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DØDEMANDSBUGTEN

AN ESKIMO SETTLEMENT ON CLAVERING ISLAND

BY

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WITH 42 FIGURES IN THE TEXT AND 20 PLATES

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I. INTRODUCTION

Dødemandsbugten[1]) — the name sounds mournful and sinister, yet it is a very apt one. For there, on the south coast of Clavering Island, lies the largest ruined settlement hitherto found in Greenland, its numerous house-ruins, tent rings and graves bearing witness of the death and extinction of a small tribe that once made a struggle for existence there. The same story may be told of Dødemandsbugten as of the whole of Northeast Greenland. From Peary Land to Scoresby Sound, everywhere lies evidence of the earlier inhabitants of that part of the country.

If the evidence of their activities is widespread, the reports of them are as sparse as they could possibly be. Only once were they seen by Europeans, and then only in small numbers. It was on the 18th of August 1823 that Douglas Charles Clavering, captain of H.M.S. "Griper", fell in with twelve Eskimos at a summer settlement on the south coast of the island that later was called after him[2]). Clavering remained with them for four days. On the morning of the fifth day they had all disappeared, leaving behind them all their goods and chattels, no doubt frightened away by the fire-arms which Clavering had allowed them to try. No one has ever seen them since.

From Clavering we know that they were coppery-brown in colour, with black hair, round faces, and fleshy hands and feet, and that they were clad in seal skin with the hair on the inside. They lived in a small tent of seal skin drawn over a framework of wood and whalebone. It was 12 feet in circumference and no more than 5 feet high[3]). On the beach lay a kayak sheathed in seal skin, with its appliances, harpoons and a lance. The kayak was no different from those that were mentioned by Cranz and Egede. The implements had wooden shafts with heads of bone or iron. Clavering considered the iron to have been of

[1]) Dead Man's Bay.

[2]) Clavering, p. 21 seq.

[3]) Regarding the size, see p. 67.

meteoric origin. The Eskimos had the custom of splashing water on seals and walruses before cutting them up.

For the period of 1823—1869 we have no reports of expeditions to Northeast Greenland, and in that period the last Eskimos must have disappeared. When the second German North Pole Expedition visited the country in 1869—70, they fell in with no Eskimos, despite a careful search. The task of looking for them had been entrusted to Dr. Pansch, and for that purpose he went on foot from Cape Mary, the southeast point of Clavering Island, to the spot where he considered Clavering had seen the Eskimos. He did not succeed in finding them, nor, in my opinion, the place which Clavering describes, for Pansch states[1]) that at this particular place there were about 23 house ruins, whereas Clavering, who was with the Eskimos for four days, makes no mention of houses at all. Accordingly, it is very probable that the twelve Eskimos have been living at one of the many summer settlements lying both west and east of the one which Pansch describes. Where the Eskimos have had their winter quarters is very difficult to decide, as on this stretch of the coast there are settlements at intervals of a few kilometres. Judging from the route and the number of houses, it must be the settlement at Eskimo Bay (the name given by the Cambridge Expedition of 1926) which Pansch visited. In error, Pansch states that the settlement he saw lies on the southwest side of Clavering Island, whereas it actually lies east of the south point, Eskimonæs. The consequence has been that Thalbitzer[2]) and afterwards Bendix Thostrup[3]) have indicated 23 winter houses on the southwest coast, but none on the southeast coast. While I was in East Greenland I found no more than one settlement with two house ruins west of Eskimonæs, whereas on the southeast coast there are at least six settlements with 93 house ruins in all. And, in addition, on Eskimonæs itself there is a settlement with four house ruins.

The next expedition to make archaeological investigations on Clavering Island was Nathorst's, which in 1899 among other places visited Cape Mary[4]). In 1926 Dr. D. McI. Johnson[5]) on the aforesaid Cambridge Expedition was at Eskimo Bay, and at the same spot in 1930 Junius Bird made excavations for the Bartlett East Greenland Expedition[6]). In addition, the National Museum in Copenhagen has a

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[1]) Koldewey II, p. 616 seq.

[2]) Thalbitzer, 1909, p. 333.

[3]) Bendix Thostrup, p. 352.

[4]) Nathorst II, p. 159.

[5]) D. McI. Johnson in Geographical Journal, Vol. LXX, 1927, p. 254 seq. The specimens were published by Therkel Mathiassen in Meddelelser om Grønland, Vol. 74.

[6]) Junius Bird in Geographical Review, Vol. XXI, p. 405.

number of specimens from Cape Mary and the surrounding area, brought home by Captain Gustav Thostrup from the Østgrønlandske Fangstkompagni.

Of others who have contributed towards our knowledge of the archaeology of Northeast Greenland, mention should be made of William Scoresby jun., the first to record traces of Eskimos in Northeast Greenland, viz. at the mouth of Scoresby Sound and on Traill Island[1]), Ryder's[2]) and Amdrup's[3]) expeditions to Scoresby Sound in 1891 and 1900 respectively, and the Danmark Expedition 1906—08, which explored the region north of lat. 75° N. The archaeological material brought home by the Danmark Expedition was published by Thomas Thomsen and Chr. Bendix Thostrup[4]). Finally, during the last few years the Norwegian student Søren Richter has made archaeological excavations, principally in the Franz Josephs Fjord complex. Among the specimens in the National Museum in Copenhagen, besides those from the Danish expeditions referred to, there are small collections from Scoresby Sound brought home by Ejnar Mikkelsen, Janus Sørensen, A. Rosenkrantz, Johan Petersen and Henrik Høegh.

A large material is thus available for throwing light upon the archaeology of Northeast Greenland, so that from an archaeological point of view this part of the country may be said to have been well explored.

Nevertheless, archaeological excavations were included in the Three Year's Expedition to Christian X's Land, because of the absence of a large collective find to show the mutual ages of the Eskimo relics and finds from the earliest ruins. For the most part the material of previous expeditions consists of many scattered finds, and likewise most of the finds came from those houses that were in a better state of preservation and therefore most easily accessible. Consequently, it was my task, as a member of this expedition, to procure a large collective find, preferably from Clavering Island, where we had something to go upon in Clavering's meeting with the Eskimos in 1823, and to obtain specimens from the earliest houses.

As my first excavation field I chose the settlement in Eskimo Bay, which in the first place was convenient for the expedition headquarters, Eskimonæs, and secondly comprised a large number of winter houses, 25 in all. Nevertheless, this settlement had certain drawbacks; 13 of the houses had already been excavated, and the others had a culture

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[1]) Scoresby: Journal of a Voyage to the Northern Whale Fishery, p. 186 seq.
[2]) Meddelelser om Grønland. Vol. 17, p. 283 seq.
[3]) Meddelelser om Grønland. Vol. 28.
[4]) Meddelelser om Grønland. Vol. 44.

deposit so thin that they yielded only very little. With a few interruptions I excavated there from 9th to 31st August 1931, when the frost came and put a stop to the work. On 1st September I made a motor-boat trip with my expedition comrades, and discovered the large settlement at Dødemandsbugten, about 20 kilometres east of Eskimonæs. I at once decided to devote the next summer's excavations to that spot, as it seemed to be the most likely one to give good results. There was a large number of winter houses in varying states of preservation, and in most cases untouched. Only two of the houses had been thoroughly excavated, and two others had been superficially examined. Remarkably enough, this ruined village has not previously been referred to in the literature; Pansch, for instance, must have gone right past it on his excursion from Cape Mary to Eskimo Bay overland. Possibly this is the one which McI. Johnson refers to when he writes: Two large colonies were found on the south coast of Clavering island, there being eighteen huts in the one at Eskimo Bay[1]).

I spent the winter of 1931—32 on Eskimonæs, whence reconnaissances were made on dog-sledges. I made one autumn journey to North Fjord and Geolog Fjord, and a spring journey to Wollaston Foreland, Sabine Island and Walrus Island.

At last, on the 27th of May 1932, the snow had melted so much that, accompanied by the wireless telegraphist, Bjarne Ludvigsen, I was able to set out for Dødemandsbugten and commence excavating. Only few of the best preserved ruins could be touched at this early time, as most of them were still full of snow or water. Owing to the frozen ground, the work proceeded very slowly at first, only a few centimetres thawing every day. Gradually, as the sun became more powerful, the snow and the frozen bottom melted, and we were able to get on more quickly. We worked there without a break from 27th May till 19th August, when I broke off to come home. In all, we excavated 23 of the 43 ruins, and, outside the houses, 5 fields of 4 sq.metres in layers of 20 cm. Midden layers, such as those usually found outside these houses, were entirely absent. There were a few badly-decomposed bones down to a few centimetres' depth in the ground in front of the houses, otherwise nothing[2]). The excavations gave about 2400 specimens, besides a large number of worked bones, pieces of slate, wood and baleen, and for each house or layer these are grouped together under the same museum number[3]). We also examined a total of thirty graves,

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[1]) D. McI. Johnson, 1927, p. 257.

[2]) This also applies to the other settlements I examined. Bird says the same of Shannon Island (p. 405).

[3]) The specimens are now in the National Museum in Copenhagen.

fifteen of which contained human bones, including five whole skeletons[1]).

Mr. Bjarne Ludvigsen was relieved as my assistant by Mr. Arne Schwarck, and he in turn by Mr. P. W. Glob during the course of the summer. The latter two continued the archaeological investigations north and south of Clavering Island respectively. In addition, Dr. Tulinius, the expedition's physician, helped me on occasion.

[1]) The skeletal material has been handed to the Normal Anatomical Institute in Copenhagen.

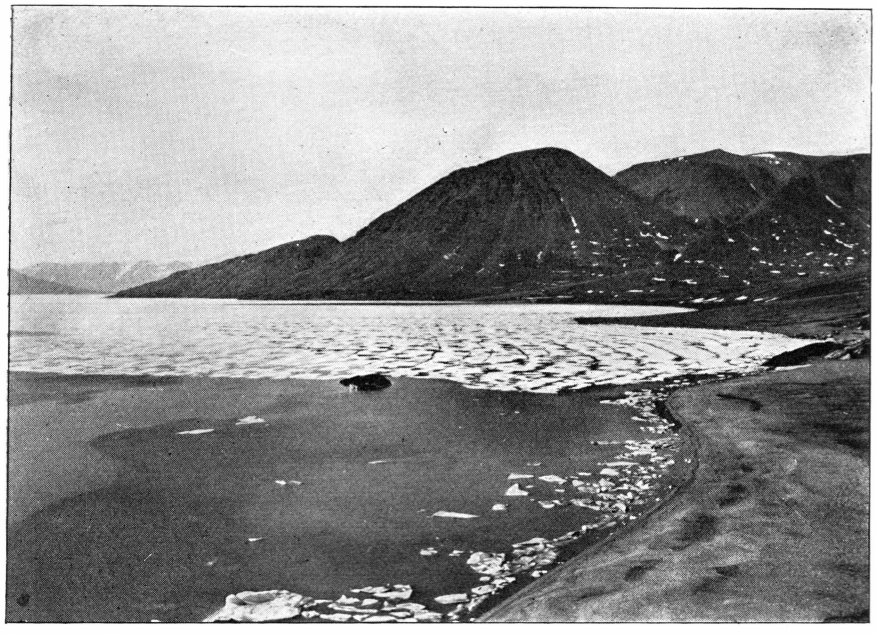


Fig. 1. Dødemandsbugten from the East Point, 21st June 1932. The ice breaking up.

II. THE SETTLEMENT DESCRIBED

On the south coast of Clavering Island, in lat. 74°08′ N. and long. 21° W. (approximately), a broad, shallow bay cuts into the land; this is Dødemandsbugten. Even from far away one can see the green, luxuriant vegetation of the settlement standing out clearly against the surrounding terraces of naked gravel. On the north a wide valley cuts into the country through mountains of a height up to 1000 metres. In the bottom of the valley runs a river which receives its water from two glaciers at the head, and which in July is so swift that it can only be crossed with the greatest difficulty. The river is particularly rapid in its lower course, where it cuts through the rock in a canyon about twenty metres deep before it empties into the bay through an enormous stony delta. In the east and west parts of the bay there are similar but smaller deltas which have formed high cones of deposited material.

Across the outer part of the valley lie five gravel terraces, decreasing in height towards the sea. In the middle of the valley only the remnants of these terraces remain, as there they are sawn through by the river, its branches and tributaries, so that they now stand in the form of sharply-outlined truncated cones. East of the valley, at the foot of the mountains which follow the coastline at a distance of about 300 metres, runs a terrace with its edge grooved by melt-water streams. This terrace,

which slopes gently towards the sea, consists mostly of coarser material with many boulders, so that its surface has, if anything, the character of a field of boulders. The large stones have been used by the Eskimos for making graves, of which there are quite a number here (see page 67).

Between these terraces and the sandy beach lies a smooth, gently sloping stretch from 50 to 100 metres wide. On this slope lie the house ruins. On the west of it, and at the same level, lies the lower gravel terrace, about two metres above high-water mark, on which there are a number of tent rings. Eastwards, this slope becomes more uneven and steep, and here and there the rock projects in low ridges at right angles to the coast. Here, where there is suitable building material, are graves and meat caches.

The part of the slope on which the house ruins lie stands out from the rest of it on account of its thick vegetation. It is not only the density of this vegetable covering, but also its wealth of species, that is astonishing, as of the 158 species found in this region we identified about one hundred. To understand the reasons for this we must take the conditions provided by the site into consideration. The settlement lies on a southern slope where the snow covering in winter is not particularly thick. This, in conjunction with the large quantities of organic matter from the Eskimo refuse, provides very favourable conditions for the thriving of vegetation.

Before passing over to a description of ruins and other Eskimo remains, I shall briefly account for the chances of hunting in Dødemandsbugten. The bones found in the ruins show that with few exceptions the Eskimos have caught the same animals as those which occur there now. Dr. M. Degerbøl describes these bones at the conclusion of this work. For the moment I shall merely refer to the principal animals, marine mammals: fjord seal, bearded seal, harp seal, walrus, narwhal, and Greenland whale, and of terrestrial animals: caribou, musk-ox, arctic hare, arctic fox, as well as polar bears, which frequent both land and water.

Fjord Seal (*Phoca hispida*) is caught all the year round. From the end of July till the close of September there is open water everywhere, so that the kayak can be used for sealing. During the remainder of the year it has mostly proceeded on the ice, in October on the bare ice and later maupoq sealing. In April, when the seals come up on to the ice, there are chances of stalking them. All through the winter, however, seals can be caught in open water. At "Strømmen" in Loch Fyne, for instance, there is open water throughout the winter, and on the outer coast the ice breaks up several times during that season; in the winter of 1931—32 it broke four times. In the event of stormy weather there may be open water for considerable periods, and stretching rather a

long way into the fjord. In 1931—32 there was open water up to a line from Big Finsch Island to Dødemandsbugten. It is quite possible that this very fact, that the open water sometimes reaches right in to Dødemandsbugten, is one of the reasons why this large settlement lies there. It gave the Eskimos the advantage of catching seals and bears, and was not even situated on the exposed outer coast. Judging by the number of bones, the fjord seal has been one of the principal quarries of these Eskimos.

The same thing applies to the *Bearded Seal* (*Erignathus barbatus*).



Fig. 2. The settlement from the east. In foreground, House Ruin Group I.

In 1931—32 this seal was not nearly so common as the fjord seal, however.

Among the ruins we found bones of the *Harp Seal* (*Phoca groenlandica*). The harp seal is now very rare in Gael Hamkes Bay; a few individuals were shot on the expedition.

Walruses (*Odobenus rosmarus*) occurred frequently on the outer coast when the ice broke in June 1932, but was also observed lying on the ice right in to Dødemandsbugten. Walrus bones were found in most of the ruins.

The *Narwhal* (*Monodon monocerus*) must have been common. Numbers of bones were found in most of the ruins, and narwhal tusk was a much-used material for implements. A school of about twenty-five was seen at the beginning of June, in the open water off the mouth of the large river in Dødemandsbugten.

I have not seen *Balaena* in the waters round about Clavering Island,

but to judge from the quantities of bones and baleen in the earlier ruins, it has certainly not been rare at that time. It is also probable that the Eskimos have hunted it. No implements for whaling were found in Dødemandsbugten, but it is beyond doubt that the Eskimos have known the umiak, and a whale-harpoon head was found by Bird[1]) at Fladstrand, a settlement about 2 kilometres west of Eskimo Bay.

The *Polar Bear* (*Ursus maritimus*) has been important to the Eskimos in Dødemandsbugt, as is indicated by the many bear bones and teeth

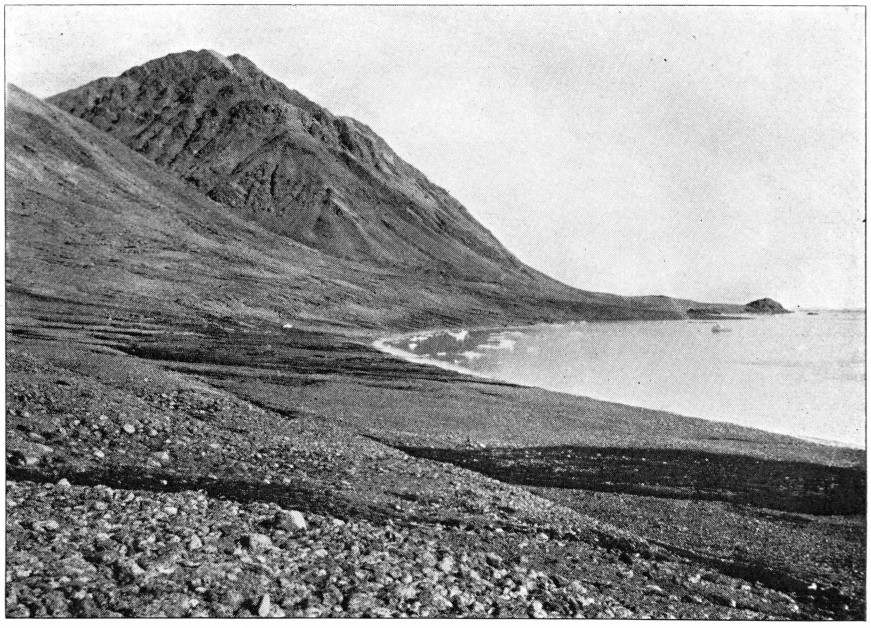


Fig. 3. The settlement from the west. In middle distance House Ruin Groups II and III.

in the ruins. The situation of the settlement, too, is a favourable one for bear-hunting, for it is not far from the outer coast, and occasionally it has open water in winter-time.

Of the terrestrial animals the *Caribou* (*Rangifer tarandus*) has been of greatest importance. Its flesh has supplied an important contribution to their larder, and the antlers material for implements. The skin has certainly been used for clothing. There are caribou bones in all the ruins, early as well as late. Regarding the former occurrence of the caribou, see Dr. Degerbøl's paper.

As to the other large terrestrial mammal in Northeast Greenland, the musk-ox (*Ovibos moschatus*) only very few remains were found in the ruins, so few that it can be stated definitely that this animal has

[1]) Page 414.

been of no great importance to the Eskimos as game; for if the musk-ox had been common, we would have found many of its bones in the ruins, as it falls a very easy prey to the hunter. Concerning the few bones that were found, and the occurrence of the musk-ox, Dr. Degerbøl's paper gives a full account.

Of the other terrestrial mammals the *Arctic Hare* (*Lepus groenlandicus*) has certainly been of little importance to the Eskimos as food, in all probability serving only in times of emergency. Arctic hare bones occur mostly in the later ruins, and in no great numbers there. At the present time there are immense numbers of arctic hares round Dødemandsbugten.

That the *Arctic Fox* (*Alopex lagopus*) has been hunted is to be seen from the many stone traps round about, and the bones found in the ruins. There is no doubt that the Eskimos have hunted the fox for the sake of its skin.

All in all, the settlement at Dødemandsbugten must be said to have an extremely favourable situation as far as hunting is concerned, this undoubtedly being the main reason why a settlement of its size has grown up there.

Description of the House-Ruins.

The ruins of these Eskimo winter houses lie in three groups, designated in the following as I, II and III, counting from east to west. (Pl. 20). The distance between I and II is about 300 metres, and between II and III about 160 metres.

Ruin Group I (Pl. 17).

In contrast to the other two groups, where the vegetation forms a thick carpet, Group I looks rather poor. The vegetation has mostly the character of fell field (*Fjældmark*), where the naked rock is interspersed with patches of heather and grasses. One of the causes of this less luxuriant growth is the sparse supply of water when the snow is thawing, and another the steeper slope of the terrain, owing to which the water runs off more quickly. In addition, this settlement is not so large as the other two groups.

Houses 1 and 2 are the most easterly in the whole settlement. They are quite close to each other, about 35 metres from the other houses in the group; they were not excavated.

House 1 appears as a slightly irregular, rounded depression in the ground. On the east there is a low mound with scattered stones from the walls; on the other sides the depression runs smoothly into the surrounding terrain. It is about 3 metres long and 2 metres wide at the front wall, and is entirely overgrown with grass and willow, so that nothing can be said about its original form. The passage, which opens

to the south, is a shallow channel about 2 metres long. 6 metres north-east of the house is a hollow about 50 cm deep, elongated in shape, but without stones, presumably a meat store.

House 2 is in a better state of preservation than House 1. In the middle of a low, grass-grown and badly cracked mound of earth lies a long, four-sided depression with rounded corners, 3.2 metres long, 2.6 metres wide at the front wall, and about 2 metres wide across the back wall. Both bottom and sides are covered with a grass carpet, but in the foremost part of the house one can distinctly see walls built of rather large stones. The south-east corner has collapsed a little into the house. The rear part of the house has fallen in and no wall stones are visible. The passage opens towards the south and is about 4 metres long. It has collapsed, but has been built of large stones.

In the same mound as the house, about 1 metre east of it, is a faint rectangular depression about 3 × 2 metres and entirely overgrown with grass.

Similar depressions were found alongside other ruins on Clavering Island. In Ruin Group II at Dødemandsbugten, one was excavated at House 7 (Field B). It was about 0.5 metre deep, with a few large stones in the wall, and contained many bones, some worked pieces of bone and wood and a few artefacts. Other depressions of this kind were found at Baadsted, about ten kilometres west of Dødemandsbugten, and on Eskimonæs, the southerly point of Clavering Island. The characteristic feature of them is that they lie in the same mound as a well-preserved oblong house, they are rectangular, and of almost the same size as the house. They are certainly not overgrown ruins, as there was no passage in any of them. They have rather been meat stores.

Houses 3—6, which form the west part of Group I, were all excavated. They lie in pairs, Nos. 3 and 4 on a natural elevation in the ground, Nos. 5 and 6 in a mound thrown up round about them. The sides of the mound are grass-grown and full of deep cracks. Nos. 3 and 4 were difficult to recognize as houses: prior to excavation one could only see a shallow, saucer-shaped depression from which ran a shallow ditch. Everything was overgrown with vigorous willow bush, whose well-developed stems and roots indicated high age. In Nos. 5 and 6, on the contrary, there was a distinctly marked, four-sided hole from which ran a covered passage. The bottom of the house, and to some extent the sides, were covered with grass.

House 3. The plan of this house is shown in Fig. 4. After excavation it appears as a small, rounded house, only 2.4 metres long and 2.2 metres wide, the greatest breadth being just in front of the middle, and narrowing slightly towards the back. The walls, which are about 0.6 metre high, at the rear consist of a continuous row of large stones, whereas at the

front the stones only occur here and there. Over the floor was a layer of gravel about 0.5 metre thick containing many stones. There was no frozen earth. Below this fill was a very thin culture layer with few weathered bones, mostly dog. In the foremost part of the house lay a number of flat floor stones, but not so close together that they formed a continuous flooring. In the south-east corner, under the floorstones, was a thick deposit of grease and bones, indicating the possibility that this was the cooking-place. There was no visible platform.

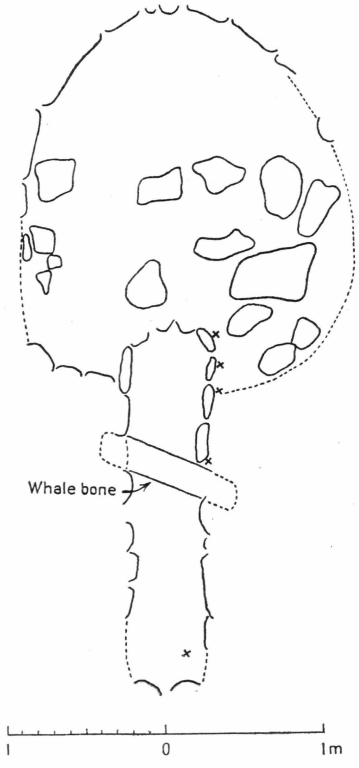


Fig. 4. Plan of I House 3. "×" indicates where human bones were found.

The passage, which opens towards the south, is 2.1 metres long and extends 0.4 metre into the house. Its walls consist of a row of large stones which continue into the house and terminate the passage there. The bottom of the passage lies 0.8 metre lower than the floor-stones. A piece of whale rib has formed one of the roofing-beams; none of the others were in position. Wood had also been used in the construction (see Fig. 5). Among the collapsed roofing-stones, and about 20 cm below the surface, was a part of a human skull and a limb bone. Further excavation brought to light other human bones in different parts of the passage (indicated by × on the plan of the house). According to

Professor F. C. C. Hansen, there are cranial bones of three adults, an individual of 15—17 years, and of three children of 5—6 years, 3—4 years, and 2 years, in all seven individuals. In addition we found a radius and a tibia of an adult and a femur and a tibia of child, probably the one of 5—6 years. The most remarkable of the finds is shown on Fig. 5. The picture shows the innermost part of the passage with the floor to the left. Two side-stones have been removed from the passage, and just behind one of these, about 50 centimetres above the bottom is the skull of an adult individual. It has been crushed by the surrounding



Fig. 5. Inner part of passage to I House 3, with the human skull. The spoon indicates where the grave goods were found. The floor is to the left.

fill, and the underjaw has fallen down a little. To the right of the skull is a heavy wooden post, and further to the right, behind the next side stone that was removed, lay in a group: a harpoon head of the Inugsuk type[1]), a winged needle-case, a pendant formed like a winged-needle case, five ornamental bodkins, four bird figures, the seat of a miniature sealing stool, an ornamental plate, a propeller-shaped buckle, two pieces of worked ivory, a piece of bone split off with a drill, and a piece of polished slate (Pl. 10). The nature of these objects, and the circumstances under which they were found, indicate that they were grave goods, probably belonging to the skull. The objects themselves recall a grave find at Rypefjældet[2]), which, among other things, contained the

[1]) Mathiassen, 1930, p. 183.

[2]) Thomsen, 1917, Pl. VII, 1—12.

winged-needle case, five ornamental bodkins, and the propeller-shaped buckle.

To my knowledge this is the first time a burial of this kind has been discovered: a skull placed behind a side stone in a passage, and accompanied by grave goods. As far as I can see, however, there is no other explanation than that the side stone has been taken out in order to deposit the skull and the grave goods, and thereupon replaced. Possibly the piece of wood was placed there on that occasion as a support for the front wall above it. But why was the skull put there? Where is the rest of the skeleton? Why were only cranial bones found in the passage, apart from the few limb bones? And finally, why do all these skeletal parts lie there; are they the inhabitants of the house itself, or has this passage been used for burying other dwellers of the settlement? The find, as will be seen, gives rise to a number of questions, the answers to which cannot be given except by guesswork.

Still, one thing indicates that hunger has ravaged this house, and that is the presence of a disproportionately large number of dog bones, both in the house and in the passage, whereas there were relatively few bones of other animals. The possibility is, then, that the people have eaten their dogs owing to lack of other food, and later have starved to death. That there has been cannibalism under such circumstances is not impossible, for it is not unknown among Eskimos even today[1]). Another possibility is that the passage has been used as a burial place after the house was abandoned. The grave goods with the skull (Fig. 5) in fact indicate an actual burial. And, as a matter of fact, this is no solitary case of the kind. In the bottom of the passage of House 10, in Group II in Dødemandsbugten, we found skeletal parts of a woman about 20 years old, and a child of about 18 months. Alongside these was a collection of objects which in many features recall this "grave find". See page 34. There were bird figures, ornamental bodkins, and various miniature implements, 13 specimens in all. They lay all together close to the bones, in other words, undoubtedly grave goods. In I, House 4 we found a human jaw-bone between the side stones in the passage, close to its opening into the house, about one metre below the surface. On the Danmark Expedition human bones were found in a house (406) at Snenæs[2]), which also yielded a rich find of ornamental objects[3]). Finally, Bird reports that in a passage on Shannon Island they found a human skull, but no other bones[4]).

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[1]) Knud Rasmussen, 1925, p. 67.
[2]) Bendix Thostrup, p. 278.
[3]) Thomsen, 1917, Pl. XI.
[4]) Bird, p. 406.

In the house were found: The butt of an Inugsuk harpoon head; a trace buckle; a whetstone; half a lamp (Pl. 6. 13); a winged needle case (Pl. 7. 22); a piece of worked narwhal ivory and seven pieces of ground slate. Besides the "grave find" (Pl. 10) in the passage there were: two sledge shoes; a trace buckle; a knife blade (Pl. 3. 30); a whetstone; an oval bowl bottom, a long meat tray and two pieces of ground slate.

House 4. A house of appearance similar to House 3, but with a more elongated, almost oval area, 2.7 × 1.9 metres. The wall to the left of the passage was built of three courses of large flat stones to a height of 0.6 metre above the floor, but otherwise it consists of earth, with stones here and there. Like No. 3, the house was full of stony gravel with a very thin culture layer, almost devoid of bones. The floor was of gravel, without floor-stones or platform. The passage, which extends 0.7 metre into the house, is 2.6 metres long and 0.55 metre wide, and runs southwards. In the inner part of the left side wall were a number of large stones; the other part consists of earth. Near one of the wall stones, as already mentioned, we found a human jawbone. The bottom of the passage lies about 0.8 metre below the floor. There was no frozen earth.

In the house were found: harpoon blade of slate; butt end of moveable lance head (Pl. 4. 5); arrow blade of slate; two whetstones; drill bit of slate; piece of flint with scraping edge; bone mounting; two pieces of ground slate and a piece of rock crystal.

In the passage: Flat barbless and bladeless harpoon head, harpoon blade of slate; blade of snow knife; adze handle (Pl. 4. 17); three two-handed scrapers of bear femur; blubber pounder (Pl. 6. 2); snow beater and three pieces of ground slate.

House 5. The ground plan is irregular trapeziform, widest at the front, with the largest dimension in the direction of the passage. There is a bulge in the south-west corner, the other corners being sharp. The house is 3.4 metres long, 2.8 metres wide at the front wall, and 1.4 metres at the rear wall. In and below the turf which covered the floor was a quantity of bones and many pieces of wood, some of which were worked. The floor consisted of many flat stones forming a complete pavement. At a distance of 1.7 metres from the rear wall was a platform-edge, 20 cm high, consisting of a row of flat stones, and behind it, at the middle, was a number of flat stones which have covered a cavity in the platform and into which they had fallen. In this cavity was loose culture earth with many objects. The sides and the rearmost part of the platform consisted of gravel. Along the east wall of the house, at right angles to the front wall and the platform-edge, was a side platform, 0.5 metre wide, the fore edge of which, 15 cm. above the floor stones, was composed of long stones set on edge. On this side platform lay a few flat stones, but otherwise it was full of grease (mainly blubber) and bones, several of them burnt; the edge stones were covered with a layer of

grease about a centimetre thick, which had cemented them together so firmly that they could only be separated with difficulty. Presumably the lamp has had its place on this side platform. In the south-west corner was a deep, grease-lined pit containing many bones, possibly a store for blubber and meat. Under the floor stones there was also a thick layer of grease containing bones, wood, feathers, hair, and so on. Possibly this may imply an earlier habitation; but in the first place no floor stones were found at a deeper level, and secondly, some of the floor stones extended right down to the gravel below. The walls are solid, double stone walls having up to five courses of flat stones on the inside, and a row of large flat stones set on edge on the outside. In the front wall they reach a height of 0.7 metre, and in the rear wall 1 metre above the floor stones. In the bottom of the west wall is a large whale bone; the east wall has collapsed a little in over the platform. Above the passage in the front wall is a small cavity, formed by taking a stone out of a course, so that stones from the courses above and below form its roof and bottom. The opening, which is rectangular, measures 40 × 20 cm.

The passage faces the south. It is 4.4 metres long, 0.6 metre wide, and continues 0.6 metre into the house. The walls consist of large stones and a few whale bones, and over the innermost 1.4 metres the roofing is still in place. The roof consists of long flat stones covered with turf. The bottom of the passage falls evenly in towards the house; inside the house the bottom of the passage is 0.85 metre below the floor stones. East of the outside entrance to the passage is a stone-set cache.

In the house over the floor and platform were found: harpoon head (Pl. 11. 2); two weapon points of slate; plug for harpoon bladder (Pl. 14. 13); wedge; bow drill of wood (Pl. 13. 1); lamp trimmer; seal figure of wood; toy "sling handle"; stick of wood with three holes (Fig. 41); two pieces of drilled antler; thirteen pieces of worked wood and two pieces of ground slate.

Under the floor and the platform were: two flat harpoon heads, barbless but with blade, and one flat, barbless and bladeless; harpoon wing(?) of wood (Fig. 34); four harpoon blades and two undeterminable blades of slate; foreshaft of ice-hunting harpoon(?); weapon point (Pl. 11. 27); three arrow heads (Pl. 12. 5 and 7); two sledge shoes; a nail for a sledge shoe; trace buckle (Pl. 12. 10); two-edged knife blade of slate; wedge (Pl. 13. 14); two whetstones of sandstone; bow drill (Pl. 13. 2); drill bit of slate; bit holder for bow drill with iron bit; slate blade for ulo; ulo all of slate; bodkin; cooking pot fragments; scoop of wood (Pl. 14. 3) and two fragments of larger scoops; spoon (Pl. 14. 2); three lamp trimmers; lump of pyrites; snow beater; toy drum handle; pierced bear tooth (Pl. 15. 1); double drop pendant; toy harpoon head (Pl. 16. 1); toy arrow (Pl. 16. 7); toy foreshaft of ice-hunting harpoon; two toy slate knives; doll (Pl. 16. 9); three top-disks of wood; unknown stone implement (Pl. 15. 9); bone mounting; five pieces of worked bone; 32 pieces of worked wood; 11 pieces of ground slate and a piece of plaited sinew thread.

In the passage: flat toy harpoon head, barbless and bladeless; three harpoon blades; two butt ends of ice-hunting harpoon foreshafts; leg of sealing stool; part

of wood bow; three sledge shoes; snow knife; knife handle (Pl. 12. 16); drill shank; bit holder for bow drill (Pl. 13. 8); whetstone; fragments of cooking pot; lamp trimmer with three holes (Pl. 14. 15); two fragments of buzz; butt end of toy arrow; "toy weapon" (Pl. 15. 15); bone mounting; fore end of "sling handle"; 8 pieces of worked bone; 8 pieces of worked wood; two pieces of ground slate and a length of seal thong.

House 6. In appearance similar to House 5, trapeziform, with its greatest dimension in the direction of the passage. It is 3.2 metres long, 2.8 metres wide at the front wall, and 1.8 metres wide at the rear wall.



Fig. 6. The entrance to I House 6.

The bottom of the house was covered with a layer of turf, in and below which was a quantity of bones and wood. On top of the flat stones which formed the floor was a thin covering of half-decayed grass. The main platform had collapsed, but it was possible to see that there had been a double cavity under the middle of it, formed of flat stones set on edge. In this was some rubbish and a number of artefacts. The edge of the platform was also disturbed, but there was still a remnant of it at each side, 1.6 metres from the rear wall to a height of 20 cm above the floor. In contrast to House 5, there was a side platform on both sides. They were built as in House 5, with an edging, 15 cm high, of long flat stones, and full of blubber and bones. In the two front corners of the house were grease-lined pits, that on the west extending about 0.5 metre in under the side wall and full of burnt seal bones. The lamp seems to have had its place on the east side platform, just near the main platform. Under the floor, as in House 5, there was a thick layer of grease.

The walls consist entirely of stones, the front wall being 80 cm high and built of up to eight courses of flat stones. In the south-west corner is a carefully built niche of six courses of flat stones, and it is in the bottom of this that we found the aforementioned pit. The rearmost part of the west and east walls consists of two to three courses of flat stones set on edge; the rear wall has fallen into the house a little; it is also 80 cm high.

As will be seen from Fig. 6, the passage was exceedingly well-preserved; no roofing stones, and only very little turf had fallen in,

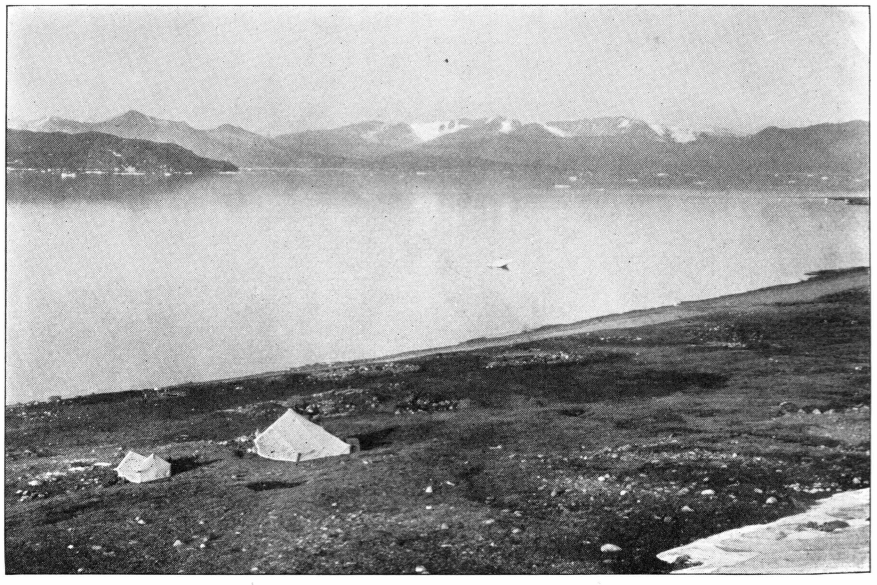


Fig. 7. House Ruin Group II, with our camp.

so we may take it that the passage has not been roofed over much farther out than the picture shows. It is 4 metres long, the innermost 1.8 metres being roofed. If we take it that some part has fallen in, it means that one-half of the passage has been open, the other covered. As far as could be seen from the debris, the same has been the case in some of the other well-preserved houses, for instance, I, House 5, II, House 1, and III, House 22. In the outer, open part the stone walls increase in height from the surface of the ground in front of the passage to the covered part. The outermost roof stone is about 85 cm above the bottom of the passage, and has a covering 40 cm thick of stones and turf. The next roof beam consists of a whale vertebra, which rests its four processes on the side stones. The passage faces south, its greatest width is 70 cm, and it continues about 60 cm into the house, where the bottom is about 85 cm lower than the floor stones. Fig. 19 shows a

longitudinal section through the whole house, indicating the principal cotes. About one metre from the west wall is a stone-set cache.

In the house were found above the floor and platform: harpoon blade of slate; six sledge shoes; handle of snow knife; knife handle; cooking-pot fragments; toy harpoon head, flat, barbless and bladeless; part of toy bow; two toy arrow heads and a toy arrow; two whetstones; pointed stick; lamp trimmer; four pieces of worked bone, two of worked wood and a piece of ground slate.

Under the floor and platform: six flat barbless and bladeless harpoon heads (Pl. 11. 6); three flat with blade without barbs, and two parts of harpoon heads; shaft mounting (Pl. 11. 16); six weapon blades of slate; seven butt ends of ice-hunting harpoons; two indeterminable foreshafts (Pl. 11. 12); finger rest (?) (Pl. 11. 24); two legs of sealing stool; ice pick; two fragments of bows; brace for a bow (Pl. 12. 14); three arrow heads with lanceolate blade (Pl. 12. 4); plug for harpoon bladder; four sledge shoes; five nails for sledge shoes; two mouthpieces for bow drill; bit holder for bow drill; three drill bits of slate; whetstone; knife blade of slate (Pl. 12. 21); two knife handles of wood (Pl. 12. 17); the unknown implement Fig. 37; fragments of cooking pot; two lamp trimmers (Pl. 14. 16); hearth for fire drilling; stave for coopered vessel (Pl. 14. 12); sides of baleen cup; part of wooden tray; pierced bear tooth and seal tooth; pendant (Pl. 15. 2); three toy harpoon heads, flat, bladeless and barbless; toy foreshaft of ice-hunting harpoon; four toy bows (Pl. 14. 4); toy arrow and two arrow heads; two toy "sling handles"; top (Pl. 15. 11); buzz; bird figure; six pointed wooden sticks (Pl. 14. 8); bone mounting; three pieces of drilled walrus ivory (Pl. 13. 17); worked bear tooth and walrus molar; 37 pieces of worked wood; eight pieces of ground slate; baleen knot and a piece of worked baleen.

In the passage: a piece of sledge shoe; a pendant (?) (Pl. 14. 17); toy snow knife (Pl. 16. 4); toy bow and slate knife, and three pieces of drilled bone.

Ruin Group II (Plate 18), Fig. 7.

About 300 metres to the west of Group I, House 6, on a smooth, flat slope overgrown with grass and other plants, lies Group II. From east to west it stretches about 90 metres, and from north to south about 30 metres. The lowest house lies 17 metres from the high water mark. All the passages face the south.

House 1. In form and state of preservation the most easterly house of the group resembles Group I, Houses 5 and 6. Seen from a distance, it appears as a mound, overgrown with short, dense grass and interspersed with cracks 10 to 20 cm wide. Sunk in the middle of the mound lies the house in the form of a four-sided depression, to which leads a passage roofed over at the inner end. At the south-west corner of the house, in the mound, is a cache with stone-set sides.

The ground plan of the house is trapeziform, but closely approaches the rectangular. The length is 2.6 metres, the breadth at the front wall 2 metres, at the rear wall 1.6 metres. Just below the turf, in which a few bones were found, lay the floor and platform paved with large flat stones.

The edge of the main platform, which lay about 20 cm above the floor stones, was formed of two large, flat rectangular stones, their

ends resting upon stones underneath, so that a cavity was formed under them. In contrast to Group I, Houses 5 and 6, the whole of the main platform was covered with flat stones. Along the east wall, between front wall and platform edge, was a side platform as in Group I, House 5, 60 cm wide, and 10 cm high. Under the floor was a thick layer of grease. The walls are about 60 cm high and consist entirely of stones, in four to five courses in the front and rear walls. The rear wall and side wall

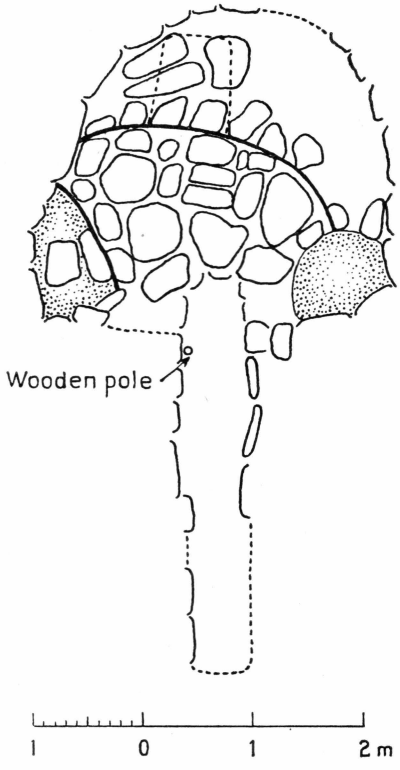


Fig. 8. Plan of House Ruin II, 2, with its second floor. The stippling indicates grease, the heavy lines the edges above the floor. The cavity under the platform indicated by stippled line.

have fallen into the house somewhat. In the front wall, just above the lintel, is a cavity as in Group I, House 5.

The passage is 3.8 metres long and 0.6 metre wide; the innermost 1.1 metres' stretch is roofed over. A piece of a large whale bone has been used in this roofing. The passage continues 70 centimetres into the house, the innermost 30 cm being covered by a large, flat sill stone. From the surface of the ground outside the passage the latter increases evenly in depth towards the house, till inside the house it is 96 cm below the floor stone. The bottom, which consists of coarse gravel, was

for some distance covered with a layer, 10 to 15 cm thick, of half decomposed vegetation, principally grass and heather, and there were also a few flat stones. Both plants and stones have undoubtedly been laid there when the passage became too wet owing to the melting snow.

In the house above the floor and platform were: two finger rests (Pl. 11. 17 and 18); two harpoon blades of slate; trace buckle: lamp trimmer; top; bone mounting; three pieces of worked bone, two of worked wood and a stone with three drilled holes.

Under floor and platform: two harpoon blades of slate; two gorges (Pl. 11. 21); snow knife and blade for snow knife; knife handle; two wedges; drill with iron bit; drill bit of slate; two cooking-pot fragments; part of a "sling handle"; ornamental plate (Pl. 15. 7); buzz (Pl. 15. 6); model of umiak (Pl. 15. 17); model of kayak (Pl. 15. 19); bear figure and two seal figures of wood (Pl. 16. 23); toys: foreshaft of ice-hunting harpoon (?), bow and ulo blade; bone mounting, 11 pieces of worked bone, 24 of worked wood, 8 of ground slate; pyrites; two pieces of broken bottle and a length of seal thong.

In the passage: three harpoon blades of slate; butt end of ice-hunting harpoon; ice pick; leg of sealing stool; plug for harpoon bladder; cutting board for arrow feathers; two sledge shoes; three trace buckles (Pl. 12. 11); four parts of snow knives; three whetstones; wedge; ulo handle; toy lamp (Pl. 13. 10); two fragments of cooking pot; part of large wooden scoop; two tops of wood and one of bone (Pl. 15. 10); three toy bows; five toy arrows; toy knife of slate; toy ulo (Pl. 16. 11); seal figure of wood; five pieces of worked bone, six of worked wood and four of ground slate.

In order to ascertain of what the mound round the house consisted, we excavated three fields (A 1—3) just west of the house, A 1 and 3 off the west wall, and A 2 outside the passage. At the top they had about 20 cm of turf, dry and very hard, and interspersed with cracks 20 cm deep. This turf contained a number of well-preserved bones. Below the turf was loose brown fill, mostly consisting of plant remains and containing a number of bones, some wood, and a few artefacts. The state of preservation varied considerably in different places. In towards the house this layer had a depth of up to 80 cm in A 1 and 3, in A 2 about 30 cm. In A 2 it thinned off rapidly towards the west, whereas in A 1 and 3 it was up to 60 cm thick in the west wall. The bottom everywhere consisted of gravel.

In A 1^1 were found: harpoon blade of slate; two foreshafts of ice-hunting harpoon (Pl. 11. 10); arrow head with lanceolate blade and conical tang with vestigal screw; adze head (Pl. 12. 13); whetstone; toy snow knife (?); two pieces of drilled antler and four of ground slate.

In A 1^2: two fragmentary harpoon blades of slate; whetstone with finger grip at the ends; part of ulo blade; toy knife of slate (Pl. 16. 13); two pieces of drilled antler, two of worked wood and four of ground slate.

In A 1^3: Lance blade (?) of slate; two lanceolate arrow blades; sledge shoe; snow knife; two whetstones of sandstone (Pl. 13. 15); adze blade of slate (Pl. 12. 12); two drill bits of slate; part of ulo handle; lamp trimmer; "double" drop pendant (Pl. 16. 14); toy arrow head with lanceolate blade and cuneiform tang, and two

toy arrows of wood; six pieces of ground slate, seven of worked bone and four of worked wood.

In A 1[4]: Harpoon blade and a piece of ground slate.

In A 2[1]: Flat bladeless and barbless harpoon head; snow knife and blade of snow knife; five sledge shoes (Pl. 12. 9); hammer stone (Pl. 13. 16) and a piece of worked wood.

In A 2[2]: Harpoon blade of slate (Pl. 11. 7) and fragment of same; two butts of foreshafts of ice-hunting harpoons; adze head; doll; bone mounting; drilled antler and eleven pieces of ground slate.

In A 3[1]: Butt of heavy foreshaft for ice-hunting harpoon; harpoon blade and two fragments of weapon blades, of slate; whetstone (Pl. 13. 12); pierced bear tooth; doll; four pieces of drilled antler, one of worked wood and four of ground slate.

In A 3[2]: Sledge shoe; whetstone; drilled antler and two pieces of ground slate.

In A 3[3]: Harpoon blade and knife blade (Pl. 12. 20) of slate; two sledge shoes; whetstone; drill shank with bit-holder; cooking-pot fragments; fragment of wooden vessel; three toy arrows; four pieces of worked bone, one of wood and one of ground slate.

House 2. This house lies to the north-west of House 1, and prior to excavation was scarcely to be distinguished from the surrounding terrain. It was only possible to see the remains of a very low, circular mound with a faint depression inside. The position of the passage was visible on account of the mound there being broken for some distance. Everything was overgrown with a thick carpet of grass and moss.

After excavation the house proved to be rounded in form (Fig. 8), 2.4 metres in the direction of the passage, and 2.8 metres across the other way, the greatest breadth being at the front. In this it resembled the Cape York house, and, as this form recurs in several of the following houses, the term Cape York House will be used of them. Under a layer of fill about 50 cm thick and containing many large stones, there was a floor in the front half of the house paved entirely with large flat stones. The rear part of the house was occupied by the platform, which was laid with flat stones about 20 cm above the floor stones. The edge of the platform, which lay 1.4 metres from the rearmost point of the house, formed a straight line at right angles to the passage and consisted of large stones resting upon the rearmost floor stone. After removing floor and platform stones, we found a new floor and a new platform. The intermediate layer consisted of grease mixed with wood shavings, animal bones, hair and baleen. Whereas the lower floor, like the upper one, was covered entirely with flat stones, the lower platform had stones only on its left half. The remainder of the platform consisted of sand, on which was a layer of fairly well preserved heather, apparently the under-matting of the platform. The edge of the platform had the form of a curved line. Under the platform stones was a cavity as shown in Fig. 9. It was almost rectangular, 1 × 0.7 metre, with its greatest dimension at right angles to the edge of the platform, and it had solid stone walls. The bottom, which consisted of gravel, lay 0.5 metre under the

floor stones. This cavity was full of pieces of wood, bones, and thin strips of baleen, which at the bottom formed quite a plaited mat. It also contained many artefacts, including especially a harpoon head of Thule type 2 with one barb, an Inugsuk harpoon head, a flat harpoon head with two barbs, and two side-prongs for a bird-dart, with barbs on the inner side. These specimens lay almost side by side.

In the south-east corner of the house, just in front of the platform, was a deep pit with its sides covered with a thick layer of grease, and containing a quantity of animal bones, some of them burnt. It



Fig. 9. House II, 2, after first floor and platform have been removed. The spade, 1 m long, stands in the cavity in which the objects on the right were found.

also contained several large pieces of baleen. A similar pit, but more shallow, was found in the south-west corner; towards the floor it was bordered by a mound consisting partly of stones set on edge. Below the lower floor was a thick, almost impenetrable layer of grease and bones, pieces of wood, hair and baleen, and below this again was gravel.

The walls of the house consist almost exclusively of stones, most of them large and round, which only form real "masonry" along a short length. The height above the upper floor at the passage is about 60 cm; the height above the platform about 80 cm.

The passage is about 3 metres long and 0.5 metre wide, and continues 0.6 metre into the house. The sides consist almost entirely of stones, those nearest the house being about one metre high, flat, and set on edge. Under the turf was first 50 cm of pure sand, and below

this about 60 cm of culture earth, which in the deeper layers contained so many bones, pieces of wood and baleen that it almost had the character of a midden. As in the cavity below the platform, pieces and threads of baleen formed a dense matting, which hampered the work very considerably. In the narrow, deep passage the sun could only very slowly thaw the frozen earth, and it took ten weeks to reach the bottom. Throughout the entire length of the passage the bottom lay 1.20 metres below the surface of the ground, 0.85 metre below the upper floor stones. The thick culture deposit and the two layers of floor stones would indicate that the house has been inhabited for a considerable period. A total of 234 specimens was found in this house.

In the house, above 1st floor and platform were: five harpoon blades of slate, including Pl. 3. 5, and three fragments of harpoon blades; two sledge shoes; wedge; adze head; four whetstones, of which three with finger grip; two two-edged knife blades of slate; lamp trimmer; cooking-pot fragment; oval bowl bottom; part of four-sided meat tray(?); wooden stick with three holes; worked tooth; four pieces of worked wood, fifteen of ground slate, five of flint and three knots of baleen.

Under 1st floor: sledge shoe; sledge cross-slat; two-edged knife blade of slate and knife blade of chalcedony; whetstone; cooking-pot fragment; three lamp trimmers, one of which with three holes (Pl. 6. 3 and 12); three pieces of worked bone, three of worked wood, one of ground slate and two knots of baleen.

Under 2nd floor and platform: Thule harpoon head (Pl. 2. 1); Inugsuk harpoon head and unfinished ditto; flat harpoon head with two barbs (Pl. 2. 5); three harpoon blades of slate; butt of foreshaft for ice-hunting harpoon; plug for harpoon bladder; lance head of slate; leg of sealing stool; two side prongs for bird dart with unilateral barbs (Pl. 2. 11); two baleen bows and two toy baleen bows (Pl. 9. 2); tang of arrow head with two short screw threads; arrow blade of slate; two sledge cross-slats; three sledge shoes; two nails for sledge shoes; trace buckle; two slate knives (Pl. 3. 16); knife blade of slate (Pl. 3. 18); knife handle of wood (Pl. 5. 4) and of antler; three whetstones; three adze heads; drill shank, two-handed scraper of bear femur; convex-edged flint scraper; bodkin (Pl. 7. 18); two ulo blades of slate; side of baleen cup; three oval cup bottoms; edge mounting; lamp trimmer; snow beater (Pl. 4. 19); back scratcher (Pl. 7. 20); drop pendant of stone; two beads of coal (Pl. 7. 11); two dolls (Pl. 8. 20); toy foreshaft of ice-hunting harpoon; two toy knives of slate (Pl. 8. 27); toy arrow head of antler; toy arrow; boot creaser(?); four pieces of worked bone, 35 of wood, 12 of ground slate, 18 baleen knots and six pieces of worked baleen; knot of seal thong; plaited hair; mica and a flint flake.

In the passage: two harpoon blades of slate; finger rest (Pl. 2. 20); two side prongs for bird dart with unilateral barb (Pl. 2. 12), ice pick; leg of sealing stool; swivel (Pl. 2. 16); six sledge shoes; four nails for sledge shoe (Pl. 5. 15); toggle for fastening draught line to sledge; blade of snow knife; four whetstones of sandstone (Pl. 3. 27) and three other whetstones, of which one with finger grip; wedge; adze handle; two adze heads (Pl. 5. 2); two drill shanks; four drill bits of slate, including Pl. 3. 35; knife handle of antler; knife blade(?) of chalcedony (Pl. 3. 31); baleen cutter; ulo entirely of slate; ulo blade of slate; hand drill (Pl. 5. 11); bodkin; sides of two baleen cups (Pl. 9. 8); two oval cup bottoms; two lamp trimmers; cooking-pot fragments; pyrites; amulet box (Pl. 7. 8); ajagaq of seal scapula (Pl. 7. 23); doll; toy Inugsuk harpoon head (Pl. 8. 2); toy foreshaft of ice-hunting harpoon; nock end of toy arrow; unknown implement of bear ulna (Pl. 5. 9); five pieces of worked

bone; stick of wood with three holes; 18 pieces of worked wood, 25 of ground slate, two of worked flint; mica; a baleen hank (Pl. 9. 9); a baleen ring (Pl. 9. 7) and 26 knots of baleen. In the wall there were: a flat harpoon head, barbless and bladeless (Pl. 2. 13); a harpoon blade; a piece of worked walrus ivory and one of ground slate.

House 3 (Fig. 10). A house of the Cape-York type, with a rounded, triangular plan, 3 × 3 metres. Before excavation it was a basin-shaped depression with a ditch running from it, and surrounded by a cracked mound, as for instance in Group I, House 1. The whole was overgrown with grass.

The floor was paved with large, flat stones. There was no main



Fig. 10. House II, 3, after excavation.

platform, but on its site were three stones on edge which undoubtedly have once supported the platform stones. Here, too, was loose culture earth under the platform, with a number of artefacts, whereas under the floor stones was a layer of grease. In the two foremost corners of the house were grease-lined pits containing bones; that on the southwest was rather shallow, with a large flat stone in the bottom, and towards the floor bordered by a flat, oblong stone set on edge. Along the east wall, about 40 cm from it, we found as the edge of a side-platform two flat stones set on edge, their upper edge about 10 cm above the floor stones. The walls are entirely of stone, at the passage entrance 0.5 metre and at the rear about 0.8 metre high; there, however, the stones had slipped into the house.

The passage was 3 metres long and 0.6 metre wide. It continues 0.6 metre into the house, where its bottom lies 1 metre below the floor stones. At the entrance to the passage the bottom is 0.8 metre below the surface of the ground. Its walls consist of large stones.

In the house were found: Inugsuk harpoon head (Pl. 2. 2); slightly flat harpoon head with blade, barbless (Pl. 2. 4); flat harpoon head, bladeless and barbless; two cylindrical shaft mountings (Pl. 2. 9); 8 harpoon blades; a lance blade and an arrow blade(?) (Pl. 3. 12) of slate; two ice-pick butts; cutting board for arrow feathers (Pl. 4. 9); blade of arrow head; six sledge shoes; trace buckle (Pl. 5. 21); two toggles for fastening draught line to sledge; two blades and a handle for a snow knife; knife blade of slate (Pl. 3. 17) and part of a single-edged knife blade; five whetstones, of which one with finger grip; adze head (Pl. 5. 1); adze blade; mouthpiece for bow drill (Pl. 5. 17); baleen cutter (Pl. 5. 6); hand drill (Pl. 5. 10); ulo handle; bodkin; scraper(?) of flint; cooking-pot fragment; part of flat scoop; part of meat tray; two lamp trimmers; hearth for fire drilling, head of back scratcher (Pl. 7. 21); ornamental pendant (Pl. 7. 12); toy cross-slat for sledge; toy trace buckle (Pl. 8. 7); toy cooking pot; two bone mountings; three pieces of worked bone, three of worked wood, two of worked stone, 20 of ground slate and a knot of baleen.

In the passage: Five sledge shoes; three trace buckles (Pl. 5. 22); two snow knives; whetstone with finger grip; pyrites; two pieces of worked bone, five of ground slate.

Houses 4 and *5*. Both houses had been excavated when we arrived at the spot. They lie side by side, surrounded by a common mound and, judging from appearances, are of equal age. Both are, if anything, trapeziform, their greatest dimension being in the direction of the passage, widest at the front, and both have walls carefully built up of several courses of flat stones. The dimensions of No. 4 are: length, 3.5 metres, breadth at the front wall 2.4 metres, at the rear wall 1.8 metres; for No. 5: length, 3.6 metres, breadth at the front wall 2.6 metres, and at the rear wall 1.9 metres. Both passages are built entirely of stone and covered over at the inner part. House 4 has a passage 3.5 metres long, of which about 1.2 metres are covered over, whereas the passage of House 5 is 3.8 metres long with 1.5 metres covered. In between these two houses is a stone cache. On the mound east of house 4 lay a well-preserved cooking-pot of micaceous schist.

In the mound round about II, House 4, were: one sledge shoe; a whetstone with finger grip (Pl. 13. 11); a drill bit of slate and the cooking pot Fig. 38.

House 6 is partly covered by the mound which surrounds House 7. The shape is somewhat uncertain, as all that could be seen of the house was a low mound surrounding a rounded quadratic depression, from which it was possible to trace a passage of a length of 1.4 metres. The depression was 2.8 × 2.8 metres inside. This house was not excavated.

House 7. A well-preserved house, trapeziform in plan, and surrounded by a wide, cracked mound. The bottom, and to some extent

the walls, were covered with grass. It is 3.4 metres long, 2.6 metres wide at the front, and 2.2 metres at the back. The whole of the floor was covered with large, flat stones; in the south-west corner was a deep pit lined with grease and full of wholly and half burnt bones. The main platform, which had partly collapsed, has been covered with flat stones at the front part; at the back it consists of gravel. There were remnants of the edge of the platform, 1.4 metres from the rear wall to a height of 20 cm above the floor stones. Along the east wall, with one end against the main platform and the other end reaching to the aforesaid pit, was a side-platform, entirely covered with large, flat stones. It was 1.4 metres long, 0.35 wide, and 0.15 high. Below the floor stones and the platform was a thin culture deposit with relatively few bones. The walls were built of flat stones in several courses; greatest height 1 metre, least 0.6 metre. The east and rear walls had slipped a little into the house.

The passage extended 1 metre into the house, although about 40 cm of this have been covered by the sill stone, which had fallen down into the passage. Thus there has been a cavity below the sill stone, and this contained most of the artefacts, including an ulo with a wooden handle and a slate blade. That part of the passage which was inside the house had vertical walls consisting of long flat stones on edge; the bottom was 0.85 metre below the floor stones. The passage lies obliquely to the middle axis of the house; it is 3.3 metres long, with roofing stones only over the innermost metre, but these had partly collapsed. The passage increases evenly in depth from the surface of the ground in front of the house. The outer part has no side stones.

In the house were found: three harpoon blades; two butts of heavy foreshafts for ice-hunting harpoons; ice pick; leg of sealing stool; plug for harpoon bladder; fragment of bow; arrow head (Pl. 12. 2); four sledge shoes; trace buckle; two toggles for sledge draught line (Pl. 12. 8); snow knife; two cooking-pot fragments; two lamp trimmers; bodkin (?) (Pl. 14. 6); head of back scratcher; pierced bear tooth; three bone mountings; thin "sling handle"; the unknown implement Fig. 39; three top disks; buzz; seal figure of wood; bird figure (Pl. 16. 25); two toy foreshafts for ice-hunting harpoon; toy side prong of bird dart with bilateral barbs (Pl. 16. 12); toy bow (Pl. 16. 6); toy arrow; toy arrow head of bone, with lanceolate blade and cuneiform tang; toy umiak paddle (Pl. 15.18); toy sledge runner and cross slat; toy slate knife; toy cooking pot; toy "sling handle"; two pieces of worked bone, 22 of worked wood, seven of ground slate, and bottle glass.

In the passage: part of weapon head of slate; leg of sealing stool; worked whale bone; ground slate and two pieces of worked wood.

As in the case of Group I, House 2, there was in the same mound as the house an almost quadratic depression measuring 2 × 2 metres. It was excavated as a field (B 1), and proved to contain loose brown culture earth like fields A 1 to 3, although more mixed with sand. In

the culture deposit, which was 0.5 to 0.6 metre thick, we found a quantity of well-preserved bones, some wood, and a few artefacts. The walls consisted of large stones here and there, but as there was no trace of passage, floor stones or platform, I do not think this is an overgrown house, it has rather been a large meat store.

In B 1[1] were: flat harpoon head with blade, barbless; cylindrical shaft mounting; toy foreshaft of kayak harpoon (Pl. 11. 11); two foursided end blocks of winged harpoon (Pl. 11. 14 and 15); "long" finger rest (?); knife handle of wood; sledge shoe; whetstone; two fragments of wooden vessels; pierced bear tooth and walrus molar; two pieces of worked bone, three of worked wood and two of ground slate.

In B 1[2]: Ice pick; whetstone; pointed wooden stick; two pieces of worked wood and two of ground slate.

House 8. A sample excavation having been encouraging, this house was excavated, although the rear parts of it were full of flow-earth, making it impossible to determine the shape of the house at the rear. Prior to excavation we saw only two wall stones of the front of the house. The passage was indicated by a ditch, and it was entirely surrounded by a low mound. From the wall stones found it could be seen that the house has had rounded corners at the front; at the rear we excavated about 1 metre into the fill, which consisted of gravel and stones, but without finding a trace of culture earth or wall stones. On the floor were a few flat stones, and by the east wall an arrangement of flat stones set on edge which may be taken to be the lamp place. Just behind this and the rearmost floor stone, 1.3 metres from the passage, in a channel 20 cm deep running from one side wall to the other, was culture earth with a few artefacts. This channel or ditch has undoubtedly formed the cavity below the platform, which probably has had its front edge there.

The passage is 3.1 metres long and 0.55 metre wide. It continues 0.6 metre into the house, where its bottom lies 0.7 metre below the floor stones. Right into the house the sides of the passage consist of stone, otherwise of earth.

In the house were found: flat harpoon head; barbless and bladeless; two harpoon blades; foreshaft of kayak harpoon (Pl. 2. 21), and an unidentifiable foreshaft; ice pick; two legs of sealing stool; fragment of arrow head; knife blade (Pl. 3. 20); two knife blades of slate without tang; adze head; six drill bits, of slate (Pl. 3. 33); bodkin; fragments of cooking-pots; fire-drilling stick (Pl. 6. 4); fragment of wooden tray; part of a boot (Fig. 30); comb (Pl. 7. 7); ornamental plate with horizontal cylinder at top; two fragments of "sling handles"; toy bow and toy cross slats for sledge (Pl. 7. 13); a piece of worked antler, five of worked wood, 18 of ground slate, one of worked flint and ten baleen knots.

In the passage: harpoon blade (Pl. 3. 9); five sledge shoes; knife blade without tang, of slate; whetstone with finger grip; wedge (Pl. 5. 8); fragment of wooden vessel; toy foreshaft of ice-hunting harpoon; toy arrow with feather, bone mounting and two baleen mountings (?); four pieces of worked bone, ten of worked wood, of which two are lashed together with plaited sinew thread, three of ground slate.

House 9. This house was not excavated. In shape and state of preservation it mostly recalls the well-preserved trapeziform houses with the cracked mound and walls built of several courses of flat stones, but the side walls have slipped so much into the house that dimensions cannot be given with certainty. The length was measured at 3 metres, the breadth at the front wall at 1.8 metres, and the rear wall at 1.1 metres. The passage, too, had fallen in, and is about 4 metres long

House 10. Surrounded by a rather flat and cracked mound lay a rounded, four-sided depression overgrown with grass and moss. Scattered about in this, and in the depression in front of it, indicating the position of the passage, were some large stones. Excavation revealed an almost square house with rounded corners, 2.9 metres long and 2.8 metres wide. As there were no continuous stone walls, the shape of the house was determined partly from the contours of the aforesaid depression, partly from the extent of the culture deposit. Where it consists of grease, as on the floor, this latter gives a very good indication, but on the platform, where there was only a very thin layer of black earth, it is more uncertain.

On the floor were a few flat stones, but otherwise it consisted of a hard, almost impenetrable layer of gravel and small stones cemented together with grease. This deposit contained neither bones nor artefacts, only a few fragments of slate. The floor extended 70 cm into the house, where it was terminated by a belt about 50 cm wide, which for a distance of 1.85 metres stretched across the house. This contained loose, stony culture earth, among which were many poorly-preserved bones, a good deal of wood, and some artefacts. This belt narrowed in at the middle, and thus was divided as if into two parts, the deposit in the west section being 40 cm thick and rich in specimens, whereas in the east part it was 30 cm thick and contained less; below it was gravel. On both sides of this "ditch" was a layer of grease, and behind it a shelf of gravel and stones some few centimetres higher than the floor. In analogy with the well-preserved houses in Dødemandsbugten, where there was blubber under the floor stones, and under the front part of the platform a cavity with loose culture earth, containing bones and refuse, this ditch must be interpreted as the cavity under the platform. The platform stones, perhaps together with floor stones and wall stones, have been removed for use in a newer house. One feature that indicates this is, that during excavation we found many large, mostly round stones lying scattered about the floor and the platform, most likely stones rejected by those who pulled the walls down.

$1^1/_2$ metres from the north-east corner of the house was a blubber or meat cache.

The passage is 3 metres long, 0.6 metre wide, and continues 0.6 metre

into the house. In the inner part the sides are of stone, the remainder being of earth. The bottom, of gravel, falls for the first metre to one metre below the surface of the ground, thereafter rises slightly in towards the house. Inside the house the bottom of the passage is 0.65 metre below the floor.

As has already been described (page 18), human bones and grave goods were found in the passage. The bones, which are those of a woman about twenty years old and a child about eighteen months[1]), lay about 10 cm above the gravel, 1 metre from the surface of the ground, and at a distance of 0.8 metre from the house end of the passage. At the side of the bones, gathered on one spot, about 10 cm in diameter, lay the following miniature artefacts: a flat harpoon head with no separate blade and with 3 dorsal spurs, a snow knife with 2 shoulders, a comb, the body of an elongated, barrel-shaped swivel, the rotating part of a slightly larger swivel, five bird figures and three ornamental bodkins, all of ivory. In the conformity between this find and the "grave find" in the passage of Group I, House 3, I consider there is confirmation of the theory that these really are grave finds.

Whereas in Group I, House 3, it was doubtful whether the skeletal parts were of the inhabitants of the house itself or of others, there are finds in Group II, House 10, indicating that the young woman and the little child have lived in this house. In the "platform ditch" we found, besides other objects, miniature specimens of a harpoon head, a snow knife, and a swivel, as well as two bird figures which were such faithful copies of the corresponding specimens in the "grave find" that they were undoubtedly made by the same hand.

In the house were found: flat harpoon head, bladeless and barbless; the harpoon head (Pl. 2. 3); six harpoon blades (Pl. 3. 6 and 10) and a lance blade (Pl. 3. 1); cylindrical shaft mounting (Pl. 2. 10) and heavy shaft mounting (Pl. 2. 8); butt of foreshaft of kayak harpoon (Pl. 2. 14); foreshaft of ice-hunting harpoon (Pl. 2. 15); swivel; part of bow (Pl. 4. 2); tang of lanceolate slate head for arrow; three sledge shoes; bone tube (Pl. 5. 7); snow knife and handle of ditto; two knife handles of bone with end hole; slate knife and four slate knife-blades; whetstone of sandstone; adze handle; adze head; two ulo blades of slate; two-handed scraper of bear femur (Pl. 4. 7); three drill bits, of slate; three fragments of cooking-pot; lamp trimmer; meat stick(?) (Pl. 6. 1); buckle (Pl. 7. 6); pierced bear tooth; doll; walrus molar carved like a bear head; two swimming bird figures; seal figure of stone; toy specimens of following: two flat harpoon heads, barbless and bladeless (Pl. 8. 3); swivel; arrow head with cuneiform tang; two snow knives; knife of slate (Pl. 8. 28); ulo (Pl. 8. 30); lamp with wick ledge, and finally, five pieces of worked bone, fifteen of worked wood, 28 of ground slate and one of rock crystal.

In the passage, besides the "grave find", there were: a flat harpoon head, bladeless and barbless; two harpoon blades and a lance blade(?) (Pl. 3. 3); four sledge shoes; three whetstones, one with finger grips (Pl. 3. 26); oval cup bottom

[1]) According to Professor F. C. C. Hansen's identification.

fragment of wooden scoop; the unknown implement Fig. 31; two pieces of worked bone, two of worked wood, 11 of ground slate and a flint flake.

Houses 11 and *12* were not excavated. Both in form and state of preservation they resemble Group II, House 10, with cracked, grass-covered mounds surrounding a rounded, square depression measuring about 3 × 3 metres, overgrown with grass and plants. In House 11, however, could be seen a part of the front wall, which had slipped into the house.

Ruin Group III (Pl. 19).

Like Group II, this, the largest of the ruin groups, lies on an even, flat slope entirely covered with vegetation consisting of willow, grasses and mosses. Almost midway between II and III runs a brook, which has water all through the summer; a smaller brook, which is almost dry in August, runs just to the west of the westerly ruins.

The houses lie in two clusters, one of which, consisting of Houses 1—5, is at a distance of 80—100 metres from the sea and stands on a low terrace, 7.5—10.1 metres above high-water mark. The other twenty houses lie together on an area of about 2000 sq.metres, that is to say, a very dense habitation. The foremost house lies 16 metres from the high-water mark, the rearmost 80 metres, at a height of 2.1 and 7.8 metres respectively above the high-water mark. With the exception of Nos. 7 and 22, which are extremely well-preserved, the condition of all the ruins was the same. They all appeared as a faint depression, from which ran a channel, surrounded by a very low mound. Fig. 17 shows one of the most distinct of these houses. They were all covered with a dense growth of willow, heather, grass and mosses, the same plant community as we found around them. This dense vegetation has the effect that the frozen soil in most of these ruins lies just under the turf.

House 1 (Fig. 11). In contrast to the other excavated houses, this one consists of two ruins, A and B, separated by a wall 1.1 metres wide and connected by a short passage at right angles to the direction of the entrance passage. The latter leads in to Ruin A, that on the west. Both ruins are apparently rounded, but it is difficult to decide what their actual shape is, as continuous walls were found only here and there; otherwise the walls consisted of gravel and scattered stones. The same material formed the fill in the house, with only faint traces of culture earth, so that this earth could not serve as a guide during the excavation either. Consequently, the dimensions of the house are also uncertain. A is 3.1 metres long and 2.7 metres wide, B is 3.7 × 2.8 metres. The connecting passage is about 0.8 metre long and 0.6 metre wide. The floor lay about 0.4 metre below the surface and consisted mostly of gravel; there were, however, some flat floor stones, especially in A.

The floor stones in the two ruins and in the connecting passage lay at the same level. There was no distinct platform in either of the rooms. In A there were some large stones where the platform should be. In B, close to the dividing wall and about 1 metre from the rear wall, was a lamp-place formed of stones set on edge. In these stood a large, broken lamp, roughly made of sandstone (Fig. 27). Along the front wall of the same room there has possibly been a side platform with a stone-set edge. The walls are about 0.4 metre high at the front and 0.7 metre at the back.

The passage faces SSE and is 3.8 metres long and 0.6 metre wide.



Fig. 11. House III, 1, from the east.

It continues 0.6 metre into the house, where its bottom lies 0.7 metre below the floor stone. From there the bottom rises slowly towards the entrance. In the innermost part the walls are built of large stones, whereas in the outermost part they consist of gravel and smaller stones. The fill is sand, with scattered streaks of culture earth. Only right at the bottom did we find a continuous culture deposit, 7 cm thick, with strips of baleen and well-preserved heather.

Whereas the passage was frozen to a depth of 50—70 cm, there was no frozen earth inside the house at all. The explanation undoubtedly is given by the loose fill, which is unable to hold the moisture. Despite the absence of frozen soil, the state of preservation of the objects was relatively good.

In A were found: toy bow; brace for a bow (Pl. 1. 7); adze blade; drill bit, of slate (Pl. 1. 12); two whetstones (Pl. 1. 17); two-handed scraper of bear ulna; two fragments of ditto and one of bear femur; ornamental bodkin (Pl. 1. 4); lamp trimmer; two oval bowl bottoms (Pl. 1. 6 and 10); fragment of wooden bowl and edge mounting (Pl. 1. 5).

In B: two Inugsuk harpoon heads (Pl. 1. 1 and 2); harpoon blade and unfinished lance blade of slate; bow of wood (Pl. 1. 8); middle prong of bird dart (?) (Pl. 1. 9); six sledge shoes (Pl. 1. 16); knife with blade slit in edge (Pl. 1. 3); two adze blades of slate (Pl. 1. 15); drill bit of slate; three whetstones (Pl. 1. 18); two-handed scraper of bear ulna (Pl. 1. 19) and unfinished ditto; flint scraper with concave edge (Pl. 1. 11); the lamp Fig. 27; cooking-pot fragment; small pellet of clay; four baleen knots.

In the connecting passage: sledge shoe and whetstone.

In the entrance passage: two weapon blades of slate (Pl. 1. 13 and 14); two drill bits, of slate, and seven baleen knots.

House 2 was not excavated, as it was almost entirely covered by a tongue of mowing soil coming from the back. Furthermore, a sample excavation in the front part of the house yielded only pure sand below the turf. Judging from the surrounding mound, this house had its greatest dimension at right angles to the passage, which was in one side of it. I have no doubt that this was a double house like Group III, House 1, and also one of great age. For it is not likely that the inhabitants of the house have built it immediately in front of a tongue of mowing soil, and, as this earth moves at an extremely slow rate on such flat ground, a long number of years must have passed before it got so far into the house as it is now.

House 3. A house of the Cape-York type, with a large bulge on the south-east corner and a smaller one on the south-west. It is 3.15 metres long (in the direction of the passage) and up to 3.4 metres wide. The floor is paved with flat stones, although not over the entire floor area. In the large bulge was a grease-filled pit separated from the floor by an edging of stone. The foremost part of the platform has been laid with flat stones, some of which are still in position. On the other hand the arrangement of flat stones on edge, which have carried the platform stones, and which have formed the walls of the two cavities under the platform, are still in position. The platform has been so constructed that three stones, about 60 centimetres apart, have been set up at right angles to the platform edge, and at the rear they join a wall formed of a row of flat stones. Behind, and on the sides of this arrangement, the platform consists of sand. The distance from the rear wall to the front edge of the platform is about 1.35 metres. The walls are built partly of stone. On both sides of the passage is a solid stone wall 0.5 metre high, built of up to three courses of stones; on the east, the wall is formed of three very large stones, although these have slipped 30—40 cm into the house. Along the remainder of its length, the wall consists of earth with some stones; at the back, it is 0.8 metre high.

The passage has a bend in the middle; its outermost part runs SSE, its innermost part S. It is 3 metres long, 0.55 metre wide, and has stone walls along its entire length. Inside the house its length is only 20 cm; originally, however, it has undoubtedly been longer, but the measurement was taken from the inner side of the front wall, which has slipped into the house a little. Nothing can be stated as to depths, as the frozen earth prevented us from reaching the bottom before we suspended excavations.

In the house were found: a flat harpoon head, bladeless and barbless (Pl. 2. 7); part of Inugsuk harpoon head; harpoon blade and two fragments of lance blades of slate; four butts of ice-hunting harpoon foreshafts; ice pick; two legs of sealing stool; three baleen bows (Pl. 9. 1); arrow shaft (Pl. 4. 3); six sledge shoes (Pl. 4. 8); snow knife; three fragments of knife blades of slate; adze handle; five whetstones, of which two with finger grip; two drill shanks; three drill bits of slate; hand drill with iron bit; two baleen cutters; bodkin (Pl. 7. 16); convex edged flint scraper (Pl. 3. 32); two lamp trimmers, one with three holes at the top; pyrites; ornamental plate with horizontal cylinder at the top (Pl. 7. 1); two ornamental plates with dot ornaments (Pl. 7. 2); double drop pendant (Pl. 7. 4); pierced bear tooth; top disk of baleen; doll; three toy sledge runners and two cross slats; toy foreshaft of ice-hunting harpoon (Pl. 8. 4); two flat "sling handles"; six pieces of worked bone, twelve of worked wood, seven of ground slate, fourteen knots of baleen.

In the passage: a sledge shoe; snow knife; two whetstones; drill shank; toy sledge cross slat; part of hand-grip of "sling handle".

House 4 was not excavated. It had the same appearance as House 3.

House 5 is of the Cape-York type, with slight bulges at the two front corners. The floor consists of gravel and stones cemented together by grease, and with only a single floor stone. In the bulges the bottom, which consists of gravel, is slightly below the level of the floor; in the eastern bulge were some half-burnt bones; the platform, which is 20 cm above the floor, has consisted at the rear part of gravel; at the front is a trace of a "ditch" (see page 33). The walls are of gravel without a single large stone; they are about 0.6 metre high. The house measures about 3.2 metres in the direction of the passage, and 2.6 metres the other way.

Only in the inner part of the passage are there a few stones, otherwise the walls are of gravel. In the middle of the passage we found a large whale vertebra, which may have served as a roofing beam. The passage is 2.9 metres long and 0.5 metre wide. The part running into the house is 0.7 metre long; there, the bottom lies 0.75 metre below the floor.

In the house were: harpoon head of slate; gorge with two holes; brace for bow; two nails for sledge shoe; drill shank; lamp trimmer; toy harpoon head, flat, bladeless and barbless; toy bow and two arrows; two cross slats for toy sledge; toy ulo handle and blade; two toy slate knives; piece of worked bone, three of worked wood, five of ground slate; pyrites; sinew thread and six baleen knots.

In the passage: two sledge shoes; wedge; two drill bits of slate; worked bone and wood and six pieces of ground slate.

House 6. As will be seen from the plan, Fig. 12, this is a four-sided house with the front corners rounded. It has its greatest dimension almost at right angles to the direction of the passage, where it is 4 metres, whereas in the opposite direction it is 3.2 metres. About 1 metre inside the west wall, however, we found a row of large stones forming a continous wall parallel to the first-mentioned. Prior to excavation, there was a mound over both walls with a depression between them. Furthermore, as the edge of the platform and the floor stones continue in under



Fig. 12. Plan of House III, 6. The partition wall is indicated by the stippled line from back to front of house.

the innermost wall, it is obvious that the latter was built later in order to make the house smaller. This is no unknown feature in East Greenland. A house of this kind was found on Cape Stosch, at the mouth of Loch Fyne, and, as regards Shannon Island, Bird says: "In three cases walls had been built inside the original houses, considerably reducing their interior dimensions."[1]) In Angmagssalik it is very common[2]). As the objects found of the two periods do not in dicate much difference in age,

[1]) Page 405.

[2]) Mathiassen, 1933, page 21.

they will be dealt with together, and the house will be described in its original form.

On the floor were some flat stones, otherwise gravel mixed with grease. In the south-east corner was a grease-lined pit with many bones. Along the west wall, from the front wall to the fore edge of the platform, is a side platform about 80 cm wide, filled with bones and grease and separated from the floor partly by a long flat stone set on edge, partly by a mound of grease. This mound, which lies close up to the main platform, without doubt represents the lamp-place. The main platform was not preserved, but a wide and deep ditch just behind the floor stones shows where its front edge has been, i. e. 1.4 metres from the rear wall. This ditch contained a quantity of strips of baleen, bones, and a number of artefacts. The back of the platform consists of gravel and is about 10 cm higher than the floor. The walls are partly built of stone. At some places they form a continuous stone wall, at others they are scattered, and there are also places where there are no stones at all, the walls there being of gravel. The front wall is 0.3 metre, the side walls 0.4—0.5 metre, and the back wall 0.6 metre high.

The passage, which runs obliquely into the front wall of the house, runs SSE and is 3.2 metres long, 0.55 metre wide. The sides are built of large stones, and whale bone has been used as cross-beams. This collapsed passage has been used as a kitchen by later inhabitants of the settlement. Just under the turf, between the collapsed beams, was a fireplace carefully built of a couple of flat stones. The stones were blackened and, like the stones below, cemented together by the dripping blubber. Otherwise the passage was full of sandy culture earth with a quantity of bones, baleen, and pieces of wood. Frozen ground was only found in the bottom at a depth of about 80 cm below the surface.

In the house were found in front of the partition wall: six harpoon blades (Pl. 3. 8); indeterminable fragment of harpoon foreshaft; ice pick (Pl. 4. 16); fragment of wooden bow and of baleen bow; brace for bow; two sledge shoes; trace buckle; blade of snow knife; two slate knives (Pl. 3. 13 and 15); handle and two blades of slate knife; eight whetstones; two adze handles; two adze blades of siliceous slate (Pl. 3. 22); hammer stone (Pl. 3. 21); drill shank; ulo (Pl. 3. 24); two ulo blades of slate; two-handed scraper of bear femur; bodkin; three lamp trimmers; fragment of cooking pot; four-sided wooden tray (Pl. 6. 10); blubber pounder; snow beater; two top disks of baleen; three dolls (Pl. 8. 21 and 22); swimming bird figure; toy arrow with bone head lashed on (Pl. 8. 15); two toy arrows; two toy arrow heads of bone (Pl. 8. 13) and one of slate; toy sledge runner; bone mounting; flat "sling handle"; fifteen pieces of worked wood, eighteen of ground slate, worked baleen and five baleen knots; knot of seal thong.

Behind the partition: Flat harpoon head, bladeless and barbless, waisted at line hole; butt of ice-hunting foreshaft; brace for bow (Pl. 4. 11); five sledge shoes; two toggles for sledge draught line (Pl. 5. 13); trace buckle; ulo (Pl. 3. 23); ulo blade; two-edged knife blade of slate; drill bit, of slate; bodkin; two-handed

scraper of bear femur; eight whetstones, two with finger grip; four fragments of cooking pot; lamp trimmer; edge mounting; two boot soles; part of gut-skin frock(?); drop pendant of stone; ajagaq of seal scapula; doll; toy foreshaft of ice-hunting harpoon; toy bow and arrow; toy lamp with wick ledge; hand grip of "sling handle", fifteen pieces of worked wood, seventeen of ground slate; three lengths of sinew thread; a seal humerus and a wooden stick both whipped with sinew thread; knot of seal thong.

In the passage: harpoon blade; two legs of sealing stool (Pl. 4. 15); drill shank; drill bit of slate; slate knife; knife blade(?) of chalcedony; three whetstones; lamp trimmer; pyrites; sides of baleen cup; edge mounting; drop pendant of stone

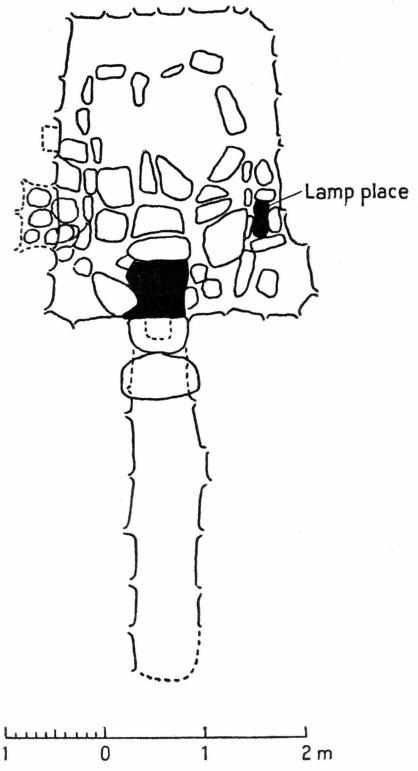


Fig. 13. Plan of House III, 7. Recesses in the wall indicated.

(Pl. 7. 10); toy harpoon head, thin, bladeless and barbless; toy baleen bow; nock end of toy arrow (Pl. 8. 14); top disk of baleen; hand grip of "sling handle"; four pieces of worked bone, fifteen of worked wood, five of ground slate; 32 baleen knots and a baleen hank; plaited sinew thread.

House 7. On Fig. 13 is a plan of this house, which is well-preserved and surrounded by a broad, grass-covered and cracked mound. It is almost rectangular, with a bulge on the south-west corner. It is 3 metres long and 2.8 metres wide at the front wall, 2 metres at the back wall. The floor is paved with flat stones lying on top of a thick layer of grease. Along both side walls there are side-platforms, separated from the floor

by means of stones set on edge. On the platform on the east side is a lamp-place, smothered in grease, and in front of this, in the bulge, is a pit the bottom of which is below the level of the floor stones. In the opposite side-platform is a similar pit, the bottom of which is 15 cm below the floor stones and covered with flat stone. This pit continues in the form of a niche, 30 cm deep, in under the wall. The opening of this niche is 60 cm wide and about 40 cm high. Its sides are entirely of stone, and a large flat wall stone serves as a roof. Presumably this cavity has served for storing meat and blubber. The main platform was dug up by earlier visitors who have been looking for artefacts, but the large flat platform stones were still there. The construction of flat stones placed on edge, to carry the platform stones, was still in position. The other part of the platform consists of gravel lying at a height of about 15 cm above the floor stones. In the cavity under the platform was frozen culture earth with many bones, pieces of wood, and artefacts. The walls are the best built and best preserved in the settlement. The front wall, and the foremost part of the side walls, are built of up to five courses of flat stones forming a solid wall. The rearmost part of the side walls consists at the bottom of large, flat stones standing on end, and above these up to three courses of flat stones lying on their faces. The rear wall is like the front wall, but has up to eight courses of stones. All the walls are about 0.8 metre high. Both in the wall over the door, and in the west wall, there is a small cavity as described in Group I, House 5. Among the many artefacts found in this house a small fragment of porcelain is of greatest interest. It lay in the grease under one of the stones in the east platform.

The passage runs SSE, is 3.6 metres long, and continues 0.7 metre into the house. Its walls are built entirely of large stones; the two innermost roof stones are in position. The bottom was not reached on account of the frozen ground, but, as in the other houses, the passage is lower than the floor. Northeast of the house, just outside the mound, is a stone cache.

In the house were: Inugsuk harpoon head (Pl. 11. 1); two slightly flat (Pl. 11. 3); five harpoon blades (Pl. 11. 9), and an unfinished flat head, bladeless and barbless; two shaft mountings; two butts of ice-hunting harpoon foreshafts; two ice picks (Pl. 11. 23); seal scratcher (?) (Pl. 11. 25); four legs of sealing stool (Pl. 11. 26); mouthpiece for harpoon bladder (Pl. 11. 13); two parts of wooden bows (Pl. 12. 1); cutting board for arrow feathers (Pl. 12. 15); arrow head with screw on tang (Pl. 12. 6); gorge (Pl. 11. 20); eight sledge shoes; two trace buckles; snow knife (Pl. 13. 5); three knife handles of wood and one of antler (Pl. 12. 19); knife blade of slate; whetstone with finger grip; adze handle (Fig. 36); drill shank with copper bit (Pl. 13. 7) and three other drill shanks (Pl. 13. 6); mouthpiece for bow drill (Pl. 13. 3); drill bit (Pl. 13. 9); hand drill (Pl. 14. 9) and two handles for hand drills; bodkin; two lamp trimmers; two cooking-pot fragments; two fire-drilling hearths (Pl. 14. 14); two lumps of pyrites (Pl. 14. 18); small wooden scoop; handle for wooden vessel (?)

(Pl. 14. 10); part of wooden vessel; side of wooden box (Pl. 14. 11); meat stick (?) (Pl. 14. 5); ornamental plate (Pl. 15. 4); four drop pendants (Pl. 16. 15); three pierced bear teeth and two pierced seal teeth; ajagaq of narwhal ulna (Pl. 14. 19); nuglutang (Pl. 15. 8); four tops; two buzzes; doll (Pl. 16. 10); two seal figures; three bear figures; a narwhal figure (Pl. 16. 19) and two models of harpoon bladders (Pl. 16. 21), all of wood; three figures of swimming birds (Pl. 16. 17), and the following toy specimens: flat harpoon head, barbless and bladeless; foreshaft of ice-hunting harpoon; four-sided block for winged harpoon; four fragments of bows; nock end of arrow; slate knife; the sledge (Pl. 15. 16); two sledge runners; snow knife and two thin "sling handles"; furthermore, a pointed stick of wood and 56 pieces of worked wood; two bone mountings and twelve pieces of worked bone, three of ground slate; a length of sinew thread and two baleen knots; an iron nail (Pl. 15. 20) and a fragment of porcelain (Pl. 15. 12).

In the passage: a slightly flat and an entirely flat (Pl. 11. 4) harpoon head with blade slit, barbless; two harpoon blades of slate; wound pin (Pl. 11. 19); leg of sealing stool; two sledge shoes; knife blade (?) of slate; drill shank with bone bit; whetstone; fragment of wooden vessel; part of flat "sling handle"; top; toy umiak; piece of worked whale bone; four pieces of worked wood, two of ground slate.

House 8 was not excavated. It is overgrown with grass and moss; the passage is not in the middle of the front wall.

Houses 9 and *10* are low, willow-grown depressions surrounded by a low mound; they were not excavated.

House 11. A house of the Cape-York type, nearly triangular, with rounded corners, 3 metres long and 3.4 metres wide. Under about 40 cm of loose black earth mixed with plant remains and some bones was the floor, which consisted partly of gravel cemented with grease, partly of flat stones. In the floor-layer there were some wood, a few badly-preserved bones, and very few artefacts. In the two front corners were pits, their bottoms slightly lower than the floor. In the rear of the house were many flat stones on a level with the floor stones. That these are platform stones was to be seen by the fact that under the foremost there was a ditch, about 40 cm deep, full of culture earth, with a number of artefacts (cf. Group I, House 10). The front edge of the platform is about 1.4 metres from the rear wall. At the west wall in front of the platform was a mound of stone and grease, probably the position of the lamp. There are very few stones in the wall, which at the front is 0.3 metre, at the rear 0.8 metre high.

The passage was not excavated to the bottom along its entire length, as all through the summer it contained water. It runs SSE, is 3 metres long, and continues 1 metre into the house. There we reached the bottom, which consists of gravel and lies 0.8 metre below the floor. There are some large stones and several large pieces of driftwood in the side-walls of the passage. Apart from very well preserved wood and baleen, a large piece of meat was found in this passage.

In the house were found: two harpoon blades and two lance blades of slate; handle of throwing board (Pl. 4. 14); leg of sealing stool; toggle for sledge draught line; four fragments of slate knives; knife blade(?) of chalcedony; knife handle of antler; two adze handles; adze head and adze blade; two hand drills (Pl. 5. 12); drill of siliceous slate (Pl. 3. 25); five whetstones, including one with finger grip; ulo handle; sides and bottom of baleen cup; lamp trimmer; cooking-pot fragment (Pl. 6. 14); hearth for fire drilling; ornamental bodkin (Pl. 7. 19); ajagaq of seal scapula; doll; toy bow of baleen and two arrows (Pl. 8. 17); pierced bear tooth; two sledge runners and one cross slat; toy slate knife; two pieces of worked bone, 25 of worked wood, 21 of ground slate; two baleen mountings(?) (Pl. 9. 5); four baleen knots and two lengths of seal thong.

In the passage: unfinished lance blade of slate; harpoon wing (Pl. 4. 13); two parts of baleen bows; sinew twister (Pl. 4. 12); two sledge shoes; trace buckle; adze head; three lamp trimmers; toy slate knife and nock end of arrow; six pieces of worked wood, three of ground slate and two baleen knots.

House 12. Like House 11, of the Cape-York type, but the plan is four-sided, with rounded corners. It is 3 metres long from the entrance to the rear wall, and 3.7 metres wide. Under the turf was a layer of gravel and small stones 30 to 40 cm thick, and below this the floor, which, as in Group II, House 10, consists of a hard layer of gravel cemented with grease, with a few scattered floor stones. Another feature which recalled Group II, House 10, was a number of large rounded stones lying loosely about in the middle of the floor, and the walls, which almost entirely lacked continuous stones. Apparently this house, too, has been plundered for the purpose of obtaining suitable building stone. There were no platform stones, but a ditch about 40 to 50 cm wide and 20 to 30 cm deep, 1.6 metres from the rear wall, with a number of wooden sticks and shavings, slate and flint chips, indicated that the edge of the platform has lain there. On the sides and behind the ditch there was gravel on a level with the floor. In both front corners were pits; that on the east was edged with a mound of grease and gravel. At the front, the walls were 30 cm, at the back 65 cm high.

One wall of the passage was built of large stones, whereas the other contained only one. The bottom falls evenly in towards the house, where, inside the house, it lies 90 cm below the floor. The passage runs SSE, is 3.2 metres long, and 0.6 metre wide.

In the house were found; round harpoon head, barbless and bladeless; seven harpoon blades; ice pick; two nails for sledge shoe; two fragments of slate knives; two single-edged and one two-edged knife blades of slate; ulo handle and three ulo blades of slate; convex-edged flint scraper; cooking-pot or lamp fragment; lamp trimmer; oval bowl bottom; edge mounting; 17 whetstones, two with finger grip; pierced bear tooth; two bead pendants of stone (Pl. 7. 9); toy harpoon head, thin, barbless and bladeless (Pl. 8. 1); toy bow and arrow; toy kayak (Pl. 7. 24); toy snow knife; two toy slate knives and two ulo blades; fragment of "sling handle"; two pieces of worked bone, 21 of worked wood, 54 of ground slate and three of ground siliceous slate; one flint flake, one baleen knot.

In the passage: end block of winged harpoon (Pl. 2. 17); leg of sealing stool; snow knife; arrow head (Pl. 4. 10); arrow blade of slate (Pl. 3. 11); two-edged knife blade (Pl. 3. 19); drill shank; two drill bits, one double; ulo handle and slate blade for ulo; lamp trimmer with three holes; two pieces of worked bone, six of worked wood and three of ground slate.

Field C was excavated west of the passage. Under thick turf was a 30 cm layer of culture earth with many stones. A few objects were found, such as in C 1^1:

An unfinished harpoon head, flat, bladeless and barbless; snow knife and fragment of blade of ditto; ice pick; two sledge shoes; two whetstones, one with suspension hole (Pl. 3. 29); a double drill bit; toy arrow head with cuneiform tang; five pieces of ground slate. In C 1^2: the knife handle (Pl. 5. 3); a piece of worked whale bone and one of ground slate.

House 13 was not excavated. The passage appeared in the form of a very wide channel, which would indicate that the wall stones have been removed.

House 14. A rounded house of the Cape-York type with a bulge on the south-east corner, 3.2 × 3.2 metres. The floor is of gravel, with a few flat floor stones. In both front corners there were grease-lined pits, their bottoms lying about 5 cm below the floor stones; in the one on the east were many bones. The platform lay 25 cm above the floor stones and consisted of gravel; at its fore edge, about 1.2 metres from the rear wall, were some round stones. Under the foremost part of the platform was a culture deposit, about 30 cm thick, with a good deal of wood and some artefacts. Thus, side by side, were a snow knife with two shoulders, and a side prong for a bird dart with unilateral barbs. The walls, which are about 40 cm high, consist of earth with stones here and there.

The passage faces the south and is about 3 metres long and 0.6 metre wide. There are only few stones in the walls; a pair of thick wooden posts in the walls have certainly served to support a roof stone. Whale bone has been used in the construction of the passage roof. The passage also contained a quantity of wood, baleen, and bones, and two large pieces of hide, probably walrus. Particularly conspicuous were the many large pieces of baleen, some of which stood up along the walls. The passage increases in depth along the first 1.5 metres to 0.7 metre below the floor stones, thereafter slowly to 0.85 metre in the part which extends into the house, measuring 0.6 metre in length.

In the house were found: fragment of an Inugsuk harpoon head; five harpoon blades (Pl. 3. 4 and 7); side prong of bird dart, with unilateral barbs; gorge with two holes (Pl. 2. 18), and fragment of ditto; baleen bow and wooden bow (Pl. 4. 1); brace for bow; five sledge shoes; snow knife; handle of slate knife (Pl. 3. 14) and two single-edged slate knives; three single-edged and one two-edged knife blades of slate; knife blade of chalcedony, knife handle of wood for slate blade;

five drill bits, of slate; mouthpiece for drill (Pl. 5. 16); hand drill; two ulos; two-handed scraper of bear femur; bodkin; eight whetstones, three with finger grip; seven cooking-pot fragments; lamp trimmer; two fragments of wooden trays; "sling handle" (Pl. 4. 18); top disk of baleen (Pl. 9. 6); three bird figures (Pl. 8. 10 and 11); two toy bows and six arrows; toy sledge runner and two cross slats; toy ulo blade; toy drum frame (Pl. 7. 14); six pieces of worked bone, 28 of worked wood, 20 of ground slate and ten baleen knots.

In the passage: finger rest (Pl. 2. 19); two sledge shoes; arrow blade(?) of slate; drill bit, of slate; ulo handle; blubber pounder; snow beater of baleen (Pl. 9. 4); ornamental pendant (Pl. 7. 3); doll; worked pieces of wood and baleen; seven baleen knots; two pieces of ground slate.

House 15. It is difficult to determine the original form of the house, as there were no wall stones at all. By following the inner side of the low mound surrounding the house, and the culture deposit on the floor, we found a rounded house which is widest at the front, 3.3 metres, whereas in the direction of the passage it measures 2.8 metres. Accordingly, it must be placed under the Cape-York type. The floor consists of gravel without flat stones. In the corner on the left is a shallow pit in which the knife Fig. 28 was found. Another shallow depression was found in front of the platform about 1.2 metres from the rear wall of the house; the platform itself consists of gravel and lies about 15 cm above the floor. The walls are 0.3 to 0.5 metre high.

In the passage are one or two stones in the walls, which otherwise consist of gravel. It runs SSE, is 2.5 metres long, and continues 0.8 metre into the house. This passage was just like a midden, there being a culture deposit about 50 cm thick with a quantity of wood, baleen and bones.

In the house were found besides the knife Fig. 28: a lance blade (Pl. 3. 2) and five harpoon blades of slate; eight sledge shoes; four single-edged knife blades of slate; handle for slate knife; adze blade of siliceous slate; nine whetstones, two with finger grip; three ulo blades; two two-handed scrapers of bear femur; three cooking-pot fragments; hearth for fire drilling (Pl. 6. 5); oval bowl bottom of baleen (Pl. 6. 7); of toys: flat harpoon head, bladeless and barbless; bow, arrow and lamp with wick ledge (Pl. 8. 29); doll; three pieces of worked bone, seven of worked wood, 23 of ground slate; a knot of seal thong and six knots of baleen.

In the passage: heavy shaft mounting; fragment of harpoon foreshaft; baleen bow; sledge cross slat and seven sledge shoes; knife handle of antler; adze handle; drill mouthpiece and bit; ulo handle and blade; bodkin; two two-handed scrapers of bear femur; toy lamp with wick ledge (Pl. 6. 11); cooking-pot fragment; two lamp trimmers; drum handle (Pl. 7. 15); three toy bows (Pl. 8. 18); toy arrow of wood and arrow head of bone; toy knife of slate; three pieces of worked bone, twelve of worked wood, twelve of ground slate; a piece of worked flint; thirteen baleen knots and four wooden sticks with baleen whipping.

House 16. Fig. 14 shows the house seen from the rear wall. It is rounded, and widest at the front, where the wall bulges outwards and leaves room for two pits. In the bottom of these are flat stones lying at a lower level than the floor, from which the pits are separated by

a mound of gravel cemented with grease and containing large stones. The top of these stones is 20 cm above the floor which, as will be seen, is covered entirely by large flat stones. There are no platform-stones, but a few set on edge have borne the foremost part of it, whether it has consisted of wood or stone. Wood is not improbable in this case, where the distance between the supporting stones is 1 metre, and such large flat stones are not common in this area. Between these supporting stones is black earth with a lot of baleen threads. It is culture earth full of strips of baleen of various thicknesses and lengths; a quantity



Fig. 14. House III, 16, after excavation. In foreground the platform ditch with baleen threads.

of wood and artefacts was also found. Unfortunately, the bottom was not reached, as the excavation of this house was begun so late that it did not thaw; the same applies to the passage. In the lower part of the picture is a portion of the rearmost part of the platform; it consists of sand, on top of which were remains of heather. The platform has been higher than the floor. From the front edge of the platform, which lies about 1.3 metres from the rear wall, to the pit on the west there is a distinct side-platform with edge stones about 20 cm above the floor stones. As the picture shows, there are very few stones in the walls. There had been more, but they had slipped so far into the house that they had to be removed in order that the shape of the house could be determined. The house is 3.2 metres long and 3.5 metres wide.

As I have said, we did not reach the bottom of the passage, but

it was clear that it has lain below the level of the floor. It runs SSE, is 3.1 metres long, 0.5 metre wide, and runs 0.6 metre into the house. A few large stones were found in the walls.

In the house were found: two harpoon blades of slate; butt of ice-hunting harpoon foreshaft; ice pick; sledge cross slat; three sledge shoes; nail of sledge shoe; two trace buckles (Pl. 5. 20); toggle for sledge draught line (Pl. 5. 14); snow knife and blade of ditto; seven whetstones (Pl. 3. 28), two with finger grip; adze blade; bow drill (Pl. 5. 19); double drill bit (Pl. 3. 36); ulo blade; two-handed scraper of bear femur; two fragments of cooking-pots; oval bowl bottom (Pl. 6. 8); lamp trimmer; toy foreshaft of ice-hunting harpoon; toy bow and two arrows; toy slate knife; wooden stick with three holes; seventeen pieces of worked wood; five whipped with sinew thread, one with a baleen knot; also seventeen baleen knots, knot of seal thong, three pieces of worked bone, ten of ground slate and one of ground siliceous slate.

House 17 was not excavated.

House 18. A house of the Cape-York type. Bulges on both front corners with grease-lined pits, that on the east being surrounded by a mound of gravel cemented with grease. The floor consists of gravel and small stones and has no flooring stones. Nor are there any platform stones, but two supporting stones resting on edge on the sides of a ditch containing culture earth. The back part of the platform consists of gravel to a height of about 20 cm above the floor. By the west wall, just in front of the platform ditch, was a small, grease-lined pit surrounded by three flat stones on edge. Possibly this has been the lamp place. In the walls, which at the front are 0.3 metre, at the back 0.5 metre high, are a few rounded stones here and there. The same applies to the passage, which was not completely excavated, as it contained water all through the summer. It is about 2.7 metres long and runs SSE.

In the house were found: two harpoon blades; leg of sealing stool; two knife blades of slate; ulo and part of ulo blade of slate; baleen cutter Fig. 29; ball(?) Fig. 32; toy arrow head of bone with cuneiform tang (Pl. 8. 12); "sling handle"(?) of baleen (Pl. 9. 3); ten pieces of worked wood, one of worked bone, seven of ground slate, one of worked flint; a baleen knot and a knot of seal thong.

In the passage: two-handed scraper of bear femur.

House 19. A low, overgrown depression, which was not excavated.

House 20. Fig. 15 shows the house after excavation. One can distinctly see the special form of Cape-York house, without indentations at the platform and with two small bulges at the front corners. In these bulges, as in most houses of this type, there are pits, the insides of which are covered with blubber and which are separated from the floor by an edging of stone about 10 cm high. There were many bones, and a quantity of grease and meat in the pits. Near one was half a lamp, in the other the handle of an ulo, as well as a block of wood which possibly has been used for blubber-pounding, as it was entirely covered

with blubber. The floor consists of gravel with a few flat paving stones. The greater part of the platform is pure sand lying on top of the gravel that forms the natural substratum. The sand was again covered by a culture deposit about 5 cm thick, mostly consisting of heather remains. As there was so sand anywhere else in the house, and as the sand was covered by a culture deposit, the obvious conclusion is that the inhabitants have covered the platform with a layer of sand, and above it placed heather. At the middle of the fore edge of the platform there has been a cavity with stone sides. It is 1.6 metres long (in the direction



Fig. 15. House III, 20, after excavation.

of the platform edge), and about 0.4 metre wide, and contained a culture deposit about 0.25 metre thick with a lot of refuse. The rearmost part of the platform lies 0.4 metre higher than the bottom of this cavity. The walls, which at the front are 0.8 metre, at the back 0.6 metre high, have almost no stones. There have been a few more than is shown by the picture, but, like Group III, House 16, they had slipped inside and have been removed.

In the innermost part of the passage there are large stones both forming the walls and concluding the prolongation of the passage inside the house. The walls of the rest of the passage contain only smaller and scattered stones, whereas we found large pieces of driftwood, which probably have been used in the construction. The culture earth also contained much wood and some baleen. The passage is 3 metres long and 0.6 metre wide, and runs SSE. It extends into the house 0.3 metre.

In the house were found: two harpoon blades of slate; sledge shoe; knife handle of wood (Pl. 5. 5); two-edged knife blade of slate; four whetstones; drill shank and bit of smoky topaz; two drill bits, of slate; wedge; two ulos; ulo handle and blade; five lamp trimmers, one with three holes; two fragments of cooking pots; oval cup bottom; ornamental plate with dot ornaments; toy bow; two toy cooking pots (Pl. 8. 31); toy sledge runner; top disk of baleen; doll (Pl. 8. 19); bone mounting (Pl. 5. 24); two flat "sling handles"; ten pieces of worked wood, 21 of ground slate; three baleen knots.

In the passage: harpoon blade; ice pick; handle of snow knife, and toy bow.

House 21 was not excavated.

House 22. Like Group III, House 7, it is surrounded by a grass-grown mound; there was also grass in the bottom of the house. Fig. 16



Fig. 16. House III, 22, after excavation, seen from rear wall. Lamp-place to the right.

shows the interior after the turf had been removed, seen from the rear wall. It is a well-preserved house with a rectangular, slightly trapeziform plan, with faintly bulging corners at the front; 3.5 metres long, 3 metres wide at the front wall, and 2.15 metres at the rear wall. Under the turf directly above the floor stones, and up over the side platforms, lay the remains of a large, hairy seal skin made up of several pieces sewn together. Possibly it has covered the walls or ceiling, or formed the roof over the front part of the house, similar to what we find in the houses of the Polar Eskimos[1]). The floor was entirely covered with flat stones, the sill stone being particularly large. To the right of this, up

[1]) Steensby, 1910, page 320.

along the front wall, was a "seat", formed of a flat stone laid over four smaller ones. Along both side walls, from the front to the edge of the platform, are side platforms with a stone-set edging 20 cm above the floor. The left one (on the east) is divided into two, the foremost being a pit covered with grease. A similar, but less deep, pit was found in the other side platform; on the picture it is concealed by the wall, which at this point had slipped into the house. In the side platform on the right was a lamp place just in front of the main platform. The rearmost 1.45 metres of the house were occupied by the main platform, which is fairly well preserved. There is a distinct edging, formed of four large flat stones 20 cm above the floor stones. Under the two largest, which rest upon flat stones set on edge, are cavities which continue in behind them. At the back, these cavities have also been covered with flat stones, but these have fallen in. In these cavities was a layer of culture earth 40 cm thick, containing plant remains, wood shavings, bones, feathers and hair, and a number of artefacts. The remainder of the platform consists of gravel and sand. As the picture shows, the walls consist entirely of stones of up to four courses. The front wall, which has collapsed a little over the passage, is 1 metre high, the side walls and rear wall are 0.9 to 1 metre high.

The passage is not in the middle of the front wall. It is 4 metres long and 0.6 metre wide; over the innermost 1.8 metres are roofing stones, but only some are in position. In the covered portion the side walls consist entirely of stone, whereas at the entrance they are of gravel with occasional stones. The bottom falls evenly from the outside surface into the house; it could not be followed along its innermost length, as it did not thaw out; nevertheless it has lain below the level of the floor. In the outer half of the passage there were no fallen-in roof stones; I am therefore inclined to believe that, as in Group I, House 6, only the innermost part of the passage has been roofed, whereas in the outer part the walls have only served as a shelter.

On both sides of the passage stone-set caches were found in the mound.

In the house were found: three flat harpoon heads, bladeless and barbless (Pl. 11. 5); flat harpoon head with blade slit, barbless; three harpoon blades of slate (Pl. 11. 8); leg of sealing stool; part of harpoon bladder; end of bow; arrow head (Pl. 12. 3); nine sledge shoes; trace buckle; handle of snow knife; knife handle of antler and two knife handles of wood (Pl. 12. 18); bodkin; hand drill; lamp trimmer; fire drill; cooking-pot fragment (Pl. 13. 13); "sling handle" (Pl. 13. 4); ornamental plate (Pl. 15. 3); pierced bear tooth and musk-ox molar (Pl. 15. 5); drop pendant; six tops of wood; four buzzes; three bear figures (Pl. 16. 22); three seal figures; two narwhal figures (Pl. 16. 18); a fox figure (Pl. 16. 16) and a hare figure (?) (Pl. 16. 24) of wood; walrus figure (Pl. 16. 20); figure of swimming bird, and the following toys: flat harpoon head, bladeless and barbless; bow, two arrows (Pl. 16. 8);

two snow knives of wood; umiak (Pl. 15. 13); two sledge runners and two cross slats; "sling handle" (Pl. 16. 5) and an unfinished cooking pot (Pl. 15. 21), the hook (?) Fig. 40; four pointed sticks of wood; 34 pieces of worked wood, fourteen of worked bone, two of ground slate; a length of plaited sinew thread; bottle glass (Pl. 15. 14).

In the passage: seal scratcher (?) of bear jaw; drop pendant; toy drum frame, two pieces of worked bone, one of worked wood.

Houses 23—25 are low, scarcely-distinguishable depressions in the ground; they were not excavated. House 25 differs from the other houses in the settlement by its peculiar form. There are three bulges, one on each side of the passage and one at the rear. The two foremost bulges run into one, but the rearmost is connected with them by a short passage. It looked to be a house with three rooms, but unfortunately it could not be excavated, as there was water in it all that summer. As late as September 1st the first spadeful of earth revealed clear water.

General Observations on the House Ruins.

In the foregoing the house ruins have been subjected to a detailed description, because we lack such a description for these low, overgrown houses in Northeast Greenland, because the house is one of the most important culture elements, and because the form of the house makes an important contribution to the solution of the problem of the migration of the Eskimos.

The features common to the twenty-three houses that were excavated are that they were entirely or partly dug into the ground, that the passage is at a lower level than the floor and continues more or less into the house, where it ends in steep walls up against the floor, which always is horizontal[1]). Another common feature, a negative one, it is true, is that they all lack every sign of roof over the house itself. But as no flat stones imaginable as having been used for roofing purposes were found either in or just outside the ruins, I consider that the only material employed the roof in construction has been wood or whale bone, turf, and possibly skin. Having regard to the relatively abundant supplies of drift-wood to be found on Clavering Island, this is not improbable. Furthermore, I assume that Dr. McI. Johnson has seen remains of roof constructions, as he writes: "The roof is of light structure, formed of turf supported by wooden beams"[2]). From Scoresby Sound Ryder reports that the roof consists of wood and whale bone[3]). But then one might ask, where are the pieces of wood that have formed the roof? The answer is that they may have rotted away, or they may

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[1]) We found no floors sloping from the edge of the platform down towards the bottom of the passage, as shown on Bendix Thostrup's Plate II.

[2]) 1927 Page 254.

[3]) Page 298.

have been taken when the Eskimos left the houses. In some of the older houses we found really large, half-rotted pieces of wood, which may have served this purpose, but in the later, well-preserved houses one should expect to find these wooden beams better preserved; as there were none at all, they must have been removed. Nor is it impossible, I think, that in winter the Eskimos have used their tent-poles in the construction of the winter houses. In the Danmarkshavn region, where there is not so much drift-wood, Bendix Thostrup considers that the roof has been entirely built of stone[1]).

From the shape and state of preservation of the houses I consider I can divide them into three types. To my mind the state of preservation alone is not sufficient for a classification, as it may vary from place to place according to the nature of the ground and the density of the vegetation. The classification only becomes quite certain when state of preservation and shape conform. The three types are:

1. Rounded houses, dug entirely into the ground, with one or two rooms, with no pits by the wall in the foremost part of the house, and with no cavities under the front of the platform. Prior to excavation they are entirely overgrown, with a low mound surrounding a faint depression, from which the passage runs in the form of a ditch. To this type we place Group I, Houses 3 and 4, and the double house, Group III, House 1. Whereas the latter two in form are distinct from the following type, Group I, House 3 is widest in front of the middle, in which feature it recalls the Cape-York house. It lacks both pits and "platform ditch", and is thus a transitional type. It is possible that this type also includes Group III, House 2, which also seems to be a double house. Whether the other, unexcavated, completely overgrown houses belong to this or the following type cannot be decided, as they are so demolished that nothing can be concluded as to their original shape from their present appearance.

The houses of this type are almost oval, with the greatest dimension in the direction of the passage. The passage is lower than the floor, and continues into the house, where its bottom is 0.7 to 0.9 metre below the floor. The floor sometimes has a few flat paving stones, but for the most part consists of gravel. There is no indication of any platform; nevertheless it must be presumed that the main platform has lain in the rearmost part of the house, where there never are flat stones. The large stones lying in the rear of Group III, House 1A, are probably wall stones that have fallen in. The walls are only partly built of stone. In the passage, however, large stones have usually been employed for the innermost part. Finally, these three houses lie far back in the settle-

[1]) Page 192.

ment, all on slight eminences in the terrain, perhaps remnants of terraces.

In what direction shall we turn to find houses of a similar type? If we take three regions where systematic excavations of Eskimo ruins have been made on a large scale, Northeast Greenland, north of lat. 76° N., the Angmagssalik district, and the Sukkertoppen district in West Greenland, we see that in the first-named area there are no houses of this type[1]). True, there is a double house (132 and 133), but it differs from III, House 1 in shape and in having a branching passage, one to each room. On the other hand, we have in Angmagssalik Mathiassen's type 1, which exactly corresponds to ours[2]). We have a double house of appearance similar to III, House 1, in the Portusoq house V[3]), and the lower passage, for instance in Kangartik, house VII[4]), and Sukersit, house IX[5]). Proceeding to West Greenland, we find that Mathiassen's characteristics of the small round house ruins in Kangâmiut, Sukkertoppen district, are applicable to the Dødemandsbugten type 1[6]). The shape may be round or oval, the passage is "for the most part" set with stones, the bottom "usually" lies below the level of the floor, and "in several of the houses at Utorqait" continues into the house; the platform "as a rule" is not paved. There are also several double houses in that area.

Mathiassen is undoubtedly right in regarding the small, round houses of the Kangâmiut area as being "the whale bone house of the Thule Culture, found transplanted here on Greenland soil"[7]). From all the signs it is also the whale bone house which we have in the Dødemandsbugten house type 1, but, as in Kangâmiut, without, or with very little, use of whale bone. As the whale bone house is apparently to be found in Angmagssalik too, the obvious conclusion is that this type of house has reached Northeast Greenland south about Cape Farewell, and I consider that this, in fact, has been the case. It is true that they are also be found in the Cape-York district, as is only natural, not only in the special Cape-York type with indentations at the front edge of the main platform, but also as round or oval houses in the construction of which whale bone has been used[8]). Unfortunately, we know nothing of the age of these houses; but if the Cape-York house

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[1]) Bendix Thostrup, Pl. II.
[2]) Mathiassen, 1933, page 11.
[3]) l. c., Fig. 6.
[4]) l. c., Fig. 16.
[5]) l. c., Fig. 23.
[6]) Mathiassen, 1931, page 56 seqq.
[7]) l. c. page 58.
[8]) Mathiassen, 1927, II, page 147.

is a derivative of the whale bone house, as Mathiassen believes, it must be the earliest and date from a time when whale bone was obtainable. There is much to indicate that the settlement of Northeast Greenland is not particularly old, and, as the Cape-York house is the predominating type, whereas the whale bone house has not been found in Northeast Greenland north of Dødemandsbugten, I consider that it cannot have come there north about Greenland. This argument, however, does not apply to the double house, as we know this type in the Cape-York district up to fairly recent times; a Polar Eskimo woman drew a double house for Steensby[1]), and similar double houses are figured by Wissler from Comer's sketches[2]). All these houses, however, differ from Group III, House 1 in having two platforms with one common floor, whereas Group III, House 1 consists of two rounded rooms connected by a narrow passage; finally, we can resort to the artefacts found in the house, and these most decidedly indicate an immigration south about Greenland.

2. Entirely overgrown and collapsed houses. Fig. 17. The shape varies, from rounded houses with the greatest breadth in front of the platform, to square houses with rounded corners. They have one or two grease-lined pits at the front near the wall, and a cavity under the foremost part of the platform.

In most cases the house has its greatest dimension at right angles to the direction of the passage. As in type 1, the passage is lower in relation to the floor, and extends some distance into the house. It often has stone-set walls, but there are never any roofing stones in position. Wood and whale bone have been employed in the construction. As the wall at the front is straight or slightly curved, we may here talk of a front wall. At the back, the wall forms either a smooth curve (II, 2, and III, 14), which in some cases goes to a point, so that the house has a rounded, triangular appearance (II, 3), or there may be a shorter or longer stretch of straight rear wall, so that we get a rounded, four-sided house (for instance III, 12). In most cases, however, the rear wall is rather doubtful, partly because as a rule there were no stones in it, partly because the culture deposit on the platform was mostly very thin. For the rest, the walls in the fewest cases consist entirely of stone; as a general rule they are of earth, with a stone here and there. In two cases (II, 10 and III, 12) it appeared as if stones had been removed for use in other houses, and this possibly has been the case with others. The floor may be entirely covered with flat stones (II, 2 and 3; III, 16),

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[1]) Steensby, 1910, Fig. 15.
[2]) Wissler, Fig. 32.

or consist exclusively of gravel, in which case it is usually cemented with grease (for instance III, 12). In either one or both of the front corners, which often bulge out and form a rounded niche, there are pits, that is to say, basin-shaped depressions, the bottom of which lies lower than the floor, and the sides of which are entirely covered with a layer of grease. In the bottom there is sometimes a flat stone, as in III,



Fig. 17. House III, 5, before excavation.

House 16. Out towards the floor they are often set with stone or have a mound of gravel cemented with grease. They are nearly always full of bones, which often bear traces of having been in fire. A frequently found feature was more or less burnt seal flippers. In two cases we found a quantity of baleen. The significance of these pits is not quite certain. The layer of grease, which recalls what is found on lamps and cooking pots, would indicate a cooking place.

A side platform higher than the floor and separated from it by flat

stones was found in II, 3, III, 6 and 16. In II, 8, III, 6 and 18, there is a lamp place by the wall just in front of the main platform. In only one case (II, 2) is this platform covered with flat stones, some of which rest over a cavity in the foremost part. In some are stones set on edge which have borne the platform stones (II, 3, III, 3, 16 and 18), and in the others only the cavity, which was full of culture earth containing refuse. The bottom of the cavity may be as much as 50 cm below the floor. In most houses the greater part of the platform has consisted of sand or gravel, over which in II, 2, III, 16 and 20 there were remains of heather. A layer of the same plant, *Cassiope tetragona*, was found by Therkel Mathiassen in a house at Naujan[1]). Usually the platform is about 20 cm above the floor.

In the foregoing, several houses have been described as being of the Cape-York type, but this does not mean that they were exactly like the Cape-York House. On the contrary, they all differ from it in one very important feature, namely, the indentation at the edge of the platform, which is due to a thickening of the wall at this spot. According to Steensby and Mathiassen, the whale bone house is a forerunner of the Cape-York House, but in the absence of whale bone or wood the Polar Eskimos have been compelled to build the roof of stone[2]). The purpose of thickening the wall was consequently to support the counterweights which held the roof stones in position, and also to diminish the distance between the walls, so that the stones could reach over[3]). This measure, however, has not been necessary in Dødemandsbugten, where there has undoubtedly been an ample supply of driftwood, and for this reason the indentation at the main platform has disappeared. In this theory I am supported by a verbal report from Peter Freuchen, who has lived for a number of years among the Polar Eskimos, to Therkel Mathiassen[4]), to the effect that the Polar Eskimos, when they have sufficient wood for their roof construction, again adopt the round form of house, as the heat circulates better in a round house than in a house with so many corners.

If we disregard this one incongruity with the Cape-York house, it appears that they agree on so many points that it is justifiable to say they are of the Cape-York type. A comparison between these particular houses and Steensby's plan and longitudinal section through a Cape-York house[5]) will show the following similarities: the sunken passage, which continues into the house, where there is a steep slope up to the

[1]) Mathiassen, 1927, I, page 12.
[2]) Steensby 1910, page 315; Mathiassen, 1927, II, page 148.
[3]) Steensby, 1910, Fig. 10.
[4]) Mathiassen, 1927, II, page 148.
[5]) Steensby 1910, Figs. 8 and 9.

floor, which is paved. The platform, which is raised above the floor, and whose rearmost part is formed of the permanent substratum, whereas under its foremost part there is a cavity formed by stones set on edge which carry the flat platform stones. Finally, there is the form, which, with the exception of II, House 10, conforms in having its greatest breadth just behind the front wall. As regards the pits at the front wall, I consider that they are derivatives of the side platforms of the Cape-York house, which fill the corners between the front wall and the edge of the main platform; in II, House 2, the east pit runs right into the platform, and in the best-preserved houses (II, 3 and III, 16) the pit passes directly into a side platform which reaches to the main platform. And finally, the lamp has had its place on the side platform of the Cape-York house, whilst blubber and bones indicate that in the Northeast Greenland houses the pit has served as a cooking place. Despite its square form, II, House 10 has been included in this group just because of the platform ditch and the pit. It is true that both these features occur in the next house type, but in state of preservation it more recalls the houses under review here, even if it seems to be one of the last of this type to be inhabited. Finally, several of the houses form a transition to II, House 10 in having a shorter or longer length of straight rear wall.

There is nothing new in the fact that the Cape-York house has been found in Northeast Greenland. In his work "Archaeology of the Central Eskimos", Therkel Mathiassen has drawn attention to the fact that the Cape-York house is the dominating type of house in the Danmarkshavn region[1]). There we have it in its original form[2]), as a glance at Thostrup's Plate II will show. Yet the rear wall is flattened, a feature now found again in Dødemandsbugten. It is natural that in Danmarkshavn region we find the Cape-York house unchanged, with its indentation at the main platform, for in those northern parts wood is very scarce[3]), so that, as at Cape-York, the Eskimos have been obliged to use stone in their roofs. Bendix Thostrup[4]) considers that all the houses investigated have had roofs of stone; in fact, on several houses the roof is partly preserved[5]). There, too, however, are houses which, judging from the plan, can scarcely be imagined to have had a stone roof without the support of timber or whale bone. The houses I mean are the quadratic houses (66, and 68—71) at Syttenkilometernæs, and Houses 399, 402,

[1]) Mathiassen 1927, II, page 149.
[2]) The so-called pear shape.
[3]) Bendix Thostrup, page 191.
[4]) l. c., page 192.
[5]) l. c., Fig. 44.
[6]) l. c., page 236.

404 and 405 at Snenæs, which, unfortunately, were not excavated. On the other hand, Houses 132—134, which are also quadratic if anything, were excavated; as to 134 Thostrup says: "The roof was in ruins; as roof materials had been used large and small, flat stones." As the roof is in ruins, it is not impossible that there once have been beams to support the stones.

With regard to the relative ages of the houses, Thostrup divides them into three groups according to their state of preservation: "Between the oldest and the second period, to judge from the ruins, there has been a long stretch of time — several hundred years! But between the second-last and the latest period the difference in age has not been nearly so great"[1]). The houses at Syttenkilometernæs and Snenæs belong to this oldest group, which in state of preservation corresponds to house-types 1 and 2 in Dødemandsbugten. However, the only two houses of this group excavated, 392 and 398 on Snenæs, were both pearshaped. Accordingly it would seem as if the two forms occur contemporaneously, which means that in certain cases they must have had access to other building material than stone, whether this has been wood or whale bone.

Now, has the square form originated in Northeast Greenland, or is it the result of influences from elsewhere? The only place in Greenland at which we know quadratic houses is the Cape York district, from which Steensby reports that: "Some of the oldest ruins were considerably larger than the houses now used, and had a more square-shaped ground plan"[2]). As the dominating type of house in Northeast Greenland comes from the Cape-York district, the obvious assumption is that the quadratic form also came from there. Two things must be observed, however; in the first place, the ruins were not excavated, for which reason they cannot with certainty be said to be square and in the second place they are much larger than the houses now in use, that is to say, the Cape-York house. This latter, however, is approximately of the same size as the quadratic houses in Northeast Greenland. Another possibility is influence from the south, for in the Angmagssalik district we find rounded four-sided houses together with the round houses of the earliest settlement, and in the sixteenth and seventeenth centuries entirely rectangular houses[3]). I think Mathiassen is right when, in the houses of the Danmarkshavn region, he sees a mixture of the Cape-York type and four-sided houses from Angmagssalik. The same may be applied to Dødemandsbugten, where, in house type 2, we have all the transitions from the Cape-York house to the quadratic house with rounded corners.

[1]) Page 335.
[2]) 1910, page 307.
[3]) Mathiassen, 1933, page 66.

3. Rectangular to trapeziform houses with the greatest dimension in the direction of the passage. They are partly dug into the ground, have well-preserved stone walls, and floors covered entirely with flat stones. The passage is more or less well preserved, but with the roof stones always in position. They are surrounded by a thick grass-covered mound interspersed with deep cracks. Fig. 18.

This type comprises I, Houses 5 and 6; II, Houses 1, 4, 5 and 7, and III, Houses 7 and 22. I would also place to this type I, House 2,



Fig. 18. Houses I, 5 and 6, before excavation. Seen from rear.

and II, House 9, which may be somewhat more collapsed than the others but recall them in form. Houses of this type undoubtedly form the last settlement in Dødemandsbugten. The bottom of the houses is covered with a layer of turf, and under this lie the floor, main platform and side platforms just as the Eskimos once left them. In one case (I, House 6), the passage, too, was completely preserved, so that it was possible to creep through it into the house. Actually, only the roof was lacking, but as already stated, this has undoubtedly consisted of wood, which probably the inhabitants took with them when they left the settlement.

Apart from the state of preservation, these houses differ from house-type 2 only in being narrower and by always having sharp corners at the back. The front corners are sometimes sharp (II, Houses 1 and 7), but for the most part are rather rounded, with more or less pronounced bulges, as in the foregoing type. The similarity is still greater in the

interior arrangement: at the front, a stone-paved floor, at the rear, and as a rule 20 cm above it, a main platform, the foremost part of which consists of flat stones with a cavity underneath; the rearmost part consists of gravel. On one or both sides of the floor there are side platforms, likewise about 20 cm above it. On the side platform, close to the main platform, the lamp has had its place, but in addition several houses have grease-lined pits, possibly cooking places, in the front part of the side platform, where, in these cases, the wall bulges out. In I, House 5, II, House 1, and III, House 7, there is a small cavity or niche in the front wall over the entrance hole, possibly used for storing small objects. In III, House 7, there was a similar cavity in one side wall. Nothing can be said as to whether there have been similar recesses in the earlier houses, as the front wall in every case had fallen

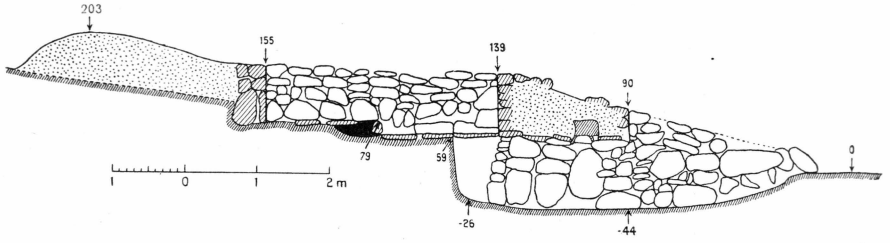


Fig. 19. Longitudinal section through House I, 6. The figures give the relative heights in cm. The stiffled patches are fill.

in over the passage and the remainder of the wall was badly preserved. Finally, mention should be made of a niche about 30 cm deep in the wall of III, House 7. Its bottom, which is paved with flat stones, lies lower than the floor. This niche has no doubt served for the storage of meat and blubber. Whereas the houses of the foregoing type lie rather deep down in the earth, the floor always considerably lower than the surface of the ground, the houses of this type are rather more superficial. As will be seen from the longitudinal section of I, House 6 (Fig. 19), the ground surface in front of the passage, the front part of the floor, the edge of the platform, and the ground surface behind the house, lie on a straight line which corresponds to the slope of the terrain. This means that the passage is entirely buried in the ground, the floor and platform are formed of the flattened ground surface, whilst the lower part of the rear wall and a part of the side walls have their outer side resting against the natural ground surface. The other part, for instance, the whole of the front wall, is built on the ground. Now, however, the outer side of the walls cannot be seen, as they are entirely buried in the mound which forms the whole ruin. As has already been stated (page 25), the mound contains loose brown fill, principally consisting of plant remains. This undoubtedly is decomposed turf which has been piled

up round the outer side of the walls to keep out the cold. On account of the high percentage of organic matter, the soil here is very fertile, as indeed is indicated by the lush green grass carpet. Possibly the cracks so often mentioned are due to drought. The grass-covered, cracked mound has been made use of among the features of this type of house because these ruins thereby become so different from the earlier ones. It is true that the latter are also surrounded by a mound, but in the first place it is lower and narrower and uncracked, and secondly it is covered with the vegetation that grows in the settlement round about the ruins, heather, for instance. There are two exceptions to this, however, as II, Houses 3 and 10 have a rather cracked mound, but, judging from the artefacts contained in them, they also belong to the latest of this house type. I imagine, therefore, that the earlier ruins have had a similar mound of turf, from which the organic matter has been washed out in the course of time, and the luxuriant vegetation has given way to a more hardy type.

It is not strange that this, the most well-preserved and latest house type, has become the best-known in Northeast Greenland, having regard to the fact that it is the most conspicuous and the most easily accessible to investigators. Thomsen calls it the Northeast Greenland type, although in this he includes the foregoing house type[1]). This is right, in so far as the two types resemble each other greatly and undoubtedly spring from the same origin, the Cape-York house, possibly with influence from the four-sided houses of the Angmagssalik district. If I divide Thomsen's Northeast Greenland type into two, it is because of the state of preservation, and also — and principally — because of the elongated form which more or less approaches the rectangular. In this they resemble Angmagssalik's small rectangular houses of the sixteenth century, and it is also probable that the influence comes from these as Mathiassen thinks. I must not omit to mention, however, that in the large Eskimo settlement "Eskimopolis" in Buchanan Strait, Ellesmere Land, there are houses very similar to those in Northeast Greenland[2]); one of those excavated (Fig. 6) is rectangular, with a bulge at one corner. It is possible that there is a connexion between these houses and Type 3 in Northeast Greenland, but in the first place the drawing of the plan is only sketchy, and secondly, no remains were found in them, a circumstance which makes a real comparison impossible. A comparison between the houses of this type at Dødemandsbugten and the other houses in Northeast Greenland shows that they have most resemblance to the houses in the Danmarkshavn region which Thostrup, according to state of preservation, reckons as the latest,

[1]) Thomsen, 1928, page 288.
[2]) Simmons, p. 190—191.

namely, 523 and 524 at Rypefjældet, and 406 and 407 at Snenæs[1]). As in Dødemandsbugten, these are either trapeziform or rectangular with bulges at the front corners. The houses in parts south of Clavering Island, however, are mostly referred to as rectangular. A sketch of the settlement at Cape Tobin shows six rectangular and one irregular four-sided house[2]). Ryder, too, always talks about the houses as being rectangular, although the rear wall, as a rule, is wider than the front wall[3]). It would thus seem as if the rectangular house has remained unchanged in the southern part of the area, whereas in the most northerly part it has been influenced by the Cape-York house.

Tent Rings[4]).

Whereas a large number of the settlements in Northeast Greenland consist either of winter houses or of tent rings, Dødemandsbugten has served both as a winter settlement and as a summer settlement. The Eskimos have lived in their houses only in winter, and in summer have moved out into tents. When one has seen how the melt-water streams in May and June flow over the settlement and turn it into a swamp, one understands why the Eskimos have left these damp holes in the ground and erected their airy tents on dry spots.

In Dødemandsbugten there are twenty-five tent rings, some of them among the house ruins, others to the east and west of them. That the tents have been pitched on the driest spots is very conspicuous in Ruin group II, which, throughout the whole of June, was overflown by melt-water streams, whereas on the three places where there were tent rings it was completely dry all the time. The largest assembly of tent rings lies to the west of Group III. There is a terrace, consisting mainly of stones the size of a man's hand and lying about three metres above the high-water mark. At the edge of this terrace, which terminates in a bluff down to the sandy beach, is a row of tent rings. The ground material is so loose that the water quickly runs through, and consequently the Eskimos have had a great fondness for these terraces as camping grounds. I have seen several on the south coast of Clavering Island and on the south coast of Wollaston Foreland. The remainder of the tent rings lie on the dry, stony terrain east of Group II.

The tent rings are of the usual Eskimo type, a ring of stones which have lain upon the edge of the tent-sheet. Fig. 20. The stones vary in size, but on the whole are as big as a man's head. In half of the tent

[1]) Bendix Thostrup, Pl. II.
[2]) Amdrup, Fig. 5.
[3]) Ryder, page 296 and Fig. 2.
[4]) In the text, and on the plans, indicated by "Tr." and a number.

rings there is a platform edge in the form of a row of stones lying across the ring. The shape varies from circular to oval, but as a matter of fact they differ greatly in form. Tr. 25 is thus rounded triangular, with a straight front side, at the middle of which the doorway has been. In the oval rings the platform edge usually lies parallel with the long axis. The size varies from 4.2 × 3.3 metres to 2.5 × 3 metres, but as a matter of fact I do not consider that too much weight should be attached to the exact shape and size; the placing of the stones apparently



Fig. 20. Tent ring 5.

is too casual for that. In the following is a very brief description of the different rings.

Tr. 1 lies right between the east and west groups of houses in Group I, twenty metres from the high-water mark. It is oval, 4 × 3 metres, and has no platform edge.

Tr. 2—9 lie on the stretch between I and II, numbers 2 and 3 closest to I, the others two hundred metres further west and close to II. They all lie less than twenty metres from the high-water mark.

Tr. 2 is practically circular, with a diameter of about 3.5 metres. The two ends of a platform edging can be seen, but the middle is lacking.

Tr. 3. Rounded-triangular, widest at the front, and with a platform edge parallel to the front wall. This ring is four metres from front to back, the platform edge is 3.7 metres long and lies 1.75 metres from the back.

Tr. 4 is almost oval, with gaps between the stones. It is about 3 × 2 metres and has no platform edge.

Tr. 5 (Fig. 19). Oval, with a platform edge across the middle. The length is 4 metres, the breadth 3 metres. On one long side is an opening which may have been a doorway. There were seal bones in and about this ring.

Tr. 6. Irregularly-round, 3 × 3 metres, with a platform edge almost across the diameter.

Tr. 7 is a small, oval ring with many stones. In the longitudinal direction of the ring there is a platform edge 0.8 metre from one side. The entire breadth is 2.3 metres, length 2.7 metres.

Tr. 8. Oval to circular, with a platform edge almost at the middle. About 3 × 2.7 metres.

Tr. 9 is greatly disturbed owing to the stones in two places having been piled into heaps. The diameter is about 3.6 metres.

Tr. 10—12 lie below the houses in Group II (Pl. 17).

Tr. 10 is small and badly disturbed. There seems to have been a platform edge. A narwhal skull forms part of the row of stones. 2.5 × 2 metres.

Tr. 11. Circular, apparently without platform edge; about 3.5 metres in diameter. Another narwhal skull in the ring.

Tr. 12. The shape somewhat uncertain owing to disturbance. About 2.6 × 2.3 metres.

Tr. 13—23 lie on the aforementioned stone terrace west of III, distributed over a stretch of about 150 metres. None of the tent rings lies more than 10 metres from the bluff. Inside the rings the otherwise uneven surface has been smoothed out.

Tr. 13. Irregular-oval with gaps in the stones. There is a hint of a platform edge at right angles to the longitudinal access of the ring, and on the short side, facing the sea, possibly a doorway. 4 × 3 metres.

Tr. 14 almost circular, with a diameter of three metres. The platform edge is not quite across the middle.

Tr. 15—17 are so incomplete that no exact measurement or shape can be indicated.

Tr. 18. Oval, with many rather small stones, close together. 3 × 2.6 metres. At right angles to the longitudinal direction of the ring, almost at the middle, is a distinct platform edge.

Tr. 19 is circular, with more scattered stones. It is 3 metres in diameter, with a length of platform edge at the middle.

Tr. 20. A circle of stones without platform edge. The diameter is 4 metres.

Tr. 21 is so badly disturbed that measuring was impossible.

Tr. 22, circular, with rather scattered stones; 3.5 metres in diameter. No platform edge.

Tr. 23, like Tr. 22 but only 3 metres in diameter.

Tr. 24 and 25 lie side by side on the slope just to the east of Group I.

Tr. 24 is oval, with a distinct platform edge of large stones at right angles to the longitudinal direction of the ring. 3.1 × 2.6 metres.

Tr. 25 is more complicated than the others. As already mentioned, it is, if anything, rounded triangular, with a flat front side, at the middle of which is an opening, possibly the door. At the middle of the opening lies a stone, which may have served to hold down the tent flap[1]). In the middle of the ring lies a row of stones parallel with the front, probably a platform edge. From each side of the doorway to the platform edge runs a row of stones, so that apparently there has been a floor space facing the doorway, a side platform on each side, and a main platform at the rear. Here, then, we have a division corresponding in very way to the interior of a Cape-York house. Of course it may be purely chance that the stones lie in this manner, but Bendix Thostrup figures a tent ring at Rypefjældet arranged in a similar manner[2]); on this the side platforms (which Bendix Thostrup calls the floor place) are covered with flat stones. The same is the case with the tent rings at Scoresby Sound, according to Ryder[3]). Tr. 25 is 4.20 metres in the direction of the platform edge, 3.30 metres in the opposite direction. The platform edge lies 1.60 metres from the rearmost point of the ring.

Unfortunately nothing can be said as to how old these tent rings are, or to what culture period they have belonged. We found no artefacts in them, and they vary so much in shape that no types can be set up. There is every transitional form from circular to oval, with or without platform edge. Some of them, however, have undoubtedly been used throughout the whole period of the settlement, as, of course, the Eskimos used the rings that already lay to hand. Tent rings like those in Dødemandsbugten are extraordinarily common throughout the whole of Northeast Greenland, and they do not differ much from tent rings in all other parts of Greenland. On the other hand, Dødemandsbugten has none of the solid round or oval tent rings of large, close-set stones which are characteristic of the Thule culture[4]).

Thanks to Clavering, however, we know something of what the Northeast Greenland tent looked like in 1823. Clavering writes on page 21: ".... a small tent made up of seal skin, pitched upon the beach within a few yards of the high water. The tent was small occupying

[1]) Bendix Thostrup, page 194.
[2]) l. c., Plate III.
[3]) Ryder, page 302 and Fig. 4A.
[4]) Mathiassen, 1927, II, page 129.

a space about twelve feet in circumference, and about five in the highest point in the middle; the framework was composed of wood and whalebone...". An error must have found its way into this description, for a tent with a circumference of twelve feet, i. e. with a diameter of 1.16 m, has never been inhabited by Eskimos. If the word had been "diameter" instead of "circumference", the dimensions of the tent would have matched those of the tent rings.

Graves.

In the settlement itself, and in its immediate vicinity, there are 30 graves. This includes only such arrangements of stones as can with certainty be identified as graves by their contents of human bones or grave goods, or by their construction, for there are also stone settings that are so destroyed as to make it impossible to determine whether they are disturbed graves or meat caches. Most of the graves had been opened and were more or less dispersed, a few contained entire skeletons, and only very few contained grave goods.

These graves differ greatly in appearance, all according to their situation and the nature of the material. Where a grave stands alone and is built of large stones with one or more flat sides, it forms a massive stone cist with vertical walls and an almost rectangular plan. Large flat stones have been used as a covering, often supported by long wooden poles. Small stones as a rule have been piled up outside the cist, so that altogether it looked like a heap of stones. The same is the case with those built alongside large boulders of the solid rock, which thus form one or more sides of the grave. Another type of grave was found on the terrace behind Groups I and II; there the surface has a number of crevices about a metre wide and filled with rather large stones. These natural accumulations of stones, probably the result of solifluction, have been used by the Eskimos for their graves. The removal of a suitable number of stones has formed a cavity in which they have laid the body, and afterwards piled stones over it. To prevent the stones from lying up against the body, long pieces of wood have in most cases been used to support the covering stones. These graves are very difficult to discover in the terrain, and only the circumstance that the wood projects betrays their presence.

Below is a short description of the various graves, their situation and contents.

Graves 1—4 lie on the stretch between Groups I and II, though nearer the latter. Grave 1 lies about 20 metres from the high-water mark, the other three just at the slope down to the beach. They were all disturbed and had no covering.

Grave 1 is a carefully-built grave of large stones, rectangular in

plan; part of one side is formed by a large boulder. The grave is 1.3 metres long and 0.5 metre wide, and lies NE—SW. It contained a few human bones.

Grave 2. Almost oval. 1.3 × 0.6 metre. E—W. Under a 10 cm layer of sand we found 10 cm of culture earth with a few human bones, a wooden stick which may have been an arrow shaft, two pieces of worked slate and three seal bones.

Grave 3. Triangular. 1.3 × 0.6 metre. NE—SW. Contained no bones, but a small piece of sledge shoe of whale bone.

Grave 4 lay so near the slope that part of one wall had fallen down.

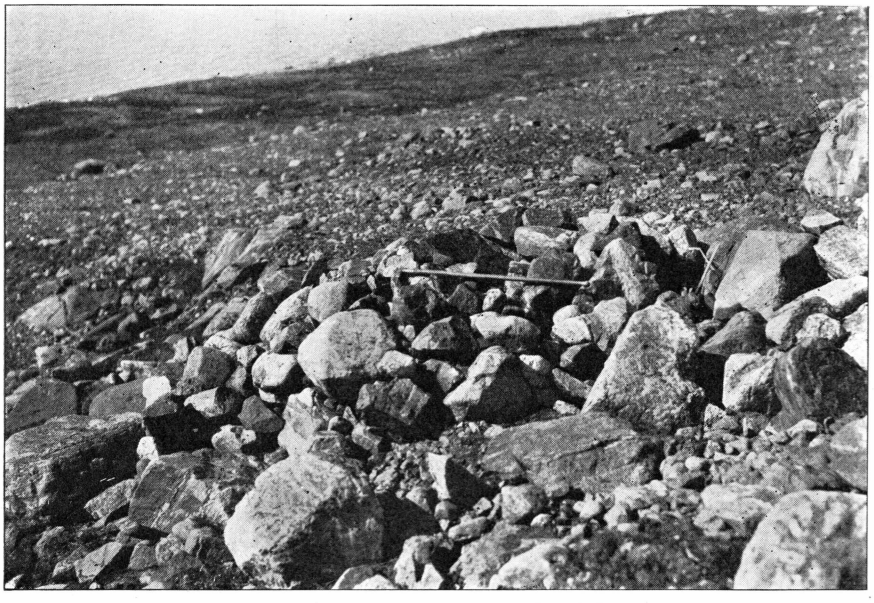


Fig. 21. Grave 6. The grave goods to the right of the grave.

It was almost rectangular, with one end formed of a large boulder. It contained the cranium of an old woman and the jaw-bone of another individual[1]). 1 × 0.6 metre. NNE—SSW.

Grave 5 lies just below the terrace, about 100 metres from the shore behind Houses I, 1 and 2. It was disturbed and almost quadratic. 1 × 1 metre. Except for two limb bones, it contained only two small pieces of driftwood.

Grave 6 (Fig. 21) lies at the same distance from the coast, but behind Houses I, 3 and 4. It was partly collapsed, but one cover stone was in position. Wood had been used to support the cover. The inner cist, which is rather irregularly-rectangular in plan, consists of large

[1]) According to F. C. C. Hansen.

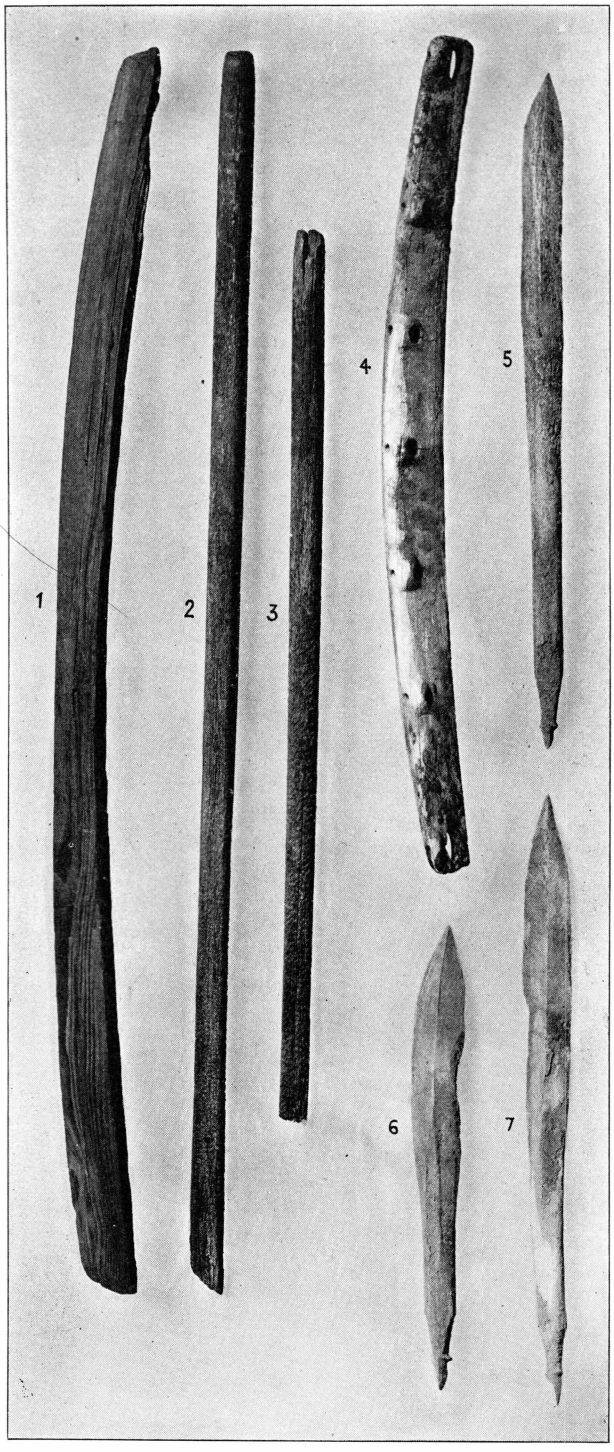


Fig. 22. The grave goods from Grave 6. (See text, page 70). 1 : 3.

stones. 1.8 × 1 metre, E—W. Smaller stones had been piled round about these. The grave contained the well-preserved skeleton of an adult. It lay on its back with the head towards the east, and the thigh bones at right angles out to each side. The left lower leg lay in the direction of the body, whilst the right one was bent up under the thigh. Beside the skull lay a pierced bear canine tooth, and down along the body an arrow head 20.5 cm long, of antler, with lanceolate blade and a conical tang, with two short screw threads (Fig. 22. 6). Outside the northern long side in the open air lay grave goods consisting of two arrow heads of antler, two arrow shafts of wood, and two implements, the use of which is unknown. The arrow heads (Fig. 22. 5 and 7) are like the one found alongside the skeleton, 29.5 and 27.4 cm long. The arrow shafts, Fig. 22. 2 and 3, are round, flattened at the nock end, and measure 54 and 38.4 cm long. Fig. 22. 1 is a flat, rather curved piece of wood, 53.6 cm long, rather narrower at the middle than at the ends, where it is 3.6 cm wide. Its shape, and the circumstance that it was found together with arrows, might indicate that it has been part of a bow; possibly it has been the backing of a baleen bow. Fig. 22. 4 is a handsomely carved implement of walrus ivory, the use of which is not known either. It is 35.5 cm long, flat and curved, with 7 pierced projections on the concave side. At each end is an elongated hole. It is difficult to say for what purpose this implement has been used, as it is the only one of its kind. It bears a certain similarity to a specimen from the Cape-York district and a specimen from the Cambridge Expedition figured by Mathiassen, and by him presumed to be a quiver handle or something like that[1]). It is not improbable that this specimen has been a quiver handle too; this conforms very well to the objects with which it was found.

Graves 7 to 13 lie on the terrace behind Ruin Groups I and II, and on the stretch between them.

Grave 7 is of the aforementioned type, in a stony crevice; apparently some large flat stones have been used, too, so that it is really a stone cist, 1.5 metres long and 0.8 metre broad, and lying N—S. The cover was formed of stones, not very large, rounded, and angular, resting upon four long pieces of driftwood. The grave contained a whole skeleton, which lay on a low shelf of small stones in one side of the grave.

Grave 8 was apparently of the same type as Grave 7. It had been opened and emptied. According to a Norwegian hunter it had contained an exceedingly well-preserved skeleton.

Grave 9 lies in a similar crevice and seemed to be untouched; nevertheless there was only a single skull in it. As the grave had been

[1]) Mathiassen, 1927, II, Fig. 10. 1, and 1929, Fig. 1. 8.

rather carelessly made, its form and dimensions are uncertain. It is about 1 metre long and 0.5 metre wide, and lies NNE—SSW. A single piece of driftwood lay lengthwise over the grave.

Graves 10 and 11 are built together end to end in a crevice 0.6 metre deep. They have been disturbed. In No. 10 the collapsed cover stones lay on the bottom, in No. 11 there were none, and one end was missing.



Fig. 23. Grave 12, opened.

Grave 10 is 1.2 × 0.5 metre, grave 11 is 0.5 metre wide. The direction is ESE—WNW. They each contained a poorly preserved skeleton. Grave 10 also contained a part of a bear jaw. Near the skull in Grave 11 was a handsomely ground two-edged knife of red slate.

Grave 12. From Fig. 23 it will be seen that the grave is built of large stones forming an almost rectangular cist. 1.4 metres long and 0.6 metre wide. The grave is covered over along half its length, the cover stones being supported by pieces of wood, one of which had been

worked. As the figure shows, the grave contained the whole skeleton of an adult individual lying on its left side with the legs bent up under the body. Beside the skeleton lay six seal bones. The longitudinal axis of the grave lies almost E—W, the skull being in the east end. In front of the grave lay the leg of a sealing stool.

Grave 13 was very remarkable in appearance. It lies in a crevice like Grave 7, is about 4 metres long, and bent. There is no actual cist, as the stones do not lie close together; it all gave the impression of being very casually built. In the middle of the grave lay two skulls, one of a nine or ten year-old child, the other of an adult. At both sides of the skulls other skeletal parts were spread over the whole grave. A thigh bone lay outside. Near the adult skeleton lay a knife haft of wood. It had a deep, wide blade groove in one end, and undoubtedly has had a slate blade. The form of the grave is undoubtedly due to the fact that it lay on the edge of the terrace, where the material is slipping down. This has pulled the sides of the grave away from one another, and the bones have been scattered.

Graves 14—16 lie in the western part of the terrace, where much of the material has slipped down. As gravel and soil have been washed out by the melt-water streams, only the large stones remain, and the graves are placed among these. They are made in the same way as Grave 7.

Grave 14. There was no distinct cist, and the bones lay in disorder one among the other, probably disturbed by the continuous slipping of the terrace. It contained an almost complete skeleton, and a single seal bone. It also contained drift-wood, which probably had been used in the construction of the cover.

Grave 15. As in Grave 14, the movement of the terrace has almost erased every trace of the grave. Under a heap of stones were two pieces of drift-wood, a wooden pole, a skull, and some other human bones.

Grave 16 is in a rather better state of preservation. There is a hint of an oval stone setting, 1.5×0.6 metre, lying N—S. Over it was a heap of small and large stones supported by wooden poles, one of which has been worked. The grave contained a whole skeleton, lying on its back with the legs bent. The skull was in the north end. The skeleton is the best-preserved of those found in the settlement; there are still remains of flesh on the bones, so that the whole of the pelvis is preserved. The flesh is quite hard and brittle; undoubtedly the good state of preservation is due to the dry climate.

Graves 17—23 lie on a low terrace below Ruin Group III. They have all been opened, and consist of an oval stone cist built of large pebbles. They are built together with a number of caches, and often are very difficult to distinguish from these. As I have said in the foregoing, only

those of oblong form, or containing drift-wood or human bones, are reckoned as graves. Most of them are so badly disturbed that they could not be measured with anything like accuracy. Nevertheless, Grave 19 is 1.45 metres long and 0.65 metre wide, Graves 22 and 23 lie side by side in an enormous pile of pebbles. They are about 1 metre long and 0.5 metre wide.

Graves 24—30 lie rather near the water on the stretch east of Ruin Group I. There are also a number of caches, some of which may be graves, but they are badly disturbed and therefore difficult to identify. Those referred to here are unmistakably graves with distinct stone cists, though all have been opened and partly destroyed, probably by bears.

Grave 24 is 1.3 × 0.7 metre, and lies N—S. It contained no human bones, but in the bottom was a small drop pendant of ivory like that figured on Plate 16. 14.

Grave 25 lies just above the high-water mark; it is practically quadratic, 1.1 × 1.1 metre, and surrounded by rock on three sides; on the fourth is a wall carefully built up of flat stones.

Grave 26. Almost completely destroyed.

Grave 27. Rectangular, but slightly rounded, with a very large stone forming one side. 1 metre long and 0.6 metre wide. Its direction is N—S.

Graves 28 and 29 were destroyed.

Grave 30 resembles Grave 27, both in form and by the fact that a large stone forms one side of it. It is 1 × 0.5 metre and lies E—W.

It will be seen from the foregoing that most of the graves are of the ordinary Eskimo type, a cist built of flat stones on the surface of the ground[1]). The graves sunk into accumulations of stones are without doubt the result of a lack of suitable materials, that is to say, large flat stones. Only in two cases did we find remains of two individuals in the same grave; the others are single graves. In consideration of the large number of house ruins, there are relatively few graves in Dødemandsbugten. This may be due either to the fact that the settlement has not been inhabited for long at a time, or that in some cases the bodies have been given to the sea, as Holm reports from Southeast Greenland[2]). A similar state of affairs, few graves in proportion to the number of house ruins, was found in Eskimo Bay and at several other settlements, a circumstance to which McI. Johnson also draws attention[3]). In the report of the Danmark Expedition, Thostrup points out

[1]) Thomsen, 1928, page 276.

[2]) Meddelelser om Grønland XXXIX, page 75.

[3]) 1927 page 258.

that there were no graves north of the 77th parallel[1]). This, however, may be due to the northern region's having been less well-explored than the regions south of lat. 77° N. In any case I do not think we can say, as Bendix Thostrup believes, that this region has only been inhabited by people who have come from the north and who have not known the custom of burying their dead in stone graves.

As to the age of the graves, it is very difficult to say anything, as only so few contained grave goods, and only one produced a large grave find, i. e. Grave 6. As these specimens, Fig. 22, are not known from other finds, only the arrow heads remain as indications of the age of these graves; but as the type with the lanceolate blade and the conical tang with screw vestiges is known from both the first and the second stage of the Mixed Culture, no more exact dating can be given. Drop pendants, like that found in Grave 24, were found in Field A 1[3], and III, House 3, and accordingly in both stages of the Mixed Culture. The knife haft from Grave 13 and the slate knife from Grave 11 provide us with no information as to the age of the graves, as no similar implements were found in the ruins.

Other Stone Remains.

Apart from the house ruins, tent rings and graves, Dødemandsbugten yielded other evidence of the doings of the inhabitants. Mention has already been made of the stone caches, which, with a single exception, are to be found at all the houses of the latest type. They are all sunk into the mound surrounding the houses, and undoubtedly are permanent. Besides these, however, there were some heaps of stones which must be interpreted as *temporary meat-depots*. They have been formed simply by piling large stones above and round about the carcase in order to protect it against dogs, bears and foxes until it was required. When the carcase was removed, a heap of stones was left with a hollow in the middle. Naturally, the shape is quite accidental, for which reason they are easily confused with destroyed graves. In Dødemandsbugten most of them lie east of Group I; some lie between I and II, and several behind Group III. Besides these, there are large numbers of them all along the south coast of Clavering Island, but they are also to be found higher up and farther away from the coast. There they have probably served as meat-depots during the hunt for caribou, whereas in those by the coast seals and other marine animals have principally been stored. These temporary meat-depots correspond in every way to those referred to by Thostrup on the Danmark Expedition[2]). On the other

[1]) Page 341.
[2]) l. c. page 201.

hand, there are no carefully-built, permanent meat-depots in Dødemandsbugten.

Of *fox traps* there is one on the stretch between Ruin Group I and II, about 50 metres from high-water mark, and one about 300 metres east of Group I, about 20 metres from high-water mark. The latter was placed on top of a large flat stone. Both are of the common Eskimo type, the so-called box trap. It consists of a box made of flat stones, about 70 cm long, 15 cm wide, and 15 cm high. The box is closed at the rear, where a wooden stick or pointed stone is placed for the bait.



Fig. 24. Children's play house.

At the front is a flat trap-door, connected with the bait by sinew thread. As both traps were badly destroyed, no exact measurements can begiven. In one was a pointed stick of wood in the back, on which the bait has been fixed. Fox traps of this type are to be found everywhere on the south coast of Clavering Island, some down by the beach, others on the rocks right up to about 100 metres above the sea. They are often placed close to temporary meat-depots, and in a few cases I have seen fox traps camouflaged as meat-depots by piling stones over them.

Fig. 24 is an arrangement of stones, probably made by children, and representing a winter house. On the outside is a trapeziform outline of large stones, 1.6 metres long, 1.7 metres wide at the front, and 1.2 metres at the back. Across the middle lies a row of stones probably representing the platform edge. From this to the "front wall" a side

platform is indicated on both sides of the doorway by a mosaic of small coloured stones. This *toy house* lies behind Group II, right up under the slope of the terrace. In front of III, House 14, right down by the beach, is a mosaic of light-coloured small stones laid in three squares of equal size meeting at the corners, so that the whole forms a triangle. The squares have a side about 55 cm long.

Whereas there is some doubt as to the significance of this latter, the former is certainly intended to represent a winter house, and may be regarded as the plaything of some children. Figures made of small



Fig. 25. Shelter 1.

stones are known in the Danmarkshavn region, representing kayaks with or without the man[1]). Bendix Thostrup calls them children's playthings; in this I think he is right, and I think the same appellation may be attached to the mosaics in Dødemandsbugten. As the Eskimo children in Northeast Greenland have had toy weapons, cooking pots, lamps and other implements which are faithful copies of those of the adults, they have in summer made houses, tent rings and kayaks for themselves in which they could play with these implements. It is undoubtedly the same thing when European children with a stick scratch houses, boats and the like on the ground, or draw them with chalk on asphalt or cement. Mc I. Johnson goes into these mosaics in great detail[2]). The two mosaics he figures from Eleonore Bay[3]) are of

[1]) Bendix Thostrup, Fig. 13.
[2]) 1927 page 259.
[3]) l. c., Fig. 4.

a type very similar to the toy house in Dødemandsbugten, with the exception that on his the platform is covered with flat stones. In fact, that on the right has the characteristic bulge at the front of one side wall. Mc I. Johnson, however, considers that they were too carefully made for them to have been children's playthings, and suggests some religious significance. Personally, I do not think there is any reason to believe that there is anything mystic in them. Ryder has already drawn attention to the fact that two four-sided "tent rings" on Danmark Island might be "winter houses", and have been put there by



Fig. 26. Stone oval.

children when playing[1]). A toy house figured by Ryder is laid out like the one in Dødemandsbugten, but is rectangular[2]). On my travels in Northeast Greenland I have come across similar toy houses on Sabine Island, where there was one, trapeziform, with "cooking pits" in the two front corners, two quadratic with rounded corners, one with a paved "floor" in front of the platform edge, the other with two "side platforms". All three had "passages", indicated by two rows of stones leading from an opening in the "front wall". On Cape Borlase Warren were two rectangular toy houses with "passage" and "side platforms", one with "cooking pits". There was also a toy house there without any passage, and a mosaic consisting of three squares of small pieces of quartz, just like the one in Dødemandsbugten. At a summer settlement

[1]) Page 302—03.
[2]) l. c., Fig. 4B.

on Strindberg Land, off Bjørne Island, were several toy houses, two of which had a straight "front wall" with a doorway in the middle; at the rear they were rounded. A third was quite round and had a "passage" one metre long. Thus there are several types corresponding closely to the various types of winter houses, which naturally have served as models.

Fig. 25 is a stone setting with a rectangular plan, about 1.35 × 0.9 metre inside measurement. The side facing the sea consists of three large stones, the other side of smaller stones in several rows. It lies side by side with a similar, but smaller one on the stretch between Ruin Group I and II. This is undoubtedly what Bendix Thostrup calls a *shelter*[1]). It is possible that this interpretation is correct; the man who has built this shelter may have been crouched up, and the smaller stones may have been piled up into a low wall. On the other hand, the other stone setting of similar appearance cannot have been used for such a purpose, as it measures only 0.8 × 0.35 metre. Possibly it was made by children. Here and there on the terrain along the south coast of Clavering Island, however, there were arrangements of stones which without doubt have served as temporary shelters for one or two men. As a rule, they are built up against the rock with walls of stone up to a height of 1 metre.

In conclusion, mention shall be made of two oval rings of large stones, Fig. 26, lying between I and II and behind III respectively. They are like tent rings, but measure only 1.5 × 1 metre and 2 × 1.5 metres respectively, in which case they can only have been used for very small tents. Similar *stone ovals* are mentioned by Bendix Thostrup at Sælsøen[2]), and on Cape Mary there are two, in size and shape recalling those in Dødemandsbugten.

[1]) Bendix Thostrup, page 196.
[2]) Pages 294 and 296, Fig. 41.

III. THE EARLIEST CULTURE

Of the types of houses found in Dødemandsbugten No. 1 is considered to be the earliest, and, of the three houses representing this type, I look upon the double house, III House I, as being older than the other two; I base my view upon the objects found in it. The fact is that, in contradistinction to all the other houses in the settlement, III House I exclusively contained types either recognizable from the West Greenland Inugsuk Culture or those which must be regarded as having originated in East Greenland itself. A description of these types will be made in the following.

Harpon heads. The two harpoon heads found are both of the Inugsuk type[1]), that is to say thin, with a closed socket, barbless, and with a blade slit that is parallel to the line hole. Pl. 1. 1 is of antler, with one spur; it is 7.2 cm long; Pl. 1.2 is of walrus ivory, 10.7 cm long, with one bifurcated spur. Both blade slit and socket are broken. We know of many harpoon heads of this type in Northeast Greenland finds. It predominates in the earliest finds in West Greenland and at Angmagssalik, and occurs, though rarely, in the Central Thule finds[2]).

Harpoon blades. Of these there are three, all of slate, and all ground. Pl. 1. 13 is a strong blade, 4.3 cm long, of reddish slate, triangular, ground with three distinct facets and with a hole near one edge. Pl. 1. 14 is a more slender form, of grey slate, 3.4 cm long, and, in contrast to the foregoing one, has its greatest breadth a little above the base. Possibly it is not a harpoon blade at all, but the blade of an arrow head. Finally we have the fragment of a third blade, of green slate, broad, with convex edges, and a large unfinished blade of black slate, possibly a lance blade.

Bow. Pl. 1. 8 is the fragment of a bow, of wood, to some extent spoilt by weathering. It is 55 cm long, up to 3.8 cm wide and 1.6 cm

[1]) Mathiassen 1930, p. 183.
[2]) Mathiassen 1927 II, p. 20.

thick. At a distance of 33 cm from the nock it narrows down for a short length and bends at the same place, the following length thus forming an obtuse angle to the end piece. Possibly the bow in its entirety has been made in one piece with sinew backing and with reflex wings.

A piece of wood shown in Pl. 1. 7 fits the bend in this bow. It is 14.9 cm long, 2.9 cm wide, 1.7 cm thick at the middle and tapering off towards the ends. Its underside forms a curved face which has lain against the back of the bow. The upper side bends faintly inwards and is smoothly rounded from side to side.

Similar specimens, but of bone, are to be seen i. a. on a bow from Cape York[1]) and one from West Greenland[2]). They are fastened on by transversal whippings and serve to strengthen the bow and to support the backing. A number of loose specimens were found at Inugsuk[3]). A similar one, of bone, was found in Grave 1 on Eskimonæs. In Dødemandsbugten six of these bow braces were found in all, but of wood. There is also a wooden specimen from Cape Stewart in Scoresby Sound[4]).

Pl. 1. 9 is probably the middle prong of a bird dart. It is made out of bear bone, 27.5 cm long, flat, rather rounded rectangular in cross section. It tapers smoothly towards the fore end, and at the butt end is furnished with a thick, conical tang with two knobs at different levels. Right at the rear end the tang is rather flat, with two sharp keels on the sides. Just above the tang is a small hole.

This is the first time such an implement has been found outside of West Greenland[5]).

As the sole traces of means of conveyance in this house there are seven pieces of sledge shoeing, all of whale bone, and all more or less defective. Pl. 1. 16 is the longest and widest piece. It is 33.5 cm long, has a maximum width of 4.2 cm, and is thus among the narrowest sledge shoes ever found in Dødemandsbugten. Only one is narrower, 4.1 cm, whereas most of them are wider, right up to 8 cm. The nail holes, too, are unusually small on this specimen, as small as 4 mm in diameter; none of the other specimens from Dødemandsbugten have nail holes of less than 5 mm in diameter.

P. 1. 3 is a knife handle, of antler. It consists of a wide haft and a narrower blade piece, with a groove in the edge for the blade. The whole knife is 14.9 cm long, the haft itself measuring 7.5 cm. Besides being wider, the haft is thicker than the blade, and most probably it has been even thicker, for whereas one side of it is rounded, the other

[1]) Birket-Smith 1918, p. 13, Fig. 1 d.
[2]) Ibid. Fig. 2 a.
[3]) Mathiassen 1930, Pl. 16. 17.
[4]) Nat. Mus. Ll. 571.
[5]) Mathiassen 1930, p. 199. Pl. 8. 9.

side is flat, as if it had had some kind of mounting on it. In that case the three holes to be seen in the haft have been rivet holes for fastening this mounting. Where the haft ceases and the blade begins there is a small step, and from this to the point runs a groove, 1 mm wide and 5 mm deep, in which the edge has been placed. Undoubtedly it has been of metal, but the nature of it is uncertain, as there is not the slightest trace of it in the groove. On the other hand, just near the side is a copper rivet running through the groove and out to the other side, which has served to hold the edge in position. The copper may have originated from the country itself, as there is native copper there; on the other hand it may have been found in a piece of driftwood.

Knives with the blade groove along one side are known in both the Thule and the Inugsuk Cultures, and have been found earlier in Northeast Greenland too[1]); but this particular type, with a haft and a thinner blade in which the groove has been cut has not hitherto been found in the latter region. We know it from the earliest finds in both West Greenland[2]) and Angmagssalik[3]).

Of adzes we have three blades, of stone. P. 1. 15 is of red slate, 12 cm long and 6.3 cm wide at the edge. It is flat, with a ground edge and a notch in the side to hold the lashing. This blade has been lashed direct on to the handle. The same applies to the second blade, which is of green slate and has a short convex edge. It is doubtful whether the third, of dark brown slate, has been for inserting into a bone head, as it is only a fragment; the blade has been more than 5 cm wide, however, and therefore it is probable that it has been affixed in a manner similar to the others. We know of this form of adze from Angmagssalik[4]) and West Greenland[5]), but it has not previously been found in Northeast Greenland.

In few places has drilling been more extensively employed than in Northeast Greenland. Pieces of bone and wood with the marks of drilling are to be found everywhere. This was also the case in III House I, where we found four drill bits, all of slate. Like Pl. 1. 12, they all consist of a wide, flat shank and a thinner point. The specimen figured is ground, and drilled through the middle, the other two are more crudely made and only the point has been ground. Whereas two have a point that is almost round, the point of the third is cuneiform, with a convex edge; the fourth is broken.

A relatively large number of whetstones was found in this house six in all, four of them being unbroken. Three are of slate, the others

[1]) Thomsen 1917, Fig. 26.
[2]) Mathiassen 1930, Pl. 10. 17.
[3]) Mathiassen 1933, Pl. 1. 8.
[4]) Mathiassen Pl. 2.2 and 3.
[5]) Solberg 1907, Pl. 8. 1 and 7.

of a grey sandstone. Pl. 1. 17 is of dark green slate, flat, rectangular in cross section and with four whetting surfaces. It tapers towards the ends, where there is a rounded notch like a finger-grip. These finger-grips on whetstones are characteristic of Northeast Greenland, not having been found outside that region. Apart from Dødemandsbugten, where this form was found in both earlier and later houses, it occurred in the field of the Denmark Expedition[1]) and in Scoreby Sound[2]). The other whetstones are minus the finger-grip. Of the other two whetstones of slate, one is elongated, thin, with one whetting surface, the other is a fragment of a very flat one, with four whetting surfaces. Pl. 1. 18 is of sandstone, as long as Pl. 1. 17 but more than twice as thick. It has four whetting surfaces, whilst one of the others of sandstone is prismatic, with only two whetting surfaces.

Pl. 1. 19 is a two-handed scraper of bear ulna. It has been fashioned by hollowing out the middle of the bone through the spongy tissue, whereafter the edges have been formed like two sharp edges; the processes on the upper part of the bone have been smoothed off a little. There are two whole specimens, one 32.9, the other 25.1 cm in length; on the shorter one the processes have been removed entirely. Besides these two there is an unfinished specimen and a fragment. There are also two fragments of bear femur which together form an implement of this type, about 34 cm long. These were made in the same way as the above and the thick articulation heads have been entirely smoothed out.

The largest number of two-handed scrapers hitherto found was at Inugsuk, and nine of them were of bear ulna[3]). There is a solitary specimen, made of the same bone, from Southampton Island and one from Amdrup's expedition, probably from Scoresby Sound[4]). Bear femur, however, has not previously been mentioned as having been used for this implement, but there are several examples in the 1st stage of the Mixed Culture in Dødemandsbugten. In the National Museum there is a specimen from Cape Mary[5]). From Eskimo Bay, House 5 there is a two-handed scraper of bearded-seal fibula, exactly like one from Inugsuk[6]), and from the Danmark Havn region there is a similar implement of bear radius[7]), but it differs a little in that it is hollowed at the edge of the bone, not at the flat part. Possibly it has been intended for inserting a separate blade.

[1]) Thomsen 1917, Pl. XXII, 1—6.
[2]) Ryder, Fig. 30.
[3]) Mathiassen 1930, p. 222 and Pl. 11. 16.
[4]) Nat. Mus. L. 6620.
[5]) L. 1. 253.
[6]) Mathiassen 1930, P. 11. 17.
[7]) Thomsen 1917, Pl. XXVI. 5

Pl. 1. 11 is a small scraper blade of flint, with a concave edge on one side. It is 3.8 cm long and up to 1.4 cm wide. One side is domed and carefully shaped by pressing off small flakes; the other side is a smooth fracture surface and has only been worked at the bottom edge, possibly for insertion in a handle. Besides this specimen, which is the only one from Dødemandsbugten, only few flint scrapers with a concave edge have been found outside of West Greenland and Angmagssalik district, i. e. in Musk Ox Fjord in Northeast Greenland[1]) and in Scoresby Sound[2]). In West Greenland it is common in the large finds of stone

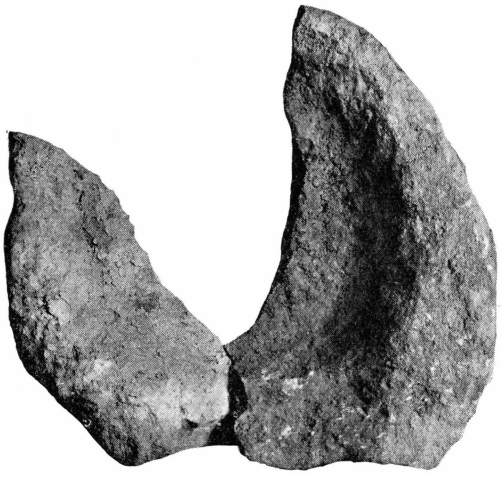


Fig. 27. Fragment of lamp of sandstone.

implements from Disko Bay and district. One specimen from Kekertak is very like the present one[3]).

Fig. 27 shows the remains of a large lamp, of sandstone. It has been shaped by roughly hewing and hollowing a flat piece of stone, the original appearance of which has determined the shape of the lamp. Its underside is the natural surface of the stone. It is 31 cm wide and at least 29.5 cm long. A wooden stick, 15.7 cm long, charred at both ends, has undoubtedly served as a lamp trimmer.

Of cooking vessels the find contains a fragment, 7.2 × 4.3 cm, of the edge of a soapstone cooking pot. The wall is 1.7 cm thick, the rather thicker edge 2.2 cm. The pot has been repaired, for there are holes for a lashing just below the thickened rim.

Pl. 1. 10 is a fragment of an oval wooden bottom for a bowl, which has probably had sides of baleen. The bowl has been a rather large one, the specimen being 26 cm long. In one end is a hole, possibly

[1]) Solberg 1932, p. 258, Fig. 1.
[2]) Three specimens in Nat. Mus.
[3]) Solberg 1907, Pl. 2. 2.

for a lashing. An oval wooden bottom for a baleen cup is shown on Pl. 1. 6. It measures 7.7 × 4.3 cm, and is rather thicker at the middle than at the edges. Finally, there is a fragment of a wooden vessel, 12.5 × 4.2 cm, possibly a scoop.

Pl. 1. 5 is a piece of edge mounting for a wooden bowl. It is of antler, 0.8 cm wide, with a flat underside and a domed upper side.

Finally, Pl. 1. 4 is an ornamental bodkin with ten grooves incised near the head, where there is a hole. It is of ivory, round and tapering gradually from the head to the point; it is 11.3 cm long and 0.7 cm thick at the head. This large and rather massive specimen may well have served as a bodkin, but the nine found in other houses in Dødemandsbugten are so small and slender that they can only have been used for ornament. Similar bodkins were found more to the north in the region of Danmark Havn[1]), to the south in Scoresby Sound[2]), Skærgaardshalvø and Angmagssalik[4]). They are fairly common in West Greenland finds, whereas the Cape York district has not produced any, nor have any been found outside of Greenland.

Of toys a fragment of a bow of wood, 9.8 cm long, was found in III House I. Like Pl. 1. 8 it has a bend at some distance from the end. Furthermore, a small spherical object of grey calcareous clay, about 3 cm in diameter, has possibly been a plaything.

Of baleen we found eleven threads with knots.

To identify a culture by means of a find comprising only 49 artefacts distributed over 22 types would ordinarily be described as a rather bold undertaking, no doubt; but where the culture is one so well known and well investigated as the Inugsuk Culture, it is another matter. For if we compare the find from III House I with the Inugsuk Culture we will recognize a conformity so great that we must place it to that culture, even if one or two new elements have made their appearance in that remote region. In his work on Inugsuk[5]) Therkel Mathiassen has already shown that elements from the Inugsuk Culture have got right up to Northeast Greenland.

Of 20 types[6]) found in III House I, 15 occur in the Inugsuk find itself, viz: Inugsuk harpoon head; triangular, facetted harpoon blade; point for bird dart, with two knobs on a conical tang; bow brace; sledge shoes; knife with side blade; whetstone (the form with the finger-grip

[1]) Thomsen 1917, Pl. VII VII, 2—5 and XI. 16.

[2]) Ryder, Fig. 32 a.

[3]) Thalbitzer 1909, Fig. 18.

[4]) Mathiassen 1933, Pl. 4,1-7.

[5]) Mathiassen 1930, p. 281.

[6]) The potsherd and the unfinished lance blade have not been included here, as they are too incomplete to use in this connection.

at the ends excepted); two-handed scraper of bear ulna; flint scraper with concave edge; lamp without a wick ledge; lamp trimmer; oval bowl bottom of wood; edge mounting; ornamental bodkin, and baleen knots. Of the other types we know of wooden bows in one piece, and with reflex wings, from the earliest culture in Kangâmiut, which also is Inugsuk Culture; undoubtedly it is merely chance that it has not been found at Inugsuk. Adze blades of stone, which have been fastened direct to the handle, occur in Angmagssalik's earliest culture, which is an offshoot of the Inugsuk Culture. Drill bits with a wide tang and thin, cuneiform point are also known from Angmagssalik; they were not found in the earliest culture, it is true, but this is only accidental, as we see from the fact that a drill bit with a rather broad shank was found at Inugsuk itself[1] [2])

There remain only the whetstone with the finger grip and the two-handed scraper of bear femur. These two types are not know outside of Northeast Greenland, and therefore must be a local development.

We see, then, that all the types, with the exception of the last two, belong to the West Greenland Inugsuk culture; when we add to this that the form of the house, as shown previously (page 54) is the same as in the earliest cultures at Angmagssalik and in the Kangâmiut district, there can be no doubt that the find from III, house 1 is Inugsuk Culture, although in a later form.

This also means that the carriers of this culture have come to Northeast Greenland from West Greenland via Angmagssalik. But does that mean that this is the earliest house in the settlement, as was held in the introduction to this chapter? In order to answer this question we must look at the finds from the other houses. As we will see later, these also contain elements from the Inugsuk Culture; in addition, however, they contain types which are strangers to that culture, but are characteristic of finds from the Thule Culture in the Central region. These types can only have come to Northeast Greenland north about Greenland. Accordingly, we have to do with a Mixed Culture. Of these two cultures, the pure Inugsuk Culture and the Mixed Culture, the former must be the earlier. It also contains five old types which are not found in the other houses: the head of a bird dart, a knife handle with a blade on the side, a two-handed scraper of bear ulna, a flint scraper with a concave edge, and the ajagaq of seal radius.

It is difficult to say how old this find is, as it entirely lacks any connexion with European culture. If we examine the nearest large

[1]) Mathiassen, 1930, Pl. 12. 8.

[2]) Among the animal bones from this house was found a fragment of an ajagaq made of a seal radius, the typical form of the Inugsuk Culture and not previously found in Northeast Greenland.

find which has been dated, the one at Angmagssalik, we see that eleven of the types from III House I at Dødemandsbugten recur in Angmagssalik's earliest culture, whereas none of the types which separate the latter from the later cultures occur in the find from III House 1. That only eleven of the types recur is undoubtedly a result of the bad conditions for preservation at Angmagssalik. This would indicate that the earliest culture at Dødemandsbugten dates from the earliest culture at Angmagssalik. In fact, Mathiassen has said of the earliest culture that it also became of significance to the more northerly part of the east coast[1]). Here he referred to the find from Skærgaardshalvø between Angmagssalik and Scoresby Sound, but we see now that it has stretched still farther, at any rate as far as Clavering Island. Mathiassen considers that the earliest culture of the Angmagssalik district lasted from the close of the fourteenth century to the sixteenth century[2]). If this is correct, the first inhabitants of Northeast Greenland must have left Angmagssalik before the sixteenth century. How long the migration to Clavering Island has lasted it is impossible to say; but having regard to the great distance, and the fact that Kangerdlugssuak, Scoresby Sound and the Franz Joseph's Fjord complex undoubtedly would make a long sojourn tempting, and the circumstance that two new types have developed, it is probable that this migration extended over a considerable period. If we take it that these people moved out from Angmagssalik in the fifteenth century, they have certainly not reached Dødemandsbugten before sometime in the following century.

Judging by the find, their mode of living must have been similar to that at Angmagssalik[3]), viz., the hunting of whales, seals, bears, and reindeer, but undoubtedly more of the two latter animals than in that region. As at Angmagssalik, drilling has been a technique of great importance. The employment of slate for implements has already been considerable, even if most probably it did not reach its maximum with slate knives and ulo blades of various forms, such as those we find in the other houses.

The settlement can only have been a very scattered one, for, as far as we can see, apart from III House I there has been only one house more in Dødemandsbugten, III House 2, that has belonged to the earliest culture. To the best of my knowledge no house has been found outside this settlement with the same culture, but of course this may be due to the fact that these earliest houses are more difficult to find than the later ones.

[1]) Mathiassen, 1933, p. 62.
[2]) Ibid. p. 61.
[3]) Ibid.

IV. THE MIXED CULTURE

Two Stages.

As was stated in an earlier chapter, house types 2 and 3 must have originated in the Cape York house, most probably influenced more or less by the rectangular houses of the Angmagssalik district. The only explanation of this is that people who have come from the Cape York district have fallen in with people coming from the south, and they have exchanged elements of their culture, a mixture which has reflected itself in the form of their houses.

Whereas the interpretation of the house types is based upon supposition, in the objects found in the houses we have definite evidence that such a mixture has actually taken place. Here it is only necessary to mention the grave finds in the passage of I House 3, and II House 10, where, for instance, ornamental bodkins and bird figures occurred in the same find. Whereas ornamental bodkins are known only in West and Southeast Greenland apart from Northeast Greenland, bird figures of the type shown (Pl. 10. 8-11) have never been found in those two regions, which means that the ornamental bodkins must have come to the northeast country south about Greenland, and the bird figures north about. Similar examples may be advanced in respect of most of the houses, and, with regard to the houses where these special Thule types and West Greenland types were not found together, the type of house and the other culture elements resembled the other houses so much that they must be presumed to belong to the same culture as they do. There is an exception in I Houses 3 and 4, which belong to house type 1; in their case the objects found in them alone determine their placing among the cultures. In other words, all the excavated houses in Dødemandsbugten, with the exception of III House 1, belong to the Mixed Culture.

Judging from the appearance of the houses, the Mixed Culture has extended over a rather long period of time, within which the culture naturally has changed somewhat. New types have come, and

old ones have disappeared. This change did not occur suddenly, but has proceeded gradually, with the result that in the latest houses we find a few old types and vice versa, just as certain types have remained unchanged throughout the whole period of the settlement. Now, it appears from an examination of the specimens that there is a distinct difference between the culture associated with the houses of type 3 and the other houses belonging to the Mixed Culture. As, furthermore, the first-named houses undoubtedly are later than the others, judging from the state of preservation, and different from them in appearance, they will be dealt with separately as a second and later stage of the Mixed Culture.

One of the circumstances that are most conspicuous when making a comparison between the finds from the two house types is the baleen they contained. Whereas in the old houses there is always some baleen, and in most of them a large quantity, some of it worked, some of it in the form of threads and unworked plates, only one baleen implement and three baleen knots were found in the new houses. For that reason the new houses also lack the types that have been used in connexion with baleen, such as oval wooden bottoms for baleen vessels, and the implement which has been interpreted as a baleen cutter, one that is unknown outside of Dødemandsbugten (fig. 29).

In addition, there is the relationship between stone and iron as materials for cutting implements. In the first place, all implements of flint are exclusively connected with the old houses. It is true that slate blades for weapons, knives and other implements have been found in both stages, but they are relatively more frequent in the first than in the second stage, whereas the reverse is the case with iron and implements that have had an iron edge. On the whole, however, very little iron was found in Dødemandsbugten compared with other Northeast Greenland finds. Finally, only houses of the second stage contained fragments of bottle glass and porcelain.

Of the types which have undergone a change from the first to the second stage, the harpoon heads will be considered first, for it has turned out[1]) that when harpoon heads are found in relatively large numbers they provide splendid material for judging the relative age of a find. It is the proportions of the thin to the flat forms that are the criterion, as the thin ones are the earliest, and in course of time they have been replaced by the flat types[2]). As will be seen from the list of types in the Mixed Culture, there are (if we include the toy specimens and the unfinished ones) in all sixty-two harpoon heads, twenty-eight of the first stage and thirty-four of the second stage. In the first stage,

[1]) Mathiassen, 1931, p. 74.

[2]) Mathiassen, 1927, II, p. 25.

thirteen of them are thin and fifteen flat; in the second stage there are only two thin, but thirty-two flat. It will be seen that the flat ones predominate in both stages, but that the difference between the thin and the flat heads is only very small in the first stage, but extremely large in the second stage.

Of other types that are different in the two stages, mention may be made of the end block of a winged harpoon, of which in the first stage we have the flat form familiar from West Greenland and Angmagssalik (Pl. 2. 17), whereas in the second stage it is four-sided, a type unknown outside of Northeast Greenland (Pl. 11. 14 and 15). In addition, the „sling handle", shown for instance on Pl. 4. 18, has changed its appearance in the course of time. Those from the earliest houses are flat, whereas from the later houses they are thin, and the hand grip has also altered somewhat (Pl. 13. 4). Finally, a number of old types have disappeared in the new houses, viz. besides those already mentioned, side sprongs of bird dart with inside barbs, knife handles of bone with a blade socket in the end, two-handed scrapers, blubber pounders, lamps with the wick ledge, and the ornamental bodkins.

As a consequence of these differences in the finds from the two stages, in addition to which there are some specimens which occur in one stage but not in the other, these will be dealt with separately in the following for the sake of clearness; they have also been kept apart in the plates.

List of Types in the Mixed Culture.

The following list contains all the types of the Mixed Culture, including fragments and unfinished specimens, showing the numbers occurring in the first and second stages.

Harpoon Heads.	First Stage	Second Stage
Thule Type 2	1	—
Thin, barbless and bladeless	2	—
Inugsuk Type	7	1
Slightly flat, barbless but with blade	1	4
Flat, barbless, with blade	—	9
Flat, bladeless, two barbs	1	—
Flat, bladeless and barbless	9	11
Other parts of the Harpoon.		
Harpoon blades of slate	51	16
Indeterminable fragments of slate blades	23	38
Shaft mountings, heavy	2	—
Shaft mountings, cylindrical	3	3
Foreshaft for kayak harpoon, short, round tenon in butt	1	—

	First Stage	Second Stage
Foreshaft for kayak harpoon, conical tenon in butt.	1	—
Foreshafts for ice-hunting harpoon	8	16
Indeterminable fragments of foreshafts	4	3
End block for winged harpoon, flat	1	—
End blocks for winged harpoon, four-sided	—	2
Harpoon wings	1	1 (?)
Ice picks	10	6
Finger rests	2	2 (4?)
Handle for throwing board	1	—
Mouthpiece for harpoon bladder	—	1
Harpoon bladder(?), part of	—	1
Plugs for harpoon bladder	2	3
Swivels	3	—
Other Hunting Implements.		
Moveable lance head, fore end	found on the surface	
Moveable lance head, butt	1	—
Lance blades of slate	12	1
Wound pin	—	1
Legs of sealing stool	13	13
Seal scratcher(?) of bear mandible	—	2
Head of bird dart(?)	—	1
Side prongs of bird dart, inside barbs	5	—
Gorges, two holes	2	—
Gorges, one hole	—	2
Gorge, groove at middle	—	1
Indeterminable fragments of gorge	1	—
Bows of baleen	7	—
Wooden bows, one-piece	1	—
Wooden bows, composite	2	5
Indeterminable fragments of wooden bow	1	2
Braces for bows	4	1
Sinew twister for bows	1	—
Arrow shaft of wood	1	—
Cutting boards for arrow feathers	1	2
Arrow heads, conical tang with screw, without separate blade	—	1
Arrow heads, conical tang with vestigal screw, without separate blade	2	3
Arrow heads, conical tang with vestigal screw, for inserting blade	—	2

	First Stage	Second Stage
Arrow head, cuneiform tang, without separate blade	—	1
Arrow head, cuneiform tang, for separate blade	—	1
Indeterminable fragments of arrowheads	1	4
Slate blades for arrowhead, with tang	4	—
Slate blades for arrowhead, without tang	3	3
Means of Transport.		
Sledge cross slats	5	—
Sledge shoes	82	54
Wooden rivets for sledge shoes	12	8
Toggles for holding draught line to sledge	7	2 (3?)
Trace buckles	12	9
Tools.		
Snow knives with two shoulders	19	14
Knife with wood handle and slate blade	1	—
Knives entirely of slate	16	1
Knife blades of slate, with tang, single-edged	12	1
Knife blades of slate, without tang, single-edged	11	2
Indeterminable fragments of single-edged knife blades	26	1
Knife blades, of slate, two-edged	10	1
Knife blades, of chalcedony and flint	7	—
Knife handles, of bone, with blade socket in end	7	—
Knife handles, of bone, with blade socket in end and in the side	—	2
Knife handles, of wood, with blade slit in end	5	14
Whetstones, of sandstone	17	10
Whetstones, of slate and other fine-grained rock	66	7
Whetstones, of slate and with finger grips	27	5
Adze handles	9	1
Adze heads	9	2
Adze blades	8	1
Hammer stones	1	1
Wedges	7	6
Drill, stone pointed	2	—
Drill, copper pointed	—	1
Drill, iron pointed	—	2
Drill, bone pointed	—	1
Drill bows	—	2
Drill mouthpieces	3	3
Drill shanks	17	4
Drill bits of slate, single	31	10

	First Stage	Second Stage
Drill bits of slate, double pointed	5	—
Holders for drill bits	—	4
Hand drills, with wood shank	5	4
Hand drill, with bone shank	1	—
Hand drills (?) of silicious slate	4	—
Baleen cutters	5	—
Ulos, wood handle and slate blade	6	1
Ulos, entirely of slate	1	2
Ulo handles of wood	8	2
Ulo blades of slate	28	5
Scraper blades of stone, convex edge	3	—
Scraper blades of stone, others	5	—
Two-handed scrapers, of bear femur	14	—
Woman's sewing knife(?)	—	1
Bodkins of bone, with suspension hole	2	—
Bodkins of bone, others	9	2
Winged needle cases	2	—
Household Utensils.		
Lamp without wick ledge	1	—
Cooking pot of micaceous slate	—	1
Cooking pots, fragments	31	13
Lamp trimmers of wood	38	14
Wooden sticks for fire drilling	1	1
Hearth for fire drilling	3	3
Pieces of pyrites	6	4
Meat tray, rounded, fragmented	1	—
Meat tray, square, fragmented	1	—
Indeterminable fragments of meat trays	4	9
Ladles of wood	1 (?)	5
Edge mountings	4	—
Handle for wooden vessel	—	1
Spoon of bone	—	1
Stave of coopered vessel	—	1
Wooden box, side of	—	1
Bowl bottoms, oval	2	—
Cup bottoms, of wood, oval	8	—
Cup bottom, of baleen, oval	1	—
Cups of baleen, sides of	5	1
Blubber pounders	3	—
Meat forks	1 (2?)	1

Clothing, Ornaments, and Objects connected with Intellectual Culture.	First Stage	Second Stage
Boots, parts of	3	—
Gut-skin frock(?), part of	1	—
Snow beaters, of wood	3	1
Snow beater, of baleen	1	—
Back scratchers	2	1
Comb	1	—
Bone buckle, propeller shaped	1	—
Bone buckle, fish shaped	1	—
Ornamental plates with horizontal cylinder at top.	3	—
Other ornamental plates	2	5
Ornamental pendants with dots	2	—
Pendant formed like winged needle case	1	—
Ornamental bodkins	9	—
Teeth, bear, pierced	4	9
Teeth, seal, pierced	1	3
Tooth, walrus molar, pierced	—	1
Tooth, musk ox molar, pierced	—	1
Drop pendants, bone, double	1	2
Drop pendants, bone, single	—	6
Drop pendants, stone	5	—
Beads, coal	2	—
Amulet box	1	—
Drum handle	1	—
Games and Toys.		
Ajagaq, of seal scapula	3	—
Ajagaq, of narwhal ulna	—	1
Nuglutang(?)	—	1
Top-disks, baleen	5	—
Top-disks, wood	—	22
Top-disk, bone	—	1
Buzzes	—	13
Dolls	13	4
Bear figures	—	8
Fox figure	—	1
Seal figure, wood	—	10
Seal figures, stone	1	—
Walrus figure	—	1
Narwhal figures	—	3
Figures of harpoon bladder	—	2
Bird figures, swimming	13	5

	First Stage	Second Stage
Bird figures, others	2	1
Toy harpoon heads, thin, bladeless, barbless	2	—
Toy harpoon heads, Inugsuk type	1	1
Toy harpoon heads, flat, bladeless, barbless	5	7
Toy foreshaft for kayak harpoon	—	1
Toy foreshafts for ice-hunting harpoon	3 (6?)	5
Toy end block for winged harpoon, four-sided	—	1
Toy swivels	2	—
Toy seat of sealing stool	1	—
Toy side prong for bird dart, with barbs on two sides	—	1
Toy bows, baleen	8	—
Toy bows, wood	13	18
Toy arrows, with feather	2	—
Toy arrow, with bone head lashed on	1	—
Toy arrows, with carved wooden head	—	3
Toy arrows, others	31	15
Toy arrowheads of bone	6	5
Toy sledge	—	1
Toy runners	7	5
Toy cross slats	10	3
Toy trace buckle	1	—
Toy kayaks	1	1
Toy umiaks	—	3
Toy umiak paddle (?)	—	1
Toy snow knives	4	4
Toy slate knives	12	8
Toy ulos, entirely of slate	1	1
Toy ulo blades, slate	3	1
Toy ulo handle	1	—
Toy lamps, with wick ledge	4	—
Toy lamp, without wick ledge	—	1
Toy cooking pots	3	1
Toy comb	1	—
Toy drum handle	—	1
Toy "sling handles"	—	8
"Toy weapon"	—	1
Sundries.		
Bone mountings	8	11
Bone tube	1	—
Bear bone with transversal edge	2	—

	First Stage	Second Stage
"Sling handles", flat	15	1
"Sling handles", thin	—	2
"Sling handle", baleen	1	—
Wooden sticks, with three holes	6	2
Wooden sticks, pointed	—	9
Unknown implement of wood, spoon shaped	—	1
Wooden peg(?)	—	1
Baleen mountings	6	—
Baleen handles	2	—
Baleen rings	2	—
Baleen knots	183	3
Seal thong with knots	7	1
Sinew thread	4	2
Iron nail	—	1
Broken bottle glass	—	4
Broken porcelain	—	1
Unknown implement of stone	—	1

First Stage.

To this stage we have put the finds from Group I Houses 3 and 4; Group II Houses 2, 3, 8 and 10; Group III Houses 3, 5, 6, 11, 12, 14, 15, 16, 18 and 20, and Field C1. In the following the specimens from these finds will be dealt with according to type. Those whose origin can throw som light upon the migration of the type to Northeast Greenland, as well as more rare types, and types characteristic of the Northeast Greenland culture, will be dealt with at some length, whereas the others will be only briefly described.

Harpoon Heads.

An account has been given in the foregoing of the distribution of thin and flat harpoon heads in the two stages. Below they will be dealt with according to type.

Of thin harpoon heads with an open socket there is only one (Pl. 2. 1). It is of whale bone, somewhat weathered, and has only one barb, nevertheless its shape indicates that at one time it has had two bilateral barbs. As it has not had a separate blade it belongs to Mathiassen's Thule type 2[1]).

The National Museum has previously had only one harpoon head of this type from Northeast Greenland[2]). It was found in a grave at

[1]) Mathiassen, 1927, II, p. 15.

[2]) Nat. Mus. L. 9677.

Cape Tobin, and likewise has two bilateral barbs. Harpoon heads of Thule type 2 are common in the Thule Culture and earlier finds in Northwest Greenland. It has not been found in South Greenland or on the south part of the east coast.

Of thin harpoon heads with a closed socket, no barbs and no separate blade, there are two toy specimens. They are both of bone and have one spur. One of them (Pl. 8. 1) has been made very painstakingly with two sharp keels on the blade. The other is more roughly made out of a bone, the cavity of which is to be seen on one side; the other side is rounded. They are so small and slender that they could not possibly have been used for anything else than as toys. To this type we must also place two harpoon heads which are transitional between the thin and the flat types, but more like the thin ones. One of them, Pl. 2. 3, is a small, slender head of antler. It is thin below the line hole but has a flat point. The line hole is wide and there are no line grooves. The socket is broken. The other is coarsely made of ivory and is almost round. The point is conical and crudely cut. At right angles to the line hole, across it and through it, are two large drilled holes which, on the back, are joined together by a groove; it may be that after it had passed out of use as a harpoon head, this specimen has been utilised as a toggle or something like that.

The Denmark Expedition brought home two badly weathered harpoon heads of this type [1]) (Thomsen type III), of which one, however, may have been barbed. It has also been found at Skærgaards Halvø[2]), at Angmagssalik[3]), and in West Greenland[4]).

The Inugsuk type is represented by three complete specimens, three fragments, an unfinished head and a toy specimen. The latter will be referred to later. Of the three complete specimens, two are of antler. Pl. 10. 1 is a very powerful specimen with a trifurcated spur and a blade slit cut out with the drill. The point is rather defective. Pl. 2. 2 is the second one, somewhat shorter but very powerful. Here, too, the blade slit has been formed by drilling; it is about 2 mm wide and undoubtedly has had a blade of slate. The socket is broken. The same applies to the third entire specimen. To remedy this a groove has been cut round about the socket for a thong to hold the broken piece in position. This head, which is of narwhal ivory, like the foregoing specimen has one spur and a broad blade slit intended for a point of slate. It is 9.3 cm long. Among the fragments is a fore end, of walrus ivory, and two butts of narwhal ivory. Finally, there is an unfinished

[1]) Thomsen, 1917, p. 382.
[2]) Thalbitzer, 1909, Fig. 4.
[3]) Mathiassen, 1933, Pl. 1. 1 and 5. 1.
[4]) Mathiassen, 1927, II, p. 20.

specimen of antler, 8 cm long. None of these specimens has any rivet holes. The distribution of Inugsuk harpoon heads has been referred to earlier.

Pl. 2. 4 forms a transitional type between the Inugsuk heads and the flat barbless heads with a separate blade. It is an extremely powerful specimen of antler. It is the largest harpoon head found in Dødemandsbugten, having a length of 13.9 cm. If anything, however, it should be placed among the flat harpoon heads, as it lies naturally on its back and as, measured across the line hole, it is 5 mm wider than it is thick. On the other hand the line hole runs from side to side and does not emerge on the upper side as on the quite flat ones. A line groove runs along each side from the line hole. The blade slit, which is parallel to the line hole, is only 1 mm wide and thus must have had a blade of iron.

This type has had wide distribution. In Northeast Greenland we know of it from the region covered by the Denmark Expedition, where, together with the Inugsuk type, it forms Thomsen's type II with one or two dorsal spurs[1]), and also from Scoresby Sound[2]). We also have it from Angmagssalik[3]) and West Greenland[4]). The Cape York district has not so far produced any, but we know of it from various Central finds[5]).

Here, as in the second stage of the Mixed Culture, the predominant type of harpoon head is the barbless and bladeless flat form. From this culture stage we have in all fourteen, of which five are toys and will be dealt with later. Of the other nine, six are of antler, three of walrus ivory. With one exception, which has one trifurcated dorsal spur, they all have two dorsal spurs. In size they vary between 12.9 cm (Pl. 2. 7) to 4.7 cm; despite its small size, the latter has undoubtedly been used for hunting purposes.

In contrast to the second stage, in which the harpoon heads of this type vary only in respect of size, those in the first stage differ somewhat in form too. Pl. 2. 7, for instance, has on its upper side three facets, which merge together at the point. Of this form we have four; on two of them the middle facet, however, runs only part of the way out on to the blade end. Pl. 2. 6 narrows at the line hole, so that the blade end is distinct from the rest of the head. Finally, Pl. 2. 13 is the commonest form of harpoon head of this type in Northeast Greenland. It is very flat, with a keel in the medial line of the upper part of the blade end, and flat or very slightly concave on the under side.

[1]) Thomsen, 1917, p. 380, Fig. 6 D. and Pl. XIII. 5.
[2]) Thalbitzer, 1909, Fig. 2.
[3]) Mathiassen, 1933, Pl. 5. 9.
[4]) Mathiassen, 1931, Pl. 1. 5 and Mathiassen, 1930, Pl. 5. 12.
[5]) Mathiassen, 1927, II, Pl. 24.

Of the four in the collection of this form, one is an unfinished specimen without a line hole or socket.

Flat bladeless and barbless harpoon heads are known from both Angmagssalik[1]) and West Greenland[2]), but in those regions they have never been of much importance. The Cape York distrikt has not yielded any, and from the Central Thule finds there is only a single specimen, a toy[3]). Accordingly, the type has undoubtedly come to Northeast Greenland round Cape Farewell, but not until it arrived there did it attain the tremendous popularity which makes it the characteristic harpoon head of that region. The most common form, with the elegant slender point and the two broad dorsal spurs, is not known at all outside of Northeast Greenland, and consequently we must assume that it originated there. In Dødemandsbugten thirty-two of the sixty-two harpoon heads are of this type.

Pl. 2. 5 is a flat harpoon head of antler with two bilateral barbs and without a separate blade. At the foremost part the blade end is furnished with two sharp edges, whereas further back and on the barbs the edges are rounded. On the inner side of the barb are the marks of drilling. The body of this head is almost round, with the line hole running straight across from side to side. The socket is broken. The specimen figured is the only one so far found in East Greenland. With one barb and two spurs we know of two from Cape Tobin[4]). The type with two barbs is known from West Greenland[5]) but not from the Thule Culture.

Of these types, only one, Thule type II, may with certainly be said to have come to East Greenland north about the country; the others have certainly come south about or have originated on the spot.

Other Parts of the Harpoon.

Of the harpoon heads with a separate blade there is probably only one, Pl. 2. 4, that has had a metal blade; the others, presumably, have had blades of stone. Blades of bone, which are common elsewhere and also known from Northeast Greenland[6]), were not found in Dødemandsbugten, probably because the inhabitants have had an abundance of a material that was easy to work, viz. the soft, reddish or greenish argillaceous slate, which is found either in boulders on the spot or in situ on the south coast of Gael Hamke's Bay. If this slate

[1]) Mathiassen, 1933, Pl. 5. 7.
[2]) Mathiassen, 1931, Pl. 1. 4.
[3]) Mathiassen, 1927, I, Pl. 40. 6.
[4]) Nat. Mus. L 1. 837 and 838.
[5]) Swenander, Fig. 89 and 90.
[6]) Thalbitzer, 1909, Fig. 5.

is easy to work, it also has the drawback that it breaks easily, and consequently the harpoon heads have often had to be renewed. This is the reason why weapon blades of slate are among the objects which most frequently occur in and about the ruins and tent rings in Northeast Greenland, almost always more or less fragmented. For example, we found a total of 158 pieces of weapon points of slate in Dødemandsbugten. It is very difficult to distinguish between harpoon, lance, and arrow blades, in the first place because no blade was found in position in the weapons, and secondly because there are all stages of transition in both form and size. Consequently, it is not impossible that blades now identified as harpoon blades may really have been lance blades or arrow blades, and vice versa.

A feature common to all the harpoon blades is the triangular form with three ground facets; within this main type, however, there are many variations. These variations seem to group themselves about three main forms, although there are transitional forms between them. Pl. 3. 4 and 5 represent the most widespread form, with slightly convex edges and a straight base. Of these we have thirty-four specimens, varying in size from 4.4 × 2.6 cm (Pl. 3.4) to 2.1 × 1.4. cm. Four of them, like Pl. 3. 10, have a hole in one lower corner, two, like Pl 3. 9, have a hole in the medial line. Five differ from the rest in having a shorter base, whereby their greatest breadth is measured a little way above it. In this respect they approach the lance blades Pl. 3. 1 and 2. Another form is illustrated on Pl. 3. 6 and 7. Like the first-named form, it has curved edges, but is broader in proportion to its length than that one. We have thirteen of this form, varying in size from 4.4 × 3.7 cm to 3.0 × 2.9 cm (Pl. 3. 7). Four of them have a hole in one corner, whilst one has a hole in the middle. Other four, which have straight edges, are reckoned as a third main form. The largest is 4.8 cm long, the smallest (Pl. 3. 8) is 3.2 cm long. In addition to these, there are twenty-three fragments of weapon blades whose shape is indeterminable; two of them have a hole at one side.

Shaft mountings for foreend of kayak harpoon shaft. These occur in two types, one of them the heavy form of the Thule Culture, which is made fast to the shaft by an oblique scarf face at the rear end, the other the cylindrical form, in which the shaft fits into a hole in the rear end and which is the predominating form in the Inugsuk Culture. We have two of the former type, Pl. 2. 8, which are of whale bone and somewhat weathered. It consists of an upper, round part with a wide and deep socket in one end, and a lower part which suddenly becomes narrow. One side of the lower part forms a scarf face which by means of a step is divided into two, of which the lower one juts out farther than the upper one. There has been a similar

divided surface on the shaft, which made it possible for the shaft mounting to sit more firmly than if there had been only one smooth surface. The other side of the lower part is smoothly rounded. The other specimen is larger and heavier, and of walrus ivory. The upper, thicker part, is about twice as long and, about midway along it, 1.5 cm from the lower edge, is a hole drilled at right angles to the longitudinal axis, no doubt intended for a thong which has held the mounting on to the shaft. The narrower under part is defective. We know of shaft mountings of this type from the region of the Denmark Expedition[1]) and from Dunholm, south of Scoresby Sound[2]). In addition, in an entirely overgrown house in Eskimo Bay, one of the Cape York type, a shaft mounting of whale bone was found resembling Pl. 2. 8 but having a side hole in the rear end, probably for a nail. We know of no heavy mountings for kayak harpoons from the Angmagssalik district. As only few specimens of it have been found in West Greenland, but it is common in the Central Thule finds, the probability is that it has arrived at Dødemandsbugten north about Greenland. This, in fact, is also indicated by the socket in the fore end, which is so large and deep that it must have fitted a foreshaft with a conical butt like the foreshafts of the Thule Culture[3]).

Of the other type, the cylindrical shaft mounting with a large hole in the rear end for the shaft and a smaller one in the fore end for the foreshaft, we have three in this stage. Pl. 2. 9 is made out of a tubular bear bone by removing the inner, porous tissue. The partition between the large and the small socket is broken. Near the lower edge of this specimen is a small hole, presumably for a nail. The specimen is broadest at the lower end, where its section is rounded-triangular; at the top it is rounded-foursided. Pl. 2. 10 is of walrus ivory, oval in section, and of the same breadth throughout the entire length. The shaft socket is oval, whereas the socket for the foreshaft is circular. Between the two sockets is a thick partition. The third specimen is of narwhal ivory, very crudely fashioned with oval sockets for both shaft and foreshaft and without any partition between them. It is 3.9 cm long, and its greatest breadth is 3.9 cm. In section it is an irregular triangle. This is a type of shaft mounting that is common in Northeast-Greenland[4]). It dominates the Inugsuk Culture from Inugsuk to its offspring at Angmagssalik, and most probably came to Northeast

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[1]) Thomsen, 1917, Pl. X. 4.

[2]) Thalbitzer, 1909, Fig. 45.

[3]) Mathiassen, 1927, I, Pl. 3. 1.

[4]) Mathiassen, 1929, Fig. 2,2 and several specimens in Nat. Mus. from Scoresby Sound.

Greenland via the latter place.[1]). It also occurs in the Thule Culture, however, if somewhat sparsely[2]).

Pl. 2. 14 is the butt end of a foreshaft for a kayak harpoon, of narwhal ivory. It terminates squarely and has a short round tenon. The specimen has broken off at a large medial hole, and it is probable that it has had no more than this one hole, as kayak harpoon foreshafts with several holes are not known from Northeast Greenland, whereas the form with the short tenon and with one hole is common[3]). It was predominant in West Greenland in the sixteenth and in the first half of the seventeenth century, where it replaced the form with the conical butt that is characteristic of the Thule Culture and also is common in the Inugsuk Culture. In the earliest culture of Angmagssalik district only a doubtful specimen has been found, and this one had one hole. We know of no foreshafts from the sixteenth and seventeenth century, and in the eighteenth century the type with a short tenon and two holes predominates. As it does not occur in the Thule Culture, it is permissible to presume that it has come from the south sometime prior to the eighteenth century. Pl. 2. 21 is a complete specimen, of narwhal ivory; it tapers evenly at the fore end and has a medial hole. In the butt end it has a conical tenon which is sharply separated from the remainder. It is rather like some West Greenland specimens of the aforesaid type[4]), and is certainly related to it. On the Thule type, which also occurs in Northeast Greenland[5]), the conical butt runs smoothly into the other part of the foreshaft. We have a doubtful fragment, of antler, of the Thule type. It is broken at a medial hole, and the rear end is in the form of a truncated cone. Possibly it has once been a foreshaft, but has later been converted for some other purpose.

Of foreshafts for the ice-hunting harpoon there is one whole specimen, of narwhal ivory, Pl. 2. 15. It increases evenly in thickness from the point to the rear end, where it terminates in a scarf face which has been roughened by means of horizontal cuts. On the opposite side are coarse notches to hold the lashing. Right at the rear is a hole, probably for a nail. There is the commencement of a hole above the scarf face. We have seven rear ends of similar specimens with cuts on both the scarf face and the outer side, all of narwhal ivory. One of these is more powerful than the others, and on the opposite side of the scarf face, and also above it, it is furnished with two holes, one over the other. Finally, there are three specimens, two of narwhal

[1]) Mathiassen, 1930, p. 188 and Mathiasssen, 1933, Pl. 1.13.
[2]) Mathiassen, 1927, I, Pl. 41. 5.
[3]) Ryder, Fig. 12 A, and several examples in Nat. Mus. from Scoresby Sound.
[4]) Mathiassen, 1930, pl. 6.4.
[5]) Thomsen, 1917, Pl. XV. 2 and Ryder, Fig. 42 B.

ivory and one af antler, which have probably been foreshafts. They lack the rear end, however, so that it cannot be determined whether they are for the kayak harpoon or the ice-hunting harpoon; but as two have a medial hole they are doubtless of the former variety.

There are nine ice picks, more or less defective. Pl. 4. 16 is the best and most powerful specimen. It is of walrus ivory, almost oval in section across the middle, whence it continues upwards in a thinner part which has been lashed on to the butt end of the harpoon shaft. The other two specimens, which are whole, are very superficially fashioned, one of antler, the other of a bone, most probably bear. At one end they are furnished with a notch for a lashing, the other end has been roughly cut to a point. Of the other specimens, three are rear ends, of antler, covered with cuts; other three are points, of walrus ivory, very like the point on Pl. 4. 16.

Pl. 4. 13 is the wing of a harpoon. It is of whalebone and very carefully manufactured. On the outer side of the narrow end is a groove for a lashing, and in the broadest part an elongated hole through which the projecting part of the end block has passed. Most probably a lashing has passed through the lower of the two pairs of small holes to be seen above and below the large one, whereas nails have been put through the upper pair into the rearmost part of the shaft; a small tree nail is still in position in one hole. Only once previously have harpoon wings been found in Northeast Greenland: a toy harpoon with wings at Scoresby Sound[1]). Oval wings for harpoons occur in eighteenth century finds from Angmagssalik[2]) and have also been used in West Greenland[3]) and Cape York[4]) in earlier times.

In another house we found a block for the rear end of a winged harpoon, Pl. 2. 17, of whalebone. In the thicker, cylindrical part at the middle there is a deep socket in which are the remains of the shaft; in the other end is a very shallov socket which has served for the stud of the throwing board. At the rear end of the flat portion is a pair of holes which no doubt have been connected with the rearmost holes in the wing by means of a lashing. There have been other projections on the edges, but these are partly broken off. In all probability these projections have rested in the elongated hole in the wing.

No similar block has previously been found in Northeast Greenland, nor do we find it in the second stage. The latter certainly does contain blocks for the rear end of winged harpoons, but they are a good deal different from the one here described (Pl. 11. 14 and 15)

[1]) Ryder, Fig. 14.
[2]) Mathiassen, 1933, Pl. 6.8.
[3]) Birket-Smith, 1924, Fig. 36.
[4]) Wissler, Fig. 30.

and will be dealt with later. A block that is very similar to Pl. 2. 17 has been found in the earliest culture of the Angmagssalik district[1]), and from West Greenland we know of a specimen exactly like this one in form. Both in West Greenland and in Angmagssalik these blocks have gone through great changes in the course of time, but nowhere in the direction of the later form from Northeast Greenland, and accordingly the latter must have originated on the spot. The earliest form of block certainly came from the south, and in any case prior to the eighteenth century[2]).

Pl. 2. 19 and 20 are finger rests for a harpoon, of whale bone, with two and one hole respectively. Similar specimens have been found elsewhere in Northeast Greenland[3]) and in both the Thule[4]) and the Inugsuk Cultures[5]).

The only trace of a throwing board discovered in Dødemandsbugten is a handle, the one shown on Pl. 4. 14. It is a very carefully made specimen with a notch for the thumb on one side; on the other side, further down, are indentations for the last three fingers and a depression for the finger tips. This depression is sharply separated from the hollow in the middle where the shaft of the weapon has rested. The index finger has been accommodated in a hole set apart from the other finger grips; this hole, however, is defective. No other throwing boards with special indentations for the last three fingers were previously known. On those in the National Museum from this region, as on the specimen figured by Ryder[6]), there is an indentation for the thumb and a hole for the index finger. They also differ in their great breadth. Throwing boards with a hole for the index finger were formerly used in West Greenland[7]), but the form most closely approaching Pl. 4. 14 is from Cumberland Sound[8]); it is therefore possible that this type has come to Northeast Greenland round about the north of the country.

Pl. 2. 16 is a swivel, of walrus ivory. It consists of a barrel-shaped body pierced in one side with two round holes, on the other with one large oval hole and with a round hole in each end. At the ends are one and two transversal ridges respectively. In one end hole are the remains of the rotating part. It consists of a round piece of bone with a knob on one end and two holes for the line in the other. A very

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[1]) Mathiassen, 1933, Pl. 1. 20.
[2]) Ibid. p. 79.
[3]) Thomsen, 1917, Fig. 11.
[4]) Mathiassen, 1927, I, Pl. 65.8.
[5]) Mathiassen, 1930, Pl. 7.1.
[6]) Fig. 17. A.
[7]) Birket-Smith, 1924, Fig. 36 A; Mathiassen, 1931, Pl. 12. 12.
[8]) Ryder, Fig. 17. D.

defective specimen, likewise of walrus ivory, also seems to have been barrel-shaped. Finally, we found the rotating part of a swivel with a double conical end knob and four holes in a row. The National Museum possesses a barrel shaped swivel from Cape Tobin[1]), but this form has not been found outside of Northeast Greenland. No swivels have ever been found in the Thule Culture.

Other Hunting Implements.

Of moveable lance heads there is a rear end, of narwhal ivory, Pl. 4. 5. It is weathered a good deal, is oval in section, has a medial hole and ends rearwards in what is apparently a conical tenon. Pl. 4. 4 shows a fore end, of walrus ivory. This one, too, is oval in section and increases in thickness towards the point, where there is a wide blade slit, undoubtedly intended for a blade of slate. This must have been fastened in with a thong, otherwise the grooves running from the two holes towards the rear are incomprehensible. There are similar grooves on a moveable lance head from Scoresby Sound[2]).

Pl. 3. 1 and 2 are slate blades for lance heads. They are much larger and thicker than the harpoon blades and have their greatest breadth some distance above the base. We also have four fragments of this type, three of which have a medial hole above the base, as well as an unfinished specimen which also has a medial hole. Eight specimens like Pl.3. 3 in form are more doubtful. It is uncertain whether they are harpoon blades or lance blades, but on account of their size they will be reckoned among the latter.

Moveable lance heads for the reception of blades have previously been found in Northeast Greenland[3]). Some have one, others have two holes. Some are conical at the rear end, others are flat with a short tenon. Of these, those with the conical butt are the earliest; we know of them from the Thule Culture[4]) and from the northern part of West Greenland[5]).

We have thirteen legs for sealing stools, in all essentials resembling Pl. 4. 15 and varying in length from 16 to 9.6 cm. Seats for sealing stools have often been found in Northeast Greenland[6]), but Dødemandsbugten yielded only a toy specimen, of walrus ivory, Pl. 10. 13. In shape it is almost like those figured by Thalbitzer from Cape

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[1]) Nat. Mus. L 1. 667.

[2]) Ryder, Fig. 15 A.

[3]) Thomsen, 1917, Pl. XV. 1; Thalbitzer, 1909, Pl. XVI. 12; Ryder, Fig. 15 A and E; Mathiassen, 1929, Fig. 2.1.

[4]) Mathiassen, 1927, I, Fig. 49.

[5]) Swenander, Figg. 163—165.

[6]) Thomsen, 1917, Fig. 12.

Tobin[1]). Whereas the specimen from the Denmark Expedition has undoubtedly been used to sit on[2]), the short legs indicate that the stools to which they have belonged have been for standing on. Sealing stools belong to the Thule Culture[3]) and have also been found in West Greenland[4]).

Of side prongs for bird darts we have five, three of which are whole, all having barbs on the inner side. Pl. 2. 12 is of bear bone with one barb. Another specimen is likewise of bear bone but has two barbs. Pl. 2. 11 is of whale bone and has three barbs. Of the two defective specimens one is of bear bone, the other of antler. They have had at least two barbs. Prior to this find only few specimens of side prongs of this type were known from Northeast Greenland, the type with side prongs on two sides having predominated[5]). As the former type has not been found in the Thule Culture, but is a common form in West Greenland and Angmagssalik, it has arrived at Northeast Greenland via the south.

In this stage we have three gorges, all defective. The one best preserved, Pl. 2. 18, is flat, formed of the outermost hard shell of a bear bone. It is widest out towards the point, where it is shaped with two sharp edges meeting in a point. As the two holes have probably been at the middle, the other end has broken and afterwards been pointed. If the holes were at the middle, the specimen has been about 13 cm long. The other two specimens are of whale bone, but of the same form. They are still wider near the point, which is formed of two sharp edges. One specimen has two holes. The other, which is slightly bent, has no holes at all. Gorges of a piece of bone pointed at both ends have a wide distribution, but this particular form with two holes and with one end leaf-shaped has only been found previously at Angmagssalik, where it occurred earliest in the find from the eighteenth century[6]), but possibly is older.

Most of the bows of the first stage are of baleen. They are all defective, but, judging from the breadth, seven have been used by grown-ups, whereas six must be presumed to be toys and will be dealt with later. Pl. 9. 1 is the longest and widest fragment. The others are like it, except that the nock varies from quite square to quite rounded. The breadth of the bows varies from 4 to 2.8 cm. They consist of one piece of baleen and there is nothing to indicate that

[1]) Thalbitzer. 1909, Figg. 38 and 39.
[2]) Thomsen, 1917, p. 395.
[3]) Mathiassen, 1927, II, p. 42.
[4]) Mathiassen, 1930, Fig. 20.
[5]) Thalbitzer, 1909, Fig. 16; Ryder, Fig. 16; Koldewey I., p. 605, No. 18.
[6]) Mathiassen, 1933, p. 82.

there have been more. Nevertheless, as these are only end pieces, there is a possibility that there have been several layers, as for instance on those figured by Birket-Smith[1]). There is no trace of any sinew backing. Of wooden bows we have four, one of them, Pl. 4. 1, apparently having been of one piece, two have been composed of several pieces, and one is so defective that nothing can be said of its original form. Pl. 4. 1 has quite a flat back with sharp edges, whereas the edges on the belly are rounded. There are no signs of any sinew backing, but at the fracture a seating has been cut for a brace (see later). This has been held on by a sinew backing, and it also indicates that at this spot there has been a bend in the bow, so that in all probability it has been of the reflex type. Accordingly, it greatly resembles the bow Pl. 1. 8 from the earliest culture at Dødemandsbugten. Pl. 4. 2 is also flat and sharp-edged on the back. It has been composed of several pieces and ends in the characteristic dovetail in which a cuneiform middle piece has fitted. This specimen increases in thickness towards the nock. The third specimen is also an end piece, but, in contrast to the foregoing one, is cuneiform at the outer end.

Baleen bows occur in the material brought home by the Denmark Expedition[2]) but have never been found on the east coast south of Dødemandsbugten. On the west coast they have principally been found in the most northerly districts[3]), and they occur in the Thule Culture[4]), from which fact it is probable that they have come to Northeast Greenland north about the country. Composite wooden bows, put together by means of dovetail joints, are known from both the Thule Culture[5]) and West Greenland[6]).

Pl. 4. 11 is a brace, of wood, seen from the side. There are in all four from this stage, all like those mentioned on page. 80. In length they vary from 17 cm to 15.5 cm, and have a thickness varying from 2.0 to 1.2 cm at the middle. The occurrence of this type has already been referred to.

Pl. 4. 12 is a sinew twister. It is a widely-distributed type in Northeast Greenland and the whole of the Eskimo regions. In contrast to most others, which are of bone, this specimen is of wood.

Of arrows we found a solitary shaft of wood, Pl. 4. 3. It is flat, but thinnest and widest at the rear, where the nock is. Apparently it has been cut over at the fore end. It is not possible to see whether

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[1]) 1918, Fig. 3.
[2]) Thomsen, 1917, p. 404 and Fig. 19.
[3]) Birket-Smith, 1918, p. 21.
[4]) Mathiassen, 1927, II, p. 43.
[5]) Ibid.
[6]) Mathiassen, 1930, p. 194 and 1931, p. 81.

this specimen has been furnished with feathering, but Pl. 4. 9, which is a small cutting board, shows that feathering has been known. The specimen is rather weathered, but it is possible to see vestiges of small projections at the upper corners, like those on Pl. 12. 15. A similar cutting board was found by the Denmark Expedition and assumed by Thomsen to be a cutting board for fine sewing[1]). In a grave find from Eskimonæs on Clavering Island, however, it was found together with arrows and other hunting implements, a fact which makes it probable that it is a feather-cutting board, an interpretation also adopted by Mathiassen for similar specimens[2]).

The arrow heads from this stage are all of antler without a separate blade. Pl. 4. 10 has a wide point which originally must have been lanceolate, but now is pointed with a few coarse cuts. The tangs are conical with two short bilateral screw threads at the middle and a slight indication of two at the point. Another tang has two short screw threads at unequal heights and a point formed of four facets. On this specimen in contrast to most others the screw threads are cut from the right, which no doubt means that the man who made them has been left-handed[3]). Finally, we have the foremost part of a lanceolate blade. This form of arrowhead with lanceolate blade and conical tang with short screw threads is the most common one in Northeast Greenland[4]). Outside that region we know of it only from West Greenland, where, however, it is rare[5]). More common in West Greenland finds are arrow heads with a continuous screw thread on the conical tang[6]) and the Thule type with two knobs[7]). The form with the short interrupted screw threads must either be a survival of the unbroken screw thread or a cross between it and the two knobs[8]), but whether this crossing has proceeded in Northeast Greenland or the type has come there from West Greenland is difficult to say. The circumstance that no arrow heads with interrupted screw threads have been found in the Angmagssalik district argues in favour of the former possibility; but on the other hand no arrowheads of bone have at all been found in the earliest culture. Nevertheless, I am inclined to believe that the form with the interrupted screw thread, which dominates so com-

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[1]) Thomsen, 1917, Pl. XIII. 10 and p. 378.
[2]) Mathiassen, 1930, Pl. 8. 5.
[3]) Ryder, p. 310.
[4]) Thomsen, 1917, Fig. 21 a; Ryder, Fig. 9 a, b; Mathiassen, 1929, Fig. 1.7.
[5]) In Nat. Mus. L. 2.3, L. 2253, L. 6839; Porsild 1915 (b) Pl. III. 22 and v. d. Steinen, Abb. 5.
[6]) Porsild, 1915 (b), Fig. 2. b.
[7]) Ibid. Fig. 2 c.
[8]) Mathiassen, 1929, p. 165.

pletely in Northeast Greenland, has originated there independently of the West Greenland form.

Apart from the arrow heads referred to, the first stage produced four slate blades which either are arrow blades for insertion in a head of bone or arrow heads which have been inserted direct into the shaft. Pl. 3. 11 shows the best of them; it has a handsomely ground blade with two sharp edges and a cuneiform tang; the others are defective or unfinished. There are some similar specimens from the Denmark Expedition, but Thomsen does not consider they can be arrowheads, as one is furnished with a nail hole where the blade joins the tang[1]). It may be that these specimens, which are more than twice as large as those from Dødemandsbugten, have served as knife blades like Pl. 3. 20, which only differs from them by having a shoulder at the base of the blade. The difference between Pl. 3. 11 and 3. 20 is that whereas the former has sharp edges only on the foremost part of the blade, the latter is sharpened right down to the tang and thus is more suitable for cutting. Arrowheads of stone of this type have been yielded by other Northeast Greenland finds[2]), and from both West Greenland[3]) and the Central region[4]).

As I have said, some of the triangular, faceted slate blades may be arrow blades, This I consider applies to Pl. 3. 12, which by its slender form is distinct from the others. In this stage we have in all three of this form.

Means of Transport.

The means of transport of the inhabitants in Dødemandsbugten have been the sledge, the kayak, and undoubtedly the umiak too. It is true that only the former has left any trace in Dødemandsbugten, but from Clavering we know that they had kayaks[5]), which were no different from those referred to by Egede and Cranz[6]).

From the second stage we have models of umiaks, and it is probable that they were also known before that period.

As the fjord and the sea are covered with ice for nine months of the year, the dog-sledge naturally has been of vital importance as a means of transport. No remains of sledges have been found in Dødemandsbugten to tell us what the Northeast Greenland sledge has looked like. On the other hand, excavations in a ruin on the east side of Strindberg Land brought to light a sledge runner and two cross slats. The

[1]) Thomsen, 1917, Pl XII.2, XIV.15 and 16 and p. 387.
[2]) Solberg, 1907, Pl. 9, Fig. 8 and 1932, Fig. 5.
[3]) Solberg, 1907, Pl. 10. 3-8.
[4]) Mathiassen, 1927, I, Pl. 7. 11 & 23.
[5]) Clavering, p. 21.
[6]) Cranz, I. p. 199.

runner lay across the house from one side wall to the other, and has possibly served as a beam for the roof. It is crudely shaped out of driftwood, is unusually heavy, 2.73 m long, up to 23 cm high, and up to 8 cm thick. Judged according to Greenland standards, this is a massive sledge, for even if West Greenland sledges are almost just as long[1]) they appear to be shorter, because a considerable part of the length is formed of the long, turned-up noses. The Northeast Greenland sledge has not this type of fore end. The upper side of the runner is horizontal right to the tip, whereas the underside does not curve up towards the upper edge until it nears the point. The effective length of the sledge, i. e. the part of the runner carrying cross slats, is on this runner 2.13 m. The part on which the slats have rested is sunk 2.5 cm lower than the point (which is 46 cm long) and the rearmost 14 cm. About 3 cm below the upper edge the runner has been pierced with thirteen square holes in a row. The slats have been secured to these by means of a lashing. Below the rearmost and foremost hole is another hole, of which the first may have served for an extra lashing the latter for the draught line (see p. 157). It is difficult to say anything about the width of the sledge, as one cross slat is 113 cm and the other about 127. In any case it is a broad sledge, broader than West Greenland sledges commonly are.

As yet it is uncertain whether the Northeast Greenland sledge has had upstanders. On one of the sledges found at Cape Broer Ruys by the Second German North Pole Expedition there is what has been taken to be a pair of upstanders[2]), but it is doubtful if these have been upstanders, and they have certainly not had their position at the place shown, on the outer side of the runners.

The Northeast Greenland sledge is most like the sledges of the Iglulik Eskimos[3]), even if the latter are somewhat longer. Unfortunately we do not know the sledges of either the Thule Culture or the Inugsuk Culture, but from the width of the shoeing one can see that the runners have been of the same thickness as those in Northeast Greenland, and a toy sledge from Inugsuk[4]) displays the same straight runners without turned-up noses. As we found sledge shoeing in the earliest culture in Dødemandsbugten, the first immigrants, who came from the south, have had dog sledges. However, those who came from the north have also had sledges with them, as they could only have performed the long journey north about Greenland by their aid. Consequently, the sledge must be said to be a culture

[1]) Birket-Smith, 1924, p. 245.
[2]) Thalbitzer, 1909; Fig. 85.
[3]) Mathiassen, 1928, Fig. 42.
[4]) Mathiassen, 1930, Pl. 20. 2.

element which has come to Northeast Greenland with both groups of immigrants. The form of these sledges has unquestionably been governed by the ample supply of driftwood and by the fact that it was possible to travel on the fjords, which permits of long sledges but requires broad shoes on account of the often loose snow.

Among the remnants of sledges of the first stage in Dødemandsbugten we found five defective cross slats. They vary in width from 4 to 8 cm, and in thickness from 3 to 2 cm. A little distance from the ends they all have a notch in each side, and three of them taper towards the end. The same feature is observable on the cross slat of a toy sledge from Inugsuk[1]). On the slats from Strindberg Land already referred to the lashing from the runner has not lain in notches, but has passed through holes, on one specimen through one hole on each side of the runner, on the other through two on each side.

Sledge shoes. Of these we have a total of eighty-two, eight being of narwhal ivory, the remainder of whale bone. Almost all are more or less defective; the longest piece is 57.5 cm long. In breadth they vary from 8 to 4.1 cm; most of them, however, have a breadth of 5 to 6 cm. As a general rule the nail holes form a zig-zag line, but on some specimens they are very irregularly scattered. On one piece, which is 26 cm long, there are two pairs of holes at each end joined together by a groove as if for a lashing. In some of the holes are remains of tree nails which have held the shoes to the underside of the runners. We also found twelve loose nails, the longest, shown on Pl. 5. 15, being 5.5 cm long. They are all cut off obliquely at the head, which is connected with the fact that the holes are all bored obliquely to enable the nails to get a better hold.

In all seven draught-line toggles, of various shapes and materials, were found. Pl. 5. 13 shows the common form, with a straight base and an arched back and with a hollowed-out part across the middle in which the draught line has rested. In one end is a hole with grooves out to the point; from this hole there has possibly been a thong to fasten the toggle to the sledge. There are five of this type; three of walrus ivory, one of wood, with a groove round one end instead of a hole, and one of antler. On the latter the hole has been torn out, but a new one has been drilled further back. The other type is shown on Pl. 5. 14. It is of whalebone, flat on base and back, but with two indentations in the sides. A similar specimen, of wood, in addition has a knob at one end, round which the aforesaid thong must have been fastened.

This is the first time that draught-line toggles have been found in Northeast Greenland. The first-named type is already known from

[1]) Mathiassen, 1930, Pl. 20. 4.

the Thule Culture[1]), the other is very similar to those still in use among the Iglulik Eskimos[2]). This toggle is also known from West Greenland[3]) and from Angmagssalik[4]), but there it is shorter and blunt at the ends.

There are in all twelve trace buckles, seven of which are of narwhal ivory, three of walrus ivory, and two, very defective, of walrus skull bone. Pl. 5. 21 is the commonest form, with a large, elongated hole and a smaller round one from which grooves on both sides run towards the point. On some specimens the large hole is also round. Pl. 5. 22 is more carelessly made of a piece of narwhal ivory split off by means of a drill. Pl. 5. 20 is different from the others, partly in having a four-sided section rounded at the corners, partly in having a tenon in the wide end. Undoubtedly it has once been the foreshaft of a kayak harpoon which has broken and the butt afterwards used as a buckle. The same is the case with a trace buckle from the second stage (Pl. 12. 11) and one from the Denmark Expedition[5]). Trace buckles of this type are distributed over the greater part of the Eskimo region.

Tools.

Judging from the great number of snow knives found in Northeast Greenland in the course of time, the snow house has been of great importance to the Eskimos on their winter journeys. Pl. 4. 6 is the common form of snow knife in Dødemandsbugten. It is of whale bone, has a wide blade, two shoulders, and a bent handle. Four has a suspension hole at the upper shoulder, Six a knob on the underside of the handle; possibly others have had these two features, but they are too defective to judge of this. We found in all six almost entire snow knives varying in length from 28.8 to 23 cm, in breadth from 7.5 to 6 cm. We also found three defective specimens, three handles, and seven fragments of blades. The type referred to is the commonest one in Northeast Greenland[6]). It is typical of the Thule Culture and only one or two examples of it have been found in West Greenland[7]). As, on the whole, snow knives are rare in finds on the southern parts of the West Coast, and quite unknown in the Angmagssalik district, this type can only have come to Northeast Greenland from the north.

[1]) Mathiassen, 1927, I, Pl. 14. 1.

[2]) Mathiassen, 1928, Fig. 43.

[3]) Birket-Smith, 1924, Fig. 173

[4]) Mathiassen, 1933, Pl. 6. 32.

[5]) Thomsen. 1917, Fig. 24.

[6]) Thomsen, 1917, Pl. XIX, 1—5 and Pl. XV. 2; Thalbitzer, 1909, Fig. 42; Stolpe, Pl. IV. 14, and many in Nat. Mus. from various localities in Northeast Greenland.

[7]) Mathiassen, 1927, II, p. 65.

Fig. 28 is an extremely well-preserved man's knife. The handle is of wood, 20 cm long and 3 cm wide at the back end. At this end it has a slightly curved hand grip which for a short length has been furnished with a very regular whipping of thin baleen thread. On the upper part along one side is the blade seating, 10.6 cm long and 1.1 cm wide sunk about 8 mm lower than the surface of the handle. On this seating rests the blade, which is of reddish-brown slate. It is 17.5 cm long, has a rather sharply ground, curved edge, and a straight, broad back which is only free along the foremost 6.5 cm, the remainder lying against the handle. The blade is fastened to the handle by means of a length of seal thong which first takes three turns round the handle and through a hole in the blade, from there for some distance parallel with the handle, then $2^1/_2$ times round it and through another hole further back in the blade. To my knowledge this is the only knife of its kind to be found in the whole of the Eskimo region. It is possible that the blade originally belonged to a knife made entirely of slate; when it broke, the blade has been shaped and fastened to a handle in the manner described. In any case it is a splendid example of the wonderful ability of the Eskimos to make a solid and useful implement out of the materials at hand.

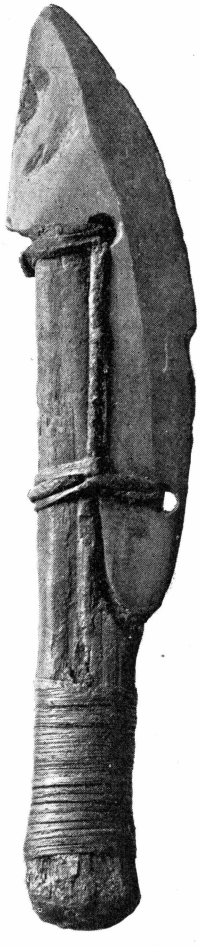


Fig. 28. Knife. 1:2.

A number of men's knives are entirely of slate. Pl. 3. 13 is a slender, single-edged knife with three notches in the handle for the fingers. A handle with similar notches is illustrated on Pl. 3. 14. The curious part about this knife, however, is that it has a short edge running almost at right angles to the longitudinal line of the handle. It is difficult to say whether this is its original form, or possibly it once had a normal blade which became broken; the latter explanation seems to be the most probable one. By the way, there is another handle, more slender, with a chisel edge like Pl. 3. 14, and this seems more distinctly to have been a knife of the usual type originally. A knife with a blade recalling Fig. 28 is shown on Pl. 3. 15, and finally, Pl. 3. 16 is a small, handsomely-ground knife which possibly is only a toy.

In all, this stage produced sixteen more or less defective knives, which have certainly not been intended for insertion in a handle. One of them is a roughly hewn oblong piece of slate on which a curved edge has been ground. Knives entirely of slate are common in Northeast

Greenland finds[1]), but otherwise unknown in Greenland. On the other hand they are known from finds in the Central area, where, for instance, there is one from Belcher Island very similar to Pl. 3. 16[2]). These knives apparently occur where is a supply of suitable material.

Knife blades of slate for insertion in a handle of wood or bone are present in rather large numbers, some single-edged, others two-edged. Pl. 3.17 is a single-edged knife blade of reddish slate. It consists of a short, almost triangular blade, the point of which is broken, and a longer and narrower, cuneiform tang. There are twelve of this type, varying in length between 10.8 and about 6 cm. Two of them have notches on the tang for a lashing.

Another type of single-edged knife blade is reproduced Pl. 3. 18. It is of greenish slate, has a blade similar to Pl. 3. 17 but a wider back end with two holes, through which it has probably been nailed to the handle. Of this type we have eleven more or less defective specimens varying in length from 9.7 to 5 cm. There are from one to four holes. Finally, there are twenty-six fragments of single-edged knife blades which give no clue as to how they were hafted.

Pl. 3. 19 is a two-edged knife blade, the blade portion being almost lanceolate, but rather defective, and a narrower cuneiform tang. Pl. 3. 20 differs from this one in that the blade forms a shoulder where the tang begins. We found ten two-edged knife blades in all, but only four have a tang. The others are defective. The same applies to these knife blades of slate as to the weapon blades that the occurrence of soft argillaceous slate is the cause of the development of the many different forms.

Apart from the slate blades, we have seven blades of flint or chalcedony which doubtless must be taken to be knife blades. Pl. 3. 30 is a handsomely made lanceolate blade of flint resembling one from Angmagssalik[3]), and also one from the Central region[4]). Another, Pl. 3. 31, is of chalcedony and near the rear end has a notch in each side. Whether this is a knife blade or a blade for a harpoon or arrow head is very difficult to decide. I place it under the knife blades, as to me the rear end seems to be too thick to fit into the blade slit of a harpoon or arrow head. The form with the two notches is known from both West Greenland[5]) and Angmagssalik[6]), as well as several Central

[1]) Solberg, 1907, Pl. 9.7; Thomsen, Pl. VIII, 1, and XXI. 8-10, and several in Nat. Mus.

[2]) Mathiassen, 1927, I, Pl. 77. 21.

[3]) Solberg, 1907, Pl. 9. 2.

[4]) Mathiassen, 1927, I, Pl. 19. 1.

[5]) Solberg, 1907, Pl. 3. 16-18.

[6]) Mathiassen, 1933, Pl. 7. 11.

finds[1]). Three other blades of chalcedony, similar in form to these, have neither tang nor notches; a fourth has a vestige of a tang but is too defective to admit of any definite conclusions about it. Finally, there is an unsymmetrical flint blade with a rounded edge, very like one figured by Therkel Mathiassen from Button Point[2]). This undoubtedly is a knife blade, whereas the others are not so certain. All the same, it is interesting that in East Greenland we find implements made of this hard material; it is certainly a reminiscence of a time when the inhabitants had no access to the more easily-worked slate. This, too, is indicated by the fact that no implements of flint were found in the second stage.

The knife handles from the first stage may be divided into two types, one of bone with a blade groove in the end, and one of wood with a blade slit in the end. Pl. 5. 3 shows the first type with a nail hole in the side. It is of bear bone, whereas the others are of antler. Of these latter, two at any rate have nail holes in the side, two have a suspension hole in the rear end, and two have a unilateral knob at the rear end like Therkel Mathiassen's from Inugsuk[3]). Judging from the blade grooves, they have all had blades of slate.

Of the second type, Pl. 5. 4 has probably had a blade of iron. In the fore end it has two transversal grooves for lashing. Pl. 5. 5 is a rather defective knife handle with a wide blade slit, undoubtedly intended for a slate blade. Another handle with a similar wide blade slit has a knob on the end. Finally, there are two half knife handles of wood, both with a transversal groove for the lashing. Whereas we know of knife handles of the first type from both West and Southeast Greenland[4]) and from the Thule Culture[5]), those of the second type must rather be looked upon as a local form.

As in the earliest culture, there are many whetstones, varying in appearance and material. They occur in three types, which differ from one another in material and appearance. Pl. 3. 27 is of a coarse-grained sandstone and is almost square in section, with four whetting surfaces. We have seventeen of this type, some of which taper a little towards one end. In thickness they vary from 5.2 to 2.1 cm. The second type is of a finer-grained material, mostly argillaceous slate. The form varies a good deal, but they are always more or less flat. On some of them the sides are convex. The whetting surfaces number from one to four, but most have four, and many are flakes on which the number

[1]) Mathiassen, 1927, I, Pl. 61. 2-4.
[2]) Ibid., Pl. 61. 12.
[3]) Mathiassen, 1930, Pl. 10. 4 and 7.
[4]) Mathiassen, 1933, Pl. 7. 1-4.
[5]) Mathiassen, 1927, II, p. 69.

of sides cannot be determined. Five are drilled at one end like Pl. 3. 29; on two of these the hole runs from the side out at the end. Pl. 3. 28 has probably been used for whetting bodkins or the like. In all we have sixty-six of this type, varying in length from 12.6 to 6 cm. A total of twenty-seven differ from it in having a depression in each end as on Pl. 3. 26. These whetstones with finger grips are characteristic of Northeast Greenland, as has already been pointed out, and are unknown outside that region.

Pl. 4. 17 is an adze handle of wood, of the usual Eskimo type with an oblique face to take a bone head or stone blade above, and below it a hole for the lashing. It also has a unilateral knob at the other end. We have nine of this type, varying in length from 27 to 22.9 cm and very much of the same appearance as the first-named. Three of them have the knob on the rear end. An adze handle from the Denmark Expedition also has a knob[1]); this handle, by the way, is very similar to Pl. 4. 17, a type which with slight deviations occurs throughout the whole of the Eskimo region.

We have nine adze heads of bone for placing on the handle, and shaped for the insertion of a stone blade; they are all of antler, but very different in appearance. Pl. 5. 1 has a flat seating on the underside, two shallow holes from side to side for the lashing, and a deep blade socket with a rectangular opening. As will be seen from the illustration, one side of this socket has been split off by drilling. There is another one, slightly smaller, likewise with two holes in the side. The blade socket is smashed in. The others have no holes in the side. Pl. 5. 2 has a seating on the underside; the top and the sides are covered with notches for holding the lashing. Further back is a collar as an additional support for the lashing. The other six are more or less the same in appearance; they vary in length from 16.7 to 10.1 cm. We know of similar heads of bone, with or without holes, both from Inugsuk[2]) and from the Thule Culture[3]); Comer's Midden, for instance, produced two very similar to those described above[4]).

Adze blades of stone occur to the number of eight, one of which is very fine-grained sandstone, the remainder a black silicious slate. The first of these has undoubtedly been fastened direct to the shaft with no intermediate bone piece, as at its rear it is 5.8 cm wide. It has a rather curved, ground edge. The remainder of the blade, which is defective at the rear end, is unground. Of the slate blades four have certainly been intended for insertion in a head of bone. Pl. 3. 22 is the

[1]) Thomsen, 1917, Fig. 27.
[2]) Mathiassen, 1930, P. 11. 1-3.
[3]) Mathiassen, 1927, II p. 75.
[4]) Wissler, Fig. 19 A and C.

largest of them. It has a straight ground edge and a coarsely-shaped, narrow rear end. The same is true of two others, but these have a convex edge. The fourth is almost rectangular, but only 2.3 cm wide. The other three blades of slate vary in breadth from 5.3 to 4.4 cm, and doubtless have been fastened direct to the handle. They all have a rather curved, ground edge. Whereas the wide blades have been dealt with when dealing with the earliest culture, and doubtless are due to immigration from the south, we know of the others from both Inugsuk[1]) and the Thule Culture[2]).

Pl. 3. 21 is a hammer stone of quartzite. It is almost spherical with a flattened belt round the middle. Hammer stones occur in the earliest culture at Angmagssalik[3]) and at Inugsuk[4]), where they are fairly common; on the other hand they are rare in the Thule Culture[5]).

Pl. 5. 8 is a wedge of whale bone. We have in all seven wedges, of various form and size. In length they measure from 23 to 11.6 cm, and in breadth from 4.8 to 2.5 cm. Three are of whale bone, two of antler, one of narwhal ivory and one of bear bone; the latter has a well cut leaf-shaped point and probably has once served some other purpose. Wedges of bone have had a wide distribution both in Greenland and in the Central region.

A number of implements are connected with drilling, which, as already mentioned, has been very widely used in Northeast Greenland. Pl. 5. 19 is a drill shank with a lashed-on bit. The shank is of wood, 32.3 cm long and rather crudely made. It tapers at the top, where it ends in a round pivot which has rotated in the mouthpiece. In the other end a four-sided socket has been cut, and in this is the bit, held in by a whipping of plaited sinew thread. The bit consists of a piece of greenish quartz, 5.7 cm long, almost four-sided in section. On three sides it is very roughly fashioned, whereas the fourth side is a cleavage surface or the natural surface of the stone. Whereas this bit terminates in a point, it rapidly becomes thicker so that one would scarcely imagine it to be suitable for drilling. Another specimen of a shank, only 12.2 cm long and somewhat defective, has a bit of smoky topaz inserted in a hole in its lower end. We have seventeen drill shanks without bits, more or less defective. Pl. 5. 18 has a large socket for the bit, the others simply have a cleft. In length they vary from 20 to 8.3 cm.

Pl. 5. 17 is a carefully made mouthpiece for a drill. It is made

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[1]) Mathiassen, 1930, Pl. 11. 4.
[2]) Mathiassen, 1927, II, p. 77.
[3]) Mathiassen, 1933, Pl. 2. 8.
[4]) Mathiassen, 1930, p. 216.
[5]) Mathiassen, 1927, II, p. 83.

of walrus skull bone, is rounded-triangular with the hole for the shank at one corner. On both sides a hollow has been cut for the teeth. Another mouthpiece of the same material has originally been of similar form with the hole in the same place. It has broken, and as the first hole thereby became useless, another was drilled a distance up on the side. Finally, on Pl. 5. 16 is a drill mouthpiece made out of the molar of a caribou. The hole is in the middle of one narrow side of the tooth.

Of drill bits we have a total of thirty-six, five of them being of the aforesaid black silicious slate. The remainder are of argillaceous slate. They fall naturally into two groups according to whether they have a point at one end or at both ends. There are thirty-one of the former kind, varying in shape from quite narrow, where the working point runs smoothly into the shank, to the form with a broad shank and a distinct, thinner point. Between these two extreme forms are every kind of transitional form. Pl. 3. 35 is an extremely powerful bit of green slate. It has a cuneiform, unground shank running smoothly into a four-sided ground point which tapers off towards the end. The point is cuneiform and has a very short convex edge. The whole bit is 7.9 cm long. From this specimen, as already said, we have specimens of every shape to Pl. 3. 33, which represents the other extreme. It has a wide flat shank ground into a shape slightly like a wedge. Quite distinct from this part is the working point, which is slender and conical. The whole bit is 3.5 cm long and 1.6 cm broad. Of the other specimens three have a conical point, while two have four indistinct facets. The others are cuneiform. The smallest is 2.1 cm long and 0.9 cm wide. Pl. 3. 34 is of silicious slate with a four-sided thick shank and an almost round working point, the end of which is broken off. On three broken round working points of the same material the end is cuneiform.

Then there are the double drill bits, of which Pl. 3. 36 is the largest and most perfect specimen. At the middle it is thick and four-sided, becoming round towards each end, which terminates in a cuneiform point. The two points are of different sizes; the larger, which has four indistinct ground facets, has a very curved edge 0.9 cm long; the smaller has a straight edge 0.4 cm long; the whole of this bit is 7.7 cm long. The other four of this type are all defective. They are four-sided at the middle, but the ends are broken; it can be seen, however, that they have been of different sizes. Most probably this type has been made to enable the worker to reverse the bit when required for holes of different sizes.

Whereas the drill shanks are of a commonly-distributed type, the rounded-triangular mouthpieces seem to be local. There is one[1]) from

[1]) Thomsen, 1917, Fig. 29.

the region covered by the Denmark Expedition, but outside of Northeast Greenland it is unknown. Double-pointed bits have previously been found in Northeast Greenland[1]) and in the Central Thule finds[2]). Furthermore, as Pl. 3. 36 has a hint of four facets, a feature often met with on the bits of the Thule Culture[3]), it is reasonable to assume that this type has come north about Greenland.

Pl. 5. 10 is a wooden shank of a hand drill. It is round, terminating at the top in a spherical surface, decreasing in thickness downwards towards the end. In this is a cleft where, judging from the rust marks, it has held an iron bit. There are three others of the same form, with a length varying from 9.4 to 6.8 cm. One has a groove for a lashing about its lower end. One, at any rate, has had an iron bit.

Pl. 5. 11 is a hand drill with a flat wooden shank and a bit of silicious slate. This bit is inserted in a cleft in the end of the shank, round about which there has been a lashing. Pl. 5. 12 is a similar implement with a handle made of an undeveloped narwhal tusk. In the thin end of the shank is a very fine bit, apparently of iron.



Fig. 29. Baleen cutter. 1:2.

Four pieces of black silicious slate have a ground point like Pl. 3. 25. These cannot be bow drill bits, as they are too large and shapeless to be inserted in a shank.

Hand drills like the first of those described have occurred in other Northeast Greenland finds[4]); at Inugsuk[5]) and in the Thule Culture[6]). Hand drills without a separate shank have occurred in West Greenland finds[7]).

Pl. 5. 6 is an implement not previously found in the Eskimo Culture. It consists of a flat stick of wood with one end cleft and furnished with a flake of flint. This flake has been held in by a strong whipping of thick sinew thread above and below it. The flake has a very sharp edge formed by the natural intersection of the two fracture faces; a small flake has been split off the upper end to leave a point. Fig. 29 is another specimen af the same type, on which the flint flake is fastened by means of a lashing of baleen. It would seem that the flake has ended in a point, as on the former specimen, but that it has been broken off. There are other three specimens of this type, varying in length from

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[1]) Thomsen, 1917, Pl. XIV, 20 and from Scoresby Sound in Nat. Mus. L1. 1017.
[2]) Mathiassen, 1927, I, Pl. 63. 13.
[3]) Ibid. II, p. 76.
[4]) Thomsen, 1917, Fig. 47.
[5]) Mathiassen, 1930, p. 218.
[6]) Mathiassen, 1927, I, p. 82.
[7]) Solberg, 1907, Pl. 6. 22-23.

13.9 to 10.8 cm. Two of them have a whipping of sinew thread, the third has none at all. At one of them the flint flake ends in a point like Pl. 5. 6. This being the first occasion on which this implement has occurred in the Eskimo Culture, the question arises as to its purpose. An attempt to cut baleen with them was most successful, and accordingly I imagine they have been used for this very purpose, for which reason I have described them in the lists as baleen cutters. What is more, they occur only in the first stage at Dødemandsbugten, where we have found a number of objects of baleen and a quantity of baleen thread. I consider it is not improbable that this implement has in fact been used for cutting these threads.

Of ulos we found six entire specimens in this stage; Pl. 3. 24 is the best preserved of them. It consists of a handle of wood in which is inserted a slate blade. The handle is broadest on the back, which is slightly arched lengthwise and rounded from side to side. The ends are cut off obliquely, and the sides slope in slightly towards the blade. Across the middle of the handle is a groove. On each side of this groove is a hole, through which runs a lashing of baleen. On the underside is a groove, about 5.5 cm long, in which is the blade. This blade is ground, has a faintly curved edge and two holes for the lashing. The ends have been cut obliquely. This description may roughly be applied to the other ulos, which vary in length from 9.3 to 6.1 cm, in breadth from 7.2 to 5.1 cm. One has two holes in the blade but none in the handle; another has two holes in the handle but only one in the blade. Pl. 3. 23 has a more sharply ridged handle on which the upper side is angular. The blade differs in having a long edge and quite a short tang.

We also have eight handles of wood without a blade; three of them are angular on the upper side like Pl. 3. 23, three of them have concave ends. One is very crudely made with lashing notches in the upper side instead of holes. It is 14.4 cm long and has a blade groove 8.5 cm long. The others vary in length from 11.2 to 5.4 cm. Finally, there are eighteen slate blades and ten fragments; in length they run from 10.4 to 3.5 cm, in width from 5.7 to 1.4. Nine of them have two holes like Pl. 3. 24, two have one hole in the middle, one a hole at the side besides the two at the top, and one has two holes, one above the other, on the tang. Four resemble Pl. 3. 23 in that they have a long edge and a short wide tang which stands out distinctly from the other part of the blade. Seven have quite a narrow tang separated from a wide blade by only a small notch. The rest have no tang or are defective. One slab of slate, 19.1 cm long and 15.1 cm wide, with a long curved edge, has probably also done service as an ulo. It cannot have had any handle.

Ulos with the blade inserted direct in the handle, which is thickest

on the back, are found in both the Thule Culture[1]) and the Inugsuk Culture[2]), where they also occur in the earliest culture of the Angmagssalik district[3]). In most places, however, the handle is of bone, whereas here our specimens are exclusively of wood.

Pl. 3. 32 is a scraper of flint, with a convex edge. It is widest and thickest at the edge. The underside is a concave cleavage surface which, however, at the back end has been shaped a little by knocking off thin flakes. Probably this was done in order to make it fit a handle, although no handle was found. This scraper is 3.3 cm long and 2.3 cm wide; another specimen, likewise worked a little on the underside, is 2,5 × 1.6 cm. Finally, there is the third and last specimen found, 1.8 × 1.7 cm, and quite shiny on the back. Convex-edged scrapers of flint are not common in Northeast Greenland; besides these three, one was found at Rypefjæld[4]), two (or more) at Musk Ox Fjord[5]), and one at Scoresby Sound[6]). The type has a wide distribution and is known in the earliest culture at Angmagssalik[7]) and the Thule Culture[8]).

While dealing with these flint scrapers with a convex edge mention may be made of five pieces of flint which have either one or two artificial edges. These specimens are of no particular shape, so that they cannot be placed under any certain type; two, however, do recall a specimen from Sermermiut[9]), which Mathiassen considers may possibly have been a baleen shave[10]).

Of two-handed scrapers we found fourteen specimens in all, three being almost complete and about 30 cm long. The others are fragments. Pl. 4. 7 is the best preserved specimen. It is made out of a bear femur in the same manner as those of bear ulna referred to under the earliest culture. At the upper end in the figure there are marks of a lashing which probably has held on an extra piece to give a better grip. On one of the other specimens this end is 12 cm long and, by smoothing off the articulation processes, has been formed into a very effective hand grip. The other specimens are made of the same bone and very similar to Pl. 4. 7. As has been remarked previously, this type is certainly of local origin. It does not occur in the second stage.

Pl. 7. 18 is most likely a bodkin of walrus ivory. It is round,

1) Mathiassen, 1927, II, p. 84.
2) Mathiassen, 1930, Pl. 12. 15, 16.
3) Mathiassen, 1933, Pl. 1. 14.
4) Thomsen, 1917, Fig. 34.
5) Solberg, 1932, Fig. 1.
6) Ryder, Fig. 31 A.
7) Mathiassen, 1933, Pl. 3. 9.
8) Mathiassen, 1927, II, p. 20.
9) Solberg, 1907, Fig. 4.
10) Mathiassen, 1930, p. 221. On Baleen Shaves cf. Murdoch, p. 174.

tapers smoothly towards the point, and at the top has a broken eye and below it two knobs on each side. Another specimen like this, likewise of walrus ivory, has only one faint knob on each side just below the eye. It is 15.8 cm long. There are similar forms in „Comer's Midden"[1]) and from Ritenbenk district in West-Greenland.[2]) In the latter case it was found together with ornamental bodkins. Pl. 7. 17 is a bodkin made by pointing the lower end of a seal fibula. We have also two defective bodkins of the same bone. Pl. 7. 16 is a bodkin of antler, with a long flat shank and a short point. In addition, there are five pointed pieces of bone which may have been bodkins, two of whale bone and three of narwhal ivory. Bodkins formed by sharpening a bone or the like are spread over the entire Eskimo region.

Of winged needle cases we found two in Dødemandsbugten, both in I House 3. The larger of the two, Pl. 7. 22, was found inside the house. It is a very thick piece of narwhal ivory, and unornamented. The other, which is of walrus ivory, is shown on Pl. 10. 7 and is part of the grave find in the passage. It is much smaller but of better workmanship, with a circle of dots round about the upper edge and a circle round each "wing". It is interesting that the same find contains a model of the winged needle case, also of walrus ivory, Pl. 10. 14. In the wide end is a knob, probably intended to represent the button which closes the case, whereas on the other end there is a prolongation with a suspension hole. This might indicate that the specimen has been used as a pendant. The winged needle case, which is characteristic of the Thule Culture, has been found earlier in Northeast Greenland[3]) and is also known from Angmagssalik[4]).

Household Utensils.

The only find we made of a lamp that could really be used was a fragment, Pl. 6. 13. The material is coarse-grained sandstone with a fairly deep depression in the middle. It has no wick ledge, but in the front edge there is a very low channel which leaves a faint indication of a ledge. There is no doubt that this is simply a vestigal wick ledge. On the other hand we found four complete specimens of toy lamps. The largest and best preserved of these is shown on Pl. 6. 11. It is of a very fine-grained sandstone, a material easier to work than the coarse sandstone of which Pl. 6. 13 was made. This specimen has a high, narrow wick ledge, dividing the lamp entirely into two compartments. There are three other and smaller toy lamps, all with a wick

[1]) Mathiassen, 1927, I Pl. 78. 8.
[2]) L. 6150.
[3]) Thalbitzer, 1909, Fig. 35; Thomsen, 1917, Pl. VII, 9.
[4]) Mathiassen, 1933, Pl. 1. 17.

ledge near the front edge. One, which is of a material similar to the foregoing, is 6.4 cm long and 4.5 cm wide. In form it is like Pl. 6. 11, but the wick ledge does not extend right out to the side, a feature recurring for instance on a lamp from the earliest culture in the Kangâmiut region[1]), and one from Qilalukan[2]). As will be seen from Pl. 8. 29, the third toy lamp is somewhat narrower in proportion to its length than the others. It is made of a soft argillaceous slate and has a wick ledge running right out to the side. The same applies to the last specimen, which is of a coarse-grained and impure soapstone.

Having regard to these four toy lamps, and to the fact that it would be difficult to make a proper wick ledge in the hard material used for the only real lamp found, we must say that lamps with a wick ledge have predominated in this culture stage, whereas they do not occur at all in the second stage. Hitherto only one fragment of a lamp with a wick ledge had been found in Northeast Greenland, viz. in Scoresby Sound[3]). It is impossible to decide to what origin this type is to be ascribed, as it occurs both in the earliest culture of Angmagssalik district[4]) and, as already mentioned, in the Central Thule finds.

It is more difficult to determine the type of cooking pot, as only very fragmentary specimens were found. Pl. 6. 14 is the largest. It is of fine-grained sandstone with a wall up to 3.5 cm thick. Undoubtedly it has been of the rounded, four-sided type; in the corner on the inner side is a projection through which a hole has been bored for suspension. Four edge fragments have a hole placed in a similar manner. In all we have thirty-one fragments of cooking pots, sixteen of them being of sandstone, the remainder of a coarse-grained crystalline schist, which one may call soapstone, but which provides a much inferior material for lamps and cooking pots than the West Greenland stone. The largest fragment is from the edge, 24.5 cm long and having a side height of about 10 cm; this is also the most thick-bodied, 3.6 cm. Two large bottom fragments show that these cooking pots have been flat-bottomed. Cooking pots with a suspension hole in an internal projection predominate in the earliest culture at Angmagssalik[5]) and in the Inugsuk Culture on the whole[5]), whereas the cooking-pots of the Thule Culture usually have the holes passing through from side to side[6]).

Pl. 6. 3 is a stick of wood charred at one end. Most probably it

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[1]) Mathiassen, 1931, p. 97.
[2]) Mathiassen, 1927, Pl. 52. 4.
[3]) Nat. Mus. L. 9680.
[4]) Mathiassen, 1933, p. 54.
[5]) Ibid., p. 55.
[6]) Mathiassen, 1931, p. 100.

has served as a lamp trimmer, as asbestos, the usual material for lamp trimmers, does not occur here. Whether the other thirty-seven wooden sticks which are burnt at one end are all lamp trimmers we cannot say, of course, but there is no doubt that many of them have been so used. The longest, which is 21 cm, has originally been a drill shank. Two of them have a groove round the middle as if they had had a cord, four like Pl. 6. 12 have three holes in one end connected by means of a groove between the two uppermost openings on one side and the two lower openings on the other side. This feature will be reverted to below.

It seems likely that the inhabitants of Dødemandsbugten have known how to make fire by drilling as well as by striking pyrites. Pl. 6. 4 is a stick of wood, conical at both ends as a consequence of fire drilling; Pl. 4. 5 is a piece of wood which has served as a hearth in the process. The same applies to two other pieces of wood. In addition, in the houses we found six pieces of pyrites which no doubt have been used for lighting fires. Both methods have been used in the Thule Culture[1]), whereas in Angmagssalik only the first named, for which reason fire striking with pyrites may possibly be an element that has come to our locality north about Greenland.

Pl. 6. 6 seems to be the fragment of a rounded wooden tray. It is very slightly hollowed out. Pl. 6. 10 is also a fragment of a wooden tray, but this is four-sided with rounded corners and has had taller sides than the foregoing specimen. It has split longways and has been repaired with baleen cord. There is another similar specimen, but more elongated and rounded at the ends; unfortunately it has suffered a great deal from weathering. Finally, we have the remains of a small flat wooden ladle or spoon with an oval bowl but with no handle, and four indeterminable fragments of wooden vessels.

Of bone mountings for the edge of wooden dishes we have four small pieces, all like Pl. 5. 23 with a flat underside and a rounded upper side with a row of holes. One specimen still has remains of tree nails in some of the holes. They vary in length from 7.5 to 2.1 cm, in breadth from 1.2 to 0.5 cm.

Oval bowls and cups with a wooden bottom and baleen sides have played a not unimportant part, judging from this and other North Greenland finds. Pl. 6. 9 is a rather large but defective bowl bottom; there is also a fragment of one, 25 cm long, which has been repaired with lashings in four places. The holes through which the lashing has passed are 1.5 cm from the edge of the fracture, from which a deep groove for the lashing runs to each hole. Pl. 6. 8 is an oval wooden bottom for a baleen cup. Seven of these wooden bottoms

[1]) Mathiassen, 1927, II, p. 109.

were found in an almost complete state, varying in length from 13.4 to 8.3 cm, and in breadth from 7.5 to 4.6 cm. We also found a fragment. Pl. 6. 7 may be a similar cup bottom, but is of baleen. Like the others, it is thickest at the middle and narrows off a little towards the edges.

Of sides for these baleen cups we found five in all, Pl. 9. 8 being the largest and most well-preserved. Inside it measures 10 cm long, 7.7 wide, and 5.6 high, and it is joined with sinew thread. The others are defective, varying in height from 6.7 to 2.7 cm. Two of them are stitched together in two places, while a third has stitches of plaited sinew thread. Oval bowls and cups like these are distributed over the Eskimo area generally.

Pl. 6. 2 is undoubtedly a blubber pounder. It is made out of a piece of driftwood which to some extent has already had the bend in it, and consists of a thin shaft and a thick head, which is rounded-foursided in section and ends in a slightly convex face. There are two others of the same type, but their handle is broken. The hammer head of one is up to 6.6 cm thick, of the other up to 5 cm thick. Blubber pounders have formerly been found in Northeast Greenland, but in no great number; Thalbitzer has figured one from Dunholm, south of Scoresby Sound, which is very similar to ours but of better workmanship[1]). Another with a handle like a "sling handle" is in the Riksmuseet in Stockholm[2]). The type is not known at Angmagssalik, and in West Greenland it was only found last summer during Therkel Mathiassen's excavations in Disko Bay, and Dr. Mathiassen has kindly informed me that it came from the earliest finds. Accordingly, it is an old type which no doubt has come to Northeast Greenland from the west coast via Angmagssalik, where, as it happens, it has not been found. In the Thule Culture we have blubber pounders of antler[3]).

Pl. 6. 1 is a long curved stick of walrus ivory which possibly may have served as a meat stick. It is somewhat defective but distinctly sharpened at one end. Another specimen very like this but only 14.1 cm long may also have been a meat stick; it has a pronounced curve and a point at one end. In workmanship, however, they are far inferior to the handsome meat sticks from Cape Tobin figured by Thalbitzer[4]).

Clothing, Ornaments, and Objects associated with Intellectual Culture.

Thanks to the frozen ground in the ruins, some few remains of articles of clothing were preserved. Fig. 30 is the remains of the back

[1]) Thalbitzer, 1909, Fig. 44.
[2]) Stolpe. Tafel V. Abb. 17.
[3]) Mathiassen, 1927, I, Pl. 28. 6.
[4]) Thalbitzer, 1909, Fig. 53.

of a kamik. It is of seal skin with the hair outside, on both the leg and the edge of the sole. On the underside of the sole, of course, there is no hair. The sole is fastened to the upper with a thick sinew thread and is crimped at the edge. Besides this specimen, there are two soles, also of seal skin, possibly bearded seal as it is much thicker than the sole of the first-named kamik. One is almost oval, about 22 cm long and 18 cm wide, and crimped back and front. At the back is a large hole with the remains of a patch, at the front a smaller one. The other specimen consists of two soles sewn one upon the other. The innermost one is very thin with two large holes, the other one is still entire. The whole specimen is about 25 cm long and 18 cm wide.

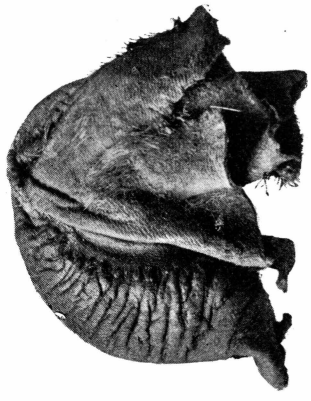


Fig. 30. Heel Part of Boot. 1:3.

On a very defective doll from II House 2, the kamiks are indicated; they seem to reach up as far as the knees, probably just below. On several of the female dolls, for instance Pl. 8. 20, it is also indicated that they have worn the natit.

Finally, we found together with the two kamik soles a very defective piece of gut-skin, 40 cm long and 30 wide, sewn together out of two pieces each about 15 cm wide. This may be the remnant of a gut-skin coat, but it may also be of a gut-skin window.

Pl. 4. 19 is undoubtedly a snow beater of wood. It has a broad blade, lenticular in section, and a narrow handle, which again widens out at the back end. We have two others, 41 and 29 cm long respectively. The point of the shorter one has been cut off square.

Pl. 9. 4 is a similar implement of baleen, but otherwise of the same form as the others. Snowbeaters of baleen have been found in large numbers at Inugsuk[1]). From the more southerly part of the west coast we know of only one (doubtful) specimen from the Ritenbenk

[1]) Mathiassen 1930, p. 248.

District[1]), and Angmagssalik has not produced one at all. On the other hand those found are very like snowbeaters from the Cape York District and Central Thule finds[2]). Previously, Northeast Greenland has only yielded one very doubtful specimen, of antler[3]).

Pl. 7. 20 is a part of a back scratcher. At the top is an oblong head of walrus ivory with a curved and sharp edge in each end. In the middle is an elongated hole in which the handle, a wooden stick square in section, is still fixed. Pl. 7. 21 is probably the head of another back scratcher, thinner and of better workmanship. It has only one edge and, in addition to the elongated hole, two small round holes. On both sides this specimen is furnished with dot ornamentation. The National Museum has one of these implements, from Scoresby Sound, with a head like the last-named and with a handle made of a bird bone[4]); probably Ryder's Fig. 39 e is also the head of a back scratcher.

This type of back scratcher is not known from the Thule Culture or the Inugsuk Culture. From Inugsuk there is an implement of baleen which may be one of these, but it is quite different in form[5]). On the other hand, implements like those described occur among the present day West Greenlanders[6]) and the Angmagssaliks[7]). As the one from Dødemandsbugten was found in the earliest stage of the Mixed Culture, it must be due to chance that no specimen has been found in one of the two other cultures referred to.

Only two specimens of combs were found, a toy comb and Pl. 7. 7. The latter is of narwhal ivory and, as the figure shows, small and crude. The form with the small head with a hint of "wings" recalls one of the types of the Thule Culture[8]), but we see the narrow head again on combs from the Inugsuk Culture[9]).

Buckles, or buttons, may probably be the interpretation of Pl. 7. 6 and Pl. 10. 15. They are both of walrus ivory, the former in the shape of a fish or narwhal, the latter propeller-shaped. We also know this shape from a grave find on Rypefjældet[10]) and from the Franz Joseph Fjord complex[11]), but not outside of Northeast Greenland.

Ornamental plates occur in two different types. The first is

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[1]) Birket-Smith 1924, Fig. 164.
[2]) Mathiassen, 1927, I, Pl. 55. 2.
[3]) Thomsen 1917, Pl. XXVI. 1.
[4]) L. 1. 877.
[5]) Mathiassen, 1930, Pl. 20.17 and 21. 22.
[6]) Porsild, (1915 b), Fig. 63.
[7]) Thalbitzer 1914, Fig. 334.
[8]) Mathiassen 1927, II, p. 113 and I. Fig. 90.
[9]) Mathiassen, 1930, Pl. 14. 23.
[10]) Thomsen, Pl. VII. 7.
[11]) Mathiassen, 1929, Fig. 1. 10.

shown on Pl. 7. 1 and Pl. 10. 19. It consists of a plate ornamented with openwork; on the upper edge of this plate has been carved a horizontal cylinder which, in addition to a wide hole through its longitudinal axis, often has small holes at right angles to it. Probably a thong of some kind has passed through the cylinder from the frock; the plate may have been sewn on to the frock through the smaller holes. On Pl. 10. 19, which is of narwhal ivory, there are three holes vertically through the cylinder which, on this specimen, is almost barrel-shaped. In the lower part of the plate are three round holes. Pl. 7. 1 is of walrus ivory. It has one unfinished and two complete holes in the cylinder. On this one the holes at the bottom are triangular, and there is a notch instead of a middle hole. There is a third specimen of narwhal ivory. It seems to be unfinished, is only roughly carved, and has no openwork in the middle of the plate.

This type has only once previously been found in Northeast Greenland, by the Nathorst Expedition in the splendid graven find from Cape Franklin[1]). It mostly resembles Pl. 7. 1. The type is known outside Northeast Greenland in the Nualik find[2]), but in a more simple form. The plate is undivided and, like Pl. 17. 1, has three vertical holes in the cylinder. Thalbitzer describes it as a "haft", but there is no doubt that it is an ornament, as indeed is indicated by the handsomely carved forms from Northeast Greenland. However, we also know them from West Greenland. In the National Museum, dated 1839, there is a piece of walrus ivory which only differs from those described in the fact that the plate divides into two branches almost at the middle. It has a hole in the middle of the plate and one vertical hole through the cylinder[3]). Two other West Greenland specimens[4]) have no carving on the plate, but have three vertical holes through the cylinder. The type is unknown outside of West Greenland, for which reason it is certain that it has come to Northeast Greenland from the south.

The other type of ornamental plate will be seen on Pl. 7. 2. It is a flat plate of bone with a suspension hole at the top and with dot ornaments on one side. These dots are arranged in rows, one along the edge, another from the suspension hole to the innermost point, a third at right angles to the latter where the plate is widest. Where these two intersect there is a round hole. The dots are arranged in the same manner on the other specimen, which is 4.5 cm long and 2.5 cm wide. It lacks the two "arms" under the suspension hole but has an elongated, horizontal hole at the bottom. With regard to the use of

[1]) Nathorst, II, p. 364.
[2]) Thalbitzer, 1914, Fig. 228.
[3]) Nat. Mus. L. c. 57.
[4]) L. 2. 402 and 835.

these plates, Mathiassen, describing two similar specimens from a grave in Eleonore Bay, says that judging from the conditions under which they were found they have either been fastened to a necklace or possibly worn at the ears[1]). Several other ornamental plates of this kind have been found, for instance two on the Denmark Expedition[2]), both with the cruciform figure of dots; there was also one in the grave find at Cape Franklin[3]), and there are several in the National Museum from Scoresby Sound.

They do not occur outside of Northeast Greenland.

Pl. 7. 3 is a pendant of ivory. It is four-sided and tapers slightly towards the top, where it has a suspension hole. There are dot ornaments on all four sides, for the most part arranged in vertical rows. We have a similar specimen 3.1 cm long and 1.5 broad, likewise with dot ornaments. Pendants with dot ornaments occur in finds from Angmagssalik[4]) and West Greenland[5]). In the Thule Culture we know of various forms of pendants, but without any dots. One pendant of peculiar form is shown on Pl. 7. 12. It is of ivory, flat, and having three rows of dots along each edge and one transversally across it. At the broken end are the remains of a suspension hole. This form has not been met with outside of Northeast Greenland. A pendant, resempling the winged needle case in form, Pl. 10. 14, has already been mentioned.

Ornamental bodkins were found to the number of nine, all of walrus ivory. Pl. 7. 19 is a characteristic specimen with nine grooves under a small eye. The other end is pointed. The other eight are from grave finds; Pl. 10. 2-6 in the passage of I House 3, the other three the passage of II House 10. They all have an eye at one end; Pl. 10. 5 has had an eye in the thick end originally, but this has broken and a new one has been drilled in the thin end; by the way, this one, like Pl. 10. 6 and one other, has no grooves. Most af them taper gradually off towards the lower end; Pl. 10. 2, however, is an exception, as it is flat with two tongues; as also Pl. 10. 3, which is round, and Pl. 10. 5, which is flat. These nine specimens vary in length from 7.3 to 5.9 cm and in thickness from 5 to 3 mm; thus they can only have been for ornamental use. The distribution of the ornamental bodkins has previously been described.

Pierced bears' teeth, with a hole through the root end like Pl. 7. 5, are present to the number of four, one having the hole from

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[1]) Mathiassen, 1929, p. 157 and Fig. 1. 12-13.

[2]) Thomsen, 1917, Pl. XI. 1 and XXV. 19.

[3]) Stolpe, Pl. V. 18.

[4]) Mathiassen, 1933, Pl. 10. 5-6.

[5]) Mathiassen, 1931, Pl. 6. 6 and Mathiassen, 1930, Pl. 18. 4.

the root end out to the side. This is a widely distributed type which may have been used as an ornament or as an amulet[1]).

Pl. 10. 12 is a seal tooth, which is slightly polished and has a hole through the root end. It is probable that rows of teeth have been used as a necklace[2]).

Pl. 7. 4 is a drop pendant of ivory. It is divided into two by a waist in which there is a raised moulding; at the top is a small eye. Only few specimens of this ornament have previously been found in North-east Greenland[3]); outside that region we know of it only from Angmagssalik, where it has been used attached to eye shades right up to the present day[4]). Of drop pendants of stone we found five, like Pl. 7. 9, which is the largest. Four are of chlorite, whereas Pl. 7. 10 consist of a core of calcareous spar embedded in a soft argillaceous slate. They vary in size from 2.2 × 1.2 cm to 1.0 × 0.6 cm. Drop pendants of stone occur in the Inugsuk Culture[5]) but not in the Thule Culture. The type must accordingly have come to Northeast Greenland from the south.

Pl. 7. 11 shows two polished beads made of coal. Seven beads and a drop pendant, found by the Denmark Expedition[6]), are of the same material. Beads of stone have a wide distribution.

Of objects associated with intellectual culture we have only three types, viz. amulet box, drum handle, and drum frame; the latter is only a toy. The amulet box is shown on Pl. 7. 8. It is rather crudely made of a piece of driftwood, rounded on the bottom, the sides and the ends, but with a rather flat top surface in which a rounded square depression has been cut. The top side has undoubtedly been covered by a flat lid, but this is missing. In the box lies the amulet, a bumble bee of a kind still found in Northeast Greenland.

An amulet box has formerly been found in Northeast Greenland, in Scoresby Sound[7]). Two transversal grooves on it recall two amulet boxes from Inugsuk[8]). As regards the amulet itself, the bee, we find the same insect used by the Central Eskimos. In Knud Rasmussen's description of the intellectual culture of the Caribou Eskimos he describes how bees and other insects are used as amulets. They are sewn into small skin bags, which are fastened on to the inner frock[9]).

[1]) Mathiassen, 1930, p. 251.
[2]) Thomsen, Pl. VII. 13 and Thalbitzer, 1909, Fig. 34.
[3]) Thomsen, Pl. VII. 14 and Bird, Fig. 15.
[4]) Thalbitzer, 1914, Fig. 318.
[5]) Mathiassen, 1930, p. 251.
[6]) Thomsen, 1917, Pl. VII. 8 and 15.
[7]) Ryder, Fig. 33.
[8]) Mathiassen, 1930, p. 259.
[9]) Knud Rasmussen, 1930, p. 62.

On an amulet belt from the Caribou Eskimos[1]) there were small skin bags with bees, about which Knud Rasmussen says that the dangerous sting of a bee has a protective power. Among the Netsilik Eskimos a mother carries a bee with all its young sewn into a piece of skin in order that her son may have a strong head[2]). Finally, among the Copper Eskimos, bees sewn into a skin on the back of the inner frock give the wearer a powerful fist when boxing, and he is also better able to resist hard blows[3]). Thus we see that the bee is commonly used as an amulet by the Central Eskimos, and that it usually brings its wearer strength, especially in the head. Amulet boxes do not occur among the Central Ekimos, but are included in Central Thule finds, where, for instance, a specimen from Naujan is exactly like Pl. 7. 8[4]). Another amulet box, from Malerualik, contained the remains of insects among other things[5]). These amulet boxes, however, have their widest distribution among the Western Eskimos, who have also used bees as amulets. Murdoch figures such a box from the Point Barrow Eskimos, containing dried bumble bees[6]).

Pl. 7. 15 is a drum handle of wood. It has a notch on the underside for the frame and two notches for the lashing on the upper side, a feature recognisable on specimens from Inugsuk and the earliest culture of the Kangâmiut district[7]). Pl. 7. 14 is undoubtedly a fragment of a toy drum frame, of wood. It is quite flat, slightly curved, and with a groove in the middle of the outer side. This is the first time remains of drums have been found in Northeast Greenland. These instruments have not been found in the Central Thule Culture, but possibly this is merely an accident.

Games and Toys.

Games and toys have played an immense part in the Mixed Culture of Northeast Greenland. Particularly remarkable is the large number of various kinds of miniature implements with which the children have imitated the doings of the grown-ups. These implements are often fashioned with astonishing care to make them resemble those of the adults to the smallest detail.

Pl. 7. 23 is an ajagaq of bearded seal scapula. It has a hole in the

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[1]) Knud Rasmussen, 1925, I, p. 240.
[2]) Knud Rasmussen, 1931, p. 275.
[3]) Knud Rasmussen, 1932, p. 47.
[4]) Mathiassen, 1927, I, Pl. 34. 15.
[5]) Ibid, Pl. 84. 13.
[6]) Fig. 428.
[7]) Mathiassen, 1930, Pl. 17. 8 and 1931, Pl. 5. 12.

middle of the cavity and another in the edge which runs through to the outer side. A small hole further down is for the cord. There are two other ajagaqs, both of the same bone. One has two holes in the cavity, but also has four through spina, a large one in the thick edge and a small one for the cord in the thin edge. The third one has two holes in the edge of the cavity. An ajagaq from West Greenland, likewise of seal scapula, is figured by Birket-Smith[1]). It has holes through spina and one in the cavity. The cord is fastened to it in the same manner as the specimens from Northeast Greenland.

This culture stage has produced five disks for tops, all of baleen[2]). Pl. 9. 6 is one of them. Of the others, one is oval, the remainder four-sided. The largest is 9.8 × 6.5 cm, the smallest 5 × 4,5 cm. Tops are widely distributed all over the Eskimo region.

Figures representing swimming birds were found to the number of twelve in this stage. They are all made of walrus molar, on which the crown has been ground off obliquely to form the flat underside of the bird. They all have an outstretched neck, often long, with a pointed or more rounded bird's head, which on one of them is turned so that the bird is looking backwards. They all have a hole in the rear end. Pl. 10. 8-11 and Pl. 8. 11 show five of them. Pl. 10. 11 and Pl. 8. 11 are ornamented with rows of dots.

A comparison between these bird figures and those from the Central Thule finds, for instance Naujan[3]) reveals such great conformity that their origin may at once be placed to the Thule Culture. Furthermore, as the type is unknown in Southeast Greenland and West Greenland, its immigration route is beyond question. In Baffin Land similar figures are used for a game, tingmiujaq[4]), and it is possible that they have been used in the same way here. That they all have a hole in the back end would thus indicate that they have been threaded on a cord.

Together with Pl. 8. 11 we found two other bird figures, also of walrus molar. One of them, Pl. 8. 10, undoubtedly represents a ptarmigan. It is bored through the rear end and has six drilled dots, two of which have formed the eyes. The other is possibly an unfinished ptarmigan; the legs have not been carved. As they were found together with the swimming bird, they have probably served the same purpose.

Together with two of the bird figures we found a seal figure of stone, Pl. 8. 26. It has a flat surface on the back and a hole in the

[1]) 1924, Fig. 294.

[2]) The top disk of wood, figured Pl. 8. 24, was found in III, House 7, and thus belongs to the second phase. It has come on to this plate by mistake.

[3]) Mathiassen, 1927, I, Pl. 32. 1-5.

[4]) Boas, 1888, p. 567.

rear. I mention this in connexion with the bird figures because of an interesting find I made in the house on Strindberg Land. In one of the side walls I found lying in one place 110 small carvings of walrus ivory which, besides miniature implements, comprised one bear figure, six hares, twenty swimming birds, ten seals, fifty-three dropp endants like Pl. 16. 15, all of about the same size and all with a suspension hole. The ten seal figures are of exactly the same shape as Pl. 8. 26, which thus undoubtedly belonged together with the bird figures, whatever they may have been, for a game or for ornaments. The latter possibility is supported by the fifty-three drop pendants found with the animal figures on Strindberg Land. A similar find was made by Bird on Shannon Island[1]). This contains no bear or hare figures, but sixty seal and bird figures like the find from Strindberg Land. One more animal figure from this same house (II House 10) shall be mentioned, a walrus molar shaped in the form of a bear's head. Holes have been drilled in to indicate nostrils, eyes and ears; in the rear end of the top of the crown there is a large hole. This tooth is 5.6 cm long and 2.2 cm thick.

We found twelve wooden dolls, six male, five female, and one on which the sex cannot be determined. On all of them the arms are merely indicated, and on those which have heads the face is lacking. Pl. 8. 19 and 20 are male and female respectively, but whereas the former is quite flat both in front and behind, great pains have been taken with the latter in the forming of breasts, stomach and thighs. We find the same parts indicated on two other female dolls. On six of them the natit is indicated. Pl. 8. 21-22 are wooden dolls of another type. They consist of a four-sided stick of wood, one end being carved with a human head without the face but with a hair-tuft, which means that they are females; on Pl. 8. 21 the breasts are also indicated. These two dolls were found together, and are both charred at the lower end. Possibly they are two lamp trimmers, which have been decorated in this manner. Dolls without a face and the arms only faintly outlined are found everywhere in the Eskimo region. Pl. 8. 9 is a small doll of ivory; it differs from the others in having the hood indicated, turned up over the head. It also has a pronounced abdomen; no legs have been given this specimen.

Of the miniature implements the thin harpoon heads, bladeless and barbless, Pl. 8. 1, have already been referred to. Pl. 8. 2 is an Inugsuk harpoon head of walrus ivory, very handsomely worked, with a trifurcated spur in which the middle lobe is longer than the other two. There are five bladeless and barbless

[1]) Bird, Fig. 15.

flat harpoon heads. Pl. 8. 3 is of the common Northeast Greenland form; it is of walrus ivory. The same applies to another specimen, 5.2 cm long, which also has the widely separated spurs of this form. The other three are also of ivory. One is almost three-sided, with four teeth on the spur; the second one is waisted at the line hole like Pl. 4. 9, and the third is an unfinished head of the form like Pl. 4. 7.

Pl. 8. 4 is the foreshaft of a toy ice-hunting harpoon, of walrus ivory. The point is broken, and in the butt there is a scarf face. Where the shaft runs into this scarf it increases in diameter, and there is a hole through this part. Another complete specimen, 11.7 cm long and likewise of walrus ivory, is like Pl. 8. 4 but lacks the thicker part and the hole. Finally, there is a third, rather weathered specimen, 9.5 cm long, of ivory. In this connection mention may be made here of three short points with a scarf face, of the same form as those figured by Ryder[1]) and Thomsen[2]). Two are of antler, the third of wood, and they vary in length from 9.5 to 8 cm. It is difficult to decide whether or not they are arrow heads for bird hunting, as Ryder and Thomsen think; there is also the possibility that they are foreshafts for toy ice-hunting harpoons.

Pl. 8. 6 is a swivel, of walrus ivory. It is long, barrel-shaped, with four "windows". There is another specimen, 2 cm longer, but of exactly the same shape. A seat for a sealing stool, Pl. 10. 13, has already been referred to.

Pl. 9. 2 is a toy bow, of baleen. There are also seven specimens of baleen bows, which without any doubt have been intended for children. The longest is about 47 cm long and 2.5 cm wide. There are thirteen parts of toy bows of wood like Pl. 8. 18, varying in length from 26.5 cm to quite small pieces, and in breadth from 1.9 to 0.7 cm. They all seem to have been one-piece bows.

Toy arrows of wood were found to the number of thirty-four, of different shapes. Pl. 18. 17 is round at the fore end, flat at the nock end, with a feather on each side. The feathering is fastened on with a whipping of sinew thread, the tip of the feather being inserted in a cleft in the end of the shaft. The feathers have their sides turned against the shaft. At the back is the nock, and at the fore end is a whipping which probably has held the head. On another arrow, 12.5 cm long, there is only one feather, and this has its edge to the shaft. The tip is inserted in a cleft as on Pl. 8. 17. Pl. 8. 15 is a thin stick of wood, to one end of which a bone splint is fastened with baleen; this is certainly an arrow and arrow head. An exactly similar one, found in a house at

[1]) Fig. 10 and p. 310.
[2]) Fig. 22 and p. 408.

Eskimo Bay, had a nock. Besides these there is a number of ends, both fore and back. Twelve fore ends like Pl. 8. 16 are thicker at one end, no doubt to represent the arrow head. Three round wooden sticks have a cleft in the fore end, probably for the insertion of a bone head like Pl. 8. 15. Eight nock ends are flat and broad like Pl. 8. 14, whereas four like Pl. 8. 17 are flat, but do not widen out.

Six points, resembling Pl. 8. 12 and 13, are no doubt arrow heads for inserting in a wooden shaft like those with a cleft referred to above. They are all of antler, with a lanceolate blade and a cuneiform butt. In length they vary from 10 to 5.7 cm.

Pl. 8. 23 is a sledge runner, of wood. We have seven of these, the longest being 13.2 cm long and 1.3 cm high, the shortest 8 cm long and 2.3 cm high. Of cross-slats there are ten, varying greatly in size. Pl. 7. 13 is one of them, with a lashing of baleen. Three others have holes for the lashing inside the knob like this one, whereas the remainder consist merely of a wide middle and a narrow length at each end. In this respect they are exactly like the cross slats from Inugsuk figured by Mathiassen[1]). Of the ten specimens the longest measures 11.7 cm, the shortest 5.5; Pl. 7. 13 is the widest, 3.7 cm, whereas the shortest one is also the narrowest, 1,4 cm. Pl. 8. 7 is a trace buckle, of walrus ivory.

Pl. 7. 24 is without doubt the model of a kayak, of wood. It is in the shape of a kayak, with the almost flat bottom and the sharp ends. The hole in the middle of the upper side represents the man-hole. The deck is quite flat and the ends are not turned up. We know of similar models from Inugsuk[2]) and from the Thule Culture[3]).

Snow knives. Of these there are three, of walrus ivory; two are complete, the third very defective, but they all are of the same form as the snow knives of the grown-ups, Pl. 8. 5. Pl. 8. 27 is a small knife of slate, which unquestionably is too small for real use and most probably is merely a toy. Finger grips are indicated on the handle. We have in all twelve of these slate knives. Pl. 8. 28 is a larger, handsomely shaped specimen, two are probably unfinished specimens of two-edged knives. Of the twelve, the longest is 6.3 cm, the shortest 3.2 cm.

Pl. 8. 25 is an ulo handle, of wood, and Pl. 8. 30 is an ulo entirely of slate. There are also three ulo blades of slate, varying in length from 5.5 to 3.5 cm and in width from 2.9 to 2.7 cm.

Pl. 8. 31 is a cooking pot, of soft argillaceous slate. In form it is rounded-foursided. Its bottom is flat and its sides slightly curved.

[1]) Pl. 20. 3-4.

[2]) Mathiassen, 1930, Pl. 20. 5.

[3]) Mathiassen, 1927, I, Pl. 14. 10-11.

On the inner side are three drilled holes, no doubt intended to represent suspension holes. There is also a fragment of a similar pot, the wall of which is only 0.5 cm thick.

Besides the toy lamps with a wick ledge referred to in the foregoing I may mention an almost conical-shaped piece of sandstone, one face of which is hollowed out. It cannot be determined whether this is intended for a toy lamp or an unfinished cooking pot.

Finally, Pl. 8. 8 is a small comb, of walrus ivory. At the top it is quite thin and bent to an angle with the remainder of the comb; a hole has been drilled in this top part.

Sundries.

We found eight lengths of bone mounting with holes for nails — five of whale bone and three of antler. The nail holes are placed in from one to three rows, according to the width, and are of different sizes. In a piece of antler not otherwise worked there are three nails which have a diameter of 0.8 cm.

Pl.5. 7 is a tube made out of a piece of walrus ivory and ornamented with transverse mouldings, two at each end and two round the middle. No similar implement has previously been described from Northeast Greenland, but in the National Museum there is one from Scoresby Sound[1]), of narwhal ivory, 38 cm long and furnished with two similar mouldings at one end and one at the middle. The other end is broken off. Finally, in a grave find at "Baadsted", about 10 km west of Dødemandsbugten, we found a similar tube of walrus ivory, 26.5 cm long and having a moulding in the middle and at one end. The other end is smooth. Thus so far we have three almost exactly similar specimens, and accordingly they must have had some particular use, but what it is we do not know. There are two possibilities, both equally acceptable, I think: either a bone tube for the draught-line of a sledge or a sucking tube. As regards the former, this device is not known outside of West Greenland, where in fact it must be of rather recent date; at any rate, it has not been found at either Inugsuk or the Kangâmiut district. Its Greenland name is akúnerut, and it is often handsomely profiled[2]). A specimen figured by Birket-Smith has transverse mouldings as on Pl. 5. 7, two at the middle and one at each end[3]). The great similarity might well indicate that our specimens are really akúnerut, but it is strange that the type is not known at all at Angmagssalik, as of course it must have passed that district to reach Northeast Greenland. The other possibility, that it is a sucking tube for drinking water, is not

[1]) L. 1. 631.

[2]) Birket-Smith, 1924, p. 247.

[3]) Ibid. Fig. 174.

easy to reject either. We know of such sucking tubes for instance from Angmagssalik. They are of wood with ivory mouthpieces, of the same length and with the same profile as Pl. 5. 7[1]). It is true that no sucking tube has been brought to light from the earlier habitations in Angmagssalik district, but this may be due to the fact this implement has been made of wood, a material of which only extremely few relics were found in the early finds at Angmagssalik. One circumstance supporting the theory that these are sucking tubes is that the grave find at "Baadsted" contained an oval bowl bottom of wood and a bird figure besides the tube. Presumably there has been an entire bowl, but the baleen sides have decomposed. It was certainly a woman's grave, and there a sucking tube would certainly be in place, whereas it is difficult to imagine a woman being buried with an object belonging to a sledge. For the sake of completeness it may be added that the Central Eskimos use sucking tubes in spring when out on sledge journeys and looking for the water under the snow. One of these tubes was figured by Boas[2]); apparently it is of ivory and has a moulding at one end.



Fig. 31. Bone implement of unknown use. 1:2

Pl. 5. 9 is an implement the use of which is so far unknown. It is fashioned out of a bear ulna, the largest process of the joint having been smoothed off, making the bone round at the top. The handle is split and pointed downwards, where it ends in a short, straight chisel edge. Another specimen of the same type and bone has a rounded edge. Quite obviously it is an implement that has required a firm grip, but for what purpose it has been used I am unable to say.

The object of the implement shown on Fig. 31 is also uncertain. It is made of antler, has a distinct handle and a blade which is hollow on one side; its edges bear the marks of drilling and subsequent grinding, the other side is smoothly rounded. It is rather similar to the knives for pressing water out of skins referred to by Mathiassen from Inugsuk[3]) and also occurring in the Thule Culture[4]), but it is rather too hastily made to permit of any definite interpretation. No similar implement has been found in Northeast Greenland before.

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[1]) Thalbitzer, 1914, Fig. 274.
[2]) Boas, p. 535, Fig. 489.
[3]) Mathiassen, 1930, p. 197, Pl. 6. 18.
[4]) Mathiassen, 1927, II, p. 51.

Another implement whose purpose is as yet unknown, but which has been found in large numbers both in and out of Northeast Greenland, is the one with the well-shaped handle and the notches at the point, Pl. 4. 18. Besides this one, which is flat on the front and rounded on the back, there is another complete specimen, 44 cm long, flat, with two pairs of notches at the point and a broad, well-shaped handle. Two others, almost complete, are likewise flat and have a short, broad handle. They are cut off obliquely at the top. There is another flat point with two notches, and the remains of one which has also had two notches. Finally, there are three shorter, broad handles and five fragments. These specimens are outstanding in that they are flat in contrast to most other Northeast Greenland specimens, which are thin or round[1]). The latter also differ with regard to the shape of the handle, it being more slender and having an almost triangular indentation for the outer fingers[2]). The flat type, however, had also been found previously in Northeast Greenland, the Denmark Expedition having brought two of them home[3]). Outside of Northeast Greenland we know only of the flat type, and it occurs in both the Thule Culture[4]) and the Inugsuk Culture[5]). Consequently, the flat form is the earliest, and it has only acquired its slender, elegant form in Northeast Greenland. It is quite in conformity with this that we find only the flat form in the first stage af Dødemandsbugten, whereas the thin form predominates in the second stage (cf. Pl. 13. 4 and Pl. 16. 5).

Concerning the use of this implement, I agree with Mathiassen that it is probably a sling handle. As this is a question which has been discussed so thoroughly in Mathiassen's book on Inugsuk[6]), I shall confine myself to one or two additional features which I consider support this assumption. Firstly, the development from the flat to the thin form has made the implement more suitable, as thereby it meets less resistance when swung through the air. Accordingly, I consider that the implement has only attained perfection in Northeast Greenland, viz. the long, slender form. As this implement has nowhere been of such great importance as in Northeast Greenland, where indeed it has remained longest in use, it is very natural that this development has proceeded there. Secondly, a "sling handle" of this kind has recently come to the National Museum from Scoresby Sound as a part of a large surface find. This find also included remains of kayaks and sledges

[1]) Thalbitzer, 1909, Figg. 103, 104.
[2]) Ibid., Fig. 63.
[3]) Thomsen, 1917, Fig. 53.
[4]) Mathiassen, 1927, I, Pl. 58. 3.
[5]) Mathiassen, 1930, Pl. 16. 9.
[6]) p. 260 seq.

and hunting implements, and the circumstance that it was found together with hunting implements indicates, I consider, that it is a hunting implement too.

Possibly Pl. 9. 3 is a similar one, of baleen. It has not the characteristic handle, but at the top it has two notches in which is a baleen cord, which is tied in such a manner that it forms a loop eye. A "sling handle" of baleen was found at Inugsuk. Its hand grip is the same, and there are two notches near the point[1]).

Among other implements of baleen, Pl. 9. 9 is probably a hank for a bowl or similar vessel. It consists of a baleen cord which has been whipped with another cord of the same material. At the ends they are so knotted that they form a loop, which, however, is broken. There

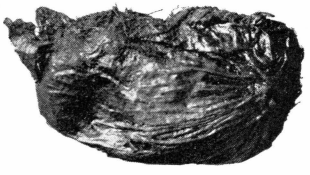


Fig. 32. A ball?.
1:2

is another, almost of the same length, but defective. A very similar specimen was found in Comer's Midden[2]).

Pl. 9. 7 is a ring of baleen. It is formed of a strip of baleen, the two ends being overlapped and whipped together. The height of the ring is 1.6 cm. Another ring of baleen, only 1.2 cm high, has been entirely whipped with baleen thread. It is difficult to say what the use of these rings has been; possibly they were the frames of toy drums.

Six pieces of baleen like Pl. 9. 5, varying in length from 26.2 to 7.4 cm and in breadth from 2.9 to 1.5 cm, and furnished with holes, may have been mountings of some kind.

Fig. 32 is a piece of gut skin tied together at the ends and filled with a black heterogeneous mass consisting mostly of feathers, hair and plant remains. Possibly this is a ball. A ball of almost the same size, but of seal skin, was found at Inugsuk[3]), and, in fact, ball games are widely distributed among all Eskimos[4])

Finally, in this stage we found 183 baleen cords tied in knots, seven pieces of seal thong with knots, two of them with a loop, and four pieces of sinew thread, two of them being plaited, and a small braid of hair.

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[1]) Mathiassen, 1930, Pl. 21. 5.
[2]) Mathiassen, 1927, I, Pl. 81. 2.
[3]) Mathiassen, 1930, Pl. 17. 15.
[4]) Birket-Smith, 1929, II, p. 288.

Second Stage.

To the second stage we place the finds from Group I Houses 5 and 6, Group II Houses 1, 4 and 7, and Group III Houses 7 and 22, as well as the fields A. 1—3 and B. 1. In the following the types from this stage will be dealt with in such a manner that those not referred to under the first stage will be described at some length, whereas those which also occur in the first stage will merely be briefly referred to.

Harpoon Heads.

Of Inugsuk harpoon heads we have only one, a very weathered specimen of antler, Pl. 11. 1, and a toy specimen of narwhal ivory, Pl. 16. 1. The latter is very well-preserved and has a bifurcated dorsal spur.

Pl. 11. 2 is a transitional form between Inugsuk harpoon heads and a flat head with a separate blade, but as it lies naturally on its back it is here placed among the slightly flat harpoon heads, of which one was found in the first stage. Pl. 11. 2 is of antler; it has a very thin blade slit which can only have held a metal blade fastened by a rivet. Grooves run out laterally from the line hole. Three others are placed to this type, two of antler and one of whale bone, varying in length from 7.7 to 6.2 cm. They all have lateral line grooves and undoubtedly have had a metal blade, which at any rate on two of them has been held by a rivet. On all these specimens the socket is broken; one has one spur, another has two, the third is defective.

Flat harpoon heads with a blade occur to the number of nine, one of which is unfinished. As will be seen from Pl. 11. 4, they differ from the foregoing type in that they are distinctly more wide than thick, and in having the line hole debouching on the ventral side, with the result that the line grooves are also on that side. On Pl. 11. 3 this feature is not so distinct, so that it is a transitional form to Pl. 11. 2. Accordingly, we have here a development series which, commencing with the Inugsuk harpoon head, passes into the slightly flat one and Pl. 11. 3 to the quite flat one. In all probability this development has proceeded in Northeast Greenland, as the flat forms have a character that separates them from those of West and Southeast Greenland. Pl. 11. 4 is of walrus ivory like all the others. They vary in length from 5.6 to 4.3 cm and in breadth at the line hole from 2 to 1.2 cm. Seven have two broad flat dorsal spurs, one has only one spur which is rounded at the bottom. Pl. 11. 3 and 4 have had their points removed by drilling, and the same is the case with three of the others. It is possible that the point has been drilled off to enable the Eskimos to recover the blade, which undoubtedly has been of iron, a material of value

to them. This type, which was not found in the first stage, is very common in Northeast Greenland[1]).

As in the first stage, the predominating harpoon head is the barbless and bladeless flat type. Eighteen were found, although seven are toy specimens that will be referred to later. The other eleven are all of the same form as Pl. 11. 5 and 6, with a blade that has a more or less prominent keel in the medial line both back and front, and two broad, flat, widely-parted dorsal spurs. In length they vary from 11.2 cm (Pl. 11. 6) to 7 cm, and in breadth from 1.3 to 1.8 cm measured at the line hole. Two of them are of antler, the remainder of walrus ivory. Special forms such as those found in the first stage (Pl. 2. 6 and 7) did not occur here; they are undoubtedly earlier forms which have gone of use. Pl. 11. 5 and 6 represent the latest and, as regards Northeast Greenland, most characteristic form; if the name of Northeast Greenland type should be attached to any harpoon head, it would be this one, in virtue of its form and the frequency with which it occurs, not only in Dødemandsbugten, where the type represents more than half of all harpoon heads, but in most Norteast Greenland finds.

Other Parts of the Harpoon.

Harpoon blades of slate occur in rather large numbers, even if the great majority are defective. Of thirty-eight it is only possible to say that they are fragments of weapon blades. Sixteen of them are taken to be harpoon blades. There are five like Pl. 11. 7 in form, varying in size from 3.9 × 2.6 to 2.8 × 2.2 cm. Four are of the same form as Pl. 11. 8. Apart from this, there is only one whole specimen, and it measures 2.6 cm in length and 3 cm in breadth. One of the others has a hole in one corner just above the base. Pl. 11. 9 is the only blade of this size, three others are of the same form but only about 4.4 cm long, one of them has a medial hole just over the base. Finally, there are three like Pl. 3. 8 with sides that are quite straight; one has a hole at one side.

Pl. 11. 16 is a shaft mounting of the short cylindrical type. It is made out of a tubular bone, probably of bear, is rectangular in section with rounded corners, and has a nail hole in the middle of one side. There are other two shaft mountings of this type; one is of a heavy tubular bone with a rounded triangular section, 3.9 cm high and up to 4 cm wide; the other is a cylinder of narwhal ivory almost circular in section, 3.3 cm high and 3 cm in diameter.

The only complete foreshaft for a kayak harpoon is the toy specimen Pl. 11. 11, fashioned out of an undeveloped narwhal tusk.

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[1]) Thalbitzer, 1909, Fig. 2, Mathiassen, 1929, Fig. 1. 2, and several in Nat. Mus.

There is a foreshaft of whalebone, 20.8 cm long, with the butt broken off. Most probably it was for a kayak harpoon, as it has a hole at the middle, round about which the shaft is somewhat thicker. There is also the point of a foreshaft of whale bone.

Pl. 11. 10 is the foreshaft of an ice-hunting harpoon, of narwhal ivory. Another complete foreshaft, 16 cm long and of the same material, has a small nail hole in the rearmost part of the scarf face. The butt of a defective foreshaft has three holes through the scarf. Pl. 11. 22 is undoubtedly the butt end of a heavy foreshaft of narwhal ivory. On one side the surface has been shaped with rough cuts and furnished with transversal notches for holding the lashing; the other side, which is cut away obliquely, has lain up against the harpoon shaft. The forepart has been cut off by drilling. We have thirteen of these heavy butt ends, all of narwhal ivory. Judging from their width, the foreshafts must have been very long. Indeed, they have probably formed the greater part of the entire harpoon. One specimen, not particularly powerful, brought home from Grandjean Fjord, has at any rate been more than 80 cm long, and I am prepared to assume that the thickest specimens from Dødemandsbugten have belonged to foreshafts of about 1 m in length. Finally, there is Pl. 11. 12, which originally has certainly been a foreshaft. It is made out of an undeveloped narwhal tusk and looked very like the foreshaft of a kayak harpoon of the Thule type; the conical butt, however, is entirely covered with horizontal notches, which would indicate that it has been fastened on. It is possible that originally it was a foreshaft for a kayak harpoon, but the butt end has broken off, whereafter it was notched and used as an ice pick or as the foreshaft of an ice-hunting harpoon. Another specimen of the same kind of tusk is pointed at the fore end like Pl. 11. 12, but foursided at the other end and furnished with horizontal notches. Possibly it has been used in the same manner as the foregoing.

Pl. 11. 14 and 15 are undoubtedly blocks for the rear end of a winged harpoon. They are of ivory, four-sided, with a rectangular section. They are narrowest at the rear end, which is cut off square and furnished with a shallow hollow in the middle to engage the stud of the throwing board. In the other end is a deep rectangular socket. As will be seen from Fig. 33, the shaft has been led into this socket. On the middle of one broad side is a longitudinal keel; the other sides are smooth. I am unaware as to what significance is to be attached to this keel; it may be a vestige of some previous form (Pl. 2. 17). The two holes on both sides of the rear part of the keel have probably been for the purpose of accommodating the cord which held the wing. On Pl. 11. 15 there are nail holes where the shaft begins. That these specimens are really part of the winged harpoon is to be seen from Fig. 33, which came

from Cape Mary on Clavering Island[1]). The figure represents a part of a wooden shaft, on the end of which is a device similar to those referred to here. In line with its sides there are on the shaft two flat surfaces which are separated from the rest of the shaft by a shoulder. The wings have rested against these surfaces and have been held on by lashings running through the shaft and also through the block. This type is characteristic of the second stage of the Mixed Culture and is unknown



Fig. 33.
Rear part of winged harpoon.
Cape Mary, Clavering Island.

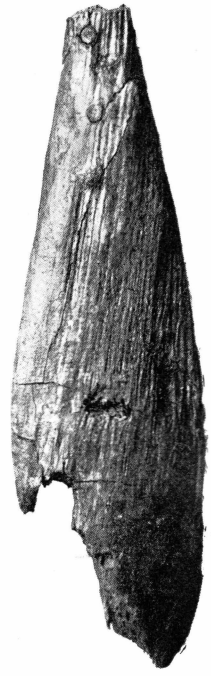


Fig. 34.
Harpoon wing, of wood.
1:2

outside of Northeast Greenland. In addition to these, we have a toy specimen, also of walrus ivory, 1.8 cm long and 1.3 cm wide, and from Cope Tobin a specimen of whale bone 3 cm long and 2 cm wide[2]).

Fig. 34 is possibly a harpoon wing of wood. It is of the same form as Pl. 4. 13 but more slender; one side is flat, the other slightly rounded. At the sharp end are the remains of three nails in a row, at the middle two holes connected with a groove. If this is a harpoon wing the nails have held it to the shaft and it has been lashed to the end block through the two holes.

Pl. 11. 23 is an ice pick, of antler. We have other five of these,

[1]) Nat. Mus. L1. 71.
[2]) Nat. Mus. L1. 1004.

four of antler and one of narwhal ivory; the longest is 18.5 cm. The four of antler have a four-sided butt covered with lashing notches.

Pl. 11. 17 and 18 are finger rests of walrus ivory with one and two holes respectively. The National Museum has several of this form from Scoresby Sound; they differ a little from the finger rests of the first stage (cf. Pl. 2. 19 and 20). Pl. 11. 24 is an implement of walrus ivory for some unknown purpose. It is flat on the under side and the two oblique faces meet in a sharp keel on the upper side. There are fragments of sinew thread in the three holes just above the base. Another specimen, 4.6 cm long, of narwhal ivory, has only two holes. A whale bone specimen of the same form, 9.1 cm long, was found at Cape Hope[1]).

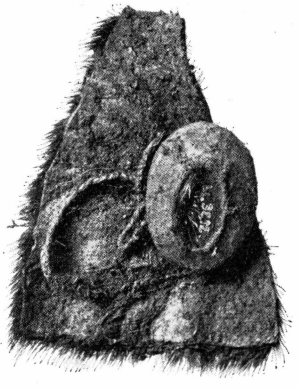


Fig. 35. Part of harpoon bladder (?). 1:2

I take it that this object has been fastened on to a shaft through the three holes and has served as a finger rest. The type is not known outside of Northeast Greenland.

Pl. 11. 13 is the mouthpiece of a harpoon bladder of the ordinary form, of narwhal ivory. That the type was not found in the first stage must be accidental, as we know it in the Thule Culture[2]) and the Inugsuk Culture[3]).

In both first and second stages were some oval wooden disks like Pl. 14. 13 on which either one or both sides are rounded. Fig. 35 shows how they have been used. Probably this object is a part of a harpoon bladder of seal skin, on which an oval wooden button has been used to close a hole. It has been placed over the hole on the hair side, whereafter the skin was drawn over it and tied below it by means of plaited sinew thread. Five loose "plugs" were found, two in the first stage and three in the second. In size they vary from 6.5 × 3.3 cm to 3.4 × 1.7

[1]) Nat. Mus., L. 1. 517.
[2]) Mathiassen, 1927, II, p. 36.
[3]) Mathiassen, 1930, p. 189.

cm. The National Museum has several of them from Scoresby Sound, but they are not known outside of Northeast Greenland as far as I know.

Other Hunting Implements.

We have a single defective triangular slate blade which, judging from the size, has been for a lance.

Thirteen legs for sealing stools were found, in form similar to Pl. 11. 26. They vary from 13.2 to 9.6 cm in length.

Pl. 11. 19 is a wound pin, of whale bone. It has a distinct head, in which there is a hole, a feature which recurs, e. g. in Angmagssalik[1]). This is the only specimen found in Dødemandsbugten, but as it occurs both in the Thule Culture[2]) and in the Inugsuk Culture[3]) it is certainly only by chance that it was not found in the first stage. We know of it from several Northeast Greenland finds, often with a pierced head like Pl. 11. 19[4]), but as this latter feature does not occur in the Thule Culture, the inference is that it came to Northeast Greenland from the south.

Pl. 11. 27 is a heavy head, possibly for a bird dart, made out of a bear bone. It is flat and elliptical in section; in the fore end on one side there is a barb, whilst the other side is defective; there may have been another barb at this place. In the rear end is a faint indication of a scarf face. On the other side there are transversal notches to hold a lashing. This is the only specimen found of this kind, so that nothing definite may be said as to what it is and where it originated.

Pl. 11. 25 is a part of a bear jaw, on which the canines have been furnished with notches. This might mean that it has been lashed on to something, probably a shaft. As we have another specimen from this stage, and a similar one from Cape Tobin[5]), both with notches, there is every reason for believing that this is an implement used for some special purpose. The most probable explanation, to my mind, is that it is a seal scratcher, with which the Eskimos on the ice have imitated the scratching of the seals. We know of seal scratchers of wood from Inugsuk[6]) and Qilalukan[7]), etc. whereas seal scratchers of bear jaw have not been found outside of Northeast Greenland.

Gorges occur in two forms; two are of antler, pointed at both ends and with a hole in the middle, Pl. 11. 21; one is of wood, spindle

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[1]) Mathiassen, 1933, Pl. 1.4.
[2]) Mathiassen, 1927, II, p. 40.
[3]) Mathiassen, 1930, p. 192.
[4]) Ryder, Fig. 18 a and b; Sollas, Fig. 1 and several in Nat. Mus.
[5]) Nat. Mus., L. 1. 690.
[6]) Mathiassen, 1930, Pl. 6. 14-16.
[7]) Mathiassen, 1927, I, Pl. 41. 9-10.

shaped, with a groove round the middle, Pl. 11. 20. Gorges with a hole or a groove at the middle are a widely distributed and old type[1]). It is therefore curious that we find the latest type, the Angmagssalik type, in the old houses, and the earliest type in the later houses. I take it, however, that the former date farther back than to the eighteenth century[2]), and that the last-named type quite accidentally has not been found in the first stage of the Mixed Culture. The type has been found in Northeast Greenland before[3]).

We have five parts of composite bows of wood, the largest specimen being shown on Pl. 12. 1. In one end it has a dovetail cleft with two knobs on the outer side, a feature which we have seen on a bow from the Nathorst Expedition[4]), and probably has served to support a lashing. There are other three ends with a dovetail, and a fragment on which the end is cuneiform. Finally, there are two defective ends on which it cannot be determined whether the bow has consisted of one or several pieces.

Pl. 12. 14 is a brace for a bow, of wood, It is 4.2 cm wide and cut square at the ends.

Pl. 12. 15 is a small cutting board for arrow feathers, of the form common to Northeast Greenland. Another of the same shape, 9.4 cm long and 3.4 cm wide, has a short tenon at the middle of the lower edge.

There are rather more arrow heads of bone and representing more types than in the first stage. Pl. 12. 6 is of walrus ivory. It has a straight-sided blade with a rounded point. A rather long screw thread is cut in the rear tang end. This is the first time a real screw has been discovered in Northeast Greenland, whereas of course the vestigal screw is extremely common on arrowheads. Three specimens, all of antler, have a lanceolate blade and screw vestiges on the conical tang. Pl. 12. 3 has two short screw threads, Pl. 12. 4 has four, and the third has two. Pl. 12. 5 is of walrus ivory; it has a conical tang with two short screw threads; in the fore end is a blade slit, cut with the drill and intended for the insertion of a separate blade. A somewhat larger but defective specimen, of antler, has also had a separate blade. The tang has two screw threads, which are so little oblique that they are very like knobs. Pl. 12. 2 is an arrow head of whale bone with a broad, lanceolate blade and a cuneiform tang. Pl. 12. 7 has a similar tang; it is of antler and has had a separate blade. This method of inserting an

[1]) Mathiassen, 1927, II, p. 55.
[2]) Mathiassen, 1933, p. 82.
[3]) Koldewey, p. 605, Fig. 19 b.
[4]) Stolpe, Pl. V. 16.

arrow head into a shaft has not been met with except in Northeast Greenland, and thus must be of local origin. Finally, there are four lanceolate blades for arrow heads, of antler, but without a tang.

Three small, slender triangular blades of slate, of a shape like Pl. 3. 12, are probably arrow blades.

Means of Transport.

We have a total of 54 sledge shoes, of which Pl. 12. 9 is one of the most well preserved and most regular specimens. There are five of narwhal ivory, three of walrus skull bone and two of walrus ivory, the remainder being of whale bone. The longest piece is 35.5 cm, the widest 6.5 and the narrowest 4.3 cm.

Of tree nails for sledge shoes there are eight of different lengths and thicknesses.

Pl. 12. 8 is a toggle for holding the draught line to the sledge. It is of ivory, almost like Pl. 5. 13 in shape, but lacking the thinner part at the middle. On the other hand a hole is drilled through at one end. Another specimen, of wood, has this thinner part at the middle; one end is defective. Finally, a specimen of the same form as Pl. 5. 13 was found on the surface, likewise with a hole at one end.

This stage produced nine trace buckles, seven of narwhal ivory, one of walrus ivory, and one of antler. Pl. 12. 10 displays the best workmanship, the longest and narrowest; Pl. 12. 11, is doubtless a trace buckle too, and, like Pl. 5. 20, has originally been a part of the foreshaft of a kayak harpoon. The specimen is only half as thick as the foreshaft, having been split lengthwise. There is a wooden plug in the small hole.

Tools.

We have eight more or less complete snow knives, all of whale bone and all with two shoulders. On Pl. 13. 5, which is the widest, the point has been cut off; the longest complete specimen measures 30 cm. Besides these, we have three handles and three parts of blades. On four of the handles there is a unilateral knob. Only one specimen has a suspension hole in the upper shoulder.

There is one knife entirely of slate. It is very flat, has a broad, defective blade, and a long, straight handle. Pl. 12. 21 is a single-edged knife blade of slate which probably has been intended for insertion in a handle, as on the back of the powerful tang there are two knobs which doubtless have served to hold a lashing. A similar knife blade inserted in a handle of antler and having two knobs on the tang was recently found in a ruin on Hochstetter Foreland. Pl. 12. 20 is a single-edged slate blade which seems to have been fastened to a handle with

nails. Finally, we found fragments of two single-edged blades and a two-edged blade.

Knife handles occur in rather large numbers and varying in form and material. Pl. 12. 16 is a short wooden handle, oval in section, and having a thin blade slit at the top for an iron blade. The blade has been held by a lashing just below the end. Of this form we have five specimens, varying in length from 9.4 to 8 cm. Six other wooden handles, also for iron blades, are longer, from 18.2 to 11.9 cm; four of them, like Pl. 12. 17, have two lashing notches near the end. Two other handles of wood have a blade slit so wide that presumably they have had blades of slate (Pl. 12. 18). Finally, there are two knife handles of antler, one of which is shown on Pl. 12. 19. It is oval in section and has a blade socket extending from the end some distance down one side. Judging from the width of this socket, the knife has had a slate blade which has been fastened on by two nails. The upper nail hole has been broken. The other specimen has an oblique blade slit from the end down on to the side. It is impossible to say whether this has had a slate or an iron blade. This type, which has also been found in Scoresby Sound[1]), does not seem to occur outside of Northeast Greenland, where its origin must be.



Fig. 36. Adze handle. 1:2.

Whetstones occur here in the same form as in the first stage. Pl. 13. 15 is a prismatic whetstone of sandstone. There are ten of this form, all more or less defective. Five whetstones of slate are furnished with a finger grip at the ends. Pl. 13. 11 is the common form. Pl. 13. 12 is a special form, of which this is the sole example. Finally, there are seven more irregular in form. Two of them are unworked stones with one whetting surface; the others are prismatic or flat, with up to four whetting surfaces. It should be observed that in this stage we found only twenty-two whetstones, whereas the total number in the first stage was a hundred and ten. Even if the total find from the first stage is larger, the percentage of whetstones in the second stage is much lower,

[1]) Ryder, Fig. 21 b.

which undoubtedly must be connected with the diminished use of slate as a material for weapon points and tools.

Fig. 36 is the only adze handle found in this stage. It differs a good deal from those found in the first stage (cf Pl. 4. 17). In the first place it is much heavier, especially at the upper end, which is almost quadratic in section; in the second place it has been furnished with a well-shaped hand grip which recalls that on the "sling handle". At the top there are two holes running from side to side, through which the lashings for the head have been passed. The lashings have consisted of plaited sinew thread, seal thong, and a rather wide strip of seal skin. How these lashings have run originally is difficult to say, as they are now pressed together and dried up. The face at the top against which the head has rested is not flat, but concave, to give the head a better grip. The groove which is to be seen just over the hand grip was undoubtedly intended for an extra lashing. In the collection sent by the colony manager, Mr. Høegh, from Scoresby Sound, there is a similar adze handle, but the form is not known outside of Northeast Greenland. The well-shaped hand grip has undoubtedly been borrowed from the "sling handle". We also find it used on blubber pounders[1]).

There are two adze heads, of antler, Pl. 12. 13 being the best as regards workmanship. It has a rounded rectangular section, three horizontal holes through the back end, and on the underside a seating for the handle. It is rather wider at the fore end, where it has an elongated blade socket. The other head is more casual in shape. It has no holes, the lashing having passed over it. There is a faint handle seating and notches in the sides for holding the lashing. The blade socket is broken.

Pl. 12. 12 is the only adze blade from this stage. It is of green argillaceous slate and has a curved, round edge.

Pl. 13. 16 is a hammer stone, of quartzite.

There are six wedges, varying in length from 15.2 to 12.2 cm and in breadth from 4.6 to 2.6 cm. Two are of antler (Pl. 13. 14), two of narwhal ivory, one of whale bone and one of wood.

As in the first stage, the bow drill has been widely used, as is evidenced by the many drilled pieces of bone and wood and by the many parts of bow drills found in the houses. Pl. 13. 7 is a drill shank of wood, round, pointed at both ends, and fitted with a bit, of copper. Round the lower end of the shank is a whipping of sinew thread to hold the bit. Another drill shank, 20.2 cm long, has a bit made from a bone and inserted in a slit in the lower end of the shank. The bit has a wider, four-sided tang and a round point. Two drill shanks, one 9.7, the other

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[1]) Thalbitzer, 1909, Fig. 105.

10.5 cm long, have iron bits. On the latter the bit seems to have been an iron nail. There are four defective drill shanks, one of which is of very unusual length, 38.4 cm.

Pl. 13.6 is a drill shank with a V-shaped cut in the rear end. In this cut there has been a bit holder, in which the bit itself has been inserted. Of drill shanks for fitting with holders we have two; of bit holders, four. Pl. 13. 8 is of whale bone, with a rather large circular hole for the bit; one, 6 cm long, of antler, has a small rectangular hole; another, 3.5 cm long, of walrus ivory, has an iron bit, and a specimen 6 cm long, of narwhal ivory, is no doubt unfinished, as it has no hole. No bit holders of this kind were found in the first stage. We know of them from other Northeast Greenland finds[1]), and they also occur in the Thule Culture[2]) and the Inugsuk Culture[3]). That they were not found in the first stage may be due to an accident.

Of drill bits of stone we have ten, Pl. 13. 9 being the most well-preserved. They all have a wide flat tang, which either runs smoothly into the point, as on Pl. 13. 9, or has two or more distinct shoulders where the neck joins the working point. The latter is either round or four-sided and ends in a cuneiform point. Nine of them are of argillaceous slate, one is of silicious slate. Judging from the holes in the various specimens made by drilling, stone bits have not been much used in this stage. Pl. 13. 17 is a handsome example of drilling technique. It is a piece of walrus ivory which has been split. It must have been done with an iron bit, as the holes are bored from one side and to a depth of 2.9 cm. A stone bit of that length would inevitably break in this hard material.

Pl. 13. 3 is a mouthpiece for a bow drill, made out of a piece of walrus skull bone. We have other two of the same bone.

Pl. 13. 1 is the bow of a drill, of wood, four-sided in section and with a groove at each end for the thong. Pl.13. 2 is a part of a similar bow, of whale bone. We also have the remaining part of this bow; it has been joined on with a lashing which has passed through a hole in each piece. The whole bow is 46.5 cm long, round, and has a hole for the thong in each end.

There are four hand drills of wood like Pl. 5. 10. One of them, Pl. 14. 9, has a bit of black silicious slate.

Pl. 14. 1 is an almost complete ulo with a wooden handle and a blade of slate. The blade is fastened to the handle with a lashing of sinew thread. The form with the long edge and the short tang was also found in the first stage. We have also two very defective ulo handles

[1]) Ryder, Fig. 36 a and b; Thalbitzer, 1909, Fig. 68 a and b.
[2]) Mathiassen, 1927, I, Pl. 22. 17 and 64. 14.
[3]) Mathiassen, 1930, Pl. 12. 1 and 5.

of wood, a whole ulo blade of slate, 6.9 cm long and 4.4 cm wide, and with two holes for the lashing, as well as four fragments of slate ulo blades. Two large blades of slate with a curved ground edge have probably served as ulos too.

Fig. 37 is an implement not previously found in the Eskimo Culture. It consists of a handsomely-made flat handle and a small ground slate blade with a slightly curved edge, placed in a crack in the lower end of the handle. On the figure the blade has been pushed out to one side, but originally has been in the middle of the crack. It is something like an ulo, but the blade is too short for such an implement. Possibly some woman has used it as a knife while sewing.

Two pointed bones like Pl. 14. 7 may have been used as bodkins.

Pl. 14. 6 is an unknown implement of walrus ivory. It is flat at



Fig. 37. Implement of unknown use with wooden handle and slate blade. 1:2.

the top, where there is a kind of head, round at the middle, and has a curved edge at the end. It is something like the bodkins with a suspension hole of the first stage (Pl. 7. 18), but the transversal edge is more like Pl. 5. 9, the bear bone with a chisel edge at the bottom. It is possible that it is the same kind of implement.

Household Utensils.

Pl. 13. 10 is the only lamp, a fragment of a toy lamp of soapstone. It has had no wick ledge.

Fig. 38 is a cooking pot of micaceous schist. With the exception of a fracture in the edge at one end it is complete. Its shape is, if anything, rounded four-sided, to some extent no doubt due to the shape of the stone. It is 26.5 cm long, 18 cm wide, and 13 cm high. The walls are about 2.7 cm thick. In the four corners holes have been drilled for suspension; they are drilled in the rim itself, but the fourth one begins on the outer side and ends in the upper edge. This cooking pot was found on the mound round about II House 4, a house of the latest type and undoubtedly belonging to the second stage of the Mixed

Culture. Besides this specimen, we have thirteen fragments, seven of sandstone and six of a coarse-grained soapstone. Two specimens have the suspension hole bored through projections on the inner side, like Pl. 13. 13.

Fourteen sticks of wood which, like Pl. 14. 16, charred at one end, are taken to be lamp trimmers. Two of them are four-sided with a groove around the upper end. Pl. 14. 15 has three holes at the top connected two and two by a groove on each side. The same feature was found on lamp trimmers of the first stage and will be discussed later.

A stick of wood 25 cm long has been used for fire-drilling, and three pieces of wood like Pl. 14. 14 have holes caused by fire-drilling.

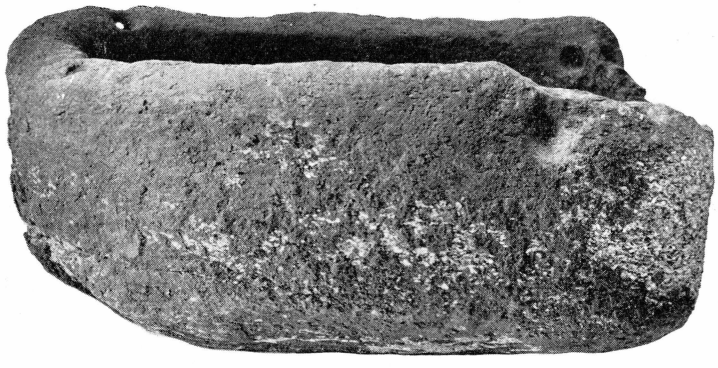


Fig. 38. Cooking pot.
1:3.

Four lumps of pyrites found in the ruins indicate that fire-striking by means of this mineral has also been known.

Pl. 14. 3 is an almost complete scoop cut out of one piece of wood. It is 2.8 cm high and has a flat bottom. We have another, smaller and flatter. We have also three fragments of very large scoops like Ryder's Fig. 28 a. The largest fragment has a height of 6 cm and a breadth of 11.8 cm. Pl. 14. 10 is undoubtedly a handle for a scoop or a wooden vessel. Pl. 14. 12 is a small stave of a coopered vessel, the only trace of coopering found in Dødemandsbugten and as a matter of fact in Northeast Greenland north of Skærgaardshalvø [1]).

Pl. 14. 11 is one side of a four-sided wooden box. There are three nails where the other side and the bottom have been joined on. A similar wooden box was found on Jackson Island by the Second German Polar Expedition[2]).

Pl. 14. 2 is a spoon of antler with an egg-shaped but rather de-

[1]) Thalbitzer, 1909, Fig. 25 and 27.
[2]) Koldewey I, p. 649.

fective bowl. These last three types occur for the first time in the second stage. However, they all belong to the Inugsuk Culture, so doubtless it was merely by chance that they were not found in the first stage. As none of the types is known in the Thule Culture, they must have come to Northeast Greenland from the south. It is true that Comer's Midden yielded one or two staves for coopered vessels, but in Mathiassen's opinion they must have come from the south, and the spoon with an oval bowl found in Washington Land is part of a find of exclusively West Greenland objects which have landed up there in some way or another[2]).

The only implement of baleen found in this stage is the very defective side of a baleen cup which has been 3.8 cm high. No wooden bottoms for baleen bowls or cups were found.

Pl. 14. 5 is probably a meat stick of narwhal ivory. It is very crudely made and has traces of drilling and the remains of holes.

Ornaments, etc.

Pl. 15. 3, 4 and 7 are ornamental plates, No. 3 of narwhal ivory, Nos. 4 and 7 of walrus ivory. No. 3 has a vertical hole through each of the short "horns" at the side of the suspension hole, No. 7 a horizontal hole in the point of each of the large curved horns. In form they recall the ornamental plates of the first stage (Pl. 7. 2), but lack the dot ornaments and possibly are a later form. Pl. 15. 7 is obviously a form widely distributed in Northeast Greenland, for, besides this specimen, there is another from Clavering Island[3]), one from Franz Joseph's Fjord Complex[4]) and one from Cape Tobin[5]). The Northeast Greenland ornamental plates of various forms are undoubtedly a local development.

It is interesting to find another example of the small pendant with the dot ornaments (Pl. 15. 2) in exactly the same shape and with the same arrangement of the dots as in the first stage (Pl. 7. 12). Like that one, it is defective at one end where there has been a suspension hole. Whether Pl. 14. 17 is an ornamental plate or not is difficult to say. May be it has been a harpoon wing originally, but the many holes would seem to indicate that it has afterwards passed over to some other use.

Pierced animal teeth occur in rather large numbers, for instance nine bear teeth, one of which, Pl. 15. 1, is hung on a piece of seal

[1]) Mathiassen, 1930, p. 296.
[2]) Mathiassen, 1928 (a), Fig. 7. 16.
[3]) Mathiassen, 1929, Fig. 1. 14.
[4]) Stolpe, Tafel V, Abb. 18.
[5]) Thalbitzer, 1909, Fig. 54.

thong, and another has a length of sinew thread in a suspension hole. Two are bored from the root end out to the side, the others from side to side. There are also three seal teeth drilled through the root end, a walrus molar with a hole in the crown and a musk-ox molar drilled through the root and hanging on a piece of thin seal thong, Pl. 15. 5. It is difficult to imagine that this unworked musk-ox tooth was used as an ornament; it is rather an amulet.

Of other ornaments our collection contains drop pendants, some of them double, others single. Pl. 16. 14 is of walrus ivory and of exactly the same form as the one found in the first stage (Pl. 7. 4). There is also one of narwhal ivory, but not so well carved. On the other hand, single drop pendants occur in this phase. There are six of them, of walrus ivory, and varying in length from 1.6 to 1.1 cm, and are either gourd-shaped like Pl. 16. 15, or spherical with a small point with a suspension hole. Drop pendants of ivory are known from both the Inugsuk Culture and the Thule Culture[1]).

In conclusion, it may be added that in this stage we found one snow beater, of wood, 29.5 cm long and of the same shape as Pl. 4. 19, as well as the head of a back scratcher of narwhal ivory, almost like Pl. 7. 21 but with a round and an elongated hole.

Games and Toys.

In this stage toys have played a greater part, if possible, than in the other; there are more specimens and more new forms, especially of animal figures.

Pl. 14. 19 is an ajagaq of narwhal ulna, a bone which has not been used elsewhere for this purpose as far as I know.

Pl. 15 8. is a walrus molar with a hole through the root and a large and a small hole almost through the middle of the tooth. It is possible that this is a nuglutang, a type which, inter alia, occurs in the Thule Culture, where a specimen from Kuk was made of the same kind of tooth as Pl. 15. 8[2]). There is a specimen from Angmagssalik which Mathiassen considers is a nuglutang[3]); otherwise it is not known in Greenland.

Tops occur in large numbers in this stage. One, Pl. 15. 10, is of narwhal ivory, twenty-two are of wood, like Pl. 15. 11. They vary in form from circular to oval, and in size from 16.4 to 4.6 cm in diameter. Most of them measure 6 to 7 cm.

Pl. 14. 20 is an enormous buzz, of wood; there are twelve others, but smaller; most are like Pl. 15. 6. Curiously enough, the buzz was

[1]) Mathiassen, 1930, p. 251.
[2]) Mathiassen, 1927, I, Pl. 69. 20.
[3]) Mathiassen, 1933, Pl. 9. 20 and p. 99.

not found in the first stage; otherwise it is a widely distributed type which, in Mathiassen's opinion, merely by accident was not found in the Thule Culture[1]). In Northeast Greenland it is very common, and we know it from Sabine Island[2]) and from Scoresby Sound[3]).

Of wooden dolls we have only four, three of them being defective and of the usual old type. Pl. 16. 9 is a female figure, the other two male. Pl. 16. 10 is a variant and a later form. The carving of the head is better and it has indications of a face and ears. The body is also more detailed, and the arms are indicated. The most remarkable feature of this figure is that it has only one thick leg with a large foot, or possibly two legs which are swathed in something. What this is intended to mean I do not know.

Pl. 16. 22 is a bear figure of wood. We have eight of this form with its thick neck and long outstretched head, varying in size from 8.5 cm (Pl. 16. 22) to 3.9 cm. They are more or less defective. Similar bear figures have previously been found in Northeast Greenland, for instance three of bone and one of wood on the Denmark Expedition[4]), one of wood in the Franz Joseph Fjord Complex[5]), and several of wood in Scoresby Sound[6]). They also occur elsewhere; there is one of wood from Inugsuk[7]) and several from the Thule Culture[8]), mostly of ivory.

Seal figures have the same distribution; we found ten of them, all of wood, and all of the form shown on Pl. 16. 23. They vary in length from 12.6 to 4.7 cm. They all have a flat surface on the back and are undoubtedly intended for lying upside down just as they do in spring when basking on the ice. Among other figures of wood mention may be made of Pl. 16. 16, which undoubtedly is intended to represent a fox with its long brush. Pl. 16. 18 and 19 are narwhals, number 18 being a male with a tusk, number 19 probably a harpooned female; a length of sinew thread has been made fast to its body. A third narwhal has had a tusk, but it is broken off. Pl. 16. 21 is undoubtedly a harpoon bladder. It is in the form of a seal, but minus the head, with extended fore flippers and a knob in the back of its body, round which is a length of sinew thread. There is another of exactly the same form. Pl. 16. 24 is a flat piece of wood crudely carved in the form of an animal; it looks like a hare. Pl. 16. 25 is intended to represent a goose. Finally, there

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[1]) Mathiassen, 1930, p. 254.
[2]) Thalbitzer, 1909, Fig. 71.
[3]) Ryder, Fig. 35 a and b.
[4]) Thomsen, 1917, Fig. 2 and Pl. XXV, 4 and 6.
[5]) Stolpe, Tafel V, Abb. 18.
[6]) Thalbitzer, 1909, Fig. 57 a and several in Nat. Mus.
[7]) Mathiassen, 1930, Pl. 17. 14.
[8]) Mathiassen, 1927, II, p. 118.

is an animal figure of bone, Pl. 16. 20, made of a walrus molar and representing a walrus with short tusks. In the rear end is a suspension hole.

As already stated, animal figures occur in both the Inugsuk and the Thule Culture, but in neither do they occur so frequently and in such a wealth of forms as in the Northeast Greenland Mixed Culture, especially its second stage. With the exception of the swimming-bird figure, and possibly the seal and bear figures, I consider that these animal figures originated locally. As regards the seal and bear figures of wood, it is remarkable that they do not occur in the much larger find of the first stage, whereas there are ten and eight respectively in the second stage. What is more, my excavations in other settlements on Clavering Island have only revealed wooden figures of seals and bears in the latest houses. The explanation undoubtedly is that these figures certainly have their origin in one of the two aforesaid cultures, but that, as with the "sling handle", they have only reached their full development in Northeast Greenland, although later than this handle. Of swimming-bird figures we found five specimens in this stage, all made of walrus molar. They differ somewhat from those found in the first stage (Pl. 8. 11), as, like Pl. 16. 17, they are shorter and have a more upright neck and no dot ornaments. The same applies to those found in the house on Strindberg Land and other finds in later houses. A typical collection of bird figures of this form, from Shannon Island, is illustrated by Bird[1]). The type is the same as in the Thule Culture, but it has acquired a local stamp.

Of the toy implements I have already referred to the Inugsuk harpoon head, Pl. 16. 1.

Pl. 16. 2 is a flat, barbless and bladeless harpoon head of walrus ivory. There are three others of the same material, two of antler and one of narwhal ivory, their lengths ranging from 6.2 to 3.2 cm.

A foreshaft of a kayak harpoon, Pl. 11. 11, has already been referred to.

Pl. 16. 3 is the foreshaft of an ice-hunting harpoon, of narwhal ivory; there are other four, the longest being 10. 2, the shortest 4.7 cm. Two are of narwhal ivory, one of antler, and one is of a seal bone.

Pl. 16. 12 is a side prong for a bird dart, of wood, with both outside and inside barbs. It is the only one of the type found in Dødemandsbugten, whereas there were five with unilateral barbs in the first stage. This is so much the more remarkable as this type was formerly regarded as being the predominating one in Northeast Greenland[2]). A number

[1]) Fig. 15.

[2]) Mathiassen, 1927, II, p. 53.

of specimens of this type have been found earlier[1]), and I myself found it in three houses outside of Dødemandsbugten. These houses were of house-type 3, and, as the type only occurs in the second stage at Dødemandsbugten, the obvious assumption is that it is connected with that stage. Furthermore, from the finds made by the earlier expeditions we see that they have almost exclusively excavated the later houses. If we proceed outside of Northeast Greenland we find that the type dominates the Thule Culture, whereas only very few specimens have been found in the northern part of West Greenland. Accordingly, the type must have arrived in Northeast Greenland from the north. Then why do we not find it in the first stage together with the other Thule types? There are two possibilities, either that it has had an independent origin in Northeast Greenland or that both types have been known and that the type with unilateral barbs has predominated in the first stage but has gradually been superseded by the other type. I consider the latter possibility to be the most probable one.

Pl. 14. 4 is a toy bow, of wood. It has been longer, but is broken and crudely repaired at the end, whereafter the string, which consists of plaited sinew thread, has been made fast rather carelessly just over the fracture. At the other end the string is laid over the knob in a loop. A little way from the knob three pairs of notches have been cut in the edges to hold the sinew backing, a feature which recurs on Pl. 16. 6 and two other toy bows and two large bows which I found in the Franz Joseph's Fjord complex, as well as on a bow from Southampton Island[2]). In the second stage we have in all eighteen specimens of toy bows of wood, varying very considerably in length and breadth.

Toy arrows of wood were found to the number of eighteen. Three have shaft and head cut out of one piece of wood, as on Pl. 16. 7. Pl. 16. 8 is the only entire one of the remainder. At the fore end it is cleft for the reception of the head, at the rear are two splits containing the remains of feathering. In this stage we have not found flat, broad nock ends as on Pl. 8. 14.

Five arrow heads of bone with lanceolate blades are toys, to judge from their size. In length they vary from 8.5 to 5.8 cm. Three are of antler, one of walrus ivory, and one of narwhal ivory. One has a conical tang with two short screw threads, the remainder have a cuneiform tang.

Pl. 15. 16 is a toy sledge, of wood. The runners are 1.8 cm high, and at the top are sunk to receive the cross slats. The same has been the case with the large sledge runner from Strindberg Land (page 109).

[1]) Koldewey I. p. 605, Fig. 18, Ryder, Fig. 16, Thalbitzer, 1909, Fig. 16, and several in Nat. Mus.

[2]) Mathiassen, 1927, I, Pl. 75. 7.

The cross slats do not narrow off towards the end as in the first stage. (Pl. 7. 13). They are fastened to the runners with lashings of sinew thread, passing through holes in them. It can also be seen from this sledge how the draught line has been made fast. Under the foremost cross slat there is in each runner a hole in which there is still a length of sinew thread. On one side this thread is about 10 cm long, fastened on the outer side of the runner by means of a small stick of wood. The sinew thread is intended to represent the draught line and the small stick the toggle. The draught line on the large sledge runner just referred to has been fastened in the same manner. On the sledges in West Greenland the draught line is made fast to the foremost cross slat[1]). This sledge has not had upstanders.

As to parts of toy sledges, we have five runners, from 7.7 to 17.5 cm long, and three cross slats, one of which is rectangular, the others narrowing at the ends.

Pl. 15. 13 and 17 are undoubtedly model umiaks. They are hollowed out in contrast to the model kayaks, which have a deck[2]). We have three umiaks in all, and one kayak, Pl. 15. 19. Possibly Pl. 15. 18 is a steering paddle for an umiak. It is of bone and somewhat defective. A toy paddle for an umiak, with a similar knob on the end, was found at Kuk[3]).

There are four snow knives, three of wood like Pl. 16. 4 in shape and size, and one 19. 3 cm long and very roughly made, of antler.

We have eight knives of slate like Pl. 16. 13. The largest is 5.3 cm long, the smallest 4.1 cm.

Pl. 16. 11 is an ulo, of slate, and we have a slate blade for an ulo, 3.8 × 2.7 cm.

Pl. 15. 21 is probably an unfinished cooking-pot of sandstone. The circumference of the inner cavity is marked off, and a commencement has been made with hollowing it out, but the stone has then cracked.

Of toys connected with the intellectual culture there is a drum handle, of wood, 6.3 cm long, like Pl. 7.15, and a fragment of a drum frame, 6.8 cm long, also of wood.

Finally, there is an implement which probably may be interpreted as a "toy weapon" similar to that figured by Mathiassen from Kangâmiut. It is shown on Pl. 15. 15 and consists of a fox femur, in one end of which a quill has been inserted with a tuft of feather at the end. The implement to which Mathiassen refers consists of a gull radius inserted

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[1]) Birket-Smith, 1924, Fig. 173.
[2]) Mathiassen, 1930, Pl. 20. 5 and 6.
[3]) Mathiassen, 1927, Pl. 72. 14.

in the corresponding ulna[1]). Large numbers of them were found in the Kangâmiut region, and we have them from the Inugsuk and Thule Cultures[2]).

Sundries.

Bone mountings were found to the number of eleven, one very large and thick, of walrus bone, with six tree nails in it, the remainder more slender with one or two rows of holes. One is of narwhal ivory, the remainder of antler.

Of "sling handles" for grown-ups we have only three, all defective: the hand grip, Pl. 13. 4, a thin fore end with two pairs of notches near the end, and a flat fore end with one pair of notches. The relation between flat and thin has previously been discussed (page 137), and, if we include the toy specimens, we find that the thin ones are absolutely predominant in the second stage. In all we have eight toy sling handles, all thin. They vary in length from 18.5 to 9.9 cm (Pl. 16. 5), and whereas the largest have undoubtedly been used by children, the smallest are only models. Another circumstance in support of the theory is that, of the flat sling handles, only two have previously been found in North-east Greenland[3]), whereas the number of thin specimens found is large[4]); and, as has already been mentioned, the specimens from the earlier excavations seem to have come from later houses.

We found a number of wooden objects whose purpose is unknown, such as Fig. 39, a flat implement like a spoon on which the "bowl" is slightly hollowed out with a large circular hole in the middle.

Fig. 40 is possibly a hook used inside the house on which to hang seal thong or the like. The Polar Eskimos use a stick pushed in between the wall stones for a hook[5]), but our specimen does not seem to be Eskimo at all, and it is possible that it has been copied from a European hook which has drifted ashore.

Fig. 41 is a flat wooden stick provided at one end with three holes connected together by grooves. Similar pins, charred at one end, have already been referred to, Pl. 6. 12 and Pl. 14. 15, but besides these the first stage produced three uncharred specimens, and the second stage the one shown on Fig. 41, which also is uncharred. Thus in all we found eight. Accordingly, this must be some definite implement, but of its use we know nothing. Nevertheless, it is obvious that a cord has passed through the holes, and that this cord had to be well fastened and had to be protected against wear. The lash of the dog whip in the Angmags-

[1]) Mathiassen, 1931, Pl. 6. 12.
[2]) Mathiassen, 1930, p. 223, and 1927, I, Pl. 52. 10.
[3]) Thomsen, 1917, Fig. 53.
[4]) Thalbitzer, 1909, Figg. 63, 103 and 104, and several in Nat. Mus.
[5]) Steensby, 1911, Fig. 13.

salik district[1]) is fastened in exactly the same manner, but of course this does not say that our specimens are whip handles; if they were, they would be toys, as they are much too slender for grown-ups.

Nine wooden sticks from the second stage resemble Pl. 14. 8 in shape, with a wide part at one end and a point with four facets at the other. They vary in length from 9.9 to 6.4 cm, and are so much alike that there is no doubt they were made for some certain purpose, but

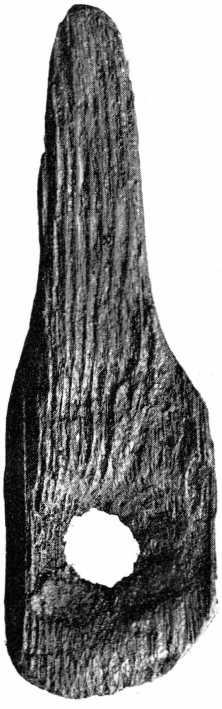


Fig. 39. Implement of unknown use. 1:2.

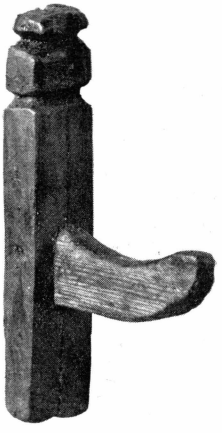


Fig. 40. Wooden peg (?). 1:2.



Fig. 41. Wooden stick, of unknown use. 1:3.

what is unknown. From Nualik there is an implement in bone like a bodkin with a point like these[2]), but otherwise the type has not been met with outside of Northeast Greenland.

Pl. 15. 9 is an implement of soapstone, of unknown use. It has a defective bowl-shaped hollow in each end and recalls a "small stone scoop or dipper" which Bird found on Clavering Island[3])

Finally, there are three knots of baleen, two lengths of plaited sinew thread, and three of seal thong, one tied in a loop and one with a slit in one end, apparently intended for splicing to another piece. It is the same method as that now used by the West Greenlanders.

[1]) Thalbitzer, 1914, Figg. 74 and 75.
[2]) Nat. Mus. L. 6458.
[3]) Bird, Fig. 14. 11.

Of objects of European origin there are an iron nail (Pl. 15. 20), four pieces of broken green bottle glass (Pl. 15. 14) and a piece of East Indian porcelain, apparently a fragment of a cup (Pl. 15. 12). Mr. J. Olrik of the National Museum in Copenhagen considers that with some probability this latter fragment may be placed to the first half of the 18th century.

The presence of these European objects in Eskimo ruins naturally raises the question of whether the Northeast Greenland Eskimos have had intercourse with Europeans. There can be only one possibility, the whalers, who carried on their trade in the waters round Spitzbergen and off East Greenland from the beginning of the seventeenth century to the close of the nineteenth. We do not know whether whalers landed in Northeast Greenland before Scoresby's time; in the narratives of the whalers we often find references to landings in East Greenland, but in most cases this turns out to mean Spitzbergen, which in those days was thought to form the most northerly part of the east coast of Greenland. On the other hand we do know that ships have been close in to the east coast. After Henry Hudson discovered the country in 1607[1]), Gerhard von Keulen's map, dating from 1710, shows that Dutch whalers named various parts of the coast in the latter part of the seventeenth century: "t. Baey van Gael Hamkes opgedaen Anno 1654". In 1761 the whaler Volqvard Boon sailed down the east coast from lat. 76°30′ to lat. 68°40′ N. at a distance of $1^1/_2$—6 miles out. In lat. 70°40′ a heavy gale drove him into a large fjord, probably Scoresby Sound, but he did not go ashore[2]). In 1769 the vessel "Die Frau Maria Elizabeth" was caught in the ice, and Gael Hamkes Land was seen from a distance of 15 miles[3]), and in 1773 the same land was seen from four or five miles out by the ship "de Sanct Peter"[4]). In "Dagboek eener Reize ter Walvisch-en Robben-Vangst gedaan in the jaren 1777 en 1778, door den Kommandeur Hidde Dirks Kat" there is a map showing that the ships have been right in to Lamberts Land, Gael Hamkes Bay and Bontekoe Island. That same year, 1777, about fifty whaling vessels were fast in the ice off the east coast of Greenland[5]).

That many other vessels were close in to the coast may be accepted as certain, and of course it is not impossible that in some cases a landing was made and that the crews fell in with Eskimos. In that case, however, the encounters have been accidental, for if the whalers had gone ashore purposely in order to meet the natives they would undoubtedly have taken beads along with them for barter, as was the case for instance

[1]) Asher.
[2]) Wormskiold pp. 383—84.
[3]) Lindemann pp. 46—47.
[4]) l. c. p. 53.
[5]) Normann pp. 49—63.

in West Greenland; but no glass beads have ever been found in North East Greenland. Until we do find beads in ruins or middens we shall be unable to say that the Eskimos have had intercourse with the whalers, and therefore for the present we are bound to assume that our finds of European objects have been washed ashore from ships that have been in the vicinity of the coast.

General Remarks on the Mixed Culture.

Now that the specimens from the two stages of the Mixed Culture have been dealt with as types in the foregoing chapters, we can review this culture as a whole. In spite of the differences existing between the first and the second stage as already shown and as will appear from the list of types and their description, there is in fact only one culture, a mixed culture, comprising elements that have come north about Greenland and elements that have come south about the country. The changes through which the culture has passed are the results of a development in Northeast Greenland itself, and not of outside influence. We can establish this fact by examining the elements that have been added in the Second Stage but which were not in the culture in its First Stage.

These added elements comprise 32 types, of which 12 are to be found in the Thule Culture and in the Inugsuk Culture; they are: mouthpiece for harpoon bladder, harpon bladder, gorge with one hole or a groove, bow drill, bit-holders for bow drills, drop pendant, nuglutang, buzz, bear and seal figures of wood, umiak and "toy weapon". Thus they are ancient types, and it is no doubt simply chance that they have not been found in the First Stage. We may say the same of three Inugsuk types that we do not know of in the Thule Culture: the bone spoon with an oval bowl, stave for coopered vessel, and the four-sided wooden box. Another element that has not been found in the Thule Culture, but occurs in the Kangâmiut Second Stage, is the screw. In the First Stage of the Mixed Culture we do not find the screw as such, but in the form of two short screw threads. It has been mentioned previously that these interrupted screw threads either are a reduced screw or an intermediate form between screw and two knobs, but in both cases the fully developed screw must be the earlier. Wound pin with a hole is found in Angmagssalik's earliest culture. Side prongs for the bird dart, with barbs on both inner and outer side, occur in the earliest Thule Culture finds and thus are a type just as old as for instance the snow knife with two shoulders, and the bird figures. Eleven types are local, viz: flat harpoon heads with a blade, but barbless; four-sided end block for the winged harpoon, seal scratcher of bear mandible, arrow heads with cuneiform butt, knife handle with blade socket in the side and in the end, adze

handle with well-shaped hand-grip, woman's sewing knife, the ajagaq of narwhal ulna, the various animal figures, the thin "sling handle", and wooden hook. Finally, there are three elements of European origin: bottle glass, sherd of porcelain and iron nail. We see, then, that the only later types in the Second Stage are of local origin, so that it is warrantable to consider the two stages as belonging to the same culture.

We turn now to a closer examination of this culture, its origin and its development. A total of 157 types of implements have been found, all shown on the list. That list also includes a number of objects that really come in under the types, but have been separated in order to show the difference between the two stages. Of objects that do not form any separate type there are, for instance, the toy specimens, which are imitations of the implements of the grown ups that have already been referred to. And of implements composed of two or more parts, such as drill shafts with a bit, and ulos, only the entire specimens are reckoned as types; finally, implements of the same form but of different material are taken as belonging to the same type.

To the 157 implement types must be reckoned other three elements, viz. the dot ornament, the Cape York House, and the rectangular house, so that in all we have 160 culture elements for an analysis of the Mixed Culture.

The first question that presents itself is: What is the position of the Northeast Greenland Mixed Culture within the Eskimo Culture? As has been shown in the description of the implement types, most of them occur in the Central Thule Culture, which once was predominant over the greater part of the Eskimo region. However, the great majority of these types are also known from West Greenland, where, judging, from the finds made so far, the Thule Culture has never existed as such, but in a more developed form, originating in the Thule Culture, it is true, but differing from it on several points. Some ancient types have been replaced by other, quite new types, some of them no doubt having arisen as a consequence of intercourse with the Norsemen. On account of these differences Therkel Mathiassen has set up a separate Greenland Culture which he has called the Inugsuk Culture, after the place where the largest find of this culture was made. It is possible to follow the Inugsuk Culture down through the southern part of the west coast round to the Angmagssalik District and on up to Northeast Greenland, where we recognize it again in the earliest culture in Dødemandsbugten.

As regards there particular types, therefore, it is impossible to decide whether they came to Northeast Greenland direct from the Central region north about Greenland, or from the west coast of Greenland south about Cape Farewell. Actually, it ought to be possible to make use of the occurrence or absence of a type in the earliest culture in Angmagssalik

as evidence of whether it came from the south or not; unfortunately, owing to the bad conditions for preservation, the finds from that period are so small that they are unsuitable for that purpose.

However, as regards some elements we may say that they must have come north about Greenland, as they are either absent in West Greenland or they occur only sparsely in the northern part of that coast. There are 11 of these elements: harpoon head of Thule Type 2; heavy shaft mountings; side prong for bird dart, with barbs on both inner and outer sides; toggle for towing line, snow knife with two shoulders, double drill bits, snow beater, baleen hank, figures of swimming birds; fire-striking with pyrites, and finally, the house of the Cape York type.

Judging from their occurrence outside of Northeast Greenland, a larger number of elements, 26 in all, must be regarded as having come from the south, viz: of harpoon heads: the thin type barbless and bladeless, the Inugsuk type, flat with two barbs, bladeless, and flat, barbless and bladeless; cylindrical shaft mounting; kayak harpoon foreshaft with a tenon in the butt; flat end block for winged harpoon; side prong for bird dart with barbs on the inner side; gorge with two holes; the screw; wound pin with pierced head; hammer stone; adze blade for fastening direct to the handle; hand drill without shaft; cooking pot with inside cord hole; spoon with oval bowl; stave of coopered vessel; foursided wooden box; blubber pounder of wood; back scratcher; drop pendant of stone; ornamental bodkin; ornamental plate with horizontal cylinder at the top; ajagaq of seal scapula; bone tube, and the rectangular house.

Apart from the aforesaid elements that have come to Northeast Greenland north and south about Greenland respectively, there are 21 types that are not known outside of Northeast Greenland, so that they must have been evolved there. These are: foursided end block for winged harpoon; barrel-shaped swivel; oval plug for harpoon bladder; seal scratcher of bear mandible; arrow head with cuneiform butt; knife with slate blade spliced to the side of a wooden handle; knife handle of wood with blade groove in the side and in the end; adze handle with well-shaped hand grip; whetstone with finger grips; rounded-triangular bow-drill mouthpiece of walrus cranial bone; baleen cutter; two-handed scraper of bear femur; women's sewing knife with wooden handle and slate blade; propeller-shaped and fish-shaped bone buckles; ornamental plates; pendant in the form of the winged needle case; ajagaq of narwhal ulna; the various animal figures; thin sling handle, and wooden hook. In addition there are two types that are known outside the area but probably are of local origin, viz. the flat harpoon heads with a blade but without barbs, and the vestigal screw. Very

probably some of the slate knives and the toys, as for instance the different toy arrows, are also of local provenance.

Finally, there are three elements of European origin: bottle glass, a piece of porcelain and iron nail.

The result of this analysis is, then, that of the 160 elements found in the Mixed Culture of Dødemandsbugten, there are roughly 61 per cent. in both the Thule Culture and the Inugsuk Culture, and they may have come from the south or from the north, 7 per cent. can only have come from the north, 16 per cent. from the south, 14 per cent. are of local origin and 2 per cent. are of European origin.

The next question to be discussed is: How old is this culture? In the chapter on the earliest culture at Dødemandsbugten we saw that it was most closely related to the earliest culture at Angmagssalik, and that the stream that had taken it to Northeast Greenland must have left Angmagssalik prior to the 16th Century. In order to establish the age of the Mixed Culture we must again resort to a comparison with the earlier cultures of Angmagssalik and West Greenland. The types that have come from the north tell us nothing with regard to their age, partly because they are few in number, partly because most of them are of wide distribution, both as to space and as to time. Finally, we lack dated finds from the regions whence the people who brought them along must have come, i. e. Cape York district and Ellesmere Land. It is true that from the former district we have a fairly large find, "Comer's Midden" at North Star Bay on the south coast of Wolstenholme Sound. The artefacts from that find, which has been named after its excavator, Captain George Comer, have been described by Clark Wissler and Therkel Mathiassen[1]). Wissler draws attention to the great likeness between the finds from Comer's Midden and the Northeast Greenland finds[2]). There is a likeness, naturally, as they both contain Thule types, but beyond that the likeness is not particularly striking. For instance, harpoon heads of Thule Type 2 are absent in Comer's Midden, whereas it is the only head of the Thule types that occurs in Northeast Greenland. Nor do I consider that the people who came to Northeast Greenland north about Greenland have ever lived in North Star Bay; more likely is it that they have gone north direct either from Etah, if they came from Ellesmere Land over Smith Sound, or from Washington Land or Hall Land, if they came over Kennedy Channel or Robeson Channel. The route they followed cannot be determined before large-scale excavations are made in Ellesmere Land, Grinnel Land and Grant Land, and on the northwest coast of Greenland north of Etah.

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[1]) Therkel Mathiassen, 1927, I, p. 293.

[2]) Wissler, p. 163.

Excavations in those regions, I think, would not only solve the problem of the Eskimos that immigrated into Northeast Greenland, but would be of great significance to the elucidation of the whole of Greenland's archaeology. The only thing we can say with anything like certainty about the people who travelled round the north of Greenland is that their culture has been the Thule Culture and that they have lived in houses of the Cape York type. The latter is evidence that they have been at a later stage of the Thule Culture, when the round whale-bone house was substituted with the Cape York house. How old the Cape York house is, and where it originated, is hidden from us at the moment. Outside Greenland it is not known with certainty, that is true, but there is a possibility that the previously mentioned houses in Eskimopolis in Buchanan Strait are of the type. If this is the case, it provides us with the link from Ellesmere Land via Etah to Northeast Greenland. From Etah the migration has probably proceeded along the north coast of Greenland and through Wandel's Valley to Independence Fjord, as assumed by Lauge Koch[1]).

As I have said, we must look southwards in order to solve the problem of the age of the Mixed Culture, for both at Angmagssalik and on the southern part of the west coast we have dated finds to compare with.

In the Angmagssalik district Mathiassen distinguishes between four culture stages: 1) the earliest culture, which prevailed at the close of the 14th and in the 15th century, 2) the culture of the 16th and 17th centuries, 3) the culture of the 18th century, and 4) the modern Angmagssalik culture[2]). Of the 26 elements in the Dødemandsbugten Mixed Culture which we regard as having come there from the south, 9 recur in the earliest culture at Angmagssalik, viz. thin harpoon heads, bladeless and barbless, harpoon heads of the Inugsuk type, cylindrical shaft mounting, flat end block for winged harpoon, wound pin with pierced head, hammer stone, adze blade for fastening direct on the handle, cooking pot with inside cord hole, and spoon with oval bowl. In addition are elements occurring in the Inugsuk Culture but not found at Angmagssalik, undoubtedly on account of the bad conditions for preservation there: the flat harpoon head with two barbs but bladeless, foreshaft of kayak harpoon with a tenon in the butt and one hole, side prong for bird dart with unilateral barbs, stave for coopered vessel, blubber pounder of wood, drop pendant of stone, ornamental bodkin and four-sided wooden box.

Two elements recur in the Angmagssalik culture of the 16th and 17th centuries: the screw and the rectangular house.

[1]) Lauge Koch, p. 73.

[2]) Therkel Mathiassen, 1933.

In the culture of the 18th century we again find two: flat harpoon heads, bladeless and barbless, and gorge with two holes.

Finally, two types do not appear until we reach the Angmagssalik culture of today: the back scratcher and the "sucking tube". It may be that the latter is a cylinder for the sledge draught line, in which case it belongs to West Greenland together with the hand drill without a separate shank, the ornamental plate with the horizontal cylinder at the top, and the ajagaq of seal scapula. How old these last five types are is not known, as they have not occurred in dated finds.

We see from the above that some of the "southern" elements of the Mixed Culture seem to have come from quite recent culture stages, and from this fact one might conclude that right up to recent times there has been culture intrusion in Northeast Greenland from the south. This is not the case, however. For if we take Angmagssalik's latest cultures as a whole we will see that the Mixed Culture of Northeast Greenland lacks so many of the types characteristic of these stages that there can be no question of any culture influence. If for instance we take Angmagssalik's 18th century for comparison, we find that Northeast Greenland lacks the kayak harpoon foreshaft with the short tenon in the butt and two holes, and the corresponding flat shaft mounting, fish hooks and sinkers, narrow sledge shoes, ulo with two arms, glass beads and the large rectangular common house. One might mention many more, but these characteristic elements would not have been missing from the finds in Northeast Greenland — now covering considerable numbers of specimens — if there had been any influence from this culture stage. Consequently, the four types that were placed to the 18th century or later are in reality earlier and only by chance have not been discovered in earlier finds.

As characteristic elements of the culture at Angmagssalik in the 16th and 17th centuries and the corresponding culture of the Kangâmiut Second Stage, Mathiassen enumerates: the kayak harpoon foreshaft with several holes, heavy weapon heads with belts of barbs, screw on the rear end of weapon heads, wound plugs of wood, ring-shaped kayak stand, boot creaser of stone and the small rectangular house. In addition there is a special Angmagssalik type, a drill bit with a three-sided, ground point[1]). Of these eight elements two only, the screw and the rectangular house, have come to Northeast Greenland, which fact would indicate that the other elements do not occur until a later phase in the culture stage, a possibility also pointed out by Mathiassen[2]).

The results of these considerations are, then, that of the 26 elements

[1]) Therkel Mathiassen 1933, p. 65.

[2]) l. c. p. 66.

in the Mixed Culture that have come from the south, 17 belong to Angmagssalik's earliest culture, two to the culture of the 16th century, whilst seven are of uncertain age. From this we must conclude that the people who brought these elements to Northeast Greenland must have left the Angmagssalik district some time in the beginning of the 16th century.

As a migration of this sort has scarcely proceeded in the form of a mass movement, but rather in groups at various points of time, it may be that the difference in time between the first immigration from the south to Northeast Greenland and this one is not so great, or, in other words, that from the 15th century till into the 16th century there has been a steady emigration northwards from Angmagssalik. After that time no large migration from Angmagssalik has reached Northeast Greenland. However, I do not consider it impossible that an individual family may have gone from Angmagssalik later on and reached Northeast Greenland.

The circumstance that in Dødemandsbugten we found no houses containing this later Angmagssalik culture unmixed, may probably mean that the migration went round about that locality. It must have continued northwards where, at some place or other, possibly in the region of Danmarks Havn, it has fallen in with emigrants from the north. There the two cultures have intermingled and, on their way southwards, have come to Dødemandsbugten where they have left their traces in the first stage of the Mixed Culture. When this has happened is difficult to say, but one may roughly put the first stage of the Mixed Culture at the 17th century, possibly even the end of the 16th century.

Then how old is the second stage of the Mixed Culture? This stage is characterized by its small, well-preserved, rectangular houses, an almost total lack of baleen objects, fewer stone implements and several new local types, whereas some earlier types are missing; in addition, it contains objects of European origin. Now, did this stage arise on the spot as a direct continuation of the first stage, or did it get to Dødemandsbugten from the outside?

If we take the houses first, we find there already a considerable difference between the two stages. Whereas the houses of type 2, which belong to the first stage, are more or less rounded and wide, and are very like the Cape York house, type 3 is more or less rectangular and narrow. It is not probable that the people at Dødemandsbugten have suddenly started to build houses different from their original type. But there are in fact other peculiar circumstances that indicate that it has made its appearance outside of Dødemandsbugten; in the first stage we find two later elements, the vestigal screw and the gorge with two holes,

whereas in the second stage we find corresponding earlier types, the entire screw and the gorge with one hole or a groove at the middle. I consider it improbable that this reversion to an ancient type should have taken place in the same settlement. A third difference between the two stages is that the bird dart side prongs with barbs on the inner side occur in the first stage, whereas the Thule type with barbs on both inner and outer side is found in the second stage. I therefore hold the opinion that the second culture stage with house type 3 did not originate in Dødemandsbugten. It has been shown earlier that it arose in Northeast Greenland, as it contains no new elements from the outside. If it thus has come from Northeast Greenland itself, I consider it must have come from the southern part of it, probably from Scoresby Sound, for from that region the reports and drawings are exclusively of rectangular houses. Some of them are trapeziform, and have bulges at the foremost corners, but they are oblong and thus are more like the small rectangular houses of Angmagssalik than the Cape York house. What they contain of artefacts is Mixed Culture, so that there is influence from the "northern" immigration; but whereas in regard to house type the Cape York element has been victorious in Dødemandsbugten and northwards, the rectangular house has become predominant here further south. One might imagine the course of events to have been that some of the Eskimos who were moving away from Angmagssalik have remained in Scoresby Sound, where they have lived in rectangular houses. They have been influenced by people of the Mixed Culture, or possibly people with pure Thule Culture on their way southwards, but not so radically in regard to the construction of their houses as further north.

For some reason or other these Scoresby Sound dwellers have gone out northwards and got as far as Dødemandsbugten, where they have left traces in the second culture stage there. That these people should have retained the entire screw and the earlier type of gorge, whilst they have abandoned the unilaterally barbed side prong for their bird darts in favour of the Thule Type, is not at all improbable to me, as when an intermingling of types is proceeding there is no saying what will gain the ascendancy.

All that we have to enable us to determine the age of the second stage of the Mixed Culture is the porcelain, which "with some probability" may be dated to the beginning of the 18th century. Accordingly, this stage cannot be any earlier than that.

As one of the essential differences between the two stages I mentioned the almost total absence of baleen in the second stage, in contrast to the first. It would thus seem that the last immigrants to Dødemandsbugten have not hunted balaena to such an extent as the earlier inhabitants there, whatever the reason may have been: the movements of the whale

along the coast or the fact that the people have abandoned whaling. If the former possibility is correct, it must undoubtedly be placed in connection with the appearance of the European whalers in the waters between Spitzbergen and Greenland.

Whaling began there in 1610, when two English ships extracted the first oil[1]), but it was not until 1635 that the industry was pursued in real earnest. Then it was the Dutch who did most of the whaling; whereas there was not a single English ship, there were in all two hundred Dutch with a total of 12—18000 men[2]). In 1660—70 the number had increased to about four or five hundred Dutch and Hamburg vessels a year. They operated almost exclusively along the shores of Spitzbergen, where there were large oil factories on land. But gradually the whale was driven out to sea by this wholesale persecution, and the whalers had to follow it, often into the ice[3]). As the whales passing the east coast of Greenland in these lattitudes came from the waters between there and Spitzbergen[4]), it is possible they have been so shy that the Eskimos had difficulty in catching them. On the other hand I do not consider it probable that the whales had decreased much in number at this time, for the industry was continued with undiminished energy throughout the whole of the 18th century, and as late as in 1814 seventy-six English ships caught 1437 whales[5]) in "The Greenland Sea", as that water was called.

But if the abandonment of whaling by the Eskimos was due not to the whales but to the Eskimos themselves, the possible explanation is that these last inhabitants of East Greenland kept to the inner fjords, where no whaling was possible. In Scoresby Sound for instance, whence I consider these people came from, whaling has certainly not played so important a part as out by the coast.

Regarding the settlements in the Mixed Culture, there is again a difference between the first and the second stage. Of the 43 ruins in Dødemandsbugten, two are considered as belonging to the earliest culture, 31 the first stage of the Mixed Culture and 10 the second stage. These ten ruins lie scattered about the whole settlement, isolated or built two and two together, like I Houses 5 and 6, and II Houses 4 and 5. We find the same thing for instance at Eskimo Bay, where of 25 ruins I would at the most say that four belonged to the latest settlement, and of Baadsted's 10 ruins only two are of the later period. My experience is that solitary ruins of type 2 are rare, whereas ruins of type 3 mostly lie by themselves or two together, as in Dødemandsbugten. Thus it

[1]) Scoresby 1820, II, p. 21.
[2]) l. c., p. 53.
[3]) l. c., p. 56.
[4]) Ad. S. Jensen, p. 57.
[5]) Scoresby 1820, II, p. 120.

would seem as if the people of the first stage of the Mixed Culture have lived together in large settlements, whereas the last settlement has been more sporadic.

As far as can be seen from the animal bones found in the houses, the conditions of life have not altered much during the whole period of settlement. Sealing has all the time been of prime importance, and the ringed seal the principal animal. There has been a lot of reindeer hunting from the first, with the possible exception of the very last period. Musk oxen, on the other hand, have not been hunted so much. None of their bones were found at all in the earliest culture, and only few in the Mixed Culture. Finally, the Eskimos have hunted bear and narwhal, and, in the first stage of the Mixed Culture, balaena. In the great majority of the ruins there was an abundance of animal bones, and only one, I House 3, gives the impression of having been ravaged by famine. There is nothing at all to indicate that scarcity of game has driven the Eskimos from the settlement in Dødemandsbugten, as the quantity of animal bones is at least just as large in the later as in the earliest ruins.

Animal bones of course have provided the material for implements, but on nothing like such a large scale as for instance at Angmagssalik. Whale bone has mostly been used for sledge shoes and snow knives, and bear bones for instance for the two-handed scraper. Seal bones and walrus skull bones have not been used so much, for the reason that in Dødemandsbugten there has been an ample supply of better material: walrus ivory, narwhal ivory and reindeer antler. Of these, walrus ivory and antler seem to have been of equal importance in the two stages of the Mixed Culture, whereas narwhal ivory would appear to have been used more in the second stage than in the first. That good materials have not been lacking is also proved by the fact that on the whole the implements are large and powerful, and for the most part well made. As already mentioned, baleen has been a much used material in the first stage. Of other materials, wood has been very widely used, which indicates that the supply of drift-wood has been plentiful, in contrast to what is the case in the Danmark Havn region.

Most implements, however, are of argillaceous slate. In no other locality in all Greenland does one find so many slate objects as in the north-east, and within the remainder of the Eskimo region only Belcher Island off Labrador[1]) and Barter Island in Alaska[2]) can approach Northeast Greenland in this respect. The cause of it is partly the absence of iron, and partly the easily accessible and abundant supplies of this handy material, which occurs almost everywhere in Northeast Greenland. As a consequence, the technique of polishing has also reached a

[1]) Therkel Mathiassen 1927, I, p. 290.

[2]) Therkel Mathiassen 1930 (a), p. 20.

perfection seen in few places in the Eskimo culture, as witness the many different and handsome forms of implements.

Of other stones, sandstone has been employed for whetting purposes, and for cooking vessels and lamps. The soft, dense soapstone which elsewhere in Greenland provides such splendid material for cooking pots and lamps, is not found there. Its substitutes are sandstone, micaceous schist and a coarse-grained crystalline schist that resembles soapstone but is of inferior quality. Flint and a black siliceous slate have been much used in the first stage of the Mixed Culture. The reason why flint has gone out of use for implements is, I consider, that slate has been so handy; it is softer, but so much the easier to work.

Of the technique employed by the Northeast Greenland Eskimos in making their implements polishing has already been mentioned. For working in bone and ivory, drilling has been of tremendous importance, greater, indeed, than anywhere else in the Eskimo culture. The evidence of this is the implements, almost all of which bear traces of drilling, and the many pieces of bone, ivory, and antler split off by drilling and found in and round about the ruins.

The drill bits have been of argillaceous slate, flinty slate, iron, copper and bone, varying in length and thickness according to the nature of the material to be worked. There are only few examples of drilling in wood. The large pieces have been split by means of bone wedges, or cut with the adze, whereas the finer work has been done with the knife. No trace of the use of the saw has been found.

In Northeast Greenland one sees no evidence of artistic decoration of implements. The only form of decorative art used is rows of drilled holes, and this occurs only sparsely.

From these general observations it will appear that in Northeast Greenland a special culture has been evolved, independently of other cultures. This culture, which one might aptly call "*The Northeast Greenland Culture*", *is characteristic in that it contains a blend of elements from the Thule Culture and the Inugsuk Culture, together with 23 types which have originated in Northeast Greenland. The carriers of this culture have had a highly developed drilling technique and to a wide extent have made use of slate as the material for their cutting implements.*

The Northeast Greenland Culture probably has extended over a period from about 1600 to some way into the 19th century and then has become extinct. The excavations at the settlement in Dødemandsbugten showed that the last inhabitants at any rate did not die there, for in that case skeletal remains would have been found in the latest ruins. They have gone away. But why, and where? The excavations tell us nothing about that; one can only guess.

Apparently they have not been forced into flight on account of hunger, for, as stated, there were many animal bones in the latest ruins. However, in the best preserved and possibly youngest house only very few reindeer bones were found, whereas there were more hare bones than in the others. Possibly this means that at that time the reindeer was scarce, and that may be the reason why the Eskimos left Dødemandsbugten.

It is possible that they have proceeded northwards, as Dr. Mc.I. Johnson points out in his recent book[1]). He bases this theory on the fact that human bones have only been found in ruins in the Danmarks Havn region. Even if this should not be the case, it is interesting to see that the ruins to which he refers, 406 and 407 on Snenæs, are the two that bear the greatest resemblance to Dødemandsbugten's house type 3. Furthermore, it would seem that the best-preserved ruins are to be found in the Danmarks Havn region[2]), whereas ruins in the area south of Clavering Island seem to be in a poorer state of preservation than on that Island. I have seen this for myself in Franz Josephs Fjord, and Mr. Glob, who made excavations in King Oscars Fjord in 1932—33, informs me that nowhere in that area did he find such well-preserved ruins as on Clavering Island.

As far as I can see, the last period of the Northeast Greenlanders has been something like the following: Decimated in numbers, possibly by degeneration on account of their isolated life, these the last dwellers in East Greenland have moved northwards in small groups. Some no doubt remained where they were and gradually died off[3]), whereas the others went on to the north, where their trail disappears in the regions round about Danmarks Havn.

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[1]) Mc. I. Johnson 1933, p. 69.

[2]) Bendix Thostrup, fig. 44.

[3]) The Norwegian archæologist SØREN RICHTER in his paper "A Contribution to the Archæology of North-East Greenland", published after this paper had been sent to the press, pictures some extremely well preserved houses from Gauss Peninsula (figs. 35 and 36). RICHTER has excavated a very large number of houses in Christian X. Land, and has brought home a large material from them. Judging from the houses and the specimens figured, RICHTER has almost exclusively excavated houses of house type 3, which, like those of Dødemandsbugten, have contained specimens referable to the second stage of the Mixed Culture. All the harpoon heads are flat, no flint implements occur, baleen is sparsely represented, and "old" types, as for instance lamps with wick ledge, two-handed scrapers, and flat "sling handles", are lacking. However, nearly all the types characteristic of the second stage of the Mixed Culture are represented.

ZOOLOGICAL APPENDIX

Animal Bones from the Eskimo Settlement in Dødemandsbugten, Clavering Island.

A Contribution to the Immigration History of the Musk Ox and Reindeer in East Greenland.

By M. Degerbøl, Ph. D.

The osseous material brought home from Clavering Island in North East Greenland is of particular interest, in that it was taken from house ruins that can be dated with a fair amount of certainty. The earliest of them, according to Helge Larsen's reckoning, may be placed to the first part of the 16th century; the latest dated from about the year 1800.

Bones of terrestrial mammals of just that period are of very great significance, as they help to throw light upon the long debated question as to history of the coming of the musk ox, reindeer and wolf to East Greenland.

In 1822 the Scoresbys, father and son, were in the sound that now bears their name; but although Scoresby junior explored Cape Stewart at Hurry Inlet, and his father went up the fjord with the ship, while others made their way in over Jameson Land, they saw no musk oxen or any signs of them. Nor did Clavering and Sabine, who the following year were on the coast more to the north, where Sabine made his observations on Sabine Island, Clavering passing along the coast by boat from Sabine Island to Clavering Island and on past Jordan Hill to the head of Loch Fyne; they saw not the slightest trace of the presence of the musk ox. The first expedition to see live musk oxen on the east coast of Greenland was the Germania Expedition under Koldewey in the year 1869.

The circumstance that these first explorers of East Greenland saw nothing of the musk ox, whereas later expeditions, the Dane Ryder in Scoresby Sound, 1891, and the Swede Nathorst in the same fjord, and in Franz Josephs Fjord and the region north of it, 1899, observed no small numbers of them, has led Nathorst and others to conclude that this animal had not yet come to East Greenland south of lat. 75° N. in the years 1822—23, or at any rate that they were very rare there.

In the material from Clavering Island I have now found musk ox

bones, even if the quantity is only small. In Group II House 2, which is labelled as being one of the earliest houses, dating from about 1600, a cavity under a second lower platform was found to contain the following bones of the musk ox: parts of right and left pelvis; proximal end of tibia, distal end of metatarsus, the middle and two inner phalanges. Of much later date, from Field A 1, there is a single upper tooth, and from Field B 1 a phalange. From III House 22 there is half of a lower cheek tooth, drilled through the root and suspended on sinew thread.

Here, then, would seem to be proof that the musk ox had already reached Clavering Island about 1600, but the presence of so few bones might indicate that it was of rare occurrence then.

Much more numerously represented is the reindeer, which has not been met with in East Greenland since 1900. Its bones occur in all the houses examined (see the various classification lists). Nevertheless it should be noted that there are only a few fragments: of metatarsus and pelvis, from one of the latest houses (I House 6) (about the year 1800). This may be accidental, of course, but, combined with the circumstance that the Scoresbys, Clavering and Sabine saw no live reindeer in 1822—23, it may mean that the reindeer was on the decline, and even that it disappeared for a time later on. It may be that in this we have a contributory cause of the disappearance of the Eskimos from Northeast Greenland. Another peculiarity about this house is that there are many bones of hare, an animal that otherwise is not represented much in the houses of the settlement. This again may be a sign that game was scarce.

There were no bones of the polar wolf, a fact that supports the theory that this animal has come to East Greenland in very recent times. It was not seen by Scoresby, Clavering or Sabine, nor by the Germans who wintered on the coast in 1869—70. The species was first seen by the Nathorst Expedition on the east coast. In this connection it should be observed that though the material is abundant, (several large cases full) it would be desirable to have still more samples. It might very well be that a cautious and shy animal such as the polar wolf is has roamed about alone or in pairs and only exceptionally trapped by the Eskimos and without having been seen by the expeditions.

The greater part of the material examined consists of bones of the ringed seal. Remains of harp seal occur in all the houses; it is worth noting that this species has been met with so far north. In addition there are bones of bearded seal and walrus, and in most of the houses there were some bones of narwhal and polar bear. In one house, I House 6, dating from about 1800, quite a number of hare bones were found, as already stated. — There were no bird or fish bones at all.

The following mammals are represented:

Lepus groenlandicus, Arctic hare.
Alopex lagopus, Arctic fox.
Ursus maritimus, Polar bear.
Phoca hispida, Ringed seal.
Phoca groenlandica, Harp seal.
Erignathus barbatus, Bearded seal.
Odobenus rosmarus, Walrus.
Rangifer tarandus, Reindeer.
Ovibos moschatus, Musk ox.
Monodon monoceros, Narwhal.
Large baleen whale.
Canis familiaris, Dog.

The house ruins in Dødemandsbugten lay in three groups, I, II and III, within which they are numbered. In the various houses, which here will be referred to according to age, were remains of the following animals:

III House 1, presumably from the beginning of the 16th century: All bones collected:

Ursus maritimus: proximal end of ulna.

Phoca hispida: inter alia[1]) 22 pelvic halves, 4 right and 6 left femori, of which two without upper and lower epiphyses, 18 tibiae, 7 scapulae, 6 left humeri, of which one without upper epiphysis, 1 right humerus, 6 radii, four without lower epiphysis, 2 ulnae, 1 penis bone.

Phoca groenlandica: 1 humerus, 3 radii, 1 ulna, 1 femur, 1 tibia.

Erignathus barbatus: 4 humeri, 3 radii, 1 ulna, 3 pelvic halves, 2 femori, 3 tibiae, 1 mandible branch.

Odobenus rosmarus: parts of skull, scapula, tibia.

Rangifer tarandus: 2 left scapulae, distal ends of 4 right humeri, 2 proximal and 1 distal end of left radius, parts of fused forearm bones, parts of 3 pelvic halves, proximal end of right femur, distal end of tibia, shaft of metacarpus, two distal ends, 1 proximal end and 2 shafts of metatarsus, astragalus, posterior part of right and left mandible, lower jaw tooth. The limb bones have been split, apparently for the extraction of the marrow.

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[1]) As to the seals, they are represented by all the skeletal bones, though there are only few penis bones, these having probably been taken out for use in games or the like. All these bones need not be published here, but in order to give an idea of the quantities the numbers of the more remarkable bones are given.

III House 22, presumably from 18th century.

Ovibos moschatus: tooth, drilled and suspended on sinew thread.

II House 2, the cavity under the lower platform; untouched since about 1600 (see p. 26). All bones collected:

Lepus groenlandicus: right and left ulna.

Ursus maritimus: 2 canine teeth, distal end of tibia.

Phoca hispida: 10 humeri, no penis bones.

Phoca groenlandica: 1 ulna, 1 femur, 1 fibula.

Erignathus barbatus: 2 branches of same mandible, shaft of humerus, distal part of fibula, 3 astragalus, 1 heel bone.

Odobenus rosmarus: Part of tooth, rib.

Rangifer tarandus: piece of antler, 3 teeth, distal ends of right and left humerus, proximal end of ditto, parts of two ulnae and 2 radii, 3 distal ends of metacarpus, shaft of metacarpus and metatarsus, parts of 2 pelvic halves.

Ovibos moschatus: parts of right and left pelvis, proximal end of tibia (suture between epiphysis and diaphysis still somewhat open, i. e. fairly young animal), distal end of metatarsus, 1 middle and 2 inner phalanges, probably from front and hind feet.

II House 2, mostly the "cooking pit". Samples.

Ursus maritimus: scapula, humerus, radius, tibia, heel bone. All whole.

Phoca hispida: including 6 left and 5 right femori, 6 ear bones.

Erignathus barbatus: scapula, part of ulna, radius without distal epiphysis, 2 halves of same pelvis, tibia.

Odobenus rosmarus: facial bones, rib.

Rangifer tarandus: tooth-bearing part of mandible, 2 right and 2 left scapulae, distal end of humerus, part of pelvis, proximal end of right and left femur, distal end of tibia, 2 astragalus, vertebrae.

Monodon monocceros: 2 caudal vertebrae.

From Field C 1, presumably in latter half of 17th century. All bones collected:

Ursus maritimus: humerus, ulna, radius.

Phoca hispida: including 11 humeri, 7 femori, 11 pelvic halves, 2 mandible branches, 4 ear bones, no penis bones.

Phoca groenlandica: Humerus, half pelvis, fibula, 2 tibiae, ear bone.

Erignathus barbatus: scapula, ulna, radius, femur, 3 tibiae.

Rangifer tarandus: fragments of antler, parts of 2 mandibles with very worn teeth, upper jaw tooth, part of right half pelvis, middle and distal parts of metatarsus.

Monodon monoceros: Parts of mandible, several fragments of teeth.

Fragments of large baleen whale.

II House 10, presumably from about year 1700. All bones collected.

Ursus maritimus: canine tooth, 4 ulnae.

Phoca hispida: including 10 right and 14 left humeri, 7 ear bones.

Phoca groenlandica: 2 left humeri, 2 radii, 1 ulna.

Erignathus barbatus: scapula, 4 humeri, 1 ulna, 2 radii, drilled proximal end of radius, 5 pelvic halves, 3 tibiae.

Odobenus rosmarus: 3 distal ends of humerus, atlas, tooth.

Rangifer tarandus: 2 distal ends of humerus, 2 distal ends of metatarsus, fragments of tibia.

Monodon monoceros: 3 fragments of teeth.

I House 6, apparently from about year 1800:

Lepus groenlandicus: fragment of maxilla, 2 mandible branches, 3 humeri, 4 proximal ends of ulna, 4 radii, 4 right and 4 left pelvic halves, 3 femori, 5 left and 4 right tibiae, one without both epiphyses, 3 phalanges.

Alopex lagopus: 3 left mandible branches, right $\overline{\text{m1}}$.

Ursus maritimus: left front part of mandible with canine, proximal and distal ends of humerus (sooty), radius.

Phoca hispida: 16 right and 9 left humeri, 10 ulnae, 8 radii, 15 femori, of which 5 of young animals, 15 ear bones, 4 right and 4 left mandible branches, 4 penis bones.

Phoca groenlandica: parts of ulna, femur, tibia.

Erignathus barbatus: 3 left humeri, ulna, radius, tibia, phalange.

Odobenus rosmarus: facial bones, left scapula, humerus, proximal end of radius, tibia, sacrum, two vertebrae.

Rangifer tarandus: fragment of metatarsus, part of pelvis.

Monodon monoceros: principal parts of skull with mandible, vertebrae.

Field A 1. from 18th century.

Lepus groenlandicus: shaft of femur, 2 tibiae.

Ursus maritimus: middle parts of two mandible branches, part of maxilla with canine tooth, very old; ulna, tibia, heel bone.

Phoca hispida: 12 humeri, 8 femori, 9 pelvic halves, 16 tibiae, 2 penis bones.

Phoca groenlandica: 3 humeri, femur, 6 tibiae.

Erignathus barbatus: humerus, half pelvis, 2 tibiae, radius.

Odobenus rosmarus: tibia, rib.

Rangifer tarandus: parts of mandible, 3 shafts and 2 distal ends of ulna, distal parts of metacarpus and metatarsus, 2 pelvic halves, proximal end and 3 shafts of femur, distal end of tibia.

Ovibos moschatus: upper tooth, right m3.

Monodon monoceros: fragments of mandible, epiphyses of vertebrae.

Field B 1. from about the same time as Field A 1.

Lepus groenlandicus: humerus, pelvis.

Alopex lagopus: 2 skulls, 3 mandibles, ulna, radius, tibia.

Ursus maritimus: part of mandible.

Phoca hispida: 12 right and 9 left humeri, 14 femori, 8 ear bones, 3 penis bones.

Phoca groenlandica: femur, tibia.

Erignathus barbatus: half of pelvis, 3 femori, tibia.

Rangifer tarandus: 2 distal ends of metacarpus, parts of 2 pelvic halves, distal end of tibia.

Ovibos moschatus: innermost phalange.

Monodon monoceros: fragments of mandibles.

. . . . **Eskimo Bay. House 5,** Approx. 17th Century.

Alopex lagopus: 2 mandible branches.

Ursus maritimus: shaft of humerus, 2 ulnae.

Phoca hispida: 29 left humeri, of which 5 without epiphyses, 18 right humeri, 23 ulnae, 35 radii, 7 right and 11 left femori, 23 right and 22 left tibiae, 15 ear bones.

Phoca groenlandica: 1 humerus, 1 radius, 5 ulna, 2 pelvic halves, 1 femur, 1 fibula, 3 tibiae.

Erignathus barbatus: 9 humeri, 2 ulnae, 2 radii, 4 pelvic halves, 1 femur, 3 tibiae, astragalus.

Odobenus rosmarus: femur, minus epiphyses.

Rangifer tarandus: distal ends of 2 scapulae, distal ends of 2 humeri, proximal end of metacarpus, distal ends of 2 tibiae, distal end of metatarsus, part of pelvis.

Monodon monoceros: part of tooth.

There have been quite a number of bones of dog (*Canis familiaris*) in all houses and middens. There are several whole skulls. These shall not be treated here, except for a few measurements to show that on the whole they have been well-grown animals:

	Condylobasal length	$\underline{p4}$ length	
II 8	194	21.6	(teeth worn)
II 2	189	21.5	(teeth badly worn. The part behind proc. supraorbitales has been knocked in but has healed)
III 1	190	circa 19.5	(very much worn teeth)
Eskimo Bay	circa 180	21.0	(do.)



Fig. 42.
Mandibles of dog (*Canis familiaris*) 1:1.

Mandible measurements.

	Total length	c—m3	p2—m3	$\overline{m1}$	Max. height under m1	Max. thickness
II 8.....	154	87.4	76.8	24.0	29.5	12.5
II 2.....	146	81.1	73.3	21.1	27.0	10.8
III 1.....	150	83.5	73.0	22.0	29.0	12.0
III 3.....	—	82.5	73.5	22.5	26.6	11.5

Several of the mandibles are those of young animals, the teeth bearing no traces of wear or they are in course of shedding. On these the lower carnassial measures 22.0 (Db II); 22.6 (Db III 3); 21.6 (Db B1[1]); 20.8 (Db III 20); 20.5 (Db III 16).

From I House 3, where many human bones were found scattered in the passage, the collection contains a number of dog bones, many of which are very small, and the mandibles rather frequently lack a cheek tooth. (Fig. 42.) Helge Larsen says that probably the inhabitants have died of hunger after having eaten their dogs (p. 18). The many dental anomalies also indicate that these animals have been reared under conditions of great hardship.

Mandibles.

c—m3	p2—m3	m1	Height under m1, outer side	Max. thickness	
81.0	73.3	22.8	26.0	11.5	
76.7	71.5	22.2	26.0	11.5	(p2 very weak)
80.5	72.5	23.0	25.0	11.1	(p4 missing)
80.5	72.8	22.0	26.2	11.2	(p2 very weak)
80.5	72.0	23.0	28.5	11.6	(p3 missing)
74.0	68.0	20.7	23.0	10.0	(p4 missing)
73.0	—	21.5	22.5	10.0	
73.5	68.0	21.8	22.5	10.5	
70.5	64.5	ca. 20.5	22.2	9.5	(p4 missing, young animal)

Two carnassials from the upper jaw are small, 18.5 mm in length.

POSTSCRIPT

I am greatly indebted to all those who have been of help to me in my work in Greenland and in the compilation of this book; first and foremost the leader of the expedition, Dr. Lauge Koch, who secured for me the most favourable conditions under which to work, in Greenland as in Copenhagen. Next, my fellow members of the expedition who have taken an active part in the excavations, as well as Mr. Paul Gelting, M. A., who has given me the botanical information I needed, and Mr. Gunnar Seidenfaden, who made the map of the settlement. My special thanks are due to Dr. Therkel Mathiassen for his instruction in the technique of excavation in the summer of 1930 and for the readiness with which he placed his wide experience at my disposal while writing the book. I am also very grateful to Keeper Th. Thomsen at the National Museum for the facilities he granted me at the Museum and to the scientists who have helped me in their various fields, Dr. M. Degerbøl who has classified the osseous material, Dr. Poul Nørlund and Mr. J. Olrik, keepers at the National Museum, and the geologist Mr. Helge Gry, M. A.; Mr. J. Raklev, custodian at the National Museum, has done the heavy work of preservation and restoration of the specimens, Mr. S. Bengtsson has photographed them with his customary skill. The drawings are the work of Mr. A. Andersen, R. N., and Mr. H. Røhling, and the translation is by Mr. W. E. Calvert.

Copenhagen, April 1934.

HELGE LARSEN.

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— 3. Stone implements. Mixed Culture, first stage.
— 4. Hunting implements etc. Mixed Culture, first stage.
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— 6. Household utensils. Mixed Culture, first stage.
— 7. Ornaments, toys etc. Mixed Culture, first stage.
— 8. Toys. Mixed Culture, first stage.
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— 10. Grave find from the passage of I, House 3.
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— 12. Bow and arrows, tools and objects for sledge. Mixed Culture, second stage.
— 13. Tools etc. Mixed Culture, second stage.
— 14. Household utensils etc. Mixed Culture, second stage.
— 15. Ornaments, toys etc. Mixed Culture, second stage.
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— 18. Plan of House Ruin Group II.
— 19. Plan of House Ruin Group III.
— 20. Map of the settlement in Dødemandsbugten.

TEXT FIGURES

(OBJECTS WITH THEIR MUSEUM NUMBERS AND PLACE OF FINDING)

(ALL MUSEUM NUMBERS BEGIN WITH L1)

Fig. 22.	1.	Bow brace?	3362	Grave	6	
	2.	Arrow shaft	3360	—		
	3.	—	3361	—		
	4.	Quiver handle?	3355	—		
	5.	Arrow head	3356	—		
	6.	—	3358	—		
	7.	—	3357	—		
—	27.	Lamp of sandstone	2224	III	House	1
—	28.	Knife	3000	III	—	15
—	29.	Baleen cutter	3150	III	—	18
—	30.	Part of boot	2002	II	—	8
—	31.	Bone implement of unknown use	2144	II	—	10
—	32.	A ball?	3154	III	—	18
—	33.	Rear part of winged harpoon	71	Cape Mary		
—	34.	Harpoon wing, of wood	1438	I	House	5
—	35.	Part of harpoon bladder?	3272	III	—	22
—	36.	Adze handle	2578	III	—	7
—	37.	Implement of unknown use	1548	I	—	6
—	38.	Cooking pot	1918	II	—	4
—	39.	Implement of unknown use	1944	II	—	7
—	40.	Wooden peg?	3252	III	—	22
—	41.	Wooden stick	1398	I	—	5

PLATES

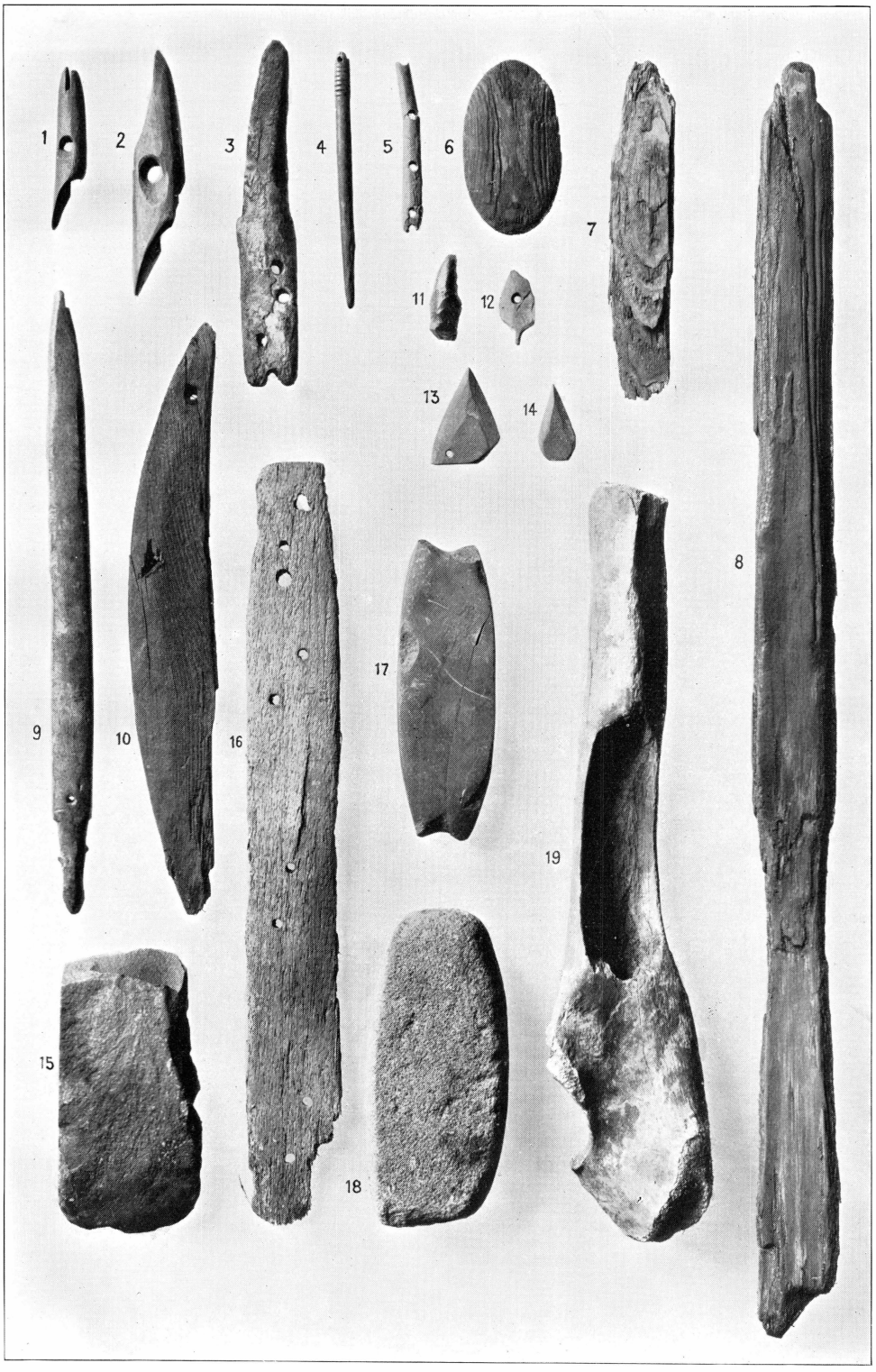
(OBJECTS WITH THEIR MUSEUM NUMBERS
AND PLACE OF FINDING)

(ALL MUSEUM NUMBERS BEGIN WITH L 1)

Plate 1.

(Earliest Culture.)

1.	Harpoon head	2200	III	House 1
2.	—	2199		—
3.	Knife handle	2202		—
4.	Ornamental bodkin	2181		—
5.	Edge mounting	2182		—
6.	Oval cup bottom	2185		—
7.	Bow brace	2187		—
8.	Bow	2211		—
9.	Head of bird dart	2201		—
10.	Oval cup bottom	2184		—
11.	Scraper blade	2222		—
12.	Drill bit	2193		—
13.	Harpoon blade	2162		—
14.	—	2163		—
15.	Adze blade	2215		—
16.	Sledge shoe	2205		—
17.	Whetstone	2190		—
18.	—	2212		—
19.	Two-handed scraper	2203		—

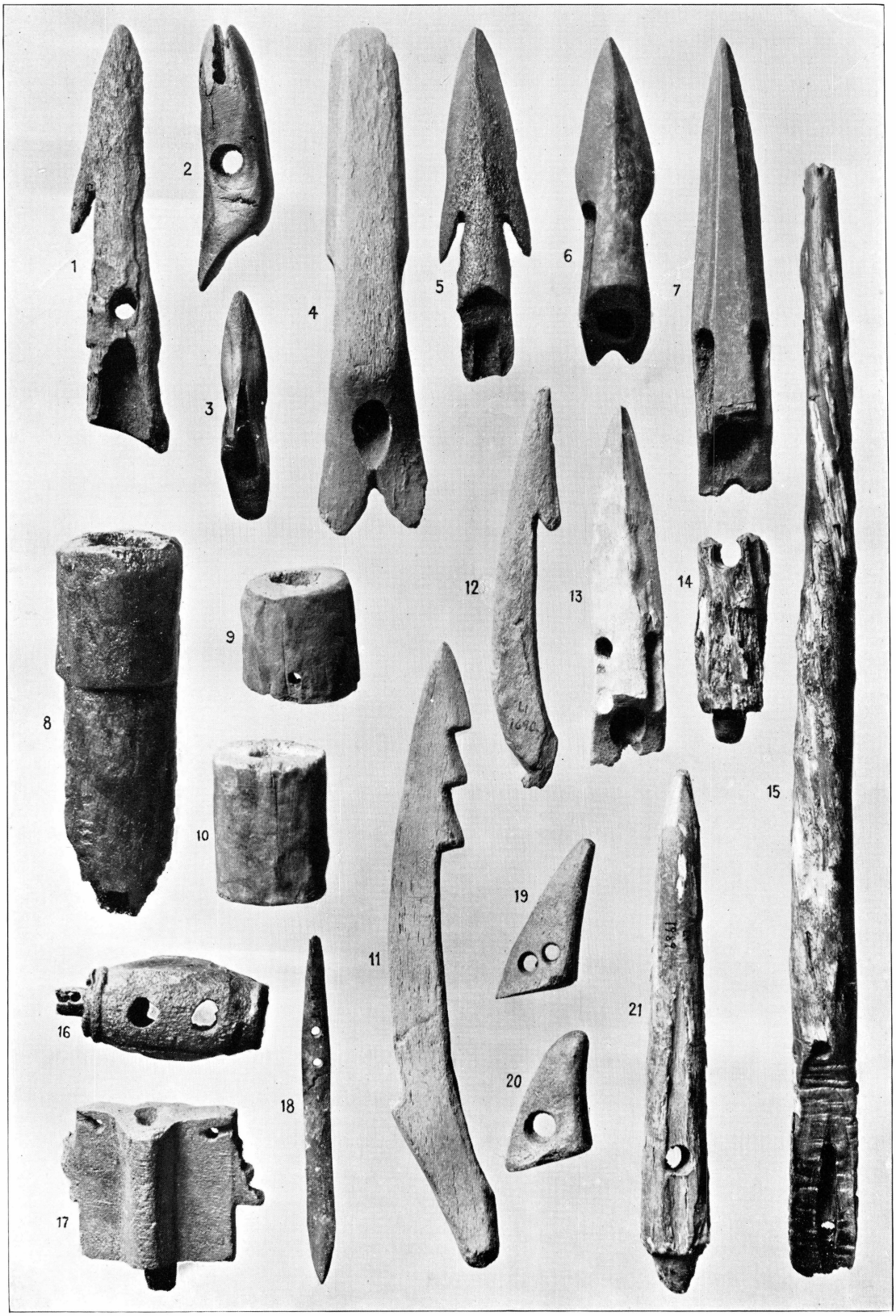


2:5.

Plate 2.

(Mixed Culture, First Stage.)

1.	Harpoon head	1735	II	House	2
2.	—	1835	II	—	3
3.	—	2057	II	—	10
4.	—	1836	II	—	3
5.	—	1737	II	—	2
6.	—	2468	III	—	6
7.	—	2230	III	—	3
8.	Shaft mounting	2059	II	—	10
9.	—	1838	II	—	3
10.	—	2060	II	—	10
11.	Side prong of bird dart	1741	II	—	2
12.	— —	1690	II	—	2
13.	Harpoon head	1831	II	—	2
14.	Foreshaft	2062	II	—	10
15.	—	2061	II	—	10
16.	Swivel	1612	II	—	2
17.	Block for winged harpoon	2848	III	—	12
18.	Gorge	2874	III	—	14
19.	Finger rest	2963	III	—	14
20.	—	1604	II	—	2
21.	Foreshaft	1989	II	—	8

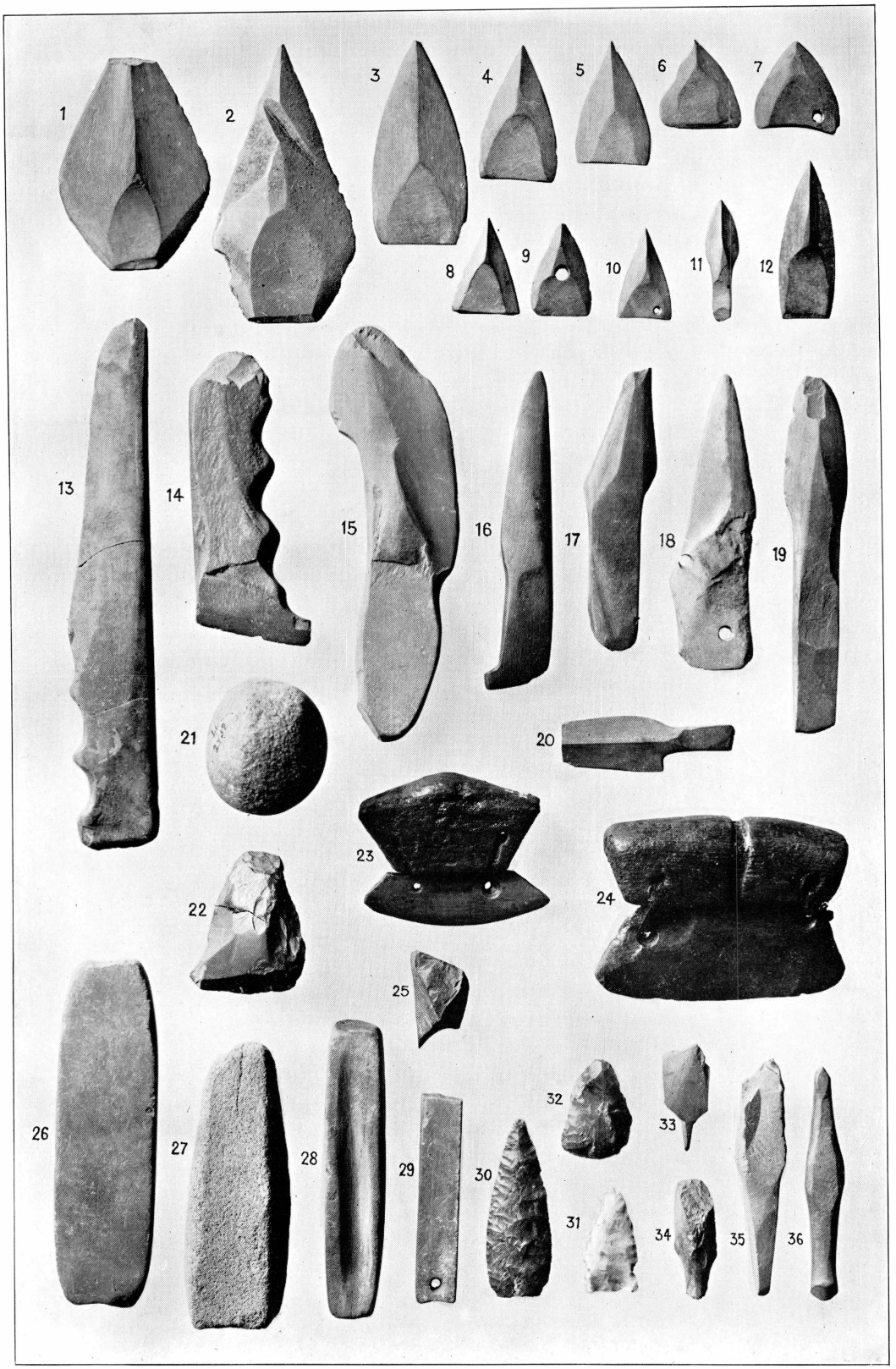


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Plate 3.

(Mixed Culture, First Stage.)

1.	Lance blade	2105	II	House	10
2.	—	3011	III	—	15
3.	—	2155	II	—	10
4.	Harpoon blade	2934	III	—	14
5.	—	1700	II	—	2
6.	—	2104	II	—	10
7.	—	2932	III	—	14
8.	—	2444	III	—	6
9.	—	2043	II	—	8
10.	—	2106	II	—	10
11.	Arrow blade	2860	III	—	12
12.	—	1877	II	—	3
13.	Knife	2435	III	—	6
14.	—	2922	III	—	14
15.	—	2436	III	—	6
16.	—	1812	II	—	2
17.	Knife blade	1873	II	—	3
18.	—	1814	II	—	2
19.	—	2858	III	—	12
20.	—	2010	II	—	8
21.	Hammer stone	2457	III	—	6
22.	Adze blade	2453	III	—	6
23.	Ulo	2482	III	—	6
24.	—	2404	III	—	6
25.	Drill	2742	III	—	11
26.	Whetstone	2153	II	—	10
27.	—	1645	II	—	2
28.	—	3103	III	—	16
29.	—	1290		C 1[1]	
30.	Knife blade	1333	I	House	3
31.	—	1664	II	—	2
32.	Scraper blade	2297	III	—	3
33.	Drill bit	2004	II	—	8
34.	—	2937	III	—	14
35.	—	1661	II	—	2
36.	—	3110	III	—	16

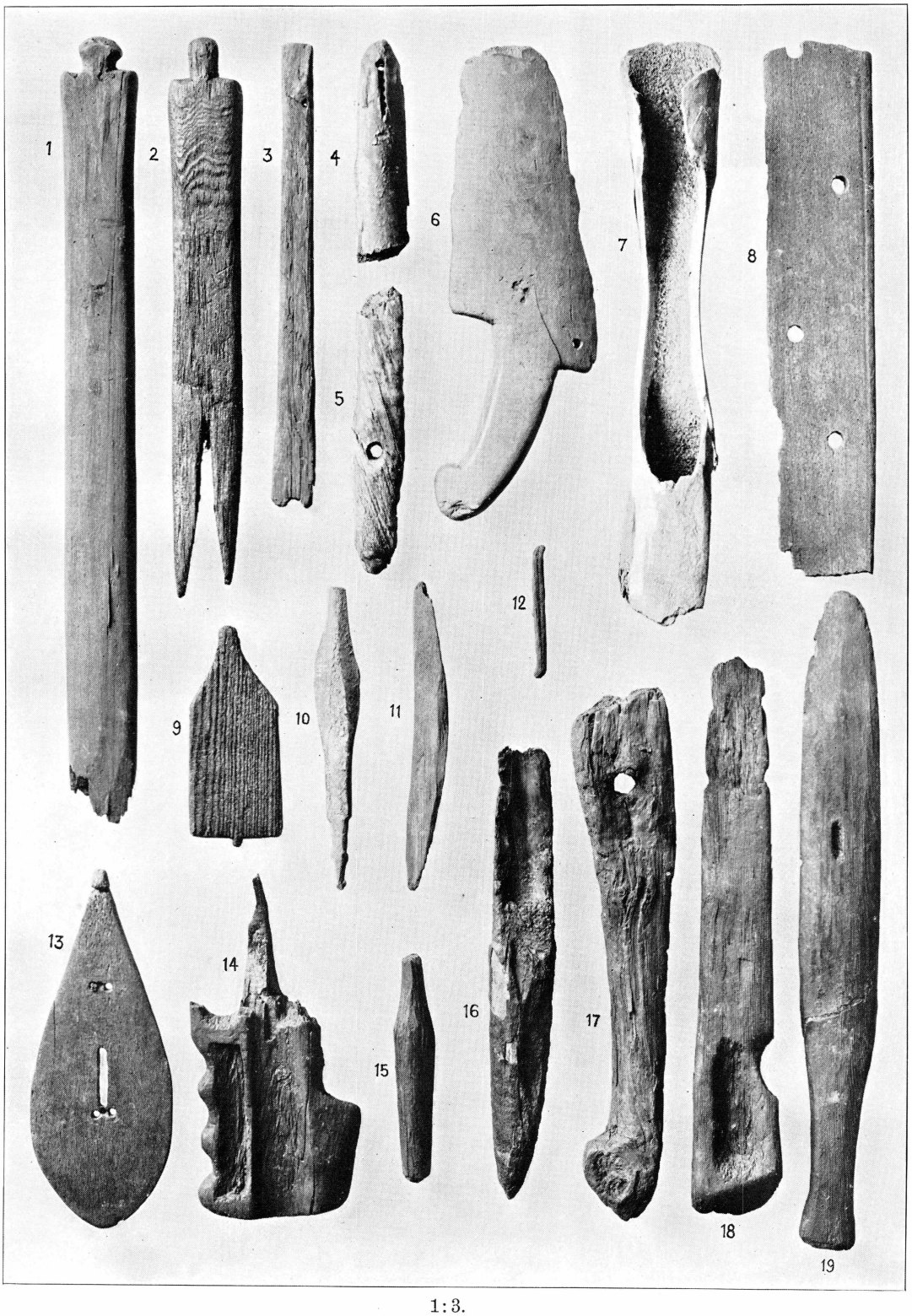

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1:2.

Plate 4.

(Mixed Culture, First Stage.)

1.	Bow	2882	III	House	14
2.	—	2064	II	—	10
3.	Arrow shaft	2269	III	—	3
4.	Fore end of moveable lance head	3370	Surface		
5.	Butt end of — —	1346	I	—	4
6.	Snow knife	1899	II	—	3
7.	Two-handed scraper	2065	II	—	10
8.	Sledge shoe	2236	III	—	3
9.	Cutting board for arrow feathers	1840	II	—	3
10.	Arrow head	2849	III	—	12
11.	Bow brace	2485	III	—	6
12.	Sinew twister	2766	III	—	11
13.	Wing for harpoon	2760	III	—	11
14.	Handle of throwing board	2706	III	—	11
15.	Leg of sealing stool	2360	III	—	6
16.	Ice pick	2393	III	—	6
17.	Adze handle	1338	I	—	4
18.	"Sling handle"	2892	III	—	14
19.	Snow beater	1764	II	—	2



1:3.

Plate 5.

(Mixed Culture, First Stage.)

1.	Adze head	1841	II	House	3
2.	—	1606	II	—	2
3.	Knife handle	1294		C 1[2]	
4.	—	1749	II	House	2
5.	—	3184	III	—	20
6.	Baleen cutter	1842	II	—	3
7.	Bone tube	2075	II	—	10
8.	Wedge	2039	II	—	8
9.	Implement of unknown use	1615	II	—	2
10.	Hand drill	1844	II	—	3
11.	—	1614	II	—	2
12.	—	2700	III	—	11
13.	Toggle for sledge draught line	2476	III	—	6
14.	— — —	3090	III	—	16
15.	Nail for sledge shoe	1631	II	—	2
16.	Mouthpiece of bow drill	2876	III	—	14
17.	— —	1847	II	—	3
18.	Drill shank	2852	III	—	12
19.	Drill	3100	III	—	16
20.	Trace buckle	3088	III	—	16
21.	—	1854	II	—	3
22.	—	1908	II	—	3
23.	Edge mounting	1756	II	—	2
24.	Mounting	3177	III	—	20

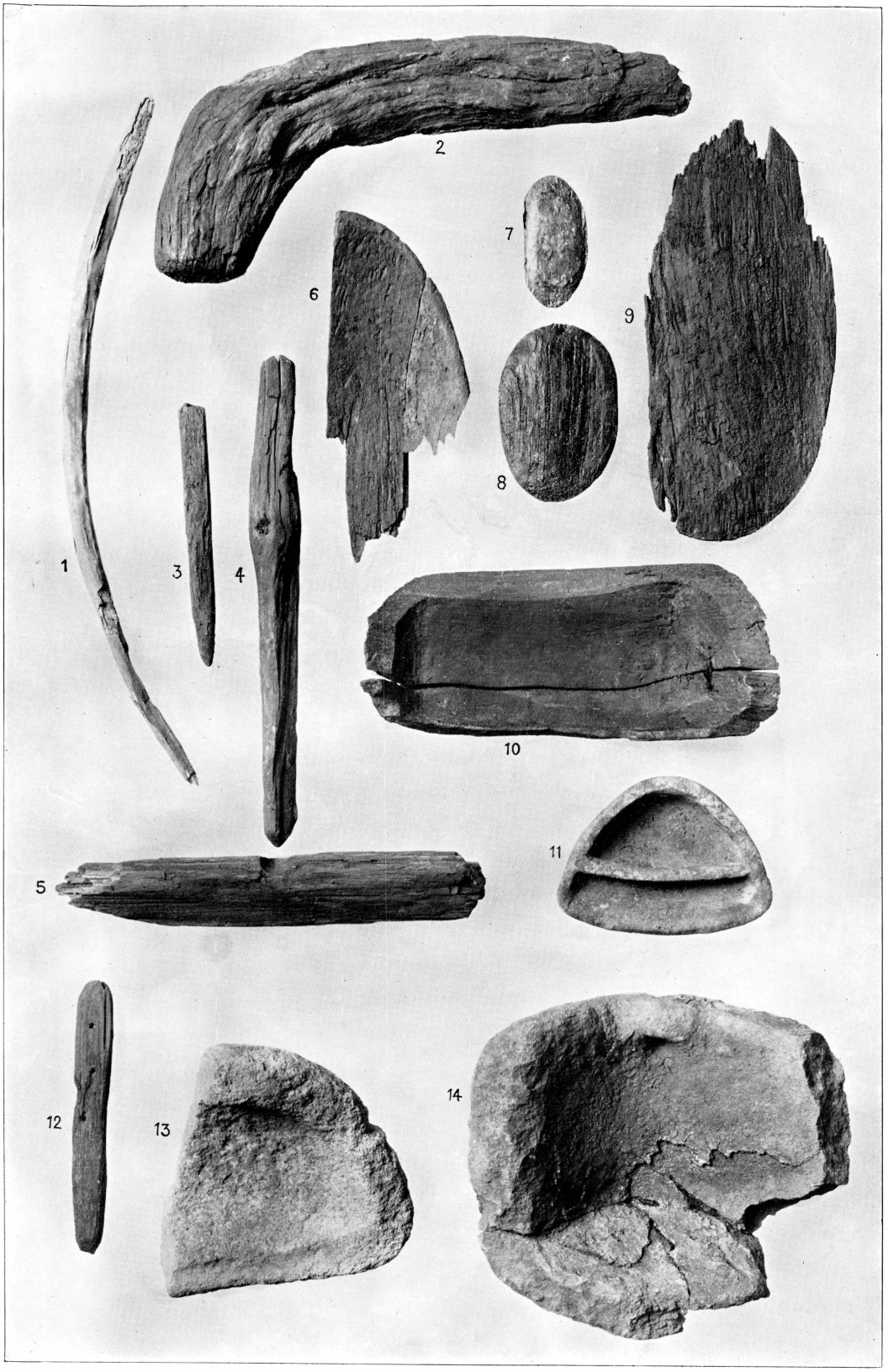


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Plate 6.

(Mixed Culture, First Stage.)

1.	Meat stick	2074	II	House	10
2.	Blubber pounder	1339	I	—	4
3.	Lamp trimmer	1726	II	—	2
4.	Fire-drilling stick	1996	II	—	8
5.	Fire-drilling hearth	2997	III	—	15
6.	Wooden tray	2904	III	—	14
7.	Oval cup bottom (baleen)	3036	III	—	15
8.	—	3102	III	—	16
9.	Oval bowl bottom	1320	I	—	3
10.	Wooden tray	2408	III	—	6
11.	Toy lamp	3061	III	—	15
12.	Lamp trimmer	1725	II	—	2
13.	Lamp, fragment	1329	I	—	3
14.	Cooking pot, fragment	2744	III	—	11

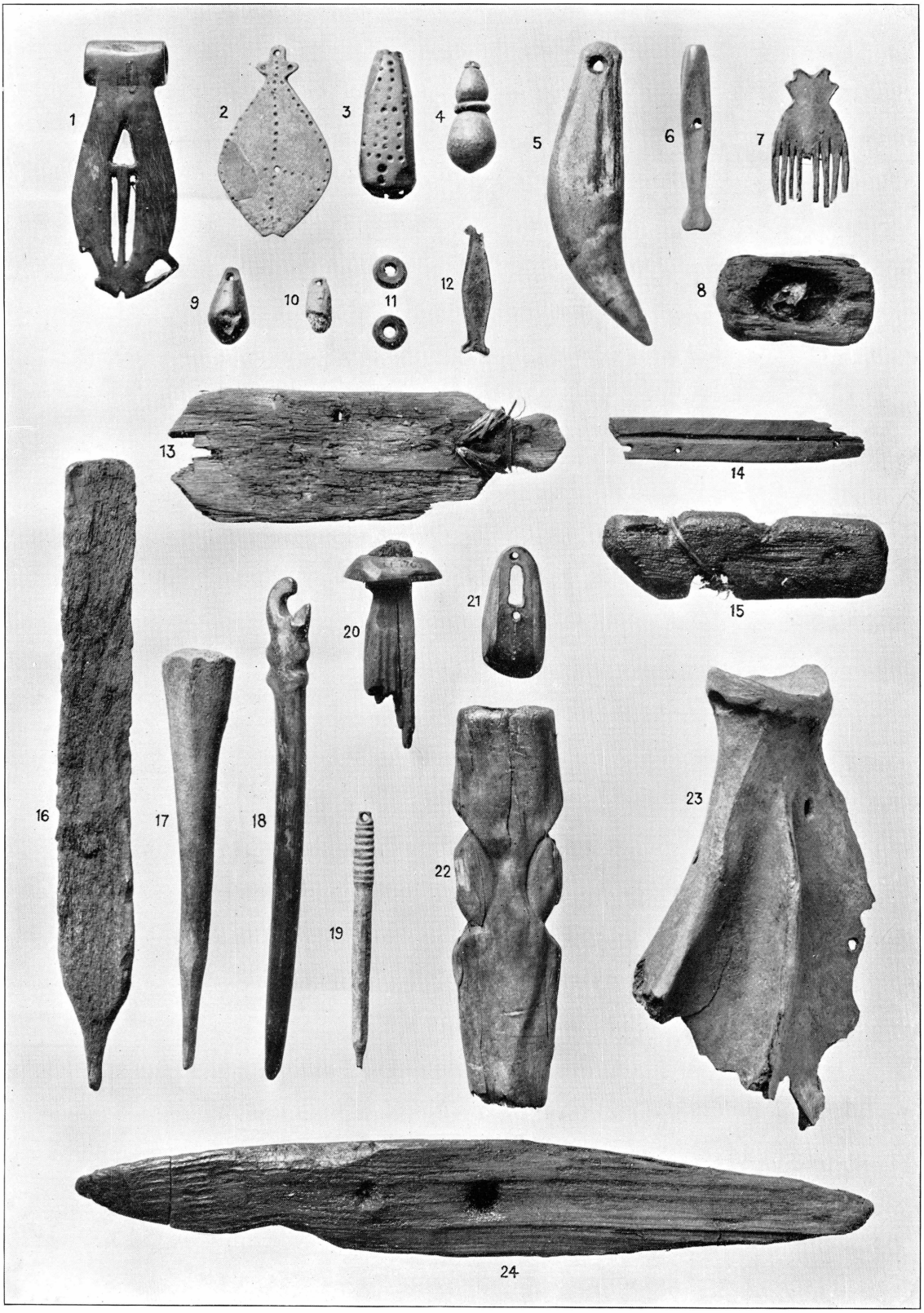


1:3.

Plate 7.

(Mixed Culture, First Stage.)

1.	Ornamental plate	2242	III	House	3
2.	— —	2243	III	—	3
3.	Pendant	2966	III	—	14
4.	Drop pendant, bone	2245	III	—	3
5.	Pierced bear tooth	2701	III	—	11
6.	Buckle	2082	II	—	10
7.	Comb	1994	II	—	8
8.	Amulet box	1685	II	—	2
9.	Drop pendant, stone	2826	III	—	12
10.	— —	2376	III	—	6
11.	Beads, coal	1824	II	—	2
12.	Pendant	1862	II	—	3
13.	Toy sledge cross slat	2021	II	—	8
14.	Toy drum frame	2900	III	—	14
15.	Drum handle	3054	III	—	15
16.	Bodkin	2247	III	—	3
17.	—	3053	III	—	18
18.	—	1757	II	—	2
19.	Ornamental bodkin	2699	III	—	11
20.	Back scratcher	1763	II	—	2
21.	— head of	1861	II	—	3
22.	Winged needle case	1326	I	—	3
23.	Ajagaq	1634	II	—	2
24.	Toy kayak	2836	III	—	12



3:5.

Plate 8.

(Mixed Culture, First Stage.)

1.	Toy harpoon head	2775	III	House	12
2.	— — —	1601	II	—	2
3.	— — —	2058	II	—	10
4.	— — foreshaft	2233	III	—	3
5.	— snow knife	2132	II	—	10
6.	— swivel	2133	II	—	10
7.	— trace buckle	1855	II	—	3
8.	— comb	2135	II	—	10
9.	Doll	2994	III	—	15
10.	Bird figure	2880	III	—	14
11.	—	2879	III	—	14
12.	Toy arrow head	3155	III	—	18
13.	— — —	2394	III	—	6
14.	Nock end of toy arrow	2365	III	—	6
15.	Toy arrow	2421	III	—	6
16.	— —	2890	III	—	14
17.	— —	2755	III	—	11
18.	— bow	3057	III	—	15
19.	Doll	3191	III	—	20
20.	—	1775	II	—	2
21.	—	2412	III	—	6
22.	—	2413	III	—	6
23.	Toy sledge runner	2420	III	—	6
24.	Top disk, (of 2nd culture Stage)	2681	III	—	7
25.	Toy ulo handle	2325	III	—	5
26.	Seal figure	2122	II	—	10
27.	Toy knife	1817	II	—	2
28.	— —	2093	II	—	10
29.	— lamp	3030	III	—	15
30.	— ulo	2101	II	—	10
31.	— cooking pot	3204	III	—	20


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2:3.

Plate 9.

(Mixed Culture, First Stage.)

1.	Baleen bow	3344	III	House	3
2.	— toy bow	1746	II	—	2
3.	— unknown implement	3152	III	—	18
4.	— snow beater	2975	III	—	14
5.	— mounting	2721	III	—	11
6.	— top disk	2907	III	—	14
7.	— ring	1624	II	—	2
8.	Sides of baleen cup	1623	II	—	2
9.	Baleen hank	1626	II	—	2

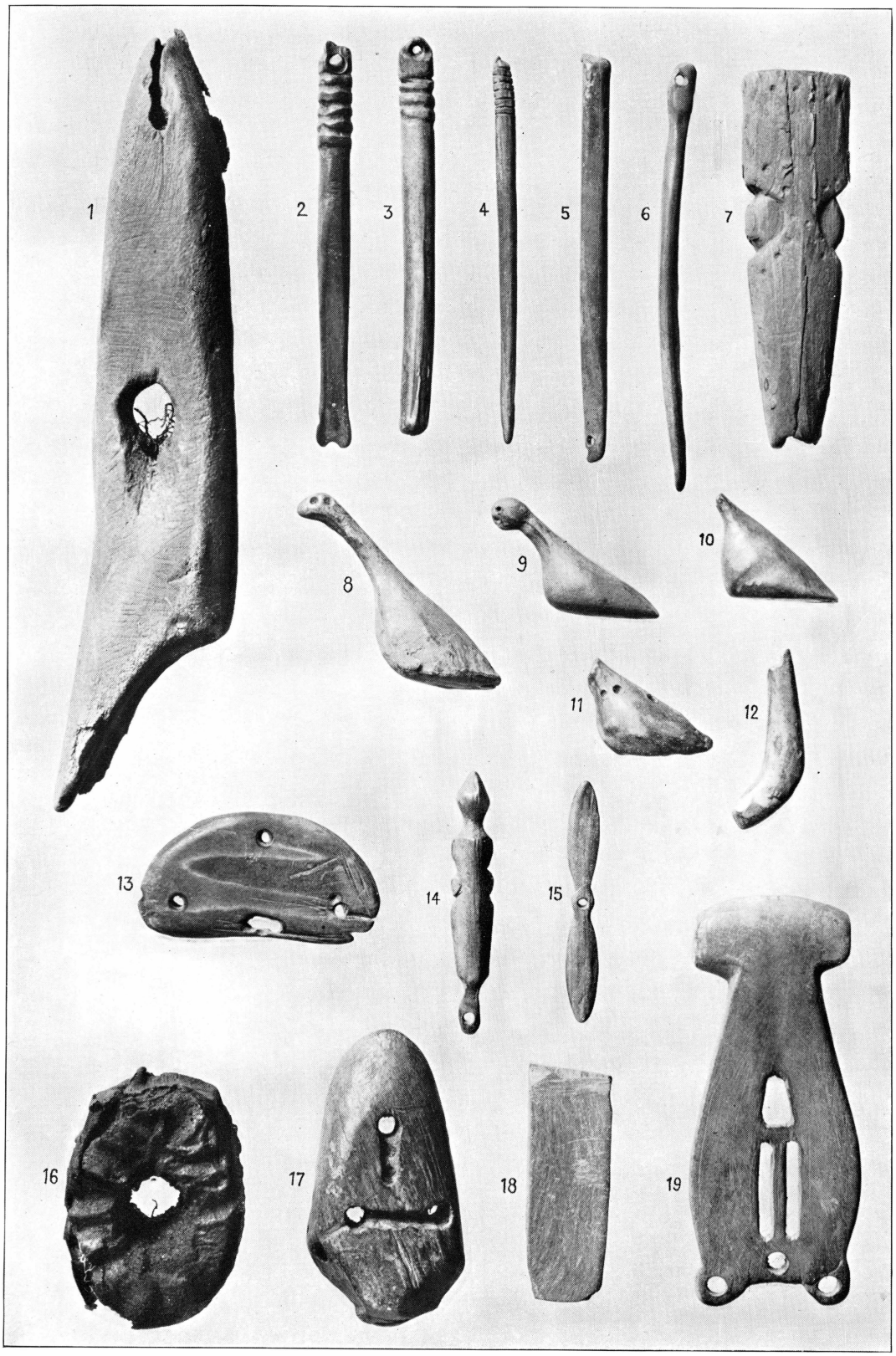


2:5.

Plate 10.

(Mixed Culture, First Stage) ("Grave Find").

1.	Harpoon head	1297	I House 3
2.	Ornamental bodkin	1303	—
3.	— —	1304	—
4.	— —	1305	—
5.	— —	1307	—
6.	— —	1306	—
7.	Winged needle case	1300	—
8.	Bird figure	1308	—
9.	—	1309	—
10.	—	1310	—
11.	—	1311	—
12.	Seal tooth	1314	—
13.	Seat of toy sealing stool	1302	—
14.	Pendant	1301	—
15.	Bone buckle	1312	—
16.	Drilled bone	1315	—
17.	Worked narwhal ivory	1299	—
18.	Worked slate	1316	—
19.	Ornamental plate	1298	—

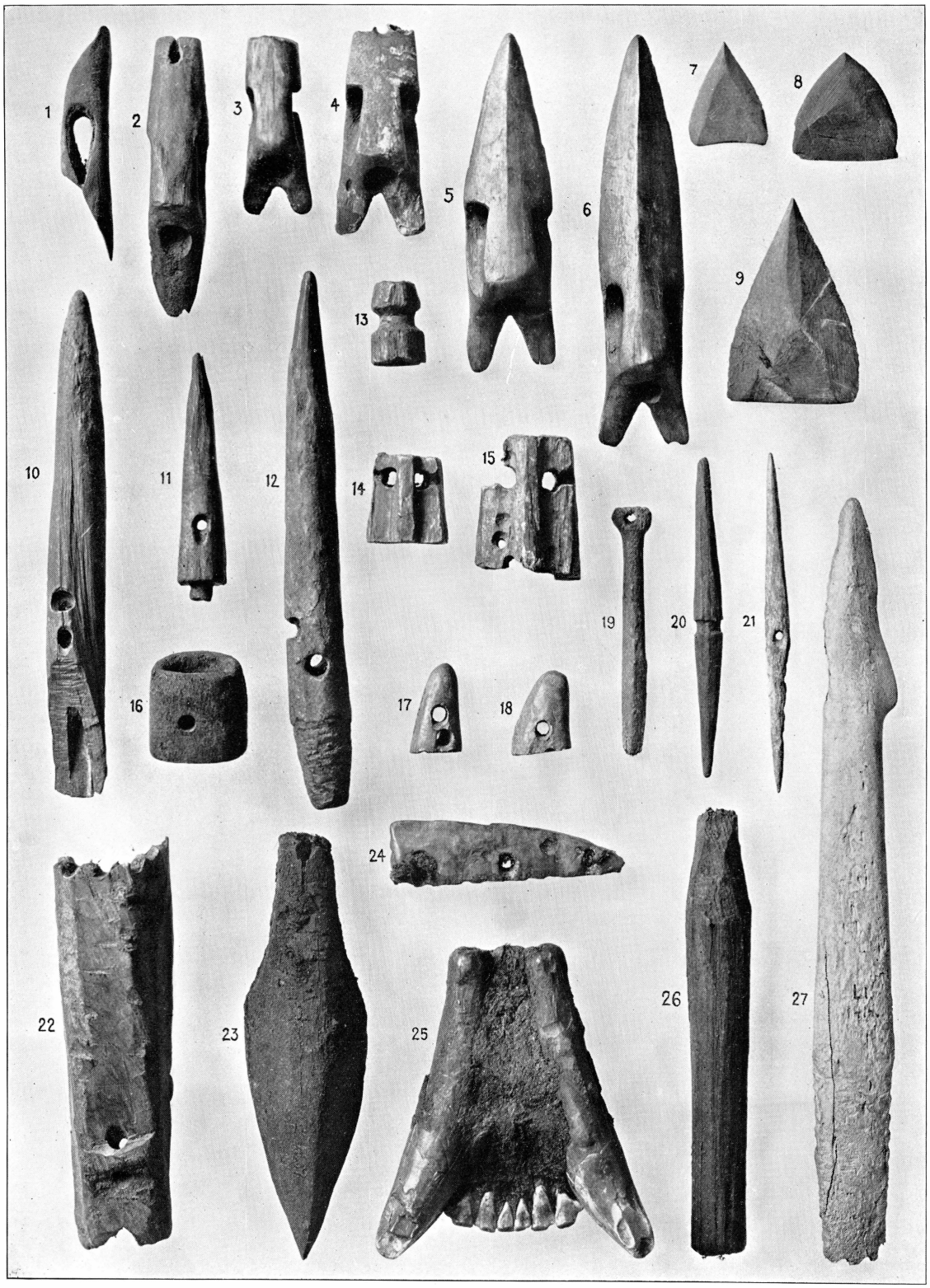


1:1.

Plate 11.

(Mixed Culture, Second Stage.)

1.	Harpoon head	2647	III	House	7
2.	—	1387	I	—	5
3.	—	2527	III	—	7
4.	—	2673	III	—	7
5.	—	3227	III	—	22
6.	—	1508	I	—	6
7.	Harpoon blade	1193		A 2[2]	
8.	—	3295	III	House	22
9.	—	2665	III	—	7
10.	Foreshaft	1043		A 1[1]	
11.	Toy foreshaft	1197		B 1[1]	
12.	Foreshaft	1519	I	House	6
13.	Mouthpiece for harpoon bladder	2548	III	—	7
14.	Block for winged harpoon	1199		B 1[1]	
15.	— - — —	1200		—	
16.	Shaft mounting	1527	I	House	6
17.	Finger rest	1068	II	—	1
18.	—	1067	II	—	1
19.	Wound pin	2675	III	—	7
20.	Gorge	2594	III	—	7
21.	—	1133	II	—	1
22.	Butt of foreshaft	2531	III	—	7
23.	Ice pick	2534	III	—	7
24.	Implement of unknown use	1543	I	—	6
25.	Seal scratcher	2551	III	—	7
26.	Leg of sealing stool	2600	III	—	7
27.	Weapon head	1414	I	—	5



3:5

Plate 12.

(Mixed Culture, Second Stage.)

1.	Bow	2582	III	House	7
2.	Arrow head	1923	II	—	7
3.	—	3233	III	—	22
4.	—	1529	I	—	6
5.	—	1411	I	—	5
6.	—	2536	III	—	7
7.	—	1412	I	—	5
8.	Toggle for sledge draught line	1932	II	—	7
9.	Sledge shoe	1055		A 2^1	
10.	Trace buckle	1417	I	House	5
11.	—	1085	II	—	1
12.	Adze blade	1239		A 1^3	
13.	Adze head	1042		A 1^1	
14.	Bow brace	1535	I	House	6
15.	Cutting board for arrow feathers	2593	III	—	7
16.	Knife handle	1365	I	—	5
17.	—	1551	I	—	6
18.	—	3249	III	—	22
19.	—	2547	III	—	7
20.	Knife blade	1278		A 3^3	
21.	—	1582	I	House	6

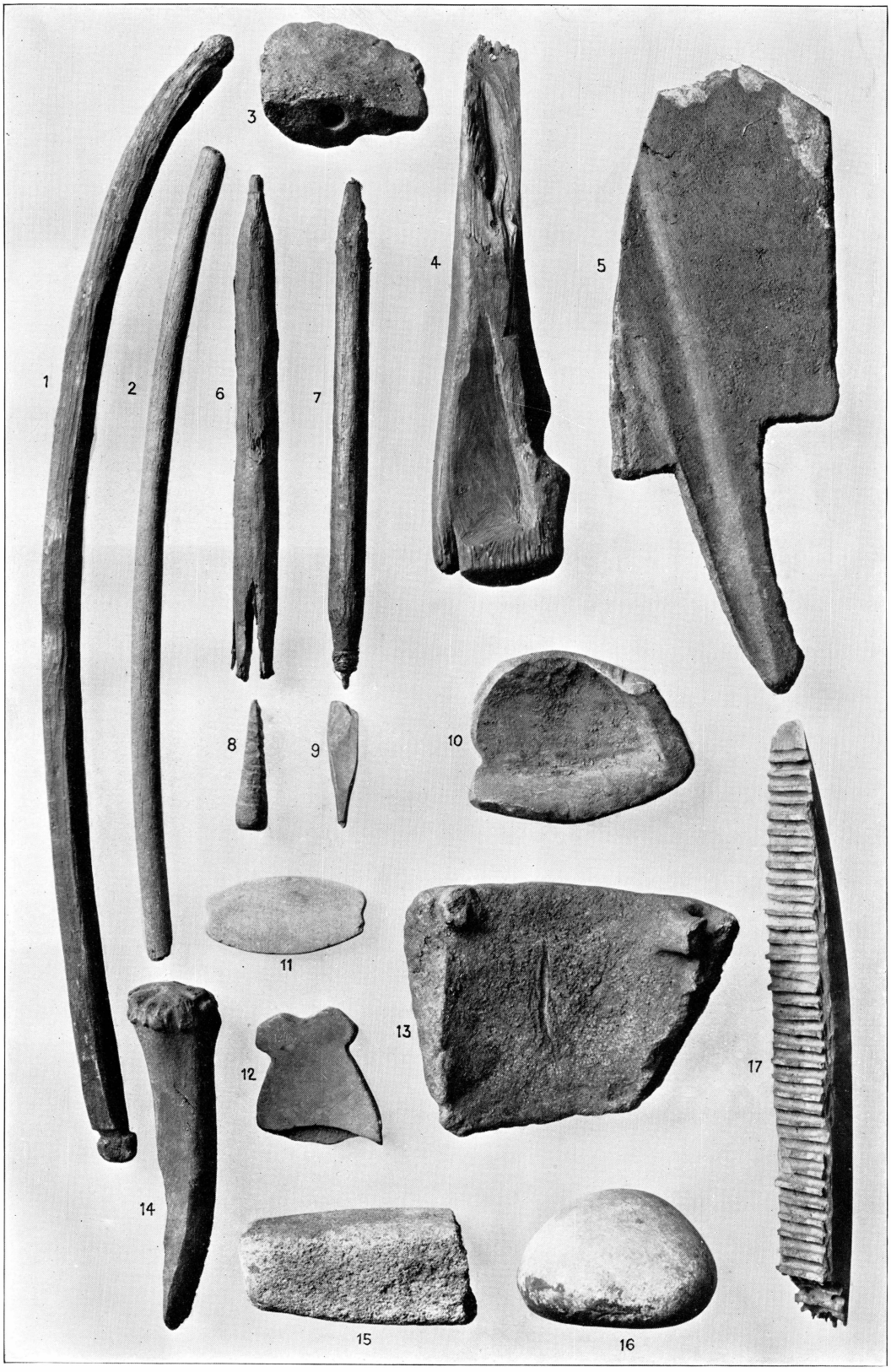


1:2.

Plate 13.

(Mixed Culture, Second Stage.)

1.	Drill bow	1389	I	House	5
2.	—	1419	I	—	5
3.	Mouthpiece of bow drill	2572	III	—	7
4.	"Sling handle"	3251	III	—	22
5.	Snow knife	2537	III	—	7
6.	Drill shank	2584	III	—	7
7.	Drill	2583	III	—	7
8.	Drill bit holder	1361	I	—	5
9.	Drill bit	2664	III	—	7
10.	Toy lamp	1116	II	—	1
11.	Whetstone	1916	II	—	4
12.	—	1248		A 3^1	
13.	Cooking pot sherd	3293	III	House	22
14.	Wedge	1418	I	—	5
15.	Whetstone	1237		A 1^3	
16.	Hammer stone	1064		A 2^1	
17.	Drilled walrus ivory	1594	I	House	6

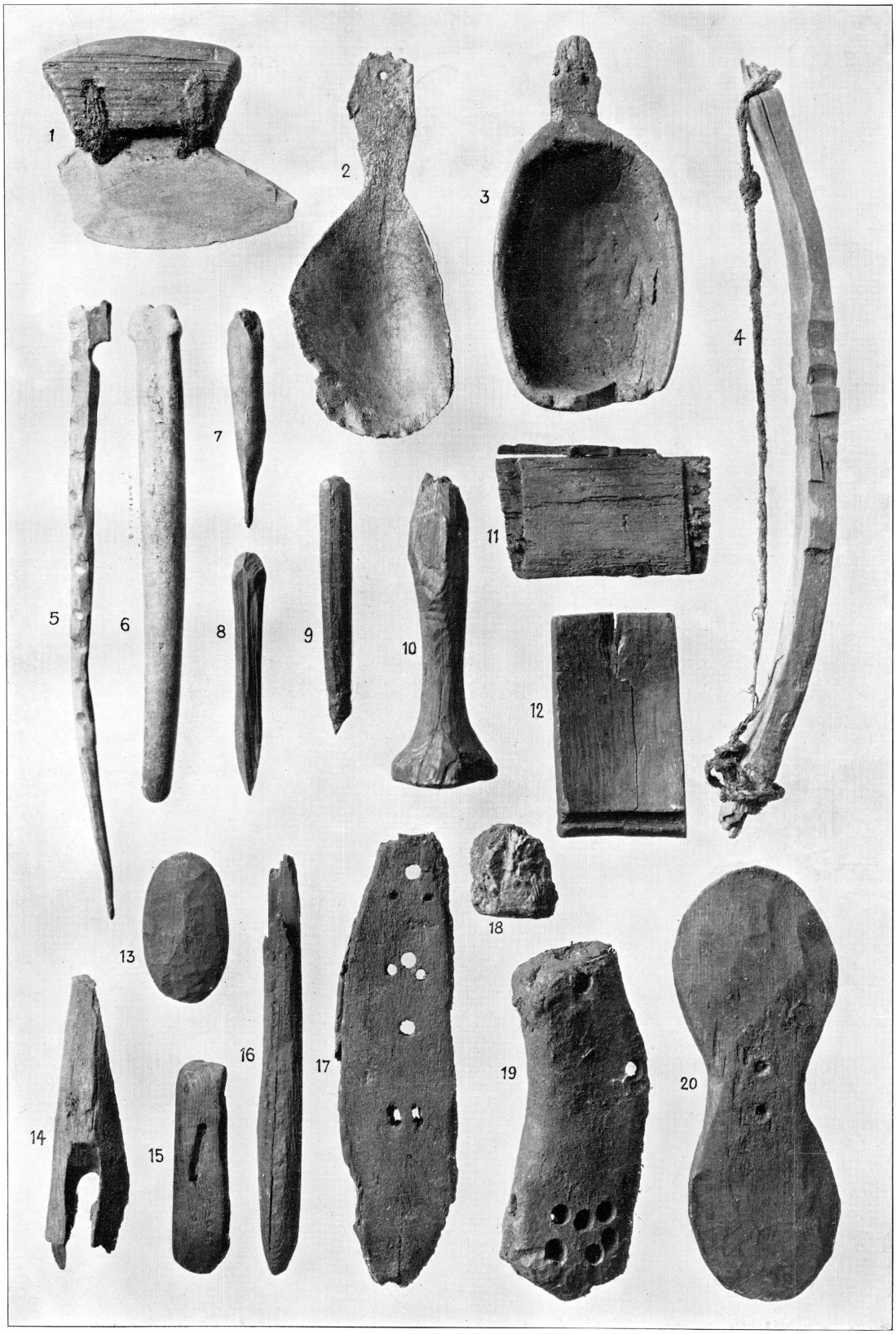


2:5.

Plate 14.

(Mixed Culture, Second Stage.)

1.	Ulo	1928	II	House	7
2.	Spoon	1471	I	—	5
3.	Scoop	1428	I	—	5
4.	Toy bow	1536	I	—	6
5.	Meat stick	2550	III	—	7
6.	Implement of unknown use	1937	II	—	7
7.	Bodkin	1425	I	—	5
8.	Wooden stick, pointed	1567	I	—	6
9.	Hand drill	2587	III	—	7
10.	Handle of scoop	2595	III	—	7
11.	Side of wooden box	2629	III	—	7
12.	Stave of coopered vessel	1550	I	—	6
13.	Oval wooden button for harpoon bladder	1390	I	—	5
14.	Fire-drilling hearth	2633	III	—	7
15.	Lamp trimmer	1383	I	—	5
16.	—	1597	I	—	6
17.	Ornamental plate	1473	I	—	6
18.	Pyrites	2663	III	—	7
19.	Ajagaq	2549	III	—	7
20.	Buzz	2614	III	—	7

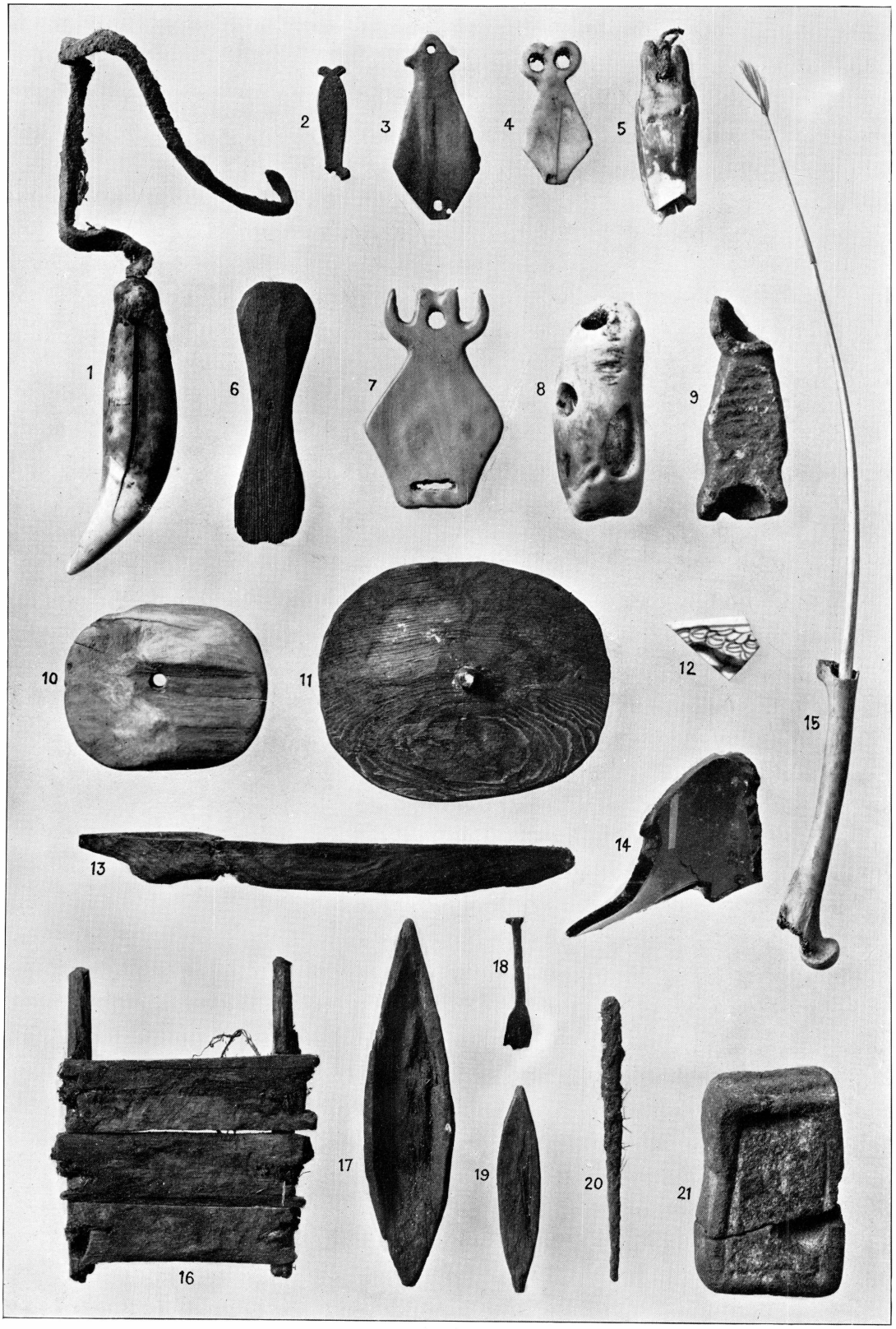


1:2.

Table 15.

(Mixed Culture, Second Stage.)

1.	Bear tooth with seal thong	1422	I	House	5
2.	Pendant	1558	I	—	6
3.	Ornamental plate	3258	III	—	22
4.	—	2558	III	—	7
5.	Musk ox tooth	3257	III	—	22
6.	Buzz	1146	II	—	1
7.	Ornamental plate	1140	II	—	1
8.	Nuglutang?	2552	III	—	7
9.	Implement of unknown use, stone	1455	I	—	5
10.	Top disk	1088	II	—	1
11.	Top	1560	I	—	6
12.	Porcelain sherd	2661	III	—	7
13.	Toy umiak	3292	III	—	22
14.	Broken bottle glass	3300	III	—	22
15.	Toy weapon (?)	1366	I	—	5
16.	Toy sledge	2619	III	—	7
17.	— umiak	1141	II	—	1
18.	— umiak paddle?	1940	II	—	7
19.	— kayak	1142	II	—	1
20.	Iron nail	2662	III	—	7
21.	Unfinished toy cooking pot (?)	3294	III	—	22

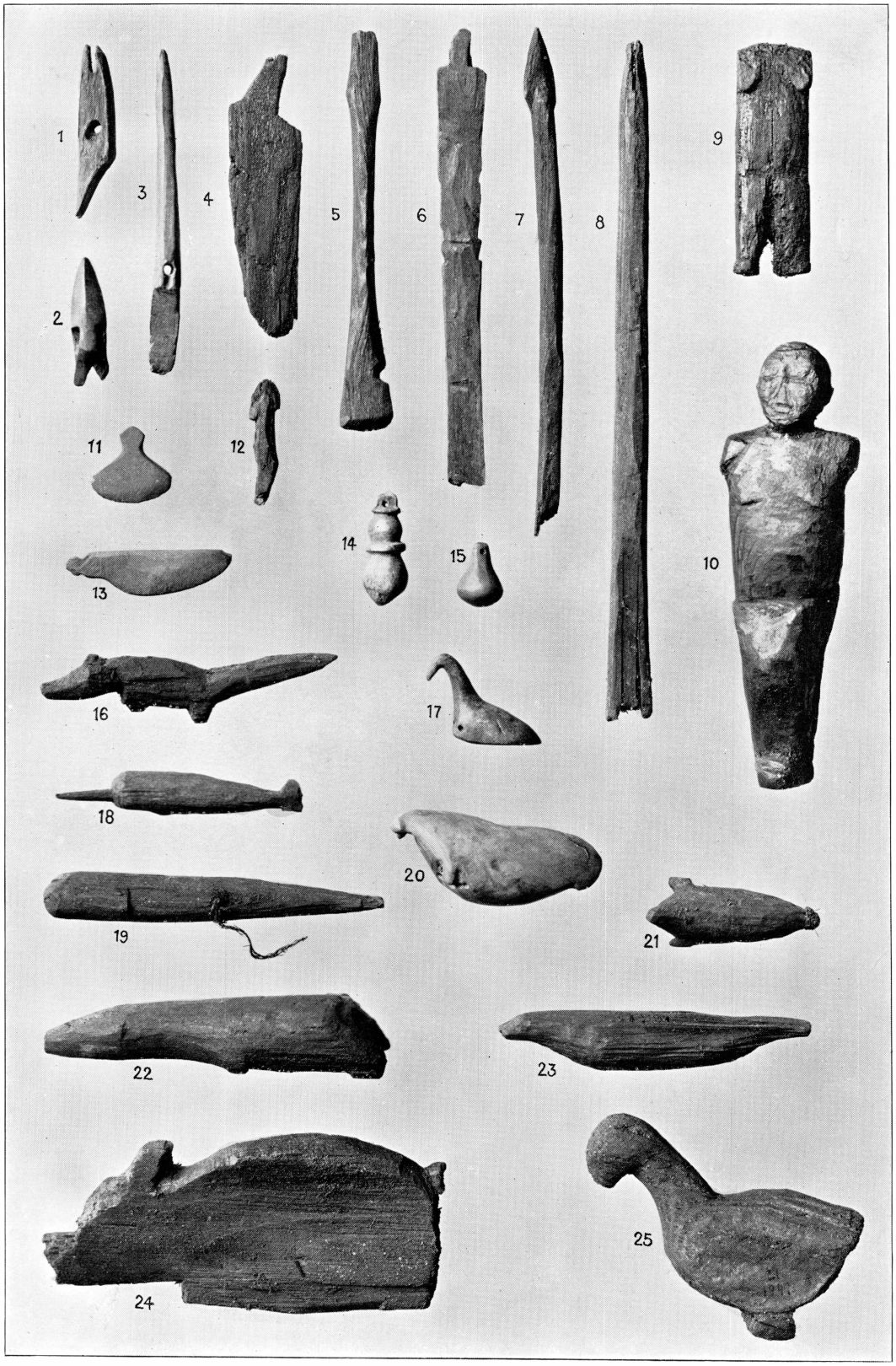


2:3.

Table 16.

(Mixed Culture, Second Stage.)

1.	Toy harpoon head	1408	I	House	5
2.	— — —	1514	I	—	6
3.	— — foreshaft	1921	II	—	7
4.	— snow knife	1476	I	—	6
5.	— "sling handle"	3283	III	—	22
6.	— bow	1952	II	—	7
7.	— arrow	1434	I	—	5
8.	— —	3286	III	—	22
9.	Doll	1437	I	—	5
10.	—	2604	III	—	7
11.	Toy ulo	1127	II	—	1
12.	— side prong for bird dart	1926	II	—	7
13.	— knife	1179		A 1^2	
14.	Drop pendant	1226		A 1^3	
15.	—	2560	III	House	7
16.	Fox figure	3269	III	—	22
17.	Bird figure	2564	III	—	7
18.	Narwhal figure	3264	III	—	22
19.	—	2610	III	—	7
20.	Walrus figure	3260	III	—	22
21.	Figure of harpoon bladder	2612	III	—	7
22.	Bear figure	3262	III	—	22
23.	Seal figure	1144	II	—	1
24.	Hare (?) figure	3270	III	—	22
25.	Bird figure	1947	II	—	7

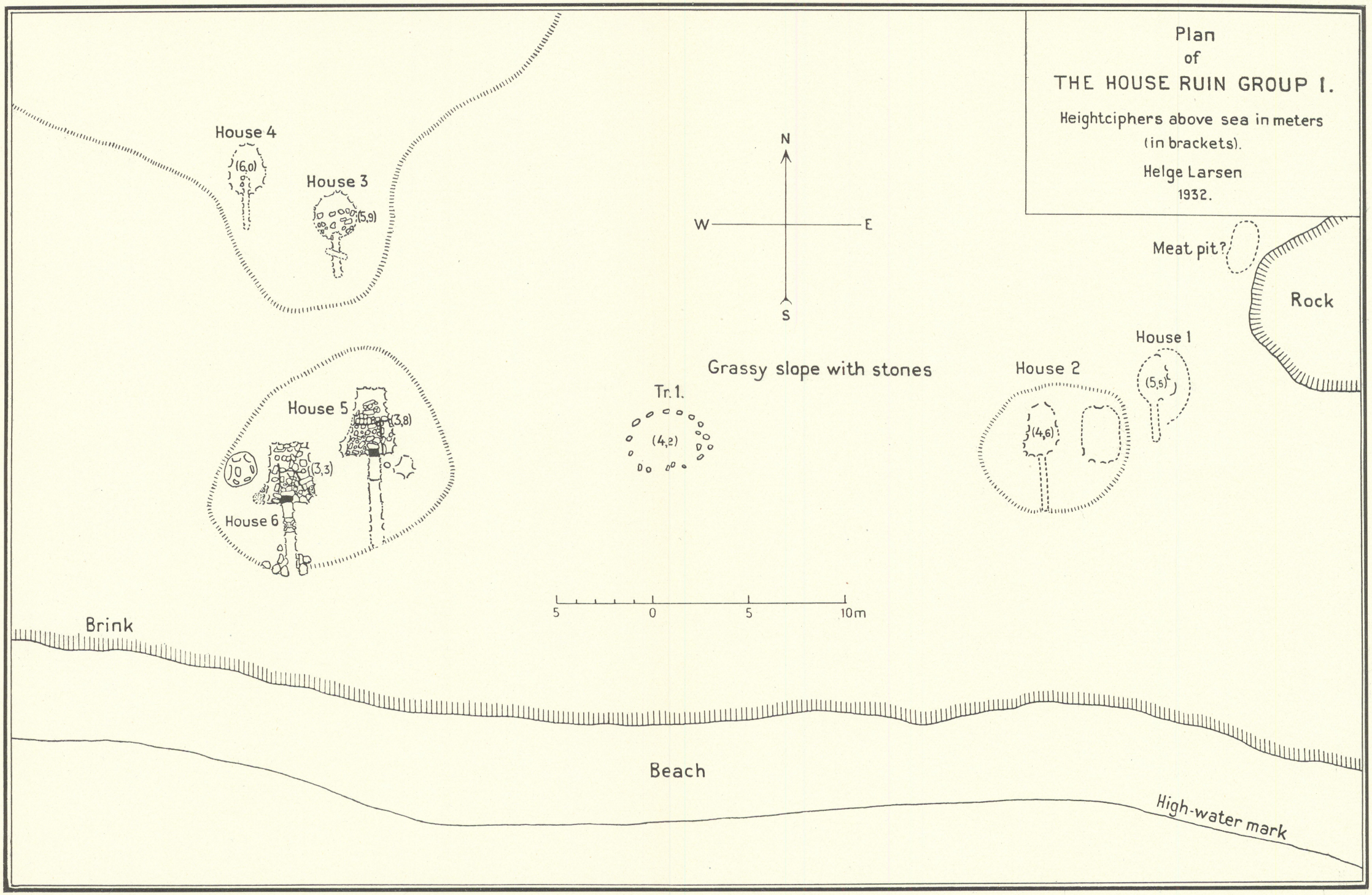


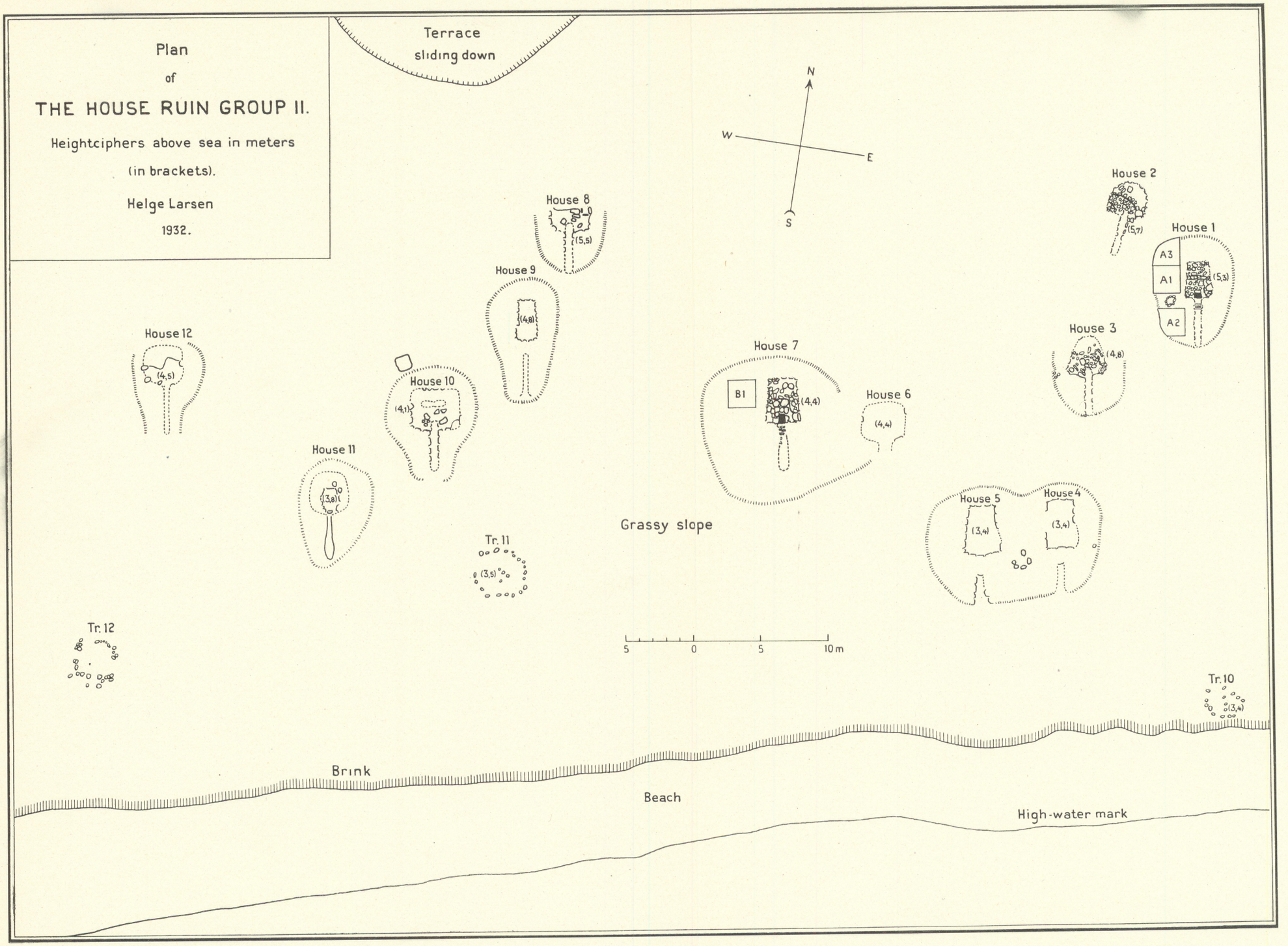
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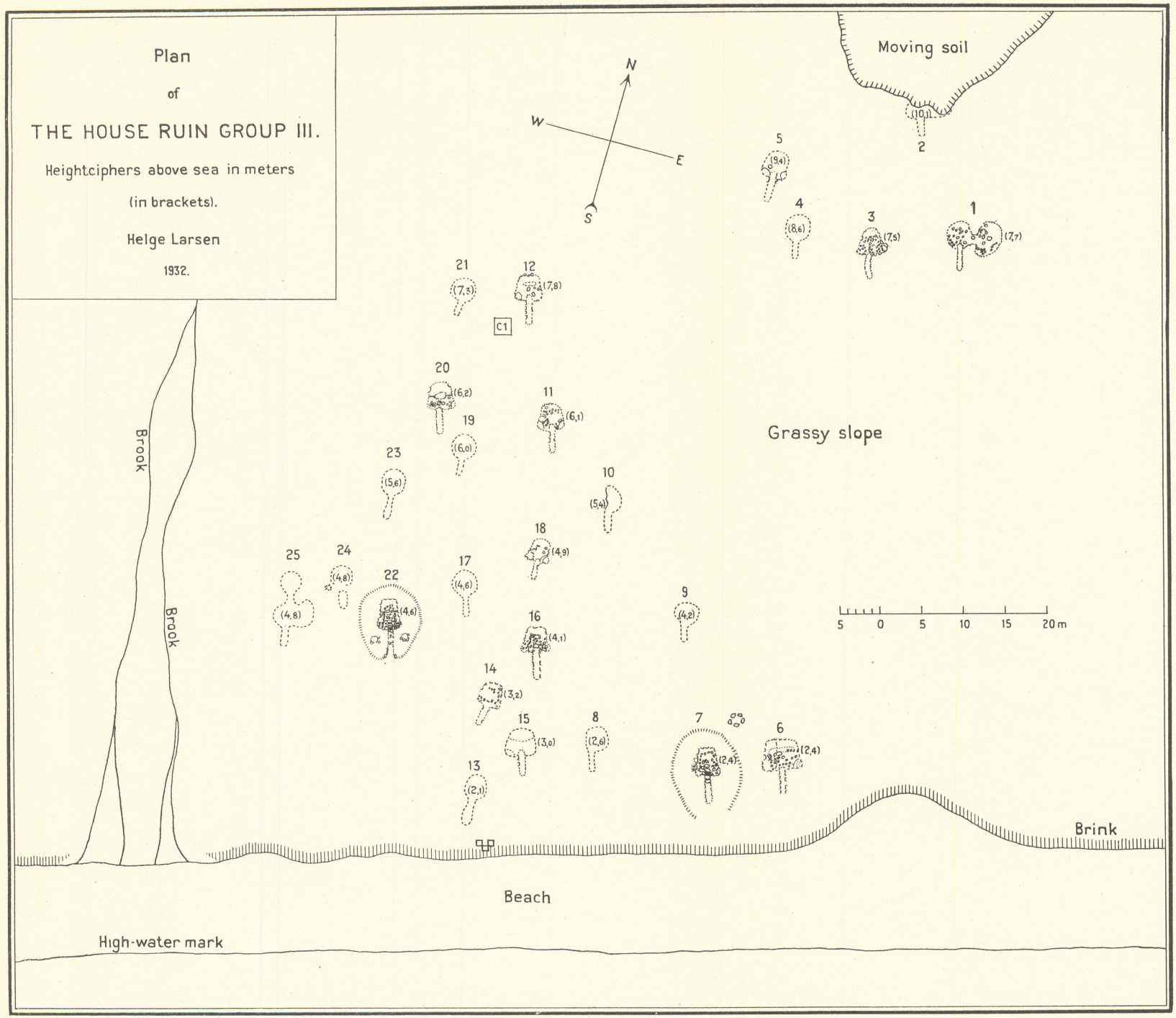
Plan
of
THE HOUSE RUIN GROUP I.

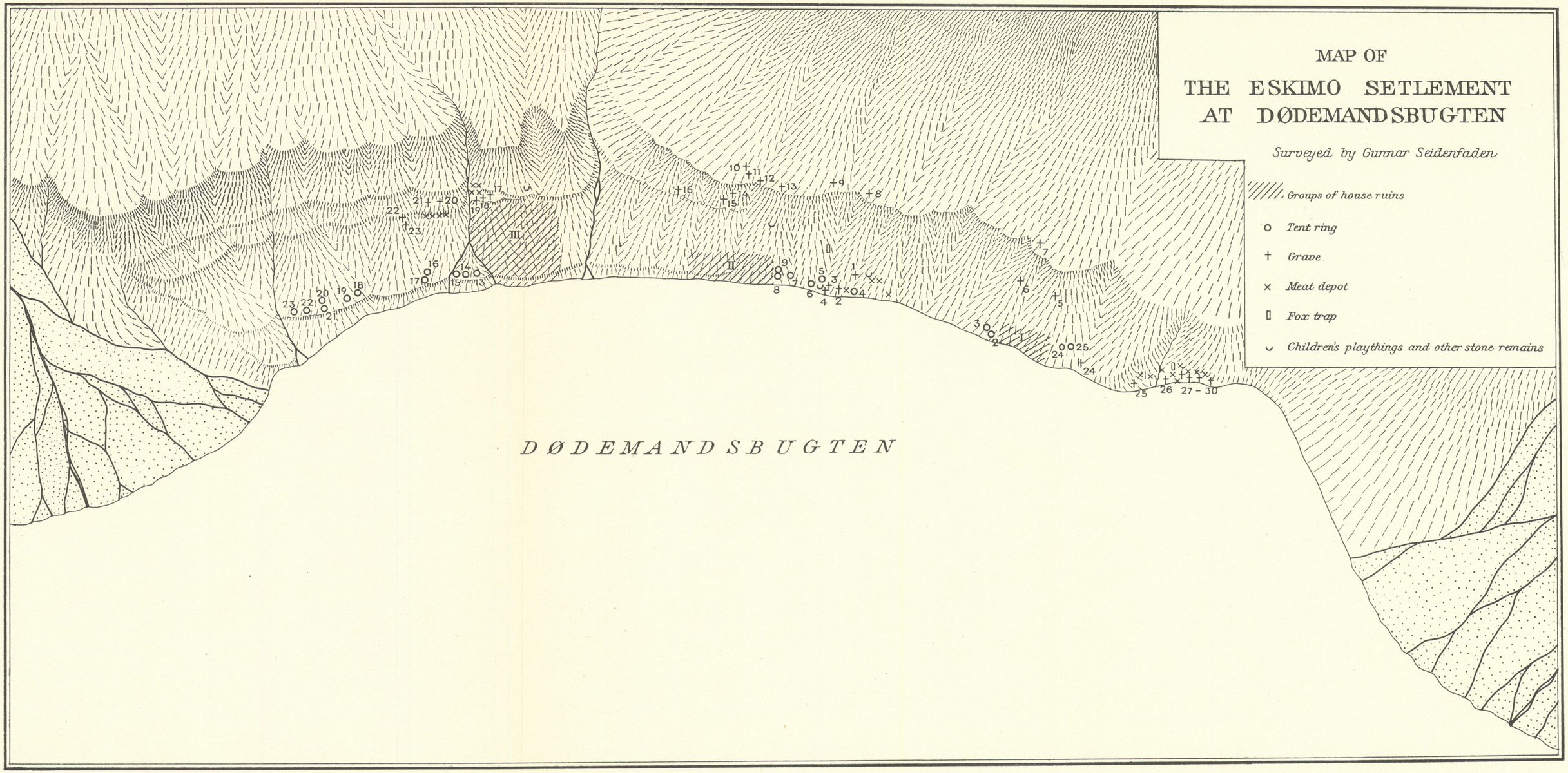
Heightciphers above sea in meters
(in brackets).

Helge Larsen
1932.




Plan
of
THE HOUSE RUIN GROUP II.
Heightciphers above sea in meters
(in brackets).
Helge Larsen
1932.
Terrace
sliding down
N
W
E
S
House 2
(5,7)
House 1
A3
A1
A2
(5,3)
House 8
(5,5)
House 9
(4,8)
House 12
(4,5)
House 10
(4,1)
House 11
(3,8)
House 7
B1
(4,4)
House 6
(4,4)
House 3
(4,8)
Grassy slope
House 5
(3,4)
House 4
(3,4)
Tr. 11
(3,5)
Tr. 12
5 0 5 10 m
Tr. 10
(3,4)
Brink
Beach
High-water mark


Plan
of
THE HOUSE RUIN GROUP III.
Heightciphers above sea in meters
(in brackets).
Helge Larsen
1932.
N
W
E
S
Moving soil
(10,1)
2
5
(9,4)
4
(8,6)
3
(7,5)
1
(7,7)
21
(7,3)
12
(7,8)
C1
20
(6,2)
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(6,1)
19
(6,0)
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(5,6)
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(3,0)
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(2,6)
7
(2,4)
6
(2,4)
13
(2,1)
Brook
Brook
Grassy slope
5 0 5 10 15 20 m
Brink
Beach
High-water mark


MAP OF
THE ESKIMO SETLEMENT
AT DØDEMANDSBUGTEN
Surveyed by Gunnar Seidenfaden
Groups of house ruins
Tent ring
Grave
Meat depot
Fox trap
Children's playthings and other stone remains
DØDEMANDSBUGTEN
I
II
III
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 - 30