and 10. Qeqertat Timerliit Illue, houses 1, 2 and 3 (?).

The 18th century is represented in Kangeq, layer 7. Illorpaat 3, houses I-IV. The Illorpaat midden, layer 12. Illorpaat 9, house II. Illorpaat 13. Itissaalik, house I and houses II-III. Qarajat, house 1 ceases here and afterwards the communal houses under houses 5-18 were inhabited. Qeqertat Timerliit Illue, house 4. Niaquusat. Umiivik.

The 19th century is represented in Kangeq, layer 7 and its continuation, layers 1-6. Qarajat houses 5-18. Qeqertat Timerliit Illue, house 4 ceases here. Umiivik ceases here. Tuperluk. Kanajutsiaat.

The 20th century is represented in Kangeq, layers 1-6 until it terminates in 1936. Qarajat, houses 15 and 16 are abandoned in 1905.

The above can form a basis for a tentative description of the development of the settlement in Godthåb Fjord (Fig. 107):

The period 1300-1400 is only documented in one locality, situated on the outer coast.

In the period 1400-1500 the settlement can be documented in several places on the outer coast and also in the inner fjord.

In the period 1500-1600 the settlement is still documented in several places on the outer coast and also in the inner fjord.

In the period 1600-1700 the outer coast is partly abandoned. Settlement can be documented in the outer fjord. There is no documentation from the inner fjord.

In the period 1700-1800 the outer coast is resettled. The outer fjord settlement from the previous period ceases and renewed settlement takes place here. The inner fjord is resettled.

In the period 1800-1900 the seasonal settlements are abandoned and afterwards the permanent settlement is concentrated in a small number of locations (Gulløv 1983: 218-222).

The chronology of the object material can now be inferred from the finds lists, which above accompanied the descriptions of each archaeologically examined locality. Some objects occur throughout the documented settlement period and are treated below.

The harpoon heads numbered 16 pieces. Typologically, only Thule-4 and 5 with variants occur, with one Thule-2 from a grave at Uummannaq. Thule-4 is found in the 15th-16th century in the inner fjord, and in the 16th-17th century on the outer coast. Thule-5 is found in the 16th century on the outer coast and in the inner fjord, where it is also documented in the 18th century. The long duration of these few types is also found in the Thule culture's West-Greenlandic harpoon-head typology, where Thule-4 and 5 demonstrate the greatest spread in time and space (Jordan 1979: 161). Thule-2 has not been demonstrated after the 14th century in West Greenland (*op.cit.*, p. 164, 170).

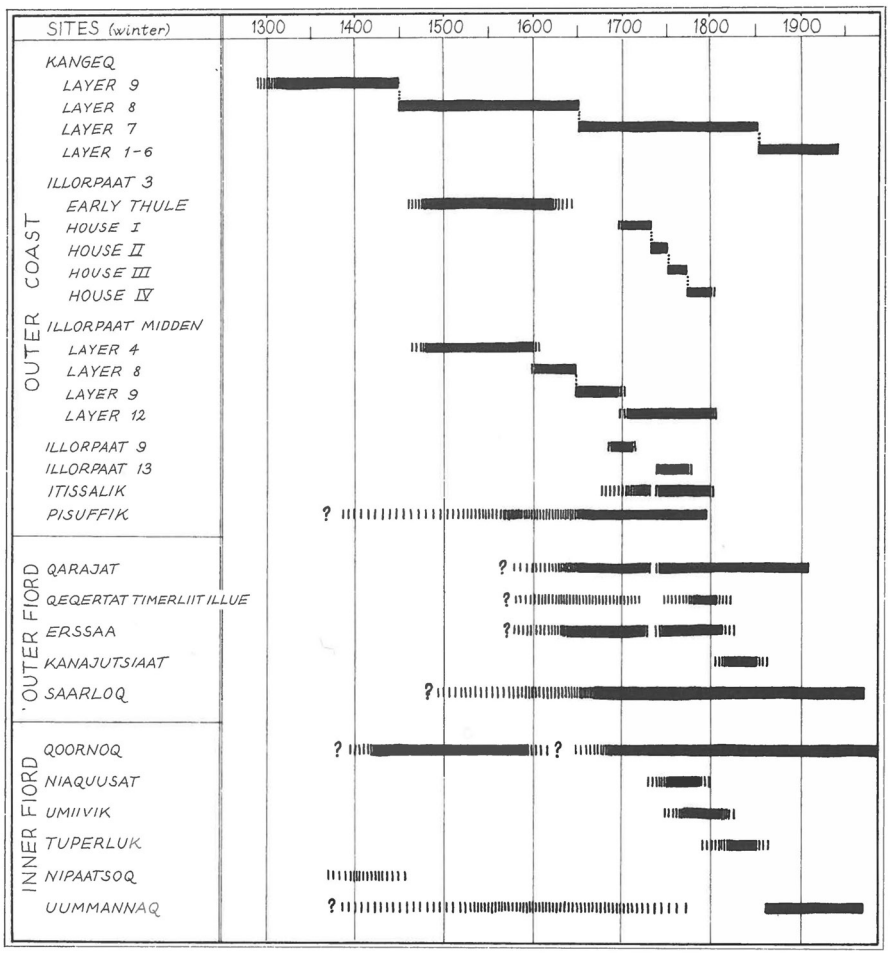


Fig. 107. *Table of the chronology of the Thule culture in the archaeologically examined winter settlements and in a few other sites from where there is source material. The continuous lines are based on scientific and historical datings. The broken lines indicate cessation of settlement. The degree of spacing in the broken lines postulates a presumed settlement, on the basis of recorded artefacts and historical sources (the greater the spacing, the greater the uncertainty). The question mark indicates uncertainty about the beginning of the settlement.*

Side prongs for bird darts were found in more than 100 examples. This large number, compared with the 13 harpoon heads, emphasizes the great importance of fowling in this part of Greenland. Quantitatively, the number is fivefold that of Upernavik (Mathiassen 1930: 198) and almost double that of Kangaamiut, where side prongs for bird darts was one of the most common find groups (Mathiassen 1931: 83). The sea at Godthåb does not freeze over in winter and therefore many razorbills overwinter there. This has caused Kangeq, among others, to be known as the place where "there was never any season, where there was nothing to hunt", as it says in the first section of Singajik's family history (Rasmussen 1924: 276). The area has been singled out for its great profusion of birds right into this century: "From olden times one has heard told, that there were many guillemots at Kangeq, that was at the time when they were only hunted with the bird dart [...] Well, there were times, when they were so plentiful, that it is no exaggeration, when one says of them that, when they in tight formation and without ceasing, flew to their feeding grounds with the land behind them, looked like the coast at low tide; but if one saw them against the horizon, it looked like a fog bank in the north, and if one got in among such flocks on the wing, it could be difficult rightly to make out those kayak comrades, who lay a little off" (Tobiassen 1971: 72). There is a correspondence between the cold period in the 18th century, the many overwintering birds in the open sea and the improvement to the fastening principle in the side prong, which was demonstrated in the Illorpaat materi-

al. This coincidence first appears in the period when increasing numbers of South Greenlanders arrive in Godthåb District (Gulløv 1982).

The arrow heads numbered 34 pieces, all of the same types as those found in the archaeological material from West Greenland. The earliest types have knobs on the tang (*cf.* Mathiassen 1930: pl.7(17,18)). The screw thread can be demonstrated at Illorpaat from the l6th century onwards. Porsild's postulate, that the screw was an Eskimo invention, is supported by the examples from Godthåb District (*cf.* Porsild 1914: 162-163, 1915: 1-16).

If **the kayak accessories**, as described at Kangeq and Illorpaat are compared, certain changes seem to have taken place. The high shaft rest disappear in the 17th century. The cruciform kayak stand from Illorpaat, as described under Wooden objects, various, was succeeded in the mid-18th century by the annular kayak stand, a foot from which has been demonstrated in the find material. At this time it also becomes common for the kayak deck mounts to be used as shaft rest. These changes should be seen as a result of the adaptation of the kayak accessories for all-year hunting on the ice-free sea, as was the case further south (*cf.* Mathiassen 1936: 99). More specifically, it can be established that this change took place at the time when fowling was made more effective and – judging by the archaeological find material – became one of the most important forms of hunting during the winter, i.e. when the south Greenlanders settled at Kangeq and on Illorpaat in the 18th century (Gulløv 1982, 1986b). The improvements to the kayak thus took place in South West Greenland and not as previously thought "not until kayak hunting was brought to such heights that it could also be pursued in winter did South Greenland become inhabitable for the Eskimos" (Mathiassen 1930: 302).

The whetstones constitute the largest find group among men's tools. It is not possible to decide which tools were sharpened. Iron occurs rarely, but more frequently in the upper cultural horizons, when there was access to European iron by means of trade. Sharpened stone is not found in the material, but it is known from the west coast in the form of weapon heads and *ulo* blades (Mathiassen 1934: pl.3(10,11), pl.6(2)). Bone was sharpened as evidenced for example by the harpoon blade on the head **igd 3958**. Wood was probably smoothed with pumice. The find of a special type of whetting tools for stone at Illorpaat in the 17th and 18th centuries might indicate that knife blades of stone were used until comparatively late.

The igaliko sandstone or the red igaliko clay slate was demonstrated in the form of a whetstone for needles from the 14th century in Kangeq and is thereafter found in all the described periods, *viz.* four pieces from the 15th and 16th centuries, four from the 17th and nine from the 18th century. The question of the presence in an Eskimo context was discussed and it was claimed that the pieces could either have been obtained by digging in the Western Settlement farms, or that they could have come to Godthåb with the South Greenlanders. The large block from Qoornoq, house 5 is a piece of raw material, which was presumably brought to the Western Settlement directly from Igaliko (*cf.* Roussell 1936: 112-113). Igaliko sandstone used as whetstone has come from several farms in this most northerly Norse area, *cf.* V51 "Sandnes", V52a "Austmannadalen", V7 "Anavik", V16 Kangersuneq and an unspecified farm in the Pisissarfik/Kapisillit Fjord (Roussell 1936, 1941).

Knives are represented by 72 parts, of which 15 iron blades with tang can clearly be assigned to late colonial times, i.e. the latter half of the 18th century and the 19th century. Two hafted knives with iron blade can come from either Dutch whalers or Norse farms (Illorpaat 9 and Qeqertat Timerliit Illue). One hafted iron blade is very likely of Norse origin. The scarcity of iron thus renders it probable that stone blades were also hafted for use as knives.

The bodkins with circular carvings were interpreted as being of clear Norse inspiration, and the 14th-century example also seems to support his theory. The form is thus demonstrated early in the Thule culture on the outer coast, and in an adapted form with a head from Qoornoq. The question of a Norse origin (*cf.* Mathiassen 1930: 297-298) cannot however be resolved on the basis of the present material. The ornamental bodkin is found throughout Greenland, and as a type is a significant cultural feature.

The most common form of **the lamps** is the segment- or crescent-shape. Very large lamps – up to 0.5 m long – with high dividing ridge were found in the earliest horizons of cultural deposits and in the earliest structures, i.e. Kangeq, layers 8-9, Qoornoq and Qarajat, houses 1 and 2. The dividing ridge is also found on the 18th-century lamps, but not where there was a cooking place in the entrance passage. It is also probable that both lamps for lighting and for cooking were in use (*cf.* Walløe 1927: 55).

Staves for tubs occur in the earliest Thule culture deposits in Godthåb District, and the straight staves are also found in the Norse tradition (Roussell 1941: 277); the well known, curved stave form is only found later in the find material. There is thus archaeological support for the theory that Eskimo coopering technique was a development from the Norse technique. It must here be noted that the artefact material from the settlements inside the fjord does not include tub staves. On the other hand, the turned wooden bowl from 16th-century Illorpaat, **igd 3935**, was probably brought to the outer coast from one of the Norse farms where a similar bowl was found (*cf.* Roussell 1936: 139).

Cooking pots of soapstone with rounded or straight-cut rims occur in equal number in the find material. Internal suspension holes in beads is the most common suspension type and are found from the earliest horizons of cultural deposits. Among the sherds from the 16th-17th century, internal handles and repair pieces, the so-called "repair-patches", are represented.

It is not possible to prove whether these Norse features are due to influence, or whether the sherds came from re-used Norse vessels. But there is much to indicate that the fine soapstone quarries in Godthåb Fjord were also of significance for the Eskimo products, which from an early stage were of high commercial value for Greenlanders and Europeans alike (*cf.* Egede 1925: 329; Dalager 1915: 82).

Conclusion

Many artefact types have been demonstrated in the find material from the earliest horizons of cultural deposits onwards. The changes in the types were explained as being the results of local adaptation, e.g. side prongs for bird darts and kayak accessories.

The presence of Norse objects in the earliest cultural layers synchronously with Eskimo imitations suggests that the Eskimos knew of the Norse objects before they settled in Godthåb District. Some types later acquire an independent significance, e.g. as expressed in the coopering technique. There is no support in the find material for Therkel Mathiassen's opinion, that "the Inugsuk culture must be looked upon as a later phase of the Thule Culture influenced by mediaeval Norse culture" (1930: 300).

The find material contains European objects of Norse, Danish, Norwegian and German origins, which were acquired by trade and exchange and which form part of

the Thule cultures defined object categories (*cf.* Mathiassen 1927,II: 5). The find material can not support Therkel Mathiassen's contention that "from a culture-historical point of view Greenland is a cul-de-sac" (1936: 126), since this does not allow for cultural adaptation. Nor can Jørgen Meldgaard's theory (1986: 29), that the European presence in the 18th century safeguarded the Thule culture in South West Greenland from periods of indigence, find any support in the archaeological material.

It was the availability of resources and the ice-free sea which determined the adaptation and development of the Thule culture in South West Greenland. The presence of European objects among the Thule culture's object groups can both be explained as cultural adaptation to new raw materials (e.g. iron) and exchange of goods (e.g. skins and blubber in return for copper, pottery and glass). The find material from Godthåb District thus demonstrates that the Thule culture categories were intact in the 18th century, having survived for more than five centuries in South West Greenland. After the year 1800 the description of the culture becomes dependent on external factors, since the adaptation of the population must be defined on the basis of European demands for permanent settlement, and this is the end of the Thule culture and of its use as an analytical concept.

IV. Ethnohistory and archaeology in South West Greenland

The descriptions in the previous chapters of the archaeology and the finds in Godthåb have established a culture-historical framework, which will be used to reconstruct the archaeological stratigraphy in the other parts of western Greenland. But this chapter will first introduce the written source material, which mentions the archaeological sites described above, in order to supplement the description of the material and thereby increase our understanding of the Greenlandic Thule culture.

The large number of written sources on which the history of Greenland is based (*cf.* Gad 1967, 1969, 1976, 1984) can be greatly reduced if one looks only at those sources which describe the Eskimo community. The mass of information, however, increases considerably after the colonization in 1721, when the ethnographic contents of the sources supplement the archaeological descriptions, as demonstrated in earlier chapters. The date thus constitutes a watershed, which is crucial to the description of the culture; and new sources also turn up from time to time. Among these new sources are the Greenlandic community's own orally transmitted accounts, which were written down in the nineteenth century.

In the following I shall attempt to answer the question of the nature and extent of the European influence on the Greenlandic community. This question was raised above, in connection with the description of the Greenlandic winter-house and the architectural change which was demonstrated to have taken place in the 17th century. The reasons for this change will be discussed later in this chapter. The European objects described above furthermore demonstrated that we must presume that an exchange of goods took place between the Greenlandic community and the Europeans present in the country. This cultural contact will be described in more detail. The questions raised presuppose knowledge of the composition and extent of the population in the 17th and 18th centuries, which is based on the demographic evidence in the sources, together with what we know of the settlement geography (*cf.* Gulløv 1983). The smallpox epidemic in 1733-34 has here had a decisive influence on the composition of the population, as a large section of the original Greenlanders in Godthåb died and were partly replaced by southern Greenlanders who primarily attached themselves to the recently established German Brethren mission (*cf.* Gulløv 1983b; Israel 1969).

This chapter will therefore first present the sources of the ethnohistory, thereby providing the background to the following description of the settlement pattern in the Godthåb region. Then follows a description of the south-western Greenlandic winter-houses and their origins. The objects described above are then compared to the ethnographic sources, which we have from the Godthåb District. This evidence will then be used to draw up the pattern which describes trade and exchange in 17th and 18th century South West Greenland. The conclusion describes the ethnohistory of Kangeq on the basis of the established source material, which consists of the archaeological categories of the Thule culture, European written sources and the Greenlandic oral tradition.

Sources of the ethnohistory

The smallpox epidemic 1733-34 came to the Greenlandic community from abroad. The many deaths had a decisive influence on the composition of the Godthåb population. It is therefore of interest to shed light on the situation before and after the epidemic on the basis of archaeology and the settlement pattern.

The epidemic broke out when an infected Greenlander returned from Europe on the ship which also brought the first German Brethren missionaries (Egede 1925: 265-266) and by the following year all baptized Greenlanders had died, unless they had fled to the uncontaminated coastal areas to the south or north of Godthåb.

The source material for the situation before and during the epidemic is Hans Egede's diaries (1925: 1-304). The source material for the situation after the epidemic is the daily journal of the Brethren congregation (Diarium Neuherrnhut 1733ff.). To this primary material the church registers can be added. Egede decided in 1729 to keep a church register of all those baptized (1925: 221), but the material is very sporadic (Egede 1939: 116-121) and only from 1826 was the Godthåb church register kept up regularly. The Brethren congregation kept up the church register from 1733 to 1900, when the mission left Greenland (Kirchenbücher 1733ff.).

The historiography (Gad 1967ff) has made extensive use of the Danish source material, while the German source material has been used by Heinz Israel (1969). The two groups of sources, however, each contain a different group of Greenlanders, i.e. original western Greenlanders from Godthåb and southern Greenlanders from Julianehåb and the district around Cape Farewell. This is of decisive importance for the ethnohistory, but is not mentioned in the above mentioned accounts of 18th century colonial Greenland.

The two population groups occur early in the sources and it is apparent that they have contact with each other. On 16th June 1723 Egede writes about the Nepisat Sound immediately to the north of the colony (*cf.* Gulløv & Kapel 1979: 27-29):

> "When I on the 16th returned and arrived at Nepisat Sound quite close to us, I found Greenlanders, who now stay there, make quite merry with one another with singing, dancing and leaping, for recently there had come a large number of strangers, who lived far to the south and intended to go north for the whale-hunting. With these same they had such games and play, which continued for some nights and days while the strangers were with them" (1925:83).

The south Greenlanders moved northwards and on the way mingled with the local Greenlanders, some of whom also travelled north: "Otherwise, the larger part of the Greenlanders, who belong here in the Nepisat Sound, are astir to move away again, each to his place, some into the fjords to fish for capelin [ammassat] and then, while it is still summer, on caribou hunting, others again northwards" (*op.cit.* p. 80). In the three following examples the historic source material is used to elucidate aspects of the ethnohistory before, during and after the smallpox epidemic. The evidence is then related to the archaeological descriptions in order to clarify the datings and increase the possibilities of interpreting the archaeological finds.

Pooq

The first example is that of the Greenlander Pooq (old orthography Pôq), who together with Qiperoq in 1724 "voluntarily has left the country and come to Denmark" (Meldgaard 1980: 14). Pooq was then 22 years old. He died from smallpox in Copenhagen in 1729, but had before then been back and had told his compatriots about Copenhagen. The account was printed in Godthåb in 1857 and later published with comments in the journal *Grønland* (Balle 1964).

Pooq belongs to the original west Greenlandic population and through him we connect back to the time before colonization. How far back the connection goes will emerge from the following. We must look to Hans Egede's diary and the minutes kept by the Council in Hope Colony, where Egede was chairman. Scattered around in these records are the pieces that together will make up the story of Pooq.

The first time he enters the story by name is on 27th December 1723, when he declares himself willing to travel by ship to Denmark the following year (Egede 1925: 108). He lived with a family of six persons, which had come to the colony the previous winter and had been quartered in the attic above the crew's room (*op.cit.*,p.64). Also present were Kusach and Navia, who arrived at the colony on 7th December 1722 and spent the winter there (*op.cit.*,p. 60). They were not overjoyed when they now had to share Egede's generosity with the family of six. This was understandable, as the two groups were related and now both had to depend on the security which Hope Colony could afford them in hard times. Pooq is said to be related to Kusach (*op.cit.*,p. 178). Kusach and Navia originally belonged in the area around Kangaamiut to the north.

It was from these people that Hans Egede and his sons Poul and Niels learnt of the west Greenlandic language (*op.cit.*, pp. 71-74). Part of the answer to the question of these persons' origin lies in Egede's information about the south Greenlanders (*op.cit.*, p. 85). According to the protocol of the Colonial Council 2nd August 1724, Pooq intimated that he would like to have a woman among the south Greenlanders as his travelling companion to Denmark (*op.cit.*, p. 417). This request was not met and after his return from Denmark the following year, Pooq married a girl from among his neighbours on the island, i.e. Illorpaat (*op.cit.*, pp. 169-170). This express interest in marriage with the south Greenlanders, whose geographically different origins are repeatedly emphasized in the sources, is of vital importance in deciding Pooq's origins.

It may thus appear that Pooq is west Greenlandic. A piece of information given by Pooq's relatives, Kusach and Navia, here becomes significant: on 13th December 1722 they told Hans Egede about the abduction of the four Greenlanders, who David Danell in 1654 brought to Bergen and Copenhagen from the Godthåb Fjord, possibly the settlement Erssaa on Sermitsiaq. Kusach and Navia knew these people very well and they could furthermore inform Egede that their friends and family were still alive.

With this last account of events from 1654 (*cf.* Meldgaard 1980: 4-6) we are back in an age when the southern Greenlandic influence is not easily discerned in the source material; and with those direct relationships, of which the two informants tell Hans Egede, we cannot be in much doubt about Pooq's historical connection with the original west Greenlandic population group.

There is an extensive description (Olearius 1656; Scheffel 1987) of the Greenlanders from the Godthåb Fjord in 1654, which has been used as a source for the history of Greenland (Gad 1967: 294-306). They have also turned up as the subjects of miniatures on drinking cups belonging to King Frederik III (Bencard 1989); and a recently discovered list of *c.* 700 words, transmitted by these people, has almost doubled the known lexical material, which means that the list "without comparison is the most



Fig. 108. *Pooq (r.) and Qiperoq (l.) painted in Copenhagen by B. Grodtschilling in 1724. Qiperoq's footwear is not Eskimo. The implements show European influence, in that the arrow head and the bird-dart head are both of iron (after Meldgaard 1980: 15).*

important source for our knowledge of the Greenlandic language as it was before the colonization" (Petersen & Rischel 1985: 158; Resen 1987: 79-121).

In the archaeological description of hunting implements and apparel we can now also make use of the painting of Pooq and Qiperoq from 1724 (Fig.108), and compare it with the painting of the four Greenlanders from 1654 (Fig. 109). We now know that there is a direct line between the two representations which are only 70 years apart.

At Egede's and Pooq's time the south Greenlandic presence is a fact and is noted in connection with the marriages. On 25th April 1726 Pooq performed a song about the Denmark journey at the meeting-place Nepisat just north of Hope Colony, where



Fig. 109. *Four Greenlanders painted by an anonymous artist in Bergen, 1654. The garments and the women's tattoos also recur in the mummies from Qilakitsoq (cf. Hansen et al. 1985). The implement types recur in the archaeological material from Illorpaat well into the 18th century, e.g. the bladder-dart head* **igd 3869** *(after Meldgaard 1980: 5).*

both west and south Greenlanders had gathered (Egede 1925: 184). The tale of the adventures in Denmark were thus brought back to southern Greenland and more than 200 years later Jens Rosing came to hear the story about the man-made mountain (i.e. the Round Tower in Copenhagen) being retold in Ammassalik (Rosing 1968). But by then Pooq was long since dead and the life-line to the 18th century broken by the smallpox epidemic in the winter of 1733-34. Egede wrote about this on the 6th April 1734 that, of 200 families for two to three miles (i.e. 20 to 30 km) to the south and west of the colony, 30 now remained (1925: 283). But the tale survived both in West Greenland (Balle 1964) and East Greenland (Rosing 1968).

The smallpox epidemic

On the basis of the fragmentary source material it is hardly feasible to establish statistics of the population. It is, however, possible to extract *de facto* information about the size of the population from Hans Egede's diaries. This information, in conjunction with the known settlement patterns, based on archaeological descriptions of the dwelling types (Gulløv 1983), gives us sufficient indicators to allow a description of the extent of the smallpox epidemic (*cf.* Willigan & Lynch 1982: 42).

The information is scattered and was written down in accordance with the amount of interest it excited. Egede mentioned on 10th January 1724 that on Hope Island there were three houses with more than 70 people (1925: 109). This is the kind of information we have available, but we cannot conclude from this that a house contained 25 people. For, during his first winter in Greenland, he noted a house with 45 inhabitants (*op.cit.*, p.13). It is thus difficult to establish how many would live in one house and what the family unit would include.

The family in 18th century West Greenland was usually patrilocal and normally consisted of three generations, i.e. parents, children and one or both of the father's parents. But cousins of either sex, adopted close relatives and orphans could swell the number of co-habitants in the winter-house (Egede 1925: 372-375). Information about a family, which does not specify the composition of persons within it, is therefore difficult to use.

A house is a more precise indication, since the large number of persons most often mentioned in it may be associated with the communal dwelling we know from archaeology. But also in this case it may be difficult to understand the family relationships. One house may be said to be occupied by one named person with family and number 20 people in total. Or it may be that the house belonging to a named person was occupied by a certain number of fellow-occupants but we know nothing of their relationships.

All assessment of the size of the population must therefore be made by an average estimate, on the basis of known sizes of families. These vary greatly within the geographical area, but if the assessment is limited to the winter period when the population is relatively static, it becomes possible to establish a realistic foundation for the estimate.

Egede used the terms 'persons', 'families' and 'houses' when indicating numbers. The Brethren missionaries used 'persons', 'family', 'house-fellow' (Hausgenossen), 'relationship' (Verwandtschaft) and 'houses' in their indications of numbers. The problem is whether we can equate the two sets of terms, each of which refers to a distinct population group, west Greenlanders and south Greenlanders. The only two concrete pieces of evidence in the sources are Egede's mention in 1723 of one family of six persons (1925: 64), which the same year is supplemented with a mention of two families of 12 persons (1925: 104) and the Herrnhut journal of 1734, which tells of a house occupied by eight families making a total of 40 people (Diarium 1733-44). We thus have Egede's indication of six and the Herrnhut's five, but no mention of the composition of the families. The number of siblings may vary and a man could have up to four wives (Egede 1925: 372).

If we select an average of six persons to a family and 30 to a house, we may establish the following estimate of the population in the Godthåb Fjord and the adjoining coastal area.

Winter	Number of Greenlanders	Date
1721-22	300 persons on Kook Islands	25 February 1722
1722-23	no information	
1723-24	more than 70 persons on Hope Island (Illorpaat)	10 January 1724
1724-25	30 families in 5 houses on Hope Island, i.e. 180 persons	6 October 1724
	60-70 families at Pisuffik, i.e. 360-420 persons	19 October 1724
	200 families 1-2 miles (i.e. 10-20 km) south and east of Hope Colony and inside Ball's Revier (i.e. Godthåb Fjord), i.e. 1200 persons*	6 December 1724
1725-26	40 families on Kook Islands, i.e. 240 persons	20 November 1725
1726-27	no information **	
1727-28	50-60 families on Hope Island and Kook Islands, i.e. 300-360 persons	21 October 1727
	60 families in Ball's Revier, i.e. 360 persons	18 February 1728
1728-29	34 families on Kook Islands, i.e. 204 persons	11 February 1729
	15 families on Raven Islands (i.e. south of Godthåb), i.e. 90 persons	15 February 1729
	30 families in 5 houses on Hope Island, i.e. 180 persons	20 March 1729
1729-30	1 house with 5 families in Godthåb Fjord i.e. 30 persons	1 December 1729
	1 house with 8 families in Ball's Revier i.e. 48 persons	10 January 1730
	1 house with 8 families in Ball's Revier i.e. 48 persons	11 January 1730
	1 house with 5 families in Ball's Revier i.e. 30 persons	13 January 1730
	2 houses with 14 families in Ball's Revier i.e. 84 persons	15 January 1730
1730-33	no information***	
1733-34	10 families on Raven Islands, i.e. 60 persons	7 November 1733
	40 families on Kook Islands, i.e. 240 persons	31 December 1733
	200 families 2-3 miles (i.e. 20-30 km) south and west of Godthåb, i.e. 1200 persons	6 April 1734

* 5-6 miles (i.e. 50-60 km) south and 6-7 miles (i.e. 60-70 km) north of Hope Colony there are no people (Egede 1925:154)

** "On 17th October [1726] my colleague [Albert Top] went over to our neighbours on the island [Illorpaat], who had also newly arrived, and read to them. There were now only few compared to those who had lived there the previous winter, for most of them had moved north to Pisuffik, 6-7 miles (60-70 km), north of the colony. Similarly there were also out on Kook Islands only few, compared to those who stayed there last year. This rambling and inconstancy gave me little hope that the Word of God which was preached to them would bear fruit with them [...]" (Egede 1925:190).

*** Egede now only counts the baptized Greenlanders. The Greenlanders are plagued by coughs and weak chests, many die. 11 colonists die of scurvy.

On a average *c.* 220 persons lived on Hope Island and Kook Islands, *c.* 75 on Raven Islands south of Godthåb and *c.* 300 in Ball's Revier (i.e. outer Godthåb Fjord). To these must be added Pisuffik, where people often stayed during the winter and where there were *c.* 400 persons. Egede did not make any mention of the population in the inner Godthåb Fjord, but did note on 15th January 1730 that further inside the fjord there were six houses (1925: 232), which would make an average of 180 persons.

By far the larger part of the *c.* 200 families thus lived along the coast and the outer fjord. Of these 30 families at the most remained after the first smallpox winter (Egede 1925: 283), 17 of them on Hope Island and 20-30 km inside Ball's Revier on 18th

October 1734 (*op.cit.*, p.287). On 7 November 1737 the country was depopulated at a distance of 150 km from Godthåb (*op.cit.*, p.288). In May 1735 there were again Greenlanders in Nepisat Sound fishing for lumpsucker and on Kook Islands fishing for halibut.

When this information is compared with the population density set out in the survey above, the number of inhabited houses in the same period can be estimated as follows.

Winter	Occupied houses	Date
1721-22	10 houses on Kook Islands*	25 February 1722
1722-23	no information	
1723-24	3 houses on Hope Island	10 January 1724
1724-25	5 houses on Hope Island	6 October 1724
	13 houses on Pisuffik*	19 October 1724
	7 houses on Kook Islands	6 November 1724
	40 houses 10-20 km south and east of the colony and inside the fjord*	6 December 1724
1725-26	8 houses on Kook Islands*	20 November 1725
1726-27	no information	
1727-28	11 houses on Hope Island and Kook Islands*	21 October 1727
	12 houses in Godthåb Fjord*	18 February 1728
1728-29	5 houses on Kook Islands	11 February 1729
	3 houses on Raven Islands*	15 February 1729
	5 houses on Hope Island	20 March 1729
1729-30	2 houses on Raven Islands	24 November 1729
	3 houses on Kook Islands	25 November 1729
	5 houses on Hope Island	28 November 1729
	12 houses in outer and inner Godthåb Fjord	1 December 1729 & 10, 11, 13 & 15 January 1730
1730-33	no information	
1733-34	2 houses on Raven Islands*	7 November 1733
	8 houses on Kook Islands*	31 December 1733
	40 houses 20-30 km south and west of the colony*	6 April 1734
	8 houses on Pisuffik	22 April 1734

* Calculated on the basis of the average population, i.e. 1 house = 30 persons

On average there were in winter 5 houses inhabited on Hope Island, 7 on Kook Islands, 2 on Raven Islands, 12 in the outer and inner Godthåb Fjord and 11 houses on Pisuffik.

It appears from the numbers presented here that on average between 1100 and 1200 people lived in the *c.* 40 communal houses in the Godthåb region proper. This region comprises the fjord with *c.* 360 Greenlanders, Raven Islands, Kook Islands and

Hope Island with *c.* 420 and Pisuffik with *c.* 330 Greenlanders. If one includes the localities south to Buksefjord, taking in the settlements Qarajat and Qeqertat Timerliit Illue, the population before the smallpox epidemic would amount to *c.* 1500 persons spread over 50 communal houses. Of these *c.* 180 survived, apart from those who had moved far away and later returned. It was thus *c.* 10% of the original west Greenlandic population in Godthåb Fjord and adjoining coastal areas.

In 1739, five years after the epidemic, the Brethren mission began to baptize the incoming south Greenlanders. This took place in an area where the rules governing the rights of use and the territorial rights (*cf.* Brøsted 1986: 327-330) could now only with difficulty be enforced by the hitherto dominant population. Egede noted on 26th July 1735 that the south Greenlanders came out from the fjord after having cut soapstone for lamps and cooking pots and continued southwards (1925: 292). The following year he noted that the south Greenlanders went out into the Kook Islands to catch halibut and to Nepisat Sound to catch lumpsuckers (1925: 299). Most of the south Greenlanders settled at Neu Herrnhut, which ten years after the Brethren's first baptism contained 300 south Greenlanders (Diarium 1745-52). Others settled on the coast of the Kook Islands and in Kangeq, which became a mission annexe in 1754 (Diarium 1752-61). Later they also settled inside the Godthåb Fjord. In other words, another population group had moved into the region.

Sinngajik

In this example use is made of the church registers from Neu Herrnhut, which have survived *in extenso* and begin with the first person to be baptized, Samuel Kajarnak (Kirchenbücher 1733-1809; Cranz 1770). It differs in time from the above example in that the historical beginning of the account is after the smallpox epidemic.

Kajarnak was born in Sermitsialik, behind the present-day Qassimiut in Julianehåb District (Cranz 1770,III: 248). He returned there to spend the winter after his baptism in 1739. In the winter of 1740-41 he was again at Neu Herrnhut, where he died in 1741. Kajarnak is a south Greenlander. Along with him the church register introduces a large number of persons, who all hail from South Greenland.

Kajarnak married Annaq and with his marriage he became a member of a family who had a decisive influence on Greenlandic cultural history. At the instigation and with the help of the Inspector of South Greenland, H.J. Rink, their descendants had 170 stories and legends printed which had been passed down by oral tradition (Gulløv 1986b: 110), with illustrations by Aron of Kangeq, the Master of Greenland's Golden Age (Knuth 1960; Meldgaard 1982).

Annaq's three brothers had been involved in a murder in South Greenland and were fleeing the blood vengeance together with their brother-in-law in 1738. The vengeance reached one of the brothers, who was murdered at Godthåb in 1739 (Cranz 1770,II: 777). Kajarnak decided to stay in the safety of the Brethren mission, where he was christened Samuel. The two surviving brothers took their brother-in-law with them to the south, safely away from their pursuers, and spent the winter of 1739-40 in their native region. In 1740 they returned to Neu Herrnhut (*ibid.*). The murderers, among whom Niels Egede had spent a night during the same year (1939: 137-139), were caught at Uummannaq Island in Sukkertoppen District, because "these islanders, near Godthåb, had killed a man of their own compatriots on the sea...", and were taken to Godthåb, where they at the request of the parson were put in irons and whipped (Walløe 1927: 43). This event was a century later depicted in a water colour by Aron of Kangeq (Gulløv 1978: 36).

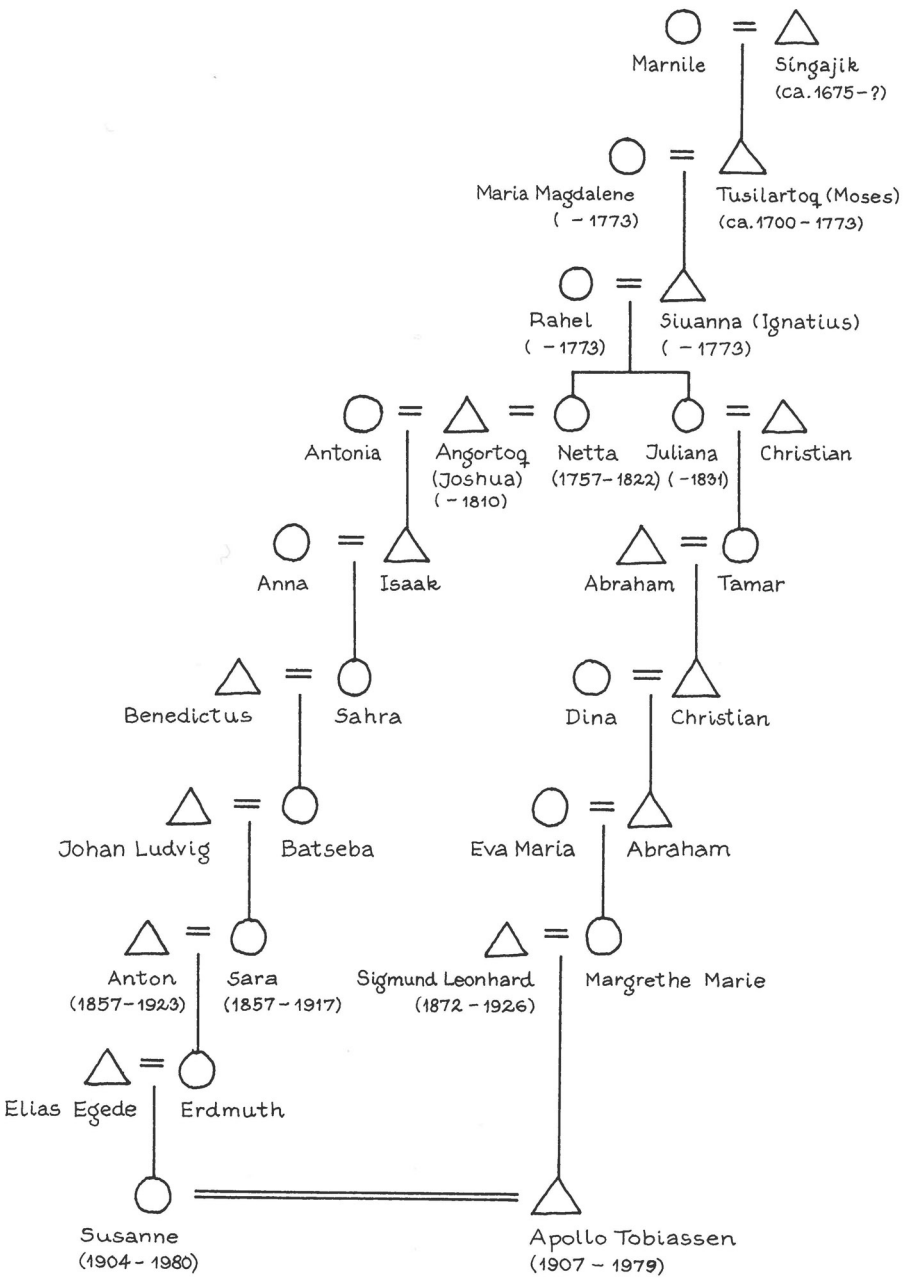


Fig. 110. *The relationship between the south Greenlander Sinngajik and Mr and Mrs Tobiassen in Kangeq. Apollo Tobiassen was catechist, schoolteacher and regional bailiff in Kangeq, until the place was closed down in 1974.*

Samuel's brothers-in-law are mentioned by name in the Brethren mission's journal as Okkomiak, Tusilartok and Innungeitsok, the two former surviving the vengeance (Cranz, *op.cit.*). Okkomiak was christened Boas in 1750 and died in 1753. Tusilartok settled with his son Siuanna in Kangeq, where he received a visit from the Brethren missionaries in 1754 (Cranz 1770,II: 811-812). He was baptized in 1758 and was given the name of Moses. By that time his son had already been baptized and had been called Ignatius. They both died in 1773 (Kirchenbücher 1733-1809). In 1773 Moses is said to be an old man of 80 (*ibid.*) and would therefore have been born around the year 1700.

The descendants of Moses' son Ignatius can be traced in the church registers until

1900, when the Brethren mission left Greenland. After 1900 the descendants are entered in the Danish church register. In the 1970s the catechist in Kangeq, Apollo Tobiassen, wrote his memoirs and here he mentions his distant ancestor Tusilartoq. Apollo tells that he was a great shaman while he was still pagan and that he became clairvoyant after he had visited his wife at her grave in South Greenland (Tobiassen n.d., p.82).

It is thus possible to establish a direct genealogical link between the first southern Greenlander in the Kangeq area, which we meet with in the sources, and the last inhabitants in this area, which was abandoned in 1974. But, as seen in the examples above, the southern Greenlanders found an earlier mention in Hans Egede's diaries and the Colonial Council's journals, though without the mention of names. Only the passing ships with strangers from the south are recorded. It is therefore of significance for the present example that we can name one other person, who does not appear in the European sources, but who is a reality in the Greenland community. This is Sinngajik (old orthography Síngajik or west Greenlandic Síngajuk), the father of Tusilartoq and thus the father-in-law of Kajarnak, the first to receive baptism.

Sinngajik was not baptized and thus does not appear in the church registers. But he does appear in the oral tradition as the man who took land at Kangeq, having married a girl from Illorpaat, and there are extensive accounts of his descendants (*cf.* Rink 1871: 1-9; Rasmussen 1924: 276-354). The stories about the south Greenlander Sinngajik take place before and during the smallpox epidemic and thus describe an historical continuity, which does not emerge from the other examples above (*cf.* Gulløv 1979; Gulløv & Kapel 1979/80; Knuth 1963).

With this example the line goes back into the 17th century. If we assume that Sinngajik was 25 years old when Tusilartoq was born, he must himself have been born around 1675. 300 years have then passed when Apollo Tobiassen wrote the memories of his life in Kangeq and when he, together with his wife Susanne, could account for his south Greenlandic lineage through ten generations (Fig. 110). The Europeans in 18th-century Greenland also noted that the Greenlanders could account for their relatives unto the tenth generation, not merely in direct line of ascent or descent, but also in all manner of side-lines (*cf.* Cranz 1770,III: 329; Dalager 1915: 56).

Apollo Tobiassen followed the archaeological investigation of Illorpaat with great interest and his extensive local knowledge helped to increase our understanding of the topography and history of the area. He pointed out the ruin Illorpaat 9 as the place where Sinngajik first lived.

Sources and archaeology

The large rectangular communal houses on Hope Island and Itissaalik were the favourite type of dwelling in the 18th century, as described in the sources above.

Illorpaat 3

House I, represents an undisturbed house, the earliest on this site. The ground plan is that of a communal house, which, judging from the finds must have been in use at the same time as the nearby Hope Colony (1721-28) or a little later, since the cow's tooth found there may also derive from Godthåb, where cattle was kept until 1735 (Egede 1925: 229, 252, 260, 263, 267, 287, 293). The archaeological investigation revealed no rebuilding of this house, and occupancy may have ceased *c.* 1730.

House II, represents a communal house where six discernible growth horizons are explained as divisions between residual phases. The culture-horizon which comprises this house is described as somewhat disturbed and a rebuilding is seen to have taken place. These observations, together with the artefacts found, makes it likely that this house was occupied when the smallpox epidemic raged in the area. The house was re-occupied after the epidemic and a report of 5th July 1740 mentions the inhabitants of Hope Island as "our usual old Greenlanders" (P. Egede 1939: 120). The settlement which can be related to house II must thus have taken place in the period 1730-50.

House III, represents a communal house, where eleven discernible growth horizons divide the residual phases. There are traces of three rebuildings, which might be related to the immigration of south Greenlanders. In 1752 around 100 Greenlanders are said to live at Kangeq, mostly southerners and 14 large winter-houses are mentioned (Cranz 1770,II: 739). Two years later the place becomes subject to Neu Herrnhut as a "Filial oder Vorhof" (*op.cit.*, p.944). On the basis of the European artefacts, house III must be presumed to have been occupied in the period 1750-70.

House IV, represents the last occupation on the site, a communal house which has later been made smaller. There has thus been one rebuilding when the house type is altered and the communal house ceases to be the dwelling-house type. Eight discernible growth horizons divide the residual phases. The journal of the Brethren mission mentions Illorpaat as being occupied in 1786 and 1796 (Diarium 1785-1820). In 1810 the geologist Giesecke observed that there were still remains of several Greenlandic houses on Illorpaat (1910: 271). On the basis of the European artefacts, the house must be presumed to have been occupied in the period 1770-1800.

In conclusion, these communal houses I-IV represent an almost continuous settlement on the site throughout the 18th century. This period thus corresponds to layer 12 in the Illorpaat midden, in which there seems to have been several house remains. Layer 7 in the Kangeq midden corresponds to the structures at Illorpaat and appears to continue into the culture layers from the 19th century.

According to the historic sources, south Greenlanders moved into both places. The two populations played the well known ballgame until the end of the 18th century (*cf.* Egede 1925: 382). Aron of Kangeq depicts this adding the text: "The inhabitants of Kangeq and Illorpaat play with a stuffed seal, according to old pagan practice, the last time before their conversion" (Kaalund 1980: no.1).

Illorpaat 9

This communal house lies easternmost in the central settlement area and 10 m above sea level. The archaeological excavation was undertaken to investigate whether the atypical siting might relate to the tradition, as transmitted by Apollo Tobiassen in Kangeq, that the ruin had been Sinngajik's house.

Under the communal house a smaller house could be detected. This house had two habitation phases. According to the story this would be the house where Sinngajit first visited the woman whose daughter he sought in marriage. The most detailed description of this episode in the story is rendered by Knud Rasmussen after information from Esaia Martensen in Neu Herrnhut (Gulløv & Kapel 1979/80: 351; Rasmussen 1924: 284-300). The detailed passages in the story are given below and it must be pointed out here that the archaeological excavation did not demonstrate any earlier digging at the site, which would have weakened the value of the story as a source. The topographical and archaeological data in the quotes are highlighted by italics.

"When the girl saw Sinngajik come out of the house [one of the communal houses down at Illorpaat] and walk towards her, she went *upwards* to their house to show

him the way, while he followed right behind her. She had said that they lived *furthest to the south* and *highest* of all the others" (p. 284).

This is confirmed in that the house lies apart and that one has to walk upwards to reach it. This only fits in with Illorpaat 9.

"When he came into the house the mother said: 'It is seldom that we are visited by men in this house; and when it at last happens they usually leave us again when we most want to keep them. But now do go and sit at the place which is for our guests!' With these words she pointed to *her daughter's side platform* and Sinngajik felt deeply grateful for this, because he was now to sit on the *window platform* just in front of the girl" (p. 284).

The archaeological observations do not contradict that there might have been a side platform and window platform in addition to the end platform demonstrated in the excavation (*cf.* section B, layer 10). The description of the layout of the house thus shows a correspondence between archaeology and story.

"... and so the evening passed and he quite forgot the time. He was still engaged in looking at mother and daughter, when he chanced to look out of the window and discovered that the sun was setting and that its blush had already begun to spread *all over the western horizon*" (p. 285).

This observation can only be made from Illorpaat 9, as central and lower Illorpaat are screened by the western ness, Illorpaat nuuat.

Sinngajik returned again [from Kangeq] to take the daughter for his wife:

"...Sinngajik only waited for her [the mother] to stop talking, so that he could come to his purpose. Thus he sat waiting patiently, until the sun at last was so low in the sky that *it shone through the windows from the west*" (p. 286).

This again confirms that the scene must have taken place in Illorpaat 9, before the sun disappeared behind Illorpaat nuuat.

"To Sinngajik's request the mother said: 'It is true I am a woman, but I use her [the daughter's] help almost as were I a man, and this is why I never wanted to part with her, although *people who live just north of us here* have often asked me for her; it is because of her help that we never, even in mid-winter, suffer any want. But if it must come to pass that she shall be given away *I would rather that the man who takes her should also live in this house.* Only if that happens can I give my consent!' " (p. 287).

It is again confirmed that the people who lived just north of them must have been the settlement companions down at central Illorpaat. The quantity of quarternary zoological material in the earliest and the latest houses turned out to be the same (Gulløv & Kapel 1979/80: 379), which may demonstrate that the daughter had indeed looked after her mother well! That Sinngajik accepts the offer to move into the house is demonstrated by the investigation's discovery of yet another habitation phase in the earliest house, as is seen in the following.

"At Kangeq he [Sinngajik] at once started to put his affairs in order and already the following day *they* [Sinngajik's household] started off and journeyed to Illorpaat. *They had no trouble taking new land, for they merely went up to the widow's house*" (pp. 287-288).

This example of matrilocality is unique in the history of Greenland and it also tells that strangers find it difficult to get permission to settle in a locality which was already occupied. Sinngajik got such permission when he came to Kangeq from the south and wanted to put his tent up by the houses (p. 278). He also received a kind welcome when he fist visited Illorpaat: "When we on a rare occasion are visited by south Greenlanders, kayaks or umiaqs they never go anywhere but up to us; so get out of your kayak and follow us!" (p. 282). However, to make a winter settlement in a place where there are "quite a few people" (p. 285) would cause no conflict if one moved in with one's prospective mother-in-law. She, furthermore, "who no longer is young, has seen south Greenlanders from time to time and she has conceived such love of their southern language that she ever likes to hear them talk" (p. 283). Thus Sinngajik and his travelling companions, since the narrator uses the plural "they", moved straight into the widow's house. This influx would necessarily entail an extension of the house, as is demonstrated by the communal house on the site.

> Sinngajik decided to go caribou hunting with his comrades at the settlement: "When I this afternoon went out and stood *outside our door and looked down* ... As I would not merely look at them *I went down to them* ..." (p. 289).

The situation of Illorpaat 9 corresponds to the transmitted tale, also after the new people had moved in.

> When Sinngajik's mother-in-law dies in his fourth winter at Illorpaat (according to the story) he wants to move to Kangeq: "The wife looked at him and replied: 'You will know that we have never interfered with any of your wishes, right from the moment you came here. So do what you wish, but it would be best to move while we can still build a house and the earth is not yet frozen. When I leave this settlement I shall not help thinking of my old mother, but it will be nothing but she who ties my thoughts to this place'. Marnilik said this and her husband replied: 'You shall know that, when there will be times when your thoughts are every on that which you cannot forget, then you may visit her, *even though it is only her grave you visit; and that you may do as often as you like*' " (pp. 299-300).

The youngest house at the site was thus occupied for a short time only, which can be demonstrated by archaeological means. Furthermore, in the house passage of the oldest house a middle-aged woman was found buried, sewn into skins in the pagan manner. No other graves have been found round Illorpaat 9. It is not certain whether archaeology can confirm the story on this point too, but it would be hard to find a better proof.

The find material from the archaeological investigation is comparatively sparse and supports the evidence of the sources that the occupation period was brief. Sinngajik and Marnilik have a son while they live in this house. It would be tempting to see the kayak model, **igd 1556**, as a toy for Tusilartoq. The two objects of European origin from this site, a knife blade with handle (**igd 1544**) and bottle glass do not point unambiguously to Hope Colony, but rather to contacts with the Dutch whalers with whom Sinngajik, according to the story, had contact (Gulløv & Kapel 1979/80: 361; Rasmussen 1924: 321-329). The iron knife blade may, however, be of Norse origin.

When Hans Egede travelled south along the coast in 1723 to look for the Norse Eastern Settlement, he noted in his diary on meeting the south Greenlanders that "here people's pronunciation and language change somewhat and becomes less comprehensible than the language among those that live with us and with whom we associate daily" (1925: 95). Egede had heard Greenlandic spoken by, among others, the west Greenlanders Kusach, Navia and Pooq, who were then at Hope Colony. The

south Greenlanders had at that time not yet settled at Hope Colony and Sinngajik's mother-in-law can still "conceive love of their southern language, that she ever likes to hear them talk".

Illorpaat 9, with the two habitation phases, must thus be presumed to have been occupied in the period 1690-1710 and probably until close to the time of colonization in 1721.

Illorpaat 13

This communal house is situated at a small inlet a distance from the more westerly central Illorpaat and was probably not a part of this community. Its situation and contents also indicate that it was somewhat later than Illorpaat 9. At least two rebuildings of the original house can be demonstrated. The spindle whorl, **igd 501**, indicates a date after 1759, the year the Brethren mission introduced sheep into Neu Herrnhut and when the spinning technique spread. Dog's hair was also used and this theory is confirmed by the many dog bones and skulls found inside this site. The merchant Lars Dalager noted in his description of Greenland in 1752 that the Greenlanders for want of caribou skin for clothes and bedcovers used dog skins, "which all south Greenlanders must do" (1915: 14). The spindle whorl thus suggests that the house was first built in the time after 1740, when large numbers of south Greenlanders came to Neu Herrnhut.

Gunflint and lead bullets from this site also indicate habitation in the second half of the 18th century, when there was very intensive hunting of caribou in Ball's Revier, where there "are as many caribou as in the whole of the rest of Greenland" and where people now "have been so well provided with guns and gunpowder" (*ibid.*).

The use of clay pipes spread across the country in the last third of the century, but they have not been found in Illorpaat 13 and the site must thus be presumed to have been occupied in the period 1740-70.

Itissaalik

The site is marked as a winter-house on Andreas Gerner's map of 1731 (Gulløv & Kapel 1979: 26-27). The locality is called "Narrak's Island", which indicates that the island would have been inhabited in the earliest, European colonization period.

Two communal houses can be demonstrated here. They are divided from each other by a pronounced growth horizon. A house passage lay below the earliest communal house and demonstrated that there had been a house there previously, which had been partly destroyed by the later structures. The two communal houses differed in two ways from the communal houses investigated at Illorpaat. Firstly, they were of twice the width (6 m). Secondly, the European material constituted *c.* 60% of the total number of recorded objects. For comparative purposes this is the corresponding distribution of European objects from Illorpaat: 4% in Illorpaat 9; 3% in Illorpaat 3, house I; 12% in Illorpaat 3, house II; 28% in Illorpaat 3, house III; 55% in Illorpaat 3, house IV; 14% in Illorpaat 13.

There is thus an expected increase in European objects throughout the 18th century. This does, however, not mean that Itissaalik must be dated to around 1800, as the objects from the two communal houses are here reckoned as one group. A jetton, a turned bone button and a black glass button were similarly found in Hope Colony (Gulløv & Kapel 1979: 86, 121), but this does not prove any direct contact, since a pewter spoon of 1739 found in the earliest communal house precludes contemporaneity. We may now presume that the remains of the site below the later communal

houses can be associated with the name of "Narrak's Island" and the "savage's house" recorded in 1731.

It is difficult to date the first communal house to before 1730. After that year the smallpox epidemic raged in the area and it is most likely that the house was built after 1740 when the south Greenlanders arrived in the district. The cooking niche, which was excavated out in the house passage, is a relatively late architectural feature and this confirmed that the communal house was built towards the middle of the 18th century.

We can now divide the occupation of Itissaalik into the following periods. The earliest demonstrated ruin was observed in 1731, but we know nothing of the structure's layout. Excavation, however, seems to show that this was most likely not a communal house. The first communal house was inhabited towards the end of the century, since the clay pipes found in it are of Danish manufacture, 1758-64 and 1767-98, and a Dutch pipe has been dated *c.* 1775. The two communal houses must have been occupied during the period 1740-1800.

Their size and artefacts, however, indicate that the houses have not only served as dwellings. A discussion of other possibilities follows.

The floor area of the largest communal house is 61 m², which makes the ruin the largest of the communal houses recorded in the Godthåb District. Even compared to the longest communal house on the Kook Islands, which had a length of 18 m and a floor area of 54 m² and was inhabited by south Greenlanders (Gulløv 1983: 99, 102-103), the house on Itissaalik must be described as being very large. It has been suggested, to explain its size, that the house may have served a special purpose, such as a feasting house, *qassi*, with reference to the find of the antler buzzer, **igd 1336** (Gulløv 1988: 195).

The explanation does not, however, take into account the large number of objects of European origin and therefore a comparison most be made with the material found at Illorpaat. Contemporary material was found in Illorpaat 3, house III-IV, covering the period 1750-1800. Illorpaat 9, which pre-dates the European colonization, and Illorpaat 13, which was closely connected with the German Brethren mission are also included in this comparison. The comparison comprises 341 objects from Itissaalik, 574 from Illorpaat 3, house III-IV, 45 from Illorpaat 9 and 422 from Illorpaat 13. The indeterminable and divers objects are not included.

	Itissaalik house II-III 1740-1800	Illorpaat 3 house III-IV 1750-1800	Illorpaat 9 house I-II 1690-1710	Illorpaat 13 house I-II 1740-1770
Hunting	2.4%	9.4%	11.2%	16.3%
Fishing	2.6%	2.8%	4.4%	0.5%
Transport	–	1.4%	2.2%	2.4%
Men's tools	7.3%	8.5%	24.4%	16.1%
Women's equipment	4.7%	3.8%	26.7%	13.3%
Household utensils	12.0%	11.3%	17.8%	19.7%
Personal equipment	4.l%	2.8%	6.7%	3.3%
Religious objects	0.3%	0.7%	–	–
Toys	2.4%	5.8%	2.2%	7.1%
European objects	64.2%	53.5%	4.4%	21.3%
	100%	100%	100%	100%

The distributions show that tools for use in hunting on land and sea are not well represented at Itissaalik and that evidence of the use of kayak and umiaq is completely absent. The proportion of men's tools and women's equipment within these find-groups alters considerably during the century. The number of women's pieces of equipment at Itissaalik does not give the true picture since there is a total absence of tools for treating skins, i.e. *ulos*, bodkins and needles. The group only consists of lamps, a single wick trimmer and a peg. The household utensils also differ from the material in the other structures in that they only consist of cooking pots and sherds and a single tub stave. The personal equipment from Itissaalik mostly consists of indeterminate parts of clothing, some of which is of European manufacture. Religious objects were only found in the two later periods, i.e. Itissaalik and Illorpaat 3, house III-IV. The toys from Itissaalik tell that all generations lived in the house. The proportion of beads in the European material is 52% at Itissaalik, 47% in Illorpaat 3, houses III-IV and 32% in Illorpaat 13.

Considering the large number of goods for use in the treatment of blubber and skins, which the Bergen Company supplied to the country in the period 1721-26 (Gulløv & Kapel 1979: 204-205) and which were later traded at Godthåb (Bobé 1944: 59), it seems surprising that this foreign material does not occur in the excavated structures until late in the 18th century. The explanation may lie in the utility value of the goods in relation to Eskimo technology, which often produced far more efficient articles. In addition, the mobility of the Greenland community may explain why goods received in payment for blubber and skins in the summer did not at once end up in the winter-house which was erected elsewhere. But we cannot explain why the European material made a sudden impact in the last half of the 18th century, shortly before the area was deserted and the market appears to have been saturated with "useless" merchandise.

However, we may find an explanation if we presume the presence in the area of a population group, which still in the last half of the 18th century associated the exotic foreign goods with status and prestige, as has been suggested by the historian Finn Gad (1969: 190). The large proportion of European goods in these structures may thus be explained on the basis of contemporary historical sources.

On 31st December 1786 only pagans from southern Greenland lived on Illorpaat (*cf.* Diarium 1785-94: "Iglorpait wo lautre heyden wohne"). The establishment of the southern colony of Julianehåb in 1775 had not stopped the travelling altogether. As already mentioned, there were also southerners at Itissaalik. They had found delight in woven cloth, felt hats, shoe buckles, clay pipes and a great variety of glass beads, of which 26 types of the known total of 45 were found, 15 of these types manufactured in Amsterdam. In the early part of the century, when the Dutch whalers dominated the market, the commercial assistant in Godthåb made a trading trip to the south and in one place he observed a superfluity of goods: "In one house he counted more than a dozen new brass kettles of various kinds, a multitude of trays, pewter bowls, multi-coloured shirts, trousers, jerseys, hats, yes, even teacups and other trifles hung up as ornaments like in a small shop" (Bobé 1944: 59). These Dutch goods were, however, of inferior quality to the Danish, which gradually replaced them (Dalager 1915: 45, 78).

This parallel of an historic source and an archaeological observation demonstrates that the large communal house at Itissaalik, with its recent south Greenlandic inhabitants and large number of European goods, is a manifestation of status. The many lamps, which were not used in connection with cooking, have consumed a great deal of blubber, which was a luxury, since blubber was needed as payment for European goods. These special circumstances indicate that the rich communal house at Itissaa-

lik also served as a feasting house, *qassi*, for south Greenlandic pagans (Gulløv 1988: 195-197).

Qarajat

Oral tradition also mentions the fjord settlement and its inhabitants' contacts with people on the outer coast. The story of Kivakiarsuk (Rink 1871: 93-95) may be cited as an example of the relations between fjord and sea-coast; all the more as the events in the story can be dated and localized and bring in the settlement Qarajat. Aron of Kangeq told the story of Kivakiasuk to Inspector Rink in the mid-18th century and illustrated it with water colours (Meldgaard 1982: 68-69).

The account first states that "Kivakiarsuk lived at Kangersunek inside the Godthåb Fjord, the only man amongst many women" (Rink 1871: 93). He heard of the excellent hunting at Kangeq and went to stay there for a while, after which he returned home. There in the fjord he once met an unknown kayaker, who invited him to accompany him to an island.

> "He went with him and came to *a large house, inhabited by south Greenlanders*, who related that they had been *on a journey to the north*, but had stopped here, because *they had made enemies*, that is with the Kernekassiks, who lived *on the mainland at Qarajat*. Kivakiarsuk stayed with the southerners and without further ado took the beautiful sister of these brothers for his wife" (pp. 94-95).

The italicized information is well known from the sources cited above in the description of the coastal settlement. This story, however, starts by mentioning Kangersunek as Kivakiarsuk's home. Winter settlements have been recorded in several places in the Kapisillit Fjord behind Uummannaq Island, including one on the isthmus between this arm of the fjord and the innermost fjord with permanent ice, Kangersuneq. A group of ruins here appear as dug-down structures with house passages and lie right out by Kangersuneq (Gulløv 1983: 152,166). The position and the vegetation cover seem to indicate a considerable age for these structures, which were presumably established immediately after the time when the Thule culture can be demonstrated in the Godthåb District.

We also know that the fjord settlement continued right into the 18th century, as the bookkeeper in Hope Colony related on 1st December 1724 that he "in the so-called Pisissarfik Fjord [Kapisillit Fjord] had come to a valley, which was still quite green and without snow, so they would still be able to gather several kinds of berry, which had been there since the autumn, which can not occur elsewhere because the earth is completely covered by snow. The savages, who live there, do not go out to the sea, but live on whales [belugas], seals [ringed seal and common seal] and game which they hunt" (Egede 1925: 152-153, 420). These fjord-dwellers did, however, come out to the outer coast, as Egede noted in his diary several times; the first instance being 8th November 1722 (1925: 59).

Kivakiarsuk also went to the coast, where he saw the large house of the south Greenlanders; the size being emphasized to contrast it with the house types inside the fjord, which were not large. The journey north, from which the south Greenlanders now returned, went up to the whale hunt, as told in the beginning of this chapter. Animosity between west and south Greenlanders, suggested by the remark that "they had made enemies", was well known and documented in the 18th Century, when alliances formed at marriage could eliminate a conflict, *cf.* the southerner Sinngajik, who married a girl from Illorpaat, and the westerner Pooq who wanted a southern girl as his travelling companion on his Denmark trip in 1724. Pooq had at that time also

taken blood revenge to "avenge his brother's death" (Egede 1788: 42). For the situation was that because of "the journeys several marriages were entered, not only with the Greenlanders in the adjoining areas, but also between northerners and southerners, so that many northern bachelors married a southern girl etc. Because of these [relationships] the hatred, which exists between the southern and northern Greenlanders, diminished and although it could not be completely eliminated, a marriage could yet prevent the hatred from breaking out in general enmity. Thus the journeys brought many from the south to the north, and from the north to the south, where they could stay for one year or more with their relatives, brothers-in-law and friends..." (Glahn 1771: 263).

The Qarajat settlement, indeed, possesses all those physical features which were emphasized in the quote from the story of Kivakiarsuk. It is further told that Kernekassik, who lived at Qarajat, also captured Kivakiarsuk's son, thereby escalating the conflict between this fjord-dweller and his southern allies on the one side and the inhabitants of Qarajat on the other. The result was that Kivakiarsuk "went there with his brothers-in-law, killed their mutual enemies and brought his son back home with him" (p. 95).

The 18th-century house type with which we are familiar at the outer coast occurs on the west side of the river; while the earlier house types may be seen along the eastern side, in the form of circular ruins, except the later house 3. The European objects found in the ruins on the eastern site date their habitation to the 18th century. There is thus reason to believe that both house types were in use simultaneously. The occupations were however probably not exactly concurrent.

The reason for the absence of the later house type on the eastern side of the river may be sought in the story's information that all the people on Qarajat were killed: custom decreed that in this event the place could not be inhabited for a number of years. Resettlement did, however, not take place, except in the very much later house 3. Nor was Illorpaat 9 ever re-occupied after Sinngajik's mother-in-law had died and was interred in the ruin.

The later settlement of Qarjat took place on the western side of the river and, with the story in mind, we may very well see it lying with a view across to the ruins of the murdered Kernekassik's and his comrades' houses. This interpretation is supported by the story and by the excavation and is arguably based on an event which took place in the early 18th century.

Pisuffik

The last example is the settlement Pisuffik, *c.* 55km north of Illorpaat. Hans Egede often mentioned this settlement, whose inhabitants had close relations with Illorpaat and the Kook Islands (e.g. 1925: 113f, 130, 149, 190). No archaeological investigations have been carried out at the settlement, which today consists of 31 house ruins spread over seven islands (Gulløv 1983: 136), but we have extensive Danish and German written sources from the 18th century, which have been used for the description below (*cf.* Gulløv 1986).

Imaneq was a well known shaman, who lived on the Pisuffik settlement. His story is told by Aron's cousin Christian (Rink 1866: 310-312) and illustrated with water colours by Aron (Meldgaard 1982: 28-33). The story tells of Imaneq's conversion to Christianity and can therefore be dated to the time around the religious revival in 1768, when Imaneq according to the Brethren mission's church register was *c.* 58 years old (Kirchenbücher 1733-1809). The reason for Imaneq's conversion was primarily that his gifts as a shaman were no longer adequate.

A young girl, who served in Imaneq's household, fell ill and, although he had knowledge of the disease, died. Imaneq consequently lost esteem and had to find ways of maintaining his authority as a leader and shaman. His solution was, according to the story and the church register, to leave Pisuffik with his family and go to Nuuk, Godthåb. He had previously had a vision, in which he had been told that he was to come to Jesus. But the Danish missionaries did not have time to attend to the new arrivals, as the dean, Egil Thorhallesen, was away and Imaneq therefore went on to the Brethren mission at Neu Herrnhut. There he was baptized along with his family in 1769 and the following year he died while staying with his family at Kangeq (Gulløv 1986: 158-159). He was originally a south Greenlander and this people had been dominant in Kangeq and on the Kook Islands since the 1750s, as demonstrated in the examples above.

When Imaneq left Pisuffik with his family the Danish mission acquired the place and established a mission annexe, which operated from 1769 to 1789, after which the settlement was abandoned and never re-occupied. The inhabitants moved north to their kinsmen at Napassoq in Sukkertoppen District, because there were not enough girls of marriable age in the Godthåb District. (*op.cit.*, p.156).

On the basis of this historical dating of the place, we can describe the ruins which are from the period when the settlement was subject to the Danish mission. The ruins are all square and are placed inside the earlier dwellings, whose outlines stand out as communal houses from the time of Imaneq (*op.cit.*, p.168). The house type was, in other words, altered when the Danish mission re-established the place as a mission annexe subject to Godthåb. This means that the composition of families must also have changed from the large extended families in communal houses to smaller family units in square houses.

At Neu Herrnhut, where south Greenlanders had arrived in large numbers since the 1740s, the composition of the family was subject to the Brethren mission's divisions into choirs. The unmarried men and women lived apart and the lack of means of heating eventually led to the building of smaller houses, whilst the organization into choirs was not altered (Israel 1969: 39ff, 46, 47). The ground plans of the new houses at Neu Herrnhut are, however, not square but trapezoid, corresponding to the ground plan of the protective wall around the south Greenlandic tent (Gulløv 1986: 165; Gulløv & Kapel 1983).

It now becomes possible to distinguish the south Greenlandic population that had come into Godthåb District from the original population by means of the house structures, since the two groups had associated themselves with each their mission. This observation will emerge from the following survey of the settlement patterns in Godthåb Fjord and the frontal stretch of coast.

Settlement patterns in Godthåb District

The following is a resumé of the settlement in the region, based on the evidence set out above and the previously presented archaeological investigations. A detailed description of the recorded settlements has already been published in a monograph (Gulløv 1983). The present topic is the winter settlement from where the summer journeys started.

The earliest winter-houses

The recorded ruins can be dated to 1300-1734 A.D. This period is determined by C-14 dates from the midden in Kangeq and the smallpox epidemic in the winter of 1733-34, when only *c.* 10% of the original population in Godthåb Fjord survived. The number of winter-houses is marked on the map (Fig. 111), together with those localities where midden layers with a thickness of more than 1.5 m have been measured. Archaeological investigations have been carried out in eight places, all described above. The summer sites are not marked, but several of the known inland camp sites can be shown to have been in use (*cf.* Gulløv 1983: 205).

The icebergs from the glacier at the bottom of Kangersuneq fill the inner fjord and often drift out to Qoornoq, which partly explains the absence of settlement in the

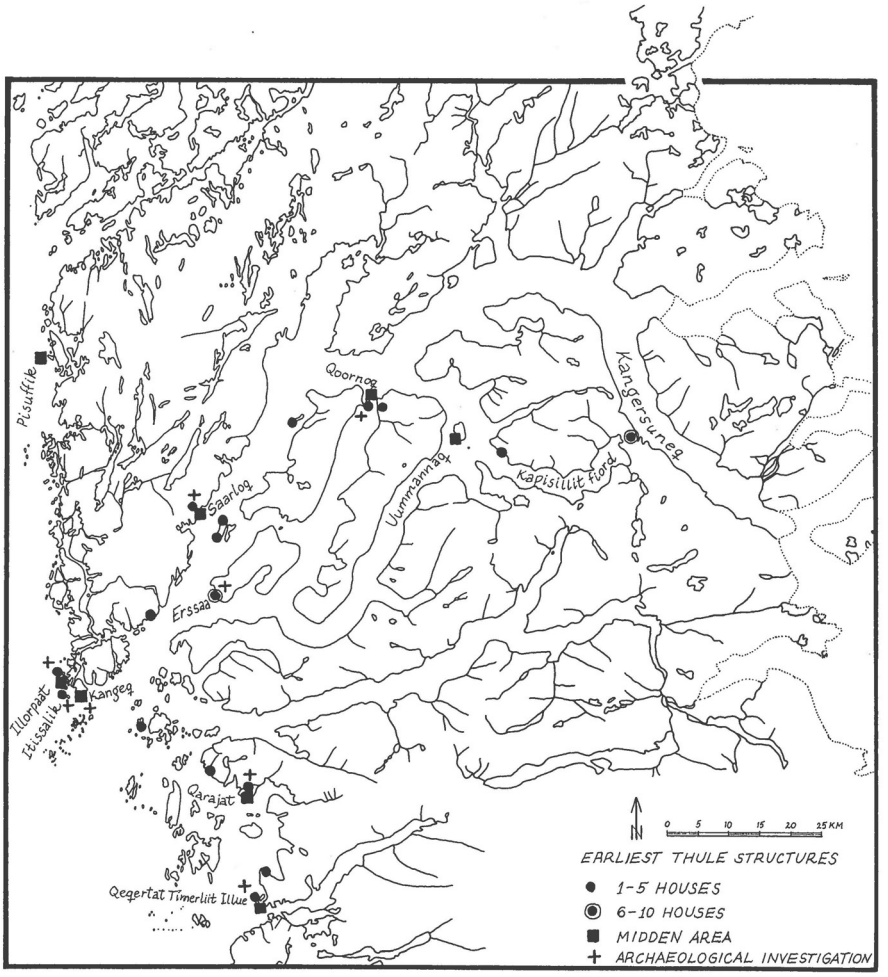


Fig. 111. *Distribution of settlements with house ruins and middens from the Thule culture during the period 1300-1734.*

innermost part of the fjord. The many Norse farms recorded along the east coast of Kangersuneq (*cf.* Roussell 1941) indicate that there was less ice in the fjord in the period of Norse settlement (Weidick 1982: 239). The settlement on the isthmus by the bottom of Kapisillit Fjord was probably established prior to the climatic change and the advancing ice in the 17th century, which made settlement difficult in this innermost region (*ibid.*, pp.241-242). After this time we must look for fjord settlement around Uummannaq Island where the firm winter ice had reached, as well as further out in the fjord.

In Ameralik Fjord there is, as yet, no evidence of any winter settlement from this earliest period of the Thule culture. The topographical conditions of steep mountainsides inland of the point where the fjord divides preclude settlement and further out only later house ruins have been recorded. The caribou in the area were exploited during the summer, which has been demonstrated by excavations at the Norse farm, Nipaatsoq. But natural resources in Amaralik Fjord do not allow for settlement of a more permanent nature (*cf.* Gulløv 1983: 203, 217).

It is therefore on the stretch towards the middle fjord system i.e. Kapisillit Fjord, where one may expect to find the densest winter settlement. Uummannaq Island here lies on the border between the part of the fjord that is open in winter and the ice-bound Kapisillit Fjord, and Qoornoq is situated by an important tidal current. Archaeologically, the earliest fjord settlement may be located in this area. But it has not been possible to determine whether houses with circular ground plan were preferred to houses of a different construction, e.g. double houses or the like. Excavation at Erssaa demonstrates that several different house types may co-exist.

The house types at the outer coast are not known, but, according to John Davis, there was plenty of wood for housebuilding in the 16th century and the amount of building seems at times to have been comparatively extensive. This should be seen in relation to the living resources, which in their variety provided the best conditions for more permanent settlement.

Caches were built close to the winter-house as a precaution against hard times and the recording of these can indirectly shed light on the distribution of the resources. In the coastal region so much was built that the earlier settlement is overlaid by later structures. But in the outer and inner fjord we may make the following survey on the basis of recorded sites (Gulløv 1983):

Outer fjord	Qarajat area (63V1-I-8 & 16)	6 houses	10 caches
	Outer Godthåb Fjord, incl. Erssaa (64V1-II-9; 64V1-III-40)	8 houses	4 caches
Inner fjord	Saarloq area [Ball's Revier] (64V1-I-11; 64V1-II-14,18 & 20)	8 houses	0 caches
	Qoornoq area (64V1-I-8 & 9)	4 houses	0 caches
	Kapisillit – Kangersuneq (64V2-III-9 & 45)	13 houses	0 caches

Each house in the outer fjord has on average one cache, while none are recorded in the inner fjord. If this is compared to the archaeological finding we see that there are only caches on the latest sites, which belong to the early time of contact (*cf.* finds of glass beads).

Communal houses

This house type is dated to the period 1690-1807. The first date is chosen because it is the closest we can get to a dating of the earliest communal house in Godthåb District, i.e. Illorpaat 9. 1807 is given as *terminus ante quem* for this house type in the Godthåb District because the much travelled geologist Karl Ludwig von Giesecke in 1807-10 noted, about all the sites he visited and where today only communal houses have been recorded, that now only ruins of Greenlandic houses remained (Giesecke 1910: 46-47, 136-158, 166-177, 189-193, 235-242, 253-260, 266-278; Gulløv 1983: 187-198).

The settlement pattern (Fig. 112) is the same as that of the earliest winter-houses. The outer coast and the area up to Qoornoq are still preferred. There are *c.* 140 communal house sites in Godthåb Fjord, Ameralik Fjord and along the adjoining outer coast. 100 ruins are recorded along the coast north and south of the joint mouth of Godthåb and Ameralik Fjords, while there are 40 inside the fjords. Ten localities have been excavated, all are discussed above.

29 communal houses with a cooking niche in the house passage have been recorded, a feature which in the 1760s was described as characteristic of the south Greenlandic dwelling (Glahn 1771: 197-198); 22 of these lie inside the fjord. 14 of the communal houses inside the fjord are so badly eroded that only the inner ground plans can be observed and nothing may be said about any cooking niche. Cooking niches in the house passage, however, appear to be a fairly characteristic feature in the fjord's communal houses. The historical source (Glahn, *op.cit.*), as well as the results of excava-

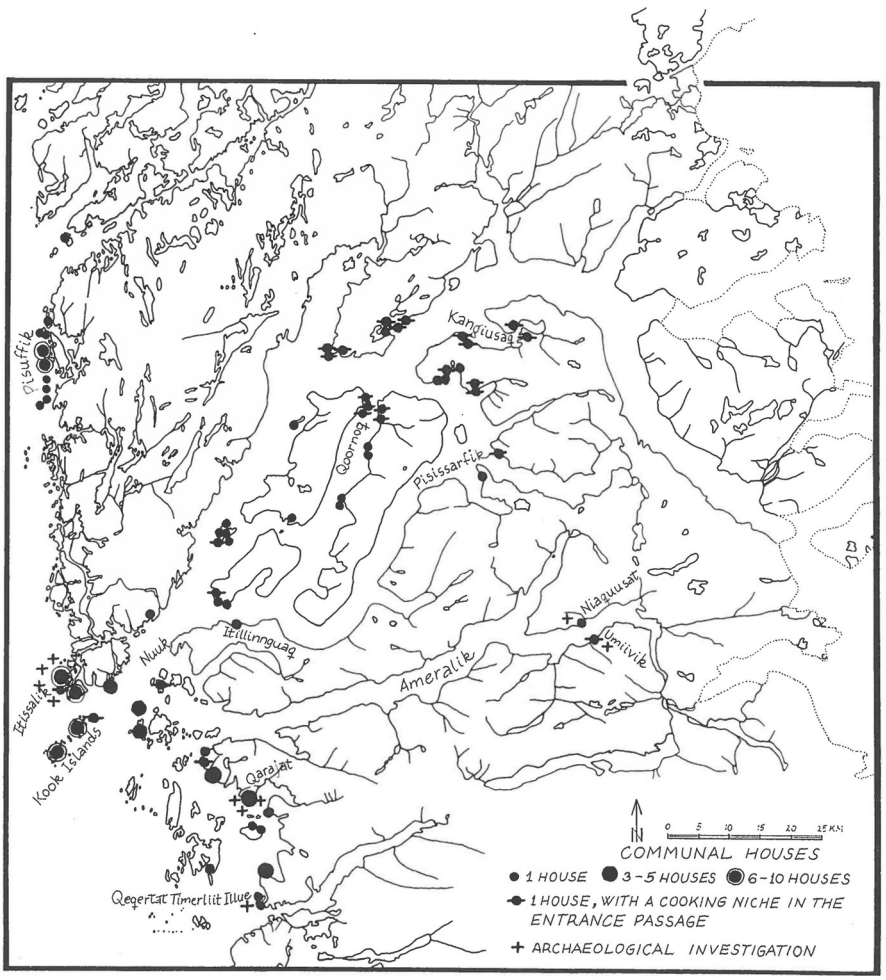


Fig. 112. *Distribution of communal houses in the period 1690-1807.*

tions at Itissaalik on the coast and Umiivik in Ameralik Fjord are in accordance that the cooking niche is of south Greenlandic origin and date it to a comparatively late stage in the communal house period.

In contrast to the communal houses with cooking niche, the earlier communal houses are comparatively narrow and lack a cooking place. This applies in the early 18th century to houses built by immigrant southerners, as well as by the original population.

In order to establish an historical dating of the communal houses in Godthåb I refer to the following sites, which are described in the historical or the ethnohistorical source material.

Archaeology has revealed early communal houses without cooking niche on Illorpaat 3 and 9. Historically it may be demonstrated at Itillinnguaq north-east of Nuuk, where the Brethren mission's first convert, the southerner Samuel, lived until his death in 1741 and where the site has not been occupied since (Giesecke 1910: 158). The ruin of a *c.* 10m long communal house may be observed in this place (Gulløv 1983: 58-59). On Kook Islands lies the 18m long ruin of Kannasuaq's winter dwelling. Kannasuaq adopted Samuel's nephew, who thereby escaped the blood vengeance which threatened Samuel after his marriage to Singajik's daughter and consequent association with her imperilled south Greenlandic brothers (*cf.* above). The house must have been in use before Kannasuaq's death in 1756 (Gulløv 1983: 99, 103, 208; Kirchenbücher 1733-1809).

Archaeological investigations have revealed late communal houses with cooking niche at Itissaalik and at Umiivik in Ameralik Fjord. Historically, such features can be demonstrated at Pisissarfik, west of Uummannaq Island (Gulløv 1983: 156-157), where the Brethren mission established a fjord station in 1751 and where the first interments took place in 1754 (Thorhallesen 1914: 43-44; Giesecke 1910: 155). The region north of there, around Kangiusaq, was also inhabited by southerners, associated with the German mission (Giesecke, *ibid.*).

It now seems probable that it was not until the mid-18th century that the communal house came to be the dwelling-house type inside the fjords, that it was largely south Greenlanders associated with the German Brethren mission who lived in these houses, and that they were built with cooking niches. The communal house of *c.* 1700 A.D. on the outer coast was, however, inhabited by southerners as well as by local Greenlanders. We may therefore presume that the spreading into the fjords of this house type took place after the epidemic in the winter of 1733-34 had exterminated the larger part of the original fjord-dwellers and the area had therefore become accessible to the immigrant southerners. This view is indeed confirmed by Hans Egede's diary, which on 26th July 1735 notes that the southerners sailed out of the fjord after having cut soapstone for lamps and cooking pots (1925: 292).

The communal houses are concentrated in three places, Kook Islands, around Hope Island and further north by Pisuffik. In all three places south Greenlanders are known to have constituted a considerable section of the population (Thorhallesen 1914: 31; Gulløv 1986). However, cooking niches in the house passage are only found in two places, which confirms that the first communal houses were built here. In the subsequent and smaller dwellings by the coast cooking niches occur nearly everywhere where there had been communal houses. This subsequent house was frequently built inside the communal house, re-using parts of the earlier walls. There is thus support for Glahn's information of the 1760s (*op.cit.*), that the cooking niches were intended to save on blubber by using heather and willow, which indeed are found inside the fjord.

Fridtjof Nansen made the same observation around a century later, when he after

crossing the inland ice overwintered at Godthåb and spent some time in the villages, among others Kangeq: "On the west coast modern civilization has brought changes, in that the food now is often cooked in special rooms with a fireplace, which have been built as a branch of the house passage. For fuel in these they use peat or gull-mounds, which is a very elevated word for old dried gull-dung" (1891: 76). Nansen's explanation is correct in ascribing the change to modern civilization and he further mentions that he has not observed the cooking niche on the east coast (*ibid.*). Here we also get Glahn's remark explained, about saving on the blubber. This was caused by the enforced civilization and the economic necessity to sell blubber (*cf.* Gad 1969: 411). The cooking niche had thus come to stay and it is from this time found in nearly all the 19th century structures, i.e. the square and the trapezoid houses.

Caches which can be associated with recorded communal houses in defined geographical areas, marked with preservation order number (Gulløv 1983) are:

The coast	Kangeq-Illorpaat area (64V1-III-29,32, 33, 37 & 38)	18 houses	18 caches
	Kook Islands (64V1-III-9,10,11,12,13,14, 15,17,18,22,23,25 & 51)	18 houses	9 caches
	Pisuffik area (64V1-IV-1,2,3,4,5,6, 7,8,9,10,11,13 & 15)	19 houses	39 caches
	Raven Islands south of Nuuk (64V1-III-3,4,5 & 6)	10 houses	11 caches
	Qarajat – Qeqertat Timerliit Illue (63V1-I-6, 8,9,12,14,16 & 20; 64V1-II-2)	17 houses	14 caches
The fjord	Godthåb Fjord [Ball's Revier] (64V1-II-6,8, 9,19,20 & 21; 64V1-I-11)	11 houses	4 caches
	Qoornoq area (64V1-I-4,8,9,26 & 27; 64V1-II-24 & 26)	14 houses	2 caches
	Kangiussaq (64V1-I-3; 64V2-IV-2 & 3)		
	Uummannaq area (64V1-I-1, 2 & 41; 64V2-III-9 & 10; 64V2-IV-1)	8 houses	2 caches
	Ameralik (64V2-III-16 & 22)	2 houses	0 caches

On average the communal houses in the coastal region have 1.1 cache and in the fjord 0.3 cache. Of these the communal houses with cooking niche in the house passage are:

The coast	Kangeq-Illorpaat area (64V1-III-32,33 & 38)	4 houses	6 caches
	Kook Islands (64V1-III-17 & 51)	2 houses	4 caches
	Raven Islands south of Nuuk (64V1-III-5)	1 house	0 caches
	Qarajat – Qeqertat Timerliit Illue (64V1-II-2)	1 house	0 caches
The fjord	Godthåb Fjord [Ball's Revier](64V1-II-9 & 19)	2 houses	0 caches
	Qoornoq area (64V1-I-8,9,26 & 27)	8 houses	0 caches
	Kangiussaq (64V1-I-3; 64V2-IV-2 & 3)	4 houses	2 caches
	Uummannaq area (64V1-I-41; 64V2-III-9; 64V2-IV-1)	4 houses	1 cache
	Ameralik (64V2-III-16)	1 house	0 caches

The communal houses with cooking niche in the coastal region have on average 1.3 caches and in the fjord 0.2 cache.

Later winter-houses

These houses are dated to the period 1754-1905. Houses smaller than communal houses are first mentioned in the written sources in 1754. In this winter there were only seven small houses at Kangeq and very much fewer people than earlier (Cranz 1770,II: 812). Nothing is said about the shape of the houses, only that they are small or smallish. This year, as already mentioned, Kangeq became a branch of Neu Herrnhut and two years previously it had been the home of about 100 Greenlanders, mostly from the south. Cranz writes that 14 large Greenlandic winter-houses had been counted (*op.cit.*, p.739), but does not relate whether the houses were counted in Kangeq itself or in the area which had become the Brethren's new mission field. Cranz was not in Greenland himself at that time, but was there in 1761-62 and he had his information from "Diarium Neuherrnhut 1752-61", which tells that the missionaries had visited "the outermost land by the sea". There is no mention of the later winter-houses after 1905, when the last family, who had lived in one of the rebuilt communal houses, left Qarajat.

The settlement pattern shows the distribution of the two house types which emerged when the communal house ceased to be winter housing (Fig. 113). Archaeological investigations have been carried out at five sites, all described above. These types are either houses which were formed by shortening the communal houses with dividing walls, so that the living space has been made smaller, giving them a square shape, or else houses with a trapezoid ground plan. The latter type arose early in the

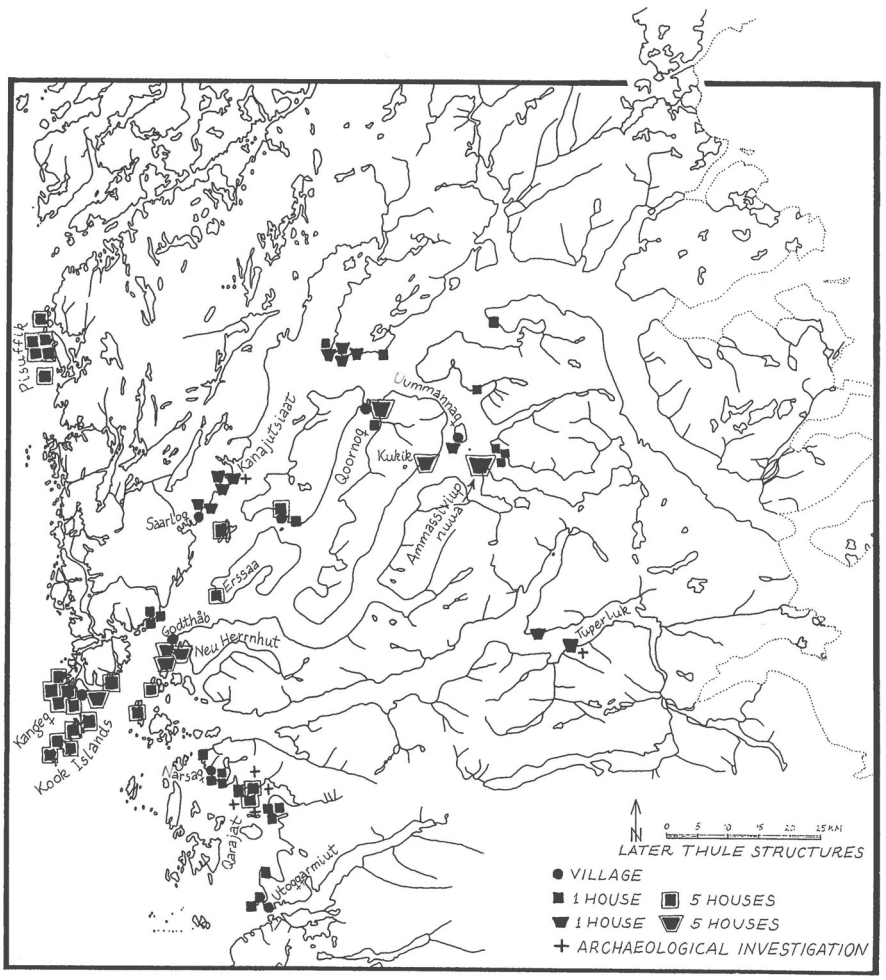


Fig. 113. *Distribution of the later winter-houses in the period 1754-1905. Permanent settlements, where the number of the ruins is not marked, are indicated by a closed circle.*

Godthåb District and has been described as a particularly Greenlandic structure (*cf.* Gulløv 1983: 211-212). The ground plan originates in the trapezoid tent base (Gulløv 1986: 165) whose shape came to form the framework of a smaller dwelling. This was first described at Neu Herrnhut, where insufficient means of heating in 1783 is said to have resulted in dimishing house sizes (Israel 1969: 46-47). There seems to be a connection between the two house types and the inhabitants' association with Godthåb and Neu Herrnhut.

Ruins survive at Pisuffik of houses which have been inhabited by Greenlanders associated with the Danish missionary post of 1769-89. They are all square. The oldest house at Sassivik, a couple of kilometres north-west of Kangeq (Gulløv 1983: 109-112), is trapezoid and was in 1786 inhabited by a single family (Diarium 1785-94). Sassivik is mentioned in 1810 as the colony's net-fishing place (Giesecke 1910: 271).

In Ameralik Fjord the trapezoid site at Tuperluk is known to have been occupied in 1852. Here ammassat (capelin) were caught with scoops in the spring, and harp seals were hunted, many of them caught by the local Greenlanders (Giesecke 1910: 253-254), as could be demonstrated by the archaeological finds there. North of here, on Ammassiviup nuua at the mouth of Kapisillit Fjord there are also trapezoid dwellings, which were occupied during spring in connection with ammassat fishing (Gulløv 1983: 157,166). According to Giesecke these dwellings were tents (!) (1910: 156-157). West of here, at Kukik, a small settlement with trapezoid houses has been recorded. This was abandoned in 1861, when the inhabitants moved to the Brethren mission's newly established station on Uummannaq Island (Gulløv 1983: 72).

Inside the fjord in the 19th century the trapezoid house was erected in places where there were particular and seasonal resources, e.g. ammassat and harp seal. Similar temporary structures are well known in the eastern Arctic regions and are described as autumn-houses, *qarmat* (Mathiassen 1928: 136-138), but as at Neu Herrnhut they are also described as winter-houses (Park 1988: 163-175).

The earliest *qamat* in Godthåb District can be dated to the 1780s. This was shortly after the Board of Den Kongelige Grønlandske Handel had blamed the mission for the continued "crowding together" of Greenlanders at the colony (Gad 1969: 479-481). However, if the Greenlanders at Neu Herrnhut were allowed to move out to the hunting grounds in the district, then the social basis of the Brethren mission, the division into choirs, would dissolve and therefore they chose to keep a very low profile on the subject (*ibid.*). One solution to the problem was to permit the Greenlanders to move out into temporary dwellings, which were erected where the seasonal resources could be exploited, e.g. the spring migration of ammassat and harp seal. This form of housing was phased out as the Brethren's stations multiplied. For example, when the mission station on Uummannaq Island inside the fjord was established in 1861, the settlement at Kukik was abandoned. Several of these temporary dwellings had also been occupied in winter, but had been abandoned because the condition of the ice for net-fishing was insecure (Giesecke 1910: 260). The characteristic feature of these settlements is the extensive use of caches, as can be seen in the following survey.

Recorded trapezoid houses (Gulløv 1983; Gulløv & Kapel 1983):

Mission stations	Neu Herrnhut	(64V1-III-1)	16 houses	0 caches
	Uummannaq	(64V1-II-28)	5 houses	0 caches
Temporary sites	Sassivik	(64V1-III-30)	1 house	0 caches
	Illunnguit	(64V1-I-8)	5 houses	0 caches
	Ammassiviup nuua	(64V2-III-50)	5 houses	0 caches
	Tuperluk	(64V2-III-15)	1 house	0 caches
Winter sites	Kanajutsiaat	(64V1-II-16 & 17)	4 houses	9 caches
	Nuugaarsuk	(64V1-I-6, 7 & 26)	4 houses	0 caches
	Kukik	(64V1-II-27)	4 houses	4 caches
	Nuua (in Ameralik)	(64V2-III-2)	1 house	1 cache

On average the winter sites have 1.1 cache per house.

The settlement pattern ended in the 19th century with the introduction of smaller house types, which replaced and temporarily coincided with the communal form of living. The reason for this change lay primarily in dependency on the colonial economy. The trapezoid houses were originally temporary dwellings for the Greenlanders who were associated with the Brethren mission. The square houses were built on and by the original winter sites, which in the 19th century became permanent villages, e.g. Utoqqarmiut, Narsaq, Kangeq, Saarloq, Qoornoq and Uummannaq (*cf.* Gulløv 1983: 218-222).

Summary

The settlement patterns described above indicate that the population generally settled on the same sites throughout the period when the Thule culture can be observed in Godthåb District. The choice of site was based on suitable topographical conditions and a stable supply of resources. These prerequisites existed at the inhabited sites along the outer coast and on the stretch of fjord as far as Qoornoq and the permanent winter-ice at Uummannaq Island. The changes to the house types cannot be explained exclusively by ecological circumstances, since the types were introduced into the area from outside, *cf.* the communal house's association with south Greenlanders and the journeys to whale hunting in the north. The permanent settlement was the result of the Greenlandic community's economic dependence on the Europeans in the country and must be described as a new form of adaptation. After this time the Thule culture no longer functions as an analytical concept.

Winter-houses in South West Greenland. Origins, form and function

In chapter II it was established that the different house types described from the Thule culture were the result of the choice of material and that their form and function cannot exclusively be explained as an adaptation to local resources. The following seeks to discuss the origins of these house types and to explain how they changed into the communal house type.

The earliest winter-houses in Godthåb District are dated to the period 1300-1734 AD, but it is not possible to establish any particular chronology of the house types. The types have been found in other parts of South West Greenland (*cf.* Mathiassen 1931: 56-59). The difficulty in attempting to use the house plans for dating in western Greenland is obvious, since the ground plans may be circular, have right angled corners or be combined into several rooms, and the hearths may be situated inside the house, as e.g. in Disko Bay until the mid-16th century (*cf.* Mathiassen 1934: 170-172). This variety thus indicates that the houses in western Greenland were constructed according to principles, whose origins must be sought elsewhere. The written sources alone cannot clarify this question and the archaeological sources must therefore come into play, primarily those from the Thule district at the gateway to Greenland (Holtved 1944, 1954).

Origins

It has been known for a long time that houses constructed from whale bones, with a circular or rounded ground plan were the earliest in western as well as eastern Greenland and that they were succeeded by houses with straight sides (Mathiassen 1936: 114ff). The original typological chronology did not entirely stand up after the discovery of angular dwellings at Ruin Island in the Thule district, the use of whale bones in its constructions (Holtved 1944) and the dating of this phase on Ellesmere Island to the 13th and 14th centuries (McCullough 1989). But the earliest Thule culture phase in the eastern Arctic region (i.e. "early classic Thule") with its rounded and multiple-roomed houses still pre-date the Ruin Island phase (Morrison 1989: 52, 54-56). The question is, however, whether the Ruin Island phase can be related to the Thule culture and its house types in the Godthåb District, which are dated to begin in the early 14th century.

The four-sided houses in Thule

Holtved (1994,II: 101) thought he could demonstrate the presence of a distinctive feature from the Ruin Island phase's houses, i.e. the open hearth situated in a niche inside the house, in houses in the Disko Bay, in the Julianehåb District and in a single house at Kangaamiut north of Godthåb (*cf.* Mathiassen 1934: 40, 45, 46, 132, 136, 142; 1936: 60, 61; 1931: 16). Since Holtved had also found Norse artefacts in the Ruin Island houses, he concluded, on the basis of certain architectural similarities between these north Greenland houses and ruins in Julianehåb District, "that there must have been a fairly rapid migration southwards" (*op.cit.*, p.105). The four-sided houses with cooking niche in the Disko Bay could hardly be any earlier than 1300 A.D. (*op.cit.*, p.100-101), unless the Norsemen had themselves been in the Thule District, which

Holtved thought difficult to prove (*ibid.*). The theory of a Norse presence in Thule has, however, been discussed again, subsequently to the investigations of the Ruin Island phase on Ellesmere Island (*cf.* Schledermann 1980; Arneborg 1991), although the possibility of architectural influence has not been admitted.

The indoor, open cooking niche has not been found in Godthåb District and it is difficult to refer to it, since there are houses with and without cooking niches on Ruin Island; the former being the most common. Corresponding architecture – though with a lamp niche instead of the open hearth – is furthermore found in the houses at Cape Kent north of Thule, which Holtved dates to the 13th Century (*op.cit.*, p.39, 42ff.) and where two C-14 datings of, respectively, arctic willow and caribou antler are calibrated to the periods 1235-1260 and 1300-1380 (K-4468 & 4469).

In the Ruin Island phase harpoon heads were found, some of which had their origins in the Bering Strait Punuk culture (Holtved 1944,II: 150). In the Cape Kent houses there were harpoon heads, some of which are only found in the east Canada and Greenland area (*op.cit.*, p.67). But in both places the houses were built with almost the same ground plan and can be dated to the 13th and 14th centuries. The building custom must thus be sought primarily outside Greenland, and in the areas to the west, where there is a plentiful supply of wood, there is a long traditon of building houses with straight walls and right-angled corners, e.g. in the MacKenzie area (MacNeish 1956; Yorga 1980) and in North Alaska (Anderson 1984: 80ff; Larsen & Rainey 1948: 45; Larsen 1982: 113).

Discussion of the architecture on Ruin Island and Cape Kent

In the cooking niches of the Ruin Island phase there were thick layers of cinders from the burning of material with high blubber contents and the inside, stonebuilt meat niches were full of blubber and fatty meat supplies (Holtved 1944,I: 72). Whale ribs had been used in the roof construction. Holtved consequently decided that the Ruin Island phase represented an apparently intensive hunting of whales, whose origins should be sought in the west (1944,II: 155). Holtved did not in 1944 succeed in establishing a chronology which explained the many variations in shape and placement of the open hearth in the houses in and outside Greenland (*op.cit.*, pp.99-103, 155). He had to confess that "it becomes more difficult to derive at any rate the early Thule culture from the old Alaska cultures. It simply cannot be done" (*op.cit.*, p.165).

The investigations of the Ruin Island phase on Ellesmere Island have refined Holtved's view and the examination of the new material concludes that "thus, a model of several "pioneering" groups from a non-uniform cultural base in Alaska appears to be more accurate than the simplistic two-stage expansion model of Thule culture migration" (McCullough 1989: 302). Holtved wrote 45 years earlier about the origins of the Ruin Island phase, "it was people from the west with Punuk culture who wandered eastwards and on their way encountered the already developed Thule culture. They did not allow themselves to be quite overwhelmed by it, however, as witness the fact that the unmistakable Punuk stamp of the harpoon heads persisted all the way to the Thule District. In actual fact we have evidence from Alaska [Collins 1937] that the Punuk culture extended northwards from Bering Strait; but where it encountered the Thule culture – already in North Alaska or farther east – cannot be decided at the moment" (*op.cit.*, p.151). Holtved's conclusion on the Ruin Island phase, its origin and its dating in relation to earlier Thule culture periods is still valid (*cf., op.cit.*, p.113). But we now also know that the Ruin Island phase is one among several influences which helped to shape the Thule culture in Greenland.

The Ruin Island phase in Thule District and on Ellesmere Island in the 13th and

14th centuries is characterized by intensive whale hunting. The open cooking niches in the houses show that in this period there were ample animal resources (*cf.* McCullough 1989). The same must be presumed to have been the case in Disko Bay when the open cooking niches came into use, but this does not presuppose that the Ruin Island phase was physically present.

The Cape Kent houses with their straight wall-courses have a more regular ground plan than the houses from the contemporary Ruin Island phase. Other features, which distinguish Cape Kent from Ruin Island, are the characteristic niches inside the houses, where the lamp was kept, and the absence of traces of open hearths. Their ground plan, seen in conjunction with Holtved's supposition of incipient whale hunting on Cape Kent (1944,II: 70), does however point to an origin in the western Arctic area, like the case of the Ruin Island houses cited above. The flat harpoon heads are only found in the eastern Arctic, which may indicate that Cape Kent is later than the Ruin Island phase, always presuming that the architecture was of western origin. Archaeological investigations undertaken after Holtved's results were published can, however, shed new light on the origins of the Cape Kent architecture.

The symmetry of the regular ground plans (e.g. Holtved 1944,I: 18) is a feature also found in dwellings with similar circumference and size from late Dorset (Maxwell 1985: 154-155, 242), and it is also there that we must seek the prototypes of the flat harpoon heads. This concurrence of dwelling types and object types has been demonstrated in north-eastern Greenland, where Holtved sees a clear parallel between the four-sided houses and Cape Kent (1944,II: 108), an observation supported by Meldgaard on the basis of archaeological investigations (Bandi & Meldgaard 1952: 30). The siting of stone-built lamp niches near the entrance has been demonstrated all along the north-eastern coast down to Kangerlussuaq (*cf.* Thostrup 1911: 192; Larsen 1934: 56, 61; Glob 1935: 80; Ryder 1895: 298; Larsen 1938: 15, 24).

By pointing to parallels with the late Dorset architecture in eastern Canada, the significance of the cultural tradition for the interpretation of Cape Kent becomes obvious. Holtved was himself aware that specific cultural features had determined the various house types and, as a significant example, cited the Eskimo feasting-house, *qassi*, whose origins were to be sought in Alaska and whose ground plan in the eastern Arctic could be both square and circular (1944,II: 98; Gulløv 1988).

No direct architectural connection can, however, be demonstrated between the 13th and 14th century rectangular houses in Thule District and the houses from Godthåb District, described above, which all had circular or rounded ground plans, until the rectangular communal house turns up at the end of the 17th century. The large amounts of driftwood demonstrated at the bottom of the archaeological stratigraphy on the west coast between Upernavik og Godthåb (*cf.* chapter II), does not appear to have influenced the ground plan of the winter-house. It must thus be stressed that the cultural tradition played a greater rôle in the architecture of the Greenlandic winter-house than did the available building materials.

Rounded house types in South West Greenland

The rounded houses in Godthåb District had one or two rooms, e.g. at Erssaa and Qarajat, and both forms could be found on the same settlement. In the double houses the platforms were placed at right angles to each other. Holtved found this feature on Inuarfissuaq, in the oldest houses in Thule District (1944,I: 32ff, II: 103). In the Disko Bay and Julianehåb District the platforms in the double houses were placed parallel along the back wall (Mathiassen 1934: 38, 40, 44, 136; 1936: 24,61), which Holtved

took to confirm Steensby's theory of a development towards the large, rectangular communal house (1944,II: 96, 103; Steensby 1910: 322).

But the double houses without parallel platforms had been in use at Erssaa around the year 1700 and were there succeeded by the communal house without any previous "development". It is thus difficult to support the theory of a linear development in the Greenlandic architecture. Furthermore, the incentive for this explanation seems to have been a wish to confirm Steensby's theory, that the house type from Point Barrow was the prototype of the four-sided, as well as the double houses in Greenland (1917: 196).

Holtved is aware of this simplified theory and therefore does not think he is able to decide whether the distinctive double house with parallel platforms arose in Thule or in western Greenland (*ibid.*). One such house was examined and described in Frederikshåb District south of Godthåb (Gulløv 1988a: 95-97). A sample of charred bone (K-5190) was taken from the earliest floor of the house passage, which lay 30 cm below the recent turf and 10 cm above the original stepping stones of the house passage. The C-14 date could be calibrated to the period 1330-1395 AD, which with ± 1 standard deviation gave the date 1300-1410 AD. Holtved's parallel houses thus appear to be present in South West Greenland in the period when the Thule culture emerges in the Godthåb District; but the date is earlier than hitherto presumed (*cf.* 1944,II: 103).

Discussion of the rounded housetypes

The clover-leaf shaped ground plan of the so-called Cape York houses was not found among the houses described in the Godthåb District, but have been found north of there in Sukkertoppen District (Frederiksen 1912). These tripartite houses are found on Inglefield Land, where Holtved dated them to the 12th and 13th centuries, e.g. Inuarfissuaq houses 3 and 7 (1944,I: 51, 59, II: 39). A stick of arctic willow from the floor layer in house 3 has been C-14 dated to 1300 AD ± 65 (K-4470) and calibrated to the period 1295-1375 AD, which is later than Holtved's suggestion (*ibid.*). The ruin contained a chess piece of Norse origin and a piece of "native copper" (1944,I: 108-109), which indicates contact with both Greenland's west coast and Canada. Houses with the same ground plan are also found in the MacKenzie area in western Canada (*cf.* MacNeish 1956: 65). In Holtved's opinion, however, this house type, which emerges in Thule District at the same time as the Cape Kent and Ruin Island phase, i.e. 13th and 14th centuries, is not of any great antiquity (1944,II: 97).

Double houses with platforms at right angles are also known in Canada, where heather from a platform in a house of this type, at the settlement Nunguvik on the north side of Baffin Island, has been C-14 dated (S-477) to 1090 AD ± 90 (Mary-Rousselière 1979: 56). Heather is a material which can be dated comparatively precisely, since it was picked fresh. A later calibration (*cf.* Stuiver & Pearson 1993), however, gave a date of 1280 AD, i.e. 1225-1375 AD. The construction of the house corresponds to that of the double houses at Inuarfissuaq on Inglefield Land. The earliest houses here were dated to the 13th century and they are thought to originate in arctic Canada (Holtved 1944,II: 86ff, 148). Another sample of heather (S-516) from the platform in the Nunguvik house's latest settlement phase has been dated to 1235 ± 60 (*ibid.*). This can be calibrated to 1290 AD, i.e. 1275-1305 AD, indicating that the two habitation phases were more or less concurrent, but is still close to the dating (S-766) of the late Dorset house at the settlement (*ibid.*), which is calibrated to 1210 AD, i.e. 1030-1265 AD.

It has been difficult to demonstrate winter-houses of turf and stone in the central

Canadian area after 1300 AD and it has been suggested that they were succeeded by snow houses (Maxwell 1985: 285-286). This suggestion, which is based on the absence of dwellings in Hudson Bay and Foxe Basin, as well as the start of the cold period, which increased the ice in the sea and led to a decline of the traditional whale hunting (*ibid.*), may be problematic. But the demonstrable change in the climate, which led to the Little Ice Age from *c.* 1500 (*op.cit.*, pp. 32, 35), did influence the arctic fauna and thus also the hunting and the settlement pattern. This situation would explain the cessation of settlement in Thule District from *c.* 1600 (Holtved 1944,II: 40), after which time the population appears to have concentrated in the southern part of Greenland. It is also now (i.e. in the 15th century) that the population increases in Godthåb District and the Thule culture is recorded at Illorpaat.

Houses with a rounded ground plan can be dated early in the eastern Arctic and seem to have been among the earliest in Thule District. This architecture appears in South West Greenland at the same time as the 14th century Thule culture can be demonstrated there. We cannot point to any architectural parallels with this house type outside arctic Canada. The Greenland house type with circular ground plan is mentioned in the 16th and 17th centuries, when both wood and whale bones were used in their construction (*cf.* chapter II). It is therefore not possible to explain why the winter-house ground plan in south western Greenland in the 16th century should have become small and four-sided as has been suggested (Mathiassen 1936: 118; Holtved 1944,II: 95). This house type in Godthåb District can only be demonstrated archaeologically in the 18th century, when the population had become associated with the European colony. But that was after the communal house had ceased as a dwelling-house type.

The communal house and its distribution

The absence of European glass beads in the four-sided houses in Disko Bay, e.g. Illutalik house 1 and 5, was assumed to indicate that these houses were older than the similar houses further south and that the Disko Bay area was thus ahead of the development on the south west coast with respect to certain artefacts (harpoon heads) (Mathiassen 1934: 172-173). The absence on a site of European trade goods, however, does not imply great age. Very few of the artefacts from the earliest communal houses on Illorpaat were of European origin, in spite of the activity there of Dutch whalers since the end of the 17th century. The presence of the nearby Hope Colony, indeed, could not be demonstrated until long after its demolition in 1728, when glass beads and brick fragments turn up.

This may indicate that the dating of the four-sided house sites in Disko Bay should be revised. Mathiassen's aim was to confirm Steensby's above-mentioned theory, that the rectangular Eskimo communal house was the capstone on a long architectural development, which culminated in the Disko Bay with four-sided dwellings, the platform in a parallel position along the rear wall and the absence of whalers' barter goods among the objects. It has now been demonstrated that objects of European origin are not necessarily associated with particular house types and that the age of a dwelling cannot be determined exclusively by the absence of particular object types (Gulløv 1982, 1985, 1986b).

The communal house is recorded in the southern part of Greenland: on the west coast up to Melville Bay and a single house north of there on Carey Islands (Lethbridge 1939: 189); on the east coast up to Kangerlussuaq north of Ammassalik. In the northernmost areas, where the communal house has been recorded, ruins without European objects have been excavated (*cf.* Hjarnø 1969; Degerbøl 1936; Larsen 1938).

The excavations can all be dated to the 18th century and at Kangerlussuaq even as late as 1800 AD (Larsen 1938: 74).

The Greenlandic communal house seems to have been a particular type of dwelling, which emerged at the time when the Europeans again took up a permanent presence in the country. In Godthåb District this house type was in use when the colonization started in 1721, as were the above mentioned rounded types (Gulløv, *op.cit.*). The communal house has been associated with the many whaling journeys the south Greenlanders made up along the west coast and also after 1740 to Godthåb District. The architecture could here be explained in terms of the ample availability of driftwood. The size of the houses served various functions, among them that of dwelling and feasting-house (*qassi*). But these common features do not explain their geographical distribution in Greenland and their absence in North and North East Greenland. This question will be treated below.

Discussion of the Greenlandic communal house

The fact that the communal dwelling-house is only found in the southern half of the country indicates that it originated within Greenland. So there is no reason to believe that the contemporary architecture in the wooded areas of Alaska and Labrador (*cf.* Anderson 1984: 81, 92; McGhee 1984a: 375) influenced the Greenlandic communal house. However, among the objects found in the houses are harpoon heads, some of which originated in the area north of the most northerly communal houses. In Upernavik there were thin harpoon heads with open sockets, together with flat heads in the communal houses and in the late pagan graves (*cf.* Hjarnø 1969: pl.1-2, 1974: pl.4), with or without objects of European origin. The thin harpoon head with open socket, which was of western origin, without doubt fell out of use in West Greenland during the 15th century (*cf.* Jordan 1979) and may thus have been re-introduced from the Thule District where it was in use until shortly before 1600 AD (*cf.* Holtved 1944). In Kangerlussuaq the "inussuk" type predominates over the thin harpoon heads of western origin (*cf.* Larsen 1938: 44-45; Mathiassen 1934a: 4). In Disko Bay the same flat harpoon-head type with lateral spurs (*cf.* Mathiassen 1934: pl.8(7,8)) was found in the four-sided houses, as well as in the excavated communal house. A single head of a later type (*op.cit.*, pl.3(4)) lay under the dividing wall in one of the houses, which thence must be seen as a later, rebuilt communal house. The small four-sided house in Disko Bay, which was previously dated to the 16th century, since no glass beads were found there, now seems to belong to an 18th century context. The harpoon heads from Illorpaat are flat, while a single specimen has been described as being of a hybrid form.

It is becoming clear that this house type, which was previously thought to be the result of a development, contains an archaeological paradox. This is that the further away one gets from central West Greenland the later the excavated communal houses and their associated find material become, while several harpoon heads in these ruins are of the original western Arctic type. The communal house in Upernavik could be dated to the 18th century and north of Melville Bay the communal house on Carey Islands, which was roofed by large whale ribs, could be associated with English and Scottish whaling activity in the 19th century (*cf.* Lethbridge 1939: 189). North of Ammassalik the communal houses in Kangerlussuaq could be dated to *c.* 1800, while that in Nuuaalik had been in use in 1883 (*cf.* Thalbitzer 1909). In South West Greenland the house type can be dated to the end of the 17th century.

The communal house spread during the 18th century to all of southern Greenland and contains harpoon heads whose typological characteristics are confined to a very

limited geographical area. The significance of these harpoon types in the Thule culture will be treated below (chapter VI). The distribution and function of the communal house can, however, be explained on the basis of the ethnohistorical source material presented in this chapter.

Large houses were used to house several families in Greenland also before this period. In Julianehåb and South East Greenland there are houses with cooking niche from the 16th century (*cf.* Mathiassen 1936: 61, 1936a: 32) which cover a floor area of between 20 and 40 m^2, and each of these may well have been a joint house for several families. They are, however, a far cry from the largest 18th century communal house at Itissaalik, in Godthåb District which covers an area of 61 m^2 and from Greenland's largest communal house in Julianehåb District, which measures 95 m^2 (Mathiassen 1936: 68). Yet, most 18th century communal houses do not exceed 25 m^2 and were on average 8-9 m long and 2.5-3.0 m wide. There would only very rarely have been more than two communal houses in occupation in one settlement. An exception was noted in 1737 by Poul Egede at Sermermiut, where he saw 20 quite large houses and stayed overnight in one of them alongside with six families (1788: 93, 1939:39). Four years later Niels Egede was told that mostly south Greenlanders lived at Sermermiut (1939: 158). The origin of the communal houses therefore cannot be explained exclusively by their size, heat saving properties and general trends of development, as has been suggested (*cf.* Petersen 1974/75; Schledermann 1976). For some earlier Greenlandic houses were of a considerable size, heat could be saved by making the houses smaller, as demonstrated at Neu Herrnhut in 1783 (*cf.* Israel 1969: 46-47), and the general development did not lead to communal housing in North East Greenland, which was inhabited in 1823 (*cf.* Larsen 1934), and in Thule District, which is known to have been re-inhabited in 1771 (*cf.* Egede 1788: 239).

The communal house must primarily be associated with the hunting of large whales which had been carried out between 67° and 69° N for a long time (*cf.* chapter II). The south Greenlanders travelled to pursue this. But Greenlanders also came from the northernmost part of western Greenland (P. Egede 1939: 98), where there was scarcely enough earth for house-building and where the roofs were made of sealskin and snow. Niels Egede noted in 1742 that Greenlanders from far north came to Disko Bay to borrow timber for their roofs (1939: 184). Before the Europeans settled in Disko Bay, the most northerly west Greenlanders bartered narwhal tusks for timber from the immigrant southerners (P. Egede 1939: 33). We now know that only with the ingress of south Greenlanders did wood become incorporated in the architecture and that it was not common when the whaler Feykes Hann wrote down his observations made in the years shortly after 1700 (*cf.* chapter II).

The size of the houses is determined by the number of travellers and they can contain several umiaq crews (*cf.* Rasmussen 1906: 113). In this way all the settlement's communal social and spiritual activities were concentrated under one roof (Gulløv 1988: 196), a practical measure when the dwelling was erected in an already built-up area. No legal claims were associated with the whale hunt, since all participants had equal flensing rights and could flense as much as they could manage (Glahn 1921: 128, 130). The permanent residents, however, had far better knowledge of flensing than "the strangers [...], for some of them are quite unused to this work" (*ibid.*). In order to gain access to the catch they therefore had to enter into a bartering relationship, unless they travelled up in order to gather the baleen that drifted ashore and was common property (*op.cit.*, p.131). The latter was, however, hardly sufficient motivation to make the south Greenlanders travel north, which they were seen to have done in the beginning of this chapter. The results of this trade and the exchange of the country's products are discussed below.

There are now no reasons for seeing the communal house and its basic form as the end of a development from small to large houses. The communal house without any particular ground plan was used as a dwelling by Greenlanders, who came from north and south for whale-hunting and trading on the coast between Disko Bay and Holsteinsborg. Later the rectangular ground plan, introduced by the southerners, spread from this core area.

It has been suggested that the rectangular ground plan was inspired by houses built by Dutch whalers (Mathiassen 1931: 129), but there is no evidence from buildings or written sources that whalers overwintered in Greenland (Kupp & Hart 1976: 14). On the other hand, the houses in the Norse settlements in South West Greenland have for some time been cited as possible sources of inspiration for the communal house. Birket-Smith does not think this probable, but does point to the square ground plan and the pitched roof with wooden supports as architectural features, which may have influenced the construction of the communal house (1917: 13). The available archaeological and historical source material does not contain any evidence of Norse influence in the communal house, but unambiguously associates its origins with whaling and trading journeys. Palaeoclimatic investigations have demonstrated a climatic change from the mid-17th century (Maxwell 1985: 31ff), which caused an increase in sea ice and longer-lasting fjord ice in South West Greenland. This supports the culture-historical evidence which we have that the Eskimo peoples left their homes and travelled about in search of living resources (Petersen 1989: 129ff).

This Greenlandic evidence enables us to make comparisons with the contemporary situation in Labrador. The large square houses on Eskimo Island in Hamilton Inlet contained a number of European trading goods and this has been taken to indicate social and economic contact with Europeans expressed by an accumulation of prestigious wealth (*cf.* Jordan 1978). In Labrador in the 18th century the Eskimo barter system was based on trading voyages to the European centres in the south and later to the new trading and mission posts. This journeying has been described in an economic model, which assumes there was a certain amount of enterprising activity, which people made manifest in large houses, social positions and prestige (Kaplan 1985: 61-62). There is a clear similarity between this and the situation in South West Greenland and the author does indeed see the culture-historical circumstances in the two areas as classic examples of a parallel development (*op.cit.*, p.65). The trading voyages from central Labrador to Belle Isle Strait have long since been known from the historical sources, but only recently has the Eskimo presence been demonstrated on the south coast of Labrador with the find of a 12 m-long and 6 m-wide communal house with rounded corners from *c.* 1770. This contained objects which largely consisted of European trade goods and a few Eskimo hunting implements (Auger 1991: 29, 69, 75). The same house type and the same object grouping is known from the Disko Bay before driftwood was used in housebuilding (*cf.* Mathiassen 1934: 132, 159).

Why did the custom of the communal house not spread further north in the 18th century? The answer was presumably supplied by Birket-Smith (*op.cit.*), when he pointed out the significance of the European whaling in the sea around Greenland and described it as ruthless exploitation, which "made a mess of the economic balance". The communal house did, however, continue in use as a dwelling in the 19th century when trading took place on hunting voyages, and it was still the preferred dwelling-house type in Ammassalik half a century after the colonization in 1894 (*cf.* Magnusson & Robert-Lamblin 1990; Petersen 1974/75; Robert-Lamblin 1988). The northernmost communal houses in East and West Greenland must thus be seen in relation to continued hunting journeys from Ammassalik and Upernavik before the areas were colonized and came under European administration. The absence of Euro-

pean artefacts in these northernmost houses confirms that hunting had become the primary objective, and that the narwhals in Kangerlussuaq and Melville Bay were still sought after (*cf.* Degerbøl 1936: 47; Møhl 1979: 382, 387), just as they had been earlier, when their tusks were bartered for timber.

Summary

It is not possible to establish a chronology of the winter-houses in South West Greenland described here. The ground plan and construction depended on the choice of building-materials. The four-sided houses in Thule District are not observed on the west coast, except in the houses at Illutalik in Disko Bay, which are probably to be associated with the Ruin Island phase, i.e. 13th and 14th century. Winter-houses with rounded ground plan and two to three rooms were in use from the 14th to the 17th century and are known on Baffin Island in the 13th century.

The size was discussed using the communal house as an example and emphasis was laid on the dwelling's social and economic function for people on trading and hunting voyages. The description of the winter-house is thus not only a matter of an isolated development and technological terms, as has been known for a long time (*cf.* Mauss 1979: 77). The square ground plan of the communal house was explained by the use of driftwood, which became available in all of southern Greenland by trade and barter. Communal houses with oval ground plan are also known in Disko Bay and Labrador (e.g. Mathiassen 1934: 132; Auger 1991: 29).

The large houses with several rooms from 15th- and 16th-century South West and South East Greenland (*cf.* Mathiassen 1936: 59ff, 1936a: 31-32) were considered to have been communal and therefore it was suggested that travel had taken place from Disko Bay southwards.

The position of platforms in the investigated houses cannot confirm that they developed from being at right angles to each other to being parallel, as has been proposed. That this development took place is still being upheld on the basis of recent investigations of a house on Ellesmere Island, C-14 dated to 1680 AD (McCullough 1987: 4-5). This 7 m-long house has niches in the front wall, a feature which is also known from communal houses excavated in Upernavik and Skjoldungen in South East Greenland (Hjarnø 1969: 20, fig.9; Mathiassen 1936a: 40, fig.20), and which was introduced into Greenland with the Ruin Island phase.

The cultural tradition appears to have had a marked influence on the winter-house architecture (Fig. 114). But on the basis of present evidence we cannot determine whether the open hearth and the straight-sided walls, which recur in the 18th century, are a result of foreign influence or a renaissance of old traditions. To resolve this question we must consider the objects, bearing in mind that the house was only a physical framework around those material forms of expression, whose cultural significance will be discussed in the next chapter.

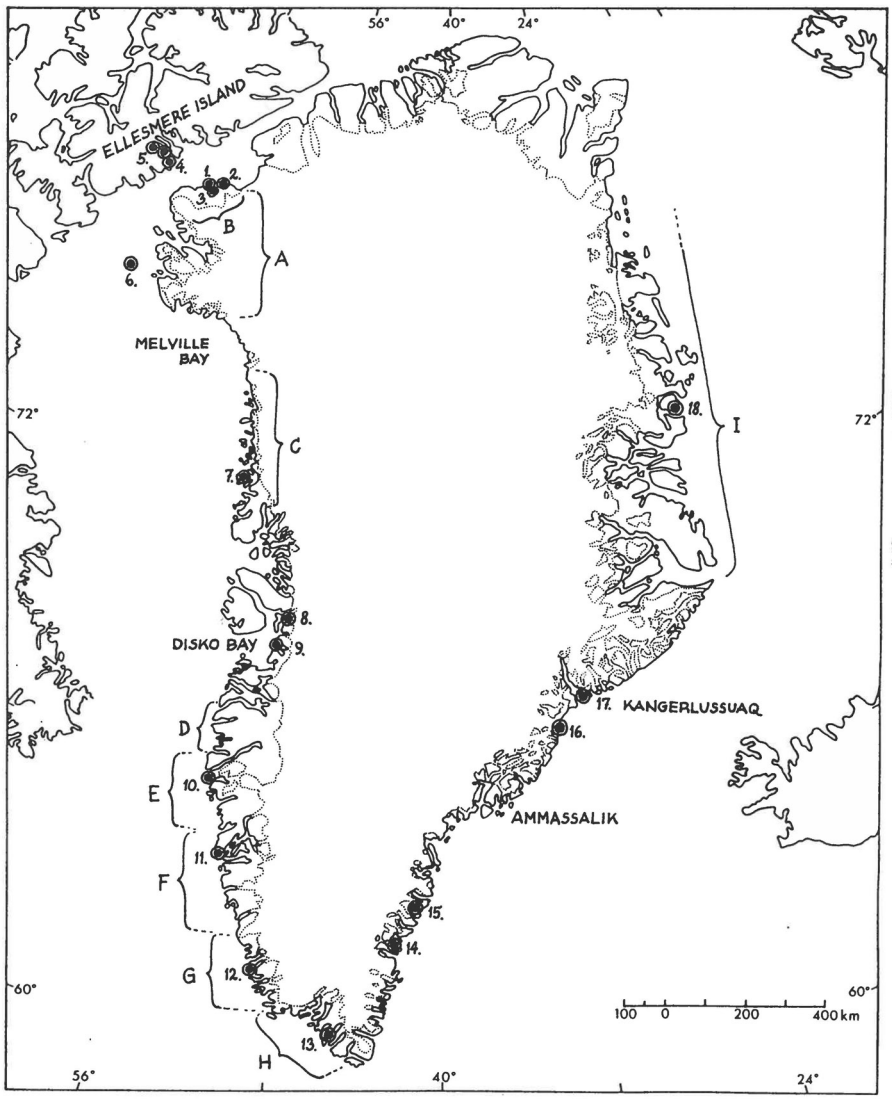


Fig. 114. *The locations of the districts and winter-houses discussed in this book.*

A: Thule District.
B: Inglefield Land.
C: Upernavik District.
D: Holsteinsborg District.
E: Sukkertoppen District.
F: Godthåb District.
G: Frederikshåb District.
H: Julianehåb District.
I: North East Greenland.

1: Ruin Island (Holtved 1944).
2: Cape Kent (Holtved 1944).
3: Inuarfissuaq (Holtved 1944).
4: Skraeling Island (McCullough 1989).
5: Haa Island (McCullough 1987).
6: Carey Island (Lethbridge 1939).
7: Nuugaarsuk (Hjarnø 1969,1974).
8: Illutalik (Mathiassen 1934).
9: Sermermiut (Mathiassen 1958).
10: Kangaamiut (Mathiassen 1931).
11: Illorpaat (the present topic).
12: No place name (Gulløv 1988a).
13: Uunartoq (Mathiassen 1936).
14: Itsarnisarmiut (Mathiassen 1936a).
15: Akorninarmiut/Skjoldungen (Mathiassen 1936a).
16: Nuuaalik (Thalbitzer 1909,1914).
17: Skærgårdshalvø, Mikis Fjord & Cape Irminger (Degerbøl 1936; Larsen 1938).
18: Dødemandsbugten, Clavering Island (Bandi & Meldgaard 1952; Larsen 1934).

The objects and the ethnographic descriptions from Godthåb District

The ethnographic sources from Godthåb were used above in the discussion of the winter-house (*cf.* chapter II) and as a reference for categorising the find material (*cf.* chapter III). In this chapter, the written sources will be compared with the excavated objects. The starting point is John Davis' observations at the mouth of Godthåb Fjord (i.e. Gilbert Sound) in 1585 and 1586; David Danell's observations of the same locality (i.e. Ball's Revier) in 1652-53 and 54; and Hans Egede's observations in the period 1721-36, when he had his domicile in the area.

Descriptions from the Middle Ages

Earlier observations than the above did find their way into the written sources, since *Historia Norvegiæ*, the History of Norway, *c.* 1170 describes a meeting between Norse hunters and the Eskimos from further north. It says that "they are quite lacking in iron and use (narwhal) tusk as throwing-weapons [dentibus cetinis pro missilibus] and sharp stones as worked tools [saxis acutis pro cultris utentur]" (Storm 1880: 75). This source, however, refers to a tradition stemming from an age well before the time of writing and it is geographically imprecise. Yet, it seems reasonable to locate it in the area around Disko Bay, on the basis of the mention of throwing-weapons made from either narwhal or walrus tusk, which had commercial value in the Norse community (Jansen 1972: 32-40). We do not know what weapons and implements the Norse hunters saw the Eskimos [*Scrælingjar*] use, but harpoons, knives and axes are all likely.

Later in Norse times boats were taken to Norway. Claudius Swart noted in *c.* 1420 that he had seen a kayak and an umiaq hanging in Trondheim Cathedral (Gad 1967: 212) and in 1505 Olaus Magnus also saw a couple of "these small skin vessels fastened to the wall above the west entrance of Oslo Cathedral" (GHM,III,1845: 465). But these boats cannot be associated with any particular areas.

Martin Frobisher 1578

We reach firmer ground when Martin Frobisher in 1578 landed somewhere on the south-west coast of Greenland (Gad 1967: 251) and in a tent saw "a boxe of small nayles ...", at which he comments that "they have trade with some civill people, or else are in deede themselves artificiall Workemen" (*ibid.*, p.409). We now have no doubt that Frobisher landed on Greenland's west coast and probably in an area which today lies within Godthåb District (Gulløv 1988b: 140-142, fig.5-6; Wallis 1984: 463, fig.10) and that he in a toolbox there saw, among other things, nails either of Norse origin or derived from contacts with Breton or Flemish sailors (*cf.* Gulløv 1988b). An archaeological parallel can be found in the iron nail set into a wooden handle (igd 2014) from Illorpaat, midden layer 4, which is dated to the 16th century. Nothing further can be concluded from this single, isolated source, which also describes the owners of the small box as ingenious craftsmen.

John Davis 1585 and 1586

The best starting point for a description of Eskimo technology in the 16th century can be found in John Davis' landing on Greenland's west coast seven years after Frobisher, since it may be presumed that he landed at the mouth of the Godthåb Fjord (Bugge 1930). The archaeological investigation and descriptions in chapter II show that layer 8 of the Kangeq midden, layer 4 of the Illorpaat midden and early Thule under Illorpaat 3 are contemporary cultural deposits. The objects described in chapter III will in the following be used to demonstrate the likely correspondence between the historical source and the archaeological material.

Hunting equipment:

"Javelins" are mentioned in 1585 and "spears" in 1586 (Bugge 1930: 40, 51). No doubt these were harpoons, but they may also have been bladder darts, bird darts and perhaps lances. The following descriptions may be deduced from the archaeological material:

– Harpoons are documented by the heads igd 4141 and 3793 (Thule-4 types) and igd 2299 (Thule-5 type); the foreshaft L13.3422, the socket pieces from the Kangeq midden (which correspond to igd 530 and 531); shafts from the Kangeq midden; the finger-rest L13.3408; and the line-holder L13.3411.
– Bladder darts are corroborated by the head igd 4013, the shaft igd 4306 and the tension piece for a bladder nozzle from Illorpaat.
– Bird darts are corroborated by a head from Illorpaat (which corresponds to igd 2020); shaft fragments of the front end, the middle piece with grooves for side prongs and the rear end from the three contemporary cultural horizons; side prongs (type I and Ic); the throwing boards igd 2072 and 2265 (another throwing board corresponds to igd 2322); and by the throwing board pegs igd 2067, 2222 and 2273.
– Lances are documented by the shaft igd 2016.

"Bows" are mentioned in 1586 (Bugge 1930: 51) and may be demonstrated in the archaeological material by the following examples:

– The bow is corroborated by the body of a bow igd 2255 with sinew-thread reinforcement?
– Arrow heads are corroborated by igd 4232 with screw thread and by igd 2043.
– Arrow shafts are documented by igd 1989 and 2144.

"Slings" are mentioned in 1586 (Bugge 1930: 51), but there is no corroborative archaeological evidence.

Fishing implements:

"Fishing nets of baleen" and "fishing implements" are mentioned in 1586 (Bugge 1930: 51, 55) and may be corroborated by the following:

– Nets may have been made with the use of the excavated knots of baleen, e.g. igd 684 and 3106.
– Fishing tackle is corroborated by the shaft of the halibut hook igd 4155.

Transport:

Only the kayak is mentioned, but in large quantities. "10 kayaks", "37 kayaks", "bought five kayaks" and "oars" are mentioned in 1585. In 1586 he saw "100 kayaks approaching, sometimes 40 or 50" and "images of idols on their boats" (Bugge 1930: 38, 39, 40, 48, 50). This can only partially be corroborated by archaeology:

– The kayak is corroborated by side stringers from Kangeq, by gunwhale stakes from Illorpaat and by cross beams from both localities.
– Oars are corroborated by igd 4238, 4254 and 4262.
– The umiaq is not mentioned, but is corroborated by the bottom rib L13.3308.

Men's tools:

Davis saw the fire drill being used in 1586, and the same year a knife was used in self defence (Bugge 1930: 50, 67).
– The fire drill is corroborated by the hearth and shank, *cf.* igd 4256.
– The endblade knife is corroborated by igd 2119, 2245 and 4292 and is also found with sideblade *cf.* igd 4057.

Household utensils:

"Tanning tubs with sealskin in them" are mentioned in 1586 (Bugge 1930: 48), and we must presume these are coopered items, as the usual wooden bowls and whalebone dishes are too shallow for that purpose. Tub staves were found at Kangeq and Illorpaat, and, with the exception of one slightly curved stave, they are all straight, *cf.* igd 4271.

Personal equipment:

"Boots, trousers, mittens and birdskin fur" are mentioned in 1585 (Bugge 1930: 39), but there is no archaeological evidence of these.

Religious objects:

Davis saw the drum and the drumstick in use immediately upon his arrival on 64° N (Bugge 1930: 39). In 1585 there were "carved wooden idols" in the tents and later that year he noted "images of idols on their boats or carried on their persons" (*op.cit.*, pp.48, 50). We might be tempted to interpret the small dolls that we call toys as such idols. There is some indication that the fittings on the kayak deck were also carved into shapes resembling humans. The idols which they carry "on their persons" must clearly be amulets.
– The drum handle has been found in an archaeological investigation at Illorpaat.
– Amulets are corroborated by igd 2336 and L13.3360.
– Dolls are corroborated by igd 4074, 3870 and L13.3490.

Davis too observed the accuracy and intricacy of the objects he saw and, like Frobisher, he was struck with wonder. There must be "several artists among them" he noted in 1585 and the following year he remarked that "they make all their things very artfully" (Bugge 1930: 39, 51).

James Hall 1605 and 1606

When the first Danish expeditions to Greenland started in 1605 in the reign of King Christian IV (Birket-Smith 1929a) the first impression was again that "although it is a savage people, yet they make everything admirably with their expert knowledge" (Gulløv 1988c: 143). The ethnographic observations were made in the Holsteinsborg area at 67° N, where the expeditions under the leadership of James Hall were mainly directed. There was possibly a landing at 64° N, where a ship's boat is said to have been assembled and launched from an island (Bobé 1916a: 84), just as during John Davis's stay in 1587 (*cf.* chapter II).

The objects brought back from these expeditions are of interest, since it is the first time they can be dated, to 1605 and 1606. These are an axe and a knife (Fig. 115) which Hall brought back in 1605 after he had met the west-coast Greenlanders, three of whom came back with him (Kisbye-Møller 1985: 141; Bielke 1990: 69). The objects are known to have been presented by King Christian to the Elector of Saxony's cabinet of curiosities in 1605 (Meldgaard 1980: 2) and are now in the collection of Dresden Museum für Völkerkunde (Israel 1982: 57-58). In Schiffergesellschaft zu Lübeck there is also a kayak from 1606, which is in good condition after being restored in 1978 and which is clearly a west coast type with straight stem and stern (Neugebauer n.d.). This type differs from the later kayaks which developed upcurved stems and sterns, but it is known from a pre-colonial burial 35 km north of Holsteinsborg (H.C. Petersen 1986: 48-49, 56).

The European interest in narwhal tusk was very evident in 1605, when the Greenlanders brought "many horns" to the expedition (Bielke 1990: 51). John Davis had also been aware of this 18 years earlier (Bugge 1930: 73). Thirty years after Hall's second expedition, the Copenhagen Grønlandskompagni also brought back "a good deal of narwhal tusks" (Gad 1967: 282). The unicorn of the sea was highly prized at the European courts in the 17th century (Bencard 1989) and the demand could be met by the west Greenland Eskimos, who were also ready when the next expedition arrived.

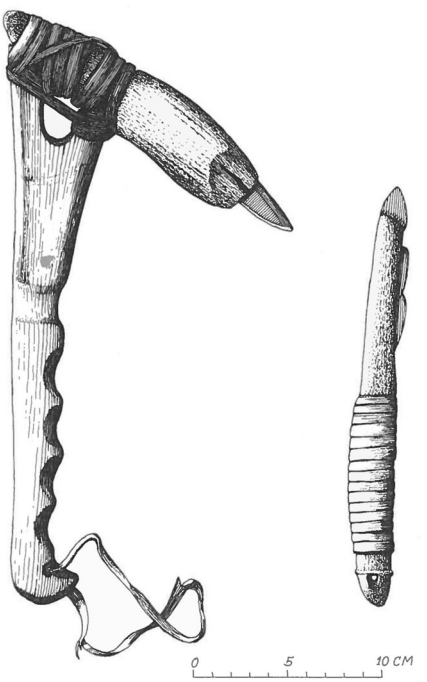


Fig. 115. *Objects presented to the Elector of Saxony in 1605 by King Christian IV. The axe is made of driftwood with a whale bone head, lashed on with willow root, and with an iron blade. The knife is of caribou antler bound with willow root and has three pieces of iron set in a groove. The iron has been analysed and contrary to expectations it was not meteoric. There is no evidence of its origin, but it may be telluric or European (Museum für Völkerkunde, Dresden).*

David Danell 1652, 1653 and 1654

David Danell's expedition in the mid-17th century contributed decisively to the ethnographic knowledge of the west Greenlanders (*cf.* Bobé 1916: 202-232). But most of the local observations were again made in the Holsteinsborg area, where James Hall had disembarked half a century before. Very few direct observations can be related to Ball's Revier, where Danell was in 1652 and 1653 (*op.cit.*, pp.215, 222). There is no direct information from 1654, but we do know that he penetrated some way into the fjord and there captured four Greenlanders, whom he took back to Europe. On the other hand, it is the evidence of those Greenlanders, as told at Gottorp Castle in Schleswig, which has become our main source for the Eskimos in the 17th century, in particular in the Godthåb area (*cf.* Olearius 1656: 163-179; Scheffel 1987).

It was those Greenlanders, and Danell who directed their capture from his chair, that their descendants had tales about even 70 years later (Egede 1925: 60). But the ethnographic description cannot be collated with the archaeological material since we do not know exactly where in the outer Godthåb Fjord the Greenlanders were captured. The archaeological investigation (*cf.* chapter II), however, does show that in the 17th century winter settlement was unlikely on the sea coast and that the reference material must be sought on one of the excavated winter settlements inside the fjord. The characteristic bladder-dart head shown in the painting of the four Greenlanders (Fig. 109) was, however, still in use at the time when the communal house emerges on the outer coast, *cf.* igd 3869. We are also told that in the mouth of the fjord and between the islands there is "much fishing" (Bobé 1916: 216). This was presumably for halibut and the shafts for the hooks have been documented on the outer coast in the 16th and 18th centuries, when there were people living in Kangeq and at Illorpaat. The barter goods they brought with them, such as knives, scissors, axes, sewing needles, nails, pins, awls, scythes, linen bands, glass beads and mirrors have not turned up in the excavations in Godthåb District, where the Greenlanders even in Danell's time daily dug for nails and iron in the Norse ruins (*op.cit.*, pp.231, 232).

It must be emphasized that most of the Greenlanders, who came to trade with Danell at 64º N in 1652, came from the south, and that narwhal tusk again and again dominated the proceedings (Bobé 1916: 214, 215). The tusks "which were on their spears" were, however, got from hunting further north (*op.cit.*, p.210). The following year "around 80 Greenlanders came on board with all manner of goods, but not with as many unicorn horns as last year", but "on 70 degrees there are said to be many whales and walrusses, of which our people bought teeth, but our people could not get up there, for it was too late in the year" (*op.cit.*, p.222, 225). There is, however, no narwhal tusk among the finds from Godthåb District.

The information, that most of the Greenlanders came from the south to trade, may be considered with reference to the wordlist mentioned in connection with Pooq. It appears from this list that some of the words may "derive from a more southerly dialect than the central western Greenlandic ... and seem to represent the so-called 'i-dialect' where *i* replaces *u*, a phenomenon known both from the Paamiut dialect and from the dialects south of there" (Petersen & Rischel 1985: 167). This observation is of especial interest here because it is the first time it is historically suggested that the well-attested 18th century travel-activity from the south northwards along the west coast must have begun around the middle of the 17th century. After this time the southern elements can be demonstrated by archaeology and ethnohistory in the communal house, Illorpaat 9.

The lack of coherence between archaeology and ethnography in Godthåb District

in the 17th century is due to the change in the settlement pattern, demonstrated above. This is a constraint on the investigation.

Lourens Feykes Haan, before 1719

After the colonization of Greenland in 1721 the descriptions become more detailed and Eskimo winter equipment is now mentioned when the accounts tell of visits to the houses. Before this time, Dutch whalers frequented the Davis Strait annually and traded with the local population, largely on the stretch between Holsteinsborg and Disko Bay (Haan 1916: 41-49). One description of the population on this coast-line, made shortly after 1700, had by 1720 found its way to a publisher in Amsterdam (*cf.* Haan 1915) and this was given to Hans Egede when he journeyed to Greenland in 1721 (Bobé 1936: 68).

Haan's descriptions are thus from the coast north of Godthåb District. Yet, we must note his description of the harpoon "which they are able to throw so dexterously into the seal, and let it run with it, until it becomes tired and enfeebled, indeed quite exhausted" (Haan 1915: 75). He does not record how the harpoon is thrown and we hear nothing of the throwing board, which might have been worth a mention. However, he does continue "they also shoot the birds with hand darts; when they shoot with these they use a piece of wood, somewhat hollowed in the curve in which the dart lies, and which then is made to fly out, while they hold the wood in their hands" (*ibid.* p.76). This indicates that Haan did not observe the use of throwing boards in connection with the harpoon. The theory is confirmed indirectly by the finds in Godthåb District from after 1700, where none of the 28 excavated parts of throwing boards appear to have been used for the harpoon, while all the determinable pieces have been used for bird darts or for bladder spears.

Hans Egede does not mention the throwing board in connection with the harpoon either, in his description of Greenland of 1741, and in the depictions of the hunters in their kayaks they are seen to hold the harpoon shaft without employing throwing boards (Egede 1925: 354, 357, 359). On the other hand, the throwing board does appear in Otto Fabricius' description, which was based on his stay in Frederikshåb District in 1768-73. The winged harpoon has a throwing board and is mainly found in Frederikshåb District, from whence it can also be tracked up to the Disko Bay (Holtved 1962: 38). The knob harpoon is considerably sturdier and may be furnished with a throwing board. This harpoon type is mostly used by the south Greenlanders between Frederikshåb and Cape Farewell, for these people are on average taller and stronger than those living further north (*ibid.* p.39). Finally, Fabricius mentions the ice-hunting harpoon, which was mostly used in Disko Bay (*ibid.* p.41). It is probable that the harpoon types mentioned by Haan and Egede were knob harpoons with finger-peg and without throwing board. The excavated objects support this hypothesis.

Hans Egede, after 1721

The descriptions of the implements which Hans Egede saw during the years 1721-36, when he was staying in Greenland, correspond to the descriptions of the objects found in Illorpaat 3, house I and II, in the lower part of midden-layer 12 and in Kangeq's midden-layer 7. The written sources are Egede's reports (1925: 8-304) and his Description of Greenland of 1741 (1925: 313-404); the latter is, however, supplemented by information from Disko Bay collected by his son Poul (*ibid.* p.311).

Hunting equipment:

The hunting equipment is said to be harpoons with bone or iron heads (Egede 1925: 34), bird darts (*ibid.*) and bow and arrow (*ibid.*). The archaeological documentation is complete and consists of Harpoon Heads of a flat type (presumably derived from Thule-5) and of a hybrid form; Harpoon Foreshafts; Socket Pieces; Finger Pegs; Shafts; Bladder Darts, which are not mentioned, but are depicted (1925: 363) and documented by Heads and Tension pieces. The Bird Dart is documented by Heads; Shafts; Side Prongs; Throwing Boards and Throwing Board Pegs. The Harpoon Bladder is mentioned (1925: 34) and is documented by Bladder Plugs and Nozzles as well as Line Accessories. Bows and Arrows are fully documented by archaeology.

Fishing equipment:

Egede mentions bone or iron hooks (*ibid.* p.34), spears for catching lumpsucker and char (1925: 361) and scoops for ammassat (*ibid.*). Hooks and sinkers found during archaeological excavations show that halibut, cod and Norway haddock were caught. Fishing for lumpsucker and char is documented by shafts and side-prongs. Fishing for ammassat is demonstrated by finds of baleen knots used for net-making.

Transport:

Kayaks are mentioned everywhere (*op.cit.*, first time p.34), as are umiaqs (*op.cit.*, first time p.9) but also oars are mentioned (*ibid.* p.38). The archaeological evidence is incomplete, since the excavated fragments do not give any indication of the shape of the vessels. In contemporary illustrations they are always shown with upcurving stem and stern (1925: 359, 363). The models, which are described under Toys, do not enable us to distinguish the straight vessels from the curved. Both forms are found among the west Greenlandic kayaks in the period, when Dutch whalers dominated (*cf.* Nooter 1971: 28, 38, 45, 48, 56). The finds thus do not lend support to the hypothesis of a regional division of the types, as was suggested by H.C. Petersen (1986: 48-49). Nor can we confirm the hypothesis that the flat type, which is most common in southern Greenland spread to the west coast (*ibid.*). Otto Fabricius could have resolved the question, but he does not describe the kayak and instead refers to David Cranz' description, which is illustrated by the upcurving kayak (Holtved 1962: 29, 30). It is probable that the two types were in use at the same time and the curved stern may have had a stabilising effect in the open and turbulent sea (Jens Rosing, pers. comm.), as depicted by Aron of Kangeq *c.* 1868 (*cf.* Meldgaard 1982: 71, 73).

Men's Tools and Women's Equipment:

Both groups of objects are mentioned very sporadically as fire drills (Egede 1925: 372), lamps, wick trimmers and lamp stand (*ibid.*, p.365). Both groups are however richly documented archaeologically.

Household utensils:

Egede mentions soapstone cooking pots, urine tubs and drying racks (*ibid.*, p.365), all of which have been found in archaeological investigations, as have spoons, ladles, dishes, bowls, meat forks and blubber hooks.

Personal equipment:

The description only mentions garments, which on the other hand are well documented e.g. bird-skin furs (1925: 12), anoraks (*ibid.*, p.24) and the attire generally (*ibid.*, p.35-36). Garments from Egede's time have not been found. There is no reason to doubt, however, that the ornamental beads they are said to wear (1925: 370) were

anything but glass beads, although beads and pendants of soapstone, caribou antler, wood and tusk have been excavated.

Religious objects:

The drum is mentioned (1925: 17) and amulets are described as an old piece of wood (*ibid.*, pp.68, 150) or as bird's beaks or talons (1925: 396). Only the drum has been found during archaeological investigations; while the excavated buzzer was presumably used in a shaman seance, several of which Egede described from first-hand observation (1925: 17, 57).

Toys:

Egede only mentions the game of cup-and-ball, *ajaraq* (1925: 382).

European objects:

These are mentioned extensively, but their diversity dimishes when the objects have to be related specifically to the inhabitants of Hope Island, i.e. Illorpaat. During his first few years in the country Egede noted the following: Sailmakers' knives (Bobé 1936: 80), brass cauldrons (Egede 1925: 11), glass beads and mirrors (*ibid.*, p.13), knives (*ibid.*, p.15), glass bottle (*ibid.*, p.18), harpoons or hand arrows, i.e. bird darts with iron heads (*ibid.*, p.34), shirts (*ibid.*, p.36), sewing needles (*ibid.*, p.53) and fish hooks of iron (*ibid.*, p.66). We do know, however, that the supply of goods was considerably more extensive (*cf.* Gulløv & Kapel 1979: 204-205), only it has not left any traces in the written sources nor in the archaeological record. This was *inter alia* due to the dominant Dutch trade in the earliest colonial period, which took place further north and of which Haan wrote: "Trade is at present slack or negligible, and not much is gained by it, and one has to pay far too much for their goods nowadays ... The cause for this we must – and this is probably nothing but the truth – ascribe to our present, frequent expeditions and voyages to the country, whereby we have run ourselves aground. Further, it is caused by the ships that go whaling there and prevent the country's people from catching whales ..." (Haan 1915: 82).

In general, Egede concluded, as had Frobisher, Davis and Hall before him, that their tools, boats and other artefacts were uniformly very beautifully and practically fashioned, although it takes them some time to make them, because they lack the proper tools; the women sew very beautifully, also when they make garments and such (1925: 34).

Summary

The above presents an archaeological corroboration of the observations which have been made on *c.* 64° N from the 16th century onwards. The larger part of the written sources are also sources for the ethnohistory. This will be presented later in this chapter, with particular emphasis on the Godthåb District. The objects which correspond with the descriptions show no outside influence on their manufacture until the mid-18th century, and the form of e.g. the kayak and the bird dart's side prongs, as noted in chapter III, must among other factors be due to internal influence from immigrant south Greenlanders.

Although the whale population in the Davis Strait had been known since the 17th century, it was not until *c.* 1700 that Dutch whalers started to operate by South West Greenland and gathered at Zuydbay on 67° N (Gulløv 1987: 78-80; Kupp & Hart 1976: 11). The source material does not allow us to localize any previous journeys to

Davis Strait, apart from Joris Carolus' marking in 1634 of Brielsche Haven at Fiskenæsset and Delftshaven at Pisuffik, respectively the southernmost and northernmost parts of Godthåb District (*ibid.*), as well as Nicolas Tunes of Vlissingen's possible disembarkation at Ball's Revier in 1656 (Gad 1967: 306-312). The only descriptions of South West Greenland prior to 1721 are those cited above.

The emphasis on narwhal tusk in the written sources was due to the European medical interest in the unicorn in the 16th and 17th centuries, an interest that waned after Ole Worm in 1638 gave a scientific explanation of the true state of affairs (Gad 1967: 310-312; Bencard 1989: 50; Bielke 1990: 51, 100). The people in western Greenland seem to have been aware of this interest and had the desired goods ready as soon as the ships landed. This might indicate that there had been more frequent demand for narwhal tusk than is apparent from the surviving sources, which also mention that the trade took place south of the areas where narwhal was usually caught.

In five selected places in arctic Canada and North Alaska, objects made from sea-mammal bones and tusk have been compared to objects made from land-mammal bone and antler (McGhee 1977). The investigation showed that the use of ivory, including narwhal tusk, could be related to wintertime and the sea, while caribou antler was related to summertime and inland areas, whence the author concluded that ivory could be seen as a symbolic bond between man and the Sea Woman (*op.cit.*, p.146). The present investigation shows there were no preferences in raw materials or choice of materials (*cf.* chapter III); neither can any local interest in these ivory tusks be demonstrated among western Greenlanders.

The Sea Woman, however, seems to have played an important rôle in another situation, which emerged in step with the increase in European whaling in Davis Strait. On the Canadian side of the Strait she was early on identified as the mythical ancestress of the Europeans, i.e. *qallunaat*, because of the increased access to non-local trade goods, and in South West Greenland the south Greenlanders associated her with whaling and trading, both with the Greenlandic and the Dutch whalers at Zuydbay and in Disko Bay (Sonne 1990: 17, 19, 30). The surplus of goods, which Feykes Haan saw as destructive for trade, was the physical manifestation of this "cargo cult", which "at present furnishes them with white and coloured shirts, which they wear on top of their other clothing" (Haan 1915: 72). The social and economic security of the community was traditionally based on marriage alliances and trading partnerships (*cf.* e.g. Pooq and Sinngajik), but from *c.* 1700 it also became based on the symbolic exchange of goods with foreign whalers (Sonne *op.cit.*). Parallel with this development there are examples of a distortion in the social organization in the polygynous marriage, which ensures the processing of the great hunter's catch, for example when Niels Egede in 1740 was asked to spend the night with a group of south Greenlanders and was given the reason that "I am the greatest master and have five wives ..." (1939: 139).

The following describes a model for this exchange of goods, as deduced from the available source material.

Trade and exchange in South West Greenland

The great amount of travel that took place between southern and mid-western Greenland had been known of since the earliest colonial era. Hans Egede noted on 13th April 1722 that two large umiaqs along with numerous small boats, i.e. kayaks, had in the last few days passed by the colony going northwards for whaling and "doubtless also to meet the Dutch ships, which go there to trade" (1925: 19). This is a matter of *c.* 500 individuals. We are also told that Nepisat Sound north of the colony was, during the springtime fishing for lumpsucker, the meeting point for the local Greenlanders and the south Greenlandic passers-by (*cf.* Pooq), and that almost 80 tents were counted in 1726 and 100 families in 1728 (1925: 185, 208). Here also it is a matter of *c.* 500 individuals.

Year upon year very large population movements were observed from the newly established colony. The motivation for the journeys has already been explained and after a year away the return journey is made with the acquired goods, e.g. on 5th August 1722 (1925: 49). It is thus not a case of migration, but of trading voyages with the primary aim of obtaining raw materials for tools, in order to secure the continued exploitation of the living resources at home. Mobility has for a long time been known to be an integral part of the Eskimo social organization (*cf.* Mauss 1904/05; Rowley 1985). The story of Sinngajik, who around 1700 fled north in fear of blood-revenge, might be an example of another motive for travel, but it is the trading journeys which made the greatest impact on the Greenlandic community in the 18th century; as they also did in large parts of the North American Arctic (*cf.* Burch 1988: 234-240; Morrison 1991; Spencer 1959: 198-209).

The structure and extent of the trading voyages

The structure of this activity was built around a network of relatives or trading partners, called "friends and relations" (Cranz 1770,I: 227). The establishing of this network has above been described in the form of a marriage between south and west Greenlanders, *cf.* Pooq, Sinngajik, Illorpaat 9 and Qarajat. The exchange of goods took place on a trading station, *aasivik* (i.e. summer site) and the locations of these gradually emerge in the sources (Fig. 116).

Kangeq, the promontory at the mouth of Godthåb Fjord, shields the *Nepisat* sound behind it. This was the place of the springtime fishing for lumpsucker, where the southerners made a stay and took part, before continuing the journey northwards, as quoted in the beginning of this chapter. In 1732 Egede counted more than 50 tents belonging to south Greenlanders on their way to Disko Bay for overwintering (1925: 259). In 1725 there is mention of the presence of soapstone in the fjord. This was used by local Greenlanders for the production of lamps and cooking pots, which were sold in the north where there was no soapstone (Egede 1925: 174). The barter-ratio is said to be 8-10 caribou skins for a small soapstone pot and 1-4 baleen strips, or as many caribou skins, for a lamp (1925: 329). The exchange took place in the north or with southerners as middlemen (1925: 144, 165).

Zuyd Bay was where the Dutch whalers gathered before and after the hunting season. Immediately south of there lay the Greenlandic whaling station Nepisat (not to be confused with the Nepisat at Kangeq), about which Egede in 1724 noted that the

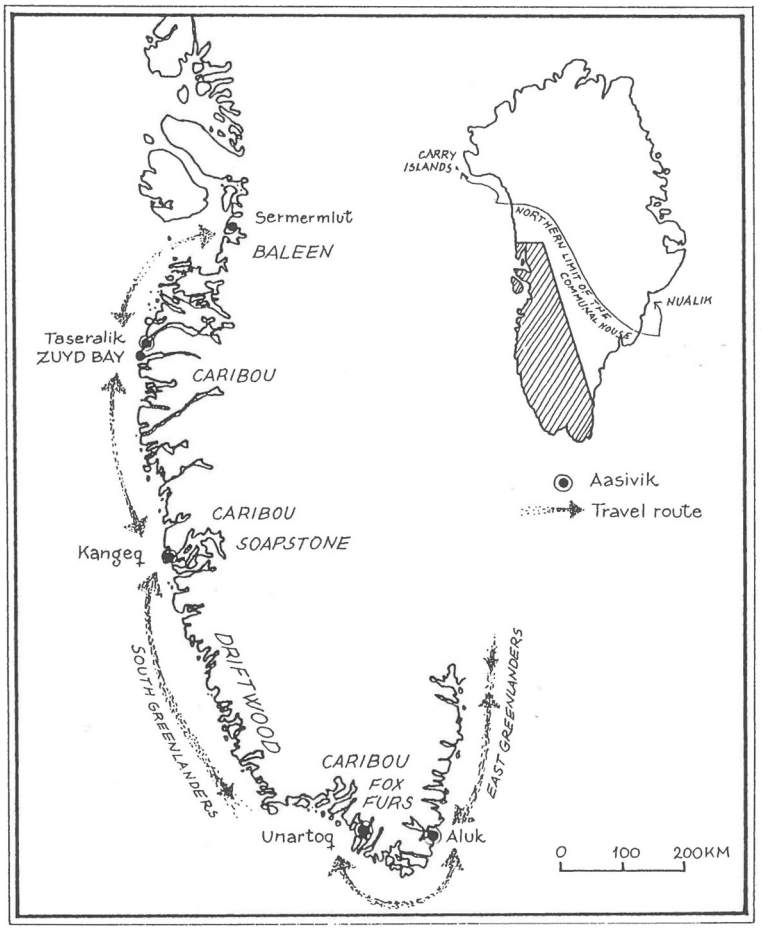


Fig. 116. *The trading voyages went between south Greenland and Disko Bay. The trading stations,* aasiviit, *are marked. They are Aluk, Uunartoq, Nepisat at Kangeq, Nepisat south of Zuyd Bay and Taseralik. Skins and driftwood were brought from the south, halfway up were the best soapstone deposits and baleen was obtained in the north. On the inset map of Greenland South West Greenland is hatched and the most northerly extent of the communal house marked.*

Dutchmen went there to barter and the south Greenlanders to overwinter (Egede 1925: 120, 127). A little to the north lies *Taseralik*, which in the 1750s is described as "some tent-islands, on which the north- and south-roving Greenlanders usually catch halibuts and seals, and where the catch in summer is just as good as at Sydbay" (Olsen 1764: 16). In the following decade it is also noted about this place that in summer there is bartering going on and conflicts are resolved by singing contests between Greenlanders from both south and north (Thorhallesen 1914: 97).

Sermermiut is the winter settlement at the large ice-fjord in Disko Bay, and in the 1730s it is noted that south Greenlanders travelled there to overwinter and to trade, amongst other things, wood in return for narwhal tusk with the people who had come from the north (*cf.* P. Egede 1788: 93, 1939: 33, 39; N. Egede 1939: 158).

Uunartoq and *Aluk* are places where south and east Greenlanders trade with one another. In 1752 Walløe met around 400 Greenlanders at Uunartoq, who had come from the south in 30 umiaqs in order to take part in the ammassat fishing and the subsequent caribou hunt. He here remarked that the language dialect was somewhat different from the one to the north (1927: 87, 89, 90), something Egede had also noticed in 1723, 100 km further north (1925: 95). Aluk was where Greenlanders from east and west gathered in the autumn to catch hooded seal and to barter, and Walløe observed this in August of 1752 (1927: 97-98). In 1728 Egede was told that Greenlanders from the western side used to travel to the eastern side of the country and that they two years previously had exchanged baleen with the easterners (1925: 209). In

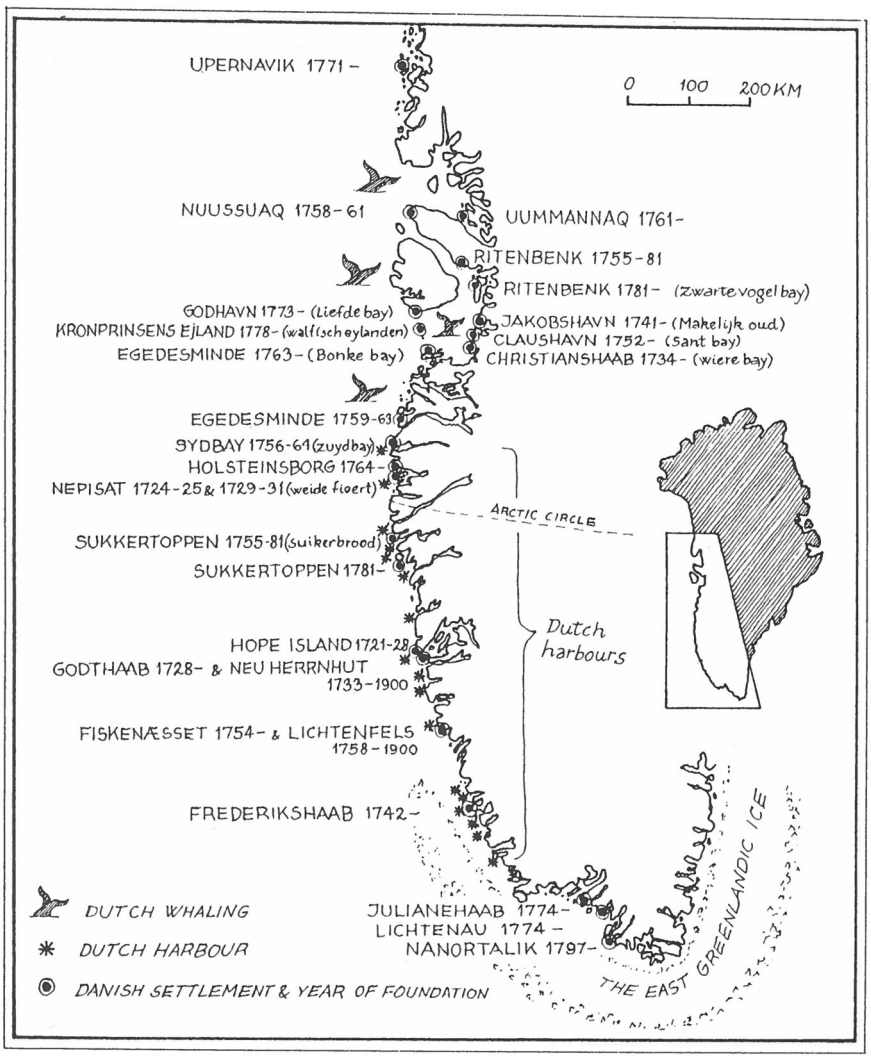


Fig. 117. *Danish trading and mission stations and their founding year. The Dutch place name is given in parenthesis (after Haan 1916). The dates are an indication of the Danish colonial policy, which aimed to "close" the country to Dutch whaling and associated barter trade. Nepisat south of Holsteinsborg was twice burnt to the ground by Dutchmen. The Dutch trading stations often lay near the Greenlandic winter settlements and* aasiviit *(after Gulløv 1987).*

1733 this trading relationship was confirmed by an old woman who related that the easterners wanted iron goods, e.g. sewing needles and knives, which they obtained in return for fox furs and other things, which were then sold to "the ships when they arrived". This woman had been up along the east coast almost level with Godthåb, i.e. Illuluarsuk at 63030', and had seen people everywhere (*op.cit.*, p.269; Mathiassen 1936a: 47-50).

There is no doubt that this Greenlandic trade was established long before the colonization and that the distribution of resources determined supply and demand. The Dutch whalers benefitted from this activity primarily in the form of blubber, baleen and fox furs (*cf.* Haan 1915). The trading voyages followed, well into the 18th century, the original pattern which was constructed around trading partners, relatives and meeting-places (*aasiviit*) and Walløe observed in 1752 in the far south of Greenland that "this region and some miles to the north and south (i.e. around Uunartoq) is the most populous; from here some families generally take turns every other year to go north to the colonies to trade and get the goods they need, for example soapstone for cooking pots and lamps; but they usually return to their homes in the autumn" (1927: 110).

The founding of several colonies along the coast ended the Dutch barter trade and after this time the European merchants took over the southern Greenlanders' enterprise, since it was proposed that the sought-after goods were "transported from one colony to another" (Dalager 1915: 82). The original trading pattern was, even half a century after colonization, the subject of discussion between the advocates for a resident population and those who wished the journeys to continue (*cf.* Cranz 1770,I: 226-228; Glahn 1771: 262-265; Thorhallesen 1914: 65). The outcome, however, was that almost all west Greenlanders became permanently settled in the area between Cape Farewell and Melville Bay, before the year 1800 (Fig. 117).

Supply and demand

In 1771 the missionary H.C. Glahn summed up the unequal distribution of Greenlandic resources which had lain behind the trading voyages. "In the south there is a great deal of wood for boats and other uses. In the middle of the country there is wood for the same purpose, as well as soapstone for lamps and cooking pots. Further north at Amerloq [by Holsteinsborg] there is baleen, from which ropes for lashing boats and fishing lines are made, and whale bone, which is useful for many things, especially the ribs and jawbones for sledge runners. In the Disko Bay and further north there are great numbers of narwals and walrusses, whose tusks are good for heads on arrows, harpoons and lances, for sockets on shafts instead of iron hoops, for side prongs on bird darts, for buckles, etc. At Uummannaq there are supplies of skins" (Glahn 1771: 262).

The highest demand was for baleen, which could be obtained in return for skins, wood and soapstone. We here have an exchange of goods between two different biotopes, each of which possesses sufficient potential resources for survival and also have the power to attract, time and again. The population in the Godthåb area supplied the best soapstone on the coast in return for baleen (*cf.* Dalager 1915: 82), until the smallpox epidemic altered the circumstances in 1733-34, and the south Greenlanders themselves took on the manufacture of pots and lamps. Some of these were taken via Neu Herrnhut home to the mother church in Herrnhut as souvenirs, as for example did David Cranz (*cf.* Israel 1982a: 477-478).

The fishing for cod, halibut and Norway haddock – the last with long line – was of paramount importance in the late winter months when the caches were empty." Although there is an abundance of seal, they are little concerned about them, except for what they need as blubber for the lamps; otherwise they live mostly by fishing" (Dalager 1915: 87). For this reason most people spent the winter inside the fjords, where the lack of good fishing tackle, e.g. lines, was worse than the cold itself (Walløe 1927: 114, 115).

The archaeological investigations carried out on the west coast confirm the importance of fishing in southern Greenland. This can be concluded from the total number of objects associated with hunting and fishing. In Upernavik (Hjarnø 1969; Mathiassen 1930) the objects associated with fishing amount to 5%; in Disko Bay (Mathiassen 1934, 1958) 5%; in Kangaamiut (Mathiassen 1931) 11%; in Godthåb (*cf.* chapter III) 11%; in Julianehåb (Mathiassen 1936) 41%. A division of the material into relative periods does not alter these figures.

We can now describe the economic foundation of the exchange by surveying the actual products (Fig. 118).

Fox furs. This was the most important commodity "with which the inhabitants do a large trade northwards" (Dalager 1915: 87). Egede bought a number of fox furs on

his journey to southern Greenland in 1723 (1925: 94, 96, 100). The sinews of the tail were used by Greenlanders for sewing thread and the skin for appliqué to the cuffs. Otherwise the fox was of no significance, but was only sold to the Europeans, who paid higher prices for the blue foxes from the southern part of the country than for the white (Glahn 1771: 84).

Driftwood. This belongs to the person who first finds it, pulls it ashore, supports it with stones or puts the owner's mark on it (Dalager 1915: 17). In Hope Colony the driftwood was at first used as firewood instead of coal (Gulløv & Kapel 1979: 90), which reduced it drastically along the coast, so even the Greenlanders' houses were demolished for their timber (Egede 1925: 104). A distinction was made between the various types of wood, most of which was pine. Otto Fabricius described the driftwood in South West Greenland (Ostermann 1946: 54-57): *Qissuinnaq* [wood for general use] is all kinds of wood and is used for house-timbers, roof supports and fuel when they cook in the open air. *Orpik* [wood] is bits of osier, pieces of alder or birch and without significance, used for fuel. *Pingeq* [red wood] is firm and heavy spruce [*Pícea ábies*] and is used for oars, harpoon and lance shafts; from the roots they make trays and drinking cups, as well as the stem and stern of the kayak, wherefore it is highly prized; the red bark is used to dye their white skins red. *Unarsivik* [wood for bird darts and bladder darts] is a white pine [*Pinus sylvéstris*] very light, with a beautiful structure and easy to work, it is therefore used for the frames of kayaks and umiaqs and for their small throwing-darts, so that they do not sink in water; this has the same value as Pingeq. *Ikkeq* [hard spruce] is a curved and finely grained sort of pine, which seems to be larch (Pinus Larix [*Larix sibirica*]); its wood is tough and can be bent and is used for arrows and kayak cockpit coamings. *Kanunngeq* [aromatic driftwood] is juniper [*Juníperus commúnis*], found in larger pieces than what usually grows in Greenland, is used for kayak ribs as it is tough and strong; it is however rare. *Uligiiliq* [loose and brittle wood] is aspen [*Pópulus trémula*], occurs as great trunks, but it's so soft in the wood and so absorbent, that it can only be used for fuel, wherefore the Greenlanders think nothing of it.

Soapstone. This was the most important merchandise of the trading voyages and gave access to the baleen. It is first mentioned as a merchandise in 1725, when the fjord dwellers had prescriptive rights to it (Egede 1925: 174). Dalager adds that certain families had the right to mine and work the soapstone and sell it in the north and the south (1915: 15). The takeover by the southerners of soapstone mining after the smallpox epidemic is first mentioned in 1735 (Egede 1925: 292). From the 1750s the soapstone trade is mentioned in the past tense, as if it were over, e.g. Walløe in 1751 (1927: 66), Dalager in 1752 (1915: 82), Cranz after 1760 (1770: 227), Glahn before 1770 (1771: 262) and Thorhallesen after 1770 (1914: 65).

Baleen. The purpose of using baleen for fishing lines and for lashing pieces of wood together was explained by Egede in 1723 (1925: 80). In 1739 Poul Egede saw on the ice-fjord in Disko Bay a baleen line for fishing halibut at 364 fathoms (1939: 71). Walløe was told in 1751 (1927: 66) of the demand for such lines for catching halibut and Norway haddock. If this demand was not met they had, as the merchant Anders Olsen saw in the south, to use plaited fishing lines of the same strong grass as was used in basket weaving, when fishing in deep waters for cod and Norway haddock (1764: 28).

Apart from the exchange of these primary goods, secondary demands also arose and were met by trade. For example, Poul Egede mentioned that in the areas north of Disko Bay there was a demand for *grass* to insulate the kamiks, which had to be imported from the south (1939: 98; Egede 1925: 326). The *caribou* was the most

important of the land mammals and in the Godthåb District there were as many as in the whole of the rest of Greenland, and for that reason "people from all districts come here to hunt in the summer" (Dalager 1915: 14-15). All caribou populations in Greenland are subject to considerable fluctuations in their number. In the mid-17th century (M. Meldgaard 1986: 59ff.) the caribou population decreased dramatically in West Greenland and disappeared from South Greenland, where Walløe in 1753 had observed "a thin crust of ice, whereby the earth was covered so firmly, that the game could not push it aside and get something to eat" (1927: 111). At the same time Dalager mentioned that in Godthåb the animals had almost all been shot due to the uncontrolled trade in flintlocks, because the Greenlanders hunted them continually from early May to the end of October (1915: 80); and, again at the same time, Anders Olsen related that in the country inland from Søndre and Nordre Strømfjord there were said to be a few caribou still remaining "of which there in earlier times had been many" (1764: 11, 14).

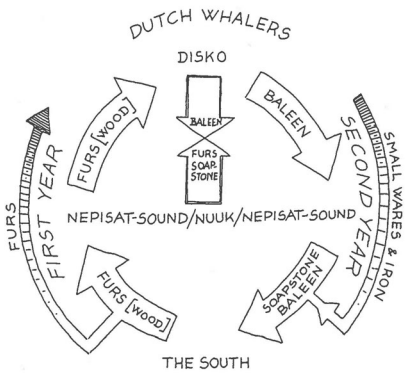


Fig. 118. *The south west Greenlandic exchange economy in the early 18th century. The direct exchange of soapstone cooking pots and lamps for baleen is shown by two opposing arrows and is known to have taken place before 1733, when certain families in Godthåb Fjord had exclusive rights to the production and "sale" of soapstone goods. The "meeting point" of the arrows can be geographically connected with an aasivik, e.g. Nepisat Sound or further north to where fox or caribou skins may also have been brought. The voyages of the south Greenlanders are shown as a circular movement, which on the left traces the first year's journey from southern Greenland to the north for whale hunting at Zuyd Bay or to Disko Bay for overwintering and on the right the second year's journey from the north back to South Greenland. The four broad arrows are marked with the goods which were brought for exchange with other West Greenland population grups. The first stop on the journey was the aasivik place in Nepisat Sound (Nuuk). The wood brought along was used in house building and as tent poles and is marked in square brackets. The smaller arrow indicates the skin products, including fox furs, which were sold to the whalers in return for "small wares" and iron (knives and weapon heads). The second stop was Disko Bay, where overwintering took place and where the southerners were provided with baleen. The third stop was again Nuuk, where some of the acquired baleen was exchanged for soapstone cooking pots and lamps. The fourth and last stop was in the south when they brought home the soapstone products and baleen, as well as the "small wares" and iron they had bartered from the whalers. A number of these goods were exchanged locally with the families that had stayed behind, in return for winter provisions.*

Summary

In the exchange system described above there was both trade with the Europeans and a domestic Greenlandic economy. The latter functioned by means of fixed values, *cf.* lamps and cooking pots for baleen and caribou skins. The southern Greenlanders' trading voyages were organized around *aasiviit* and marriage alliances with west Greenlanders. Thus, if the hunting or fishing failed, they could find support from family *en route* along the coast, since kinship extended to the tenth remove in "the lateral branches ... which is a great strength for many of the poor" (Dalager 1915: 56), and a distinction could be made between assistance obtained by kinship or by entering (trading) partnership; a distinction which is a well documented Eskimo phenomenon (*cf.* Spencer 1959: 65-66, 170).

In economic terms the exchange system can be described as reciprocal (*cf.* Sahlins 1974: 188). Dalager's (*op.cit.*) relief measure thus becomes a "generalized reciprocity", where the sharing of meat and giving of gifts confirm the social relationships, while the exchange of goods may be described as a "balanced reciprocity", which arises by trade (Sahlins 1974: 193-195). The barter trade with the Europeans was not in balance, despite reciprocal agreements on the value of goods, which were based on criteria of supply and demand, and this situation is described as a "negative reciprocity" (Haan 1915: 82; Sahlins 1974: 195). The sexual aspect of this trade, which was observed by Danell in 1652 (Bobé 1916: 215) and by Haan in *c.* 1715 (1915: 80), was a socially sanctioned activity performed by married women (*ibid.*). This means the establishing of trading partnerships with mutual obligations, as was customary in the internal Eskimo community, where it is described as a "balanced reciprocity" with a potential for resolving conflicts (*cf.* Sahlins 1974: 221; Spencer 1959: 81, 85).

The trading voyages from southern Grenland dominated the relations with the European whalers on 67° N, since the southerners could supply the coveted fox furs. This was the situation Hans Egede saw on the colonization in 1721. The south Green-

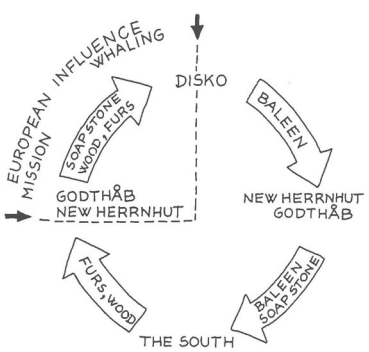


Fig. 119. *The situation after the smallpox epidemic 1733-34, when south Greenlanders had taken over the rôle of dealers in,* inter alia, *soapstone. Skins, wood and soapstone were all brought north to Disko. The wood was in great demand. The European influence is indicated by black arrows, which show where the south Greenlanders broke their journeys. This was by Neu Herrnhut, to where they were drawn in in large numbers and where they in time became resident, with the result that they no longer went north to Disko to exchange baleen. Hereby the basis for the model's right half has been eliminated. The colonization of southern Greenland later made up for this deficiency by direct supplies from Julianehåb.*

landers had become entrepreneurs in the trade with soapstone products from Godthåb Fjord, and from 1735 they dominated the market completely and subsequently settled in the coastal areas of the region. This travel-activity is associated with the communal house, whose origins in archaeological terms can be dated to shortly before 1700 and whose dispersion in the Godthåb Fjord can be solely attributed to the immigrant southerners after 1740 (Fig. 119).

The increase of the European proportion in the total number of finds in Godthåb District (chapter III), which in archaeological terms did not become significant until after the mid-18th century, must be seen as a result of the trading relationship, where the south Greenlanders were the main entrepreneurs. Their winter settlements lay alternately in South Greenland and north of 67° N. When they established themselves in the district, the proportion of European objects increased too, *cf.* Itissaalik with 60% European goods and house 13 at Tuttutuup Isua in Julianehåb District, with a similar ground plan, rebuilding and find-composition (Mathiassen 1936: 29-31). The acquired wealth, which the ammassing of European goods symbolized, was in economic terms the result of a negative reciprocity and could therefore not be exploited in the long run, e.g. by redistribution, and consequently the securing of winter provisions by cache-building was neglected. This resulted in a permanently settled population, subject to the colonial economy, as can be seen in the settlement pattern in Godthåb District after 1800.

It was thus commercial wishful thinking that made Thorhallesen suggest, around the end of the 18th century, that the Greenlandic exchange of goods should be maintained with the help of Danish merchants, as he did not understand the social network on which it had originally been based: "Also it is highly necessary that one merchant in the country assists the other with regard to the Greenlandic goods, which each place requires. Thus the merchant at Godthåb requires baleen from the north and sealskin straps from the south, as neither is to be found there, and without these the Greenlanders can neither fish nor catch seals. This assistance has become all the more important, since the inland trade with the travelling Greenlanders has quite ceased after the founding of colonies in north and south. The merchant at Godthåb must assist in this by procuring skins for the colonies which need these, and soapstone for those who want that" (1914: 65).

This overriding control over resources and production, to which the population in South West Greenland became subject, altered the social network, which henceforth covered smaller geographical units, associated with the European trading and mission stations. The causes must be sought in the distribution of the available resources in western Greenland, which had been exploited in an established exchange-system, based on "balanced reciprocity". This system became unbalanced when it attempted to meet an external demand for a tertiary resource, i.e. fox furs. Migration and trade were an important element in the hunting community's adaptation to the available resources; they constitute a reference framework for the interpretation of Thule-culture objects, and when this element disappears a date can be set for the end of the Thule culture. The following describes how a cultural identity survived even after 1800, despite the influence of mission and trade.

Ethnohistory

In the above, the established archaeological chronology of the Thule culture in Godthåb District has been correlated with the historical source material, and the changes, which have been demonstrated to have taken place in the composition of objects and in the settlement pattern, have been shown to be the result of an economic and social re-organization in the Greenland community. The evidence given by written sources about the resources in South West Greenland and the descriptions of the internal trade have shown that both variations and interventions in the natural environment could bring this re-organisation about. These historical and archaeological sources are the prerequisites for ethnohistory and they refer to the social environment, where the tale is told (*cf.* Gulløv 1980: 430). Hans Egede's account of Greenland's population and the Greenlanders' oral tradition are thus both sources for ethnohistory.

Hans Egede wrote, when he had been 15 years in the country, that the Norsemen had not been the first and original inhabitants there; those had been the savages on Greenland's west coast. They were descended from those Americans who lived north of Hudson Bay and whom they ressembled in appearance, occupation and dress. These Americans came from the north down along the west coast of Greenland, where they "often had wars with the Norwegians" (1925: 315). Egede knew the historical source material from John Davis to Lourens Feykes Haan, which talks of people on the other side of Davis Strait, and his supposition of an immigration from the north still holds true. He was, however, concerned with the fate of the Norsemen, which indeed was the reason for his going to Greenland, and he never changed his view, that it was the scrælings who had driven his forefathers from the country. He sought to find the explanation in the many ruins which ostensibly were destroyed by the savages. This point of view presupposes cultural contact, primarily of a conflict-orientated nature, but critical analysis of the source material cannot lend credence to this theory today (*cf.* Arneborg 1988, 1989).

The Kalals in South West Greenland

Hans Egede wrote in his diary, after he had been in Greenland for a year, that the people in the colony had returned from the fjord and told that a number of the savages were in there now. "They said that our people were not to go in there, because the *kalals*, as they called themselves, wanted to go hunting and fishing; but if our people still wanted to go there, they were not to do them harm or hinder them in their occupation" (1925: 48).

Hans Egede last made mention of the Greenlanders with this particular appellation in 1723: "[...] were a number of Greenlandic strangers with us, who had many fox skins to trade [...] and had first and foremost come here in order to visit us [...] among what I spoke to them about and asked them about, I was also told that in the south, where they live, there are many derelict stone-built houses in which the *Kablunachs* [qallunnaavsuit] i.e. the Norwegians had dwelt, but they are now deserted, so the *Kalals*, as they call themselves, now again live in many of these derelict dwellings [...]" (1925: 86).

We know that in 1654 the Greenlanders from Ball's Revier, i.e. Godthåb Fjord, called themselves *inuit* and the Europeans *qallunnarsuit* (Petersen & Rischel 1985: 164). The information came from the kidnap-victims, who still had family and friends living in the area, when Hans Egede 70 years later began to study their Green-

landic language with the help of his sons and the assistant vicar Albert Top. Egede also noted that *inuit* means 'people' (Egede 1925: 386).

These Kalals are only mentioned in South West Greenland and the appellation has later been suggested as being a derivation from the Norse word *skrælingjar*, which Egede also knew (Thalbitzer 1904: 36). This suggestion, however, has no phonetic justification and must now be rejected (*cf.* Petersen 1961: 463-464). The appellation Karelians, who Claudius Swart in the 1420s said were the inhabitants of the northern countries, from whence they would go "ever down in Greenland in large hosts" (Bjørnbo 1911: 106), has been suggested as the origin of Kalals (*cf.* Gad 1967: 212). This source was, however, first brought to light in 1904 (Bjørnbo 1911: 89), which makes it unsuitable for solving a linguistic problem in the 18th century.

Poul Egede observed in 1737 that the inhabitants of Disko Bay called themselves *inuk*, while *kalal* was used in reference to the Dutchmen and the Danes (1788: 81, 116), and 15 years later Walløe noted of his journey to South Greenland that the descendants of the scrælings are the so-called *inuit* or *kalals* (1927: 92). There is now no doubt that the two appellations were in use simultaneously in South Greenland in the Middle Ages (*cf.* Kleivan 1984: 620). It must thus be presumed that Hans Egede asked the Greenlanders what they were called and was told *Kalals.* This name is included in Poul Egede's dictionary with the comment that "they say the appellation was introduced by the old Christians who earlier lived in their country" (1750: 68). We do not know whether the name was originally confined to the South Greenlanders, who stayed in Godthåb District and Disko Bay on their travels, or whether it was remembered by Inuit in the whole of South West Greenland. But we must presume that the *norsemen* and *inuit* used the names *kalals* and *qallunnaarsuit* about each other.

It has been suggested that *kalal* is derived from the Icelandic word (*skinn*) *klædast* i.e. those who wear (skin)clothing. This does not carry the same negative meaning as the derogatory term *skrælingjar*, which is found only in Norse sources (Collis 1988: 259; GHM 1845: 33). *Kalal*, together with a few other words of likely Norse origin (*cf.* Egede 1925: 36; Thalbitzer *op.cit.*), constitute an ethnohistorical source which tells of a meeting of cultures. It is difficult to determine the time and place of this meeting, but an attempt will be made in the chapter below in connection with the discussion of Norse objects found in Eskimo settlements.

The family on Illorpaat and in Kangeq

We know that the south Greenlanders travelled north for the whaling and that they gathered on the Kitsissut Islands by Cap Desolation on the border of Frederikshåb and Julianehåb Districts to catch hooded seal for victuals on their journey (Cranz 1770,III: 247; Walløe 1927: 67). This was also the place where Hans Egede met Greenlanders in tents in 1723 and noted that the dialect changed (1925: 95). This linguistic observation, also made by Walløe a little to the south (1927: 90), was made in summertime and did therefore not establish a fixed linguistic border. The phonetic criteria used were not recorded, but we know that the intonation of the words was in 1740 described as "drawn out singingly" (Cranz 1770,II: 524) and that there was a vowel-shift from *u* to *i*, *cf.* Aluk to Alik (Walløe 1927: 92). These are however features of the east Greenlandic i-dialect, which must already by then have come into southern Greenland from the east coast, via the *aasivik* places. This would correspond with the linguistic theory "that the strongest linguistic influence [in eastern Greenland] went in a southerly, not in a northerly direction" (Rischel 1986: 131, 139).

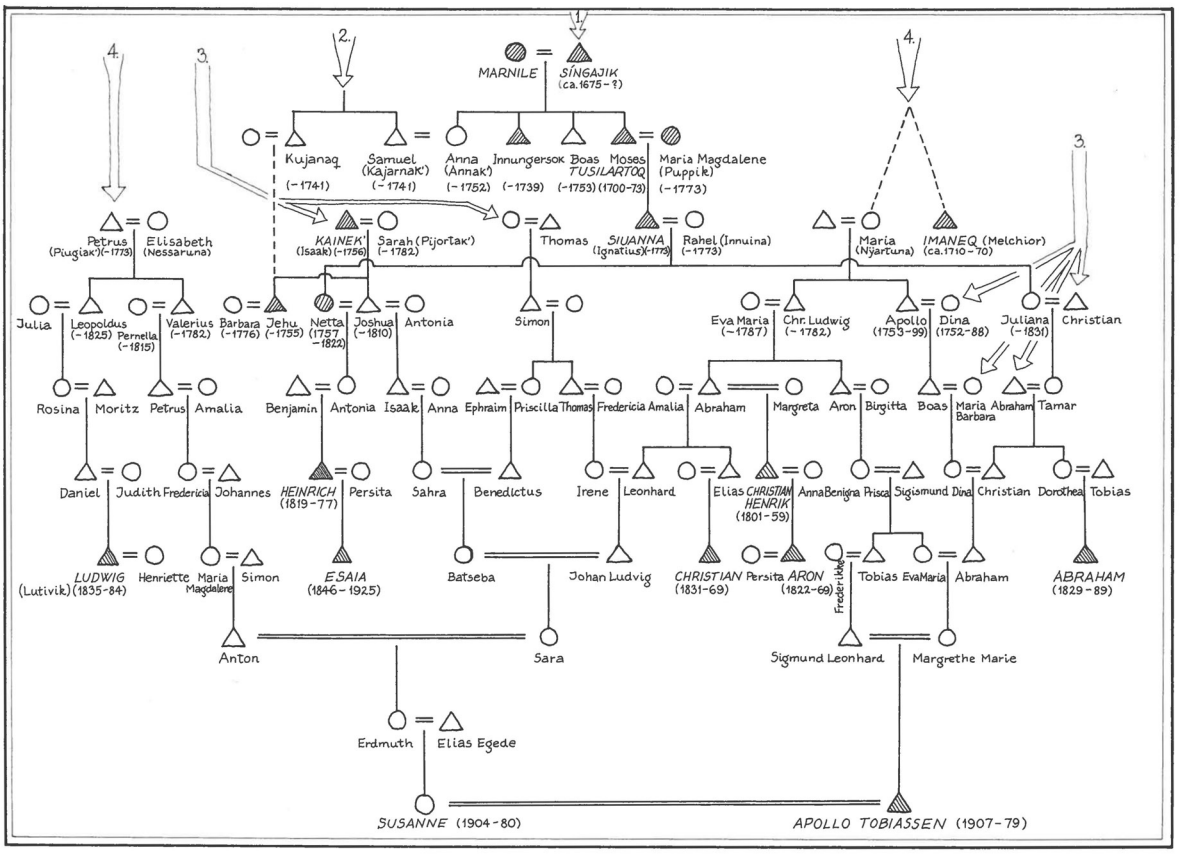


Fig. 120. *The genealogy of Apollo and Susanne Tobiassen in Kangeq. The figures in the arrows show where the south Greenland immigrants settled.*
1: Illorpat and Kangeq.
2: Neu Herrnhut.
3: Kook Islands.
4: Pisuffik.
The hatched symbols in the first four generations indicate the persons mentioned in the oral narratives, which were collected and published by Rink (1871) and Rasmussen (1924). Then follow the informants in the sixth and seventh generations.

It was in this region that there were many derelict stone-built houses, some of which were now again inhabited by the *Kalals*. It was from that region that the southerner Sinngajik travelled north to Kangeq, where "there never were any seasons of the year, where there was nothing to hunt" (Rasmussen 1924: 276). The motive for travelling was the wish to safeguard against hunger, as was the motive for the southerners' trading voyages, but instead of returning to South Greenland, Sinngajik settled at Kangeq and the reason for this was quoted to be a flight from enemies (*ibid.*). The story of this event became oral tradition in Kangeq and a part of the people's history there, which was not written down until *c.* 1920, but continued to be told in 1975, when the family's first dwelling on Illorpaat was also pointed out (*cf.* Gulløv 1979, 1985a; Gulløv & Kapel 1979/80).

During the course of the years *c.* 2,500 south Greenlanders were recorded in the church registers at Neu Herrnhut (Kirchenbücher 1733-1900), to which Kangeq belonged. The continuity in this immigrant south Greenlandic community in Godthåb District, which has been pointed out above in the sources for the ethnohistory, can hereafter be illustrated chronologically and geographically with the genealogy of the informants Apollo and Susanne Tobiassen through a period of 300 years (Fig. 120). The southern Greenland element in the coastal regions by Godthåb and Neu Herrnhut emerges in the following places:

1. Kangeq and Illorpaat. Sinngajik arrived here with his family when they had fled from their enemies, and according to the story his son Tusilartoq was born on Illorpaat (Rink 1871: 1-9; Rassmussen 1924: 276-354). The settlement in a communal house at Illorpaat lasted a couple of years and took place around the year 1700, according to the archaeological evidence (Gulløv & Kapel 1979/80).



Fig. 121. *Apollo Tobiassen (1907-79) with his confirmees in front of the church in Kangeq in 1969.*

2. Neu Herrnhut and Kangeq. Kajarnak arrived here with his travelling party in 1738 on his way north and the following year he stayed with the Brethren on his way home and became the first to be baptized by the Herrnhuts and was given the name of Samuel (Kirchenbücher 1733-1809). Samuel married Sinngajik's daughter Annaq, who had come from the south with her brother Tusilartoq. The revenge of Sinngajik's enemies reached their son Innungersoq, who was murdered in 1739. His killers were caught at Uummannaq in Sukkertoppen District and were taken to Godthåb, where they were put in irons and whipped by the parson (Cranz 1770,I: 509-511; N. Egede 1939: 137-139; Walløe 1927: 43). Samuel's communal house lies north-east of Godthåb (Giesecke 1910: 158). Tusilartoq settled in Kangeq with his son Siuanna (Cranz 1770,II: 811-812).

3. Kook Islands. The south Greenlanders came here after the smallpox epidemic, which had depopulated the islands (Egede 1925: 299; Dalager 1915: 13). Kannasuaq, called Kaineq, settled there after he had adopted Samuel's nephew, and his communal house can still be seen (Gulløv 1983: 99, 103). Several people settled on the island, according to the baptismal register (Kirchenbücher 1733-1809).

4. Pisuffik. The south Greenlanders came here before the smallpox epidemic (1925: 149). The communal houses were abandoned 1733-34 and were again inhabited after 1740 (Ostermann 1935: 40, 65). There were singing contests between the south Greenlanders from Kook Islands and Pisuffik in 1762 (Cranz 1770,II: 1009). A religious revival in 1768 led by the shaman Imaneq led to the desertion of the place and the original inhabitants moved to the Danish mission in Godthåb, while the southerners led by Imaneq went to the German mission in Neu Herrnhut. Imaneq was christened Melchior and then settled among his kinsmen in Kangeq, where he died in 1770, at the age of *c.* 60 (Kirchenbücher 1733-1809; Gulløv 1986).

The source material quoted here consists of the oral tradition, archaeology, the church register from Neu Herrnhut, the Brethren mission's journals (*Diarium* used by David Cranz) and Dano-Norwegian diaries ("The Relations" by the Egedes, Dalager and Walløe). After 1900, when the Brethren's mission station and congregation were transferred to the Danish State Church, the church register for the Godthåb congregation has been used to continue the genealogy. The extensive demographic documentation of the south Greenlandic population in Godthåb District is primarily due to the association of the immigrant Greenlanders with the Brethren missions, which had direct contact with the mother church in Herrnhut. The records from there are preserved *in extenso* and are thus valuable source material for the ethnohistory (*cf.* Gulløv *et al.* 1985). The archives of the South Greenlandic Inspectorate, which contained church registers from most of the South Greenland parishes, went down with the Greenlandship "Hans Hedtoft" in 1959 (Caning 1979: 62).

In spite of the lacunae in the Danish source material we are thus able to complete the genealogy in Godthåb and demonstrate the south Greenlandic influence in Kangeq through 10 generations. Apollo Tobiassen (1907-79) acted as catechist in his native village (Fig. 121) and descended in direct line from the south Greenlander Sinngajik.

The informants and the oral tradition

The first half of the 19th century saw a period of decline in hunting and fishing and the introduction of fishing nets in 1805 did not remedy this situation. Health standards deteriorated and consumption was prevalent. In 1854 Kangeq became an official trading station and The Royal Greenland Trade Department built an official residence for the Danish commercial assistant (Gulløv 1976: 108).

The population had been in permanent residence since the time when the long trading voyages ceased, more than half a century earlier. Hunting and fishing were carried out within the borders of the colonial districts, which had been established in the 18th century. This was the situation when the Inspector of South Greenland H.J. Rink sent an invitation from Godthåb in 1858 to the country's missionaries and colonial administrators, asking them to help collect, among other matters, "Greenlandic legends or poems which are still kept alive among the inhabitants in certain areas by oral narrative or legend" and make sure that the manuscripts were "written as clearly as possible, because of possible divergences in the spelling, which one wished to keep exactly like the originals unless there were to be contributions from natives who were more than commonly ignorant of orthography". The aim was "partly to serve as information for the colonial administration and the mission, partly to provide the Greenlanders with matters for diversion or general education" (Meldgaard 1982: 4).

This invitation resulted in 444 manuscripts returned from the west Greenlandic districts, as well as 93 written tales dated 1823-28 returned by Pastor Peter Kragh, who had collected them during his missionary activity in northern West Greenland (Rink 1866: 353). 17 Manuscripts were sent from eastern Greenland with narratives collected among immigrant east Greenlanders in the Cape Farewell area. 23 manuscripts came from Labrador, collected by German Brethren. Rink's initiative thus resulted in 577 manuscripts, most of which were written in fair copy by the pupils at the newly established teachers' training college in Godthåb and later transferred to the Royal Library in Copenhagen, along with Eskimo legends and songs collected by Franz Boas on Baffin Island (Ny Kgl. Samling 2488, 4o, I-IX).

Rink visited Kangeq only once, although it was a mere 18 km from Godthåb. This

was in the spring of 1856. Fog from the open and ice-free sea often lay over the skerries and Rink wrote that "the place has a very sinister appearance" (Gulløv 1976: 110). But the invitation also reached the skerries and the first manuscript was received from there not quite a fortnight after the handbill had been written. This was sent by the Brethren mission's catechist Christian Henrik, who included illustrations by his son Aron. Rink's reaction to these first pictures is seen in a letter to C.C. Rafn at the National Museum of Denmark, who had been informed of the drive for legend collection: "... I permit myself to include 2 examples by a certain Aron at Kangeq in Godthåb's District, from whom I hope to get many contributions, as the poor man is ill and almost always abed ..." (Knuth 1969: 40). These came to amount to many hundreds of pictures during the next decade, until Aron died of tuberculosis soon before his 47th year in 1869.

During the following years, six persons from Kangeq returned 169 manuscripts, which was about one third of Rink's total material from western Greenland. The contributors were all literate Greenlanders, who had been educated by the German Brethren. In other words, a story-telling tradition existed, which on Rink's initiative could be preserved and transmitted, in spite of the difficulties involved when the oral tales had to be rendered correctly in written form (Rink 1866: 2). In the Neu Herrnhut church register there are short obituaries of the baptized Greenlanders, and the six people from Kangeq also find mention here (*cf.* Kirchenbücher 1809-1900):

Christian Henrik (1801-59) succeeded his father as catechist [Nationalgehülfe] in 1832. Sent six manuscripts between 1858 and 1859 accompanied by drawings by his son Aron. Died of tuberculosis [Lungenschwindtsucht].

Aron (1822-69), seal hunter, schoolmaster and assistant catechist [Gehülfe beim Versamlungshalten]. Sent 56 manuscripts during the years 1858-68, together with *c.* 300 drawings, woodcuts and water colours, which illustrate the accompanying tales (Knuth 1969: 30). Died of tuberculosis [Lungenschwindsucht]. (Figs. 122-123).

Christian (1831-69) seal-hunter, was Aron's cousin, born in Neu Herrnhut, but moved after his marriage in 1854 to Kangeq where he worked as assistant schoolmas-

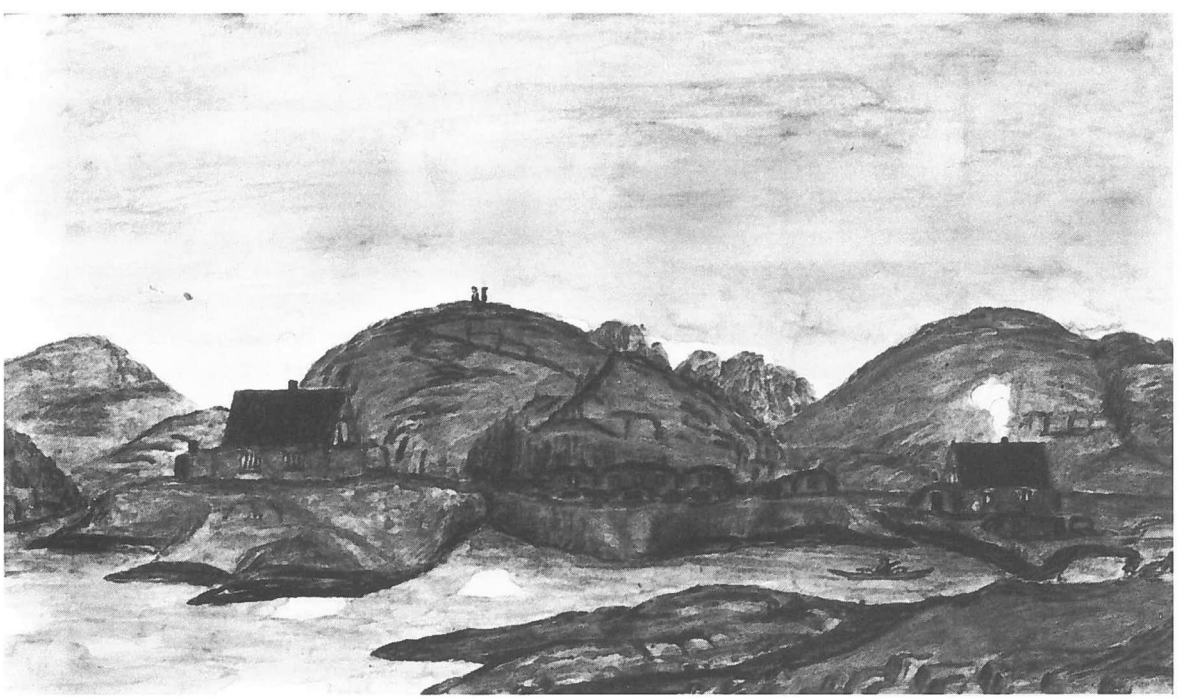


Fig. 122. *Aron's water colour of Kangeq painted c. 1859 (Meldgaard 1982: 83-84). Aron lived in the house to the right. The Danish commercial assistant lived in that to the left and below this are the thick midden layers described archaeologically in chapter II.*



Fig. 123. *A section of the view above, photographed in 1972. On the site of Aron's house there is now a waste shute and to the left are the ruins of the Greenlandic turf-walled houses. The house in the center with the long staircase belonged to Apollo and Susanne Tobiassen. The church on the right contained a school-room in the loft and had been half of the Brethren's church at Uummannaq Island inside the fjord. In 1905 it was separated off and floated on a raft to Kangeq.*

ter [Gehülfe der dortigen Schule und Versamlungshalter]. Sent 12 manuscripts between 1858 and 1859. Died of surgical tuberculosis [Knochenfrassleiden].

Heinrich (1814-77) lived in Neu Herrnhut, but moved after the death of his wife in 1866 to Kangeq, where he began collaborating with the infirm Aron (Knuth 1963: 216). Rink received 68 stories from Heinrich, 62 of them written down from oral narrative in the beginning of 1867, when he spent a month with Rink in Godthåb. Died at the age of 57 after a miserable existence in Kangeq.

Abraham (1829-89) worked *inter alia* as kayak postman between Godthåb and Ivittuut. Sent four manuscripts between 1858 and 1867. Died of gastric inflammation [Magenentzündung] at Fiskenæsset.

Ludwig (1835-84), seal-hunter. Sent 23 manuscripts between 1867 and 1868. Drowned at sea near Kangeq.

In his thesis on the Eskimos, Rink pointed out the distinction the Greenlanders themselves made concerning the origins of the legends, when they distinguished between myths, *oqaluttuat*, and stories, *oqalualaarutit*, the latter being about events which the narrator had "on second or third hand from the person who had participated in the events" (1871: 206). The family in Kangeq was able to demonstrate that it had had its roots in southern Greenland. By means of the story they kept alive the memory of the deeds, which enabled them to survive culturally, in spite of the altered living conditions entailed by permanent residence. Although the stories from 19th century Kangeq contain many mythical elements and their events are difficult to date, *oqalualaarutit* remain an important ethnohistorical source for 18th-century events (*cf.* Gulløv & Kapel 1979/80: 377).

The story of the southerner Sinngajik was written down by Heinrich and was again told by his son Esaia to Knud Rasmussen in 1902 (*cf.* Gulløv & Kapel, *op.cit.*). The sto-

ry from Pisuffik about the shaman Imaneq's conversion was told by Christian (*cf.* Gulløv 1986). Both stories were illustrated by Aron (*cf.* Knuth 1963; Meldgaard 1982: 28-33).

The stories about caribou hunting in the ice-free country behind Søndre Strømfjord and about the exchange of baleen with the people living to the north can also be ascribed to the south Greenlanders and can be dated to the time of the trading voyages around the year 1700. Aron has told of both customs (Rink 1866: 134-137, 230-232; Meldgaard 1982: 48-53).

Since 1721 the Europeans in Greenland had wondered that so little was remembered among Greenlanders of events which were known to have taken place in the country, "such as of the first sight of ships, of firearms, of the old Norsemen and the first visits by the later Europeans, of the smallpox epidemic etc." (Rink 1871: 208). But is is no accident that the oral tale, i.e. *oqalualaarutit*, concentrates on the narrator and the family, for thereby an account is created, whose ethical and poetic contents will at all times have a primary value for the responsive audience, and which can often be constructed around an extensive genealogy (*cf.* Vansina 1985: 148-150, 174-185).

To make up for this deficiency, Aron painted, on Rink's request, a series of water colours which depicted the events mentioned by Hans Egede with the addition of a good deal of invention (Gulløv & Kapel 1979: 56, 1979/80: 362, note 14; Knuth 1948: 65, 66), as well as situations from the Brethren's missionary activity, as published by David Cranz, among which the smallpox epidemic in 1733-34 and the first baptism, of Kajarnak, are the most important (Knuth 1948: 72; Gulløv 1978: 36). However, in the Eskimo community, which was the subject of the tales, these events were ever of secondary importance. It was symptomatic of Rink's request, that it concerned itself with the historic events called "the first thing" and "the first people" and with people who are inferior in the Greenland community, and this emphasizes the difference between the European view of history and the Greenlandic tale. None of the key figures in the sources illustrated by Aron, e.g. Hans Egede, Karjarnak and Matthäus Stach, appear in the Greenland tales, but their own heroes, e.g. Sinngajik, do.

The stories about the Norsemen aroused interest because their disappearance was ascribed to Eskimo attacks and thus seemed to confirm the tale of the scrælings (*cf.* Egede 1925: 316). Not surprisingly, the same persons appear in southern Greenland and in Kangeq in the story about the Norse chieftain Uunngortoq, as told by Sameq from Julianehåb and Abraham from Kangeq (Knuth 1969: 48-73). Since the time of Hans Egede, the European request for information appears to have given rise to the desired answers, which, with a large measure of imagination, and with reference to the visible Norse ruins, told "about the old Norsemen" and their demise. Aron, Abraham and the other *Kalals* could give reins to their imagination, confident that the mission was not an institution which sanctioned blood-revenge. There had been conflicts between the two ethnic groups, as is demonstrated in a few Norse sources (*cf.* Arneborg 1988), but "we have no source material which, with any degree of certainty, can reveal their extent, nor tell of the other historical circumstances. The Greenlandic legends of the Norsemen may be held to be posterity's interpretation of the events" (Kleivan 1982: 328). The meeting of the cultures is archaeologically demonstrated by the peaceful representation of both parties as small dolls (Gulløv 1982b, 1983a). Aron does not remember this and his visual representation is corrected by Rink, who writes: "...his pictures are independently devised and composed; only one thing I have had to draw to his notice, that is to give the old Norsemen other clothing than that of present-day Europeans" (Knuth 1969: 42).

The narrative tradition continued to exist among the Greenlanders of the Brethren mission. When Knud Rasmussen made a stay in Godthåb District in 1902 on his way

to the Polar Eskimos, he sought out the best storytellers and later published a selection of their legends in his book "Myter og Sagn fra Grønland" (Myths and Legends from Greenland). More than half of these tales from western Greenland (Rasmussen 1924) were taken from two oral informants. They were Heinrich's son Esaia, who was then living at what had been Neu Herrnhut, and Juua from Kangeq. In 1902 Knud Rasmussen and the painter Harald Moltke went out to Kook Islands south of Kangeq where the Kangeq people gathered eggs. Juua entertained there and Moltke described the situation: "Seeing him and Knud together was a rare treat. They drew sparks off each other and Juua has probably never told so vividly, nor puffed out his rubber face so amusingly, as that day on Kook Islands, when he all by himself performed a whole fairytale with a large cast, spoken with different voices. The Greenlanders were convulsed by laughter and I, who could only follow the story through his mimicry and gestures, consider these open-air scenes among my best theatrical experiences [...] It was a very calm evening. The smoke from the crackling fire rose straight up. Juua sat on a slope, while his story was written down by Knud and thus entered world literature" (Gulløv 1976: 114).

Conclusion: Ethnohistory and archaeology

The narrators from Kangeq and their genealogy have enabled us to use the stories, i.e. *oqalualaarutit*, about south Greenlanders, hunting and trading journeys and named persons as sources for the ethnohistory. In other words, the oral narrative continued to seek its inspiration and structure in the traditional stories long after the missions and trade had gained a foothold in the country (*cf.* Gulløv and Kapel 1979/80; Sonne 1982). This cultural identity also comprises the Greenlandic landscape with its named settlements and the excavated house ruins. The results of these archaeological investigations constitute yet another ethnohistorical source.

This chapter emphasizes that both the oral tradition and archaeology are requisites for ethnohistory. Together they create a diachronic and synchronic dimension, which enables us to interpret and thereby understand the Eskimo community on its own premises as a historical reality, in spite of the scarcity of written sources. This is a long-established perception of ethnohistory (*cf.* Axtell 1979; Sturtevant 1966; Trigger 1986) and it is about to gain ground in Greenlandic scholarship (e.g. Gulløv 1980; Grønnow *et al.* 1983; Sonne 1990).

If Therkel Mathiassen in 1930 had thought that the oral tradition was as valuable a source as were the results of his archaeological work in Kangaamiut, then he would not have suggested that the communal house was inspired by houses built by Dutch whalers. For he was told about such a house that it "according to tradition, was built by a man from the south who would show the people here in the north how to build houses" (1931: 50).

Schultz-Lorentzen pointed out at an early stage (1904) that, when the stories in the material collected by Rink told of journeys, they primarily told of northward journeys along the west coast. We now know that a large part of this material was collected among descendants of immigrant southerners. This circumstance is, however, not mentioned by Birket-Smith, who in his critique of Schultz-Lorentzen stated that "at the time when the Danish colonization began there was a certain tendency among the south Greenlanders to travel northwards, but one can not attach any importance to this, other than that the tendency was there at the time" (1917: 32).

In the light of our increased knowledge, we cannot criticize the authors quoted above, but we must note that also the material features which enter their discussion of

the borderline between southern and northern West Greenland, e.g. the cooking niche in the house passage, the use of bird darts and the joining together of wood by rebate rather than lashing (*op.cit.*), are just those traces which the south Greenlanders have left in South West Greenland.

This "tendency" to travel northwards has in the preceeding been associated with whaling, from which the southerners returned after they had finished trading. Journeys from the north down along the west coast for the purpose of whaling were demonstrated to have taken place in the discussion of the communal house. The most important winter resources were the fishing in South Greenland and seal-hunting in northernmost West Greenland (*cf.* Mathiassen 1936: 132; Møhl 1979: 389). There is thus nothing in the existing source material to indicate that the Dutch whaling changed the settlement in West Greenland, as has been postulated (*cf.* Meldgaard 1986: 29).

The change only took place after the establishment of permanent trading and mission stations. The archaeological source material and the settlement pattern of the later winter-houses confirm that the accumulation of people was succeeded by a movement onto temporary sites with limited resources, where it, in some places, was necessary to build caches to survive the winter when there was little to catch, *cf.* the Ameralik Fjord, where nearly 90% of the excavated bones were from spring-migrating harp seals (Møhl 1982: 289), and where line-fishing had to be abandoned after a few winters (Giesecke 1910: 260). The recorded caches were, in other words, a part of the hunting and fishing system and thus reflect the chosen hunting and fishing strategy, which, however, ceased when people moved back to the European sites. The interpretation of this system is thus only valid for a very brief period, when the European influence on the choice of strategy was of paramount importance.

The corresponding source material for the communal houses demonstrated that the use of caches was common in the coastal region, e.g. the Pisuffik area with 2.1 caches per house, while it was less common inside the fjord. This distribution corresponded to that of the communal houses with cooking niche in the house passage, which was introduced after 1750. The difference between coast and fjord reflects the demographic situation, which arose after the immigrant southerners had moved into the fjord and had become associated with the German Brethren mission, e.g. in Kangiussaq and the Uummannaq area. The occurrence of caches decreases as the contact with Europeans increases.

The source material from the earliest winter-houses demonstrates caches at houses which could be dated to the end of the period, around the year 1700. The building of caches must be seen in relation to the earlier winter-houses further inside the fjord, e.g. Qoornoq and Kapisillit, where no caches have been recorded. This difference between earlier houses without caches and later houses with caches describes a change in the winter hunting and fishing. The existing source material does not allow us to establish the extent and character of this change, but we do know that the common seal in Kapisillit was still a winter resource in the 19th century and that it bred in Kangersuneq (Gulløv 1983: 216, 217). The earlier winter settlements might have been based on breathing-hole hunting and a smaller demand for caches. The change in the settlement pattern, when the innermost fjord sites were abandoned, was connected with the climatic change and the advancing ice in the 17th century. From then on the bladder dart and the bird dart were the most important implements for winter hunts on the open sea.

The settlement pattern and the recorded structures show that stable resources always determined the location and size of the winter settlement. If they were inade-

quate, the dwelling was moved or caches were built. This conclusion applies to all the described house types.

The fjord settlement was thus based on a certain size of population and stable resources, which did not require the building of caches. This seems to apply in the 15th and 16th centuries. The change in climate and the increase of ice in Kangersuneq in the 17th century presumably hampered the hunting of common seal, and that may have caused the cessation of winter settlement in the innermost branches of the fjord. The permanently settled fjord population is mentioned by the written sources in the 18th century. However, caches have only been recorded at the settlements in the outer fjord, e.g. Erssaa and Qarajat.

The coastal settlement has been established since the 14th century and was extended at the end of the 15th. The resources were seal and razorbill. The recorded caches can be dated to the time of the altered dwelling type at the end of the 17th century. The immigration from southern Greenland in the 18th century increased the pressure on winter resources, especially the overwintering razorbills, and there was widespread use of caches. The permanent settlement made this strategy redundant, the building of caches ceased and survival henceforth depended on European initiatives, e.g. price fixing on Greenlandic products and social welfare (Gad 1976: 33f; Israel 1969: 90ff.).

We now know that the increased use of caches in Godthåb District occurred simultaneously with the south Greenlandic trading voyages and the change in the fjord-dwellers' settlement. This growth in mobility in South West Greenland is connected with the climatic change, which culminated in the 17th and 18th centuries, and is called the Little Ice Age (*cf.* Maxwell 1985: 32, 35). The barring by the western ice of Baffin Bay across Davis Strait on 67° N resulted in an increase in Greenlandic hunting of the sought-after Greenland whale, which wintered at the ice's edge, where Europeans also came. The increased ice formation in the south-west Greenlandic fjords in Godthåb and Julianehåb Districts caused the fjord-dwellers to move out from the innermost winter settlements.

The diminution of the ice-free sea area in South West Greenland thus caused an increased pressure on the living resources in southern Greenland, which were also exploited by incoming south-easterners. Fishing was here of decisive importance for survival in winter. One of the reasons for the northward trading voyages was the need to obtain the equipment for such fishing.

The ethnohistorical account of this movement also describes an Eskimo system of hunting and fishing, whose main characteristics are great distance between the home and the potential resources, return to the point of departure and the building of caches. This system is based on a high degre of "logistic mobility" (periodic journeys), a low degree of "dwelling mobility" (permanent winter-houses) and a high degree of specialization (trade and barter), which define the Eskimo adaptation strategy (*cf.* Binford 1980). The European mission and trade change this strategy, which is henceforth based on low logistic mobility (between coast and fjord), high dwelling mobility (between winter-house and hunting lodges, i.e. *qarmat*) and dependence on Europeans.

In the Kangeq area's ethnohistory this hunting and fishing strategy also finds mention in the quotation cited in the beginning of this chapter, where the south Greenlanders were on their way north for whaling. The archaeological examination of the communal houses demonstrated that also the local Greenlanders used this type of dwelling when they journeyed north, but that they used the earlier and smaller type when they overwintered inside the fjord. This adaptation to the defined area and the

specialized trade in soapstone products changed when the south Greenlanders moved in after the smallpox epidemic.

When one, or just a few, resources increased, as did, for example, the whales on 67° N and the razorbills on 64° N in 17th century South West Greenland, then the ethnohistory demonstrates increased building of caches, low dwelling mobility, high logistic mobility and a specialized hunting and fishing system, e.g. from individual to collective activity. A similar adaptation strategy has been observed in arctic Canada and, with the aid of settlement patterns and archaeology, it describes the Eskimo exploitation of large whales and caribou in the 13th century (*cf.* Savelle 1987: 17-18).

The available sources set the limits for the description of hunting and fishing strategy in the Eskimo community. It is here defined by means of resources and mobility, and the demonstration of a change in the strategy thus becomes closely connected with the archaeological documentation for migration (*cf.* Rouse 1986: 172). Ethnohistory, however, helps to amplify the interpretation of the archaeological source material, as was, for example, demonstrated above by the sources for Illorpaat 9, and uncovers the causes of the events. This is the optimal benefit we can gain from the archaeological context, for "it is only when we make assumptions about the subjective meanings in the minds of people long dead that we can begin to do archaeology" (Hodder 1986: 79).

The aim of the following chapters is to uncover the earliest layers in the Thule culture, as found in South West Greenland.

V. The Thule culture in South West Greenland

Some of the artefact types from Godthåb District which were described in chapter III were demonstrated to have been present in all the settlement periods. These types were harpoon heads, side prongs for bird darts, arrow heads, kayak accessories, whetstones, knives, bodkins, pots and tub staves.

The extensive travel activity, the altered settlement pattern and the European whaling in the 17th-18th century came to have influence on the social situation of the population in South West Greenland. Formalized trade and exchange arose along the coast, where some groups gained control of the most important resources, e.g. by trade in soapstone lamps (*cf.* chapter IV). The many variations in the shape of the hunting implements which emerged in this period denote a change in proprietory relationships from the collective to the individual. The acquisition of European goods, which were often amassed in large quantities in the houses, is seen as an expression of social prestige. A social network came into being by marriages between local and incoming Greenlanders and an economic network was established by means of trading partnerships amongst native Greenlanders and with European whalers.

As described in the previous chapter, these factors could also be related to the mythological figure, the Sea Woman. She ruled over the living resources in the sea and became associated with the symbolic exchange of goods between the Greenlanders and the foreign whalers. The trading expeditions of the south Greenlanders accordingly stand out as the most plausible cause for their particular preoccupation with the Sea Woman (*cf.* Sonne 1990). The explanation of the journeys, which took place in a period which saw great changes to the arctic ecological system, must, in other words, be sought in the Eskimo universe, where the Sea Woman determined cause and effect. The baleen for fishing lines which the south Greenlanders acquired in the north helped them to secure provisions at home, but the exchange of goods was organized in a way which ensured that the Eskimo universe remained intact.

The solution to the ecological challenge was thus both material and spiritual and was contained in "the cosmological system [which] as a whole complements in a positive and important way the practical aspects of adaptive organization by relating severe and enduring ecological problems to an alternative realm of causes and effects" (Sabo & Sabo 1985: 85). The archaeological artefacts must also originally have been an integral part of this Eskimo universe, as in 1752, when it was noted that the hunting implements had to be altered if the catch failed to appear for one reason or another (Dalager 1915: 47).

Selected diagnostic types

Some artefact groups can be clearly related to the meeting of cultures in South West Greenland in the 17th and 18th centuries which was described above. These are the soapstone lamps, the harpoon heads and the European objects. The last group does not appear throughout the settlement period, but recurs in the 14th-century cultural horizon in the form of Norse objects and here they are evidence of a much earlier meeting of cultures. These three groups have been selected as diagnostic types in the reconstruction of West Greenland's cultural stratigraphy which follows below.

Soapstone lamps

The soapstone quarries in Godthåb Fjord are said to be some of the best in Greenland and the product was traded from here to large parts of the west coast. The soapstone material which is described is uniformly of good quality and presumably comes from the quarries inside the fjord.

The archaeological material shows that the earliest lamps were oval in shape. They were succeeded by crescent-shaped lamps with a dividing ridge which were later given a wick ledge. Lamps with wick ledge alone is the most common type and was mainly used in the 18th century; later in this century larger lamps without ridge or ledge occur too. All the known types from West Greenland are represented in the material dealt with here, if one includes the information about the lamp from Aligortooq with the wick ledge shaped as a row of knobs (*cf.* chapter III). The sizes varied according to whether the lamp functioned as a source of light or for cooking.

In Canada large lamps replaced the open hearth in the houses (Maxwell 1985: 278), as seen in North Alaska (*cf.* Anderson 1984: fig. 2) from whence the Thule culture came. This happened at the time when people got to know of the presence of soapstone in eastern arctic Canada (Morrison 1991: 240f) and began to use it instead of clay, the latter material having been generally used throughout Alaska (de Laguna 1947· 251ff).

Such a change would, however, be of significance for the perception of the lamp and its maintenance as being in the woman's domain. In Alaska all production of pottery, including lamps, was woman's work and the result was her property (Spencer 1959: 471). In Greenland work with soapstone, including lamp production, was primarily man's work, while the lamp was still the woman's property (Birket-Smith 1924: 82). This difference explains both that the form of the lamp, with and without ridge, was dependent on the blubber supply and that the lamp trade in South West Greenland was integrated in a "cosmological system"; both functions had now been taken over by the man.

This situation can be demonstrated to have existed at the same time as the changes in the Greenlandic community in the 17th and 18th centuries took place. The use of clay, however, does not cease outside the pottery region in the western Arctic. Pottery in the Thule culture has been demonstrated in several places in the eastern Arctic (*cf.* Arnold & Stimmel 1983; Collins 1950: 24; Holtved 1944,I: 262f, 1954: 79; McCullough 1989: 185ff; Mathiassen 1927,I: 66f; Taylor & McGhee 1979: 103). The dating of this custom stretches across five centuries from 'early Classic Thule' in the 10th century on Banks Island (Arnold & Stimmel 1983: 1) to the Ruin Island phase's "Barrow Curviliniar Pottery" on Ellesmere Island in the 14th century (McCullough 1989: 187, 241)

and it was still in use in the Copper Eskimo area in the 15th century (Morrison 1983: 159, 1991: 241).

During this period there were several successive migrations into the eastern Arctic, among them those into Greenland in the 13th and 14th centuries, where the architecture of the Ruin Island phase dwelling and that on Cape Kent could each be related to a building tradition, with fireplaces in the front walls as the earliest feature (*cf.* chapter IV; Holtved 1944,II: 155). In the former there were pottery and soapstone lamps, also with knob-row (Holtved 1944,I: 168f), in the latter the lamps were made from other kinds of stone, which were, together with sandstone, still the preferred materials in North East Greenland (Sandell & Sandell 1991: 64f).

The hearths, which were heavy on fuel, and the blubber pits in the high arctic areas are evidence of access to plentiful animal resources, especially whales (Holtved 1944, II: 108; McGhee 1969/70). Conversely, the change in the architecture and the emergence of the large lamps for cooking in Greenland happened in more southerly regions, where seal hunting predominated and there was access to major soapstone deposits.

This access does not seem to have been present in Disko Bay, where the earliest large lamps were made from plates of gneiss, e.g. Illutalik house 6 and Sermermiut (Mathiassen 1934: 38, 77, 1958: 44, fig.12). A birch branch was found below the latter and has been dated (K-557) to 1275 AD calibrated, i.e. 1230-1380. The wall of the lamp is made of clay and tells of a pottery tradition which was still alive. A similar lamp was found in 18th-century Ammasalik, in spite of large soapstone deposits there and, together with the artefact types from the same place, tells of a later arrival of Eskimos from North East Greenland (Mathiassen 1933: 9, 92, pl.5(7)). Such composite lamps are also known from the Canadian archipelago (Collins 1951: 50; McGhee 1984: 70) and can be related to one similar from Comer's midden in Thule, which is of Southampton Island type (Holtved 1944,II: 137f; Wissler 1918: 151f).

In other words, the size of the lamps tells us that the open hearth was absent, i.e. that a removal from whaling districts had taken place. This began early from North Greenland southwards into West Greenland, while it happened comparatively late from North East Greenland into South East Greenland, where niches in the houses' front walls were in use for a long time (Mathiassen 1936a: 40). The composite lamps show that either there was not yet knowledge of soapstone in the periods in question, or that the rights of use of this resource had already been claimed. This had been the case for a long time among the Eskimo families in Godthåb District, where the south Greenlanders arrived late in the 17th century. At that time the Thule culture's second whaling period had commenced and blubber pits in front of the platform in the houses could again be demonstrated archaeologically (Mathiassen 1934: 54). The question is whether there was also knowledge of the Godthåb Fjord's soapstone quarries in the 14th century, when the Thule culture can be demonstrated in the area and when the Norse Western Settlement was abandoned. If there was, it becomes probable that an Eskimo population group was present in South West Greenland.

Harpoon heads as 'parallel traditions'

The archaeological material comprises 16 harpoon heads, to which can be added a head found in Hope Colony (Gulløv & Kapel 1979: 75). The shape is determined by the function and the prey was mainly seal, but it is known that baluga was hunted too (*cf.* Gulløv 1983: 216ff). Most of the heads had been in heavy use before they were dis-

carded, so few of them are complete. The typological classification into thin and flat heads is based on the length of the line hole measured in relation to the cross section in the relevant place. On the basis of these proportions it could be established early on that the thin heads represented a principle which was earlier than that of the flat heads and this determined the typological dating of the Thule culture, a dating which still holds (Porsild 1914: 128; Mathiassen 1927,II; Jordan 1979).

The heads were found on the outer coast, as well as inside the fjords. Four thin heads, four flat and one hybrid with an almost circular cross section were found on the coast. Two thin heads and six flat ones were found in the fjords. Nothing can be said chronologically about their relative age, since both types are represented simultaneously. Typologically, three more features were of significance for the classification, i.e. the shape of the socket, the placing of the barbs and the placing of the spur or spurs.

On this basis it could be established (*cf.* chapter III, summary) that the found heads represented the thin Thule-2 type (from Uummannaq), the thin Thule-4 type (from Illorpaat) and the flat Thule-5 type (from Illorpaat and Uummannaq). The first two are among the prototypes in Classic Thule (*cf.* McCartney 1977; Mathiassen 1927), while the last was early on connected with the harpoon heads of the Dorset culture (Collins 1937: 315)

Collins' emphasis on this connection is important because it presupposes a meeting of cultures, about which there is still only very little archaeological evidence in spite of a determined search (*cf.* Bielawski 1979: 104f; Manning 1951; O'Bryan 1953), and because the flat head becomes very widespread in Greenland. This can be seen in the table below:

	Thin	Flat	Total
Thule District (*cf.* Holtved 1944, 1954)	302 (94%)	19 (6%)	321 (100%)
North East Greenland (*cf.* Larsen 1934; Glob 1935)	23 (23%)	76 (77%)	99 (100%)
Upernavik (*cf.* Mathiassen 1930; Hjarnø 1969, 1974)	79 (59%)	54 (41%)	133 (100%)
Central west coast, *i.e.* Disko Bay region (*cf.* Mathiassen 1934; Swenander 1906)	68 (29%)	165 (71%)	233 (100%)
South West Greenland (*cf.* Mathiassen 1931, 1936; present study)	44 (52%)	41 (48%)	85 (100%)
South East Greenland (*cf.* Mathiassen 1933, 1934a, 1936a; Larsen 1938)	78 (44%)	100 (56%)	178 (100%)
All regions	594 (57%)	455 (43%)	1049 (100%)

If the Thule District is excluded, the flat heads make up 60% of all Greenlandic heads. In the west Greenlandic area from Upernavik to Cape Farewell the flat heads make up 58%.

It can thus be established that the two main types represent each their cultural tradition: a Classic Thule tradition with its roots in Alaska and a Dorset tradition with its roots in a meeting of cultures in the eastern Arctic. It is not probable that the latter should merely be interpreted as being the result of a simple imitation of found Dorset

heads. The harpoon head represents a proprietary relationship between the hunter and his prey, and lost implements can be identified, as can be seen in the 18th-century ethnohistorical sources (Dalager 1915: 18; Egede 1788: 52).

Such a relationship must have lain behind the choice of the Thule-5 type, which can be demonstrated to have been in use throughout the original Dorset area. It has been suggested that the cultural contact first took place in the form of a trading relationship (Taylor 1963: 462), after which new types of harpoon head would indicate the above-mentioned proprietary relationship between the individual, the social unit and the prey. This presumed prehistoric cultural contact could thus be described in the same way as the one in South West Greenland in the 17th-18th century.

The composite harpoon heads from the fjords and the coast could be dated to this period. The fjord type (L.b.611 and NA-3-77-39) is from the 1730s and is described as a flat Thule-5 type with a single dorsal spur, with barbs as on the Thule-2 type and without a blade. It appears at the same time as the South Greenlanders in Godthåb District and it is here the oldest form to have been demonstrated in West Greenland. It was used for hunting harp seal and baluga. The type was later furnished with a blade and is subsequently found distributed throughout West Greenland from Julianehåb to Upernavik (e.g. Mason 1902: fig.36; Mathiassen 1930: pl.23(3), 1931: 44, journal on 16th April 1934; Porsild 1914: 140f; Swenander 1906: pl.3(93-104), but it is not known from the remainder of Greenland (Mathiassen 1930: 306). The type was in use in the 20th century (H.C. Petersen 1986: 82).

The coastal type (h 4160) is from the 1720s and is described as European work (Gulløv & Kapel 1979: 75). This is also compounded of the Thule-2 and Thule-5 types, but has two dorsal bifurcated spurs. The type is known from northerly West Greenland in the 17th century (Mathiassen 1930: pl.5(19)), where the European whaling took place (*cf.* Gulløv 1987). The type should presumably be seen in relation to this meeting, since the harpoon head which we have from Hope Colony (*op.cit.*) in shape represents a prototype, which is known to have been put into production later (*ibid.*). Such a prototype of iron is known from Cumberland Sound and would have been imitated in tusk, bone and antler (Boas 1964: 65; Mason 1902: 301). The type hereafter became widely distributed in West Greenland, also with curved spurs which imitate the ones forged from iron (e.g. Mathiassen 1930: pl.23(2), 1931: pl.7(1); Porsild 1914: 141; Swenander 1906: pl.3(111)). The demand for iron played an important rôle in the 17th-18th-century Eskimo-European meeting of cultures, which introduced the sailmaker's knife as a woman's knife into the western Greenlandic community (Gulløv & Kapel 1979: 125). This also applies to the mass produced harpoon head, which, however, retained its typological features.

The harpoon heads found in Godthåb District represent two cultural traditions which appear simultaneously. The same seems to have happened in the rest of Greenland, and I will thus call them 'parallel traditions' from now on. When they occur in the same head the merging tells of a meeting of cultures, whose causes can be discovered in ethnohistory. The question is whether the 'parallel traditions' have always been present in South West Greenland; if that is so, a reconstruction of the cultural stratigraphy would demonstrate whether the thin and flat type came into West Greenland at the same time as the Thule culture. I would thus be able to establish whether the Thule-5 type, which is common in the "Inussuk culture", can only be dated to after 1400 AD as has been claimed (Maxwell 1985: 272).

Norse objects

Objects of Norse origin were found in the nethermost cultural layer in the Kangeq midden, which was dated to the 14th century. They consisted of a turned soapstone beaker, a heavy rim of a cooking-pot, a wooden ornamental bodkin (Eskimo imitation?), a caribou-antler netting needle, a whetstone for needles of igaliko sandstone, a zig-zag ornamented piece of wood and a tub stave (Eskimo imitation?).

None of these objects seem to have had any practical use in the contemporary Eskimo community. Wooden staves and ornamental bodkins are, however, some of the most important indications of Norse influence, since they are interpreted as being imitations of medieval coopering and writing implements, the so-called *styli*, and have thus contributed to the definition of the concept "the Inussuk culture" (Mathiassen 1930: 295ff).

The stave technique, however, is known from late Dorset culture, where it is recorded at Nunguvik on the northern Baffin Island; here it has a small groove at each end of 'the stave', which has served as the side of a box or casket (Mary-Rousselière 1984: 48, 57; Maxwell 1984: 364, fig.6j). The dating of house 71 (S-766; Mary-Rousselière 1979: 56) is calibrated to 1210 AD, i.e. 1050-1265, and is thus close in date to early Thule culture on the same site (e.g. the discussion of rounded house types, chapter IV). Similar double-grooved 'staves' have not yet been discovered in the Norse culture in Greenland, but some were found at the bottom of Comer's midden in Thule, where Holtved dated them to the 13th century (1944,II: 54).

The ornamental bodkin is not known outside Greenland, but has been compared with a find from the Ipiutak culture in Alaska (Larsen & Rainey 1948: 91, pl.24(11); Mathiassen 1930: pl.14(11)), although no explanation of the similarity could be found. The nearest I can get to Alaska-related bodkins in Greenland are the ones from Dunholm south of Scoresby Sund on the east coast (Thalbitzer 1909: 461f) and from Disko Bay, Illutalik house 7 with kitchen niche (Mathiassen 1934: pl.1(15)). Both places were the southern limit of the distribution of harpoon heads of Thule-2 type with grooves at the socket (Larsen 1934: 95; Porsild 1916-18, unpublished excavations at Sermermiut), but these bodkins are not ornamental, although they have been described as such. The wooden ornamental bodkin which we have from Kangeq (L13.3373) resembles closely in form only the one from Thule, which was found together with a knife with a Norse iron blade in house 21E. The house also contained thin and flat harpoon heads, which demonstrates the 'parallel traditions' and shows influence from Disko Bay in the 15th century (Holtved 1944,I: 259, 305, pls.21(19), 36(10), II: 52,112).

Since Therkel Mathiassen's excavation of the midden at Inussuk, Norse objects in Eskimo context have been interpreted as archaeological proof of direct contacts between the two population groups, or as the result of digging for iron in the deserted Norse ruins, as David Danell was told about in the 1650s (*cf.* chapter IV). By such digging other objects were found too, which must be presumed to have had the same value as they had in the 18th century south-west Greenlandic community (*ibid.*).

The survey below lists the qualitative and quantitative extent of all the recorded Norse objects found in an Eskimo context. It must, however, be emphasized that much of the metal from the early excavations in Greenland has not been metallurgically examined, so there may be more Norse objects among them. Nor have Eskimo imitations of Norse objects, such as spoons, been included (*cf.* Mathiassen 1936: 116f).

South Greenland, i.e. Nanortalik, Julianehåb (Qaqortoq) and Narsaq municipalities.

Nanortalik (Arneborg 1991: 206f; Mathiassen 1936: 60): 1 iron nail, 4 pieces of bell metal.

Julianehåb (Arneborg 1991: 208): 2 pieces of bell metal.

Narsaq (Gulløv *et al.* 1992: 49; Gulløv 1993: 5f; Mathiassen 1936: 78ff): 17 iron pieces (4 of them knives), 2 copper/brass pieces, 2 bronze pieces, 5 pieces of bell metal, 13 spindle whorls, 5 soapstone pieces, 5 whetstones, 1 woollen cloth.

South West Greenland, i.e. Frederikshåb (Paamiut), Ivittuut, Godthåb (Nuuk), Sukkertoppen (Maniitsoq), Holsteinsborg (Sisimiut) municipalities.

Frederikshåb/Ivittuut (Arneborg 1991: 212ff): 4 pieces of bell metal, 2 bronze pieces (one a part of a cooking pot), 1 rune stone.

Godthåb (Arneborg 1991: 214; the present study): 2 pieces of bell metal, 6 spindle whorls, 12 soapstone pieces, 1 bone needle, 2 whetstones, 1 piece of wood with zig-zag ornament.

Sukkertoppen (Arneborg 1991: 217; Mathiassen 1931: 109f): 4 pieces of bell metal, 1 bronze piece (horse).

Holsteinsborg (Arneborg 1991: 218): 1 piece of bell metal, 1 chess man of walrus ivory.

Disko Bay, i.e. Jakobshavn (Ilulissat) municipality. (There have been no archaeological excavations of the Thule culture in Egedesminde (Aasiaat), Godhavn (Qeqertarsuaq) and Christianshåb (Qasigiannguit) municipalities).

Jakobshavn (Mathiassen 1934: 29, 116f, 157, 1958: 45ff): 4 iron pieces (knives), 1 iron sheep shears, 2 bronze pieces (one a cooking pot), 3 walrus ivory carvings, 1 wooden handle of a 'kidney dagger', 1 piece of wood with zig-zag ornament, 1 wooden spoon case, 2 whetstones, 1 spindle whorl, 1 woollen cloth.

Uummannaq & Upernavik municipalities, i.e. most northerly West Greenland (Arneborg 1991: 221f; Mathiassen 1930: 284ff): 3 pieces of bell metal (1 made into an ornamental pendant), 1 woollen cloth, 1 whalebone jetton, 1 rune stone (in a cairn, but not in Eskimo context).

Melville Bay, *i.e.* Thule (Avanersuaq) municipality.

Tuttulissuaq/Kap Seddon (Grønnow 1981: 4f; Grønnow & Meldgaard 1980: 42; Meldgaard 1980b: 11): 1 iron rivet, 4 chain mail rings.

Thule District, *i.e.* Thule (Avanersuaq) municipality.

Uummannaq (Thule), Nuulliit, Inglefield Land (incl. Ruin Island) (Buchwald & Mosdal 1985: 4; Holtved 1944,I: 298ff): 11 iron pieces (incl. 1 rivet, 5 knife blades, 2 harpoon blades), 4 copper pieces, 1 brass brow-band, 1 bronze piece (leg of a cooking pot), 1 fragment of chain mail (a lump of rings), 1 lead knife blade, 1 wooden sieve, 1 wooden spoon case, 3 fragments of a wooden box, 1 whalebone jetton, 2 walrus ivory chess men, 1 bottom of wooden tub, 1 double comb, 1 woollen cloth.

Peary Land & North East Greenland (Knuth 1980: 17ff): 1 piece of oak, 4 (?) iron rivets, 1 piece of copper (harpoon blade).

South East Greenland, i.e. Tasiilaq municipality.

Frederik VI's Coast (Gulløv *et al.* 1990: 388; Mathiassen 1936a: 30, 32, 34): 3 pieces of bell metal (2 of them made into ornamental pendants), 1 spindle whorl.

Ammassalik (Mathiassen 1933: 96): 4 pieces of bell metal (made into ornamental pendants).

Kangerlussuaq (Mathiassen 1934a: 10): 2 pieces of bell metal (?) (made into ornamental pendants).

Canada.

Ellesmere Island (McCullough 1989; McGhee 1984b; Maxwell 1960; Schledermann 1980): 74 pieces of iron (incl. 12 rivets, 6 knife blades, 2 ulo blades, 2 weapon points, 2 drill bits, 4 wedges; not all the pieces have, however, been analysed), 8 pieces of copper (incl. 1 weapon point), 1 bronze lever from a set of scales, 3 rings from chain mail, 1 plane without blade, 1 whalebone gaming piece, 1 bottom of a wooden tub (in 2 pieces), 1 piece of worked oak, 2 woollen cloths.

Lancaster Sound area (Collins 1951; Franklin *et al.* 1981; McCartney 1988: 60; McGhee 1984, 1984b; Mathiassen 1927,I: 193):

Cape Garry, Somerset Island: 21 iron pieces (not analysed), 3 copper pieces (not analysed). Port Refuge, Devon Island: 2 iron pieces (1 part of a cooking pot). Porden Point, Devon Island: 7 iron pieces (not analysed), 1 piece of bronze. Brooman Point, Bathurst Island: 2 pieces of iron (knives), 2 pieces of copper, 1 piece of bronze.

Resolute Bay, Cornwallis Island: 2 pieces of copper.

Qilalukan, Eclipse Sound: 1 piece of copper and lead alloy.

Hudson Bay region (McCartney & Mack 1973; McCartney 1988: 60; Harp 1974/75):

Silumiut, West coast of Hudson Bay: 1 piece of iron (knife blade).

Gulf Hazard, east coast of Hudson Bay: 1 piece of copper (ornamental pendant found in Dorset context).

It is known that metal was fairly widely distributed among the Eskimo communities before their contacts with the Norse, and meteoritic iron from Cape York was very widely distributed in both the Dorset and the Thule cultures. Later it also found its way to the Western Settlement (Andreasen 1982: 186; Buchwald & Mosdal 1985; McCartney 1988). It has been pointed out that the trade in metal, after the emergence of the Thule culture in the eastern Arctic, followed an already existing network, which presupposed that people "even have known that Dorset peoples in eastern Canada were using iron" (McCartney 1988: 62f, 78).

A trading system based on metal presupposes a balanced reciprocity with mutual obligation, as was described above with reference to South West Greenland in the 18th century (*cf.* chapter IV). Such a system has been described in northern Scandinavia in the 13-14th century (*cf.* Fjellström 1982: 87, 91; Simonsen 1967) and could also apply to a direct contact between Eskimos and Norsemen in Greenland. However, we only have the archaeological remains to support this theory, and they do not tell who were the partners in this trade and where it took place. I shall, however, try to clarify these questions below.

It has been suggested that the many Norse objects, found in connection with the recent investigations of the Ruin Island phase in the Smith Sound region, show evidence of direct contact (McCullough 1989; Schledermann 1980); this phase will therefore be isolated in the following table, which shows the distribution of Norse

metal in relation to Norse inspired tub staves, ornamental bodkins and wooden dolls, using the same geographical divisions as above.

	Fe	Cu, incl. bronze & brass	Bell metal	Dolls	Staves	Ornamental Bodkins
South Greenland (*cf.op.cit.*)	18	4	10	–	1	4
South West Greenland (*cf.op.cit.*; Gulløv 1983a)	–	3	11	1	55	22
Disko Bay (*cf.op.cit.*; Gulløv 1983a)	5	2	–	1	59	19
Uummanaq-Upernavik (*cf.op.cit.*; Gulløv 1983a; Kaalund 1979: 142)	–	–	3	6	47	11
Melville Bay (*cf.op.cit.*)	5	–	–	–	–	–
Thule District, excl. Ruin Island phase (*cf.op.cit.*; Gulløv 1983a; Lethbridge 1939: 192)	5	5	–	1	80	10
Ruin Island phase in Thule District (*cf.op.cit.*)	7	1	–	–	–	–
Ruin Island on Ellesmere Island (*cf.op.cit.*)	73	8	–	–	–	–
Ellesmere Island (*cf.op.cit.*)	4	1	–	–	–	–
Lancaster Sound (*cf.op.cit.*)	4	7	–	–	–	–
Hudson Bay (*cf.op.cit.*)	1	1	–	–	–	–
Hudson Strait (*cf.* Gulløv 1983a; Sabo & Sabo 1978)	(–)	(–)	(–)	1	(–)	(–)
Peary Land & North East Greenland (*cf.op.cit.*; Bandi & Meldgaard 1952; Glob 1935; Larsen 1934; Richter 1934; Thomsen 1917)	4	1	–	–	–	35
South East Greenland (*cf.op.cit.*; Larsen 1938; Thalbitzer 1909)	–	–	9	–	31	66
	126	33	33	10	273	167

There are 192 metal finds among the 273 recorded objects of Norse origin. 89 of them can be dated to the Ruin Island phase, from whence came a further 10 objects of other materials (4 in Greenland and 6 on Ellesmere Island). Although the many metal pieces may be fragments, which have not all been analysed, they make up a considerable number compared with the European finds in Godthåb District in the 18th century, to which 218 pieces could be dated (195 iron and 23 copper or brass). Furthermore, neither wooden staves nor ornamental bodkins were found in the Ruin Island phase, while such objects, according to Holtved, could be identified in the Thule District from the 13th century (1944,II: 52, 54).

Holtved dated the Ruin Island phase to the 14th century. It has later been suggested, on the basis of a number of C-14 dates from Ellesmere Island, that it may have begun in the second half of the 12th century (McCullough 1989). However, several dates obtained on willow and conifer give a standard deviation which places them in a period of more than 500 years (*op.cit.*, p.241). For this reason, other materials will be used in the discussion below of the age of the Norse objects in the Ruin Island phase.

A fragment of a coat of mail and a double comb were found in house 4 on Ruin Island (Holtved 1944,I: pl.44). The composite double comb replaces the single comb and becomes universal in Scandinavia during the 13th century (Søgaard 1963: 180) and in Greenland the earliest examples are dated to the period 1220-1390 (Arneborg 1991a: 87). The C-14 date for this house, made on walrus tusk (K-1487), gave the date

1160 AD, i.e. 1020-1245. A mean date to the mid-13th century seems possible, but it may be later and be closer to 1300 AD.

A woollen cloth and two pieces of iron were found in house 6 on Ruin Island (Holtved 1944,I: 301). The C-14 dating of this house, made on walrus tusk (K-1488), gave the date 1040-1150 AD, i.e. 1010-1220. The C-14 dating of the woollen cloth (K-1489) gave the date 1285 AD, i.e. 1260-1395. Dating of walrus tusk is subject to some uncertainty and although in both cases the dates are adjusted to take into account isotope fraction and reservoir effect (*cf.* Arundale 1981; McGhee & Tuck 1976), the quoted dates of this material would be too early. I would therefore date house 6 to *c.* 1300 AD.

A chain mail ring, a ship's rivet and a piece of oak were found in house 6 on Skrælling Island site, Ellesmere Island (McCullough 1989: pl.73). The C-14 dating, made on the oak (Geo-6069), gave the date 1280 AD, i.e. 1260-1400. A date around the year 1300 seems probable.

Two pieces of woollen cloth, a plane and a piece of iron were found in house 15 on the same site (*ibid.*). The C-14 dating of this house, made on heather from the platform (GSC-3059), gave the date 1330-1400 AD, i.e. 1300-1410. The C-14 dating of the woollen cloth (GSC-3038) gave the date 1280 AD, i.e. 1270-1390. A dating of this house to the mid-14th century seems probable.

A draughtsman was found in house 6 on Sverdrup Site, Skrælling Island (*ibid.*). The C-14 dating of this house, made on heather from the platform (GSC-3561), gave the date 1310-1380 AD, i.e. 1290-1400. A dating of this house to the mid-14th century seems probable.

A bottom of a wooden tub/box and a piece of copper were found in house 1 in Eskimobyen on Knud Peninsula, Ellesmere Island (*op.cit.*). The C-14 dating of this house, made on heather from the platform (GSC-2953), gave the date 1310-1380 AD, i.e. 1290-1400. A dating of this house to the mid-14th century seems probable.

A piece of oak was found in house 3 on the same site (*op.cit.*). The C-14 dating of this house, made on heather from the platform (GSC-2950) gave the date 1450 AD, i.e. 1420-1490. The dating of the oak (GX-6073, not corrected for the C-13 measurement) gave the date 1400 AD, i.e. 1280-1440. A dating of this house to the mid-15th century seems probable.

Indeterminable pieces of metal were found in several of the structures. In house 21 on Skrælling Island site there were 14 pieces of iron (not analysed) and 1 piece of copper (identified as Norse). A C-14 dating of heather from the platform (GSC-3156) gave the date 1290 AD, i.e. 1280-1390. In house 22 at the same site there were 16 pieces of iron (not analysed). A C-14 dating of heather from the platform (GSC-3003) gave the date 1220 AD, i.e. 1170-1260.

Two ruins without Norse objects at Nuulliit in Greenland have also been dated. In house 4 there was a harpoon head of Thule-4 type with a 'keel' which is also known from Ruin Island, Inuarfissuaq and the Thule settlement (Holtved 1944,I: 190, 1954: 50f, 62, 113). The C-14 dating of this house, made on walrus tusk (K-1080), gave the date 1250 AD, i.e. 1165-1285. The dating will probably lie around the year 1300 (*cf.* Arundale *op.cit.*). In house 29 there was a harpoon head of Thule-2 type with a vestigial spur, which is also known from Ruin Island house 4 (Holtved 1944,I: 184, 1954: 50f, 61). The dating of this house, made on walrus tusk (K-1078), gave the date 1230 AD, i.e. 1050-1275. The dating of this house also seems to lie around the year 1300 (*cf.* Arundale *op.cit.*).

Holtved's culture-historical dating of the Ruin Island phase to the 14th century on the basis of the Norse objects still appears to be valid, but the C-14 datings also showed

that Norse metal occurred during the 13th century. The architectural style with the characteristic kitchen niche was in use during several centuries and the find material demonstrated that there was influence from Alaska for a very long time, e.g. pottery vessel decorated with "Barrow Curviliniar Paddle design" (McCullough 1989: 187) found together with two pieces of woollen cloth and a plane in house 15 at Skrælling Island site from the mid-14th century. This influence was after Holtved's excavations described as being "freshly imported from Alaska" (Mathiassen 1944/45: 69).

The Ruin Island phase is, in other words, closely connected with the High Arctic area, from its emergence some time during the 13th century until some way into the 15th, and it is there associated with intensive whaling (Holtved 1944,II: 155; McCullough 1989). Seen in relation to the archaeological material in the present study, where the Thule culture could be demonstrated in 14th-century Godthåb District, it appears that others were involved in the presumed trade in Norse objects to the north.

There are three possibilities. Firstly, there may have been a palaeo-Eskimo people who knew of metal in West Greenland in the 12th-13th century and they may have transmitted their knowledge of metal and the Norsemen to the Thule culture, as suggested above (*cf.* McCartney 1988). Secondly, a pre-Ruin Island phase of the Thule culture may have met the Norsemen in Greenland, which would presuppose that they knew of their existence, as in the first possibility, unless the meeting took place in Thule. Such an early phase of the Thule culture has, however, been demonstrated in the 13th century on Baffin Island (*cf.* Mary-Rousselière 1979). Thirdly, the Norsemen may themselves have been in Thule, as suggested above (Arneborg 1991; Schledermann 1980). On the basis of the available source material, all three possibilities seem to have existed, but all at different times.

The first possibility is based on the information in *Historia Norvegiæ*, thought to have been written in Denmark under the influence of other writers, among them the Icelander Ari fróði (Arneborg 1991: 23; Jansen 1972: 32ff). The account of Greenland contains a mention of the meting with 'scrælings', who have no iron and use whale teeth for missiles. It has been suggested that this meeting took place in Disko Bay (*cf.* the objects and the ethnographic descriptions, chapter IV), but there is no archaeological evidence for this, in spite of finds of objects of late Dorset type and C-14 datings of structures from the 11th-12th century (*cf.* Grønnow *et al.* 1983: 53f, 89; Meldgaard 1986: 23; Larsen & Meldgaard 1958: 71).

The second possibility presupposes that a Dorset-Thule meeting took place before the meeting with the Norsemen, and that the Thule culture can thereafter be demonstrated in West Greenland before the emergence of the Ruin Island phase. Archaeological indications and the possible time of such a meeting have been postulated (*cf.* Bielawski 1979; Mary-Rousselière 1979). The knowledge of the Dorset culture's stave technique turns up at the same time as the Thule culture in Greenland, as pointed out in the beginning of this section. The characteristic kitchen niche was demonstrated as present in Disko Bay, as well as in South and South East Grenland (Mathiassen 1934: 38ff, 1936: 60f, 1936a: 31) and was associated with the Ruin Island phase (Holtved 1944,II: 99f), but has as yet not been found in a single house in South West Greenland, e.g. Holsteinsborg (Meldgaard 1980a), Sukkertoppen (Mathiassen 1931), Godthåb (Gulløv 1983), Frederikshåb (Gulløv 1986a, 1988a). This last observation, or the lack of it, might indicate that the Thule culture had already entered this part of Greenland after the Western Settlement had been abandoned, and that it was the Norse Eastern Settlement which thereafter became the target of direct trade. The find of a handle with carved bears' heads in the Norse Vatnahverfi (Vebæk 1943: 89) can be typologically related to similar finds from the Ruin Island phase and the Thule culture on northern Baffin Island (Holtved 1944,I: pl.38(5), 1954: pl.1(18); Mathiassen

1927,I: pl.41(7)). But, apart from the similarity, nothing further can be said about the dating of the handle in this part of the Eastern Settlement, where extensive erosion seems to have taken place in the 13th century as a result of overgrazing and tree felling, which caused the abandonment of several farms in this period (Vebæk 1992: 98, 108). The contact with the Eskimo communities, of which the handle is evidence, must have taken place a long way away from the Eastern Settlement.

The third possibility involves the 12 ship's rivets from the Ruin Island phase, which have been associated with a shipwreck (Schledermann 1980). These objects would then have been distributed in the Eskimo communities, as was described in Canada in relation to an investigation into the distribution of metal from abandoned ships in the 19th century (*cf.* Savelle 1985). The find of the 4 rivets at Melville Bay indicates that the ship may have foundered in these waters and that it may have happened in the second half of the 13th century, judging by the dating to *c.* 1300 AD of house 6 on Skrælling Island site, where a ship's rivet was found together with a fragment of chain mail. Similarly, the rune stone from Kingittorsuaq in Upernavik can be dated to around 1300 AD (Stoklund 1993) and this is further evidence of a Norse presence in this part of Greenland, which lies inside the Norse hunting grounds, *Norðrsetur*. The owners of the large farms sent ships out there on hunting trips and the hunters kept their houses there (Gad 1967: 109f; GHM,III,1845: 238ff).

The Norse hunters also had houses in *Greipar* and *Króksfjarðarheiðr* (*ibid.*). *Greipar,* which means the space between the fingers, has been suggested situated on 67°N (Nansen 1911: 229f), where the fjords Amerloq, Ikertooq, Qeqertalik and Kangerluarsuk, bordered to the north and the south by 1.5 km-high mountains, come closest to this description. *Króksfjarðarheiðr*, i.e. the flat and waste heath by the crooked fjord is described as the flat-topped mountains of horizontally bedded rock on Disko Island and the Vaigat Sound to the north, which is supported by the geology (*ibid.*; Rosenkrantz 1967). Here lies *Eysunes*, which means the glowing or smouldering peninsula. This refers to the coal- and oil-bearing slate strata on the Nussuaq Peninsula, which combust when there are rock falls (*ibid.*). A direct meeting between Norsemen and Eskimos may have taken place in this region and the *Norðrsetur* people's tools and other equipment may have been saleable commodities. Most of the Eskimo representations in wood of the Norsemen come from the area between *Greipar* and *Norðrsetur*, although their archaeological contexts do not demonstrate any direct contact.

The archaeological finds can thus contribute very little to the elucidation of a possibly formalised trade betwen Eskimos and Norsemen. The available material indicates that the contacts were incidental and that any real trade in Norse objects only took shape when the Thule culture entered the settlements themselves; but then by means of an already established Eskimo trading network. An examination of this and of the parties involved is one of the prerequisites for our understanding of the Thule culture in South West Greenland.

Apart from metal and the presumed imitations of Norse objects (*cf.* wooden staves and ornamental bodkins), Norse culture does not appear to have influenced the Eskimo material culture. We thus have no evidence of the use of, for example, woollen cloth which was noted in 1720 in the later contact period, when European clothing was worn "on top of their other garments" (*cf.* Haan 1915). Norse draughtsmen were used as spinning tops, which was a common toy (*cf.* chapter III; Mathiassen 1930: pl.22(6)). Oak is an exotic wood in Greenland and the rim of a turned bowl was found in 15th-century Illorpaat (*cf.* chapter III). Oak was also found in Upernavik, on Inglefield Land, on Ellesmere Island and in Peary Land (Holtved 1944,I: 300; McCullough 1989: 86; Knuth 1980; Mathiassen 1930: 299).

In Peary Land the oak was a 21cm-long piece of umiaq gunwhale, fitted with an iron rivet of Norse origin. This detail was probably not due to a lack of sufficient driftwood, but appears to have been deliberate: it occurs in West Greenland in the colonial period, when for example a piece of different wood might be attached to the kayak frame and have served as an amulet for the hunter (H.C. Petersen 1986: 18). Amulets in umiaqs are also known in West and East Greenland (Dalager 1915: 56; Qúpersiman 1982: 90). We canot tell whether the oak from Peary Land also served as an amulet, but might interpret it as such. The C-14 dating of the umiaq which was made on baleen lashings and on musk ox bones found nearby (K-566 and K-352) both gave the date 1440 AD, i.e. 1400-1490 and 1430-1450. The oak was dated (K-1449) to 1270 AD, i.e. 1220-1370, which corresponds with the date of house 6 on Skrælling Island Site from the Ruin Island phase.

This, together with the intensive whaling which we know took place in this phase of the Thule culture, as well as the known whaling in the north eastern Greenlandic polynia (Knuth 1980: 18), makes it probable that this resource was still exploited in North East Greenland. The Ruin Island phase as an archaeological concept cannot be applied in this part of Greenland, but a few artefact types from here are found as far south as Scoresby Sund, "freshly imported from Alaska" as Mathiassen would say, *cf.* the needle case from Dunholm (Thalbitzer 1909: 476; e.g. Holtved 1944,I: pl.37(30,31)).

The Norse objects may early on have been an integral part of the "cosmological system", which comprised trade and hunting. This interpretation is significant for our understanding of the resumed whaling in South West Greenland, which was noted in the beginning of this chapter (*cf.* Sabo & Sabo 1985; Sonne 1990), and it also seems to apply to 13th-14th-century North Greenland. The question is then, whether the Norse presence alone caused the Eskimos to move to South West Greenland, or whether the climatic change in the 13th century, which continued into the neo-boreal period in the 16th and climaxed in the Little Ice Age, resulted in a more southerly settlement (*cf.* Maxwell 1985: 31ff). The conditions necessary for whaling seem not to have been present in the most northerly parts of Greenland after 1500 AD (*op.cit.*, p.304f) except at the north-easterly polynias. The question is partly answered if the increase in midden-formation in 14th-century Godthåb District is interpreted as a result of an increase in the local population; but we do not know who these Eskimos were, for by then both thin and flat harpoon heads had become 'parallel traditions'. The time when this happened will emerge from the following.

The cultural stratigraphy in West Greenland – a reconstruction

The diagnostic types will in the following be placed in the Thule culture in West Greenland with reference to the description of them above. This will be a reconstruction, as the archaeological investigations and the preferred methods have changed a great deal since Therkel Mathiassen began the systematic excavations in 1929. The interpretation of them in relation to Thule District was partly re-evaluated by Erik Holtved in 1944 (II: 89ff).

The reconstruction of Mathiassen's stratigraphy is based on his descriptions of excavated layers, the designation of which are added to each individual object in the museum records. Later studies and C-14 dates are also included. The main aim of the reconstruction is to relate the selected diagnostic types to the earliest Thule culture in the examined areas. It then becomes possible to answer the questions above and to discuss them. The first question was whether there was a palaeo-Eskimo presence in West Greenland when the Thule culture arrived; the second was whether the thin and the flat harpoon heads were contemporary in West Greenland before the year 1400, i.e. whether there was a 'parallel tradition'; the third was when these traditions were introduced into West Greenland.

The geographical survey begins in Frederikshåb/Paamiut, continues across Godthåb/Nuuk, Sukkertoppen/Maniitsoq; Holsteinsborg/Sisimiut and Disko Bay and finishes in Upernavik.

Frederikshåb/Paamiut

This municipality is the most southerly in West Greenland. The Norse Middle Settlement (by some included in the Eastern Settlement) lies in the southern part. The municipality was surveyed and the Eskimo remains described for the first time in 1986, 1988 and 1989. It was possible to date the earliest Thule culture by means of trial excavations at Avigaat by Isblinken, at Akutsuk south of Frederikshåb Town and at Torsuut Tunulee 45 km north of the most northerly farm in the Middle Settlement (Gulløv 1986a: 49ff, 96ff, 1988a: 52, 64f, 94ff).

Avigaat. Description of the 1.7m-thick midden with neo-Eskimo deposits to a depth of 1.4m. C-14 dating of seal bones and bird bones from the midden's earliest Thule culture (K-4797) gave the date 1435 AD, i.e. 1415-1450.

Akutsuk. Two structures built as circular stone rings of 3.2 x 3.2m with a sunken entrance passage and walls of large stones to a height of 30-40 cm without turfs and situated in a gravefield behind the settlement (Fig. 124).

In the trial excavation of one ruin a microblade core of rock crystal was found immediately below the turf on the gravel on the floor. Three bones of harp seal and two dog bones were found 40 cm below the house passage. C-14 dating of the seal bones (Ua-2702) gave the date 1290 AD, i.e. 1265-1380, while the dog bones (Ua-2703) gave the date 1260 AD, i.e. 1215-1285.

Tarsuut Tunulee. Settlement with seven ruins of houses with both single and double rooms, situated on both sides of a small inlet. Trial excavation in one ruin did not yield any artefacts. On the youngest flagstones of the entrance passage, 30 cm below recent surface, a lump of burnt seal bones and blubber was found. C-14 dating of this (K-5190) gave the date 1400 AD, i.e. 1310-1415.



Fig. 124. *Surveying the circular structure at Akutsuk from the 13th century.*

Discussion. None of the Norse artefacts described above could be associated with these investigations. Ruins with double rooms are known from Thule culture in West Greenland until *c.* 1700 AD (*cf.* chapter IV). Most of the above mentioned C-14 dates from Frederikshåb fall within the same period as the earliest dates from Godthåb District, i.e. the 14th century. On the other hand, the ruin at Akutsuk has been dated to the 13th century and is of a type not found earlier in West Greenland. Nor is it found in 13th-century Thule District, including the Ruin Island phase, and I must therefore presume that, culturally, the ruin belongs to a period in the earliest Thule culture. Any association with the Dorset culture on the basis of the microblade core could not easily be established, because of the find of dog bones, which have not been demonstrated in Dorset. But the architecture, with the sunken house passage, where the bones were found, may at Akutsuk as in Canada (*cf.* Maxwell 1985: 240) have been the result of a cultural meeting between Dorset and Thule, and the possibility of a palaeo-Eskimo presence in West Greenland when the Thule culture arrived cannot be excluded.

Godthåb/Nuuk

The Thule culture is described in the present study and is dated from the 14th century onwards. The Norse artefacts are from this period, although the two pieces of bell metal are stray finds from the southern part of the district. Poul Egede relates that in 1727 he bought a piece of bell metal in return for sewing needles from the Greenlanders inside the Godthåb Fjord (1788: 33). This piece has not been preserved. In old burials on Uummannaq Island inside the fjord a thin harpoon head of Thule-2 type (L.b.602) was found, as well as a flat one of Thule-5 type with closed shaft socket and with an acuminated oval cross section (L.9362). The method of lashing on both types corresponds with an old tradition, which was in use before 1400 AD. The date of the burial can, however, not be determined.

Sukkertoppen/Maniitsoq

The settlements were first described and excavated in 1930 and around 3,000 objects from there are recorded under the number L12 (Mathiassen 1931). Two of the Norse objects (bell metal) were found in these excavations, while the remainder are stray finds. There are no C-14 dates of the Thule culture from this district, where the main archaeological effort was made at Qeqertarmiut and Utorqaat.

Qeqertarmiut. The excavation of the midden at this site yielded more than half the total number of objects from this district (1931: 5). Several earlier remains of structures were unearthed during the excavation and these are marked on the reconstructed section, which also shows Mathiassen's marking of the first cultural phase (Fig. 125). The midden's greatest depth of 1.9 m was recorded in D3 (1931: 40).

The flat harpoon head found with the thin Thule-1 type (C8) shows evidence of reuse (1931: pl.1(1,4)), and did probably not come from this place in the midden in its original form. Iron blades used as weapon points were found in the early and late layers of the midden (C46) and could thus indicate use of Norse as well as later metal, but building remains at this place in the midden (1931: 42) indicate stratigraphic disturbance. A piece of bell metal was found above an earlier floor (D5) and was connected with the destruction of the Norse settlements (1931: 110); it was dated to the 15th century. Below it a wooden ornamental bodkin was found (1931: pl.6(3)). Among the 15 recorded ornamental bodkins in the midden nine were of wood and all of those lay in the earliest layers (C29, 34, 35, 36, 40, 47(layer 5), D5). This concentration is special to this site, since only five other samples of wooden ornamental bodkins are known apart from these, i.e. Kangeq midden layer 9, Sermermiut and the Inussuk midden (Mathiassen 1930: 225ff) and Thule, house 21E.

Among the 22 harpoon heads from Qeqertarmiut, 17 were found in sections C and D, 10 of them in the earliest deposits. Three samples of the thin Thule-4-derived head without barbs and point (C27, layer 6 and C46, layer 4) and three of the Inussuk type (C39, layer 6, with one spur, C44, layer 5, defective, and D5, layer 7, with two spurs and rivet hole for a blade). Five examples of the flat Thule-5 type (without barbs and blade from C29, layer 3, identical with the example from the bottom layer at Sermermiut (Mathiassen 1958: fig.11(3)), C47, layer 5, D2, layer 3, D8, layer 2, and with one barb but no blade from C44, layer 3). The two traditions cannot be shown to have been contemporary, but the Inussuk type was found in the same place as the Norse bell metal (D5).

Utorqaat. Settlement with structures consisting of single and double rooms, as well as communal houses. 15 of the settlement's 24 structures were excavated along with four middens (1931: 14ff). In house 13 which had a double room there was bell metal, which was the only Norse object found at the site (1931: 18, 110), together with an imitation (?) of a Norse spoon made of antler (1931: pl.5(5)). A harpoon rest (L12.70) was of the same type as that from Qeqertarmiut D5, layer 6, which contained bell metal, and the one from the Kangeq midden (L13.3428) dated to the 16th-17th century. A side prong for a bird dart (L12.78) was of type I (*cf.* chapter III), an example of which was dated in Godthåb District to the 16th century.

In the smaller house 20 there were, among other finds, a gneiss plate which had functioned as a lamp, a knife with an iron blade in a side groove and a penis carved from antler (1931: 22). A similar item at Illorpaat was dated to the 17th century (*cf.* chapter III). In the small house 23 (1931: 24ff) there were, among other things, a harpoon head of the same type as that from Illorpaat 3 (igd 3958) from *c.* 1700 AD, an iron adze head with a rectangular shaft hole similar to the head from Illorpaat 13 with

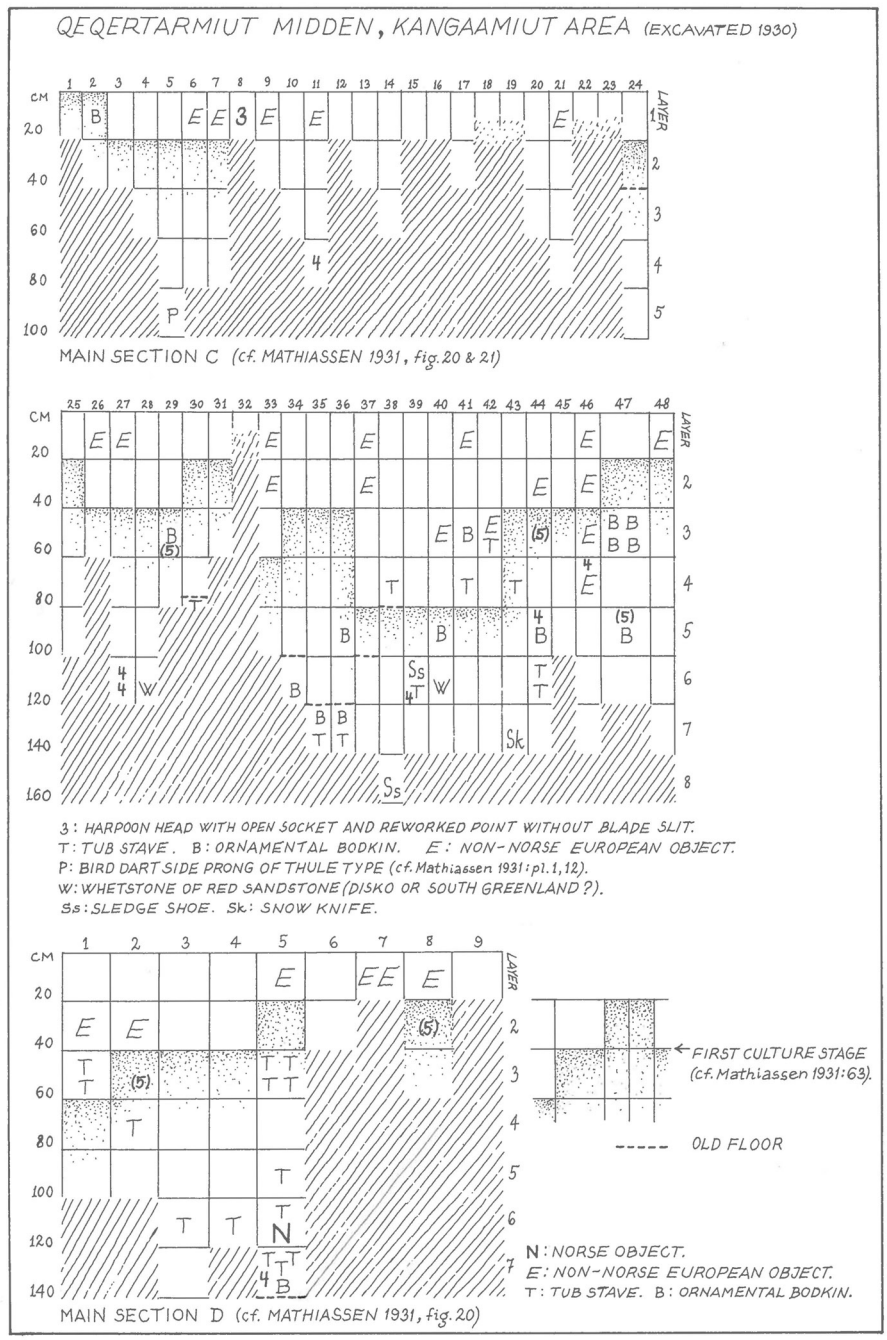


Fig. 125. *Reconstruction of the midden at Qeqertarmiut. The harpoon heads found in the earliest deposits were of the types Thule-4 and -5 with closed socket, i.e. 4 and (5).*

a circular shaft hole (igd 448), as well as a blue glass bead of the type IIA6, which was found at Illorpaat and dated 1730 AD.

Discussion. The sites described above and their artefacts were identified as belonging to the first cultural phase in this part of Greenland and dated to 1350-1500 AD (1931: 63,125). The selected material probably cannot be dated before 1500 AD and some structures have furthermore been in use after the arrival of European whalers in the country, *cf.* finds of glass beads in ruins of the Cape York type from this area (Frederiksen 1912; Gulløv 1982, 1986b). A sledge shoe and a snow knife from Qeqertarmiut (C38, 39 and 43) must probably be related to the incipient neo-boreal period

in the 16th century and the later mention in the 18th-century written sources of sledging in these areas (*cf.* Transport, chapter III). On this basis I would date the earliest archaeologically demonstrated Thule culture in Sukkertoppen District to the 16th century, where wooden ornamental bodkins are of a later date than those found at Kangeq.

Holsteinsborg/Sisimiut

There have been no archaeological excavations of the recorded Thule culture winter settlements in this part of Greenland (Meldgaard 1980a) and the Norse artefacts which have been found are stray finds. There are a few C-14 datings of early Thule culture from the caribou-hunting camp Aasivissuit in the inner part of the ice-free area, which has been in use since the Dorset culture (Grønnow *et al.* 1983). Layer 4A represents the earliest Thule culture at this site (*op.cit.*, p.63) and the dating of an antler (K-3153) gave the date 1270 AD, i.e. 1240-1290. Layer 4B represents the subsequent use of the site and the C-14 dating of caribou bones (K-3154) gave the date 1470 AD, i.e. 1440-1630. Among the types of structures which have been described here was a so-called "hunters' bed", and a C-14 dating of a caribou bone from there (K-3514) gave the date 1040 AD, i.e. 1010-1170 (*op.cit.*, p.52f).

Discussion. The earliest Thule culture here seems to have exploited the caribou population in South West Greenland since the 13th century, which is before the culture came into Godthåb District, but contemporary with the presence of Norse hunters out along the coast in *Greipar* and north of there. It is, on the other hand, hard to associate the dating of the site to the 11th-12th century with the Thule culture and for the present we must presume that a still existing Dorset culture practised caribou hunting with the same method as that which was demonstrated at Aasivissuit at a later date. This method is known from other regions in the eastern Arctic (Maxwell 1985: 138f).

Disko Bay

There have been no archaeological investigations of the Thule culture in the earlier Egedesminde area between Holsteinsborg and Disko Bay since the one carried out by Kaj Birket-Smith. At that time a Thule-2 type with lashing holes at the socket was found and in a communal house also a couple of harpoon heads of a late, flat variant from the 17th-18th century (*cf.* chapter VI), one of which was decorated with a cross, a motif well known from the Dorset culture (Birket-Smith 1924: 47, 61; Maxwell 1985: 160ff). The Thule-2 type is the most southerly one known in West Greenland, if one exludes the example from Godthåb Fjord.

Since the 19th century the Disko Bay has been the key region for our understanding of Greenland's prehistory (*cf.* Meldgaard 1952a,1983; Porsild 1914; Solberg 1907; Swenander 1906). The examination of the Thule culture was resumed here in 1933 and 1955 (Mathiassen 1934, 1958). The above mentioned Norse artefacts were found during these excavations, while the woollen cloth was found in a grave by Thomas Thomsen in 1909 (*cf.* Mathiassen 1934: 29). Excavations were carried out in several places, most extensively at Illutalik, Illorsuit and Sermermiut which yielded respectively 2,713, 766 and 818 objects, all recorded under the number L8 (1934: 4f, 1958: 43f).

Illutalik. Settlement with the ruins of 10 winter-houses, half of them with kitchen

niche. There were ruins with single and double rooms, house complexes and a communal house. The ruins with niches lay grouped together (houses 6-10) and after excavation it was decided that they belonged to the early Thule culture since no Norse objects were found (1934: 82f). When Holtved later compared them with the archaeology of Thule District, including the Ruin Island phase, he, however, corrected this date and suggested the 13th-14th century (1944,II: 110).

Houses 7 and 8 contained the ornamental bodkin and evidence of the use of metal (1934: 73, 80). The piece of copper (L6.1152) from house 7 was, however, not mentioned by the excavator and it may be native copper from Canada, just as the inussuk-type iron blade in the harpoon head is presumed to be telluric (1934: 73, pl.1(2)). The harpoon head with closed shaft socket from the same house (pl.1(3)) is, however, of a later type, which was also found in the Inussuk midden (Mathiassen 1930: pl.5(11)). The harpoon rest from the same house (1934:pl.1(10)) is similarly of a later type, which was also found in Kangeq and in Utorqaat house 13, Sukkertoppen District (*cf.* above), as well as in 15th-century Thule District, i.e. house 21 (Holtved 1944,I: pl.18); and th is also applies to the harpoon rest found in house 8 (1934: pl.1(11)). In house 6 a plate of gneiss had been used as a lamp (1934: 77) and in the midden in front of this house there were two harpoon heads of the Thule-2 and -5 types (1934: 73). The Thule culture in these ruins shows that there had been contacts with the Norse culture by then and that the 'parallel traditions' are represented. The shape of the bodkin from house 7 (1934: pl.1(15)) is evidence of a later tradition that came from the north and had also found its way down along the east coast (*cf.* Thalbitzer 1909: 461f).

The earliest part of the Illutalik midden was dated to the 15th century; a date with which Holtved agreed (1934: 169; 1944,II: 113). Several remains of earlier structures were also found in the excavations, as marked on the reconstructed section (Fig.126).

The Norse artefacts marked on the plan are a piece of wood with zig-zag ornament from A6, layer 5 (1934: pl.7(25)), a knife handle and a carving of walrus ivory from A19, layer 19 (1934: pls.6(11), 7(22)), and a spindle whorl from A40, layer 3 (1934: pl.7(23)). Furthermore, two cooking pots have an internal handle (A6, layer 6 and A31, layer 9), known to have been Norse work or Eskimo imitation in 16th-century Illorpaat (*cf.* igd 3201, chapter III). The knife handle is from a so-called 'kidney dagger', which occurs in European finds from the 14th-15th century (Bruhn 1950: 28), and was found at the bottom of the midden together with a toy harpoon head of the Thule-2 type with lashing holes by the socket (L6.2162). Wooden staves and ornamental bodkins were also found in these bottom layers, together with iron in men's knives (A4, 9, 16 and 19), in a woman's knife (A37), as a bit in a drill (A10), a rivet in a harpoon head (A26) and a piece of iron (A39).

In the fifth excavation layer under the floor in house 5, behind the midden there was a Norse doll (1934: pl.7(21)) and in the sixth layer a harpoon head of the Thule-5 type with closed socket (L6.841). These layers correspond with the middle sections of the midden in front of the house and are dated to the 16th century (1934: 129). The find of a net for sealing in this place in the midden (A20, layer 8) is evidence of a hunting method which must have been in use before the Europeans returned to the country (*cf.* the find of baleen knots at Illorpaat, chapter III) and whose origins outside Greenland are still not known (1934: 96f; Ford 1959: 111), *cf.* John Davis, chapter IV.

The 'parallel traditions' are demonstrated by Thule-2 and -5 at the bottom of the midden, the latter with an open shaft socket, and in the midden in front of house 6. This fastening method is known from Classic Thule 900-1400 AD, where lashing holes replace slots, while Thule-5 in Early Classic Thule has a closed socket (Morrison 1989:

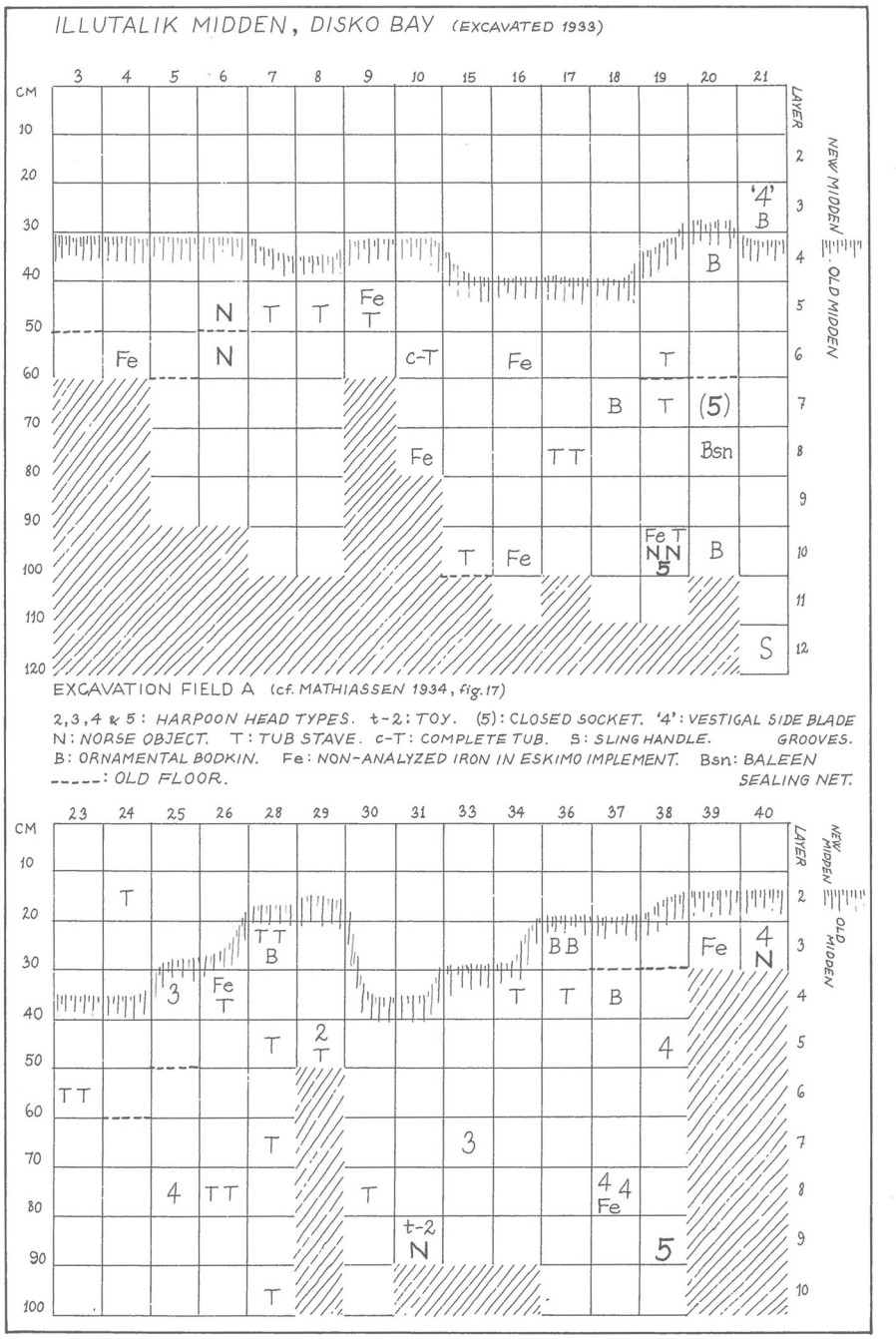


Fig. 126. *Reconstruction of the midden at Illutalik. The excavated harpoon heads from the earlier deposits are marked, i.e. Thule-2, -3, -4 and -5 with open and (5) with closed shaft socket.*

51). Thus no chronology can be established in the described material from Illutalik, which can be dated to the 13th-14th century at the earliest.

Illorsuit. Settlement with 18 ruins, several with kitchen niche, was dated to the 13th-14th century on the basis of a bronze cooking pot and an iron knife blade found in house 8 (1934: 157). Holtved moved the date forward to the 14th century (1944,II: 116). Bronze cooking pots of this type occur in Europe in the 14th-15th century (Drescher 1969) and it is presumed that it was found in the Eastern Settlement after it was abandoned, i.e. house 8 should be dated to the 16th century. In house 15 there was a harpoon head of Thule-3 type with its blade slot parallel to the line hole (L6.3414) and also two of the inussuk type (1934: 152). The architecture of Thule

house 7 is the same as that of Illorsuit house 15 and a whetstone of igaliko sandstone was found in it (Holtved 1944,I: 119, pl.29(29)). This possible connection with West Greenland must be dated to the 16th century (1944,II: 39, 50).

Sermermiut. The first systematic examination of the Thule culture in this midden was undertaken in 1955 (Mathiassen 1958). No original harpoon types were found then. The described Thule-2 head has holes at the socket and a blade (1958: 43). The original Thule-2 type, without a blade and with slots at the socket, was found by Porsild when he excavated at Sermeriut in 1916-18 (Nat. Mus. Dk., unpubl.). During the investigation in 1955 the flat Thule-5 type with closed socket was found in the nethermost Thule layer, immediately above the Saqqaq layer there (L8.2734; 1958: fig.11(3)). The same type, of an identical form, was found in the midden at Qeqertarmiut (C29, layer 3; *cf.* above) and it was also found with an open socket in a burial at Qeqertarsuatsiaq south of Disko Bay in Egedesminde District and in a burial at Qilalukan, Baffin Island (Mathiassen 1927,I: pl.65(2); Swenander 1906: pl.3(80)).

In the same place in the Sermermiut midden there were two Norse objects (1958: fig.14(4,6)). The other Norse objects (*ibid.*) found in other parts of the midden, are unrelated to the diagnostic types mentioned above. The gneiss lamp with clay sides (1958: 44) found near the bottom of the midden was dated to the end of the 13th century (*cf.* soapstone lamps, above), while a C-14 dating of a turf sample from above the lamp (K-556) gave the date 1040 AD, i.e. 980-1230, and may have contained older collapsed wall material from a house at the site.

The dating from Sermeriut thus indicates a settlement of the Thule culture from the end of the 12th century. The flat Thule-5 harpoon head from the bottom layer cannot be associated with corresponding finds in the Thule District in this period and must be assigned to a later or contemporary tradition in West Greenland.

Upernavik

We have the results from two archaeological investigations in Upernavik. The midden at Inussuk was excavated in 1929 (Mathiassen 1930) and later communal houses and burials in 1967 (Hjarnø 1969, 1974). Around 6,000 objects were found which are recorded under the number L4. The investigation of 1929 is discussed in this chapter.

Inussuk. The remains of earlier structures were also found in this midden and are marked on the reconstructed section (Fig. 127).

The Norse artefacts (*cf.* 1930: pl.22) are bell metal (B2), a knife with a Norse (?) iron blade (B9), a woolen cloth (B12), a piece of wood with a face on one side and ornament on the back (B15), Norse (?) iron in a drill bit (B17), an oak handle (B23; 1930:299), a whetstone for needles of igaliko sandstone, a harpoon head of the inussuk type (Thule-4 variant) and another of the Thule-2 type, both with iron points (C6), a jetton and a whetstone for needles of igaliko sandstone (C7). Apart from the oak none of the Norse artefacts were found in the nethermost layer; however, a dating of the piece to the 13th century, which was the date of similar above-mentioned pieces found in the Ruin Island phase and at Peary Land, cannot be maintained here (*cf.* above). The woollen cloth lay on an earlier floor, the bell metal higher up and it appears to have been thrown onto the midden at a comparatively late date. Compared with the other finds of bell metal which have been mentioned, their geographical distribution (*cf.* above) and the described find circumstances seem to point to an origin in the Eastern Settlement, i.e. a dating to the 16th century or after the settlement was abandoned some time in the 15th.

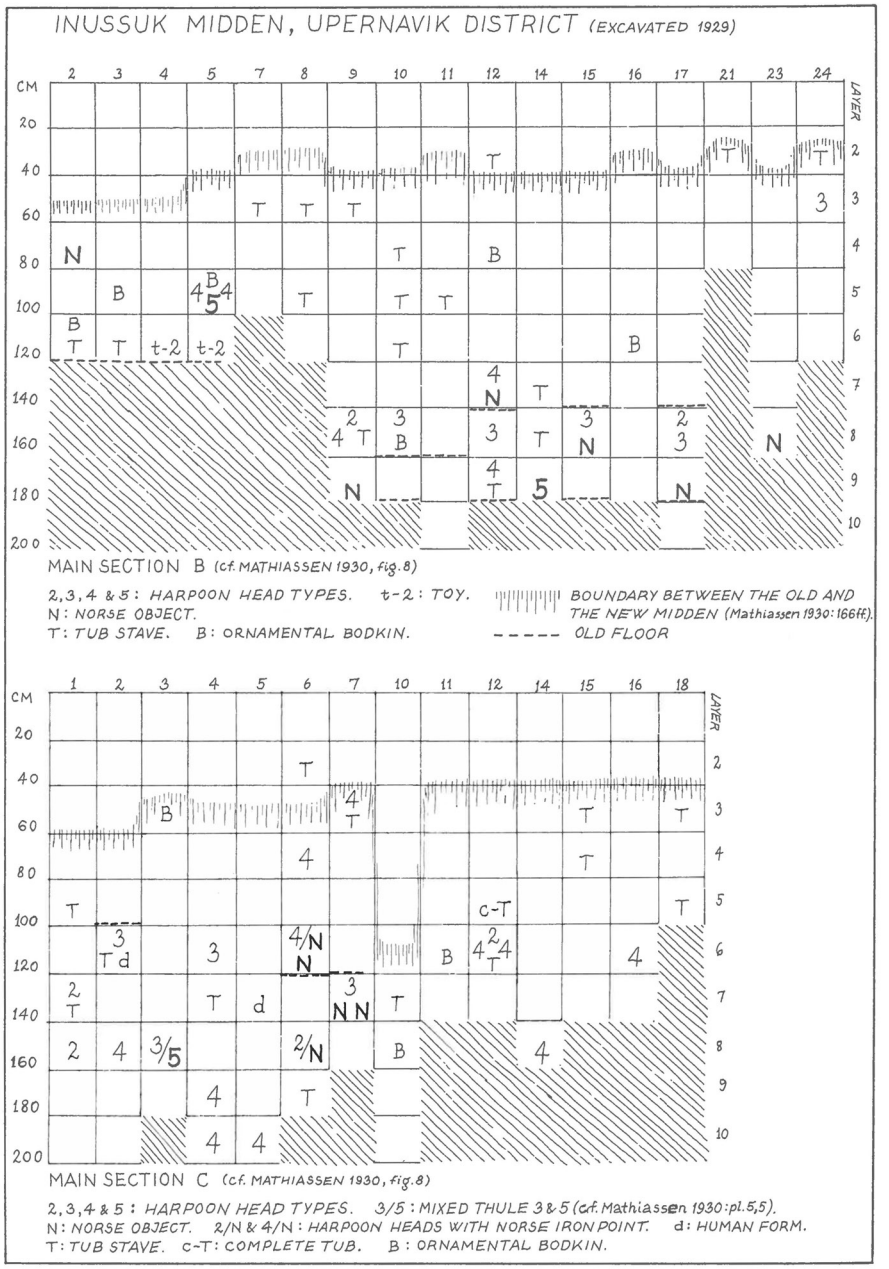


Fig. 127. *Reconstruction of the midden at Inussuk. The described diagnostic types are noted, as well as harpoon heads of the Thule-2, -3, -4 and -5 types and combinations of these,* cf. *3/5.*

Discussion. The 'parallel traditions' can be demonstrated in the midden's bottom layer, where the narrow Inussuk type (Thule-4 variant) and the Thule-5 type with open socket were found. When Holtved compared the Inussuk midden with the Thule District he thought that it was culturally further away from Thule than the Illutalik midden in Disko Bay (1944,II: 111). This presupposes that the 'parallel traditions', which have now been found throughout West Greenland, arrived here later than they did in Thule. A comparatively late element in the Inussuk midden was the needle case found in B8, layer 3 (1930: pl.14(1)). This is a Punuk type from Alaska, which is found in the Ruin Island phase (*cf.* Collins 1937: pl.65(2); McCullough 1989: pl.50; Holtved 1944,I: pl.37(30,31)) and this type was dated to the 14th century at, *inter alia*, Skrælling Island house 6 and Sverdrup Site house 6 with Norse artefacts (*cf.* above).

With regard to the location of the bell metal at Inussuk, it may be presumed that the bell metal may have been brought south from Thule into West Greenland when the Ruin Island phase ceased some time in the 15th century.

Summary

In South West Greenland the 'parallel traditions' are present in early Thule culture, they can be dated to before 1400 AD (*cf.* Maxwell 1985: 272) and a late palaeo-Eskimo presence can not be excluded. I will now discuss this early Thule culture by examining the two regions from whence the Thule culture may have come into South West Greenland, i.e. Thule District and South East Greenland.

Discussion of early Thule culture in Greenland

The original population had two possible routes to South West Greenland, both of which were determined by the country's geographical location. From Nares Strait between Canada and Greenland, which is the gateway to the country, they could choose between a route down along the west coast and a route north around the country and then down along the east coast. The choice depended on the objective of the journey. This objective was primarily the nature and extent of the living resources. As long as people are adapted to these resources they can meet other needs by means of trade. The latter form of adaptation by means of trade is described in chapter IV. The former form of adaptation is found in regions with stable resources and has been described in the Ruin Island phase in the Smith Sound region, where whales were a stable resource in the 14th-15th century (Holtved 1944; McCullough 1989), and in Clachan Thule in the Coronation Gulf area, where seals and native copper were both stable resources in the 11th-14th century (Morrison 1983). Above, climatic changes in the neo-boreal period after the 15th century were associated with a decrease in settlement in the northerly regions and this was interpreted indirectly as a change in the availability of living resources. There must have been a subsequent migration to more southerly regions.

The definition of Thule culture in Greenland is based on the occurrence of the thin harpoon-head types Thule-2, -3 and -4. The two former have an open shaft socket and the latter has a closed socket (Holtved 1944; Mathiassen 1930). Their prototypes were found in the Bering Strait region (Collins 1937). The open socket was at an early stage defined as evidence of the earliest Thule culture (Wissler 1918: 150) and subsequently employed as a diagnostic typological feature (Mathiassen 1927,II: 11ff). Lashing slots by the open socket were stratigraphically demonstrated as being earlier than drilled holes (Jenness 1928).

In Greenland the flat Thule-5 type with lashing holes by the open socket was found in the lowest midden layers, which chronologically dates them to a later phase of the Thule culture. In Canada, Early Classic Thule is the period when lashing slots were the most common, but here they occur together with flat Dorset-derived heads with closed sockets (Morrison 1991: 51; Taylor 1963: 462). Because of this it is difficult to argue that the distribution of the early thin Thule types in Greenland was earlier than that of the open, flat Thule-5 type, when these two types occur as 'parallel traditions'.

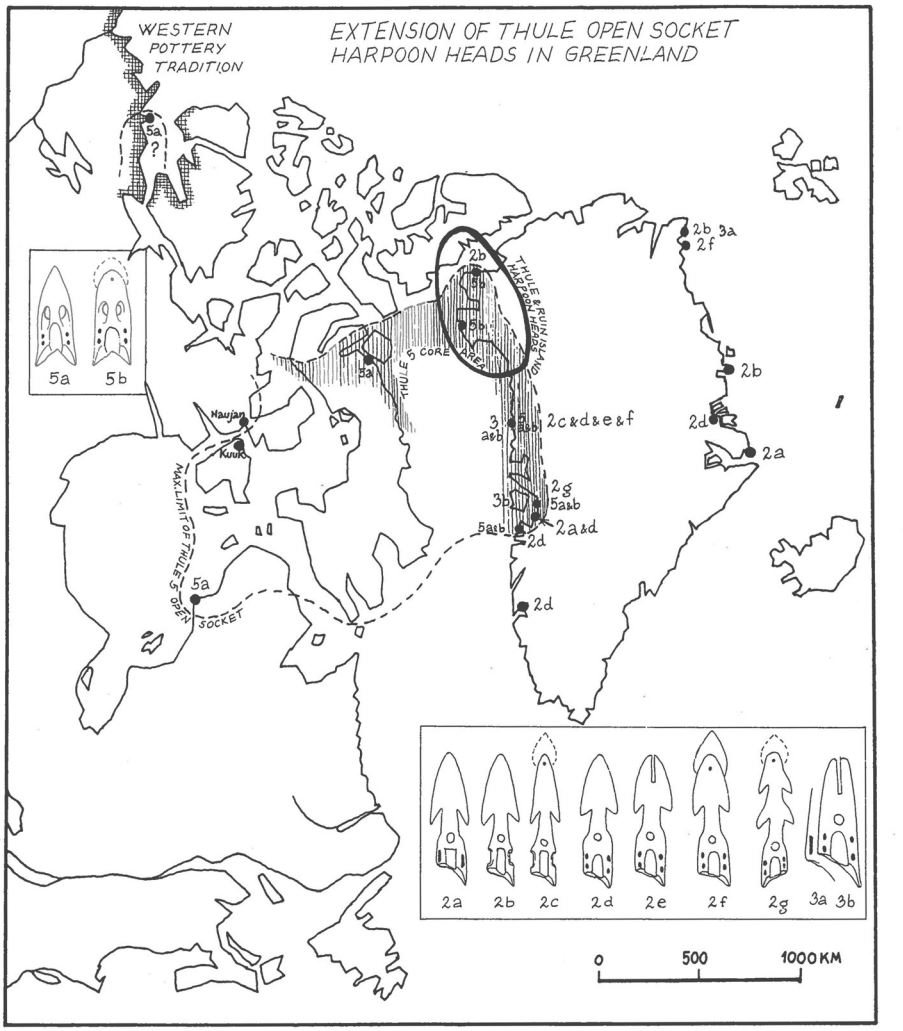


Fig. 128. *The distribution of harpoon heads with open socket in Greenland. Thule-5 in Canada and the limit of the western pottery tradition are marked. The core area of Thule-5 is hatched. Inside this area the open socket is found in the 'parallel traditions'. Note the border between Naujan and Kuuk where the 5th Thule expedition's main efforts were made (Mathiassen 1927). The extent of the Ruin Island phase is marked* (cf. *Grønnow 1981; Holtved 1944,1954; McCullough 1989).*

Furthermore, the closed Thule-5 type is found geographically further away from the Thule District in South West Greenland and North East Greenland and must therefore be later, while in Canada it belongs to the Thule culture's earliest phase.

The geographical distribution of these types shows (Fig. 128) that Thule-5 with open socket falls within the core-area of the Dorset culture. The outer limit is Jackson Site to the west (Taylor 1972: pl.2(d)), Port Harrison to the south (Mathiassen 1927,I: pl.77(3)). Qilalukan to the east (*op.cit.*, pl.65(2)) and in Greenland at Cape Kent to the north (Holtved 1944,I: 88) and Egedesminde District to the south (Swenander 1906: pl.2(80)).

Outside the geographical area of the Ruin Island phase, Thule-3 is found on the west coast as far as Disko Bay, plus one stray find from North East Greenland. Two examples with lashing slots (3a) have been found, one in collapsed material in the Inussuk midden and the other a stray find on Sophus Müllers Næs (C. Andreasen, pers. comm.; Mathiassen 1930: 180).

Thule-2 is however the most widely distributed and is found in seven variants. On the west coast it has been demonstrated in Upernavik across Disko Bay and down as far as Godthåb (Birket-Smith 1924: 61, 291; Mathiassen 1930, 1934; Porsild 1916-18 unpubl.; Solberg 1907: 67; Swenander 1906: pl.3(106)).

On the east coast it occurs in its original form (2a) at Scoresby Sund, with lashing notches instead of slots at Sophus Müllers Næs and Dødemandsbugten, with holes (2d) at Cape Harry and with holes and point at Eskimonæsset (Glob 1935: 77; Knuth 1967: pl.(12), 1980: 21; Larsen 1934: 95, pl. 2(1)).

A C-14 dating of Thule-2(d) from Cape Harry, made on the harpoon shaft's walrus-tusk ice pick (K-4530) gave the date 1285 AD, i.e. 1265-1290. Compared with the Ruin Island phase in Smith Sound, where drilled holes do not occur, this dating is comparatively early, unless the head should be seen as an example of the 'parallel traditions' which were already present in North East Greenland. In Dødemandsbugten both the thin and the flat types were thus found in the same ruin, where Thule-2(b) – whose lashing notches are just as old a method as are grooves (Maxwell 1985: 298) – lay together with the flat Thule-5 and a hybrid form (Larsen 1934: pl.2(1,5,13)).

The house type, in which the 'parallel traditions' occur, has been described in Thule District, Inuarfissuaq house 21, where Thule-2(b) was found and there predates the Ruin Island phase (Holtved 1944,I: 45,II:39). The 'parallel traditions' are of great age in Greenland and it should be possible to demonstrate them in Thule District at the time when the Ruin Island phase began there.

Thule District

Clark Wissler established, in his publication of Captain Comer's excavations in 1916 of the large midden at the Uummannaq settlement in Thule, that the open shaft socket was the earlier form and illustrated this with a couple of Thule-5 heads (Wissler 1918: 150, fig.24(c,d)). Mathiassen published the results of the excavations made at the same time by members of the 2nd Thule Expedition and decided that the artefacts were the oldest so far in Thule District and associated them with Qilalukan. Wissler had also pointed out the close connection in Thule between Southampton Island on the one side and North East Greenland on the other (Mathiassen 1927,I: 293ff, 302f). Holtved resumed the excavation of Comer's midden in 1937 and continued in 1947 (1944,I: 144ff, 1954: 107ff).

The harpoon heads from this excavation are shown on the reconstructed section (Fig. 129). In the two lowest layers there were wooden staves with grooves cut into both ends, as well as Thule-5 with open socket and lashing holes. Holtved dated these layers to the 13th century and Norse artefacts turned up in layer 8 (Holtved 1944,II: 180).

In layer 8 were the harpoon heads of Thule-2 and -4 types, which occur in the Ruin Island phase in Greenland. Thule-4 in its original form with a 'keel' from tip to line hole is known from Punuk (*cf.* Collins 1937: pl.70). All except two of the open sockets are fastened by lashing holes. The Thule-3 type with slots from layer 3 is dated to the 16th century, but is also known from early Thule (1944,II: 42).

The 'parallel traditions' are thus not present in Comer's midden, where Thule-5 together with wooden staves from the lowest layers pre-date the Ruin Island phase and can be connected with Dorset and Thule settlements at Eclipse Sound on Baffin Island (*cf.* Mary-Rousselière 1984; Mathiassen 1927,I: pl.65).

At the Uummannaq settlement, houses 16 and 19 were from the Ruin Island phase (Holtved 1944,II: 70) and Holtved found archaeological evidence that associated it with the find-complex around Thule houses 21W and E (*op.cit.* p.21ff, 113). When these data are compared with the Ruin Island phase on Ellesmere Island, contempo-

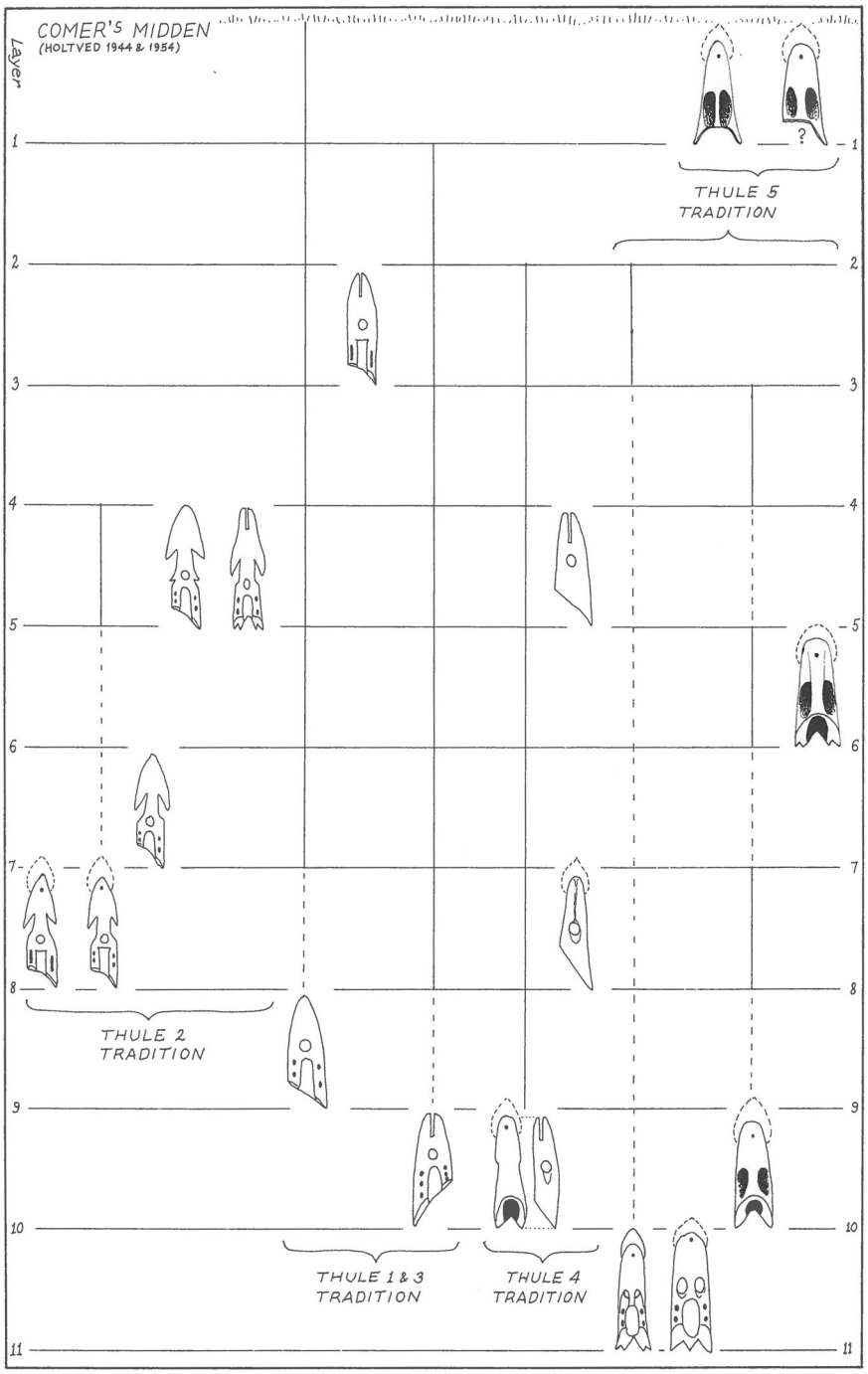


Fig. 129. *Reconstruction of Comer's midden. The excavation is described in 12 layers, the lowest four constituting the earliest phase (Holtved 1944,II: 8). There were no harpoons in layer 12, which has therefore been omitted on the reconstruction.*

raneity can be demonstrated between the thin and flat types, as they appear in the 'parallel traditions' (Fig.130). As no earlier Thule culture has been demonstrated archaeologically below the structures belonging to the Ruin Island phase on Ellesmere Island, a hypothesis may be established that this phase represents the earliest neo-Eskimo culture in the High Arctic (McCullough 1989: 300f); but as illustrated, Thule-5 may have been in contemporary use in Greenland.

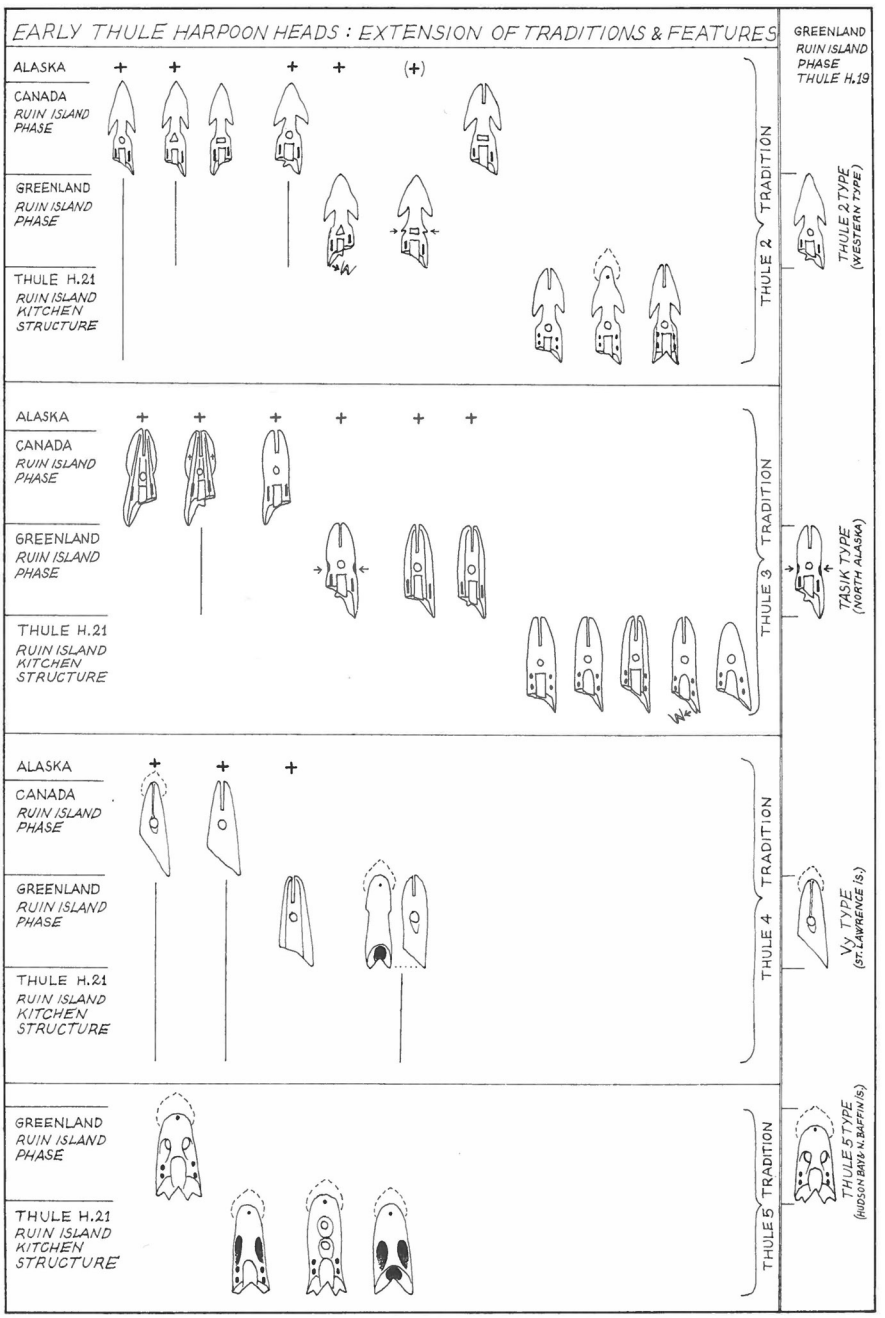


Fig. 130. *Early Thule harpoon types from the Smith Sound region with indication of the archaeological context, the typological features and their occurrence in Alaska. The 'parallel traditions' are shown in the right hand column with an example from Thule house 19 (Holtved 1944).*

As shown, the Thule-2 type comes in several variations, including examples with vestigial barbs, as known from Birnirk in Alaska (Stanford 1976: 108) and from Inuarfissuaq (Holtved 1944,I: pl.3(7)).

The Thule-3 variants include the prototype 'Sicco' with its characteristic 'wings', on the examples from the Ruin Island phase also with incised crosses. This ornament also occurs in Greenland on the needle case from Dunholm by Scoresby Sund (Thalbitzer 1909: 476). The 'Tasik' type (Holtved 1944,I: pl.3(13)), with vestigial grooves for side blades and with a vestigial spur, is also a Thule-3 tradition and is also found in Birnirk and Punuk in Alaska (Ford 1959: 82).

The Thule-4 type with 'keel' is a widely distributed type throughout the North American Arctic and it was also found in Comer's midden layer 8. The Inussuk type with cleft spur belongs to this tradition.

Thule-5 was also found on Inglefield Land in houses 1, 2 and 4 and on Cape Kent (Holtved 1944,I: 88, 192), where all the ruins had niches in their front wall as in North East Greenland. There are two C-14 datings from house 2, on a willow twig from the floor layer (K-4468) and on a caribou antler (K-4469), which gave the dates 1160 AD, i.e. 1235-1260, and 1310 AD, i.e. 1300-1380.

Discussion. The Ruin Island phase has been the object of much attention because of its distinctive typological features, which connect it with Alaska and the finds of Norse objects. But the archaeological circumstances in Greenland show that the phase cannot be seen as confined to the period 1200-1400 to which it has been dated. There is on the other hand archaeological evidence that the described types in this phase must be seen as an expression of a sense of community in relation to other groups in the region. We must thus assume that people had previous knowledge of the destination of their journeys, and this assumption is corroborated by the examples below.

Collins found his III(a)x-type from St Lawrence Island's Punuk on Cornwallis Island (1952: 51) and Ford found the related type in North Alaska and called it 'Sicco' (1959: 83ff). On St. Lawrence Island it was the most common type and constituted 161 examples of the total number of 417 found heads, divided between 36 types, i.e. 38.6% (Collins 1937: Table 2). In North Alaska Ford found 336 heads divided between 19 types, four of them of the 'Sicco' type (1959: fig.34). Stanford found 63 heads in North Alaska divided between 16 types, three of them of the 'Sicco' type (1976: 18ff). In the Ruin Island phase on Ellesmere Island 17 heads of the total 43 found can be related to Collins' and Ford's 'Sicco' variants, i.e. 39.5% (McCullough 1989: 90). If the Ruin Island phase in Greenland (i.e. Ruin Island, Nuulliit and Thule houses 16 and 19) is judged by the same criteria, 17 heads out of 54 can be deemed to belong to this group of heads with hexagonal cross section, i.e. 31.5% (Holtved 1944, 1954).

Comparatively few harpoon heads of this type have been recorded between Smith Sound and North Alaska (*cf.* McGhee 1984a; Maxwell 1985: 255; Taylor 1963), which might indicate that there was fairly swift movement between these two regions and that for a time there was lively contact around Smith Sound. We must in future try to demonstrate the extent and nature of this contact, in which metal is distributed and which Holtved describes as a connecting link between Thule and the more southerly regions (1944,II: 100).

I now maintain that the Ruin Island phase is chronologically secondary in the eastern Arctic. The origins of early Thule must be sought in North Alaska, where the Birnirk culture's harpoon types, *cf.* Thule-2 and Natchuk, turn up early in arctic Canada (Arnold & Stimmell 1983; Collins 1952; Stanford 1976: 108; Yorga 1980), while the later Thule-3 type is not widely distributed in Greenland.

South East Greenland

It is presumed that the Thule culture did not arrive in this area until after the Norse Eastern Settlement had been abandoned (Mathiassen 1933: 59, 1936a: 53). All the Norse bell metal, apart from one example, was found in the form of worked pieces in contrast to the raw material found on the west coast.

Misigtoq in the Ammassalik Fjord, where the midden at the earlier excavation in 1931 had been 1.1 m thick, was re-excavated in 1987 (Gulløv & Lange 1987: 104ff; Mathiassen 1933: 23f). A turf sample and bones from the undisturbed layers under

the exposed house passage at the bottom of the midden were collected for dating. The C-14 dating of the turf (K-5000) gave the date 1290 AD, i.e. 1280-1395, and the bones of ringed seal from the layer above (K-5001) gave the date 1485 AD, i.e. 1450-1635. The turf sample may have been admixed with earlier material from the site and therefore rendered a date which was too early. An early settlement here could thus have taken place after the time when the Eastern Settlement had been abandoned.

The architecture is, in several places along the coast, characterized by houses with straight walls and niches in and by the front wall, which is a north east Greenlandic feature (*cf.* Degerbøl 1936: 15,29; Larsen 1938: 14; Mathiassen 1933: 34, 1936a: 36). The finds from this place similarly point to the north, i.e. harpoon block for a winged harpoon (Mathiassen 1933: pl.1(20); type Larsen 1934: pl.2(17)), flat harpoon head from the same place as a gneiss-plate lamp with clay edge (1933: 93, pl.5(7)), tubular ornamental pendant (Mathiassen 1936a: 34; type Larsen 1934: pl.7(1)), socket piece with diagonal scarf face (Mathiassen 1934a: pl.2(4); type Larsen 1934: pl.2(8); type Thalbitzer 1909: 444), harpoon foreshaft (Thalbitzer 1909: 361f, pl.16(11)). The last piece which is of walrus tusk has been C-14 dated (K-4471) to 1475 AD, i.e. 1445-1625. Local willow, from a ruin at Skjoldungen of this North East Greenlandic type with a niche in the front wall, is C-14 dated (K-6162) to 1650 AD, i.e. 1485-1955 (Gulløv 1995: 17).

Discussion. I maintain that there was a later phase of the Thule culture in this part of Greenland, which may have arrived in the 15th-16th century. This interpretation of the archaeological data must be seen in relation to the 19th-century oral tradition in Ammassalik, which tells that people in "olden times" came to Ammassalik, some from the north and some from the south (Thalbitzer 1914: 346). This presents new knowledge about the geographical origin of the cultural tradition, which arrived in South Greenland in the 18th century, and which from that time can be demonstrated in the archaeological, oral and written source material connected with the whaling and the European presence in South West Greenland, as was described in chapter IV.

Whether there was an early phase of the Thule culture in the 13th century, as the date from Misigtoq suggested, must be the subject of future studies. Neo-Eskimo exploitation of the now extinct caribou population in Ammassalik might have taken place up to that time (*cf.* M. Meldgaard 1986: 40ff), if one must not continue to assume, as has been suggested, that there was a Dorset substratum in the Thule culture, which seems to re-emerge in this region in the 19th century (*cf.* Maxwell 1985: 244; Meldgaard 1959).

Conclusion: chronological problems

The Thule culture in South West Greenland is composed of traditions, whose origins must be explained as being a result of a meeting of cultures, which took place when the neo-Eskimos arrived in Greenland. This meeting of cultures has been demonstrated in the 'parallel traditions', which were found in early Thule culture all over the country. The chronological problems, which arose with the presence of the Ruin Island phase in the archaeology of Thule District, are due to the fact that we cannot demonstrate contemporaneity of several Eskimo groups. The open socket of the Thule-5 type seems here to have been a later feature than the closed socket, which was found in North East Greenland and Canada (*cf.* Mathiassen 1927,I: pl.64(6)). Stratigraphically, the open Thule-5 type is the earliest in Thule, which means that the Dorset-Thule meeting took place outside the Smith Sound region and thus merely confirms that this happened before the type emerged (*cf.* Taylor 1963: 462).

During the Ruin Island phase settlement increased and at the same time whaling became more intensive (Holtved 1944,II: 155; McCullough 1989). The extent of this whaling can be demonstrated as far as to the northern Hudson Bay, where this cultural phase has been described as Classic Thule (McCartney 1977). The C-14 dating of this phase there to the 13th century has been carried out on wood, but the date seems too early and a correction would bring it closer to the expansion of neo-Eskimo whaling in the following century (*op.cit.*, p.220f; Maxwell 1985: 253).

The Punuk related 'Sicco' heads are also in this region found as a secondary feature in the Thule culture, which denotes more intensive whaling. I will account for this briefly, because it has been claimed that "using the Sicco harpoon heads as a clue, there may be a reason to suggest that an early, and perhaps the earliest, immigration followed a southern rather than northern route" (Maxwell 1985: 258).

The harpoon heads are included in Mathiassen's material from Naujan, although he was not aware of that in 1921-23 when the investigations took place (Mathiassen 1927; Schledermann 1979: 135). Seven of the examples are of the 'Sicco' related type and were found in houses 8 and 10 and in midden A, layers 3, 4 and 7. The midden was excavated in 10 layers, each one 10 cm thick, in other words there was a 30 cm midden formation at the site prior to "the earliest immigration". The conditions of Comer's midden were similar (Mathiassen 1927,I: 15ff, 21ff, 303f). The heads are described here for the first time.

P1.1528. "Sicco open socket" (house 10). Length 9 cm. Ornament: longitudinal lines and a cross by the tip (possibly a symmetrically placed cross as the head is split along the blade slot).

P1.1081. "Sicco open socket" (field A, layer 4). Length 9.5 cm. Ornament: longitudinal lines, dotted ornament and vestigial sideblade grooves. The head is split along the blade slot.

P1.2683. "Sicco open socket" (field A, layer 7). Length 8.2 cm and 11 cm incl. the baleen blade. Ornament: vestigial sideblade grooves (1927,I: pl.1(10)).

P1.278. "Sicco open socket" (house 8). Length 8.6 cm. Ornament: vestigial sideblade grooves. (Almost identical to P1.2683, where the spur is facing the other way).

P1.2270. Sicco-like (field A, layer 3). Length 9.6 cm. Ornament: deep, longitudinal grooves.

P1.347. Sicco-like (house 8). Length 8.3 cm. Ornament: rounded dorsal side and vestigial sideblade grooves.

P1.2315. "Sicco open socket"-like without 'wings' (field A, layer 4). Length 10.4 cm and 11.4 cm incl. the blade of meteoritic iron. Ornament: vestigial sideblade grooves (1927,I: pl.1(6)).

The vestigial grooves for sideblades on five of these heads is a feature only found in one example in North Alaska (Ford 1959: 83). In other words, it represents an old Punuk tradition, which is found in a later phase at Naujan (*cf.* Collins 1937: fig.24). The ornamental features, i.e. dots and lines, are common to Naujan and Kuuk house 17, Southampton Island, where "in contrast to one harpoon head of the Thule type there are two of the later, flat type, and also the peculiar Cape Dorset form, the chronological position of which is uncertain" (Mathiassen 1927,I: 256). A comparison of Thule-2 and -3 types from these two sites (Fig. 131) demonstrates contemporaneity at a time when there had already been settlements in both places.

The ornament here shows evidence of contact between the two neighbouring settlements, after the time when the 'parallel traditions' could be demonstrated (*op.cit.*). The interchange of ideas manifests itself here later than does the meeting of cultures. The types in question have a long tradition behind them, the origins of Thule-3 and

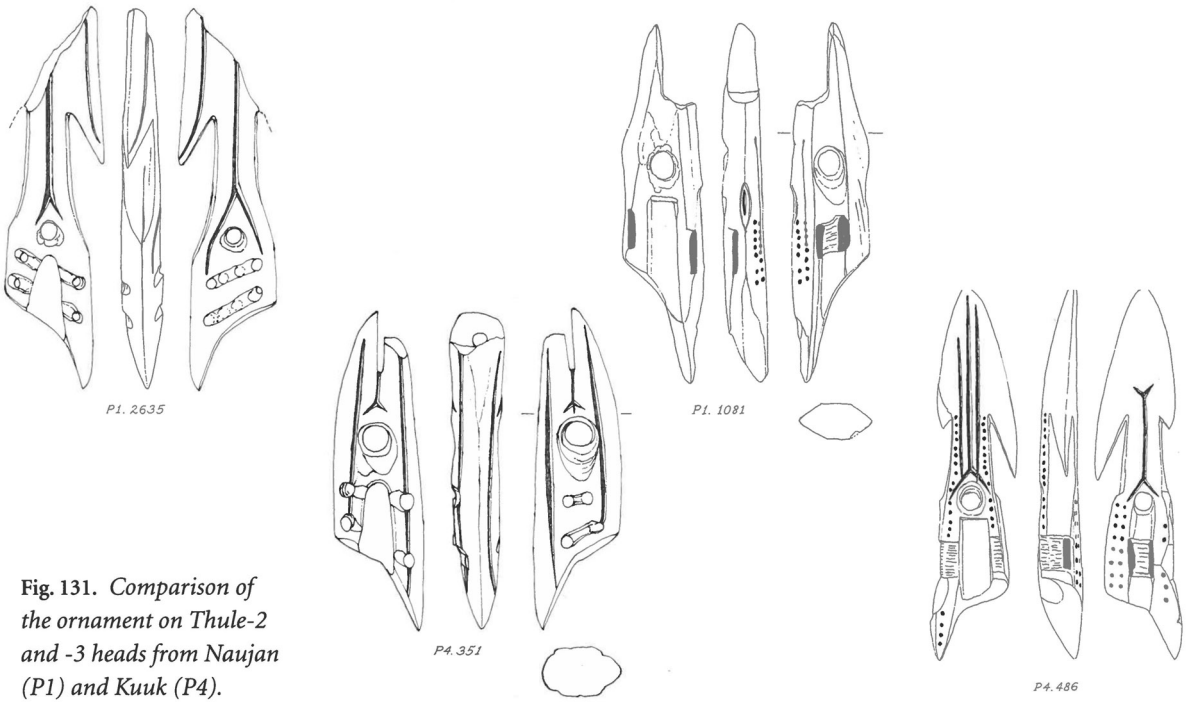


Fig. 131. *Comparison of the ornament on Thule-2 and -3 heads from Naujan (P1) and Kuuk (P4).*

Thule-5 are well known, while the Thule-2 features are demonstrated on heads from pre-Dorset (Maxwell 1985: 83), Dorset (Arnold 1981: 127, 136), Birnirk and early Thule, as well as the colonial era in South West Greenland.

With the above example, I wish to show that the chronological problems in Greenland mainly arise when archaeological examinations of an arctic hunting culture, such as the Eskimo, do not take into account the dynamic aspect, which is essential for the study of people who "move around a lot" (*cf.* Lee & DeVore 1968: 11).

In South West Greenland the Thule culture appears in three phases, all of which can be put into context with the archaeological survey in this chapter. The first is settlement along the coast in the 14th century and a simultaneous exploitation of the caribou population in the fjords, as demonstrated in Kangeq. This phase began in the 13th century with a settlement in Disko Bay, which was contemporary with the Norse hunting journeys to *Nordrsetur*. Then followed an increased settlement from the 15th century, which was connected with the neo-boreal period and was demonstrated in Kangeq, on Illorpaat and further north at Qeqertarmiut. In this period the most northerly part of Greenland seems to have undergone a depopulation, at the same time as the Ruin Island and its associated whaling ceased. Finally, increased travel-activity in the 17th century, followed by settlement in the 18th could be demonstrated on the basis of all the source material. This phase is here associated with the resumed whaling in West Greenland. It was in the second phase that South West Greenland became densely populated and when the descendants of the Greenlanders who had originally come from the Disko Bay area called themselves 'Kalals' (*cf.* chapter IV).

VI. Harpoon heads and tradition

The origins of the Greenlandic Thule culture harpoon heads are to be sought outside the country. In the above it was demonstrated that the thin and flat heads were to be found in, respectively, Alaska (*cf.* Collins 1937; Ford 1959; Stanford 1976) and the eastern Arctic (*cf.* Collins 1937: 315f; Jenness 1925: fig.5). These western and eastern types recurred in Greenland as 'parallel traditions'. In Thule District Norse objects and artefacts from the Dorset culture were used as chronological points of reference and the earliest Thule culture in Greenland was then dated to the 11th century (*cf.* Holtved 1944,II: 26, 40; Jordan 1979: 154, 170). Holtved based his datings on the harpoon typology, while Jordan based his on the Ruin Island phase and the then not yet calibrated C-14 datings (*ibid.*). This phase has subsequently been dated to the 13th-15th century on both sides of Smith Sound.

There have as yet been no datings of the Thule culture in Greenland prior to the 13th century, and the flat harpoon heads from Inglefield Land, Comer's midden and the Ruin Island phase at Uummannaq thus seem to have arrived in Greenland with the Thule culture.

One of the original features which characterizes the western types is the open shaft socket with lashing slots (Holtved 1944,II: 7). Outside Thule District only four stray finds have lashing slots, i.e. Thule-3 from Inussuk and Sophus Müllers Næs, Thule-2 from Disko Bay and Scoresby Sund (C. Andreasen, pers. comm.; Larsen 1934: 95; Mathiassen 1930: 180; Porsild 1916-18, Nat. Mus. Dk. unpubl.). One Thule-2 type with lashing holes from Cape Harry in North East Greenland (Glob 1935: 77) was dated to the 13th century. This method of fastening thus seems to occur early in Greenland.

The open shaft socket is represented in North East Greenland by Thule-2 and -3, together with the closed Thule-5, while in West Greenland it is found on Thule-1, -2, -3 and -5. The Thule culture has been demonstrated to have been present along both coasts in the 13th century and the distribution of the open sockets thus indicate an early division between east and west. The open shaft socket went out of use in Thule in the 16th century (Holtved 1944,II: 42), but re-emerged in Upernavik in the 17th-18th century (Hjarnø 1969: 49ff, 1974: 29) and in Thule in the 19th century (*op.cit.*).

The open shaft socket was in use for a long time and is found on 68 heads from West Greenland and 209 heads from Thule District.

West Greenland	type 1	type 2	type 3	type 5	
Upernavik	–	15 (22%)	14 (20.5%)	4 (6%)	33 (48.5%)
Uummannaq/Disko Bay/Egedesminde	1 (1.5%)	20 (29.5%)	4 (6%)	8 (11.5%)	33 (48.5%)
Sukkertoppen/Godthåb	1 (1.5%)	1 (1.5%)	–	–	2 (3%)
Total	2 (3%)	36 (53%)	18 (26.5%)	12 (17.5%)	68 (100%)

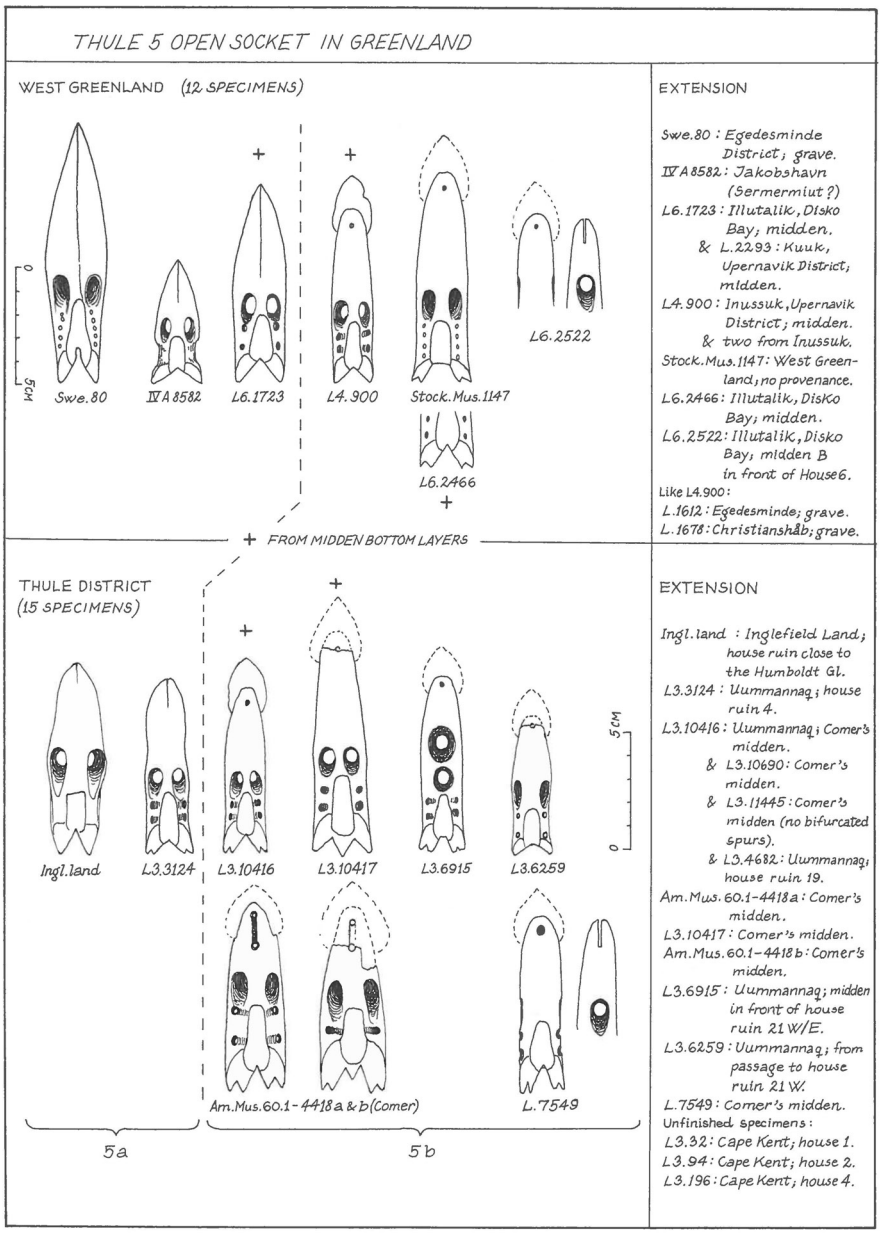


Fig. 132. *The distribution of Thule-5 with open shaft socket in Greenland. 5a has no blade, 5b has a blade.*

Thule Distrikt	type 1	type 2	type 3	type 5	
Uummannaq, incl. Comer's midden	26 (12%)	23 (11%)	74 (35%)	19 (5%)	133 (63%)
Uummannaq house 16 & 19 (Ruin Island phase)	–	1 (0.5%)	3 (1.5%)	1 (0.5%)	5 (2.5%)
Nuulliit (Ruin Island Phase)	–	14 (7%)	14 (7%)	–	28 (14%)
Inglefield Land	–	23 (11%)	9 (4%)	4 (2%)	36 (17%)
Ruin Island	–	7 (3.5%)	–	–	7 (3.5%)
Total	26 (12%)	68 (33%)	100 (47.5%)	15 (7.5%)	209 (100%)

The number of Thule-5 in West Greenland is more than double compared with the Thule District and in both areas it is found with and without blade (fig. 132). Eight examples from Thule have bifurcated spurs, as opposed to only two from West Greenland. The placing of the line hole is different on two examples in that it goes directly from side to side. This is a later change which in Disko Bay, Illutalik (L6.2522), can be dated to the 14th-15th century.

These heads are indicators of early Thule in Greenland and are nearly everywhere found together with Thule-2, and in North East Greenland as closed types. The prototype must be sought among late Dorset forms which have been their model. The lashing method derives from the western thin types, while the line hole is copied and introduced into the Thule culture. The latter has presented some difficulties, as demonstrated by the examples from Inglefield Land and Uummannaq, which have been made wider to accommodate the hole, or the line hole has been placed vertically.

Function and symbol

The size of the Thule-5 types shown here and the shape of the late Dorset types indicate that they were used in connection with seal hunting (*cf.* Mathiassen 1927,II: 15; Maxwell 1985: 217ff; Schledermann 1990: 268). Compared with the toggle harpoons from the early Thule culture (*cf.* Ford 1959: 75ff; Stanford 1976: 18ff) their form shows no particular functional adaptation for sealing, but a cultural adaptation to a new geographical area, and Thule-5 can thus be perceived as a cultural symbol (*cf.* Yamaura 1979: 476).

Such a perception of the harpoon head as a symbol is known in Alaska where ornamented heads are described as markers of economic control over the living resources in prehistoric Eskimo groups (*cf.* Arutiunov & Bronstein 1985; Fitzhugh & Kaplan 1982: 83). The decreasing occurrence of ornamentation throughout the Punuk period has there been interpreted as a change in the economic control as a result of displacement of the population (Gerlach & Mason 1992: 67).

A parallel to this can be seen in the eastern Arctic, where the Thule culture types replace the late Dorset types or imitate found heads from that period. However, since only the latest Dorset types can be identified and described in the Thule-5 type in the early Thule culture, it is a possibility that an actual meeting of cultures took place. A cultural continuity of this nature implicitly supports the hypothesis of a "cosmological system" (*cf.* the introduction to chapter V), which "may have contributed in part to the maintainence of ecological adaptations which account for these cases of prehistoric Eskimo continuity" (Sabo & Sabo 1985: 85).

The harpoon head as a cultural element is still the clearest symbol of cultural tradition in the Eskimo communities. In South West Greenland in the 18th century it was the expression of the hunter's proprietory right to the prey and it thus also became an economic symbol (*cf.* Dalager 1915: 18). But the proprietory right depended on the relationship between the hunter and the Sea Woman. The individual only owned his tools and his clothes, "but these also seem to have been connected with the owner by a certain supernatural bond, somewhat on a par with the relationship of the body with the soul" (Rink 1871: 176). Such bonds were secured by observance of the taboos associated with seal hunting and they could, for example, be maintained by lowering "small carvings of seals, harpoons and harpoon heads [...] to Nuliajuk [i.e.

the Sea Woman]" as has been observed in Canada (Rasmussen 1931: 169). The relationship with the prey is thus combined with great respect, since "the greatest peril of life lies in the fact that human food consists entirely of souls" and "the soul of a seal resides in the naulaaq: the harpoon head, for one night after the seal has been killed" (Carpenter 1973: 46; Rasmussen 1929: 56, 158).

In the following I will account for the origin of the flat Greenlandic harpoon heads and establish a model for the distribution of the preferred variants, which came to be the forms in universal use in the country during the first centuries of the Thule culture. The semiotic interpretation above of the use of the harpoon head in an empirical and a non-empirical reality explains why the Alaska types went out of use comparatively quickly outside the Thule District, but were not forgotten, until they re-emerged in the 18th-century south west Greenlandic meeting of cultures.

The head shows that there was a preference for double spurs in the east compared with the original single spur in the west. The bifurcated spurs on Thule-5 arrive in the period when the closed Thule-4 becomes the "inussuk type" with cleft spur. This similarity with the seal's rear flippers is interpreted as an expression of adaptation to sealing and comes into being when a new population group enters Greenland from the west (*cf.* Holtved 1944,II: 16).

Late Dorset types and Thule-5

The late Dorset types from Abverdjar number 109 pieces designated F (31 pieces), G (30 pieces) and E, i.e. 'Dorset parallel' (35 pieces) and all have closed shaft sockets. In addition there is the type Ha (13 pieces) with open sockets (Maxwell 1985: 220f). All are represented in Thule District, the last mentioned, however, only has one spur (Holtved 1944,I: pl.1(1-7)).

The prototypes for Thule-5 must be sought among these, which, outside the Thule District in Greenland, are only represented by a very late type E from Disko Bay (Larsen & Meldgaard 1958: 71). On the basis of C-14 datings it has been suggested that there was a settlement in the Smith Sound region until the 11th-12th century and perhaps to the south west in the early 13th century in Creswell Bay, Somerset Island, and Nunguvik, Eclipse Sound (Mary-Rousselière 1979: 56(S-766, calibrated); Schledermann 1990: 267,332). After that Thule-5 emerges (Fig.133).

Thule-5(F), derived from Dorset type-F, which is self-bladed, is broadest at the line hole, has a closed socket and is very flat. The out-curving spurs are only found in eastern Greenland, and in north-eastern Greenland they usually have squared off ends. The cross section measured across the line hole is triangular with a domed dorsal side, sometimes with two facets. Four north-eastern Greenlandic heads from early Thule differ from the others by having three facets on the ventral side (Larsen 1934: 97, pl.2(7)), a feature which does not appear in the late Dorset types, but does occur in Independence II (*cf.* Knuth 1967: pl.6). Thule-5(F) with open socket and lashing holes is known from Qilalukan, Baffin Island and in Egesminde District, West Greenland (Mathiassen 1927,I: pl.65; Swenander 1906: pl.2(80)). It is found with closed socket in North East Greenland and in a later, smaller version in Ammassalik and also in West Greenland in identical forms at Sermermiut and Qeqertarmiut, Sukkertoppen (*cf.* Larsen *op.cit.*; Mathiassen 1933: pl.5(7), 1958: fig.11(3)). It is not known from Thule District. The open type has only been found in graves. The closed type is found in North East Greenland together with early Thule-2 with lashing notches and at Ser-

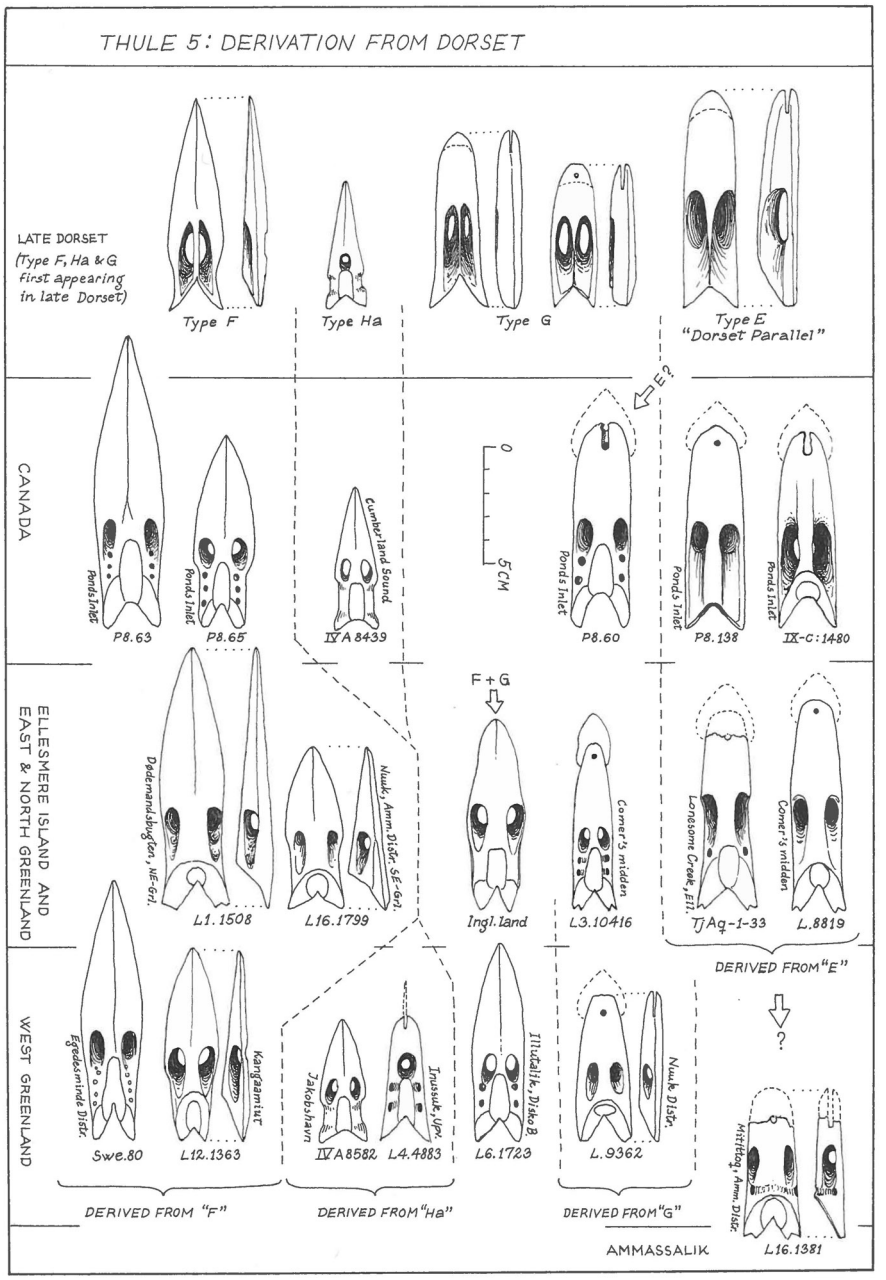


Fig. 133. *Thule-5 in Canada and Greenland and the prototypes in late Dorset.*

mermiut it is found in the nethermost Thule deposits; in both places the type can be dated to the 14th century (*cf.* chapter V).

Thule-5(H), derived from Dorset type-Ha with two spurs and one hole for the line, is self-bladed and has an open shaft socket. The largest Dorset example was found on Ellesmere Island (Schledermann 1990: pl.37a). Thule-5(H) only occurs in two examples, i.e. from Cumberland Sound and Disko Bay (*cf.* Mathiassen 1927,II: 23), as well as in a hybrid of Thule-3 and Dorset type-Ha from the Inussuk midden (C3, layer 8), where the context is dated to the 14th century (*cf.* chapter V; Mathiassen 1930: pl.5(5)). A similar hybrid from Sermermiut is 9 cm long (Porsild 1916-18, Nat. Mus. Dk. unpubl.). The type has not been found elsewhere.

Thule-5(G), derived from Dorset type-G, has a separate blade, oval to acuminated

oval cross section, concave or convex sides, spurs curving in or out and a flat, rectangular, closed shaft socket. Thule-5(G) with open socket is found in Thule District and northern West Greenland with or without blade and has an oval cross section. The type is widely distributed in Canada, where its relationship to Dorset has been discussed (Mathiassen 1927,II: 23; Schledermann 1975: pl.3d-f; Taylor 1960: 83ff). The closed socket is widely distributed in Thule and West Greenland (Holtved 1944,I: pl.4; Swenander 1906: pl.2). The closed type with acuminated oval socket was found in a grave at Uummannaq in Godthåb District (L.9362) and is the only example from Greenland which gets close to the form of Dorset type-G (*cf.* chapter III). Thule-5(G) has not been found in East Greenland. Thule-5(G) from Illutalik in Disko Bay has been dated to the 14th-15th century (*cf.* chapter V).

Thule-5(E), derived from Dorset type-E, has a separate blade, flat dorsal side, domed ventral side, almost parallel sides, two dorsal spurs and a flat, rectangular, closed shaft socket. Thule-5(E) is found with a closed socket in Thule District and the Ponds Inlet region in Canada, where the shape closely resembles that of Dorset type-E (McGhee 1984a: fig.2d; Mathiassen 1927,I: pl.64(6)), as well as on northern Ellesmere Island (Maxwell 1960: pl.9(1,2)). The fragmentary example of this type from Illorpaat, Godthåb District (igd 2299) is dated to the 16th century (*cf.* chapter III). It is widely distributed in Canada (Boas 1907: fig.248; Mathiassen 1927,II: 24). In North East Greenland there is a later type with an almost oval cross section and the same shaping of the rear part as on the contemporary late Thule-5(F)-derived types (*cf.* Larsen 1934: pl.11(3-6)). In this region it has been found in 18th-century Ammassalik (*cf.* Mathiassen 1933: pl.5(10)). A later variant of Thule-5(E) from the Illutalik midden, Disko Bay (A20, layer 7), has been dated to the 16th century (*cf.* chapter V). The earliest types seem to be those from Ponds Inlet and northernmost Ellesmere Island, where they are dated to the 14th-15th century (Maxwell 1960: 83). After this time Thule-5(E)- derived forms are found in West Greenland and North East Greenland.

Discussion. Thule-5(H) occurs in Greenland simultaneously with the other heads described above, but so sporadically that any further discussion would be useless. The open Thule-5(F) is not found in Thule District, but is found in graves in Canada and West Greenland. The closed type occurs in both West and North East Greenland from the 14th century, but the shape is different in the two regions, especially the shaping of the spurs and the course of the line hole. The north east Greenlandic type seems to have developed independently. The only examples found in western Greenland are the ones described above. The open Thule-5(G) is only found in Thule District and down along the west coast to Disko Bay and a closed type in Godthåb District. The type is found in later, closed forms in the same areas as the open ones. Thule-5(E) is found early and has the greatest distribution, as the original, closed form had in Canada. The type later spread to West and North East Greenland, particularly the latter.

It appears from their distribution (Fig. 134) that Thule-5(F) was preferred in East Greenland and Thule-5(G) in West Greenland. Thule-5(G) sometimes occurs in a slimmer version and may be composed of features from types F and G. It has, however, been found with the two original outer forms in west Greenlandic graves, e.g. with spurs curving in or out (Swenander 1906: pl.2(68); Godthåb L.9362). Several heads from West Greenland can be classified as derived from Dorset type-G (e.g. Swenander 1906: pl.2(65-67)) and this classification also seems to apply to heads found at Cumberland Sound on Baffin Island (Boas 1901: fig.4a-c; Schledermann 1975: pl.4b).

Experiments with line holes take place when the western tradition has to be adapted to the local Greenlandic tradition. This happened in Upernavik, Disko Bay and Kangerlussuaq.

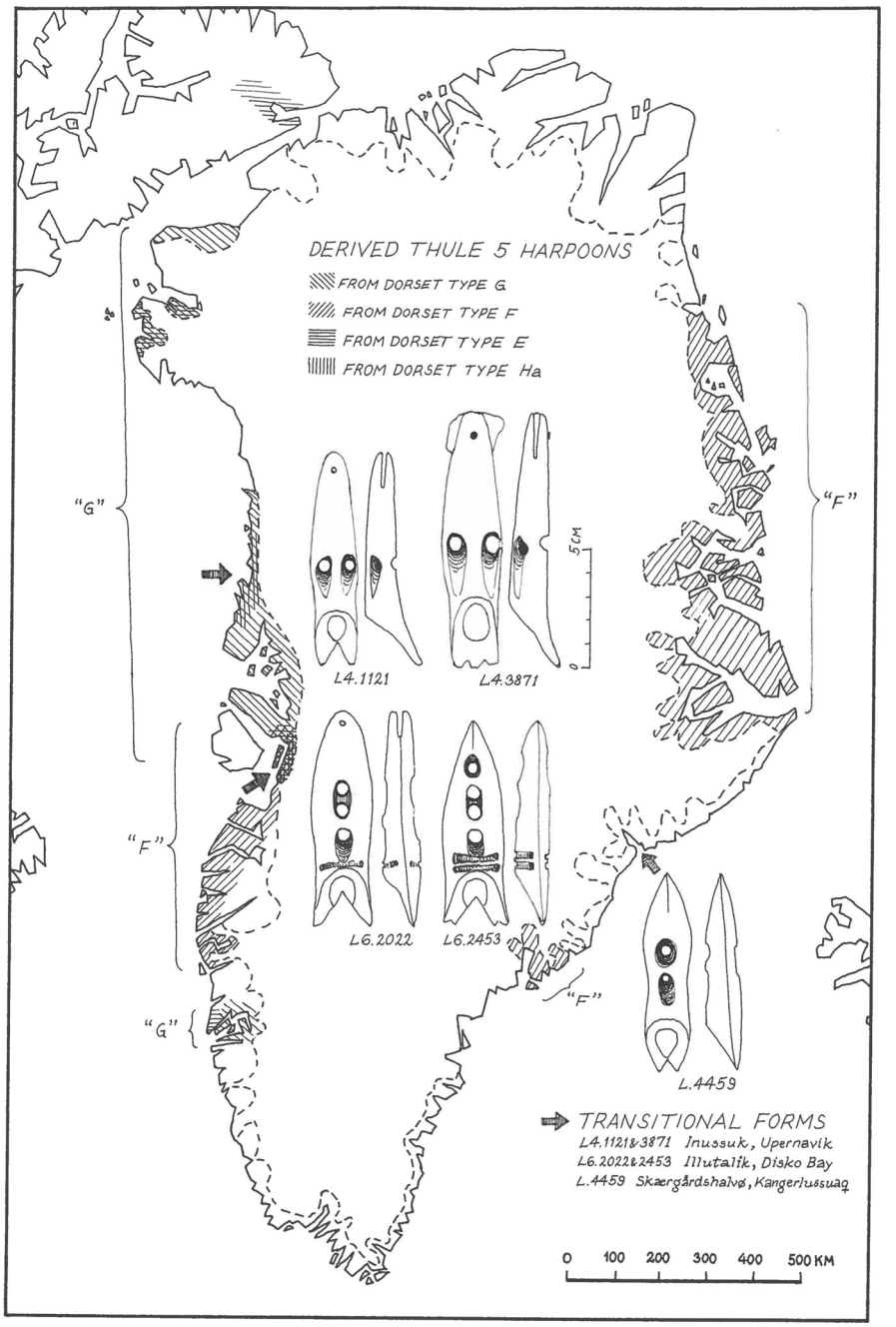


Fig. 134. *The distribution of Thule-5 with the Dorset prototype marked. Transitional forms with changes to the toggle principle occur in Upernavik, Disko Bay and Kangerlussuaq.*

Two Thule-4 ('inussuk' types) with cleft spur, but with Thule-5 line holes were found in the Inussuk midden. Their contexts, L4.1121 (C18, layer 4) and L4.3871 (C7, layer 7), both from the penultimate bottom layer, date them to the 14th-15th century (*cf.* chapter V).

In Disko Bay, Illutalik midden A, an experiment had been made on flat heads. L6.2022 (A26, layer 4) and L6.2453 (A38, layer 8) were both found in the lower part of the midden, which is dated to the 15th-16th century (*cf.* chapter V), the time when there were also changes to the harpoon head in Thule District (*cf.* Holtved 1944,I: pls.3(19), 4(30), II: 110, 112f).

Several similar examples of thin types have come from Kangerlussuaq (*cf.* Larsen

1938: pl.1(1); Mathiassen 1934a: pl.2(3); Thalbitzer 1909: 348, L.4459). All came from houses with kitchen niches in the front wall, a feature which was associated with North East Greenland and probably dates to the 16th-17th century (*cf.* chapter V).

Classic Thule and Ruin Island in Greenland

Classic Thule covers the Thule culture in arctic Canada in the period 900-1400 AD, when clay replaces soapstone, lashing holes replace lashing slots and when there is whaling (McCartney 1977; Mary-Rousselière 1979; Mathiassen 1927; Morrison 1989: 51, 56). The Ruin Island phase is dated to the period 1200-1400 AD and is characterised by an archaeological assemblage where there are typological features from Alaskan Punuk and when whaling take splace (Holtved 1944, 1954; McCullough 1989). The particular characteristics of the open-socket harpoon heads in this phase are in Greenland not found outside Thule District. A contemporaneity between thin and flat types expressed as 'parallel traditions' can be demonstrated in Thule District and is also found in the Ruin Island phase. The distribution in this phase must be seen as territorial marking. The cessation of the Punuk marking is described as acculturation and terminates in the 14th century.

One of the latest harpoon heads to come into the Ruin Island phase is the closed Thule-4 with oval cross section and blade slit parallel with the line hole. This type has been found at Sverdrup Site house 6 on Ellesmere Island, where it is dated to the mid-14th century (McCullough 1989: pl.3e) and is also found in Thule District and Disko Bay, Illutalik house 7. At the latter site it was furnished with a bifurcated spur and was thereby turned into the Greenlandic 'inussuk' type (*cf.* Holtved 1944,I: pl.4(18); Mathiassen 1934: pl.1(2)). In all places the houses are of the Ruin Island type with kitchen niche and are dated to the 14th century (*op.cit; cf.* chapter V). In this period acculturation can also be demonstrated by hybrid forms, e.g. Illutalik house 7 and the Inussuk midden C12, layer 6 (Mathiassen 1930: pl.5(11), 1934: pl.1(3)).

Besides Thule-4 Classic Thule also contained harpoon heads of the Thule-1 type, which were not present in the Ruin Island phase and which must be seen as a separate tradition coming from the west. The distribution of the two types will be discussed below (Fig. 135).

Thule-1 has been described as a Thule-3 without a blade (Mathiassen 1927,II: 14f; Maxwell 1985: 270). The type must, however, be regarded as independent and its prototype sought in 'Tipiruk' from the Birnirk phase in North Alaska (Ford 1959: 80f; Stanford 1976: 22, 108). It has been found with lashing holes and bifurcated spur in a grave in Egedesminde District in West Greenland (Swenander 1906: pl.1 (7); Westman & Jakobsen 1989: 57), where it, with its four facets, is the prototype of the entire Greenland Thule-1 group with open and closed shaft socket. Thule-1 with open socket is found in Thule District in the 14th-15th century, where it has been identified in Comer's midden, as well as house 21 on the same site (e.g. L3.7866, Holtved 1944,I: 150f, pl.4(1)) and it remains in common use until the 19th century (e.g. L3.11051, *op.cit.*, pl.4(2)). It is found with a closed socket in North East Greenland, Renskæret house 132 (e.g. L.3480, Thomsen 1917: fig.8), in a grave at Kangerlussuaq in South East Greenland (e.g. L.4458, Thalbitzer 1909: fig.4) and in a grave in the Skjoldungen region (Koch & Felbo 1993: 97; Gulløv 1995: fig.10). The last site is dated to the 17th-18th century, i.e. before the eastern Greenlandic customs of burial at sea or laying the dead on open rock are mentioned in the sources (*cf.* Graah 1832; Holm 1887: 106;

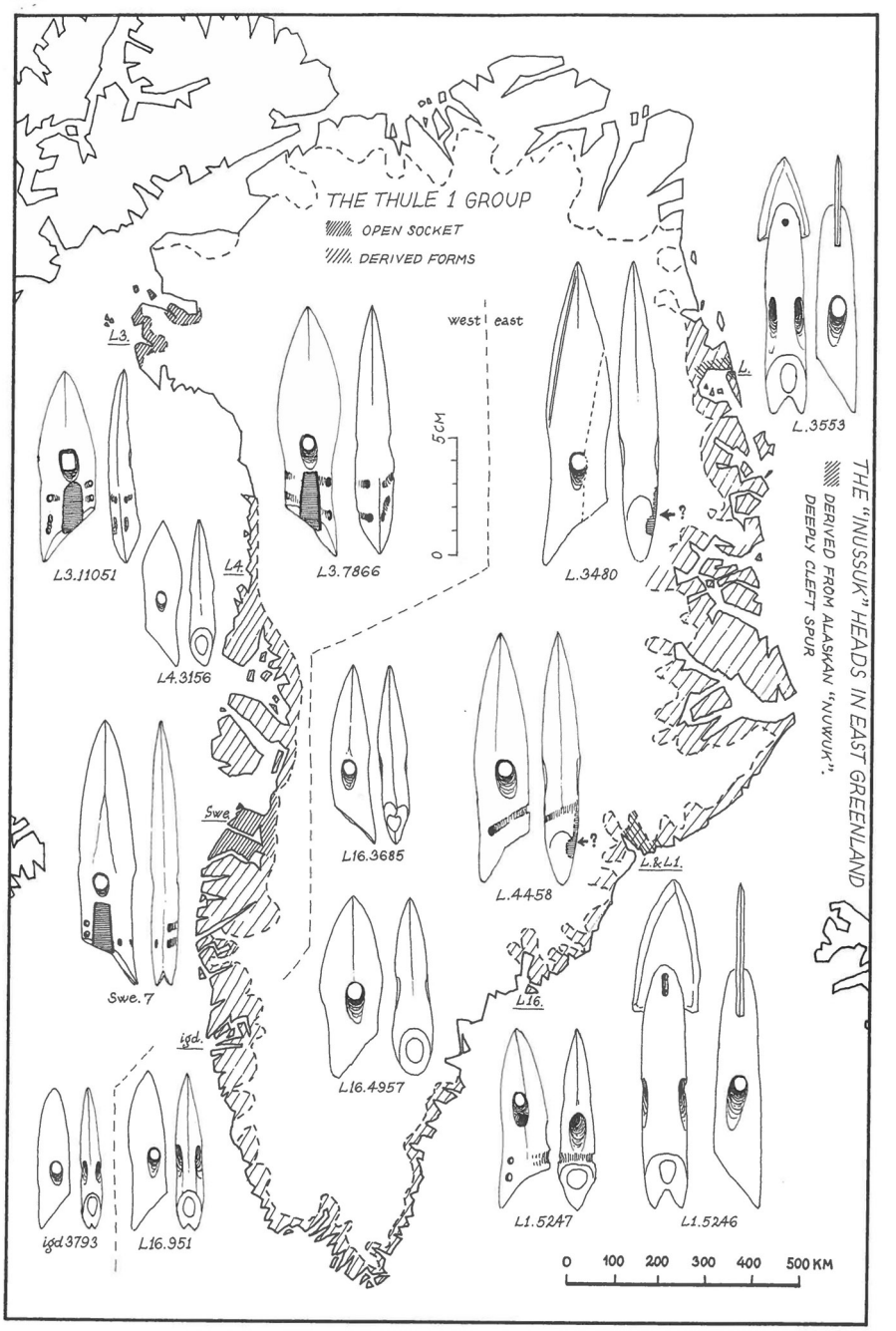


Fig. 135. *The distribution of the Thule-1 group and the large 'inussuk' types from East Greenland.*

Thalbitzer 1933: 36). In all places the houses have a rectangular ground plan with niches in the front wall, *cf.* L.16.4957 in Ammassalik (Mathiassen 1933: 34, pl.1(1)).

The form recurs in the smaller fish-harpoon heads (*cf.* Mathiassen 1931: 72), which are found with bifurcated spur at Illorpaat in the 16th century and Ammassalik (e.g. igd 3793 and L16.951, Mathiassen 1933: pl.5(1)) and with undivided spur at Ammassalik and Inussuk (e.g. L16.3685 and L4.3156, Mathiassen 1930: pl.5(6)). In the last place it was found in B17, layer 8, which was dated to the 14th-15th century (*cf.* chapter V).

This type had also been subject to experiments with the line hole, as was the one

described above, and it is here illustrated by an example from Kangerlussuaq in South East Greenland (e.g. L1.5247, Larsen 1938: 50).

Thule-4 has been described as a derivation from Collins' type-Vy (1937: 111), while the prototype of Classic Thule is found in the 'Nuwuk' type with the blade parallel to the line hole from North Alaska (Ford 1959: 93; Stanford 1976: 22, 108). It appears early in Greenland and with its bifurcated spur it gives the name to the 'inussuk' type (Mathiassen 1930: 182f). In all parts of West Greenland and Thule District the type has been found at the bottom of the middens (*cf.* chapter V). It is known in East Greenland in two very large versions from, respectively, Renskæret house 134 in North East Greenland and Kangerlussuaq in South East Greenland (e.g. L.3553, Thomsen 1917: fig.5, and L1.5246, Larsen 1938: pl.1(2)). Both are from the same period as the above mentioned large 'Tipiruk'-derived Thule-1 types and were found in the same localities. From the latter site comes a dating to a time after 1700 AD (*cf.* chapter V).

Discussion. Among the Greenlandic variants described above, Thule-1 and Thule-4 both appear to have come from North Alaska Birnirk/early Thule. The former is only found in its original form with open socket in West Greenland and has not been found in Classic Thule in Canada. The latter is found in Classic Thule, the Ruin Island phase and throughout Greenland. In this Classic Thule differs from the Ruin Island phase, each having their own tradition. Judging from this, Birnirk/early Thule seems to appear early in West Greenland, followed by Ruin Island features which only relate to the late Thule-4 'Nuwuk' from Sverdrup Site on Ellesmere Island, Illutalik in Disko Bay and Uummannaq in Thule District. In North East Greenland the types occur later than Thule-2 and Thule-5(F).

The distribution in Greenland

The above mentioned thin and flat types spread early with the Thule culture to both West and East Greenland, where some were in use for a long time. In the following I discuss the described traditions on the basis of their distribution in Greenland.

Late Thule-5(E)

This late type with both pointed and straight-cut dorsal spurs have been found in Thule District, northern West Greenland, North East and South East Greenland (Fig. 136).

The type is common in the second stage of the mixed culture in North East Greenland and it is not found in the first stage (Larsen 1934: 139f; Sandell & Sandell 1991: 38). The examples shown are from Dødemandsbugten, site 3, house 7, from Cape Tobin and Cape Hope, house 6 with an iron blade, e.g. L1.2673 (Larsen 1934: pl.11(4)), L.4535 (Thalbitzer 1909: fig.2), L.417 (Nat. Mus. Dk. unpubl.). Shannon Island is the most northerly location where iron blade has been found (Bartlett & Bird 1931: 408; *cf.* Mathiassen 1929: 146) and it can be dated to the time of the intensive European whaling off this coast in the 17th-18th century (Larsen 1934: 169). The type can be demonstrated in Ammassalik in the 18th century, e.g. L16.2909, where 56 pieces were of this type, and the further 54 found in Ammassalik Fjord, i.e. 40% of the

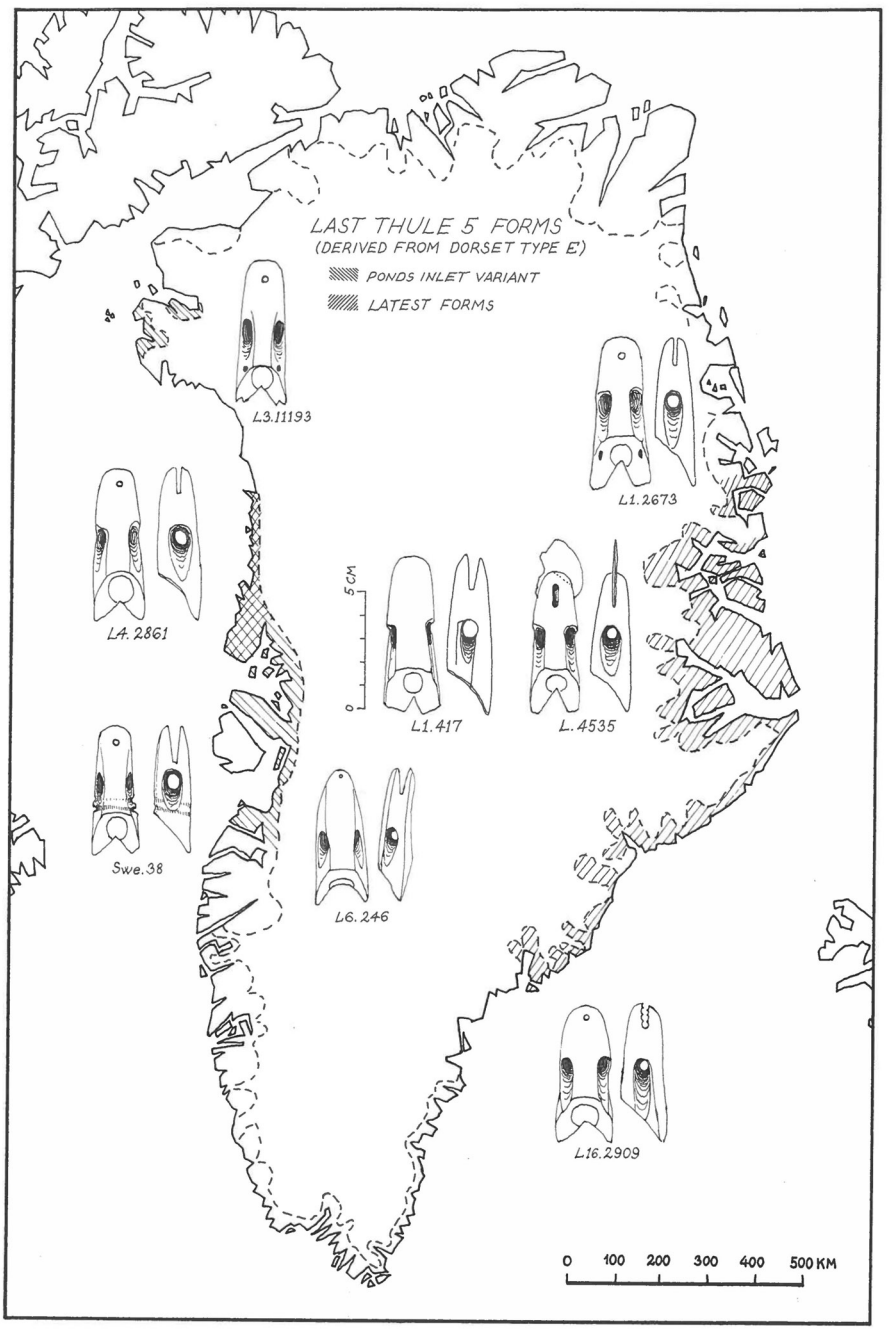


Fig. 136. *The distribution of the late Thule-5 types derived from Dorset type-E.*

total number of 139 heads from the 18th century (Mathiassen 1933: 68). In Thule District the type is known from Comer's midden, e.g. L3.11193, and the house-21 complex at the same site, which Holtved dated to the 15th century (1944,I: pl.4(23,24)). Similar types were found at Qilalukan, Baffin Island (Mathiassen 1927,I: pl.65). In West Greenland it was found in the Inussuk midden, e.g. L4.2861 (C12, layer 6), and in a grave in Disko Bay (Swenander 1906: pl.1(38)) and at Illutalik 27 examples were found (Mathiassen 1934: 85), dated to the 15th-16th century (*op.cit.*, p.119f). L6.246 from the same site house 2 has laterally placed spurs, which occur on the later types in West Greenland and thus appear to indicate an independent development.

Discussion. The type seems to have spread across Thule to both West and North East Greenland. European objects, which derive from the whaling in the 17th century, were found together with this type. They were most frequent in East Greenland where the first whaling took place (*cf.* Gulløv 1987). In all places the type is found with an iron blade and the earliest date is the 15th century from Comer's midden (Holtved 1944,I: 192). Typologically, the south east Greenlandic types resemble the west Greenlandic ones and a connection between the two areas cannot be excluded, since features from early types seem to re-appear in the elongation of the line hole as deep furrows down the sides. This feature is also found on the stray find from Kangaamiut (Mathiassen 1931: pl.1(4)) and on igd 2299 from 16th-century Illorpaat (*cf.* chapter III). A connection between South East and North East Greenland in the 16th-17th century is probable (*cf.* chapter V).

Late western types

The types are Thule-4 'Nuwuk' and Thule-3 with open shaft socket (Fig. 137).

Thule-4 'Nuwuk' with undivided spur is found throughout North East Greenland, e.g. L.3974 from Dove Bay; Rypefjeldet house 527 (Thomsen 1917: fig. 6b; Thostrup 1911: pl.2), L1.2526 from Dødemandsbugten, site 3, house 7 (Larsen 1934: 41), L1.831 from Scoresby Sund, Cape Tobin, house 4 (Nat. Mus. Dk. unpubl.). In Dødemandsbugten the type was found together with porcelain and iron nails (Larsen 1934: pls.11(3,4), 15(12,20)). Larsen compares this thin type with both the Dove Bay example (L.3974) and the above Thule-1 variants (1934: 96), but the last mentioned example, a toy without blade, is a Nuwuk type (1934:pl.8(1)), which together with a block for a winged harpoon (1934: pl.2(17)) was dated to the first phase of the mixed culture. A similar Nuwuk type was found in the same phase, together with a socket-piece with scarf face for a harpoon shaft (1934: pl.2(3,8)). On Gauss Peninsula, site 5, the Nuwuk type was also found together with slender throwing boards (Richter 1934: figs. 46(11), 50(2)). Large blocks for winged harpoons are, outside North East Greenland, only found in Ammassalik (Mathiassen 1933: pl.1(20)) and on the Kuuk settlement in Upernavik (L.2295, Nat. Mus. Dk. unpubl.). The slender throwing boards (e.g. Glob 1935: fig.30) have not been found outside North East Greenland. The prototypes for this harpoon accessory must be sought in Alaska, where the so-called "winged objects" are for winged harpoons and occur together with the above slender throwing boards from Punuk and early Thule (*cf.* Arutiunov & Fitzhugh 1988: figs. 137, 138; Collins 1937: pls. 20, 21, 80(3); Ford 1959: fig. 48a,b). This late Nuwuk type was on the west coast found in Upernavik in a communal house with internal kitchen niche, e.g. L4.6471 (Hjarnø 1969: fig.9, pl.2(19)).

Thule-3. In the same house in Upernavik a Thule-3 type with lashing holes was found, i.e. L4.6468 (*op.cit.*, pl.2(15)). The type was also found in contemporary graves nearby (Hjarnø 1974: pl.4(8)). The only comparable types are from Thule District and here they were found with bifurcated spur in Comer's midden in the 16th-17th century, e.g. L3.10787 and L3.11565.

Discussion. These late western types demonstrate a tradition which survived for a long time in northern Greenland. According to Holtved's investigations, the 17th-18th century is very sparsely, if at all, documented in the archaeology of Thule District (1944,II: 40) and we may presume that there was a migration to, *inter alia*, Upernavik in this period.

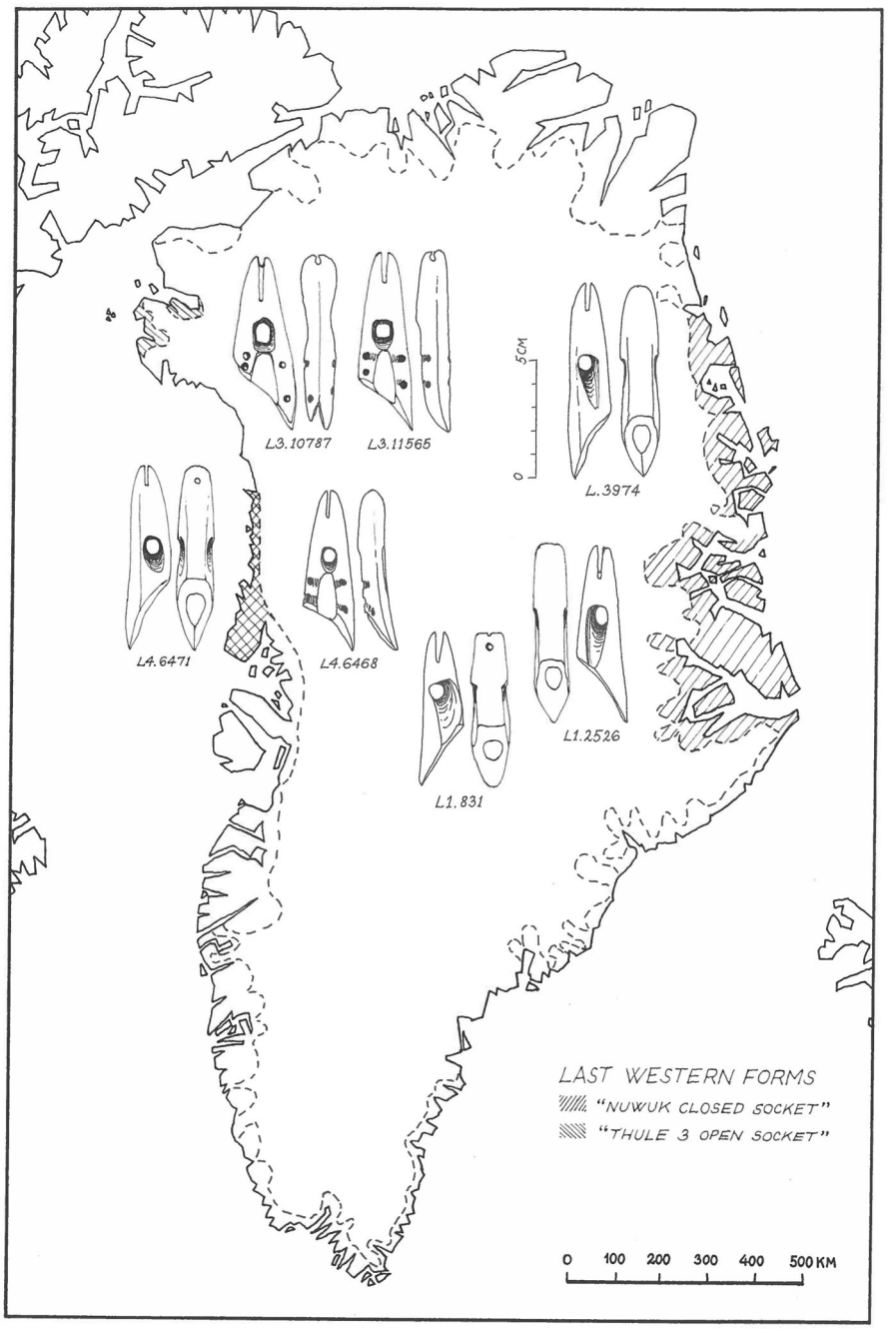


Fig. 137. *The distribution of the late western, thin types, i.e. 'Nuwuk Closed Socket' and 'Thule-3 Open Socket'.*

I shall now discuss when the late western types may have arrived in North East Greenland. Larsen places the ruins in the northern part of North East Greenland in his type 2 group (1934: 59), with which all the Nuwuk- and Tipiruk-derived harpoon heads described above can be classed (*cf.* Thostrup 1911: 237f, 278, pl.2). Bones of Greenland whale were found there (*ibid.*) and a C-14 dating on baleen from house 399 on Snenæs (K-567) gave the year 1540 AD, i.e. 1465 (calibrated, Clark 1975). It seems probable that there were still connections round the north of Greenland in the 15th-16th century and that is corroborated by datings of other sites in northern Greenland (*cf.* Knuth 1980: 18f). The contact between the whaling areas in Smith

Sound and North East Greenland was discussed above in connection with the Norse oak on Peary Land (*cf.* chapter V). The late western harpoon types presumably arrived in North East Greenland in this period.

Final Thule-5(F)

This type (Fig. 138) was found together with the above-mentioned types from North East Greenland and was dated to the 16th-17th century (Glob 1935: 82). The spurs on several of these examples from the southern part of the coast were shaped in a way that indicated an independent tradition, e.g. L1.3624, L1.3618, L1.3619 from Geographical Society Island site 2, house 2 (Glob 1935: pl.1(7)). The type is also found outside this region with a lateral barb and is called "the Scoresby Sund type"; this has not been found anywhere else (*cf.* Glob 1935: pl.1(6); Ryder 1895: fig.13b; Sandell & Sandell 1991: 37). As a thin type it is found in Ammassalik in the 18th century (Mathiassen 1933: pl.5(3)).

The late Thule-5(F) in Ammassalik, e.g. L16.1799 is in outer shape and with the slightly out-curved spurs more closely related to those which were described in North East Greenland (Mathiassen 1933: pl.5(7)). The example illustrated here was dated on the basis of the find context to the 18th century; and from this period there are also the western Greenlandic heads of this type without out-curving spurs, e.g. L12.869 from Kangaamiut, Qeqertarmiut A4 (Mathiassen 1931: 38,63) and the stray find Cat. No. 63946 from Disko Bay (Mason 1902: 253, fig. 42).

A similar connection can be drawn between L16.1801 from the same site house 12 in Ammassalik Fjord and Disko Bay (e.g. Swenander 1906: pl.2(83-85), although Mathiassen was unable to prove it (1933: 74, pl.5(11)). Both these late types were considered to be common in Ammassalik when Gustav Holm was the first European visitor there and they were present from Skjoldungen in the south to Nuualik in the north, but there with a concave cut between the dorsal spurs (Gustav Holm Samlingen 1985: 81; Mathiassen 1936a: fig.21(2), 41; Thalbitzer 1914: fig.135f).

Discussion. The youngest examples of Thule-5(F) are found in East Greenland, where there may have been contact between the north-eastern and the south-eastern regions in the 17th-18th century. The connection between East and West Greenland is documented in the written sources from the 18th century (*cf.* chapter IV) and the harpoon types illustrated here seem to corroborate it. The type is still extant in South East Greenland in the 19th century.

West Greenlandic types in the 17th-18th century

The description of the harpoon heads from this period illustrates the ethnohistory in South West Greenland, as discussed in chapter IV. The 'parallel traditions' are contemporary and are interpreted as a meeting of cultures. The large communal houses were used at an early stage by Greenlanders on long journeys from East Greenland and the most northerly parts of West Greenland. The purpose of the journeys was trade which, during the course of the 18th century, came to be dominated by South Greenlanders. The geographical aim was the central west coast, where European whaling started at the end of the 17th century. The harpoon heads of this period reflect the control of resources and the meeting of cultures (Fig. 139).

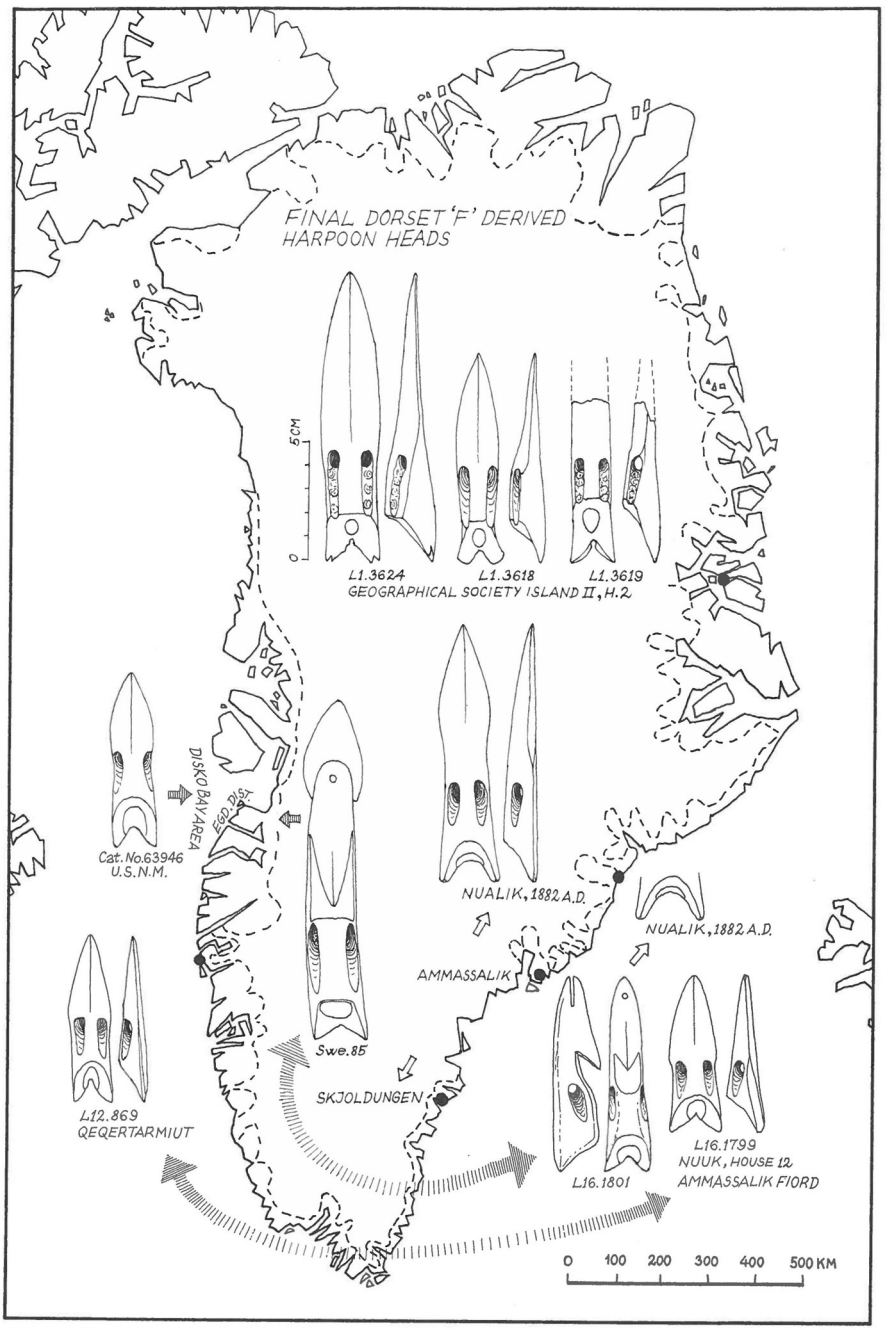


Fig. 138. *The final Thule-5(F) types in Greenland and the typological connection between South East and West Greenland.*

Most of the 17th-century western Greenlandic harpoon heads are flat and are derived from Thule-5(E,G). The spurs are placed either dorsally or laterally. The latter arises in this period (*cf.* late Thule-5(E) from Disko Bay). The line hole is sharply cut, which is characteristic for all the variants in this period. The description follows the west coast from north to south and includes the house types.

Bifurcated dorsal spurs. L4.1825 was found in the Inussuk midden B10, layer 4, which in this place is stratigraphically dated to the 16th-17th century (Mathiassen 1930: pl.5(18)) and it is thus the earliest of the described variants.

L4.5970 was found in a 6.5 m-long house with rounded corners at Upernavik, in

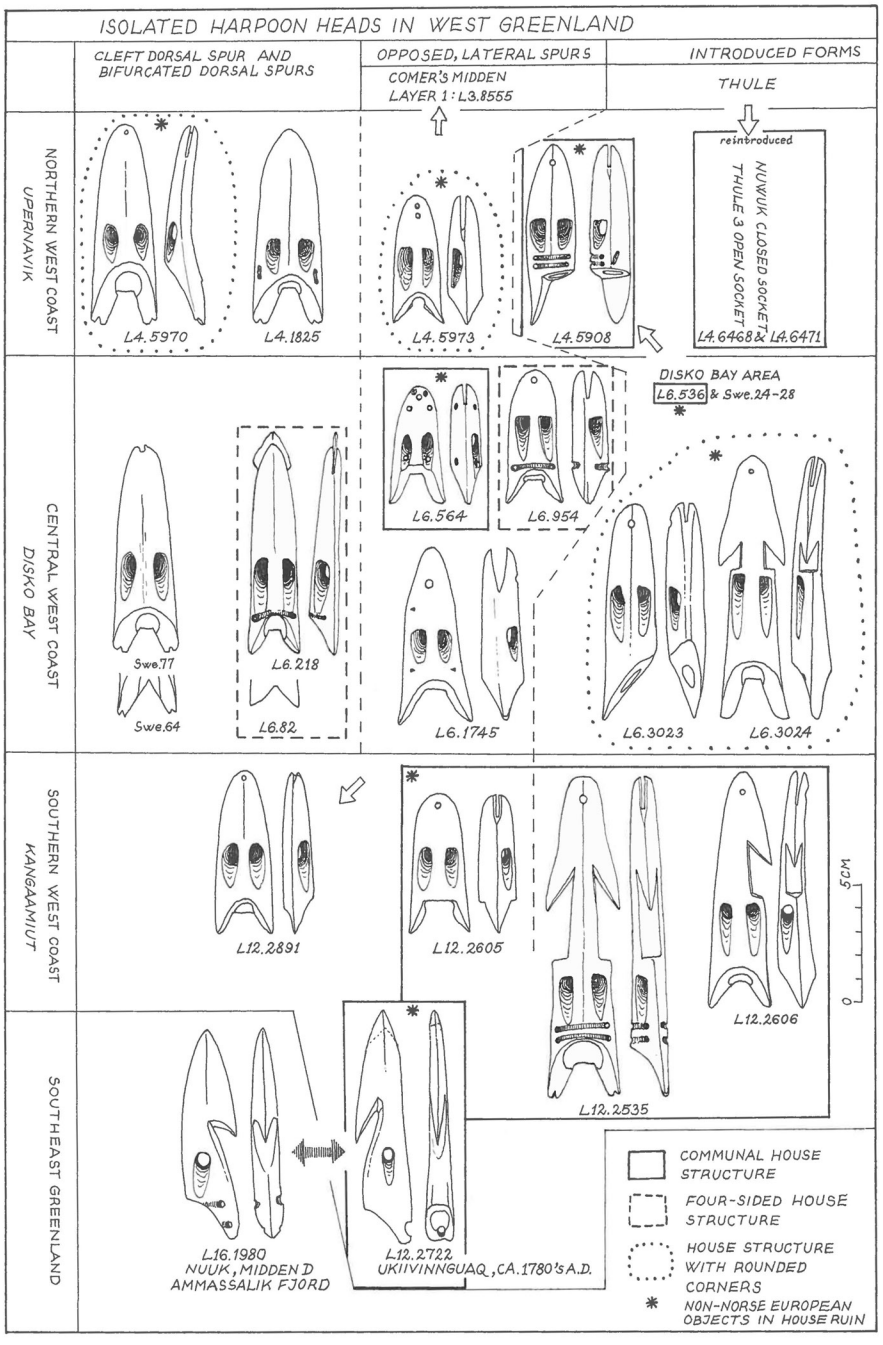


Fig. 139. *The west Greenlandic harpoon heads in the 17th-18th century in relation to house types and European objects.*

which there were glass beads and a pendant of lead, among other things (Hjarnø 1969: fig.7, pls. 2(6), 20(14)). This is dated to the latter half of the 18th century.

Swe.64 and 77 were found in a grave in Disko Bay (Swenander 1906: pl.2). The variant Swe.64 with spurs meeting at a sharp angle was also found in a communal house in Egedesminde, together with a copper tub, a sailmaker's knife and other trade goods which were dated to the first half of the 18th century (Birket-Smith 1924: fig.5a). In the same communal house there was a harpoon head with bifurcated, lateral spurs and cross-ornamentation (*op.cit.*, fig.5b). The type is found among the 19th-century harpoon heads from Ammassalik (e.g. Thalbitzer 1914: fig.133e).

L6.82 and L6.218, both without bifurcated dorsal spurs, were found in six exam-

ples and with two variants of the basic form in the four-sided house 1 at Illutalik (Mathiassen 1934: 55, figs. 23, 24). Because of the absence of European artefacts, this house has been dated to the 16th-17th century (*op.cit.*, p.120). However, most of the objects were found in seven excavation layers below the recorded floor and L6.218 below the dividing wall, which makes the house type, whose latest habitation phase contained tub staves, later than has been presumed.

Lateral spurs. L4.5973 was found in the above-mentioned Upernavik house (Hjarnø 1969: pl.2(8)).

L3.8555 was found uppermost in Comer's midden (Holtved 1944,I: pl.4(25)).

L6.564 was found under the floor in the rectangular communal house on Illutalik, together with an iron sawblade, and was dated to the first half of the 18th century (Mathiassen 1934: 51ff, 123f, pl.8(8)).

L6.954 was found during the excavation of the southern room in the four-sided house 5 on Illutalik, halfway down in the 13 excavation layers (*op.cit.*, fig.15).

L6.1745 was found in the midden in front of this house, A20, layer 2, and is also found in Disko Bay in the 19th century (*cf.* Porsild 1914: fig.1c; Swenander 1906: 13, pl.2(49)).

L12.2891 was found in an early house of unknown type by Sukkertoppen (Nat. Mus. Dk. unpubl.).

L12.2605 was found in a large 18th-century communal house at Uummannat in the Kangaamiut area (Mathiassen 1931: 35f, 120). This is the most southerly findspot of the type.

Introduced types. L4.5908 with a single lateral spur was found in a 9m-long communal house at Upernavik (Hjarnø 1969: pl.1(14)), together with heads with lateral spurs and three thin heads with open shaft sockets (one of them a Thule-3), as well as several European artefacts which have been dated to the 18th century (*op.cit.*, pls.12(14), 16(7), 24(7)).

L4.6468 and L4.6471 were found in a rectangular communal house with kitchen niche in the front wall on the same site in Upernavik District. The types have been described above as Thule-3 and Nuwuk. The type with bifurcated dorsal spurs was also found in this house. A two-armed ulo from this house has been dated to the 18th century (*op.cit.*, pl.16(10)).

L6.536 with a single lateral spur was found in the rectangular communal house on Illutalik and has been dated to the 18th century (Mathiassen 1934: pl.8(7)).

Swe.24-28 is of the same type with a single lateral spur and is also found in several graves in Disko Bay (e.g. Swenander 1906: pl.1).

L6.3023 with a single lateral spur comes from a 7m-long communal house with rounded corners on Illorsuit (Mathiassen 1934: 132ff, pl.10(2)). European objects were also found there, among them gunflint, which dates the house to the mid-18th century. In the structure in front, large whale bones were found (*ibid.*) which corroborates the information of 1725 that the houses in the north were built of whale ribs in lieu of beams and rafters (Egede 1925: 159).

L6.3024 with two barbs is from the same structure (Mathiassen 1934: pl.10(1)). L12.2535 is the same variant as L6.3024 and was found in the 18th-century communal house at Uummannat in the Kangaamiut area (Mathiassen 1931: 117, pl.7(1)).

L12.2606 with lateral spurs and one barb was found in the 18th-century communal house at Uummannat (*op.cit.*). Barbs become common all along the west coast from the 18th century and are found on harpoon heads with both dorsal and lateral spurs and with a single dorsal spur (e.g. Swenander 1906: pls.2, 3). They were intro-

duced in the colonial age, when there was increased hunting of smaller whales, and they occur at the time when the south Greenlanders made trading voyages up along the west coast.

L12.2722 is a thin type from a large communal house with kitchen niche in the house passage and with many European objects. It has been dated to the time of the great religious revival in Sukkertoppen at the end of the 18th century (Mathiassen 1931: 45; Gulløv 1986).

L16.1980 is of the same type and is from 18th-century Ammassalik. The connection between East and West Greenland is mentioned in the written sources in 1733 (*cf.* Egede 1925: 267).

Discussion. Heads with lateral spurs seem to have their origin in Disko Bay, where they have been found under four-sided houses and could be dated from the 17th century onwards. They later appear in larger houses with rounded corners in Disko Bay and Upernavik and have been found in Comer's midden. They are also found in rectangular communal houses from Sukkertoppen to Upernavik. This is a building type which seems to have been introduced by south Greenlanders, who wanted to show the northerners how to build a house (Mathiassen 1931: 50). A western tradition can be demonstrated among the thin types in Upernavik, found in communal houses from the 18th century, and an eastern tradition among the thin and flat barbed heads from South West Greenland, found in 18th century communal houses in Sukkertoppen and Disko Bay. The heads with dorsal spurs, which resemble Thule-5(G) most closely, seem to be the oldest of the described variants. They are only found in the northern part of the west coast and in Upernavik together with late western types. This is because a tradition was brought in and spread with the travel activity which began in the 17th century. The 'parallel traditions' are still reflected in the hybrid forms, which resulted from the meeting of cultures when the types changed more quickly, *cf.* Jørgen Meldgaard's definition of a period of stress (1986: 24).

Conclusion: Parallel traditions in South West Greenland

I have demonstrated that the 'parallel traditions' have been present in Greenland since the 13th century, which is the date of the Thule culture in Thule District and in West and North East Greenland. The description of the types and the demonstration of their geographical extent showed a preference for Thule-5(F) in East Greenland and for Thule-5(G) in West Greenland and in both regions they were found together with Thule-2. Thule-5(E) appeared later in both West and East Greenland. A continued western tradition was demonstrated in the thin types, which were in use in northern West Greenland in the 17th century. The table below gives the geographical distribution of the types described.

	Thule	West Greenland			East Greenland	
		NW	Disko	SW	NE	SE
Western tradition (thin types)						
Thule-1 Tipiruk open	–	–	×	–	–	–
Thule-1 Tipiruk closed	–	–	–	–	×	×
Thule-1 Ordinary open	×	–	–	–	–	–
Thule-1 Ordinary closed	–	–	–	–	×	×
Thule-2	×	×	×	×	×	–
Thule-3	×	×	×	–	×	–
Thule-4 'keel'	×	–	–	–	–	–
Thule-4 'Nuwuk'	×	–	×	–	×	–
Thule-4 'Inussuk'	×	×	×	×	×	×
Dorset tradition (flat types)						
Thule–5(F) open	–	–	×	–	–	–
Thule-5(F) closed	–	–	×	×	×	×
Thule-5(E) closed	×	–	–	–	–	–
Thule-5(E) late, closed	–	×	×	×	×	×
Thule-5(G) open	×	×	×	–	–	–
Thule-5(G) closed	–	–	×	×	–	–
Early hybrids						
Thule-2 & -5(F) closed	–	–	–	–	×	–
Thule-2 & two dorsal spurs	×	–	×	–	–	–
Thule-3 & -5(H)	–	×	–	–	–	–
Thule-4 'Nuwuk' & -4 'Inussuk'	–	–	×	–	–	–
Experiments with the line hole	×	×	×	–	–	–
Late hybrids						
Thin & flat	–	×	×	×	–	×
Experiments with the line hole	–	–	–	–	–	×

A tentative division of the Thule culture in Greenland into periods shows (*cf.* chapter V) when and where the types appear. Open and closed shaft sockets and lashing slots and lashing holes cannot be used to determine chronology in Greenland as they were introduced simultaneously.

13th century. Thule-2 in Thule District and North East Greenland. Thule-3 and -4 in Thule District. Thule-5(F) in North East Greenland.

14th century. Thule-2 in Thule District and West Greenland as far as Disko Bay and possibly in Godthåb District. Thule-3 in Thule District, North East Greenland(?) and West Greenland as far as Disko Bay. Thule-4 everywhere, except in South East Greenland. Thule-5(F) in North East Greenland and possibly in South West Greenland. Thule-5(G) in Thule District and all of West Greenland.

15th-16th century. The Thule-1 group in Thule District and North East Greenland. Thule-2 in Thule District. Thule-3 in Thule District and all of North West Greenland. Thule-4 in all of Greenland. Thule-5(F) in North East Greenland. Thule-5(E) in Thule District, West and South East Greenland and possibly in North East Greenland. Thule-5(G) in Disko Bay and South West Greenland.

17th-18th century. The Thule-1 group in Thule District and East Greenland. Thule-3 in Thule District and North West Greenland. Thule-4 in all of Greenland. Thule-

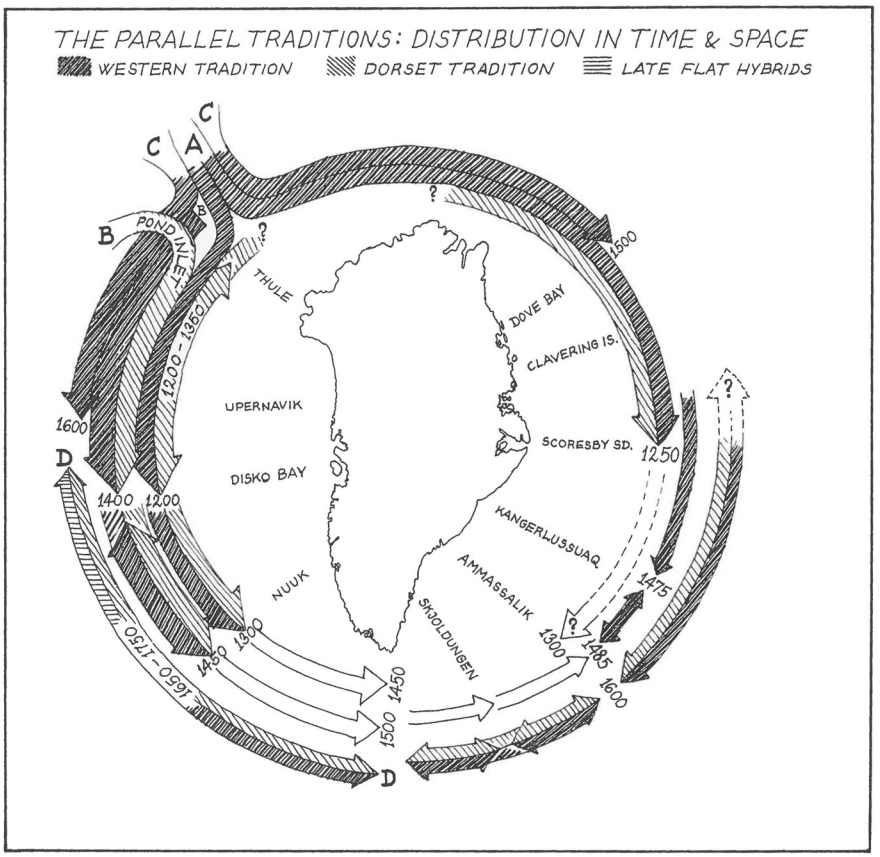


Fig. 140. *The 'parallel traditions' shown as a circular model where the spread of traditions follows the coast, which illustrates the circumference of a circle. On the basis of the described harpoon-head types four possible courses of the 'parallel traditions' can be established, three of which reached South West Greenland.*

5(F) in North East Greenland. Thule-5(E) in Disko Bay and East Greenland. Thule-5(G) in West Greenland. Hybrids in West and South East Greenland.

Western thin types were re-introduced into Upernavik, while barbed harpoon heads appear in South West Greenland at the same time as the documented travel activity.

The traditions discussed here are found everywhere in the Greenlandic Thule culture and their origins can be demonstrated to lie in the described prototypes, which were brought along to South West Greenland as 'parallel traditions'. The archaeological data must thus be seen as ethnohistorical sources, as described in the Greenlandic circular model (Fig. 140).

It can be seen in the model that the Thule culture in Greenland was influenced from Alaska and by a Dorset-Thule meeting in the eastern Arctic. The latter may have taken place before the time when the culture is demonstrated to have arrived in Greenland, although the presence of late Dorset in both East and West Greenland just before 1200 AD cannot be excluded.

The model presents four periods when there are typological changes in the 'parallel traditions', which can be interpreted as further population movements, or as the result of acculturation, i.e. a meeting of cultures.

Period A

The 'parallel traditions' can be demonstrated geographically down to Disko Bay and Scoresby Sund in the 13th century. The finds of Norse objects in Thule in this period show direct contact between the two population groups in the country. The nature of this contact has not been discovered, but early, closed Thule-5 sockets and house types which differ from the Thule District's dwelling type may indicate that several Eskimo groups were involved. In the 14th century the Thule culture can be shown to be present in South West Greenland and is represented by the Thule-2 and -5(G) types, which are now also found in Thule District. The exploitation of soapstone in Godthåb District can be demonstrated archaeologically from this time on. In North East Greenland a separate development/adaptation is demonstrated by the Thule-5(F) type, which is not found in Thule District. Certain architectural features from North East Greenland, e.g. niches in the front wall and blubber pits inside the houses are also found on Inglefield Land in Thule District in this period. A C-14 date from early 14th-century South East Greenland cannot be connected with the diagnostic types described above. Harpoon heads from Disko Bay and the Ruin Island phase in Thule District show acculturation.

Period B

The 'parallel traditions' are dominated by Thule-5(E), which is found as far as Disko Bay and in 14th-15th-century Thule District. The type is common in the Baffin Island-Iglulik region and we must presume that there was a connection between the areas. This hypothesis is strengthened by the, archaeologically rare, use of sealing nets which has been demonstrated in both places (*cf.* Ford 1959: 111; Mathiassen 1927,I: 189f, 1934: 96f). Thule-5(E) can be demonstrated in later midden deposits from the 15th-16th century in Godthåb District, which in this place are associated with the neo-boreal climatic change and subsequent population movements in North Greenland. At the beginning of this period, i.e. the 14th-15th century, Norse bell metal from the Eastern Settlement is found in the west Greenlandic middens at the same time as the internal kitchen niche can be demonstrated in a few ruins in South and South East Greenland (*cf.* Mathiassen 1936: 58ff, 1936a: 31f). In North East Greenland this period is an extention of the previous one, since no change can be demonstrated in the 'parallel traditions'.

Period C

Appears in North East Greenland with the introduction of Thule-1 variants and Thule-4 'Nuwuk' which occurred round the north of the country at the time when there was whaling in this region. The late Thule-5(E) may have been introduced from the south, since it is found together with European objects from the 17th century. There seems to have been a connection between the southerly and northerly parts of the east coast in this period, i.e. the 16th-18th century. In North West Greenland thin western types were used in the 17th-18th century, a time when, according to the archaeology of Thule District (*cf.* Holtved 1944,II: 40), the connection with the north had virtually ceased. The tradition presumably came into West Greenland with the latest migration from Thule District in the 16th-17th century. A written source from 1771 mentions that people again live "at 75 degrees further north" (Egede 1788).

Period D

Comprises the 17th-18th century and is characterised by independent types within the 'parallel traditions', where the sources for ethnohistory in South West Greenland describe population movements as a result of trade, cultural contacts and altered settlement patterns. The clearly defined thin and flat types become diffuse and are replaced by hybrids, which have to be interpreted individually.

The 'parallel traditions' can thus be demonstrated as having been present in the Thule culture in South West Greenland for more than five centuries. It is up to future culture-historical research to investigate how much of the original tradition survived in this part of Greenland. We now know that traditions were brought to this coast from all the Greenlandic regions.

VII. Discussion and summary

In the introduction the Thule culture was described as a mixed culture. It had been called the *Inussuk culture* at an early stage and in Canada it was described as an analogue to *Modified Thule* (Morrison 1989: 52). *Modified Thule* was dated to the period 1250-1600 AD and contained a preponderance of flat harpoon heads, often with double dorsal spurs.

The occurrence of closed Thule-5(F) and thin Thule-2 heads in the 13th century at the same time as the *Ruin Island phase*, as well as the open shaft sockets on the flat harpoon heads in the following century, change the definition of the Thule culture in Greenland. It appears, in its earliest demonstrated phase, in the northern part of the country as *Classic Thule* and as *Ruin Island*. Both were found contemporarily in the Smith Sound region and both show connections with Alaskan Punuk and Birnirk/early Thule.

A connection already demonstrated by archaeology between northern Baffin Island, via Comer's midden and Inglefield Land in Thule District, and North East Greenland (Holtved 1944; Mathiassen 1944/45; Wissler 1918) is still probable on the basis of the stratigraphic placing of the Thule-5 types.

Modified Thule is present in Greenland from the 15th century, with a close relation between Thule-5(E) in West Greenland and eastern Canada. The 'Inussuk' type continues in use in Greenland, but here it must be described as an eastern arctic 'Nuwuk' type.

The other phases of the Thule culture in Canada which have been described have not been found in Greenland. The late western influence in North East as well as North West Greenland in the 15th-17th century must thus have come from a still extant population group in Thule District and nearby regions. The only early phase of the Thule culture to have been described and dated in the Smith Sound region in this period is the *Ruin Island phase*. It can still be dated to the 15th century by C-14 dates and Norse objects which had been in circulation for a long time.

On the basis of the material presented in chapters V and VI, I maintain that an old tradition of the Thule culture still existed in the 15th-16th century in North Greenland and that this local tradition showed up in North East Greenland in the 15th-16th century and in Upernavik in the 17th-18th century. Furthermore, a particular Ruin Island feature, i.e. the needle case, appears to be demonstrated in Upernavik District and the Scoresby Sund area; in the former place in the 14th-15th century.

In other words, there was an archaic Thule tradition which shut West Greenland off to the north in the 16th-17th century. This was also the case in East Greenland, where the closed Thule-5(F) and Thule-1 'Tipiruk' types came into South East Greenland from the north in the period when there were still connections between the areas. This cultural connection finds mention in the oral tradition in Ammassalik in the 19th century, which tells of two groups who met from the north and the south "in olden times".

The unmistakable Dorset features, which seem to appear in South East Greenland within the period of recorded history, may have been brought from the north and may originate ultimately in the northern Baffin Island-Iglulik area. But the possibility of a still extant Dorset group in Ammassalik in the 14th-15th century, when the Thule culture arrived, cannot be excluded.

The description of the elements in the country's early Thule culture is of significance for our understanding of this culture in South West Greenland. It arrived there from the north in the 14th century and again in the 15th-16th century and from the south in the 17th-18th century.

The chosen method. The aims of the study were to explain the changes in the archaeological context on the basis of the historical source material. This material was most extensive in South West Greenland, where the archaeological investigations took place. The Thule culture in Greenland was thought to have lasted longest in this region. The archeological objective was the Greenlandic communal house, whose origin was associated with trade and migration.

The method included an interpretation of the significance of the European objects for the dating of, and their function within, the Greenlandic community and this was called the "direct historical approach". The result, which showed how important trade had been for the social and economic organization of the Greenlandic community, became the starting point for the description of ethnohistory in South West Greenland.

With the chosen method it would also be possible to explain the presence of the Norse objects, on the assumption that there was trade and cultural contact in early Thule culture. There the scarcity of written sources rendered a "direct historical approach" difficult and an examination of early Thule culture sought, with the help of archaeology, to distinguish who might have been the parties in a 13th-14th-century meeting of cultures. The result was that there were several Eskimo groups in West Greenland and Thule District, each of which could be dated to the period in question. Furthermore, the examination of the Thule culture in South West Greenland showed that trade in Norse objects must have taken place, also after the abandonment of the medieval European settlements.

The method presupposes an archaeological continuity, which was not present *in situ*. The continuity was however demonstrated by an examination of the cultural tradition which accompanied the harpoon head types. These rendered it probable that there was both a western influence and an early meeting of cultures between Dorset and Thule, which followed the Thule culture as 'parallel traditions' all over Greenland. Thus it seems that a cultural continuity can be established.

The use of the results of the study. The spread of the western features was associated with the occurrence of large whales (McGhee 1969/70). Whaling was culturally and archaeologically associated with the *Ruin Island phase*, which could, however, only be demonstrated at a late stage in the eastern Arctic (Holtved 1944, 1954; McCullough 1989). Sealing must still be presumed to have been the most important basic resource and the cultural foundation of early Thule in Alaska (Stanford 1976: 113).

The use of clay could be demonstrated in Thule District shortly before 1400 AD. It also occurred in both the *Ruin Island phase* and in the Uummannaq settlement house 21E (Holtved 1944,I: 263; McCullough 1989), and it was used in lamps in Disko Bay around the year 1300 and in Ammassalik in the 17th-18th century. This showed a continued western influence.

The presence of blubber-containing animal resources was also associated with whaling and was documented in the ruins' blubber pits both in Thule District and in North East Greenland (Holtved 1944,II: 108). The characteristic open kitchen niche inside the ruins was a western feature, which was demonstrated in Thule District and in 14th-century Disko Bay and subsequently in South and South East Greenland. Its spread was associated with the spread of the Thule culture to East Greenland via Cape

Farewell in the 14th-15th century and could be related to the soapstone lamps with knob-row as a diagnostic type (Mathiassen 1936: 76). The kitchen niche appears in communal houses in North West and South East Greenland in the 18th century (-Hjarnø 1969: 20; Mathiassen 1936a: 40) and was interpreted as a tradition whose origins were to be sought in the Smith Sound region. From here whaling spread to the rest of Greenland in the 15th-16th century.

This late influence in North West and South East Greenland is also found in North East Greenland's Thule culture, where large blocks for winged harpoons and sucking tubes have been found. These types occur in both North West and South East Greenland, but not in South West Greenland (*cf.* Glob 1935: 73; Hjarnø 1974: 32; Holtved 1944,I: 268; Larsen 1934: 166; Maxwell 1960: 62). We may presume that there was a connection between these comparatively late features in the Thule culture north and east of South West Greenland and the spread of the so-called East Greenlandic dialect to just these areas. However, the above survey of the 'parallel traditions' cannot support the theory of a late migration from North East to North West Greenland (Anon. 1986: 189; R. Petersen 1986). The Smith Sound region (and perhaps the most northerly north-east Greenlandic polynia) must instead be seen as the places where this linguistic phenomenon arose or was kept up. In this area there were continued influences from the west in the 15th century and from here there was Thule-culture influence into North East Greenland until the 16th-17th century.

The Ruin Island phase could still be dated to the 15th century and this factor, together with the archaeologically demonstrated Punuk connection, is important for the interpretation of the linguistic situation in the East Greenlandic dialect, in the Nunivak elements among the Angakkut puullit in East Greenland and the east Greenlandic features in the drum-singing tradition in Upernavik (*cf.* Hauser 1992; Rischel 1986; Sonne 1986).

The connection demonstrated above (Period B, chapter VI), between Canada and West Greenland down to Disko Bay, seems to correspond to linguistic features which were shown to be common to these two areas (Fortescue 1986: 169). On the other hand, the theory of a connection between the East Greenlandic vowel-shift from *u* to *i* and a Dorset substratum (Anom. 1986: 190) cannot be supported by the 'parallel traditions'; although it would be tempting to interpret the independent Thule-5(F) type from North East Greenland as supporting such a linguistic notion. The vowel-shift does, however, seem to have taken place comparatively late and may thus be associated with the above mentioned late cultural influence in South East Greenland and Upernavik.

Regarding the physical-anthropological studies, a connection has been demonstrated between North East Greenland and the skeletal material collected at Naujan by Therkel Mathiassen on the one hand, and between the "Inussuk" group in West and South East Greenland and north Alaskan Birnirk, 'Old Igloo' (Ford 1959: 19ff) on the other (Jørgensen 1953; Koch 1988). The latter connection can be proven by the material in the present study, which demonstrated the relationship between Birnirk/early Thule and Classic Thule (*cf.* chapter VI), while the former connection is hard to prove archaeologically, unless there were to be a relationship between Thule-5(F) in North East Greenland and the open type in Canada (which, however, has also been found in a west Greenlandic grave).

But the 'parallel traditions' do indeed presuppose a meeting of cultures, which is claimed to have taken place in the eastern Arctic, and do not rule out that several groups may have inhabited an area simultaneously. This happened in Thule District in the 13th-14th century. The physical-anthropological problem, however, remains unsolved until the suggested division of the material into smaller geographical regions

(*cf.* Koch 1988) has been carried out. This was done in the examination of the late pagan graves in Upernavik, where the possibility of a connection with the Canadian/-north-east Greenlandic group was pointed out (Jørgensen & Vesely 1974; Koch 1988).

Final remarks. With this ethnohistorical study I have attempted to give archaeology a voice which tells of a tradition brought along to South West Greenland all the way around the country. I was given my first clue by the late catechist Apollo Tobiassen from Kangeq, when he told me that his ancestor Sinngajik, who spoke a south-east Greenlandic dialect, had lived out at Illorpaat. That was true (*cf.* Gulløv & Kapel 1978/80). But before this time the experience accumulated for many years had turned into tradition before it arrived in South West Greenland. This tradition had first and foremost come into the family as a result of meeting other people. The sites where these meetings took place are archaeological key-sites for our understanding of the Thule culture in Greenland. On the basis of the knowledge I have acquired with this study, I can point to three regions where archaeological research can increase our knowledge of this meeting of cultures.

First, North Greenland, where the unexplained relationships between the eastern and western parts of the country can be illuminated by investigations in Inglefield Land in Thule District and by the north-eastern polynias. Secondly, the coast from Holsteinsborg to Disko Bay, which was the *Greipar* and *Norðrsetur* of the Norsemen, and where it would be possible to demonstrate late Dorset and early Thule. Thirdly, South East Greenland, where Dorset appeared in historical times and where the Thule culture seems to have arrived later than in any other part of Greenland.

Cultural history has other tasks to perform in Greenland too, but the above can be directly formulated on the basis of this study, which has demonstrated that Dorset culture, Classic Thule culture and the Norse culture all became a part of living history in South West Greenland. When the narrators in the 18th century spoke the old west Greenlandic u-dialect, caught seals with a flat harpoon head, or called themselves 'Kalals', then tradition lay behind a part of ethnohistory.

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This book presents an archaeological and ethnohistorical examination of the Thule culture in South West Greenland. It is the third and final publication of the material which was collected by the Ethnographic Department of the National Museum of Denmark in the 1970s and 1980s.

A historical-archaeological examination of the Dano-Norwegian mission station Hope Colony and a description of the Eskimo sites in Godthåb District were published earlier (Gulløv & Kapel 1979; Gulløv 1983).

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Discussions with colleagues in Denmark and abroad have enabled me to formulate many of my ideas behind the presented material (*cf.* Gulløv 1977ff).

The former catechist couple in Kangeq, the late Susanne and Apollo Tobiassen have been my informants and have contributed much to my understanding of ethnohistory in South West Greenland (Tobiassen n.d.).

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Appendix: Faunal Remains from Illorpaat

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Abstract

The archaeological remains described in this article are from selected Thule culture contexts from the costal site Illorpaat (Godthåb district), on the south side of Hope Island, excavated in 1972 and 1975. In order to obtain the best possible sample of specimens from the site, the excavations also included a substantial area of midden deposits. Radiocarbon datings of both marine and terrestrial animal bones together with historical sources place the occupations associated with these remains between 1445 and 1800 AD. In all, there are 73,376 bone specimens representing fish, birds and mammals, with harp seal (*Phoca groenlandica*) and Brünnich's murre (*Uria lomvia*) being predominant Illorpaat was likely inhabited year round, with occasional hunting expeditions inland. However, the settlement was situated at the largest "winter open-water area" in Greenland making it a site of paramount importance. Changes in ratios of seal to bird bones through the midden sequences indicate fluctuations in climate, an inference further supported by tool remains. Furthermore, large samples of faunal refusal provides a general overview of resource use over a time span of nearly four centuries.

Introduction

The situation of the Illorpaat settlement on the rough outer coast, frequently exposed to depressions with accompanying storms and sleet, would not seem to make the place attractive for occupation. However, it provides the productive and varied hunting grounds that are the foundation of an Inuit existence. Summer weather is often inclement, but due to the action of tides and currents, the ice never closes the sea, and therefore numerous birds and marine mammals gather here during the winter. Sealing, both in summer and winter, was performed from kayaks. One has to feel a profound admiration for these hunters, defying drift ice and heavy seas in their fragile vessels, navigating in the tempestuous winds and strong currents of this archipelago. It is no accident that this area produced the best kayakers in Greenland. Their hunting equipment varied from darts and harpoons for marine mammals to lighter bird spears or darts for birds. Baleens have also been found, and were probably used for long-line fishing.

Midden Layers versus Settlement Layers

Three houses and one midden were excavated. Careful excavation of houses is crucial for many aspects of archaeological analysis, but faunal reamins from houses can be problematical. The house floors may have been laid down on top of older layers, and fallen peat roofs may introduce bones from other periods. Furthermore, it must be assumed that mostly smaller bone fragments were left behind on the floor in the houses. In contrast, the midden was where the vast bulk of ordinary refuse was concentrated. Year by year, it would grow thicker and thicker in accordance with the

human exploitation of the more or less stabile animal populations. That is why we emphasized the excavation of such a midden, and in order to make the sample as representative as possible, we excavated a reasonbly large section, sixteen square meters. Layer after layer, we dug through nearly four centuries of left-overs and other waste. The result of this excavation was a vast number of bones, 47,328, which are summerized here.

Method

The midden section was excavated in 1 × 1 m horizontal units in vertical layers of 10 cm. The midden was approximately 1.5 m thick. The trench was dug from the eroding bank at the sea, and 8 m into the settlement. During excavation, stones and archaeological artefacts were drawn and measured, and the composition of the layers was described. No sieving was performed, because the layers consisted primarily of bones and plant remains. The bone samples were examined in the field and divided into two groups, one group being left behind, and the other being returned to Copenhagen. Only species diagnostic bones were returned, for example lower jaws (mandibulae), ear bones (pars petrosae), humeri and ulnae from ringed seals and harp seals. The bones from the other remaing mammals and birds were all brought to Copenhagen.

State of Preservation

Due to the permafrost the middens have been constantly frozen, accounting for the excellent preservation of organic remains. Only the top 10-15 cm of the top soil thaws during the summer, leaving underlying deposits sealed off from chemical or bacterial decomposition. Conditions promoting permafrost include sufficiently cold temperatures and water. The cold is inherent to the location, and organic matter itself produced moisture. If, on the other hand, the soil is dry or well-drained, permafrost is not possible. The permafrost of Illorpaat slowed down the excavation, because the layers in some places thawed very slowly. Thus one minor section could not be excavated completely in the time available.

Comments on the Species List

It is evident from the species list that the fauna was very rich. In all, 33 different species, including three human bone specimens, probably introduced accidentally. Most striking are the many bird bones, clearly dominated by one species, the thick-billed murre (*Uria lomvia*), a pattern thus far unique for a Inuit settlement in Greenland (Godfredsen in press). The abundance of harp seal (*Phoca groenlandica*) bones is also striking compared to the few bones of ringed seal (*Phoca hispida*); the latter usually dominates zoological samples from Inuit settlements. The species list shows that the hunting of thick-billed murres and harp seals was the primary reason for the existence of the Illorpaat settlement. The high representation of these species is best viewed in relation to Illorpaat's location at a so-called "open-water area". The ice does not close the ocean during the winter in this area, leading numerous marine mammals and birds to aggregate here. The following facts can be detected from the species list: the thick-billed murre accounts for 97% of the birds, the harp seal accounts for 90% of the seals, and from the mussels/fish group, 87% are fragments from the common mussel (*Mytilus edule*). The last group, Other Mammals, accounts for only a small fraction of the bones, though several species are represented. The ratio between these four groups is shown in Fig. 141.

Species List

Species		Midden	3 Ruins	
MOLUSCA	Common mussel, **Mytilus edule**	455	8	
FISH	Fish unidentified, **Pisces sp.**	18	0	
	Cod, **Gadus callarias**	8	3	
BIRDS	Gyrfalcon, **Falco rusticolus**	1	0	
	Fulmar, **Fulmarus glacialis**	13	7	
	Cormorant, **Phalacrocorax carbo**	11	10	
	Old-squaw, **Clangula hyemalis**	0	2	
	Common eider, **Somateria mollissima**	7	101	
	Duck unidentified, **Anas sp.**	176	4	
	Read-breasted merganser, **Mergus serrator**	1	4	
	Glaucous gull, **Larus hyperboreus**	0	1	
	Iceland gull, **Larus glaucoides**	0	2	
	Gull unidentified, **Larus sp.**	6	0	
	Kittiwake, **Rissa tridactyla**	7	8	
	Dovekie, **Plotus alle**	612	144	
	Great auk, **Pinguinus impennis**	74	43	
	Brünnich's murre, **Uria lomvia**	37160	15662	
	Black guillemot, **Cepphus grylle**	58	27	
	Shearwater, **Puffinus major**	7	1	
	Ptarmigan, **Lagopus mutus**	0	1	
	Raven, **Corvus corax**	10	1	
	Common loon, **Gavia immer**	2	0	
	Birds unidentified, **Aves sp.**	81	171	
MAMMALS	*Wild*			
	Arctic fox, **Alopex lagopus**	37	4	
	Harbor seal, **Phoca vitulina**	0	5	
	Ringed seal, **Phoca hispida**	30	14	
	Harp seal, **Phoca groenlandica**	298	537	
	Seals unidentified, **Phocae sp.**	8032	8821	
	Hooded seal, **Cystofera cristata**	7	5	
	Reindeer, **Rangifer tarandus**	67	82	
	Fin whale, **Balaenoptera physalus**	0	3	
	Pilot whale, **Globicephala melas**	22	30	
	Harbor porpoise, **Phocaena phocaena**	6	1	
	Whales unidentified, **Cetacea sp.**	31	172	
	Domestic			
	Dog, **Canis familiaris**	89	169	
	Cow, **Bos taurus**	1	1	
	Sheep, **Ovis aries**	1	1	
MAN, **Homo sapiens**		0	3	
Amount of bone fragment		47,328	26,048	
Total				73,376

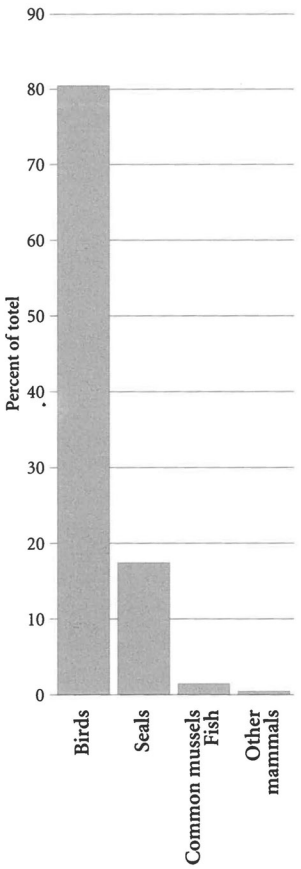


Fig. 141. *Percentage representation of four animal groups based on numbers of identified specimens.*

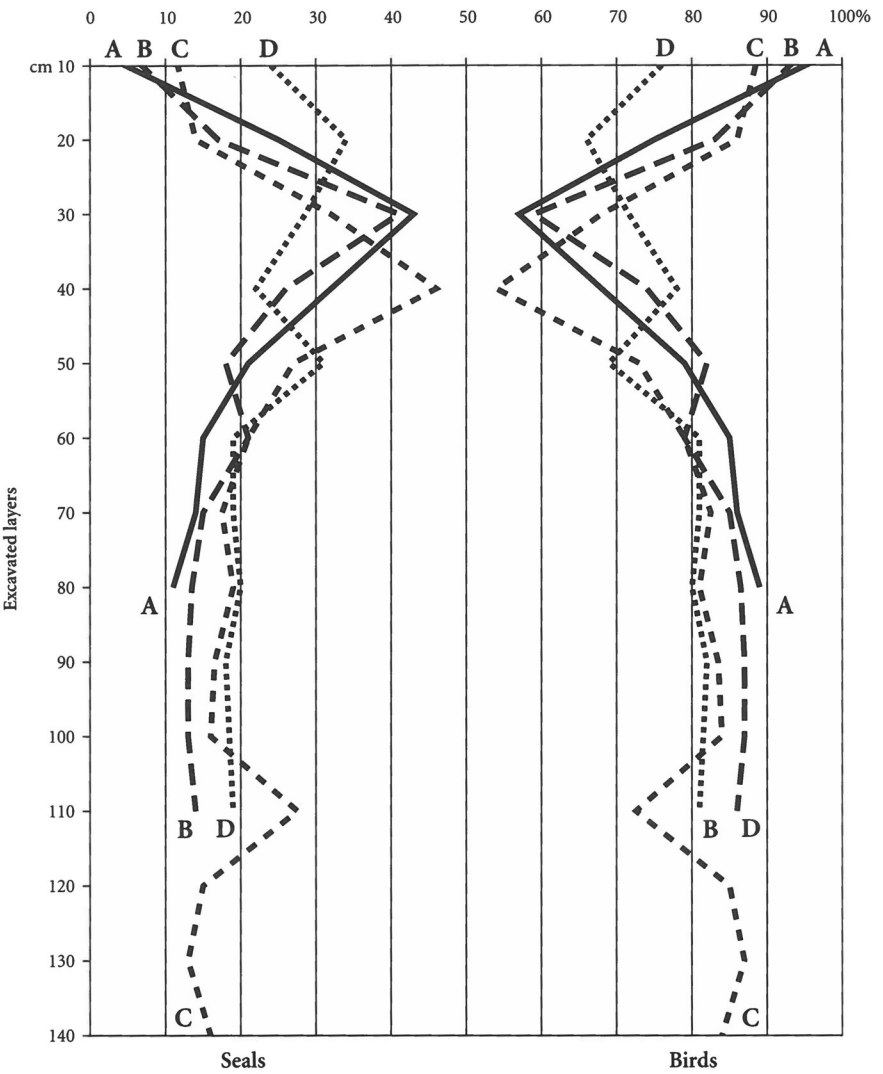


Fig. 142. *Stratigraphic fluctuations in percentage representation of seals versus birds from sections A, B, C, and D, based on numbers of identified specimens.*

The domination of bird bones is surprising, and this pattern was evident in the field as well. While excavating, we got the feeling that the Illorpaat settlement was centered on the hunting of birds. But one should bear in mind that the ratios in Fig. 141 refer only to bone fragments, not to meat yields. The average weight of a murre is app. 0.360 kg, whereas the weight of a seal is about 35 kg, or roughly 100 times more. (This is according to the Greenlandic harvest data). Thus, a single seal yields about 100 times the meat end entrails compared to a single murre. If this contrast is viewed in relation to Fig. 141, it can be seen that the murres were still important to the settlement, but the seals were of paramount importance. Not only did the seals provide meat, they also provided blubber for heating, cooking and light, and fur for clothing.

Fluctuations in the Taxonomic Composition

Fig. 142 summerizes variation in representation between birds and seals through the fourteen midden layers. This figure, like Fig. 141, expresses the ratio between bird and seal bones fragments from sections A, B, C and D, singled out by the individual lines in the figure. A regular distribution can be seen, with a marked per cent increase of seals, or decrease in birds, in layers 3 and 4. The numbers 1 to 14 designate the different 10 cm layers vertically through the midden, with layer 14 representing the Thule culture remains dated at 1445 AD. On the basis of the archaeological artefacts, layers 8 – 2 are assigned to the eighteenth century. In layers 5 – 2, a change in the composition between birds and seal can be seen. It is tempting to correlate this pattern with the climatic change that occurs in West Greenland, according to written sources, at the same period of time. Moreover, a change in the tool inventory has been recorded (cf. Chapter III). According to tradition, the Illorpaat settlement was in use all year with minor expeditions to the inland for reindeer hunting and trout fishing (cf. Møhl 1982). Therefore, no attempt has been made to establish seasons from the bone remains, but the settlement's situation on the outer coast's open-water area cannot be over-emphasized (Fig. 143). The entire area was one giant larder because birds and seals were able to find food here when the waters in other areas were closed by ice during the winters (cf. Møhl 1979a).

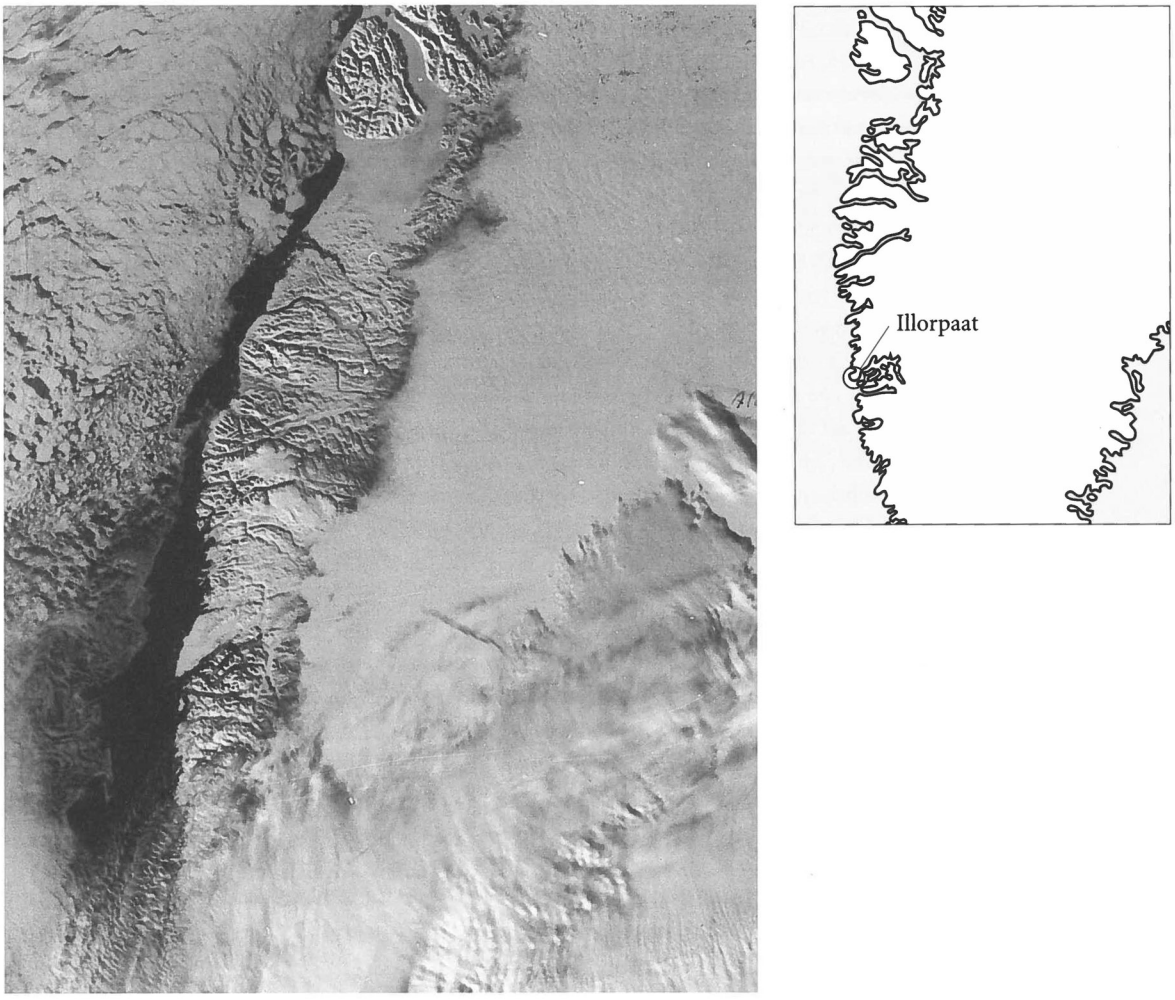


Fig. 143. *A wintertime satelite photograph of Greenland's west coast showing the distribution of the sea ice and open water along the coast.*

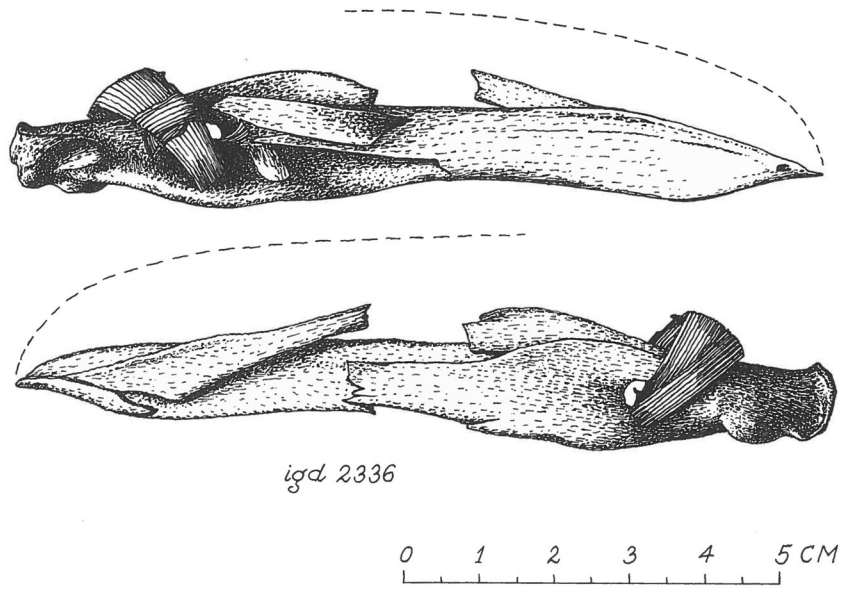


Fig. 144. *Lower jaw of a great auk (pinguinus impennis) with a knot of baleen probably used as an amulet.*

The Great Auk (*Pinguinus impennis*)

The presence of great auk from Illorpaat warrants seperate comments. This large specialized bird probably became extinct in the first half of the nineteenth century (ca. 1815, Meldgaard 1988), and today very little is known about it (Fig. 144). Its bones were found, albeit sparsely, in all layers of the midden, indicating a regular but not common occurence. The midden and the house ruins yields a total of 117 bones of the great auk, and of these two are from very young individuals, confirming that the birds bred in the area. Contrary to earlier investigations, but with support from finds from Itinnera (1010 +/-100 BC) and Qeqertasussuk (2400 -1600 BC) (Meldgaard 1988), those remains show the great auk has existed in Greenland for a very long time. The youngest bone from Illorpaat should be assigned to ca. 1800 AD. From oral tradition we hear about the great auk from catechist Apollo Tobiassen, Kangeq, who says the bird was hunted on open waters from kayak with darts in August-September.

The great auk was considered special among the Inuit, and only men were allowed to eat this rare bird. The fat from the bird was apparently considered especially delicate. Also, Apollo Tobiassen related that he himself once found an almost entire auk in a frozen midden at Kangeq, only three kilometers from Illorpaat (Tobiassen n.d., p. 54).

The domestic animals

It is quite surprising with the relative many dog bones as it is not a good dog-sledge area along these rough coastline with tides and current waters. But according to information of the local inhabitans (Kangeq), it was normal practice in this region to keep dogs just for the skin. The contact with Europe is shown in the bone material by two teeth of cow and one tooth and an astragalus of sheep. These bones may be brought to the site either by the whalers or from Hans Egede's contemporary Hope Colony. But as provision on board the whaling ships consist of salted rib sides and haunch of venison it is more likely that the three teeth and the tarsal bone are remains of the domestic animals Hans Egede kept at his colony (Møhl 1979b).

Cut marks, butchering and bone splitting

The scarsity of cutting or crushing marks throughout bone sample can be accounted for by considering the way seals are butchered. Usually, seals are skinned by a longitudinal incision down the abdomen, followed by cuts around the nose and flippers, but because of the thick layer of blubber, these cuts do not reach the bones. It is likewise easy to cut off the flippers and the ribs and to cut up the back without leaving marks on the bones. Seal bones, and marine mammal bones in general, do not have a marrow cavity. Instead, the bones are filled with a spongy tissue, which is why they are not split for marrow. Finally, because of their light construction, the bones are seldom used to make tools. Occasionally, tibiae and bacula were used, and teeth from walruses were preferred for harpoon heads. Few harpoon heads were found at Illorpaat, suggesting a scarsity of resources, that forces the hunters to re-use raw materials more than usual.

In contrast to the seals, many reindeer bones were split for marrow, even the small toe bones. When the added value of reindeer bones for tool manufacture is considered, it is easy to understand why they are more fragmented compared to seal bones (cf. Meldgaard 1986; Møhl 1972). As for the birds, and especially the murre which accounts for 98% of the bird bones, cut marks are infrequent, which could be explained by the fact that Inuit often boil the birds, feathers and all.

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