MEDDELELSER OM GRØNLAND
UDGIVNE AF
KOMMISSIONEN FOR VIDENSKABELIGE UNDERSØGELSER I GRØNLAND
Bd. 161 · Nr. 3

THE SERMERMIUT EXCAVATIONS 1955

BY

THERKEL MATHIASSEN

WITH 14 FIGURES IN THE TEXT

KØBENHAVN
C. A. REITZELS FORLAG
BIANCO LUNOS BOGTRYKKERI A/S
1958

I. INTRODUCTION

In 1953 Dr. HELGE LARSEN, Professor P.V. GLOB, Ph.D., Messrs. JØRGEN MELDGAARD, M.A., and GEORGE NELLEMANN were members of an archaeological expedition to Disko Bugt for the purpose of procuring more information about the "palaeeskimo" culture[1]) which had been discovered by Mr. HANS MOSEGAARD in 1948 at Sarqaq and described by MELDGAARD[2]). While LARSEN and GLOB reconnoitered quite a number of ancient Eskimo settlements in Disko Bugt and found "palaeeskimo" stone implements at some of them, MELDGAARD and NELLEMANN made a small excavation at the settlement of Sermermiut, near Jakobshavn, where they succeeded in unearthing two strata containing "palaeeskimo" stone artefacts under the large midden which dates from the "neoeskimo" Inugsuk culture, separated from the latter and from each other by sterile strata; the lower deposit contained objects of Sarqaq type, whereas the upper one proved to be very similar to the Canadian Dorset culture[3]). This was a discovery of far-reaching importance, for it was the first time that these two culture phases had been found in stratigraphically definite positions. Consequently it was natural to amplify the results by making a larger excavation at this settlement, combined with a botanical-geological study of the conditions there.

Thanks to a grant from the Greenland Department this was made possible in the summer of 1955. Apart from myself, those taking part in the expedition were Professor ERIK HOLTVED, Ph.D., Dr. J. TROELS-SMITH, who is the head of the National Museum's bog laboratory, together with his colleague SVEND JØRGENSEN; then Miss INGE PARBØL, a Danish student, and two English students PETER WORDIE, B.A., and ALICK SHERRIFF. We sailed on the "Disko" on June 19th and returned

[1]) I am no lover of the term "palaeeskimo" or "paleoeskimo"; to me it is a concept more in the nature of a "lumber-room" for disposing of everything earlier than the Thule Culture ("The Arctic Whaler Culture") and comprising a number of culture groups (Dorset, Sarqaq, Caribou Eskimos, Ipiutak, Cook Inlet, Denbigh(?)) which are widely separate chronologically and spatially and which often have very little to do with one another.

[2]) MELDGAARD 1952.

[3]) LARSEN and MELDGAARD 1957.

on the "Umanak" on September 2nd, though HOLTVED and Miss PARBØL remained there for a time for the purpose of making ethnological studies in Disko Bugt and Holsteinsborg. Conditions at Sermermiut being most unsuitable for camping on account of the marshy ground we put up at Jakobshavn and walked the three kilometres to and from Sermermiut every day.

It was a particularly bad summer in Disko Bugt that year, with incessant rain, fog and cold, which explains why we were unable to accomplish more in those six weeks, even with our fairly big team assisted by two Greenland labourers; the frozen soil thawed very slowly, and in the last week of August when we had a few clear days with sunshine, night frosts set in. The one advantage of this cold weather was that the mosquitoes were not quite so numerous as usual at Sermermiut.

In addition to my admirable fellow travellers I wish to thank the head of the Greenland Department, ESKE BRUN, for the financial aid; the National Museum director JOHANNES BRØNDSTED who gave me leave of absence from my post as head of the National Museum's Department of Antiquity; and HANS JACOBI, the colony manager at Jakobshavn, who lent us both advice and assistance.

The photographs of the landscape and sections were taken by J. TROELS-SMITH and of the artefacts by LENNART LARSEN, the National Museum's photographer. The drawings are by M. E. KNOP and the English translation is by W. E. CALVERT.

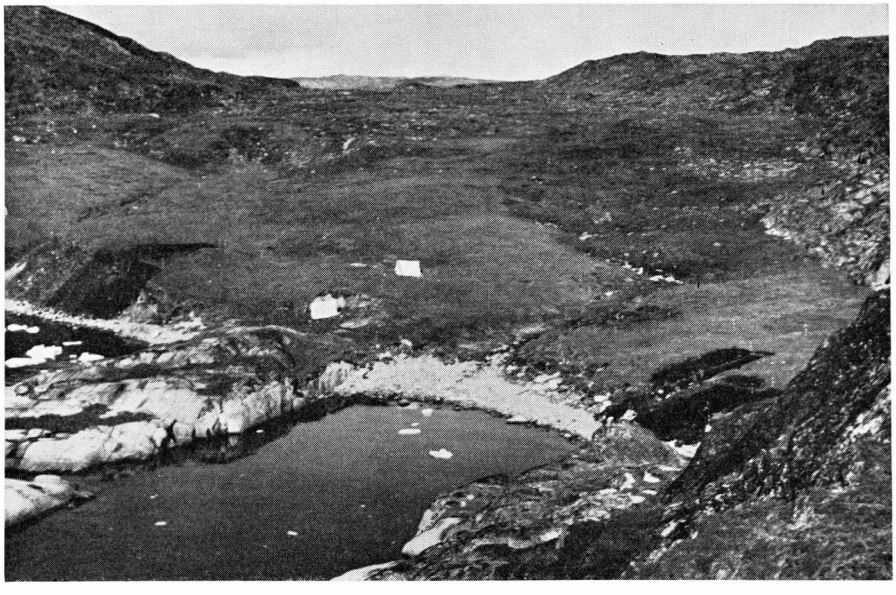

Fig. 1. The Sermermiut settlement, from the southwest. On the left of the tents is Main Area A with the cliff-side section and the transverse trench. On the right of the tents, extreme right by the shore is Main Area B; more in the background south of the gully is Main Area C (where not much excavation had been done when the picture was taken).

II. THE SERMERMIUT SETTLEMENT

The large old Eskimo settlement known as Sermermiut at Jakobshavn in Jakobshavns Isfjord, perhaps the largest in West Greenland, figures frequently in the literature. I was also at the locality in 1933 in the course of my archaeological investigations in Disko Bugt[1]), but made no excavations there, though Sermermiut was inviting enough. As stated at the time, the reason was that M. P. Porsild, M.A., had been digging there for several years and had accumulated a large material, which was to be published. As it happened, however, it never got that far. The latest description of the settlement is contained in Larsen and Meldgaard's report, so there is no need to describe it again here; it would have been of advantage if the whole locality had been accurately mapped and surveyed, but time was too short for that; we had to concentrate on the excavation.

I might just repeat that the settlement lies at the mouth of a broad valley debouching into a small bay, which is separated from Jakobshavns Isfjord merely by a rocky point. Two deep gullies divide the

[1]) Mathiassen 1934, p. 19.

settlement into three parts, and from the southern part of the middle section a small rocky headland juts into the bay (fig. 1). To the north of this headland the ground rises steeply from the stony beach, a rather thick deposit of morainic gravel being surmounted by a deep midden from the settlement. On both sides of the gully to the north there are over a score of house ruins, chiefly dating from the final habitation in the first half of the 19th century; but they are in a state of total collapse and thickly overgrown with grass and moss which cover the entire settlement. Down at the beach this section of the settlement ends in a two or three metres high brink of midden. Large parts of that midden, and doubtless several house ruins too, must have been washed into the sea. The reasons are two—the submergence of the land that is still proceeding in West Greenland, and the special circumstance of the big waves that are set up whenever the icebergs outside calve or when the glacier in the fjord is producing.

There are no ruins to be seen south of the southern gully; the ground is lower, very flat, marshy, and has a drop of only about one metre at the beach.

Excavations were made at three places, Main Areas A, B and C, their situations being shown on fig. 1, which is a picture of the settlement seen from the southwest: A lies between the two gullies in prolongation of Meldgaard's Profile A; B runs along the beach south of the southern gully, continuing Meldgaard's Profile B, and C is located a short distance up the south side of the southern gully.

Main Area A comprises 1: *the cliff-side profile*, a strip of the midden 19.5 m long by 1.5 m wide along the brink at the beach in prolongation of Meldgaard's Profile A, and 2: the *transverse trench*, a ditch 19 m long by 2 m wide at right angles to the cliff-side profile, 12—14 metres from its south end.

At the cliff-side profile we first dug off a half-metre strip, thereby forming a vertical section wall which was subjected to a highly detailed survey by TROELS-SMITH after it had been scraped clean. Another metre was then dug off right along the section wall; here and there, however, in the upper part of the midden this was not possible because of the frozen soil. In the cliff-side profile measurements in three dimensions were taken of all shaped objects and all pieces of stone waste; in the upper part of the midden, however, this does not apply to all shaped sticks of wood or to the innumerable animal bones and unworked strips of baleen. The purpose of this detailed survey was to make it possible to draw a complete section along the entire length of the excavation with all the artefacts shown in position, in order to provide an exact picture of the occurrence of the various artefact types in the different layers.

Of the *transverse trench* MELDGAARD had succeeded in excavating the uppermost 7 metres, but he was nowhere near the bottom. The trench was prolonged to 19 metres, and the excavation everywhere reached the substratum. There only a few of the more important objects were plotted in, the remainder being excavated layer by layer in square-metre areas. The thickness of the excavation layers at first was 10 cm, but when the frozen levels were reached they had to be confined to each day's thaw, often no more than a centimetre or two. At the close of the excavations a rough survey was made of the north wall, time being too short to permit of going into details.

Excavations in Main Area A covered 67 sq.metres.

In *Main Area B*, whose northern boundary lies 100 metres to the south of the south end of the cliff-side profile, two excavations were made: a trench 13×2 m at right angles to the beach, and, two metres to the south of this, an oblong area of 6×8 m, both in prolongation of Meldgaard's excavations; because of the latter and the irregular border towards the beach this southern area comprised no more than 41 sq.m, making the excavated total in Main Area B 67 sq.m. On account of the slow thawing of the boggy layer it was not possible to reach the bottom everywhere, especially in the eastern part of the area.

Main Area C, along the south side of the gully, within the same area as B, was just to the west of an elevation in the ground, possibly the remains of a house. The northwest corner of this area was 71 m south of the south end of the cliff-side profile and 26 m east of the latter's 0-line (Meldgaard's A section). Main Area C was a rectangle 6×5 m, but owing to the irregularity of the side to the gully the excavated area was no more than 24 sq.m. Here the bottom was reached everywhere, the thickness of the deposit being less than in B.

The stratigraphy at Sermermiut.

A close examination of the stratigraphy at the settlement was one of the principal objects of the excavation. In order to clarify the situation the bog-geologists TROELS-SMITH and SVEND JØRGENSEN made a highly detailed survey of three sections showing the positions of the artefacts found. Characteristic parts of these sections are shown in figs. 2—5.

Conditions were clearest south of the southern gully, in Main Areas B and C, where there has been no recent habitation. As our starting point we take the section shown in fig. 2, a length, about 2 metres, of the north wall of Main Area B, the lower part of the long trench. Fig. 3 is a photograph of the same section. The thickness of the layers there varies

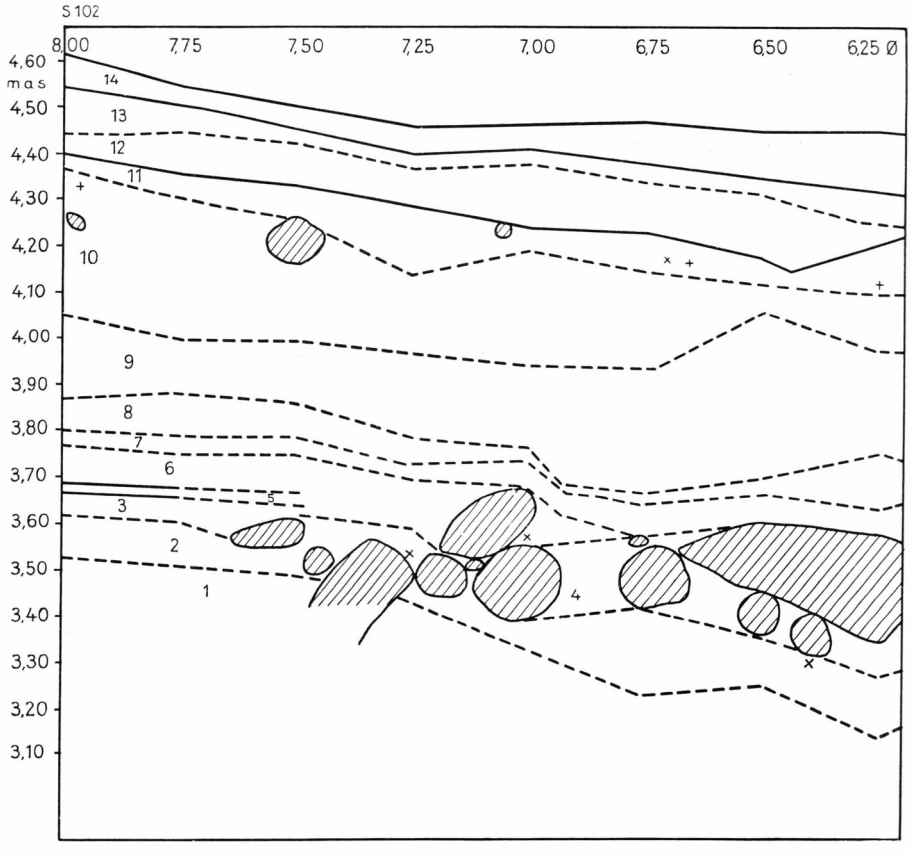

Fig. 2. Main Area B. Section along the north wall. The figures above indicate the distance (in metres) from the main line (the cliff-side section's 0-line); the figures on the left are the height above sea level.
The explanation of the symbols applies to all three sections (see fig. 5).

from 1.1 to 1.3 m. The sequence given below is from the bottom upwards:

1. Very stony gravel with a slight iron content.
2. Stony, humous sand. Uppermost in this layer are chips of angmaq[1]).
3. Highly humified peat, clayey and sandy, with charcoal fragments as well as implements and chips of angmaq.
4. Sandy and clayey, slightly humified peat with rhizomes.
5. Slightly clayey sand.
6. Moderately humified peat with rhizomes and moss leaves, very slightly clayey.
7. Slightly humified peat with few small wooden sticks and very little clay.
8. Slightly humified peat with several sticks.
9. Light-brown moss-peat, slightly humified, with few woody roots.

[1]) This is the common term for the siliceous schist formerly in general use in Greenland for implements.

Fig. 3. Photograph of the same section as fig. 2. The Dorset deposit is visible from white stone chips high up in the stratum; the Sarqaq deposit is near the bottom.

10. Blackish-brown, slightly humified peat consisting of matted roots, uppermost with flakes of chalcedony and angmaq.
11. Leafy, greyish-yellow, moderately humified matted root-peat with cultural remains, implements and chips of chalcedony and angmaq.
12. Pale brown moss-peat, slightly humified, with few woody roots.
13. Leafy, greyish-yellow matted root-peat, somewhat less humified than 11.
14. Recent moss-peat.

It will be seen that there are two separate culture deposits, one down in layers 2—3, chiefly with angmaq chips, and an upper one in layer 11 and upper 10, mostly containing chips of chalcedony but also with some angmaq. The intermediate layers 5—9 and the overlying 12—14 are sterile. This proves definitively that there have been two habitation periods, separated by some time in which there was no settlement in the locality, and both periods are marked by the presence of stone objects. It also shows that there was no habitation on the spot in the Middle Ages (the Inugsuk Culture) or later, the periods that formed much the greater part of the large midden which ends at the cliff-side section. A discussion on these layers and their correlation with possible climatic fluctuations will be published by the bog-geologists when the pollen material has been analysed. The same applies to the other sections.

Fig. 4 is a section, $2^1/_2$ m long, in the south wall of *Main Area C.* Here the thickness of the layers is slightly less, between 0.5 and 0.8 m.

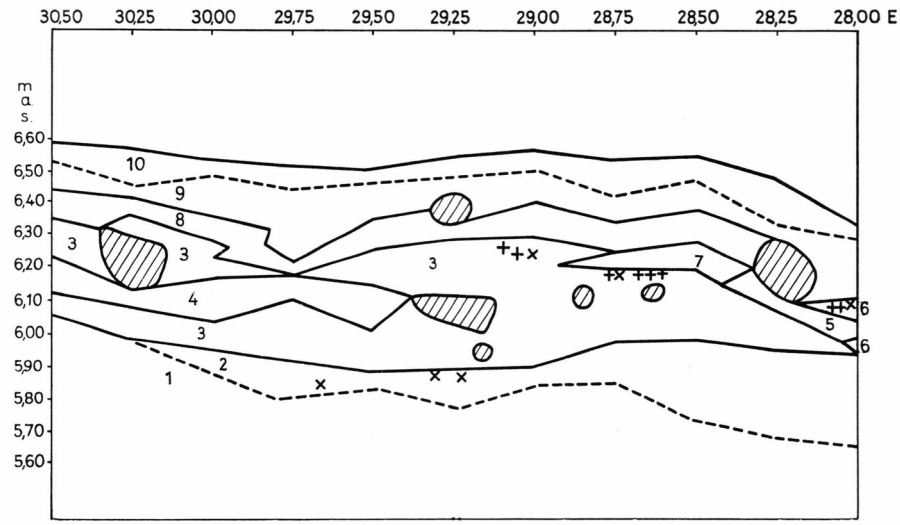

Fig. 4. Main Area C. Section along the south wall. The figures above are the distance east of the 0-line, the figures along the side the height above sea level.

The stratigraphical sequence, from the bottom upwards, is as shown below:

1. Very stony gravel.
2. Stony, humous sand with implements and angmaq chips.
3. Pale brown, matted peat, uppermost with artefacts and chips of chalcedony and angmaq.
4. Sandy peat, pale, brownish-yellow, matted.
5. Greyish-white, clayey sand.
6. Sandy peat, pale, brownish-yellow, matted, uppermost with chips of chalcedony and angmaq.
7. Moss-peat, whitish-yellow, matted.
8. Greyish white, clayey sand.
9. Sub-recent peat, whitish-yellow-greyish, matted, with scattered sand grains.
10. Recent marshy white-greenish moss.

This section too has two quite separate culture deposits with stone objects: the lower one, in 2, exclusively with angmaq artefacts, the upper one, uppermost in 3 and 6, also with chalcedony. They are separated by sterile layers comprising the greater part of 3, 4 and 5 and they are overlain by the sterile layers 7—10. Here again there is no sign of later habitation.

Cliff-side section, Main Area A, is of quite a different character and much more complicated. When this section, $19^1/_2$ metres long and

2—3 metres high, was surveyed in detail it was found that conditions in most places were very confused. This was due to the later Inugsuk people, whose houses were often dug down into the earliest deposits; over large areas these deposits are no longer there, the Inugsuk remains extending right to the bottom. It is nothing uncommon to find lumps of the old layers, or individual artefacts from them, high up in the Inugsuk layers, for one reason because grass tufts from the old strata had been used for the later house-building. Another point is that artefacts corresponding to the chalcedony layer in B—C have only very few representatives in A. Notwithstanding all the work put into the complete survey of the section and the plotting of all the traces of culture, the cliff-side section lends itself but little to stratigraphical study. Only in the south end of the section are matters so clear that reliable stratigraphical conclusions can be drawn from them.

Fig. 5 is a drawing of the southernmost 1.80 metres of this section, where the thickness of the layers varies from 2.0 to 2.6 m. In it are plotted the artefacts found in the section wall itself as well as all those found within 50 cm forward of or behind the wall, these being projected into the wall. As there is so much variation between the strata, these latter objects of course are not placed with such certainty as those found in the section wall itself, for which reason their symbols are given within a circle, whereas those actually in the wall are not encircled. The section is described by the geologists as follows—as usual with the sequence starting from below:

1. Stony gravel.
2. Stony creep-soil with floes of humified peat; chips of angmaq.
3. Stony, humous sand with implements and chips of angmaq.
4. Black, humified peat, clayey and sandy, with implements and chips of angmaq.
5. Dark greyish-brown, humified, leafy, slightly clayey peat with rhizomes.
6. Greyish-yellow or brownish, sandy and clayey peat with rhizomes.
7. Slightly clayey, pearl-grey sand, in some places paler, yellowish, or darker, brownish, and here and there very slightly peaty.
8. Dark greyish-brown, humified, slightly clayey peat, leafy, with rhizomes. Implements and chips of chalcedony and a little angmaq.
9. House-floor layer, yellow-greyish, a concretion of bones, baleen, skin, feathers, blubber and imbedded artefacts of bone, baleen and wood (Inugsuk Culture).
10. Reddish-brown peat, clayey, sandy, leafy.
11. Like 9.
12. Yellowy-brown—dark-brown midden deposit with lumps of peat and a few small stones; uppermost a few angmaq flakes.
13. Like 9.
14. Yellowish-brown—dark-brown midden deposit like 12, with Inugsuk Culture artefacts of bone, baleen, wood and steatite.

15. Peaty deposit, brown-blackish-brown with thin layers of sand and clay; scattered artefacts of bone and wood.
16. Sandy culture deposit, yellowish, with bones, skin, hair, feathers.
17. Like 15; more recent Eskimo and European objects.
18. Humified peat, brownish-yellowish, matted, with bones.
19. Turf, recent.

The earliest stratum, the angmaq layer, as we know it from B and C, is present everywhere here as the bottom deposit, overlying the stony, sterile substratum 1; it occupies layers 2 to 4 inclusive. Separated from it by the sterile layers 5 and 7 we have the chalcedony layer in 8, but the latter occupies no more than slightly less than the south half of the section. In the north half it would seem that an Inugsuk house had been dug down; its floor layer, formed of a sinter of culture remains, forms layers 8 and 11. Then above this in the entire section lie the midden layers 12—14 with Inugsuk culture with a fairly distinct boundary against 8 but with no sterile intermediate deposit. These layers then continue all the way up through the midden; from 17 to 19 it is the more recent artefacts, 18th and 19th century, that characterize them.

Thus the stratigraphy here is clear enough: the earliest is the angmaq layer at the bottom. Separated from it by a sterile layer and overlying the latter we have the chalcedony stratum. That this must be earlier than the compact midden layer 9 lying at the same level, at places even lower, is evident from the fact that all organic culture remains in the chalcedony layer have disappeared. Overlying the chalcedony layer are thick midden layers, first from the mediaeval Inugsuk Culture with its many baleens, subsequently with objects of the later West Greenland Culture with its touches of European influence. In this part of the cliff-side section the two ancient culture horizons and the intermediate layer occupy only the lower 25 cm of the entire layer thickness of 2 m. And it is only along a stretch of 0.75 m out of the whole $19^1/_2$ m of the section that the chalcedony deposit appears as a separate horizon sharply divided from the other layers. Nevertheless, this spot is of the highest stratigraphic significance in that it displays Sermermiut's four culture deposits in their undisturbed position. The results of the pollen-analytical examination of this section are likely to be of great interest.

In the *transverse trench* in Main Area A the conditions are no less disturbed than in the cliff-side section. The thickness of the layers falls from 1.75 m out at the slope to about 1.0 m in the east end of this $19^1/_2$-metre trench. Here again the greater part of the layers belong to

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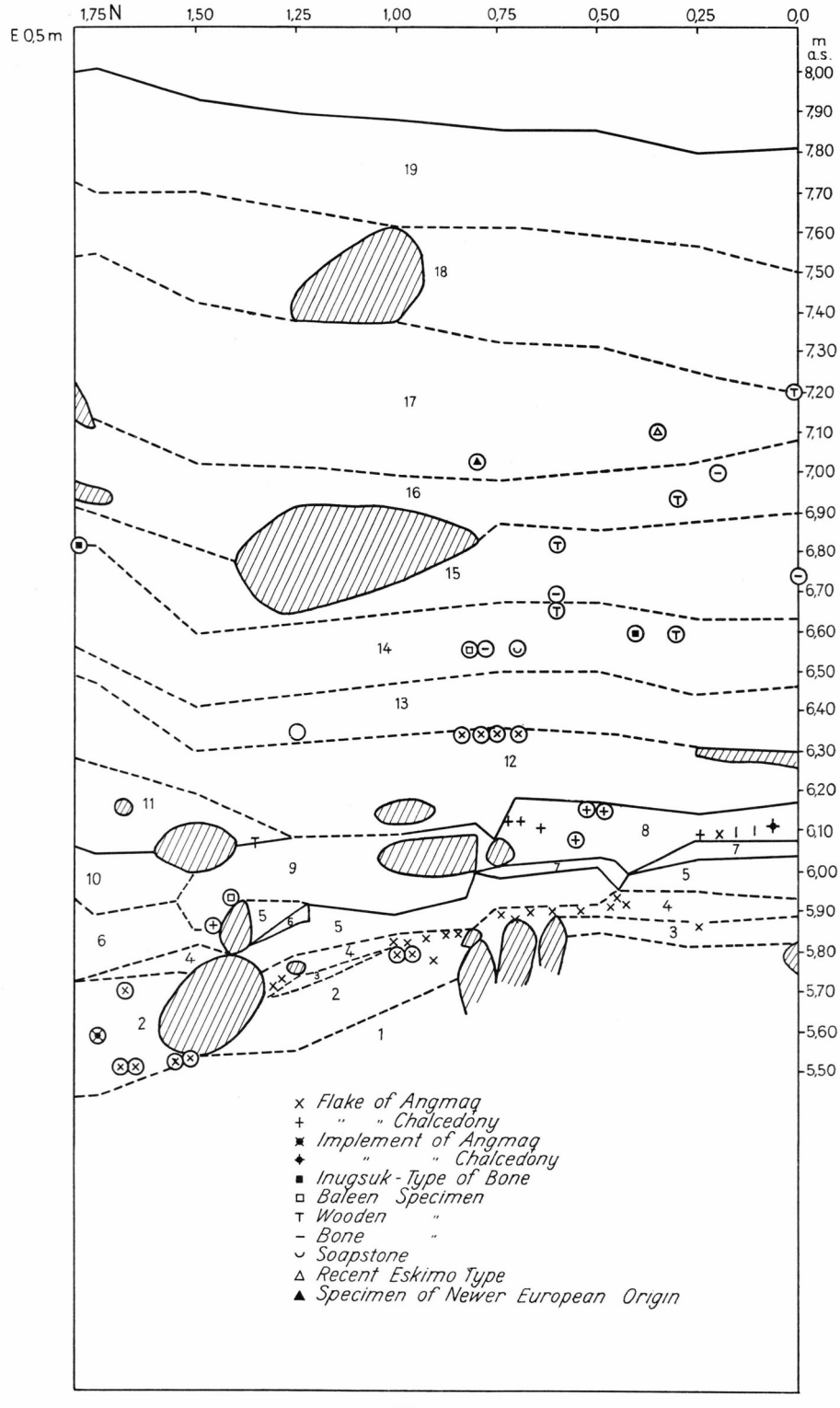
Fig. 5. Main Area A, southern part of the cliff-side section, taken 0.5 metre east of its 0-line (Meldgaard's section). The figures above give the distance (in metres) from the south end, those on the right the height above sea level.


1,75 N
1,50
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0,75
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E 0,5 m
m a.s.
8,00
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5,70
5,60
5,50
× Flake of Angmaq
+ " " Chalcedony
✱ Implement of Angmaq
✦ " " Chalcedony
■ Inugsuk-Type of Bone
□ Baleen Specimen
T Wooden "
– Bone "
⌣ Soapstone
△ Recent Eskimo Type
▲ Specimen of Newer European Origin

Fig. 5.

Inugsuk and later; at most places there is an angmaq horizon at the bottom, here and there—especially in the west part, fairly rich, with stone arrangements, hearths etc. signifying the presence of house ruins from that old culture; but there in this trench only 2 m wide it was impossible to discern any shape of these ruins. No chalcedony horizon could be observed; some objects of this stone were found, it is true, but scattered among the others. Nor was there any sharp boundary between the angmaq layer and the Inugsuk deposits. In other words, no definite stratigraphy can be built up from the layers in the transverse trench, beyond the fact that the angmaq layers are usually below those of the Inugsuk Culture. This trench contributes nothing to the chronology of the chalcedony layers.

III. THE SARQAQ CULTURE AT SERMERMIUT

In their "Paleoeskimo Cultures in Disko Bay" HELGE LARSEN and MELDGAARD have given the name of Sarqaq Culture to the lowest deposit at Sermermiut, the layer which in the foregoing I have called the angmaq layer; this appellation was taken from the finding place of the first collective find of that culture, the trading post of Sarqaq in Disko Bugt. The present investigation has verified that find and therefore the name is employed as the heading for this chapter.

In proceeding to a discussion of the implement inventory of this culture, the fact must first be established that the only localities at Sermermiut where there is complete certainty that the Sarqaq strata are pure, with no possibility of later intermixtures, is in the lower layers to the south of the southern gully, i. e. in Main Areas B and C; these deposits lie direct on the sterile substratum and in their turn are overlain by fairly thick, sterile layers (figs. 2—4). Accordingly, in order to ascertain what implement types definitely belong to that culture we must first and foremost see what types occur in these lower layers in B and C. In Main Area A, both cliff-side section and transverse trench, the conditions are so mixed up that the find combinations cannot lead to reliable conclusions as to whether an implement belongs to the Sarqaq Culture or not; the only certain chronology observable is in the southernmost part of the cliff-side section (fig. 5); but the section wall itself did not produce a single implement, nothing but flakes and chips belonging to the lowest layer. It is quite another matter that on the background of the implement types found in the lower layers of B and C we can pick out a large number of artefacts from Main Area A as belonging to the Sarqaq Culture, as well as a few types which with some probability, but nothing like certainty, do so.

Fig. 6 displays the implement types found in B and C and therefore actually belonging to the Sarqaq Culture. Fig. 7, 1—16, shows some other artefacts, all found in Main Area A, chiefly in its lowest layers, which probably, but not all with complete certainty, belong to the same culture.

The table below lists the quantities of Sarqaq types found in the various layers. In Main Area A, both in the cliff-side section and in the

Table 1. Sarqaq types.

Types with certainty belonging to the Sarqaq Culture	Illustrated fig.	B	C	A				Total
				Cliff-side section		Transverse trench		
				Layer		Layer		
				Upper	Lower	Upper	Lower	
Slender, symmetrical, lanceolate, untanged blade ..... angmaq	6.1,2&5;7.3	..	3	1	2	6	14	26
Slender, symmetrical, lanceolate, tanged blade..... –	6. 3 & 6—8	3	1	..	2	..	16	22
Broad, pointed, symmetrical blade with slight tang ..... –	6. 4 & 7. 1	..	1	..	..	1	..	2
Short, sym., rounded blade with long tang ..... –	6. 9	..	3	..	..	..	..	3
Round-pointed, sym. blade, butt end square ..... –	6. 10	..	2	..	..	..	..	2
Small triang. arrow-head, slightly convex sides, butt end square, polished at middle ..... –	6. 29 & 7. 16	..	7	..	3	3	26	39
Unsymm., double-pointed blade, two-edged ..... –	6. 14 & 7. 9	..	1	..	..	..	5	6
Adze blade with polished edge ..... –	6. 13	..	1	..	..	..	4	5
Scraper, convex edge, straight-sided or nearly so, tapering rearwards..... –	6. 18—21 & 7. 13	1	8	..	4	2	29	44
Scraper with concave edge at both sides, S-shape	6. 16	1	..	..	..	1	1	3
Scraper with concave edge at one side.....	6. 15, 17 7. 11—12	1	2	..	7	2	11	23
Burin, polished, oblique point and burin blow from the point..... angmaq	6. 24—28; 7. 14—15	1	23	2	6	8	82	122
Bodkin, cylindrical, polished ..... –	6. 30	..	1	..	..	..	2	3
Beak-shaped blade with trimmed edge –	6. 12, 22	..	2	..	..	..	..	2
Irreg.-rounded blade with double trimmed edges..... –	6. 11	3	..	..	..	..	..	3
Hammer-stone ..... –	6. 23	..	1	..	..	..	1	2
Whetstone of sandstone.....	6. 31	..	1	..	..	..	..	1
Totals...		10	57	3	24	23	192	309
Less certain types								
Long, slender, two-edged, symm. blade, butt square	7. 2	..	..	..	..	..	13	13
Unpol., unsymm., round-ended blade.. angmaq	7. 10	..	..	..	..	..	2	2
Small slender blade, unpol., oblique edge at end ..... –	7. 7, 8	..	..	1	..	..	4	5
Axe blade ..... –	7. 4	..	..	..	..	1	1	2
Totals...		..	..	1	..	1	20	22
Other objects								
Fragments of indeterminable blades, angmaq...	..	7	35	..	..	..	..	..
Micro-blades of jasper	..	..	3	..	..	..	..	..
Chips and flakes of angmaq.....	..	367	2633	..	..	..	..	..
Chips and flakes of chalcedony.....	..	..	13	..	..	..	..	..
Chips and flakes of other stones, mainly jasper	..	7	53	..	..	..	..	..
Baleen strips	..	..	2	..	..	..	..	..

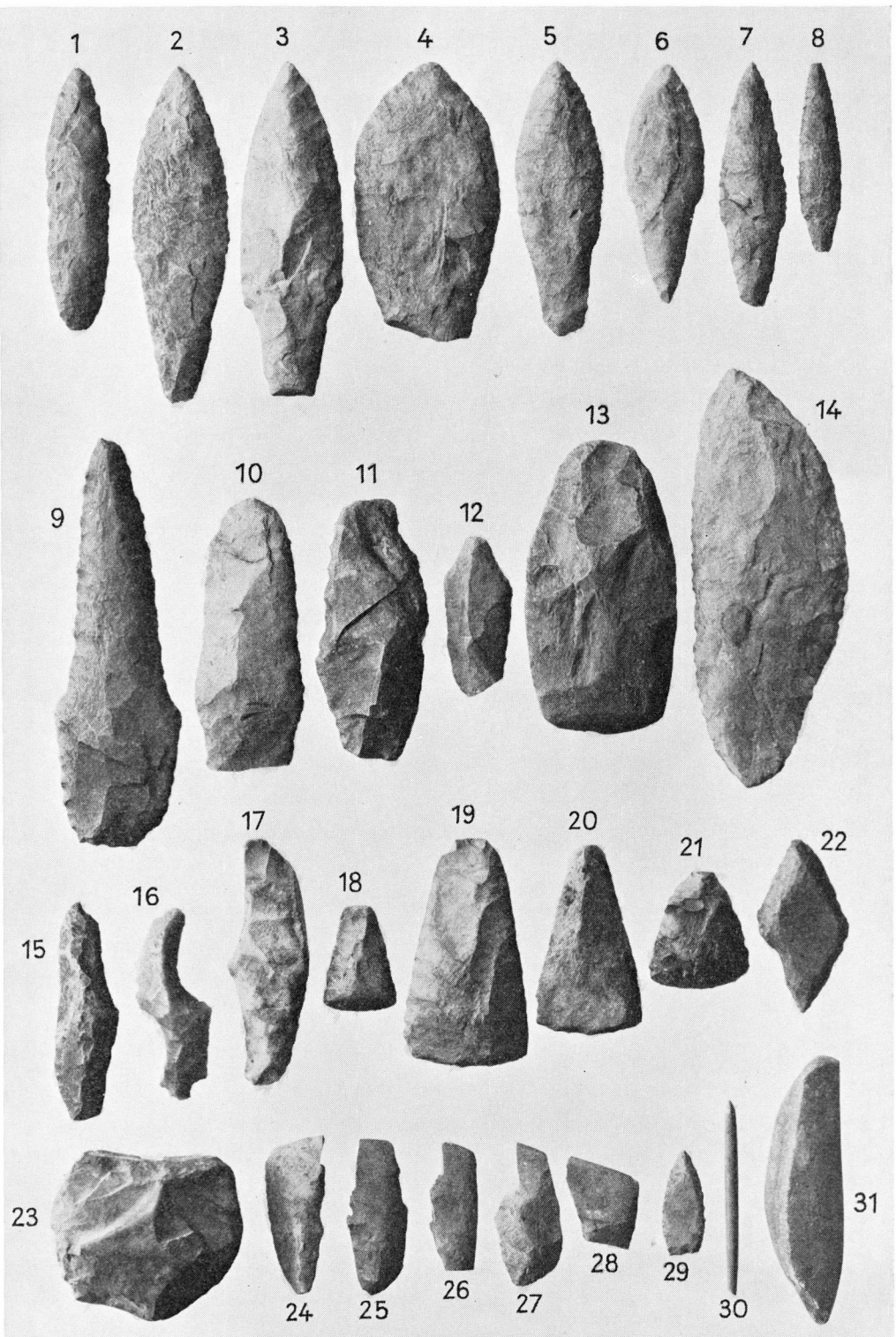

Fig. 6. Artefacts from the Sarqaq deposit in Main Areas B—C. 2:3.

transverse trench, a distinction is made between those found in upper and lower layers; by "upper layers" is meant those containing artefacts of Inugsuk type or later forms, bone and wood objects, baleen or other organic material, dating from the later habitation; "lower layers" means those layers which contain no such materials but solely objects of stone; as already mentioned, however, the boundary between these deposits is not sharp.

In the list reference is also made to the specimens illustrated in figs. 6 and 7, in order to make the appearance of the types quite unmistakable.

"Other objects" indicates only the finds in the unquestionable layers in B and C.

It will be seen from the table how predominant angmaq is as a material for implements. The majority of the implement types were found solely in angmaq, the only exceptions (apart from the whetstones) being the scrapers. Of the convex scrapers in B—C, five are of angmaq, four of jasper; of the concave ones, one is of angmaq and three of jasper. Among the scrapers in A the majority are of angmaq too, whereas others are of variously coloured jasper, quartz and rock crystal. Of the other types there is only a blade from A, of the type fig. 7.2, of black jasper; otherwise they are all of angmaq.

It should be added that in the lower layers of B—C not a single implement of chalcedony was found, and only one or two squares in C produced a few (13) flakes of that stone; angmaq is also highly dominant among the chips, though there are a few different varieties of jasper; the few micro-blades found in C are all of that stone; angmaq is not suitable for microblade-making technique.

As the implement forms of the Sarqaq Culture are discussed in detail in LARSEN and MELDGAARD's work the present examination need not be extensive, though some observations will be added to certain of the types.

The slender, lanceolate blades are unpolished almost without exception; among those from B—C only one, fig. 6.3, has faint polishing marks on both sides, but the edges are unpolished. The assumption is that these pointed, symmetrical blades were weapon points, and probably also the broader, symmetrical blades like fig. 7.1 and the long, two-edged types like fig. 7.2. These symmetrical, pointed angmaq blades trimmed on both sides are among the most characteristic types of the Sarqaq Culture.

Less well defined are the symmetrical, round-ended blades, also trimmed on both sides but never polished, sometimes with a long tang (fig. 6.9), sometimes without (fig. 6.10); they are all of angmaq.

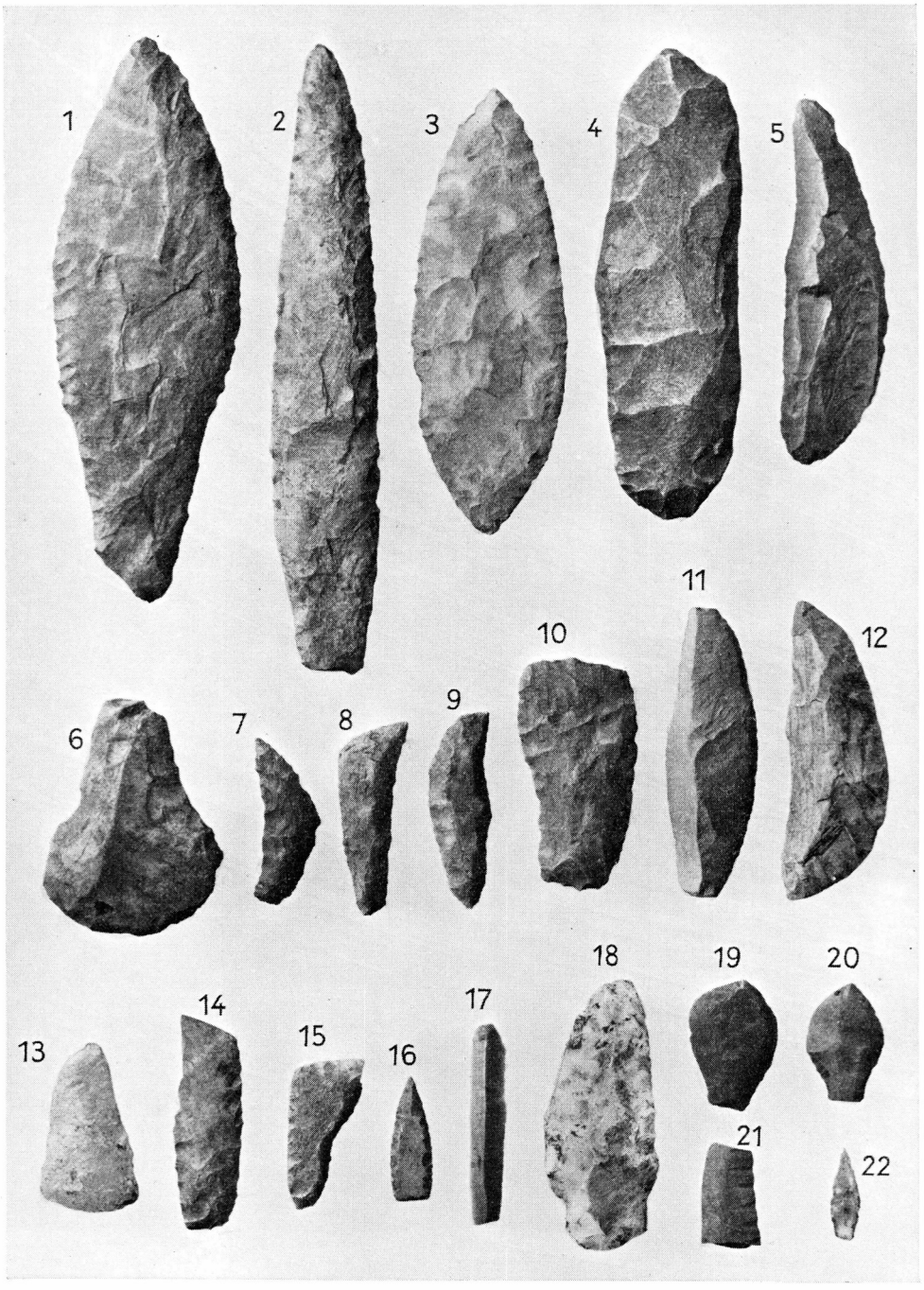

Fig. 7. Artefacts from Main Area A; 1—16 are Sarqaq types, 17—22 Dorset types. 2:3.

The large, broad, angmaq blade fig. 6.14 with one strongly curved edge, the other less curved, is also trimmed on both sides and unpolished. It may have been for use as a blade for a knife, like the later Eskimo ulo, the women's knife. The adze blade fig. 6.13 is trimmed on both sides and polished at the edge; it is unsymmetrical with one steep and one less steep side, and the piece as a whole has a convex and an almost flat side; this blade was presumably hafted as an adze. On the other hand, fig. 7.4 seems to have been an axe proper, trimmed in the form of a slender core axe, unpolished at the edge; but, as was said above, its connection with the Sarqaq is not wholly certain.

The convex-edged scrapers are among the commonest implements in the Sarqaq Culture. There are slight variations in the shape, as will be seen from the illustrations fig. 6.18—21. The edge may be slightly convex, sometimes almost straight, or it may have a more pronounced curve as on 21. The shape varies from triangular with a pointed butt like 20 to trapeziform with a broader butt like 18; but the butt end is always much narrower than the working end; the sides vary from slightly convex to almost straight; there is also a good deal of variation in the size. Fig. 7.6 has faintly concave sides and a very convex edge. All these scrapers have one feature in common: they are chipped only on one surface, where they have a steep, unilaterally worked edge.

The concave scrapers differ more; they may have a single, slightly concave edge like fig. 6.15, which is of angmaq, two such edges on both sides (fig. 6.17) or two very concave edges, one on each side, like the S-shaped scraper fig. 6.16; the last two are of pale jasper.

A type that is less clear is the beak-shaped or more irregular scraper (fig. 6.11—12) which is also retouched on the side; they are chipped only on one flat side. The same applies to the curious, rhomboid specimen fig. 6. 22.

A type that is very clear and also characteristic of the Sarqaq Culture is the burin, figs. 6.24—28 and 7.14—15. The fore end is always ground flat on both sides and its oblique edge is also ground, not sharp but rounded; the angle which it forms to the long axis of the tool varies somewhat, as the illustrated specimens show. The burin blow was applied to the pointed corner, causing a flake to separate off and leave a very short, sharp, rounded edge, excellent for graving grooves in bone. On several specimens this edge is worn smooth or damaged through small flakes falling off on both sides, apparently through use. The butt end of the burin is unground, trimmed on both sides and generally tapering rearwards, so that it could be inserted into a haft. Sometimes the burin blow was repeated, usually at the same place to sharpen the blunted edge, and sometimes—though more rarely—at the other, blunt corner. MELDGAARD's is the credit for having demonstrated that this

small implement is a burin. In my earlier Eskimo-archaeological works in Greenland I regarded the type, which occurred here and there in the Inugsuk Culture deposits, as an implement resembling the Greenlanders' boot-creaser, for puckering their kamik soles; I assumed the flake scar to be an injury caused by the heavy pressure. But with this large new material, and the fact that there is not a single specimen without this "injury", that explanation will not hold good and the identification as a burin is undoubtedly correct; so much the more because now since GIDDINGS has demonstrated burins in his "Denbigh Flint Complex" in Alaska, they have been found at many places in Arctic America. The material which I myself excavated on the Fifth Thule Expedition in 1923 at Button Point, Ponds Inlet in the northern part of Baffinland, also contains burins[1]); but at that time this type had not yet been properly recognized by Danish archaeologists.

Another very characteristic type of the Sarqaq Culture is the small, thin, triangular blades, figs. 6.29 and 7.16, which presumably served as arrow-heads. At the middle of both sides they have a polished facet, whereas the slightly convex edges are finely trimmed, occasionally like the fine serrations of a saw.

A curious type that is also characteristic of Sarqaq is the bodkin, fig. 6.30, thin, cylindrical, wholly polished and having a conical, polished point. Inserted into a handle it may have served as a bodkin or an awl.

Then there are the more uncharacteristic types: the hammer-stone (fig. 6.23), a lump of angmaq with the marks of blows, and the sandstone whetstone (fig. 6.31).

The fact that the making of micro-blades was familiar to the Sarqaq people is evident from the finding of three of them, of jasper. Thus the technique was known but not often used, because angmaq is unsuitable for the purpose.

Less certain as Sarqaq Culture elements are the objects fig. 7.8 and 10. The first two are small blades chipped on both sides and ending in a sharp, oblique edge. No. 8 may be an unfinished burin, but hardly No. 7. One might imagine these implements used as sewing knives. No. 10 is also chipped on both sides, and it comes to a broad, slightly concave, sharp edge; it is unpolished.

It should be noted that not a single fragment of a steatite vessel was found in a definitely Sarqaq deposit.

The only organic substance found in the Sarqaq layers was two badly decomposed strips of baleen, recovered from the lower layer in C. But they are of interest as showing that the Sarqaq people hunted the whale; though of course it is not impossible that they came from a dead whale thrown up on the beach.

[1]) Meldgaard 1952, fig. 78. 12—13.

This brings us to the end of our description of the material from the Sarqaq layers at Sermermiut. The implement types are not particularly numerous but very characteristic; as guide forms for this culture we must particularly single out the lanceolate, unpolished weapon blades, the small triangular arrow-heads, the burins and the bodkins; the last-named three acquired their specific shape from the material of which they were made: angmaq.

The *age of the Sarqaq layers* at Sermermiut has been determined by C14 tests in the National Museum C14 laboratory by its chief, HENRIK TAUBER. The sample was taken from peat layer No. 3 in the section figs. 2—3 in Main Area B. That layer, which contains flakes of angmaq and implement types of the Sarqaq Culture, and overlies the very gravelly substratum which highest up (layer 2) also contains Sarqaq artefacts, gave the result of 790 ± 100 B.C. (as the average of 3 tests).

On his reconnaissance in Disko Bugt TROELS-SMITH also inspected the classical locality at Sarqaq, whence MOSEGAARD had fetched the material forming the basis of MELDGAARD's first paper on this culture. From a hearth belonging to that culture horizon TROELS-SMITH took a number of samples of charcoal, which E. TELLERUP has gone through very minutely in order to pick out any remains of driftwood, whose value to a C14 test is of course more uncertain. On the remaining charcoal—formed exclusively of small bushes that had grown in the country itself—a C14 test gave an age of 810 ± 100 B.C. (also 3 tests), a result agreeing quite well with the one from Sermermiut. In other words, the Sarqaq Culture in Disko Bugt was in existence round about the period 7—900 B.C.

This is indeed a most surprising result, when it is remembered that as the outcome of my earlier researches in Disko Bugt[1]) I formed the opinion that the Eskimo habitation there could not be dated back farther than to a little earlier than the immigration of the Norsemen to Greenland in 985 A.D.

The *Distribution of Sarqaq Culture* in Greenland has already been discussed in LARSEN & MELDGAARD's publication: Not only was the presence of the culture ascertained in at least 21 settlements in Disko Bugt apart from Sermermiut, but its types have been found at Ũmánaq, Godhavn, Egedesminde and the Holsteinsborg District, and a few specimens have been found to the south on the West Coast and at Angmagssalik.

It would be interesting, however, to go into the question of the presence of these types in the large, systematically excavated finds in

[1]) MATHIASSEN 1934.

Greenland—also with regard to whether some of the types continued in use in the later cultures.

At the Inugsuk settlement in Upernavik District, the type-find of the Inugsuk Culture, the only Sarqaq type discovered is the stone scraper with a concave or convex edge[1]). But as these forms have an exceedingly wide range, within early phases of the Arctic Whaling Culture too[2]), its occurrence at Inugsuk (and elsewhere in the Greenlandic Inugsuk Culture) is not necessarily connected in any way with the Sarqaq Culture.

In the large settlement of Igdlutalik in Disko Bugt the earliest group of house-sites produced an implement of angmaq[3]), retouched on one side, two-edged, rounded, recalling fig. 6.11—12; this, however, is a somewhat vaguely fashioned type. In the group dated to the 15th—16th century a typical lanceolate point of Sarqaq type was found[4]) as well as a burin[5]), i.e. two of the Sarqaq Culture's guide forms; another burin was found in the bottom of site II[6]), which is of a very ancient character, to judge from the harpoon heads of Thule type. The same two Sarqaq types: the unpolished lanceolate point and the burin, also occur in the earliest sites at the settlement of Igdlorssuit[7]). But as a Sarqaq-Culture deposit was found during Larsen & Glob's visit to Igdlorssuit, in the north part of the settlement[8]), the presence of a few Sarqaq types in Inugsuk-Culture houses is not surprising.

At the old settlements of Utorqait and Qeqertarmiut in the Kangâmiut area, Sukkertoppen District, two of the slender, lanceolate, unpolished points were found as well as a burin, the latter in a midden deposit ascribed to the second culture phase of the locality (1500—1650 A—D.)[9]). On the other hand, these types have also been discovered in later deposits within the area, for instance a lanceolate point together with a convex-edged scraper at Ũmánaq, where there is nothing but one of the large, rectangular 18th century houses; moreover, two burins were found at Utorqait in Midden B, in layers presumably emanating from the large rectangular house 19.

There are no typical Sarqaq artefacts among the few that have been found in the ancient Eskimo ruins in the Julianehaab District[10]). The same is true of the by no means extensive archaeological material

1) Mathiassen 1930, pl. 13.3—5.
2) For example in Old Bering Sea: Collins 1937, pl. 41—42.
3) Mathiassen 1934, pl. 1.7.
4) Ibid. pl. 3.15.
5) Ibid. p. 108.
6) Ibid. pl. 8.4.
7) Ibid. p. 154 and pl. 9.2.
8) Larsen & Meldgaard p. 39.
9) Mathiassen 1931, pl. 1.19 and 3.18.
10) Mathiassen 1936a.

from Frederik VI's Kyst[1]), the stretch of Greenland's East Coast between Kap Farvel and Angmagssalik. And therefore it is so much the more surprising to find that Sarqaq types crop up again at Angmagssalik.

A lanceolate, tanged angmaq blade, as well as two fragments of similar blades, was found in Inugsuk Culture deposits at the settlement of Savanganeq[2]), and a blade of the same kind at the settlement of Utorqarmiut, where an unusually large number of stone implements were found around the ruin of a small, four-sided house, practically all of angmaq, a species of stone not known locally in the Angmagssalik District; among these objects were two burins of typically West Greenland form[3]). But it is still more surprising to find burins in deposits containing artefacts of the 18th century, i.e. two from Misigtoq, three from Kangârtik and seven from Savanganeq[4]); the latter locality also yielded two of the small, triangular arrow-heads with polished sides[5]), i.e. a third Sarqaq guide form.

More to the north, along the East Coast, the Sarqaq types disappear; there are none in the region around Clavering Ø, an area that has been well examined archaeologically and where the large settlement of Dødemandsbugten[6]) in particular has yielded up much material, including flints. Two flint burins are illustrated by MELDGAARD[7]) from Scoresby Sund; and on reaching Greenland's northeast corner we find that the material secured by EIGIL KNUTH[8]), as yet somewhat slender but interesting, contains types that are reminiscent of Sarqaq, i.e. burins of flint but of another, more primitive form than the characteristic burin of the Sarqaq Culture, of polished angmaq. A small lanceolate arrow-head found on Peary Land is also like the Sarqaq type[9]).

The Sarqaq types have not been encountered in the Thule District which, thanks to Erik Holtved's excavations, must be said to be relatively well explored; hitherto the earliest known is the Dorset Culture in Inglefield Land[10]).

Then finally, in judging the occurrence of Sarqaq types in later deposits we must consider the Inugsuk-period and still younger layers at the Sermermiut settlement itself. As will be seen in the table on page 16, both the cliff-side section and the transverse trench in Main

[1]) MATHIASSEN 1936b.
[2]) MATHIASSEN 1933, pl. 3.3.
[3]) Ibid. fig. 30.1 and 11—12.
[4]) Ibid. p. 70 and pl. 9.8.
[5]) MATHIASSEN 1933, p. 69, pl. 5.33.
[6]) HELGE LARSEN 1934. BANDI & MELDGAARD 1952.
[7]) MELDGAARD 1952, fig. 78.
[8]) 1952, figs. 20.9 and 14.4—7.
[9]) MELDGAARD 1952, fig. 10.2.
[10]) HOLTVED 1944 II, p. 59.

Area A contained a number of objects of distinctly Sarqaq type in layers otherwise characterized by Inugsuk types or still later artefacts. There were relatively many in the transverse trench, but it must be borne in mind that in that excavation there is no sharp division between Inugsuk layers and the earlier ones, and they are often considerably mixed. But then again we find Sarqaq artefacts—burins and lanceolate points, though they are very few in number—high up in layers dating from the time subsequent to the first contact with the whalers or the Danish colonization. This scarcely means that these types were in use so late; the simple explanation must be that they had been dragged up from the earlier strata under the settlement.

The question that now arises is whether the presence of Sarqaq types in Inugsuk and later deposits everywhere may not be explained in the same manner. At a locality such as Igdlorssuit, where later excavations have discovered a Sarqaq habitation, this is exceedingly probable. But I am inclined to think that it is also the case at the other places, even if nothing else has been discovered there to suggest a Sarqaq settlement. Anyone who is familiar with the country in Greenland from long experience knows that there are relatively few spots really suitable for settling, so it is a very natural thing that in the course of time the same sites were occupied and that one spot will reveal traces of habitation dating from widely separated periods. Traces of the Sarqaq Culture are anything but easy to find—unless armed with the experience of recent years one is actually looking for them. When I was conducting my archaeological explorations in Greenland my search first and foremost was for house sites; and as the Sarqaq Culture has left hardly any sites, but usually nothing but thin culture deposits, perhaps with a hearth, it is understandable that I was able to travel round Disko Bugt and inspect many ruin localities without striking pure Sarqaq deposits.

Another circumstance suggesting later mixing is the fact that Sarqaq artefacts—apart from the Inugsuk layers—also occur, and often with greater frequency, in the quite recent deposits of the 18th and 19th centuries; it is scarcely likely that a primitive form of implement like the burin was in use so late as that.

Finally, the fact that the Sarqaq types do not occur in the somewhat later Dorset deposits shows that they had already become obsolete then and therefore were not likely to make a re-entrance in the much later Inugsuk Culture. The Sarqaq types must be deleted from the inventory of the Inugsuk Culture.

The *origin of the Sarqaq Culture* is a question difficult to answer. The stone artefacts alone remain, with the result that we are given a highly defective and onesided picture of the culture, so much the more

as there is every reason for supposing that it resembled other Arctic cultures in having most of its utensils made of bone and wood. We have the stone objects alone for making comparisons with other cultures, and this brings us to another difficulty: Several of the more important forms of implements in the Sarqaq Culture have acquired their character from the material of which they were fashioned: the siliceous schist angmaq. This is particularly true of types such as the burin, the small triangular arrow-head and the bodkin (awl). If these were to be made of other material, flint, jasper, chalcedony, argillaceous schist, etc., their form would inevitably be influenced by it. Accordingly, for these types there can be no question of similarity in detail, but merely a more general likeness, which of course complicates the problem.

What is more, from his recent journeys to Arctic Canada JØRGEN MELDGAARD is in possession of a quality of unpublished material that may be expected to elucidate the entire question. For the moment it must suffice to say with HELGE LARSEN and MELDGAARD that the cultures most likely to be the origins of the Sarqaq Culture are to be found in Western Arctic America. A number of finds have been made in those regions, all giving an impression of great age and several of them embodying implement forms like the Sarqaq. This is true, for example, of the Denbigh Flint Complex[1]) in Alaska, in which there are types such as burins, lanceolate flint blades, small triangular blades and micro-blade technique. Similar types have been found on North Knife River a little to the West of Churchill in Hudson Bay[2]), at Brook Range in Alaska[3]) and The Pointed Mountain Site near Fort Liard in Northwest Canada[4]). As yet, however, the mutual chronologies and relationships of these finds are undefined. Presumably they were associated with Mesolithic and Neolithic cultures in the Old World.

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[1]) GIDDINGS 1951, figs. 59a, 61a, b and 64.3—5.
[2]) GIDDINGS 1956.
[3]) IRVING 1951.
[4]) MACNEISH 1954.

IV. THE DORSET CULTURE AT SERMERMIUT

In their report HELGE LARSEN and MELDGAARD have placed to the Dorset Culture the deposit which in the foregoing is called the chalcedony layer. The question of the justification of that appellation will be reverted to below. For the present, let us look at the contents of this deposit.

What was said of the Sarqaq deposit also applies to this one, that its absolute purity, without intermixture of other cultures, can be relied upon only in Main Areas B and C, where it is encapsuled between sterile layers of peat, as shown in the sections figs. 2 and 4. In the cliff-side section the deposit is satisfactorily isolated only in the southernmost part, seen on the right of the section in fig. 5, and there the only implement found was a convex-edged scraper of chalcedony. Conditions otherwise in the cliff-side section and the transverse trench are so confused that it is impossible to separate any clear chalcedony horizon, wherefore one cannot stratigraphically single out the artefacts belonging to that horizon. Happily, the deposit in B and C, especially the former, is so rich that the culture is laid clear; indeed, in contrast to the Sarqaq layers it contains a few objects of organic substance, bone, wood, baleen and skin. In the accompanying list the objects from B and C are kept separate, but I have added those artefacts from Main Area A whose type or material (chalcedony) indicates the same period; it should be observed here that not a single implement of chalcedony was found in the Sarqaq layers. The only uncertain elements are two implement types entered last on the list (table 2).

One is immediately aware of a marked difference in the material of the implements. In the Sarqaq layer in B and C, 93 per cent. of the implements were of angmaq, 7 per cent. of jasper, whereas here we have 54 per cent. chalcedony, 34 per cent. angmaq, 10 per cent. jasper and 2 per cent. other stones (quartzite, obsidian). A new and important material not previously utilized had been added to the others, chalcedony, which has many of the excellent qualities of flint but is too hard to polish; it has one drawback: it is found in rather small pieces, so that angmaq had to be employed for larger implements such as axe blades. A material not mentioned in the list is rock crystal; in B—C it occurs only in the

Table 2. Dorset Types.

Types with certainty belonging to the Dorset Culture	Illustrated fig.	B	C	A				
				Cliff-side section		Transverse trench		
				Layer		Layer		
				Upper	Lower	Upper	Lower	
Triang. unpol. symm. blade with hafting notches, chalcedony or jasper	8. 1—3 & 6	11	2	1	1	..	2	17
Triang. unpol. unsym. blade with hafting notches, chalcedony or jasper	8. 5	3	..	..	..	..	..	3
Slender, unpol. symm. blade with hafting notches, chalcedony or jasper	8. 4 & 7. 22	..	1	..	..	..	1	2
Slender, unpol. unsym. blade with hafting notches, chalcedony or jasper	8. 10 & 7. 18	1	1	..	1	..	..	3
Triang. unpol. blade w. concave base, chalcedony	8. 7	1	..	..	..	..	..	1
Wide, pointed, unsymm. blade with hafting notches, chalcedony	8. 14	1	..	..	..	..	..	1
Round, symm. unpol. blade with hafting notches, chalcedony	8. 11	1	1	..	..	..	1	3
Round, unsym. unpol. blade with hafting notches, chalcedony	8. 12	2	..	..	..	..	..	2
Lanceol. facetted blade with tang, angmaq	8. 8—9	3	1	..	..	..	3	7
Unsym., pol. pointed blade, no tang, angmaq	8. 24	2	..	..	..	..	1	3
Larger, sym. rounded, blade chipped both sides, angmaq	8. 15	1	..	..	..	..	1	2
Small, rounded blade, chipped both sides, no hafting notches (side blade), chalcedony	8. 13	20	6	1	1	..	..	28
Burin-like impl. with three-sided, polished point, angmaq	8. 16—23	30	5	..	3	..	4	42
Scraper, convex edge, triang. or trapezif., various stones	8. 25—28, 31—32	23	8	..	6	1	..	38
Scraper, convex edge, with out-turned edge-corners, various stones	8. 29—30	6	..	..	..	..	..	6
Scraper, concave edge, S-shaped, chalcedony	8. 33	1	..	..	..	..	..	1
Scraper, concave edge, beaked, chalcedony	8. 34—36	5	..	..	..	..	2	7
Axe blade, angmaq	9. 2	2	..	..	..	..	..	2
Saw-toothed implement, angmaq	8. 37, 7. 21	1	..	..	..	..	1	2
Unidentifiable blade, fragment, angmaq	..	12	2	..	..	..	..	14
Unidentifiable blade, fragment, chalcedony	..	21	3	..	..	..	..	24
Unidentifiable blade, fragment, jasper etc.	..	5	6	..	..	..	..	11
Microblades, chalcedony or jasper	..	198	19	1	37	2	21	278
Microcores, chalcedony or jasper	..	9	..	..	2	..	..	11
Chips of angmaq	..	1207	304	..	..	..	..	1511
Chips of chalcedony	..	1072	84	..	..	..	..	1156
Chips of other stone	..	203	25	..	..	..	..	228
Steatite bowl, oval, thin-walled	9. 1	13	3	..	1	..	..	17
Sherds of large, thick-walled rounded pot	9. 3—4	7	1	..	..	..	..	8

(*continued*)

Table 2 (cont.).

Types with certainty belonging to the Dorset Culture	Illustrated fig.	B	C	A				
				Cliff-side section		Transverse trench		
				Layer		Layer		
				Upper	Lower	Upper	Lower	
Oval bowl bottom, wood	10. 1	2	..	..	..	..	..	2
Hollowed-out wood bowl	10. 3	1	..	..	..	..	..	1
Boot-creaser, wood	10. 6	1	..	..	..	..	..	1
Animal figure, wood	10. 4	1	..	..	..	..	..	1
Phallus, wood	10. 7	1	..	..	..	..	..	1
Bear's foot, wood	10. 8	1	..	..	..	..	..	1
Cutting-board, wood	..	1	..	..	..	..	..	1
Mask(?), wood	10. 10	1	..	..	..	..	..	1
Pieces of wood with slots	10. 2	2	..	..	..	..	..	2
Piece of wood, with cross	10. 9	1	..	..	..	..	..	1
Unidentifiable pieces and sticks of wood	..	59	..	..	..	..	..	59
Harpoon head, type Thule 2, antler	10. 5	1	..	..	..	..	..	1
Baleen, strip, with whipping	..	1	..	..	..	..	..	1
Baleen knots	..	3	..	..	..	..	..	3
Baleen strips, shaped	..	2	1	..	..	..	..	3
Unworked baleen strips	..	sev.	..	..	..	..	..	sev.
Sealskin, with seams	..	1	..	..	..	..	..	1
Seal bones	..	over 172	..	..	..	..	..	over 172
Less certain types								
Wide, round-pointed, pol. blade with tang	7. 19—20	..	..	..	2	..	2	4
Microblade with retouched sides	7. 17	..	..	1	..	..	1	2

form of micro-blades, but in A there are micro-cores and small scrapers of it.

As in the case of the Sarqaq types, LARSEN & MELDGAARD's report contains a comprehensive description of the implement forms in this horizon, so that their examination here can be quite brief.

Fig. 8 presents objects found in B—C, whereas fig. 7. 17—22 are from A, objects which from their type must be assumed to belong here.

The triangular blades with a hafting notch are among the commonest types. As a rule they are rather wide, symmetrical (fig. 8. 1—3 and 6), more rarely with a slightly oblique point (fig. 8. 5); sometimes they are more slender and may be either symmetrical (fig. 8. 4) or oblique (figs. 8. 10 and 7. 18). In most cases the material is chalcedony, less commonly jasper (fig. 8. 3). I am inclined to think these points are weapon blades; at any rate the symmetrical ones would be suitable

for that purpose; it is not quite clear whether the obliquity of the others is intentional or not.

One outstanding piece is the triangular point with a concave base (fig. 8. 7). It recalls one of the guide forms of the Canadian Dorset Culture, though the latter usually has a wider, less concave butt.

Presumably the facet-ground, tanged points fig. 8. 8—9 are also weapon blades, possibly arrow-heads; it will be remembered that the lanceolate tanged points of the Sarqaq layers are never ground. For this reason the two corresponding, wider blades fig. 7. 19—20 are also placed in this category, although they were not found in a definitely "Dorset" layer.

The rounded blades with a tang, some symmetrical (fig. 8. 11), others crooked (figs. 12 and 14), occur fairly frequently; they are always of chalcedony and are probably knife blades. Other frequent objects are the small, rounded blades with no tang (fig. 8. 13), usually of chalcedony; they are generally very thin and must be regarded as inset-blades for knives or weapon points. Fig. 8. 24 is a heavy, single-edged knife of polished angmaq, whereas fig. 8. 15 is a more untypical, larger angmaq blade.

Special mention is called for by the type of implement represented by the group fig. 8. 16—23, both because it is among the most numerous and most characteristic forms of implement of this culture horizon, and also because of its somewhat problematic purpose. LARSEN & MELDGAARD call it "burin-like implement"[1]). SOLBERG[2]), who was the first to describe it, considered it to be a drill point. In my former excavations in Greenland I too formed the opinion that these not too common points were drills, though with some reservation on account of the often considerable width of the point[3]). In his paper on Sarqaq MELDGAARD[4]) also calls them drills.

These implements usually have a rather wide, unpolished butt and a thinner, three-sided polished point, at the apex having a ground facet, usually oblique, though in some instances it is at right angles to the long axis of the implement; this facet is generally very narrow, but it may be wider, up to 2 mm. In cross-section the point is usually an acute-angled, crooked triangle; in three cases, however, it is rectangular. It is this ground facet at the point that makes the use of the implement as a drill problematic. One small specimen, fig. 8. 22, has a flat point with six facets and a very narrow, bevelled facet; it may perhaps have served as a drill, as also the very thin, three-sided point fig. 8. 21. But

[1]) LARSEN & MELDGAARD p. 61.
[2]) SOLBERG, table 5, p. 45.
[3]) MATHIASSEN 1933, p. 90.
[4]) 1952a p. 228, fig. 78.14—17.

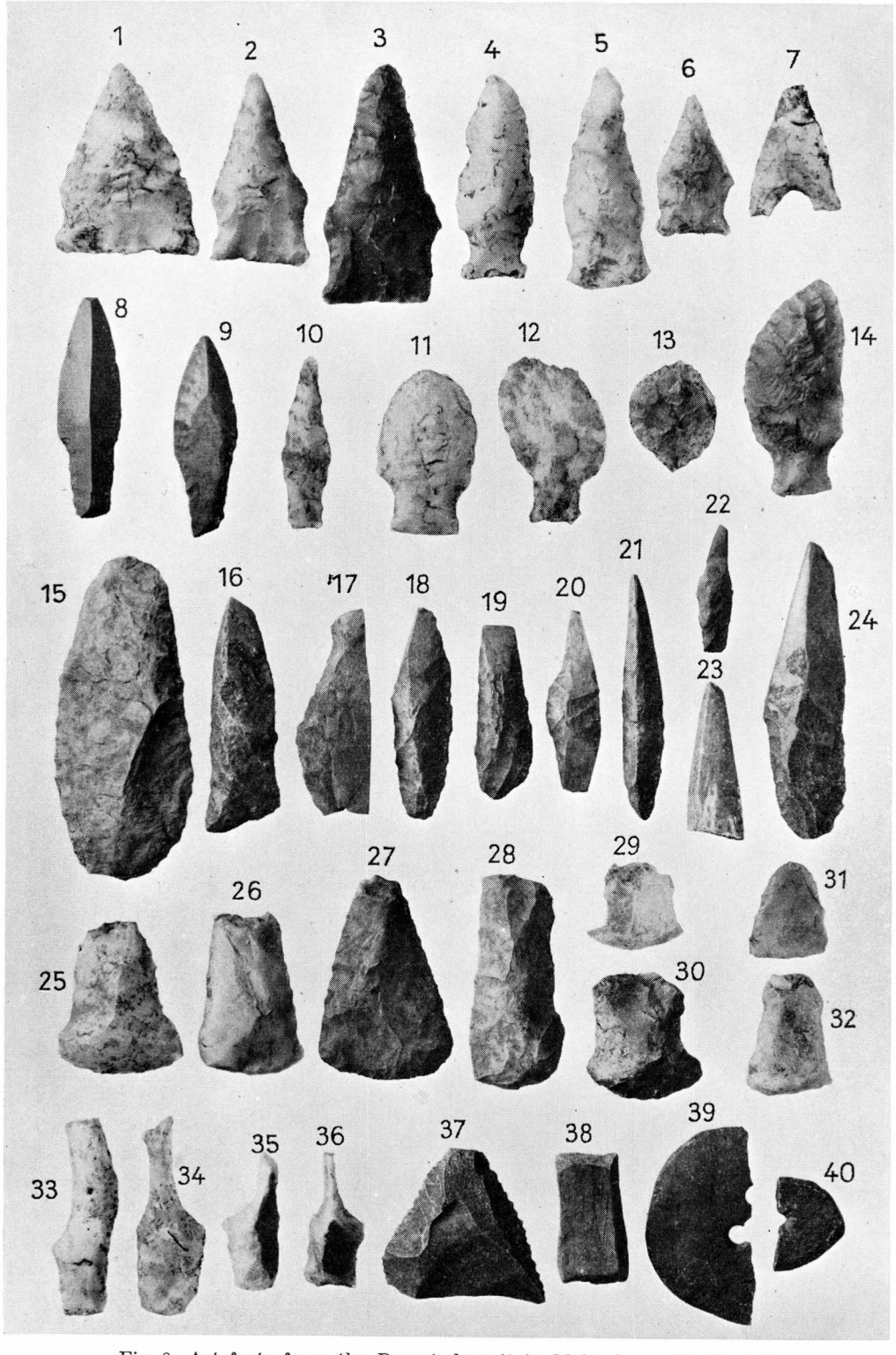

Fig. 8. Artefacts from the Dorset deposit in Main Areas B—C. 2:3.

that employment seems impossible for the others with a rather long, oblique or square-ground facet at the end. Only the fewest of them have a good graving edge; it is generally very oblique. On the other hand, some of the specimens, especially those with a right-angled facet, could no doubt be used in the same manner as a burin, for grooving bone, so that the term "burin-like implements" is not wholly unreasonable. A curious find was the broken-off fore end of one of these typical implements, in a very soft slate (fig. 8. 23).

Among the scrapers with a convex edge (fig. 8. 25—32) there is a variant with out-turned edge-corners (29—30); it does not occur in the Sarqaq layers, whereas the others cannot be distinguished by their shape from the Sarqaq scrapers. Those with a concave edge include both the S-shaped (fig. 8. 33), familiar from Sarqaq, and another with two concave edges which narrow the fore end into a beak (fig. 8. 34—36).

Two small specimens of dark angmaq have very small saw-teeth. (fig. 8. 37 and 7. 21).

Fig. 9. 2 is a small axe of angmaq, slightly polished on one side but not at the edge; in shape it is something like a rather flat core axe. Presumably it is unfinished, as an unpolished angmaq edge would not have much bite.

Micro-blades and the corresponding cores are numerous; the majority are of chalcedony, some of jasper, and one or two of rock crystal. Two (not found in a reliable position) have fine retouching along one side, for example fig. 7. 17, which is of reddish brown jasper. As micro-blades are of very uncommon occurrence in the Sarqaq layers, all those—and the cross—found in the cliff-side section and the transverse trench have been placed to the Dorset horizon; at any rate we may be certain about those made of chalcedony, and they are in the majority. In all probability these micro-blades were inserted as side-blades in knives and weapon points of bone.

There are a number of sherds of steatite, most of them of a rather unusual, fine-grained stone pitted with small natural hollows.

It has been possible to make an almost complete reconstruction of an oval bowl (fig. 9. 1); it has very thin walls with an almost round bottom, $16 \times 10\ ^1/_2$ cm and about 4 cm deep. This may have been a blubber-lamp, but of course a bowl can be used for other purposes. Another, more defective bowl seems to have been of about the same size but deeper, and with a flat bottom. Eleven sherds are presumably of similar, thin-walled bowls. Seven other sherds are of rather large, thick-walled cooking pots, like fig. 9. 4 which has a thickness of up to 1.9 cm, rounded; a smaller fragment is thicker still, 2.9 cm, thickly encrusted with food remains. Fig. 9. 3 is a rim sherd, having on its inner side a pierced knob for suspension, a common feature of Eskimo steatite

cooking pots. Fig. 8. 39—40 are two small, flat discs of steatite with two and one central holes respectively, both broken; their purpose is uncertain. Finally of stone there is a defective small, prismatic whetstone of sandstone (fig. 8. 38).

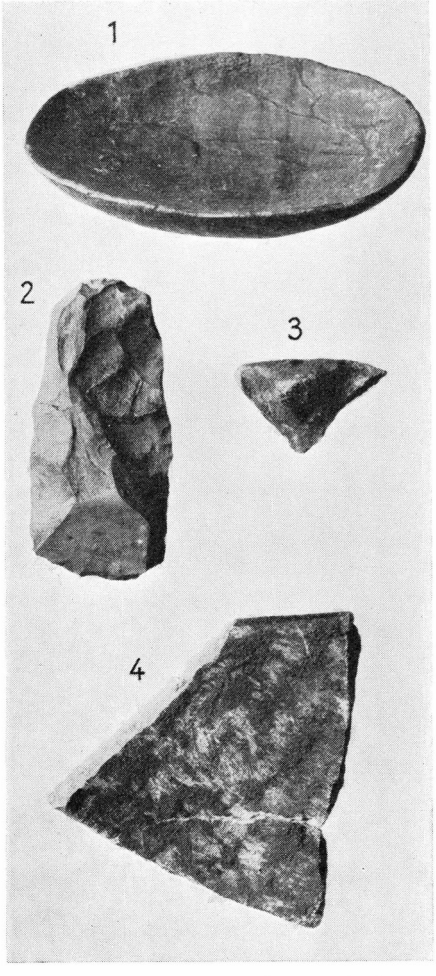

Fig. 9. Artefacts from the Dorset deposit in Main Areas B—C.

A number of squares in B, where the culture layers were rather thick (up to 20 cm), contained some preserved organic material. The only bone object, however, was the harpoon head fig. 10. 5. It is of antler, 10.5 cm long, rather slender, badly weathered and decomposed, but the type is distinct enough: it is Type No. 2 of the Thule Culture, thin, with open socket, unilateral spur and two almost opposed barbs; at the fore end there had been a groove for a blade. The line-hole was

rounded-triangular, as is often seen in the Early Thule Culture; the open socket seems to have been four-sided in cross-section. Owing to the advanced weathering and the defective state of the butt end it is impossible to say how the lashing round the socket was laid.

It is surprising to find a harpoon head of this type in these surroundings, but it cannot have been a later admixture; it was found midway in the deposit which there was fairly rich in animal bones, with typical stone objects around it—above it too. Moreover, the entire culture deposit here, as everywhere in B, was "sealed up" by a thick, sterile layer of peat.

This layer also produced a number of artefacts of wood, the more important of which are illustrated in fig. 10. 1 is a piece of the bottom of one of the oval bowls, presumably with sides of baleen (or bark or skin) that are so common in the Thule and Inugsuk cultures. 3 is a fragment of a hollowed-out wooden bowl or ladle, also a familiar object in these cultures. The others, however, are unusual: 2 is a flat, semi-circular piece with a sharp edge and three slots cut right through. Two similar slots are to be seen in the edge of No. 10, which has some deep-cut grooves pointing inwards towards the same point; apparently this is merely a fragment, perhaps of a mask. On a third object, not illustrated, there are two more slit-like holes.

No. 6 is a peculiar little implement, ending at the top in an unsymmetrical, sharp-edged blade which brings to mind the Greenlandic boot creaser. No. 4 is a small carved animal figure, judging from the slender body perhaps an ermine. No. 8 is a bear's foot, with carved toes below and above ending in a foursided tenon. No. 7 can scarcely represent anything else than a penis, and No. 9 is a curved, rather flat piece of wood ornamented with a cross. By the innumerable cuts in it a small, flat piece of wood must be identified as a cutting-board. In addition to the above there is a large number of indeterminable worked pieces of wood and sticks.

It was also interesting to find a strip of baleen whipped with baleen cord in this layer, as well as three baleen strips with knots, three shaped strips of baleen and some badly decomposed, unworked baleen strips. There was also a piece of sealskin with a seam of sinew thread.

The animal bones in this layer were all identified by ULRIK MØHL as far as was possible, for they were more or less decomposed, often so badly that all that was left was a thin membrane. The bones identified were harp seal (*Phoca groenlandica*), common seal (*P .hispida*) and possibly one or two of bearded seal (*Erignathus barbatus*); but owing to the decalcification and consequent deformation of the bones it is impossible to decide which of the first two species is the more numerous.

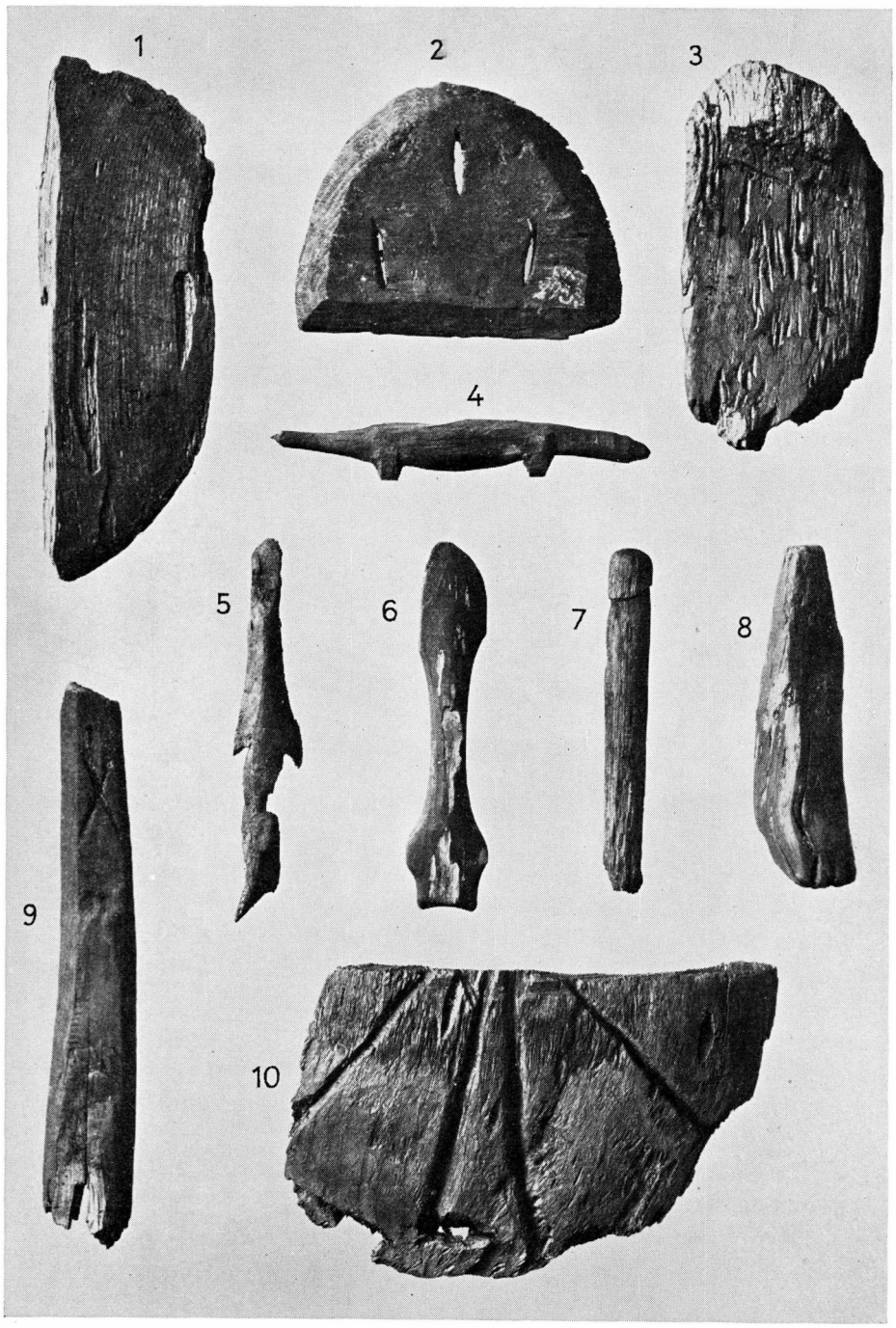

Fig. 10. Artefacts of wood and antler from the Dorset deposit in Main Area B. 2:3.

Most of the bones seem to have been of young animals. Seal bones were the only animal bones found.

The age of this culture deposit in B was determined by means of peat samples taken immediately below and above the layer in the section fig. 2. Tests at the C 14 laboratory in the National Museum by HENRIK TAUBER gave an age of 40 ± 100 A.D. for the lower sample and 10 ± 100 A.D. for the upper one (both two tests). Accordingly the age of the deposit may be assumed to date from the 1st century A.D.

Is it Dorset Culture in this deposit? Undoubtedly, quite a number of types argue that it is. On the other hand, what we have of large, pure Dorset finds to compare with is limited until MELDGAARD is able to publish his Iglulik material. The main comparative materials, in addition to JENNESS's small fundamental report of 1925, are: HOLTVED, Inglefield Land 1944; WINTEMBERG, New Foundland 1939, LEECHMAN, south side of Hudson Strait 1943, and COLLINS, the TI settlement on Southampton Island 1956. Moreover, in my "Archaeology of the Central Eskimos" 1927 I described the find at Button Point in northern Baffinland, though it is not pure Dorset, and illustrated some Dorset types from the settlements of Qilalukan and Mitimalik, also in Ponds Inlet, these Thule settlements apparently being injected to some extent with Dorset Culture.

Let us take all the main types from Sermermiut and see how they compare with the Dorset Culture finds.

The triangular blades with hafting notches (fig. 8. 1—3) are among the commonest Dorset forms; they are known from Inglefield Land (HOLTVED pl. 2. 7), Cape Dorset (JENNESS fig. 3d), south side of Hudson Strait (LEECHMAN pl. XXIX. A 9), Southampton Island (COLLINS pl. II. 4 and 6, with two pairs of notches); New Foundland (WINTEMBERG pl. VI. 17, 21 and 39—42), Button Point (pl. 61. 2—6) and Mitimatalik (pl. 44. 16, crooked, and 18, straight); in other words, wherever the Dorset Culture has been found.

The same applies to the corresponding slender form (fig. 8. 4) (HOLTVED pl. 2. 12, JENNESS fig. 3k, LEECHMAN pl. XXIX. A 12, Qilalukan pl. 44. 19).

The round blade with the hafting notches (fig. 8. 11) is also widely distributed in the Dorset Culture (WINTEMBERG pl. VI. 18; LEECHMAN pl. XXIX. A 19; COLLINS pl. IX. 13—15; Button Point pl. 61. 7—9; Qilalukan pl. 44. 21) as also the crooked, pointed blade with hafting notch (fig. 8. 14) (HOLTVED pl. 2. 8; JENNESS fig. 3i; LEECHMAN pl. XXIX. A 18; Button Point pl. 61. 12).

The triangular blade with a concave base (fig. 8. 7) is one of the Dorset guide forms (HOLTVED pl. 2. 1—4, JENNESS fig. 3g; WINTEM-

BERG pl. VI. 5 and 8—9; LEECHMAN pl. XXIX. A 19; COLLINS pl. II. 2—3 and 13; Button Point pl. 61. 7—9; Mitimatalik pl. 44. 20). It is a conspicuous difference that this form at Sermermiut occurs as a single, untypical specimen, whereas it is common at the Dorset settlements outside of West Greenland.

The round insertion blades are familiar from COLLINS pl. III. 14—17 and Button Point pl. 61. 10; but we also have them at NAUJAN, the type settlement of the Thule Culture (MATHIASSEN 1927, pl. 10. 10—11).

The small convex scrapers with out-turned edge corners are illustrated in WINTEMBERG pl. VI. 35, LEECHMAN pl. XXIX. B 2 and Qilalukan pl. 52. 16. The concave scrapers are met with everywhere, the beaked form for instance in WINTEMBERG pl. VI. 34.

Microblades and micro-cores are mentioned by HOLTVED pl. 2. 22—24; LEECHMAN pl. XXIX. B 8; COLLINS pl. IV (with side retouch pl. V).

The three-sided ground point, "burin-like implement", is a special West Greenland form, but it seems to have a parallel in some flat, polished specimens with a sharp corner in the Dorset Culture (COLLINS pl. X. 2—4, ROWLEY 1940, p. 495g, the Iglulik region; Button Point pl. 6. 1, 13; Qilalukan pl. 47. 8).

The wooden objects from Sermermiut (fig. 10) are very reminiscent of some from Button Point; for example there are a similar flat, three-sided piece with slots (pl. 62. 4), slender animal figures (pl. 62. 12, 14—17) (and HOLTVED pl. 1. 18) and ornamenting with a cross (on the human figure from Button Point pl. 62. 7). The slot-shaped cuts in these pieces of wood are of course a feature that is highly characteristic of the Dorset bone objects, drilling technique having been unknown—or nearly so—in that culture.

The thin-walled, oval steatite bowls (fig. 9. 1) are also typical of Dorset (HOLTVED pl. 2. 34; LEECHMAN p. 373; ROWLEY p. 495, fig. 1a; Button Point fig. 70). It is interesting to find the flat, pierced steatite discs (fig. 8. 39—40) at Button Point (p. 210). The hollowed-out meat tray of wood (fig. 10. 3) is found in the Dorset Culture of Inglefield Land (HOLTVED II, p. 53); whereas the oval bowl bottoms (fig. 10. 1) do not seem to occur in any earlier Dorset find.

This leaves us with the polished angmaq blades figs. 8. 8—9, 24 and 7. 19—20. Presumably they must be regarded as local forms, related to the types fig. 8. 10, 11 and 14 but transferred to the local material, angmaq, and consequently polished.

There still remains the harpoon head of Thule type, fig. 10. 5. Granted, it is more slender than these usually are, and it has a four-sided socket, as far as can be judged from its poor state of preservation.

It is interesting to remember here that HOLTVED (II, p. 63) refers to a harpoon head of Thule type 2 "rather slender and smaller than usual for this type", from the Dorset deposit at Inuarfigssuaq in Inglefield Land.

Another feature recalling the Thule Culture is the heavy cooking pots with an inside suspension knob (fig. 9. 3—4); hitherto they have not been encountered in the Dorset Culture.

Looking back on the occurrence of these Sermermiut types, there can be no doubt that HELGE LARSEN and MELDGAARD are right in their opinion that this is Dorset Culture; but it is Dorset with a local West Greenlandic stamp about it. Through the absence of the triangular blades with a concave base and the presence of types such as the harpoon head of Thule type, heavy oval steatite cooking pots, oval bowl bottoms, the three-sided "burin-like implements" and some angmaq blades, the West Greenlandic Dorset Culture differs markedly from the classical one of the Central Eskimos. Here in West Greenland the find contains what seem to be indubitable drill-bits (fig. 8. 21—22), which otherwise do not appear in the Dorset Culture, and the line hole in the harpoon head appears to be drilled, as far as can be judged with this weathered specimen.

The Dorset Culture is generally considered to be distinctly inland in character, but that certainly cannot hold good in the Jakobshavn District where there is scarcely any ice-free interior; moreover, the bones from the stratum are of seal exclusively. The baleen is evidence that the people caught whales and the material of the harpoon heads that they also hunted the caribou. And anyhow, the TI settlement on Southampton Island also reflects a Dorset Culture based almost entirely on the hunting of marine mammals[1]).

The range of the Dorset Culture in Greenland has already been discussed by LARSEN and MELDGAARD. Reconnaissances by HELGE LARSEN and GLOB in Disko Bugt established the presence of the culture at 18 settlements apart from Sermermiut, and its implement types have been discovered in southern West Greenland and at Angmagssalik. However, as in the case of the Sarqaq Culture it will be interesting to have another look at the occurrence of the Dorset types in the large, systematically excavated finds, for one thing in order to examine whether the various types survived in the types of the later cultures.

At Sermermiut there are some Dorset types in the more recent midden deposits in Main Area A: 34 implements together with 58 micro-blades and two micro-cores in the layers which also contained Inugsuk artefacts, and 5 implements plus 4 micro-blades in the upper layers

[1]) COLLINS 1956, p. 65.

with their impress of later European objects. From this, however, we learn nothing of the continued use of these types in the Inugsuk Culture or later. As I have said, in the greater part of this midden there is no Dorset horizon sharply segregated from the Inugsuk layers; Dorset must have been mixed up with the Inugsuk deposits as a result of subsequent house construction; and the presence of Dorset objects in the fully recent layers is obviously the result of later mixing.

The Inugsuk settlement in Upernavik District yielded two of the triangular blades with hafting notches, one of chalcedony, and a lanceolate, polished blade of angmaq.[1]).

Several Dorset types were found at the large settlement of Igdlutalik in Disko Bugt: in the earliest group of ruins a triangular chalcedony blade with hafting notches, and in the large group which represents the principal habitation 5 similar blades, the majority being of chalcedony, a lanceolate, polished angmaq blade and two small scrapers with a convex edge, of chalcedony[2]). The settlement of Igdlorssuit also produced several: triangular blades with hafting notches, a burin-like implement and micro-blades[3]). There is nothing surprising in this, however, for Larsen and Meldgaard record a Dorset habitation in this locality[4]).

A few Dorset types were also found at the settlements in the Kangâmiut area: Utorqait, Qeqertarmiut and Igdlutalik: three triangular blades with hafting notches, a burin-like implement and two convex scrapers of chalcedony[5]).

In the somewhat slender material of stone implements from the Julianehaab District there are a fairly slim, two-edged, symmetric blade with hafting notches, of hornstone, from Narssassuaq, and a burin-like implement from Tugtutûp isua[6]).

In the Angmagssalik District we have from the ruins in the earliest group a single-edged, polished knife blade of angmaq[7]), the exact counterpart of the one from Sermermiut (fig. 8. 24). Among the many stone artefacts from the small house at Utorqarmiut are also some which seem to belong to the Dorset Culture, for instance two rather large angmaq blades with hafting notches and two burin-like implements[8]). On the other hand, Dorset types were also found in the later houses and middens, such as triangular blades with hafting notches and burin-

[1]) Mathiassen 1930, pl. 5.17, 8.1 and 2.
[2]) Mathiassen 1934, pl. 1.4, pl. 3.12 and 16, p. 107.
[3]) Cf. pl. 9.1, 4—5 and 14, p. 154.
[4]) p. 40.
[5]) Mathiassen 1931, pp. 76, 92 and 93.
[6]) Mathiassen 1935, pl. 38.1—2.
[7]) Mathiassen 1933, pl. 3.5.
[8]) Mathiassen 1933, fig. 30.2—3 and 9—10.

like implements[1]); of the latter, 3 were found at Misigtoq, 4 at Kangârtik and no fewer than 23 at Savanganeq, where there must have been quite a considerable habitation of both Sarqaq and Dorset people.

In Northeast Greenland the large settlement in Dødemandsbugten was the finding place of a few triangular chalcedony blades with hafting notches[2]), and in the later house group III. 25 were several objects of flint suggesting Dorset Culture, including scrapers with convex edge and out-turned corners[3]). And still more to the north, in Danmark Fjord, finds have been made of indubitably Dorset objects: blades with hafting notches, oval side-blades, micro-blades and other flints[4]).

Regarding the Thule District, mention has already been made of HOLTVED's large Dorset settlement at Inuarfigssuaq, in Inglefield Land. But then from farthest north we have the small find from Hall Land[5]) —the first demonstration of the Dorset Culture in Greenland—; moreover, HOLTVED's excavations in the District secured no small number of Dorset types, both in the Thule Culture deposits (Inuarfigssuaq) and the Inugsuk Culture layers (Ruinøen and Thule).

The question now is: Can the presence of all these Dorset types in house ruins and deposits from the Thule and Inugsuk cultures be explained by later mixing from earlier deposits, as in the case of the Sarqaq artefacts? It is presumable that this must have been so in several cases, as for instance at Sermermiut itself, at Igdlorssuit and Savanganeq; but I am not sure that this applies to every case. For example, when two Dorset types like the triangular blade with hafting notches and the lanceolate, polished angmaq point, were found in the Inugsuk settlement itself, lying on a tiny island where there is no trace of Dorset habitation, not even underneath the large midden, we cannot at all be certain that there are not Dorset forms which had survived into the Inugsuk Culture, as presumably was the case with the concave and convex scrapers. Nor was any trace discovered of Dorset habitation in the large settlement of Igdlutalik, though we were there for some time in 1933, but various Dorset types (the same as Inugsuk) were found in the mediaeval deposits; on the other hand there were no burin-like implements, which seem to be the most solid evidence of the occurrence of Dorset Culture. In other words, we cannot be certain that some of the Dorset types, especially the two mentioned above, were not also known and used in the Inugsuk Culture before the latter received iron sufficient for weapon and knife blades. Nor would it seem that the two cultures were so far

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[1]) MATHIASSEN 1933, pl. 7.11, 19—20 and 24.
[2]) HELGE LARSEN 1934, pl. 3.31.
[3]) BANDI & MELDGAARD, pl. 1.
[4]) EIGIL KNUTH 1956, fig. 3, 19—26.
[5]) MATHIASSEN 1928, fig. 10.

apart in time that contact between them was impossible, perhaps through the medium of a phase of the Thule Culture which has not yet been demonstrated in West Greenland. At any rate, the Thule deposits in the settlement of Inuarfigssuaq, Inglefield Land, contains no small number of Dorset types[1]); but as the locality was also inhabited by Dorset people, we cannot know whether or not these artefacts in the Thule deposits were mixings from the earlier layers.

Another question of importance is whether there was any contact between the Sarqaq and Dorset cultures in Greenland, or it may actually be the fact that the West Greenland Dorset Culture was a further development of the Sarqaq Culture.

However, that can hardly have been the case; the differences between the two are too pronounced. Not only is the material employed for their implements different—Sarqaq principally angmaq, Dorset chalcedony—but the types themselves differ considerably. Actually, the only elements they have in common are the convex and concave scrapers, which have a very wide range in both the new and the old world, and the micro-technique, which however was not much used by the Sarqaq Culture but also has a very wide distribution. Otherwise the implement types of the two cultures vary so much that it is scarcely practicable to build any bridge between them. What is more, at Sermermiut especially they are separated by several centuries (six to seven hundred years)[2]). There can scarcely be any doubt that they represent two separate waves of immigration into Greenland. What the situation was in the intervening centuries must be left as a problem for the future to solve.

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[1]) See table, HOLTVED II, p. 42ff.

[2]) The C14 tests of charcoal from the Sarqaq deposits at Igdlorssuit (LARSEN and MELDGAARD p. 40) gave a value such as 3250 years (1300 B.C.), but this figure must be viewed with all reserve; the driftwood was not separated from the wood growing in the country itself, and of course driftwood is capable of giving much higher values for the reason that most of it came from Siberia and may have been on the way from its place of origin for a very long time.

V. THE LATER HABITATION AT SERMERMIUT

The greater part of the large midden, Main Area A, consists of deposits of the mediaeval Inugsuk Culture, as will appear from the section fig. 5. Overlying these comes the refuse from the very latest habitation, which stretches forward right up to about 1850.

The Inugsuk deposits are characterized first and foremost by the large quantities of baleen; but they were also rich in all manner of organic rubbish: bones, pieces of wood, fragments of skin, feathers, often with everything sodden with grease and forming compact layers, especially in the case of a house floor. There are a number of remains of houses in the deposits, but badly destroyed, it having been the rule there as everywhere in the country to remove stones from the old dwellings for building new ones; nor could the shape of any of these houses be determined, because no large areas were excavated. However, the houses of the Inugsuk Culture are known well enough from the earlier excavations elsewhere.

The implement types of the Inugsuk Culture, like those of the later West Greenland Culture, are also familiar from the earlier excavations along the northern West Coast at Inugsuk itself and at the large settlements in Disko Bugt, Igdlutalik and Igdlorssuit. It should therefore be unnecessary to go into their details here. Below is a list of the types found in the course of the Sermermiut excavations—in the cliff-side section and the transverse trench of Main Area A. Only few of them are reproduced in the illustrations, figs. 11—14. No sharp boundary between the Inugsuk Culture and the last habitation is discernible; presumably Sermermiut has been populated continuously since the Middle Ages. In the list the artefacts which may definitely be placed to the later habitation (after about 1650) are shown separately, whereas the others are entered under the Inugsuk Culture.

Only a few of the finds from the Inugsuk deposits need be discussed. Fig. 11. 1 is the most common type of harpoon head of the Inugsuk Culture, 2 is a variant of it with one barb, 3 is a somewhat unusual form; all are of antler. No. 6 is one of the culture's characteristic forms, the ornamental bodkin with a head, not known in the Thule Culture. Nos.

Table 3. Later types.

Presumably Inugsuk Culture.

Type	Quantity
Harpoon head,	
thin, open socket, 2 barbs, blade groove at r. angles to line hole	1
thin, closed socket, blade groove parallel to line hole (fig. 11.1)	2
thin, closed socket, no blade groove	1
thin, closed socket, 1 barb (fig. 11. 2)	2
flat, 2 spurs, no blade groove (fig. 11. 3)	1
Harpoon foreshaft for ice-hunting	1
Lance head, antler	2
Side prong of bird dart	3
Ice pick	1
Harpoon rest, kayak, bone	4
Towing toggle	1
Wound pin, bone	4
Wound pin, baleen	1
Wound pin, wood	1
Ice-scoop, baleen (fig. 13)	1
Sealing stool	3
Bow, wood	3
Bow, baleen	3
Bow sinew twister	1
Arrow-head, antler,	
no barbs, 2 knobs on tang	3
1 barb, 2 knobs on tang	2
2 barbs, 2 knobs on tang	2
no barbs, notched tang	1
1 barb, notched tang	1
2 barbs, no knobs or notch	1
Arrow-shafts	24
Leister prong, antler	2
Leister prong, baleen	1
Sling handle, wood	2
Sledge shoe, bone	43
Sledge shoe, baleen	10
Trace buckle, bone	1
Trace buckle, baleen	1
Kayak rib	3
Kayak deck-beam	4
Kayak ring, baleen	1
Kayak paddle rest, wood	1
Paddle blade	2
Kayak scraper, bone	1
Thong end-piece	1
Snow knife	4
Knife haft, bone, with pierced side-knob	10
Knife blade, slate	1
Knife, baleen	2
Axe-head, bone	4
Mattock-head, bone	3
Drill bow, bone	3
Drill shank, wood	5
Bow-drill mouthpiece, wood	1
Fire-drilling "hearth", wood	11
Whetstone	9
Wedge, bone	7
Cutting board	1
Ulo handle, stemless	5
Scraper, bone (fig. 11. 7)	1
Scraper, two-handed, bone	3
Thimble holder	2
Bodkin of bird-bone	9
Needle, bone	1
Lamp with wick ledge, steatite	3
Lamp without wick ledge, steatite	7
Lamp of granite slab with clay edges (fig. 12)	1
Lamp stand	1
Lamp trimmer, wood	1
Cooking pot, steatite, fragments.	16
Blubber pounder, bone	1
Bowl, wood, hollowed-out	46
Dish, wood, rounded-rectangular	5
Bowl bottom, oval, wood	8
Baleen side for oval bowl	2
Bowl, steatite, oval	1
Tub stave	14
Dipper, wood	2
Spoon, bone	7
Spoon, baleen (fig. 11. 8)	1
Ladle, wood	6
Bag, sealskin	2
Platform mat, baleen	4
Edge-mounting, bone	10
Carrying handle, bone	1
Meat stick	1
Snow beater, baleen	2
Eyeshade, wood (fig. 11. 9)	1

Table 3 (cont.).

Type	Quantity
Bodkin, ornamental, with head (fig. 11. 6)	1
Comb, bone	2
Bead, pierced tooth	1
Drop pendant, bone	1
Drop pendant, steatite	1
Drum frame	4
Ajagaq	1
Amulet box	2
Spinning top	1
Toy harpoon head	3
– bladder dart head, baleen	1
– harpoon foreshaft	3
– harpoon, baleen	2
– harpoon wing, baleen	1
– side prong of bird dart	3
– bow, wood	10
– bow, baleen	5
– arrow-head, bone	1
– arrow-head, wood	3
– arrow-shaft, wood	8
– leister prong, wood	1
– throwing board, wood	1
– sledge runner, wood	3
– sledge cross-slat, wood	4
– sledge cross-slat, baleen	1
– kayak, wood	4
– kayak paddle, wood	7
– paddle, wood	5
– boat, wood	2
– knife, baleen	1
Doll, wood	12
Baleen, worked	73
Baleen cord, knotted	181
Norse relics (fig. 14)	6
More recent types	
Harpoon head, flat, late type (fig. 11. 4)	8
Harpoon foreshaft with short tenon on butt	5
Ferrule for harpoon foreshaft	2
Harpoon wing	1
Throwing board	5
Heavy bladder-dart head with ring of barbs (fig. 11. 5)	5
Heavy bone point with screw butt	2
Wound pin with screw	1
Toggle for towing line	1
Ferrule for kayak paddle	2
Awl, iron, pointed	1
Ulo, stemless, large iron blade	1
Ulo, stem handle	2
Boot creaser	1
Wood stick with screw	2
Glass beads	33
Sherds of stoneware, faience and glass	9
Iron objects, sundry	9
Musket-flint	1
Spoon, horn	2
Comb, horn	1
Tub stave, imported wood	1

7—9 are three uncommon articles: a heavy scraper of whalebone with a long grip and a depression for one finger, a spoon of baleen and an eye-shade of wood.

Fig. 13 seems to be an ice-scoop; it is of baleen and consists of a bent-up strip shaped at the ends for securing to a handle, and a net of knotted baleen cords. Fig. 12 is a large lamp shaped out of a slab of gneiss, the ends and side walls being formed of clay, a most unusual type; the left end was damaged during excavation but has been restored; it is 39 cm long, 34 cm wide and 14 cm high.

The bladder-dart head fig. 11. 5, of whalebone, belongs to a rather later phase, for it seems to make its first appearance in the period 1500—1650. Fig. 11. 4 is a modern harpoon head.

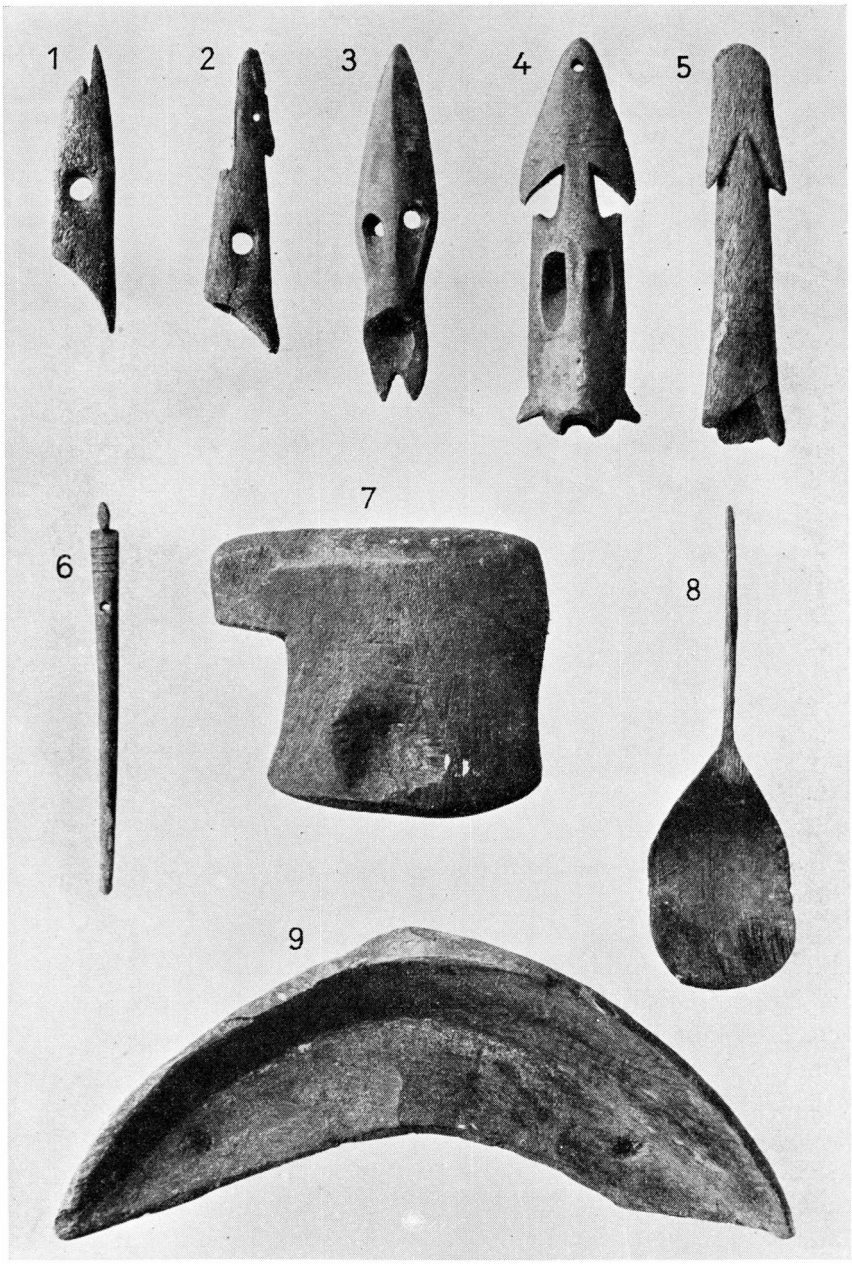

Fig. 11. Artefacts from the later midden in Main Area A. 2:3.

Some Norse objects found in the Inugsuk layers (illustrated fig. 14) deserve rather closer attention. All were found deep in these layers, which removes any doubt as to their belonging to this culture. Figs. 1

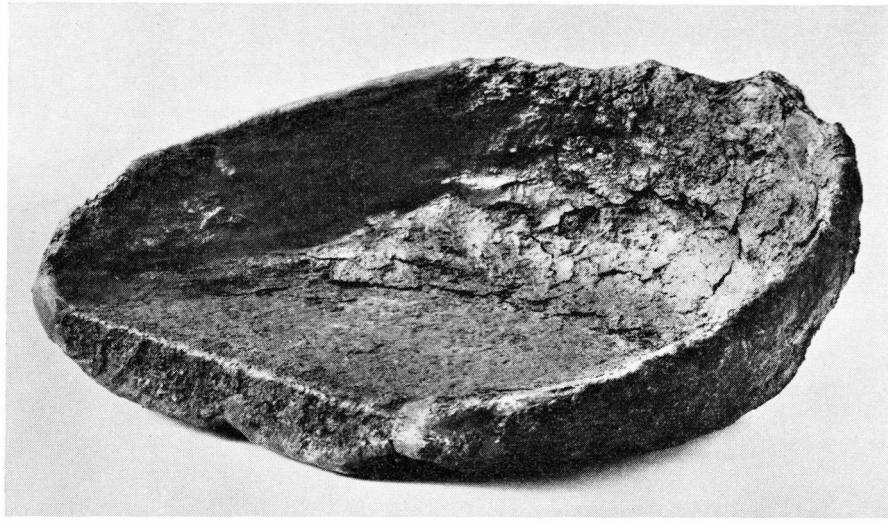

Fig. 12. Lamp from the cliff-side section, Main Area A.

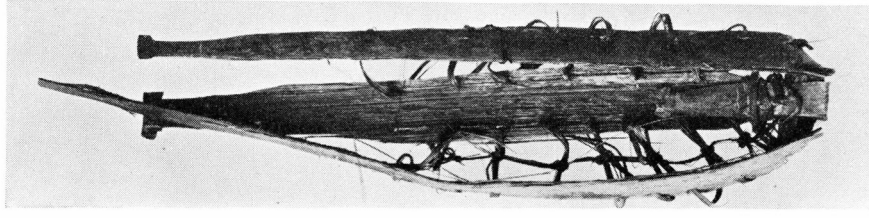

Fig. 13. Ice-scoop of baleen, Main Area A.

and 2 were found close together in the cliff-side section, both 7.6 metres from its south end, No. 2 right at the bottom of the midden, No. 1 16 cm higher up; at this spot the Inugsuk deposits extended down to the bottom. No. 3 was also found on the bottom, 6 metres from the south end; there are no earlier deposits here either. No. 5 was found 7.15 metres from the south end, 20 cm from the bottom, where again there are no deposits from the earlier cultures. Nos. 4 and 6 are both from the transverse trench, in the square lying between 8 and 9 metres from the edge of the cliff, in 9 and 8 excavation layers respectively and also deep down in the Inugsuk midden.

Fig. 14. 3 is the half of a pair of sheep shears of iron, rather slender; a similar one was found earlier in a Norse settlement at Vatnaverfi in the Julianehaab District[1]). No. 4 is a small object of bronze, with a

[1]) VEBÆK 1952, p. 114.

Fig. 14. Norse relics, Main Area A. 2:3.

transverse edge below; this is possibly part of a spoon shank which the Eskimos hammered into an edge at the bottom. Nos. 5—6 are whetstones of the familiar Norse type, of a fine-grained, red sandstone, prismatic with ground edges; one has a suspension hole.

Two ornamented pieces, Nos. 1 and 2, are interesting. The former is the lid of a spoon case of wood; it is slightly defective at both ends, but it can be seen that at one end there is a rebated area, so that the lid could be turned aside when the spoon was to be taken out of the case. One side is decorated with carved ornaments, interlaced bands. A similar spoon-case lid, but plain, was found at the Norse farm of Sandnes in the Godthaab District[1]); and curiously enough, a spoon-case without a lid was found in an Inugsuk house at Thule[2]). Fig. 14. 2 is a piece of walrus ivory of uncertain use with a similar decoration, but more in the form of plant ornaments.

These articles provide no reliable dating within the five centuries of the Norse settlement in Greenland. In Europe the ornamented objects would be dated to rather early in the Middle Ages; but as developments in Greenland were often far behind because of the frequently poor communications, this gives us no clue. It would be presumable that these Norse relics, like most of those found in Eskimo settlements on the northern West Coast, date from the 13th—14th centuries, when fraternization between the two peoples seems to have been quite brisk, chiefly no doubt through the Norsemen's summer excursions. A 614-dating, made by HENRIK TAUBER on single peat samples, taken just below and just above the lamp fig. 12, which was found near the bottom of the Inugsak midden, gave however 1240 $\pm$ 120 and 1010 $\pm$ 120 A.D. respectively; these ciphers suggest a little earlier date. Nevertheless there can scarcely have been any contact at Sermermiut between the Dorset Eskimos, who lived in the first century A.D., and the Inugsuk people. This means that Sermermiut had at least three periods of settlement: Sarqaq Culture in the 7th—9th centuries B.C., Dorset Culture in the 1st century A.D. and Inugsuk Culture from the 12th—13th century onwards, until it was gradually transformed into the Greenland Culture prevailing in the 19th century. In West Greenland we have no knowledge as yet of any Thule Culture such as that found in Inglefield Land[3]).

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[1]) ROUSSELL 1936, fig. 143.
[2]) HOLTVED 1944, pl. 44.13.
[3]) HOLTVED 1944, II, p. 64.

VI. CONCLUDING REMARKS

As we have seen, the main result of the excavations at Sermermiut is the demonstration of the fact that the locality has been populated in three periods, first by the Sarqaq people (7th—9th century B.C.), then the Dorset people (1st century A.D.) and finally by Inugsuk Eskimos and their successors, the present West Greenlanders (12th—13th century until about 1850), and that each of these groups seems to represent an immigration wave; the place was apparently uninhabited in the intermediate centuries. LARSEN and MELDGAARD[1]) discuss at some length the possibility that climatic fluctuations may have played a role in this. I shall not touch that question here; we must await the results of the pollen analyses of the deposits at Sermermiut, now in the hands of TROELS-SMITH and SVEND JØRGENSEN.

The next question is: Where did the various immigrations come from? The last one, the Thule-Inugsuk wave, has long been clarified; it was an element of "the Arctic Whaling Culture"[2]) (the "Neoeskimo Culture"), which seems to have had its origin in the regions around the Bering Strait where it has ancient ancestors (Old Bering Sea and its pre-phase, Okvik).

It is also certain enough that the Dorset Culture came from Arctic Canada via the Thule District; but the form of it discovered at Sermermiut doubtless had been stationed in West Greenland for some time before acquiring its special character. In Inglefield Land we know of a Dorset Culture that more resembles the one we know from Canada. Where that culture came from is another matter. In the Iglulik region MELDGAARD has found a whole series of phases of it, each associated with its shoreline level. So far only short preliminary communications have appeared on this important material[3]), and we must await the final publication to see what the earliest phase of the Dorset Culture looks like and where it has its nearest contacts. In his publication of the Dorset settlement TI on Southampton Island Collins advances the opinion that this culture originated in the old flint cultures of Alaska,

[1]) p. 22.

[2]) HELGE LARSEN and RAINEY 1948.

[3]) MELDGAARD 1955.

whereas MELDGAARD considers that it developed in Arctic Canada. I am inclined to side with the latter view; as long ago as in 1935 I demonstrated similarities between Dorset and some old eastern Indian cultures, and that theory has since been amplified by other workers.

The beginnings of the Sarqaq Culture have been discussed earlier; it seems to have formed a part of a culture group spread widely over Arctic North America, with its roots presumably in Alaska, where we have what seems to be the earliest known link in the Denbigh Flint Complex. The West Greenland Sarqaq Culture has its own stamp too; but here again we are unable to say yet in what direction its nearest contact lies; also in this connection MELDGAARD has some important unpublished material from the Iglulik region, one which moreover contains objects of bone.

It is of course the most serious defect in the West Greenland material of the Sarqaq and Dorset cultures that there is an almost complete absence of artefacts of organic origin, bone and wood, and this naturally provides a most deficient and one-sided picture of these cultures. In consequence, the most important task for future Greenlandic Eskimo-archaeology must be to find settlements dating from these two ancient cultures where bone and wood are preserved, and most of all, house sites. This should not be impossible if a search were made more to the north along the West Coast, where the artefacts were once encapsuled in permanently frozen strata.

Nor would it do any harm to obtain skeletal material of the West Greenlandic Sarqaq and Dorset cultures. Were these people in fact Eskimos?

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Færdig fra trykkeriet den 29. oktober 1958.