

DET KONGELIGE DEPARTEMENT
FOR HANDEL, SJØFART, INDUSTRI, HÅNDVERK OG FISKERI

NORGES SVALBARD- OG ISHAVS-UNDERSØKELSER
LEDER: ADOLF HOEL

SKRIFTER OM SVALBARD
OG ISHAVET

Nr. 63

SØREN RICHTER

A CONTRIBUTION TO THE ARCHÆOLOGY
OF NORTH-EAST GREENLAND

WITH 124 TEXT FIGURES AND 1 MAP

OSLO
I KOMMISJON HOS JACOB DYBWAD
1934

Results of the Norwegian expeditions to Svalbard 1906—1926 published in other series. (See Nr. 1 of this series.)

The results of the Prince of Monaco's expeditions (Mission Isachsen) in 1906 and 1907 were published under the title of 'Exploration du Nord-Ouest du Spitsberg entreprise sous les auspices de S. A. S. le Prince de Monaco par la Mission Isachsen', in *Résultats des Campagnes scientifiques*, Albert I^{er}, Prince de Monaco, Fasc. XL—XLIV. Monaco.

ISACHSEN, GUNNAR, Première Partie. Récit de voyage. Fasc. XL. 1912. Fr. 120.00.

With map: Spitsberg (Côte Nord-Ouest). Scale 1:100 000. (2 sheets.) Charts: De la Partie Nord du Foreland à la Baie Magdalena, and Mouillages de la Côte Ouest du Spitsberg.

ISACHSEN, GUNNAR et ADOLF HOEL, Deuxième Partie. Description du champ d'opération. Fasc. XLI. 1913. Fr. 80.00.

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SCHETELIG, JAKOB, Quatrième Partie. Les formations primitives. Fasc. XLIII. 1912. Fr. 16.00.

RESVOLL HOLMSEN, HANNA, Cinquième Partie. Observations botaniques. Fasc. XLIV. 1913. Fr. 40.00.

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GUNNAR ISACHSEN has also published: Green Harbour, in *Norsk Geogr. Selsk. Aarb.*, Kristiania, 1912—13, Green Harbour, Spitsbergen, in *Scot. geogr. Mag.*, Edinburgh, 1915, and, Spitsbergen: Notes to accompany map, in *Geogr. Journ.*, London, 1915.

All the above publications have been collected into two volumes as *Expédition Isachsen au Spitsberg 1909—1910. Résultats scientifiques. I, II. Kristiania 1916.*

As the result of the expeditions of ADOLF HOEL and ARVE STAXRUD 1911—1914 the following memoir has been published in *Videnskapsselskapets Skrifter. I. Mat.-Naturv. Klasse.*

HOEL, ADOLF, Nouvelles observations sur le district volcanique du Spitsberg du Nord. 1914, No. 9. Kr. 2,50.

The following topographical maps and charts have been published separately:

Maps:

Bear Island. 1:25 000. 1925. Kr. 10,00.

Bear Island. 1:10 000. (In six sheets). 1925. Kr. 30,00.

East Greenland. Eirik Raudes Land from Sofiasund to Youngsund. 1:200 000. 1932. Kr. 5,00

Charts:

No. S. 1. Bear Island. 1:40 000. 1932. Kr. 4,00.

„ S. 2. Bear Island Waters. 1:350 000. 1931. Kr. 5,00.

„ S. 3. From Bellsound to Foreland Reef with the Icefjord. 1:200 000. 1932. Kr. 5,00.

„ S. 5. Norway—Svalbard, Northern Sheet. 1:750 000. 1933. Kr. 4,00.

„ S. 6. Norway—Svalbard, Southern Sheet. 1:750 000. 1933. Kr. 4,00.

A preliminary edition of topographical maps (1:50 000) covering the regions around Kings Bay, Ice Fjord, and Bell Sound, together with the map of Bear Island (1:25 000), is published in:

Svalbard Commissioner [Kristian Sindballe], Report concerning the claims to land in Svalbard. Part I A, Text; I B, Maps; II A, Text; II B, Maps. Copenhagen and Oslo 1927. Kr. 150,00.

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In 1929, as a member of a two years' hunting expedition, I went to North-East Greenland in order to undertake archæological field investigations. As a contribution towards my equipment, I had kindly been given a grant from the University and the Ethnographical Museum of Oslo, which institutions accepted my collections on my return home in 1931.

When working on my collections during the course of the following year, the Museum was good enough to provide me with study accommodation and other assistance. The printing of this paper was commenced in the spring of the same year but for different reasons the work had to be postponed.

Meanwhile, an opportunity occurred to continue my investigations in the field, and, during the summers of 1932 and 1933, I accompanied the Greenland expeditions of Norges Svalbard- og Ishavs-undersøkelser as archæologist.

This treatise appears in a somewhat broken form as the reports of the two last summers have necessarily been included as addenda to the original paper.

The drawings have been done by Mrs. Hütten and Miss Krekling both of the Ethnographical Museum, Oslo; the translation is — I am glad to acknowledge — the able work of Mr. J. C. Aird.

Oslo 20 December, 1933.

Søren Richter.

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Map: The Central Part of North-East Greenland.

INTRODUCTION

The Country. North-East Greenland between the Liverpool Coast in the south and Cape Bismarck in the north, forms a distinct polar region of its own. Its long, eastern, sea border extends over six degrees of latitude. The Liverpool Coast, a serious obstacle in the path of all traffic up and down these shores, separates the country from the fjord system situated to the south, whereas on the north a natural boundary is formed by the inland ice which rears loftily almost from the sea itself.

The territory stretching between the extreme points mentioned, is an area comparatively favoured by nature. The broad Arctic current which slowly flows down the east coast of Greenland and renders it, taken as a whole, a most inhospitable coast, presents fewer hindrances to navigation along this particular stretch. It is here that the mighty ice-belt, up to about 500 km broad — a bulwark against the outer world — breaks up with the approach of mid-summer; and the ice-floes cease their passage and remain drifting, more or less scattered. From the middle of July, therefore, until well into the autumn, the country concerned becomes the most easily accessible part on the northern half of the east coast.

In many ways the natural features are reminiscent of the Norwegian Coast: wide fjord mouths; a vista crowned by high, rugged, mountain ranges; large islands of a size equal to the largest in Norway and open foreland along a broad front down to the outermost coast, are characteristics of the formation of the landscape. Seen from the sea, the shore seems to rise steeply and abruptly from the water's edge, with an occasional low entrance to a valley, but on approaching nearer under lee of the land, the mighty mountain ranges are seen to merge below into a foreland of varying width. Some places along this farstretching, rugged landscape fall steadily and evenly towards the sea; elsewhere the foreland disappears altogether and only here and there, where certain valleys debouch, does a somewhat scanty vegetation manage to exist on the sandy, stony, debris banks thrown up in the course of time by rivers and smaller watercourses.

Heading towards the coast, as usual between lat. 74° and 75° N., a long, low piece of land lying far out in the ice gradually comes into view on the right at the same time as,

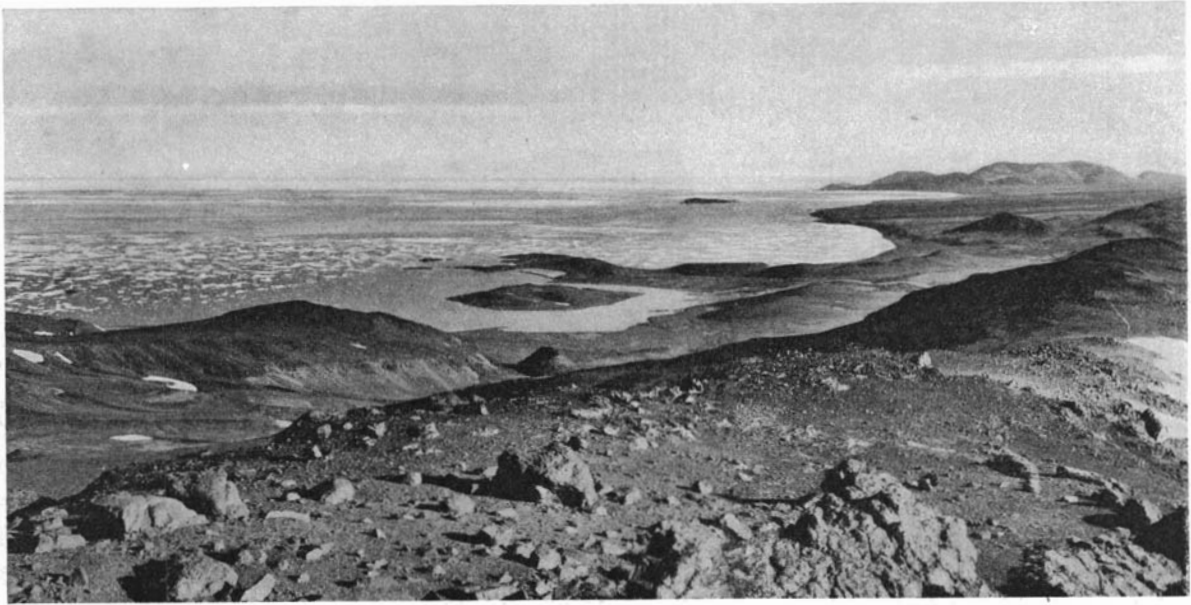
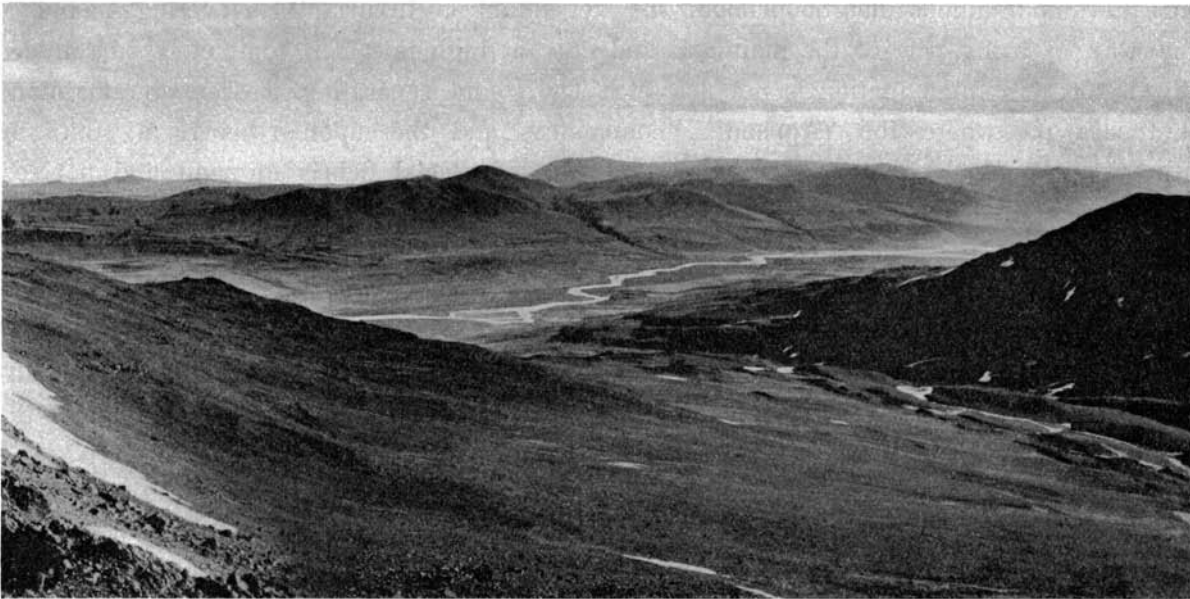


Fig. 1. From the east

immediately beyond the bows, the mighty mountainous line of the mainland landscape emerges from the blue haze of the far distance. This low land is the large island Shannon. Seen from the sea only a single medium-sized plateau interrupts the otherwise quite horizontal line which the contour of this island then forms. Still more to the right, a glimpse is caught of the pointed peaks of the greater Koldewey Island, but thereupon the landscape disappears in the haze towards Denmark Harbour.

When well under the lee of the land, about lat. $74^{\circ} 30' N.$, the two medium-sized islands Little Pendulum and Sabine Island are right ahead. Although having some open, pleasant country and not being particularly high, both convey the impression of being desolate and barren, Pendulum Island in particular. Towards the north, on the mainland beyond Shannon Island, a long, high range of serrated peaks is discerned. These peaks are the Barth Mountains which mark the extent of the Hochstetter Foreland on the inland side.

The extensive, gently undulating lowlands forming the foreground of these mountains belong to the best section of this northern coastal region. For so far north, the vegetation displays a surprising luxuriance; musk-oxen, moreover, graze in large herds on the gentle slopes. To the south, the large Ardencaple Inlet, with the greater part of its coast quite steep, cleaves well into the inland ice. Continuing southward, the eye, turning almost due west, rests upon the mountains of a medium-sized island named Kuhn. The outer coast of this island is comparatively steep, but inland, the country gives on to long, gentle hilly slopes with rich vegetation. To the south of Kuhn and to the inside of the Sabine and Pendulum Islands, stretches the extensive Wollaston Foreland which is cut in two by a



coast of Hudson Land.

(B. Luncke phot. 3/8 1931.)

broad valley running from Albrecht Bay to "Trangfjord" on the Tirolerfjord. The outer part consists of high, mountainous, barren country descending abruptly to the outer coast. At this spot a valley — the only one of any appreciable size — opens, broad and low, to the ocean; proceeding inland, however, it grows narrower and narrower, and finally disappears to become one with the mountains far beyond.

Continuing along Wollaston Foreland and rounding Cape Borlase Warren, the open country is seen to be somewhat more extensive. The vegetation, however, is also extremely scarce here. The soil is poor, as these great expanses, especially around Cape Herschel, are covered by a thick layer of clay-like mire both during the early summer and autumn.

The entrance to the Tirolerfjord is now reached. On the left lies Clavering Island; on the right is pleasant, gently-sloping, open country with a single large valley running across its face. Soon, however, the fjord narrows and the rocky, cliff-like walls rear perpendicularly on either side. Just prior to the ship entering this so-called "Trangfjord" — the narrowest part of the channel inside Clavering Island — the large valley bisecting Wollaston Foreland is seen on the right.

To the north of the west point of Clavering Island, the fjord abruptly turns to the north-west and thereupon branches off into a narrow arm — termed by Norwegian hunters, "Blindtarmen" — penetrating far into the country. It is bordered by rugged, mountainous country, falling abruptly towards the sea, but just within the mouth of this fjord, on the right hand side, a long valley opens through which runs a small river, rich in fish. The valley is only lost when far in among the mountains. As the summer proves warm

in this mountainous neighbourhood, the vegetation is luxuriant. Clavering Island is by way of being part of the mainland and only at high tide is it completely surrounded by water; circumnavigation is not possible. The sound separating it from the mainland branches off where the "Appendix" commences and thereupon runs in a southerly direction. A reef, presumably a narrow stretch of glacial debris of sand and pebbles, has accumulated here from shore to shore, and is unsubmerged at low tide.

On the mainland west of Clavering Island, broad, fine, open foreland exists with plateaux and rather fertile slopes in succession. One of the best Norwegian hunting stations has been situated here for many years. Lower down the sound a second narrow fjord, the Grantafjord, about 10 km long, with steep rocky sides, cuts its way inland. About half-way along its course it takes a kind of elbow turn and terminates its journey under the inland ice.

The channel between the island and the mainland gradually merges into the wide, large Claveringfjord which eventually ends under two broad glacier-tongues, one on either side of Jordanhill, an outstanding, swarthy mountain distinguishable at a considerable distance.

In Norwegian Arctic history, Clavering Island is one of the best-known places of North-East Greenland and it has proved the most frequently visited point of call since Norwegian hunters first touched at the coast of this country. Large herds of musk-oxen were found grazing so supplies of fresh meat were easily obtainable. Fur trappers have also long favoured Clavering Island as being among the best. Stations have therefore repeatedly been erected on the island and occupied during many winters.

Seen from a distance the island seems to consist of wild, rugged mountain-masses falling abruptly to the sea on all sides, but a turn ashore here and there reveals the countryside as offering all the conditions necessary for the existence of game. Useful minerals, however, have not, so far, been found on the island.

Clavering Island is 60 km long and about 40 km broad, with its greatest extent in a direction running from East to West. The coast is not greatly indented; a single large bay, however, Kirchenpauer Bay, broad, but not penetrating deeply, cuts into the north-east coast.

The island is divided into two sections, eastern and western, the latter being much the larger. Cape Mary, the prominent rocky mass on the eastern extremity, is separated from the rest of the island by a broad passage, but hardly a few hundred metres high, stretching from coast to coast. This depression is broad of base, with slopes gently rising on either side and extending towards a number of cirques giving on to a plane about equal to that of the passage. The greater part of the outer coast is steep, but running throughout its length is a narrow strip of foreland with small sheltered bays where vegetation is in abundant growth. Near the south-east point the productive land again becomes more extensive. Wide, open valleys wind far up between the mountains; the outer country falls away partly in great broad terraces, and partly in long, hilly, rugged slopes the



Fig. 2. Hudson Land as seen from Clavering Island.

(B. Luncke phot. 13/8 1931.)

green turf on which, throughout the summer, freshens up the otherwise desolate and sombre mountain landscape to a height of about 1500 feet.

For a country lying 4° of latitude farther north than the most northern point of Norway, this may appear a striking phenomenon, but the author is not alone in his surprise; all the Norwegian hunters who have been engaged in or have roamed over these regions have been struck by the rich vegetation found, up to the height mentioned, on the slopes facing south. This is not the case on Clavering Island alone, as similar tracts are also found farther south in the neighbourhood of Franz Joseph Fjord. Herds of musk-oxen are frequently found grazing at these heights.

The poorest part of the island is the west and north coast, but the foreland, with some of the larger valleys, is fair in parts. The vegetation and animal life as a whole, is more indigent here than on the east and south coast. This, however, seems to be a characteristic feature held in common by all parts of these regions which, as it were, turn their back to the sun and light.

In districts where winter reigns supreme for nine months of the year, the snow conditions and precipitation are of particular importance. When precipitation is great and the snow on the northern slopes lies as a thick untrodden carpet over the whole countryside, all wild life tends to disappear.

On the whole, the facilities the condition of the snow offers for movement from place to place — for traffic on foot and for sledging — are good on Clavering Island throughout the winter and it is this circumstance which, no doubt, goes far to explain why this particular island seems once to have been among the principal abodes of the natives. Regular winds

from the glacier arms on each side of Jordanhill sweep the south coast and, keeping not only the ground but also the ice fairly bare, render travelling on the fjord easier. Winds are also frequent along the outer coast.

Looking southwards from Clavering Island a view is secured of Hudson Land, the largest and richest of the sections into which Eirik Raudes Land¹ can naturally be divided. Two large, deep fjords cut far into this part of the country and sub-divide it into three sections.

Loch Fine runs from the north, taking — from a point near the estuary — a straight line in a southerly direction. From the point where it ends, a broad, low-lying plain continues southward towards Myggbukta, the innermost part of the broad Mackenzie Bay sweeping into Hudson Land from the south-east. Continuing, a broad depression runs westwards to the head of the Musk-ox Fjord — the second, large fjord of this district — which penetrates into the south-west corner of Hudson Land for a distance of about 60 km. Proceeding from its estuary, the fjord first takes a south-easterly direction; it thereupon swerves, and taking a north-east course, approaches to within scarcely 20 km of Loch Fine.

I should feel inclined to partition off Hudson Land in the following manner: East Hudson Land as being bounded on the west by Loch Fine and by the broad depression leading to Myggbukta; South Hudson Land as defined by a northern boundary marked by the Musk-ox Fjord and the low land between that fjord and Loch Fine; and West Hudson Land as bordered on the south and east by the two fjords mentioned.

Loch Fine is more than 40 km long and on an average a good 5 km broad. Towards its mouth it bends slightly and, being quite narrow at this point an appreciably strong current is formed. In fact, so strong is the current that usually, in the narrows, a channel remains open in the ice throughout the winter. Consequently, particularly during the winter, large numbers of fjord-seal² congregate and gambol in the channel thus formed or lie resting along the edge of the ice.

As is the case with many of the long inland fjords of North-East Greenland, Loch Fine is free from ice much earlier than the large, open, main fjords. In the inland fjords, the ice simply melts away with the beginning of summer, but in the main fjords it is not until towards the second half of July that the ice breaks up and is carried out to sea by the wind and currents.

Narrows are also found in the Musk-ox Fjord but the stretch concerned is towards the extreme limit of the fjord and defines a comparatively small basin only; the current here freezes over during the winter.

Prominent mountain masses, long deep ravines and extensive lowlands characterize the eastern section of East Hudson Land. On the whole, the foreland of the north coast is poor and there is little of it. Near Cape Stosch, however, at Cape Krogness, its extreme

¹ The region between 71° 30' and 75° 40' Lat. N.

² (*Phoca foetida*.)



Fig. 3. Myggbukta. The station.

(B. Luncke phot. 21/s 1931.)

point, where a remunerative Norwegian hunting station is situated, coal seams exist in the mountains near at hand.

Cape James, the north-eastern point, is steep. Lying just off the cape is Jackson Island, small, but richly stocked with game. To the south of Cape James the foreland becomes more extensive and although at first it is hilly and interspersed with minor valleys and plateaux, somewhat more to the south it merges into far-stretching lowlands.

To the south of the cape is the Danish hunting station Carlshavn situated in a district rich in game.

Proceeding in a direction due west from the lowlands south of Cape James is a low valley opening on to the upper part of Loch Fine.

Towards the south the rocky eminence Hold with Hope is seen with both its flanks almost perpendicular. In the foreground is a wide depression running from coast to coast, in a direction east to west. Along the outer coast, the rocky wall, with narrow terraces here and there, descends steeply into the sea. It is possible, although with difficulty, to round the cape on foot.

The natural line of traffic up and down the coast during the winter is, however, — and certainly always has been — the broad depression behind Hold with Hope.

Having at length rounded Hold with Hope — the ice near this broad promontory often puts considerable difficulty in the way of navigation — the coast line is seen running westward.

The outer limit of the broad Mackenzie Bay is now passed. On the right the country falls with gentle slopes, and broad terraces give on to the sea shore.

Hardly 10 km from the cape, one of the largest rivers along the coast discharges into the sea.

The inland limit of the bay where the Norwegian wireless and meteorological station Myggbukta is situated is reached after proceeding about 30 km in this direction. A view

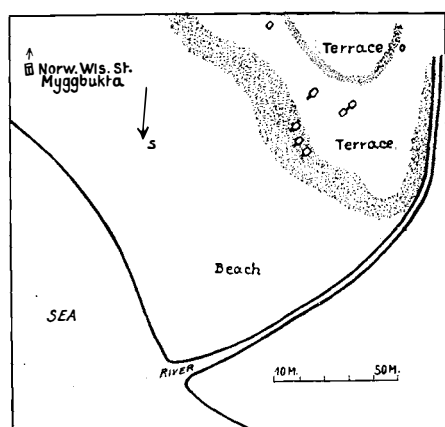


Fig. 4. Myggbukta. Settlement.

is thereupon obtained up through the broad depression already mentioned, the extent of which is bounded on the north by the mountains at the head of Loch Fine. The east boundary of this low-lying land is formed by undulating country which only merges into higher ground when far in the east. River beds form their way through the district and dotted here and there are small lakes. The wild goose seems to have made this district one of its favourite breeding places, and on the slopes leading to the wide plains is one of the permanent migratory tracks used by herds of musk-oxen.

On the west, the same depression is flanked by the long, partly serrated Giesecke Range. The plains within Myggbukta extend a distance of about 30 km in length and about 10 km in breadth. Like the terrain more to the east these plains are also furrowed by large and small river courses and they tend to become somewhat hilly particularly towards their borders. To a large extent the plains consist of sandy heaths or clayey slopes but extensive tracts of ling are also found as well as many a place with a rich flora of other herbs.

Excepting in the north where vessels can approach as far as the small flat holm lying about 2 km from the head of the bay, the inner part of Mackenzie Bay is very shallow. During the early summer abundant bird life exists along the shores of the bay. The wild goose breeds on the highland tarns; the glaucous gull in some of the steep cliffs; the king-eider among the swamp holes along the beach; and, out on the small holm mentioned, the long-tailed duck and the Arctic-tern flock in multitudes. Along the beach and up and down the water courses snipes strut searching for food; and evenly distributed over the whole of the low-lying country lives the Arctic gull in pairs. During the summers when the lemming is found to be numerous in these parts, the snowy-owl and the falcon also hatch-out in considerable numbers.

Vegetation in the areas adjoining the bay is of the high-Arctic type. There is not a great variety of species but none the less during the latter part of July the fields in many places are rich in floral colouring, blue, red and yellow. *Ranunculus*, saxifrages, yellow papavers and the beautiful *Epilobium latifolium* grow in clusters so close together that, at some spots, the flowers form a thickly-woven carpet. Luxuriant grass grows along all the river courses, with clumps of willow here and there. The slopes, for the most part dry, are covered with ling, and the swampy hollows by mosses and various kinds of willows. Drought, however, begins to make itself evident by the month of August, and, consequently, all vegetation withers over wide tracts of country.

From Myggbukta the coast continues in a south-westerly direction. Standing out towards the coast is the broad ridge of C. Bennet, bluff in front, but, to the rear, falling steadily

to the low land behind. It is about 10 km long, a good 5 km wide, and a few hundred metres high; its relief is rugged with great plains, hills and valleys. Vegetation, even on the highest summits, is exceptionally developed and animal life is prolific throughout the whole year. No doubt the facilities for movement offered by the excellent snow conditions throughout the winter have much to say in this respect.

The common winter wind at Myggbukta is the Loch Fine wind — from the fjord of that name — which crosses the lowlands and the Bennet Ridge on its way to the sea. This wind often prevails throughout the whole winter and is at times so strong that large tracts are swept clear of snow. With regard to snow conditions and the facilities for movement afforded thereby, the neighbourhood of Myggbukta is one of the best throughout the whole of North-East Greenland.

To the south of Bennet Ridge the coast turns more westward. The foreland is broad and flat and it is here that two more rivers of the larger kind discharge into the sea. This stretch of coast line, about 20 km long and ending at Cape Franklin, the north-east point of the mouth of Franz Joseph Fjord, belongs to those parts of the country most difficult to traverse during the winter, as it lies to the lee of all prevailing winds and consequently if the winter precipitation proves heavy, snow lies deep.

Breaking abruptly at Cape Franklin, the coast line takes a north-westerly direction, and the Franz Joseph Fjord proper opens. When entering and sailing midstream, the fjord, — almost 30 km across here and with apparently perpendicular walls of mountain rock on either side — conveys an imposing impression.

The northern coast is formed by the southern section of Hudson Land — South Hudson Land — or to be more exact that part of it known as the Gauss Peninsula. Viewed from the sea, the drop to the fjord is, as mentioned, apparently precipitous, but also here a strip of foreland although broken at a few places, skirts the shore. For the first 20 km from Cape Franklin, the terrain is hilly with a few broad terraces being found higher up the mountain side. Several smaller, bluff-faced promontories rise here and there sheltered between which lie delightful nooks where vegetation thrives gloriously during the summer. Opening to the west is a broad valley — where the Norwegian hunting cabin Smedal is

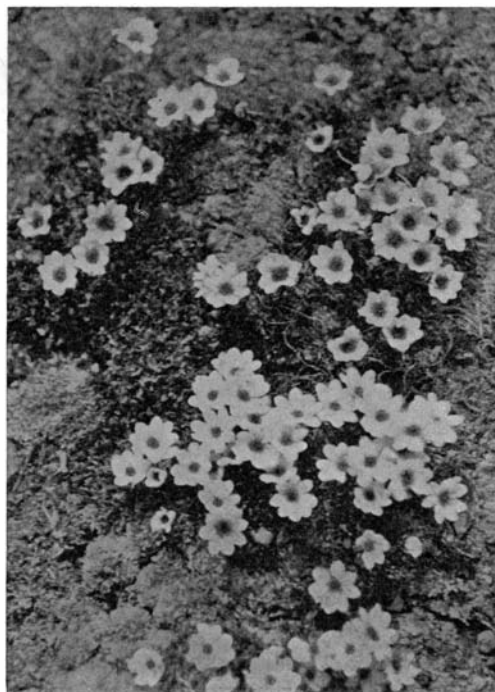


Fig 5. *Saxifraga groenlandica*.
(End of July 1931.)



Fig. 6. Myggbukta. Vegetation. (*Epilobium latifolium*.)
(End of July 1931.)

situated, the area on Gauss Peninsula where the game is most prolific and the soil most fertile. The entrance to the valley is broad and low; along its bottom flows a rather large muddy river; towards its borders are broad terraces at varying heights merging, in turn, into the steadily rising mountain slope. The valley gives

the impression of being blocked about 10 km away; but on proceeding nearer it is seen that it branches off in two directions, into lateral valleys in fact, which continue far into the mountains.

The whole of the Smedal valley faces south, and protected as it is from the keen winds coming from Franz Joseph Fjord, the summer can prove very warm. It is therefore possible before the weather becomes too dry in August to trace the fresh green turf as far up as the mountain crest.

Within Smedal, however, the foreland again grows narrower with broader tracts only near the wide sandy or stony banks formed by the rivers. Nevertheless, the whole length of this narrow strip of coast is expressive of a rich vegetation, and of a bird life which seems to thrive everywhere on its steep sunny cliffs.

About 40 km within reach of Smedal the mountain range is again cleft by a single large-sized valley, New Tromsdal, which crosses the peninsula as a broad depression. Its highest point, however, lies several hundred metres above sea level.

Cape Kolthoff, the most north-westerly point of Gauss Peninsula is steep, and does not permit of being rounded on foot. On the farther side of the cape is the Musk-ox Fjord of which mention has previously been made. On both sides the mountains are towering heights; on the right the terrain falls in steep slopes towards the sea. High up under the pinnacles, however, are grassy ledges and terraces of which no view is obtained from below.

Opposite Cape Kolthoff — on the other side of the fjord — is the Waltershausen Glacier, 10 km across, its high bluff advancing well into the sea.

The country stretching from the farther, northern bank of the fjord is at first hilly, but about 10 km from the glacier it opens on to broad plateaux as well as on to cirques and valleys which penetrate far into the mountains. A permanent Norwegian hunting station is situated here.



Fig. 7. Ymer Island seen from the eastern entrance of Sofia Sound. (Orvin phot. 3/8 1931.)

Further inland, the course of the fjord can again be characterized as traversing hilly terrain, but at intervals there are wide valleys each with a varying declivity towards the fjord itself. Approaching the head of the fjord the country becomes low and finally merges into the low isthmus which leads to Loch Fine.

We now cross to the west section of Hudson Land — West Hudson Land — which as mentioned above is bounded by Loch Fine and the Musk-ox Fjord. The declivity towards the former is steep, with a narrow strip of foreland following the shore. The landscape of the second fjord has already been briefly described. The isthmus which links up the heads of the two fjords extends in a north-westerly direction and issues on to a broad valley known as Great Valley which, some 20—30 km farther, when amid the mountains, suddenly contracts and forms a gateway thereupon, however, seeming to widen once more.

The interior of this western section is still little known, but, viewed from the high ground along the fjord, the ice-free country appears to be very extensive. The limit of the inland ice seems to be a considerable distance away.

The district of the Musk-ox Fjord is rich in animal life; and a wide hinterland stretches from both its banks. Salmon is found in its waters; the walrus enters now and again, and on several occasions evidence of large narwhal shoals has been sighted out in the fjord.

Situated between the mouth of the Musk-ox Fjord and the main fjord, is the broad, but comparatively short Nordfjord. Its western bank rises like a high, steep, rocky wall; its extremity, however, slopes steadily seawards. This is the east of the Strindberg Peninsula. On the west, farther inland, the coast line turns gradually and, continuing eastwards, ceases where it runs into the Waltershausen Glacier. Right in the corner, as it were, is the broad, open entrance to a long valley which continues twisting and turning far inland. A wide,

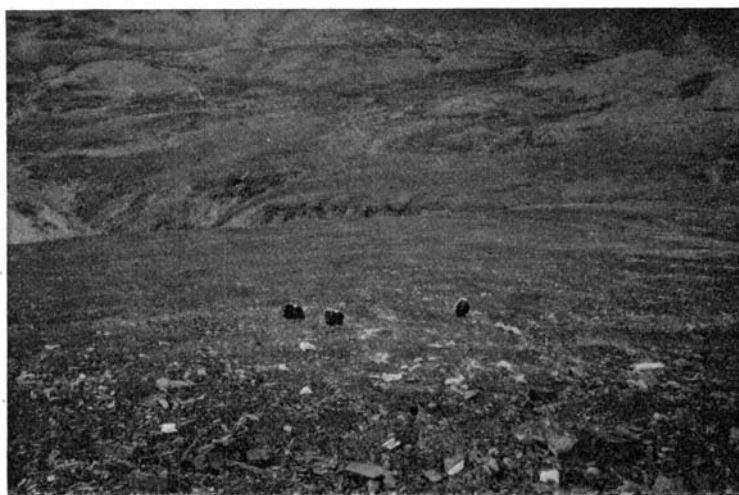


Fig. 8. From the east coast of Ymer Isl. Musk-oxen are seen feeding.
(Orvin phot. 4/8 1929.)

clear river seemingly well stocked with fish, discharges here. A short distance up the valley the river runs into a rather large lake surrounded by fine grass-grown slopes. As mentioned, the extreme point of the peninsula falls steadily to the sea. On the west, the country becomes steep, with a number of cirques, terraces and ledges at divergent heights up the mountain side. This coast is formed by the long Geolog Fjord which runs northwest and only ends when under the inland ice.

The main fjord bends here and continues in wide curves, almost in a south-westerly direction. At a few places it branches off into lesser fjords and links up with the fjord delta to the south, by way of the Antarctic Sound. There are three main estuaries issuing to the sea, viz., Sofia Sound, Vega Sound and Davy Sound.

Andrée Land, an extensive, high, apparently barren mountain district when viewed from a distance, forms the first part of the northern coast of the inner section of the Franz Joseph Fjord. Actually, however, Andrée Land is traversed by several broad, deep valleys. Due west of Cape Weber, its precipitous eastern point, the steep outer coast is broken by a broad, deep cirque known as Eleonore Bay Valley, with fertile slopes and terraces facing south.

Bordering the Franz Joseph Fjord on the south for a distance of more than 110 km, is the island of Ymer, the most northern of the three large islands in this fjord district.

Ymer Island is greatest in extent in a direction running from east to west where it is about 110 km across, as against a distance of about 30 to 40 km from north to south. It is almost bisected by the Dusénfjord, a long waterway entering from the east, and attaining a distance of about 5 km only from the fjord on the other side. The isthmus between the two fjords is low — scarcely 100 metres high — but broad. Traversing the first 4 km from the head of the Dusénfjord is a river with two lakes, one being more than 2 km long. The northern part of the island has been named Gunnar Andersson Land. The country bordering the head of the Dusénfjord and the isthmus leading to the Franz Joseph Fjord is perhaps the area of this fjord district most rich in game and wildlife. Whereas the southern slope is steep, the northern slope, consisting partly of hillocks, partly of ridges, and partly of sheltered cirques facing south, only becomes steep and rocky



Fig. 9. Norwegian station. Vega Sound.

(Hoel phot. 15/s 1931)

when well inland. It is probable that in the vicinity of the large lake on the isthmus, coal deposits exist a short distance up the slopes.

Facing Franz Joseph Fjord, Gunnar Andersson Land is steep, but on its extreme eastern limit it runs out on to a long, low tongue of land known as Cape Graah. On the south is gently undulating open country with grass-grown ledges and terraces here and there, some as high as the mountain rock itself. Very frequently during the winter, when driving on the fjord, we sighted herds of musk-oxen — like hardly-discernible black ants against the snow — well up on the highest terraces of the mountain side.

The southern part of the island is more than twice as large as the northern, but it does not give the impression of being so richly stocked with wild-life. The north coast facing the Dusénfjord, is steep; it possesses a few valleys of a fair size, but, as is usually the case with land turning away from the sun, it is poor both in vegetation and animal life.

The east, however, is best favoured and it is here that rather extensive areas of fertile soil exist. Jutting out herefrom into the Franz Joseph Fjord is a large spit of land usually known as Wijkander Island; the foreland within gently rises towards the mountain rocks which, however, are not reached before a height of about 1000 metres is attained.

The sea to the east of Ymer Island is a very good hunting ground. Throughout the summer the ringed seal and the bearded seal frequent the narrows near the mouth of Sofia Sound in considerable numbers. Towards the end of the winter, about the middle of April, when the strength of the sun begins to make itself felt, we could see how the seals mounted the ice to sun themselves and, by early May, we found them evenly distributed, either

singly or in groups, so far as the eye could reach across the large bay into which Sofia Sound runs. It is here, on the outer coast of Ymer Island, that one of the best Norwegian hunting stations is situated.

The south coast of the island is bounded by Sofia Sound, the entrance to which is bifurcated by Robertson Island, a small island lying in the narrows mentioned. Of the two channels thus formed, the southern is shallow and not navigable, whereas the northern is deep with its current at times very rapid. Along the navigable channel Robertson Island presents a rocky bluff, a perpendicular wall about 40 metres high where birds breed in the nooks and crannies. Here are the haunts of the glaucous gull and the white-fronted goose, as well as those of the eider duck and the long-tailed duck on the shore below where a strip of foreland is found.

Seen by the passer-by, Ymer Island for the first 20 to 30 km along the shores of Sofia Sound, rises gently; almost on the entrance coal deposits are found high on the mountain side. Far up, between Sofia Sound and Antarctic Sound are broad lowlands with valleys cutting deeply into the mountains from several directions. A low passage leads from Sofia Sound to the Dusénfjord. The banks of the Antarctic Sound are steep almost everywhere.

Geographical Society Island is the next of the three large islands. It is somewhat smaller than the foregoing and is characterized by wide lowlands, particularly near its outer limits. Inland, that is, westwards, it converges until, finally, it is only about 10 km in width. A broad depression runs across the island from north to south, the height of the pass being about 200 metres over sea level; the transit of the island can therefore easily be accomplished both summer and winter.

On the whole, the north coast is naked and poor, but along the south coast facing Vega Sound, with the exception of its extreme point, there are slopes and extensive plains having the finest pastures I have seen in North-East Greenland. During our stay the first summer, we were surprised not to find large herds of musk-ox grazing in this particular district, but, apparently, the musk-ox has shunned both this and the large island lying to the south; moreover, no evidence exists of this animal ever having been on these islands at all. It is evident, however, that the reindeer, from the number of antlers found, was once numerous in the neighbourhood of Vega Sound.

Bird-life at Vega Sound is very varied during the summer. The wild goose breeds extensively, especially along the outer half of the sound, and the Arctic tern inhabits a few small holms. The year I spent in this part of Greenland large, coveys of ptarmigan were feeding, practically speaking, in every one of the innumerable valleys both large and small; and during the spring and autumn, flights of Arctic sparrows migrated along the sound. It is, however, only in the short summer and autumn that life at Vega Sound proves so animated and rich. With the coming of winter the countryside is hidden beneath a deepening carpet of snow which banishes all animal life; moreover, as there is little or no wind the snow

settles where it falls and remains until, towards the early summer, it finally melts away. Of the three larger rivers of the island, one discharges on the north and two on the south. One of the two latter runs towards the outer part of Vega Sound; higher up its course it forms three lakes



Fig. 10. The Vega Sound Station in winter. (End of April 1931.)

the second of which, some 3 to 4 km long, is the largest. Many small islands and holms are scattered in the eastern half of the sound; in fact, from the turn taken by the sound half way up its course, to the estuary itself, about 30 may be counted.

The island of Traill, the largest island of North-East Greenland, forms the southern bank of Vega Sound. The island is half as large again as Ymer Island. On the whole, it is low along its outer coast, particularly on the inner shore of Mountnorris Inlet, a medium-sized fjord entering from the east. The coasts on the west and south are steep, with the exception of a stretch along Holm Bay on the west.

Three small islands, the Ruth, Maria and Ella Islands, lie at the inner end of King Oscar Fjord. The last mentioned island is the largest; it is almost triangular in shape, each side being about 10 km in length. The southern half of the island is rugged and barren, but the northern half presents as a whole a hilly aspect with fertile spots here and there. The island is richly supplied with game and wild life, and, judging from tracks and other evidence of animals, the musk-ox occasionally grazes there in herds. In 1930, however, we saw merely a single ancient ox.

Within these three islands is Kempefjord running far inland. It branches into three arms of which the two outer are fjords having extremely steep coasts, whereas the third runs through a narrow but pleasant strip of open country and, finally, continues into a long, broad valley. More to the south, the wide Segelsällskapets Fjord cuts towards the west and thereupon bifurcates, each arm having steep banks. It is here that King Oscar Fjord swerves in a south-easterly direction. As mentioned, its northern coast is steep but the entire length of its southern coast is fronted by a foreland varying in width. At Antarctic Harbour, a large bay situated far down the fjord near Davy Sound, are extensive lowlands stretching westwards from the head of the bay, and by way of broad valley-passes establishing contact with the gigantic ice-free land to the south and west.

The mouth of the King Oscar Fjord is Davy Sound. Three fjords of medium size with banks — as at most other places — gradually rising from the shores, penetrate into Jameson Land on the south coast.



Fig. 11 a. The Eskimo winter settlement at the mouth of Sofia Sound.
The ruins are seen to the left of the Norwegian station.
(Orvin phot. 3/s 1930.)

From Davy Sound a glimpse is caught of the serrated alpine ridges of the Liverpool Coast — the steep unpropitious coast more than 100 km long, which, as previously mentioned, forms a natural barrier against all land lying to the south.

Climate. On the whole, the weather conditions on North-East Greenland are such that towards the

end of May winter begins to yield sway and by June and the first half of July the actual thaw seriously sets in. According to observations made up to the present, the snow seems to melt away gradually, but it happens that, some years, spring breaks suddenly with great and unexpected force. In the summer of 1930, for example, the real thaw seriously began during the night of 7th and 8th of June and when day broke the water was found to be half a meter above the level of the ground floor of the Norwegian hunting station Myggbukta, with the booming and rushing of released turbulent streams re-sounding everywhere. By the middle of July the snow disappears from the southern slopes and the Arctic flora enters upon a short but very flourishing florescence. The open channel skirting the coast grows wider and wider and very soon the wind off the shore sends the sea-ice out to the ocean. The period from the middle of July until well on into September may be looked upon as summer; for so long a period it is possible to traverse by boat the outer coast and the fjord arms farthest inland; the weather is then quiet and, according to Arctic standards, warm. I have camped out in a tent during the second half of September and I remember how we enjoyed the warm sunshine by day and endured the evenings and nights which proved almost hot and close. October is the real autumn month with the sun sinking lower and lower; the ice is then forming and one is confined to the station and its immediate environs. With the coming of November may be expected the first fall of snow, and by then the sea-ice is able to carry sledges. Shortly before the middle of the month the sun sinks finally below the horizon: throughout the country winter has now set in, its grip not to be released until May has come and gone.

February and March seem to be the coldest months. At some places the temperature often drops to minus 40° C and more. In 1930, during these two months spent at Vega

Sound, we had greater figures for lengthy periods at a time, the minimum being 46°C with a slightly higher temperature during the brief space the sun was above the horizon. Around Myggbukta with the sea climate in evidence, the coldest winter temperature is somewhat higher.

About the middle of the winter, particularly during December and January,

fairly lengthy periods of mild weather occur during which the temperature is only just below zero. These periods of mild weather do not always mean precipitation, but, if at all, then mostly as a very light fall of diminutive snow flakes only, as snow-dust in fact. It may also happen, as it did during the winter of 1930, that snow falls increasingly from the end of November until Christmas Eve.

Taken altogether, precipitation is very irregular. It is at its minimum from May to November. In some years, snow may fall in June and early July. Rain, on the other hand, is infrequent, at all events, in the course of the three summers I spent in North-East Greenland, the rainfall registered was only a short shower each year. Black frosts usually come in October and ice commences to form on the sounds and inner fjords as early as the first few days of that month. Towards the end of the month, ice along the outer coast usually becomes strong enough to take a load, but at so early a date it cannot be trusted implicitly. On 29th October 1930, for example, we drove, heavily laden, across the frozen mouth of the Franz Joseph Fjord, but three days later, wishing to return, we found the whole fjord open and swept clear of ice. To the north, between Clavering Island and Sabine Island, there have been some winters with open water extending from the coast as far out as one could see, due, no doubt, to the eddying mountain winds prevailing here some years; the hurricane-like force of these winds breaks up the ice and carries it out to sea.

As stated above, precipitation is during the winter. Snow fell from November to February during the winter 1929—30; but the succeeding year we had, as mentioned, a heavy fall before Christmas and snowy weather throughout April with hardly a pause.

The winds are strictly local in extent. In the northern half of Eirik Raudes Land winds prevail much more than in the southern half, where districts exist in which, throughout the whole winter, almost complete calm is to be observed. What winds

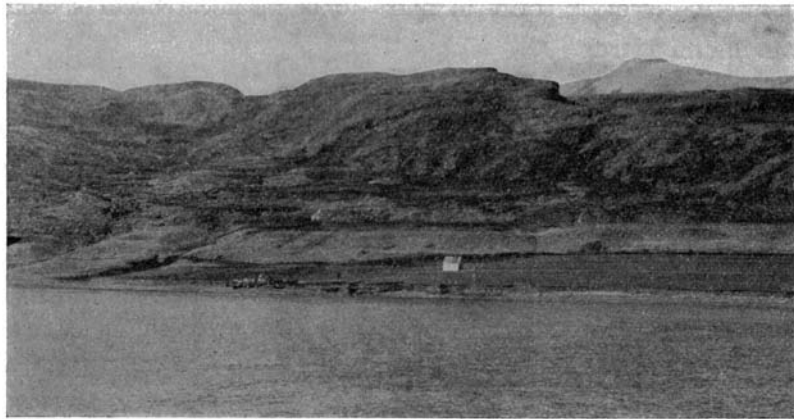


Fig. 11 b. The Eskimo settlement at the mouth of Sofia Sound. (Sept. 1929.)
Ruined houses to the left of the station.

there are, however, conform more to being local breezes emanating from the large valleys and inland fjords.

The old settlements of the natives. Eskimo once roamed over the entire country and, practically speaking, travel where one will, evidence is found of their hunting and other activities.

Their permanent habitations — the winter huts — are spread over the whole country, singly or in clusters, both along the inner fjord arms and the outer coast. The site chosen for the settlements seems to have been circumstanced by three main factors, viz., regard to light, hunting and the facilities for movement offered by the state of the ground. On occasion, however, the first-mentioned had to yield place when one of the two remaining factors perhaps made itself particularly evident. As an instance may be mentioned a habitation on the bay north of Cape Petersen, on the west coast of Ymer Island, situated immediately below a high rocky bluff facing north, the sun thus being excluded until the spring is well advanced. The bay, however, is one of the few places in the region of the inner fjords where the ground conditions for winter travelling seem to remain satisfactory throughout the season. Game treks pass on the slopes above and, in the course of the season, many a bear prowls along the shores.

I have frequently come upon winter habitations where none of these factors could particularly be urged, but a closer examination of the ruins concerned revealed that they had obviously been occupied for a comparatively short time only, probably hardly throughout the winter.

My stay in these regions convinced me, in any case, that the winter homes of the Eskimo were not chosen casually, but with a detailed knowledge of the country and of the facilities the site offered for getting through the dark months in the best possible manner.

The winter huts were always near the coast as the catching of marine animals was the most important occupation of the Eskimo and the one upon which they could most safely rely. The musk-oxen which grazed here during the periods the Eskimo inhabited the east coast were probably few in number. In the northern half of Eirik Raudes Land several discoveries bear witness that the natives have hunted and utilised this animal, but I know of no find, so far, indicating that the Eskimo has done so in the southern half. The reindeer, however, has existed in large numbers at most places although it certainly must have proved a difficult animal to track down during the short winter days: it would be better to characterize it as the most important game of the late summer and autumn months, and, according to the testimony of the many food caches containing remnants of fox, hare and ptarmigan, smaller kinds of game have frequently furnished food for the winter.

But, as mentioned, the catching of marine animals has certainly been the most important Eskimo occupation. Northwards from Clavering Island to Sabine Island, where certainly most years the sea remained open — as at present — for the greater part of the winter, the Eskimo occasionally, restricted only by the short daylight, could hunt at sea in exactly the same manner as during the summer. More to the south where good sealing places existed

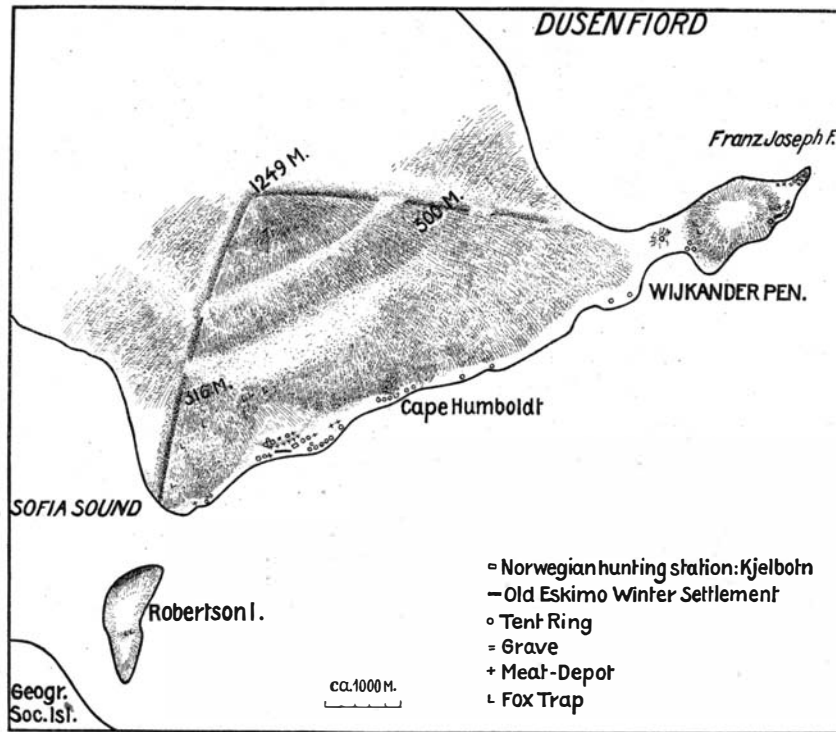


Fig. 12. The east coast of Ymer Island.

just outside the door of some of the larger settlements, hunting at the breathing-holes in the ice was probably carried on successfully during the many long, dark, winter months.

It is manifest that the Eskimo oriented his hut according to the sun, and where the nature of the ground has not prevented this, the front of the hut and the opening of the entrance-tunnel faces due south.

The south coast of the Gauss Peninsula is one of the highest and most genial places on North-East Greenland. I recall many a day in February with the dusk of the afternoon already settled over Ymer Island, at a time when Gauss Peninsula still lay bathed in delightful sunshine. Moreover, the stretch of coast mentioned has been one of the most thickly-populated regions of Eirik Raudes Land and, incidentally, judging from the remnants discovered, probably the last spot to have been inhabited. I believe that the surmise may be put forward that the Eskimo lived there for a considerable period after Clavering in 1823 had met natives living along the coast more to the north. Excepting on its outskirts, Gauss Peninsula also offers excellent locomotion conditions, but it was perhaps rather the track of the narwhal following the line of this coast during the summer, which attracted the Eskimo to these parts: of the bone remnants found here, those of the narwhal form the predominating part.



Fig. 13. Winter settlement. Cape Wijkander Peninsula (22/7 1930).

Similarly, success has accompanied the choice of a site for a large settlement near Cape Humboldt on Ymer Island: it can truly be maintained that the three conditions aforesaid, determinative of the site of the habitation, are here fulfilled. It has been, in fact, one of the habitual haunts in the southern district. Many sites have been occupied and vacated perhaps within so short a time as a year later, but in the case of the one now concerned several generations of Eskimo have assuredly lived there. The settlement was once deserted — the population perhaps having become extinct — but fresh hunters' families arrived and settled down on the site and, in any case, rebuilt two huts. Conditions for locomotion have always been good in the particular vicinity of the settlement, and on the ice immediately beyond the natives found one of the best hunting places for both the fjord seal and bearded seal. The



Fig. 14. House-ruin. C. Wijkander Pen. (22/7 1930).

narwhal also attracted lively attention; further, many of the caches on the slopes, contain remnants of fox, hare and ptarmigan.

During the summer the natives wandered far afield. Indications of tents are found practically everywhere along the shore. The Eskimo presumably pursued the narwhal into the great fjords, and during the latter part of the summer they were certainly engaged in deer-hunting,

but I have never seen traces of tents farther than 100 metres from the shore.

Earlier archæological work. Archæological research on North-East Greenland was initiated by the second German North Pole expedition of 1869—70. Its members covered the district lying between Franz Joseph Fjord in the south and Cape Bismarck in the north, and found many relics of the Eskimo settlements. Excavation work was undertaken by Dr. Pansch, particularly on Sabine and Little Pendulum Islands, the east and south coast of Wollaston Foreland, on Clavering Island and on Shannon Island in the north, in short, the coastal section between lat. $74^{\circ}00'$ and $75^{\circ}10' N$. The finds are discussed and



Fig. 16. The point of C. Wijkander Pen. (20/7 1930).



Fig. 15. Tent-ring on the point of C. Wijkander Pen. (20/7 1930).

described in Koldewey's monumental account of the expedition¹.

Research along this part of the coast was continued during A. G. Nathorst's voyage in 1899. Nathorst returned chiefly bringing with him from the region where the German expedition had worked, finds discovered by the Norwegian hunters with whom he came in contact. Somewhat more to the south along Franz Joseph Fjord and King Oscar

¹ "Die Zweite Deutsche Nordpolarfahrt in den Jahren 1869—70". Leipzig 1874, pp. 587 seq.

Fjord, Dr. Hammar, a Swede, on the same expedition conducted his own investigations regarding the deserted settlements between lat. 72° and $73^{\circ}30'$ N. Of the results achieved only reports exist which are dispersed in the narrative of the expedition¹; also, in a short review of the most important relics by Hj. Stolpe². Moreover, on various occasions Norwegian hunters have returned with archæological material — now in Norwegian museums — from their expeditions between Shannon Island and Cape Hold with Hope³.

The material collected by the "Danmark" expedition of 1906—08 originates from regions more to the north. It is exhaustively described in "Meddelelser om Grönland", Vol. 44, by Chr. Bendix Thostrup and Thomas Thomsen. Archæological investigations have also been undertaken farther south on the coast by Lieutenant C. Ryder and his Danish and Norwegian colleagues of the Hekla expedition to Scoresby Sound in 1890—91⁴. Finally, the coastal region to the immediate south of the Scoresby Sound, was investigated by G. Amdrup, during his boat journey of 1899—1900⁵.

Many years elapsed before anything was heard of the archæological researches of the "Danmark" expedition: interest in the ancient population of this coast seemed to have finally ebbed, when the increased activity on the part of Norwegian hunters six or seven years ago again attracted attention to these regions. Finds made by these hunters then again began to arrive in Norway. Further, in 1926, the British Cambridge expedition collected certain archæological material, an interim report of which, written by Dr. Johnson, archæologist of the expedition, was published in the *Geographical Journal*, 1927. Subsequently, this collection was treated by Th. Mathiassen in "Meddelelser om Grönland", Vol. 74. More recently, in 1930, an American expedition under Captain Bartlett carried out archæological work in the region to the north of Myggbukta regarding the results of which an interim report by J. Bird, the archæologist of the expedition, appeared in the *Geographical Review*, 1931.

¹ A. G. Nathorst: "Två somrar i Norra Ishafvet". Vol. II. Stockholm 1900.

² "Über die Forschungsergebnisse der Schwedischen Grönlands Expedition vom Jahre 1899. 14. Internat. Amerik. Kongress, Stuttgart 1904, pp. 101 seq. This incompletely published material has partially been used for various treatises dealing with Eskimo archæology; by O. Solberg: "Beiträge zur Vorgeschichte der Osteskimo", Christiania 1907; W. Thalbitzer: "Ethnological description of the Amdrup Collection from East Greenland comprising objects found in Eskimo house-ruins and graves north of Angmagsalik between 68° and 75° lat. N." *Meddelelser om Grönland*, Vol. 19. Similarly, these finds are mentioned by G. Swenander in "Harpun-, Kastpil- och Lansspetsar från Västgrönland". *Kungl. Svenska Vetenskapsakademiens Handlingar*. Vol. 40, No. 3. Uppsala and Stockholm 1906.

³ Cf. Solberg, *Beitr.*, p. 11.

⁴ *Meddelelser om Grönland*, Vol. 17, and Capt. R. Knudsen, "Heklas Reise 1890—91". *Dagboksoptegnelser*. Oslo 1932.

⁵ *Meddelelser om Grönland*. Vol. 28. (Amdrup and Thalbitzer).

INVESTIGATIONS IN THE FIELD 1929—31

During my first sojourn in the Arctic I spent a little more than two years in North-East Greenland as a member of a Norwegian hunting expedition. During the two first summers much time was occupied in building huts; in September, we began trapping live foxes. We were merely a few in number and as no one could be spared for any length of time, my archæological work had to become a secondary consideration. The consequence was that the time and opportunity I could have wished for my excavation work was not always available, but, all the same, our activities made us very familiar with the terrain, particularly with the region along the coast where relics of the Eskimo population are to be found. My comrades were also interested in the archæological work to be done and they always informed me when evidence of ancient settlements was forthcoming.

In this manner, I had only time for occasional research during the first summer concerned. We entered near Cape Wynn and unloaded at various places during our voyage southwards along the coast. Towards the end of the summer and throughout the autumn I was permanently stationed at Vega Sound where we were occupied in erecting hunters' huts and with hunting, it thus being impossible for me to leave this neighbourhood during the first year.

The year following, however, in March and April, I was able to undertake a lengthy journey on skis, and although it was not possible, of course, to conduct close investigation, I was able to visit most of the known settlements as far north as Cape Borlase Warren. I spent the early part of the summer at the station near Cape Humboldt on Ymer Island and during July was able to investigate the numerous ruins to be found on the outer part of the island. Towards the end of that month I crossed to Gauss Peninsula and excavated at a settlement there. The arrival of the "Veslekari" from Norway, however, brought much other work. Stores had to be brought ashore and huts erected.

On board the "Veslekari" I went to the district lying to the south of Myggbukta and during this voyage I was able to study a fairly extensive tract stretching from Myggbukta as far as the mouth of Davy Sound.

I was stationed at Cape Humboldt for the latter part of the summer and the trapping of live foxes confined me to Ymer Island for the remainder of the period during which I could have undertaken research work of an archæological nature.



Fig. 17. Stone circle, partly disturbed. Cape Wijkander (20/7 1930).

With the coming of summer the third year, I was at Myggbukta, but it was not until July that I was able to cross to Gauss Peninsula on foot. I was then away two weeks, my main object being preliminary exploration for a boat trip to be made as soon as the ice had broken up. I was, however, able to do excavation work as well.

The ship from Norway this year placed a motor boat at my disposal and also a colleague,

although his primary task was the collection of anthropological material. I again travelled along Gauss Peninsula on a two weeks' trip and excavated at several spots. Moreover, this summer, I managed to investigate the settlement at Myggbukta as well as a single house more to the east on the way to Hold with Hope.

My field investigations during 1929—31 thus comprised the stretch from Cape Borlase Warren to the south of Antarctic Harbour, with my main field of operations lying to the south of Myggbukta.

As previously mentioned, the outer coasts of Ymer Island seem to have been the site of one of the principal Eskimo habitations and, as I know this district best, I shall commence my account of what I have been able to observe in the old Eskimo settlements, by first describing the ruins extant in this neighbourhood.

The eastern coast of the island facing Foster Bay — the large bay between Hudson Land and Geographical Society Island — is about 10 km in length and, as already described, its northern section protrudes as a long tongue of land into the outer part of Franz Joseph Fjord. According to high-polar standards, the country is fertile, and wide in extent; it is delineated from the remaining part of the island by steep declivities converging from both sides at the very summit and having but few passes.

As Ymer Island is somewhat withdrawn from the outer coast, little is noticed of the raw, damp climate and the many days of fog which, for example, can make the summer at Myggbukta so cold. The weather conditions of the island must rather be considered as being at an intermediate stage towards the dry inland climate. Spring arrives earlier here than it does in the outer coastal regions and the vegetation is considerably richer and more luxuriant than in the inner fjord districts where drought at some places as early as the month of August almost reduces the country to a desert. It therefore follows that animal life

is as prolific on land as in the sea off its shores, and it is evident that this particular region to-day — as in past decades — offers most favourable potentialities where hunting is concerned.

The countryside skirting the coast is richly reminiscent of Eskimo occupation. Two large settlements were situated here, the one immediately within that point on the coast bearing the name Cape Humboldt, the other on the north-east point of the island; again and again along the whole strip of coast, indications of tent occupation are to be found,



Fig. 18. Grave on the point of C. Wijkander Pen. (20/7 1930).

besides caches and stone traps, the latter as high up as 300 m above sea level.

Hardly a kilometer from the mouth of Sofia Sound a large-sized strand-flat has been formed as a foreground to a comparatively wide cirque-shaped depression in the broad ridge which stands out from the bulk of the mountain behind. Lying in rows at about the centre of this level plot, are ruins of Eskimo dwellings dug out from the low bank-shaped acclivity of an ancient shore line. The row of houses runs from east to west, the most easterly being about 15 meters from the beach, the most westerly, about 25 meters; the height above high water mark is between 6 and 7 meters. The soil, on the whole, is rich mould. The flat ground to the rear of the houses is somewhat marshy and throughout the summer is able to supply water for the hunting station close by.

Every spring, these holes in the earth which once served as human dwellings, could best be described as marshy burrows. Undoubtedly the coming of the thaw, inexorably forced these folk to resort to their tents: the stone rings now marking the one-time sites of these tents are usually found on spots becoming bare of snow early in the spring.

The settlement consists of the ruins of 8 houses; most of them were in an extreme state of collapse but, by means of their characteristic formation it was possible to distinguish them from their surroundings. Counting from the east, the first 7 in the row are of the small type of house most commonly encountered; they are about 2.5 m long and 2 m wide, with an entrance-tunnel below floor-level, of between 2 and 4 m in length. The 8th house is of the larger type and is 3.5 m in length and 3 m in width and on each side are two fairly large hollows in the earth which, possibly, have been connected with the main room by tunnels. These hollows which are 1.2 m square have possibly served as storage rooms.



Fig. 19. Isolated house-ruin, about 100 m from the settlement on C. Wijkander Peninsula (20/7 1930).

At a first glance the dwellings seemed to resemble natural depressions in the soil rather than ruins of habitations which once housed human beings. The bottom of each was covered by stones, large and small, overgrown with turf and moss. With the removal of this covering, however, each earth-hole assumed a shape, which, at all events, gave some idea of how it had appeared when occupied: a small, low, oblong living-room, broad in front, narrower and on a slightly higher plane at the rear, with, as entrance, a long narrow tunnel below the level of the floor.

In order to get out one had to crawl down through a very small square or semi-circular aperture in the front part of the room and thereupon on all fours wriggle through a long narrow passage several meters in length. I shall not now, however, go into further details with regard to the Eskimo house and its construction, but return to the matter later, as I subsequently discovered dwellings better preserved which furnished a more trustworthy foundation for re-construction.

During excavation at Cape Humboldt, I was particularly struck by the large use the natives had made of narwhal skulls as building material for their houses. The walls in several of the older dwellings were, to a large extent, constructed of such skulls arranged edgewise one alongside the other. In the estimation of the Eskimo this material must have had its advantages as there was no lack of stone in the neighbourhood of this settlement.

The two houses in the centre bore evidence of being of a more recent date than the others. Neatly built of



Fig. 20. From the settlement near Cape Petersen (1/5 1930).

flat stones laid one upon the other, the walls still stood, probably at their full original height. The entrance-tunnel had not wholly fallen-in and the covering of moss which clothed the interior part of the ruins was considerably thinner than in the other houses concerned. Moreover, the archæological work here yielded better results: at all events, I gained the impression that these two houses had probably been occupied long after the settlement had otherwise been deserted.

I found hardly any woodwork in any of the houses of this settlement although there had been no lack of driftwood along the outer coast of Ymer Island.

Bone remnants were not so profusely scattered on the slope as at several other settlements, but under the covering of turf lay refuse of various kinds to a depth of about 20 cm. I found bone remnants and defective utensils of varying kinds practically everywhere I excavated in the neighbourhood of the settlement as well as between the settlement and the sea.

The second settlement-ruin on the outer coast of Ymer Island lies near the northern point of Wijkander Peninsula (Cape Wijkander), the long tongue which, as already mentioned, just into the outer mouth of the Franz Joseph Fjord. Probably the peninsula was once an island itself, but it is now connected with the main island by a low sandy flat; its centre lies comparatively high and is hilly to some extent; there are several indentations on its outer coast. The northern point is a long, low tongue about 100 m in length, with a sheltered sandy bay on the side facing inland.

Lying on the northernmost bay on the east side on a site where its high centre commences to merge into the out-lying lower land, are the ruins of 5 winter dwellings, one situated alone about 100 m from the rest and about 20 m from the shore, the remaining four dug out from the side of a bank just above high-water mark. Like the ruins near Cape Humboldt all the houses have fallen-in and are overgrown with moss. One house was of the larger type (3.7 m long and 2.7 m broad), four of the smaller.

No refuse heap had accumulated and the archæological finds were accordingly few and poor, although two huts were excavated and tests made at random in the others.

The 10 km stretch from the entrance to Sofia Sound to the outer point of C. Wijkander Peninsula is reproduced on the sketch given in fig. 12 where all the ruins are included.

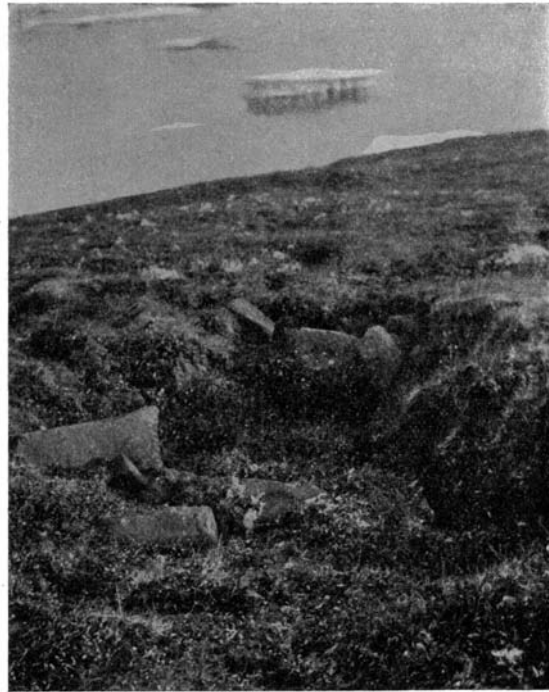


Fig. 21. House-ruin near the eastern entrance to Vega Sound (6/9 1929).



Fig. 22. Settlement on Ella Island (14/9 1930).

settlement. A long row of caches lies on the acclivity leading to the level ground, where, about 20 m above sea-level, several tent-rings are seen. In the same neighbourhood are several caches, large and small, as well as three graves, in two of which skeletal remnants were found.

Apparently, the point of Cape Wijkander has been a comparatively well populated place during the summer: tent-rings abound on the little sandy beach where also are cairns of various kinds. There are also numerous stone-settings having the outlines of winter huts; they are partly filled up with small, round, chalk-white pebbles (fig. 17). This has probably been the children's playground.

Two untouched graves were also here; the one on the sandy beach itself, the other among the cliffs above. The former was shaped like an oblong heap of stones and had a length of about 3 m and a height of about 1 m. When the stones had been thrown aside it was seen that in the centre of the heap was a coffin-shaped sepulchral chamber about 1 m long, $\frac{1}{2}$ m wide, and $\frac{1}{2}$ m high. The walls and roof were of flat flag-stones, and the floor was merely the sandy beach. The roof rested upon props of drift-wood laid cross-wise over the walls of the grave. Strangely enough, of the skeleton, the skull only was found. The second grave was partly of natural formation, but here again was found the small, coffin-shaped sepulchral chamber constructed of stone slabs. Lying within was a skeleton, practically intact. In a third grave which, however, was despoiled, lay nothing with the exception of a defective skull. An intact narwhal tooth was in one of the tent rings and I was also



Fig. 23. Depot (Cache). Ella Island (14/9 1930).

As will be observed, tent indications lie in rows behind each other. The majority are along the present bluff which, at places, rises about 2 m over high-water mark, but tent indications and caches also exist farther in on the plain near old shore lines. Many similar and other reminders of Eskimo times are extant on the large terrace running 50–60 m to the rear of the site of the winter

able to collect various utensils which were strewn around.

The lengthy Dusénfjord is not particularly rich in Eskimo relics. This beautiful fjord, abounding with game, should have proved pre-eminently suitable as a site for permanent settlements, but neither my comrade who had this particular neighbourhood as his hunting ground and knew it thoroughly, nor I, myself, who have travelled along the fjord on several occasions, found any ruins of winter dwell-

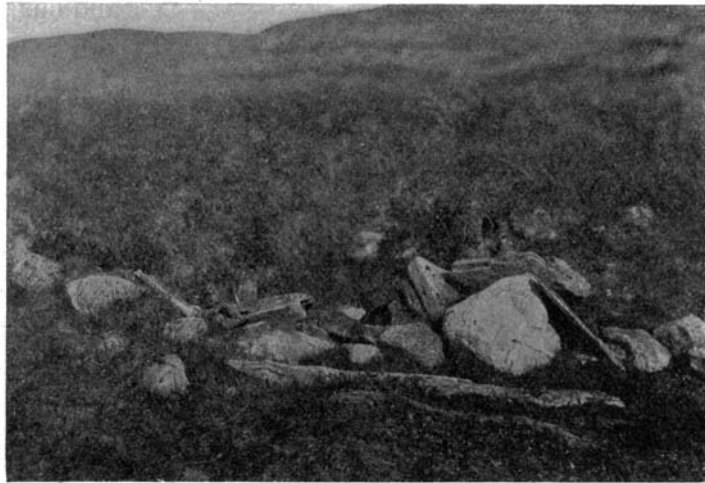


Fig. 24. House-ruin? Cape Petersens (5/8 1930).

lings. Although tent-rings lie here and there they are not very numerous at any one spot.

On the north of Ymer Island, however, towards Franz Joseph Fjord another deserted winter settlement is found¹ about 5 km from the point of Cape Graah. Unfortunately, I was not able to visit this site during a summer season.

As already mentioned, an ancient winter settlement lies on the small bay near Cape Petersen on the north-west of Ymer Island, but as I arrived at this site on May 1st, when on a sledge journey and found that snow covered all the hollows in the open, it was impossible to undertake close investigation. The photograph, however, (fig. 20) shows the collapsed ruins of two houses, both of the smaller type and having had exceptionally short tunnel entrances.

Like Dusénfjord, Sofia Sound has, apparently, also been without permanent settlements, but at certain spots, particularly near the large valley which debouches about 20 km up the sound, lie some tent-rings and caches.

Vega Sound, on the contrary, seems to have had greater attraction for the natives, as winter houses and tent-rings are to be found at several places along the north coast. The first permanent site I discovered in this vicinity was at the extreme outer part of the sound on the north side of the large funnel-shaped fairway beyond Nordenskiöld Island.

This site is situated where the extensive low-lands commence, which stretch as far east as Cape Mc. Clintock and as far north as Cambridge Bay. A steep bluff, at some places 5 m high, runs along the coast, with an occasional passage permitting of descent. On the level ground above are the ruins of two houses, one being considerably farther away from the beach than the other. Along the edge of the bluff are seven tent-rings, in addition to cairns of several kinds. I arrived here with a comrade in order to erect a hunter's hut,

¹ See also Nathorst: "Två somrar i Norra Ishafvet". II. p. 356.



Fig. 25. Tent-rings. Cape Petersens (5/8 1930).

a single object of archæological interest. Under the layer of turf which covered everything within the ruins was a whole net-work of lemming burrows so excavation was easy; all the same, as stated, nothing was found which bore evidence of having once been handled by human beings. In one of the tent-rings, however, lay two small-sized fragments of bone-shoes used on sledge-runners.

At the spot where Vega Sound, about half way along its course, turns eastwards, lie the ruins of an ancient Eskimo dwelling. Of all the Eskimo habitations I have seen on Greenland, this is the one which conveys the impression of being of a ripe, old age. The contours of the actual living-room were but faintly visible in the ground and the tunnel-entrance was like an overgrown ditch; in fact, had it not been that I considered the little tongue of land and particularly the small bay on which the house is situated, as being eminently suitable as a site for a dwelling, I would hardly have observed this ancient Eskimo house at all.

Excavation yielded only a few finds of archæological interest, but some stone knives I discovered exhibit a more primitive shape than is usually the case with implements found on North-East Greenland. The house has been of the larger type.

Higher up Vega Sound, on the south-west point of Geographical Society Island in fact,

and our small motor-boat being heavily loaded with material and the sound being choked with pack-ice as far up as the shallow sound between the most westerly of the Scott Keltie Islands, we had had a long and trying journey. We therefore achieved little else than just about erect the hut before a fog-bank came stealing in upon us from off the sea and as we were without provisions and other necessary equipment for a lengthy stay we considered it advisable to be off again and to travel as far as possible up the sound before the fog finally blotted everything out. I was able, however, to make a few tests at random among both sets of ruins, but I did not strike upon



Fig. 26. Children's playground. Cape Petersens (5/8 1930).

are the ruins of two winter houses, the one somewhat farther from the shore than the other, and both in an advanced stage of collapse. I have not visited this spot during summer and, therefore, have not had an opportunity of making a detailed examination of the site.

Tent-rings are found here and there along the whole north coast of Vega Sound, most frequently merely a single ring at each particular spot, but the characteristic double rings are also found. An ancient tent settlement exists on the largest but one of the Scott Keltie Islands, facing the deepest sound of the archipelago.

On the small Maria Island a few tent-rings and caches only are to be found, but the Eskimo have permanently inhabited the larger Ella Island. To the north of the large bay which sweeps into this island from the east, are the remnants of what, presumably, were once winter dwellings (fig. 22).

In the course of time the marsh to the rear has crept forward until now the ruins are covered to the very front, the sites being so overgrown with moss that only one ruin can confidently be described as having been a winter dwelling. I discovered this dwelling in the middle of September when out hunting, but as the frost was already in the ground I was unable to do much excavation beyond unearthing a few utensils. Two months later



Fig. 28. Tent-rings on the southern side of Gauss Peninsula, near the mouth of Franz Joseph Fjord (25/7 1930).



Fig. 27. Tent-ring. Cape Petersens (5/8 1930).

I was again on Ella Island when I discovered the ruins of a further house on the small bay south of Cape Elisabeth. It is situated on flat marshy ground a good distance from the shore and is considerably dilapidated. I was not at the site the following summer and consequently, have not examined it. Tent-rings and caches exist in considerable numbers on Ella Island, (see fig. 23) especially along the north side of the large bay previously mentioned.

Near the mouth of Segelsällskapets Fjord, at its northern extremity, is a winter

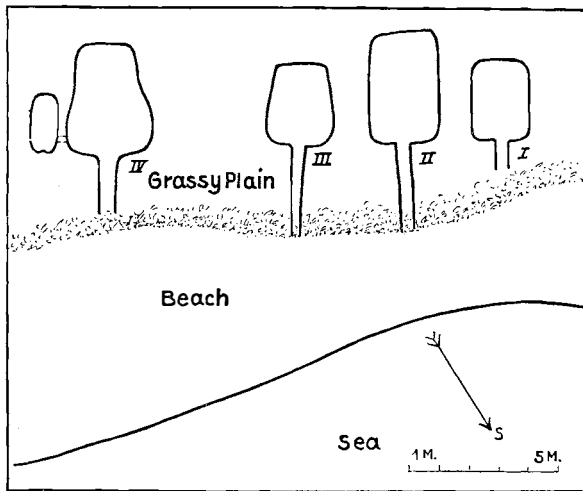


Fig. 29. Settlement No. 1, Gauss Peninsula.

settlement — with the ruins of two dwellings — discovered by Norwegian hunters. I was not able to visit the site, however. The country lying to the south of the estuary was much visited by the Eskimo, but during the summer only. I discovered tent-rings on both sides of Cape Petersens as well as cairns of various descriptions (see fig. 24—27).

No evidence of Eskimo occupation seems to be available in the vicinity of Antarctic Harbour and its extensive hinterland, but due south of Cape Biot, near the entrance to Fleming Inlet, Norwegian hunters while busy here, discovered an ancient settlement with the ruins of 5 houses.

On the north side of Davy Sound, near the south-east corner of Traill Island are winter settlements and tent-rings known from the days of the British expeditions of the first half of the 19th century¹.

The Eskimo does not seem to have travelled much along the lengthy inland fjords, although a few winter habitations are found along the inner part of Franz Joseph Fjord. I have seen only one tent-ring among the large inland fjords to the south, this being on the narrows of Röhss Fjord, the centre of the three arms protruding from the head of Kempefjord.

Facing Antarctic Sound and situated on Suess Land is a settlement discovered by Lauge Koch on his sledge journey, 1926; another settlement, but of a larger kind and partially investigated during one of Professor Wordie's expeditions, is on Eleonore Bay; further, Nathorst found an Eskimo hut on Cape Weber where he carried out some excavation work.

We now turn to the land lying to the north of Franz Joseph Fjord and the native relics I found there.

It is natural to commence with the south coast of the Gauss Peninsula. As previously mentioned, the whole of this district, with the exception of a few larger valleys consists of a narrow and, in parts, hilly foreland, notwithstanding which, judging from all the evidence left behind, the country must have offered the Eskimo excellent potentialities for subsistence.

Many tent-rings and cairns of various kinds lie on the terraces near Cape Franklin itself. At one time Nathorst carried out archæological research here; similarly many tent-

¹ W. Scoresby: Journal of a Voyage — p. 265.

rings are found on the bays immediately to the west of the cape (see photo, fig. 28). The first winter settlement is about 3 km up the fjord; it lies on a small bay and consists of 4 huts (fig. 30 and sketch, fig. 29, of settlement No. 1 on Gauss Peninsula). The huts lie side by side on quite a narrow grassy plain which merges into a steep, stony waste; they are built on the very fore-front of the grassy patch, the entrance tunnels, which still stand as good as

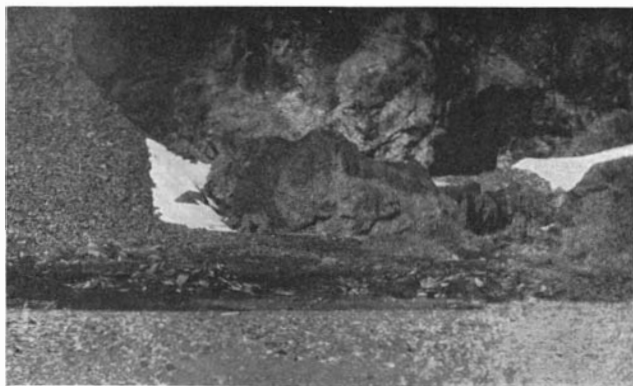


Fig. 30. From Settlement No. 1, Gauss Peninsula (25/7 1930).

untouched in some cases, debouching close up to high-water mark. Once in a wind blowing off the sea, I saw waves washing well up into the tunnels. Various caches lie in the vicinity of the settlement, but, despite close examination, I found no graves.

Two of the four sets of ruins are houses of a smaller type and two are of the larger. At the side of hut No. IV lies a smaller stone-lined chamber, which, so far as I could see, was once connected with the main dwelling by means of a narrow tunnel. I excavated in all four huts, but there was little to be found. Bone remnants were also few, both inside the habitations and outside on the slopes. Proceeding five kilometers west-ward along the coast, the ruins of the next settlement are reached (see sketch, fig. 32, of settlement No. 2, Gauss Peninsula). There are five ruined dwellings, all houses of a smaller type, collapsed, and overgrown with turf and moss. The huts are in two lots dug out from the bluff about 5 m high. I discovered several graves and caches on the wide sandy river bank slightly to the east



Fig. 31. House-ruin IV, Settlement No. 1, Gauss Peninsula (25/7 1930).

of the settlement. All graves, however, were more or less desecrated, but in one were the remnants of the skeleton of a child.

I stayed two days here excavating in all the dwellings, but, none the less, huts Nos. I and IV were only partially examined. There were not many finds of interest; refuse from meals was also comparatively scarce, both inside and outside the huts.

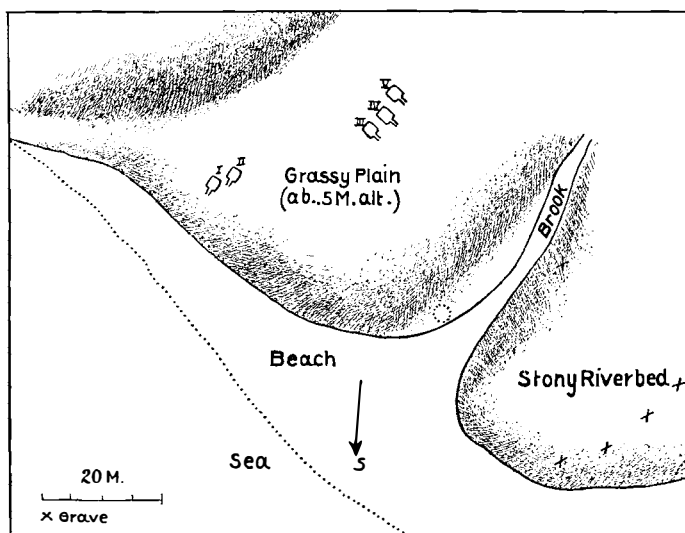


Fig. 32. Settlement No. 2, Gauss Peninsula.

missing, but the characteristic contour of the Eskimo hut was obvious and I am inclined to believe that it represents a dwelling of incomplete construction. Caches or graves were not to be found here. The ruins of a third ancient settlement exist on the extensive valley bottom debouching about 20 km from Cape Franklin. The settlement consists of five, old, very overgrown huts. It is situated to the front of the eastern part of the valley entrance below the long terrace running parallel to the shore, a short distance from the eastern, outer part of the valley entrance mentioned. No sign of any cache or grave could be found anywhere in the neighbourhood of this settlement, and a single cairn on the terrace (see fig. 33) was all I was able to observe.

When on my first visit, I did some excavation work among these ruins, but my wish to continue at this — according to North-East Greenland conditions — probably very ancient Eskimo settlement, was not, however, to be fulfilled: while hunting far up the valley to renew our supply of provisions, our motor-boat was seriously damaged during a strong shore wind and the two days which otherwise I would have had for archæological research at this spot therefore had to be spent in salving the boat and in repairing it sufficiently to enable us to continue our journey. The casualty, moreover, was the cause of the total loss of my material from settlement No. 2; unfortunately, it lay in an open case and everything was washed overboard.

Continuing westward from the entrance of the valley to the fjord, the foreland is found to be very narrow, but tent-rings exist at some spots as well as cairns of various descriptions; most, however, were destroyed.

About 10 km from the last-mentioned settlement I discovered further old Eskimo dwellings lying quite close to the shore on a narrow grassy plot. A ridge, not particularly

At a spot a further kilometer inland, near the large promontory dominating this part, are the ruins of a single house. I discovered it, casually, on the first occasion I was traversing Gauss Peninsula on foot. The hut lies well hidden, a fairly good distance up the slope, and about 60 m from high-water mark, on the edge of a small river valley. It had been of the smaller type and in its present form resembled most an ordinary, small sandy pit. The usual large and small stones — collapsed walls — which, as a rule, fill the ruins inside were almost entirely

high, rising in the rear and rugged in places, slopes downwards towards the narrow plot.

This settlement (see sketch, fig. 34) is situated about 30 m from the sea, on a site where the ground commences to rise. It consists of the ruins of four houses and two faint hollows having the usual characteristic contours, but possibly these hollows are merely excavated, but unused, building sites for huts. Three tent-rings were observed on the low bluff on the other side of the brook which flows down close to the settlement.

This settlement is of particular interest as some of the huts are so well preserved that a tolerably correct picture can be formed of them as once they were and of the manner in which the natives installed themselves therein.

Hut No. II was the best preserved of the ruins (fig. 35 a, b). The yawning tunnel-entrance opening stood out from the slope some 4 m in front of the house. A glance through the opening immediately revealed that large stone slabs in the walls and roof still stood untouched by the effect of time and cold. The living room had been dug deeply in on the slope itself.

It seems to have been general throughout North-East Greenland for the natives to dig their winter dwellings deeper than has been the custom in certain other parts of Green-

land. At Tingmiarmiut, for example, a fjord on the south-east coast, deserted winter huts still stand which are built, practically speaking, on the surface itself, but excepting that they rear much higher above the surrounding field, they are of the same construction as most winter dwellings on North-East Greenland, i. e., flat stones superimposed on each other.

The roof had partially fallen in, but to some extent it was held up by the



Fig. 33. From settlement No. 3, Gauss Peninsula (8/7 1931).

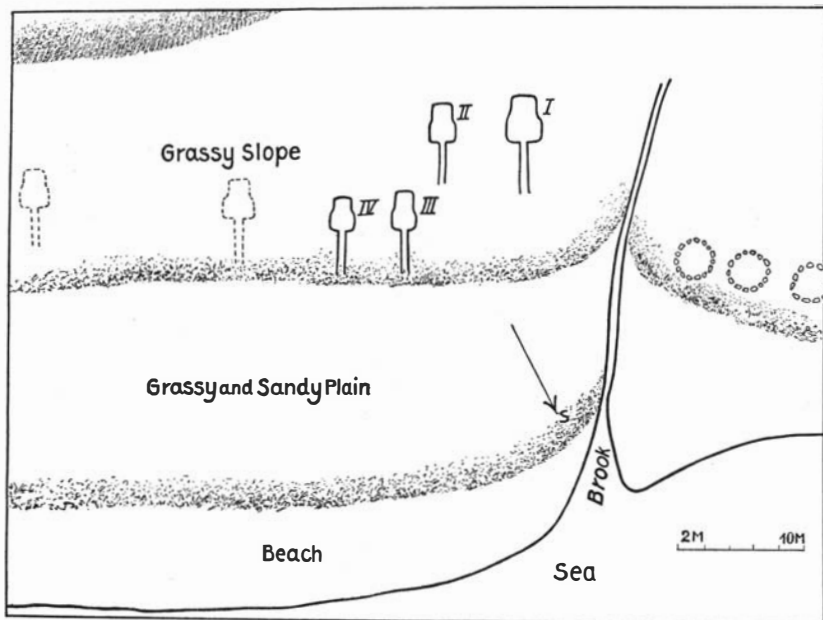


Fig. 34. Settlement No. 4, Gauss Peninsula.

were of a construction similar to that of the one just described.

I discovered tent-rings and caches on both sides of the settlement, and I also found several graves along the ridge. Some graves, clearly visible on the ling-covered slopes, had been more or less desecrated, but from one, however, a certain quantity of burial treasure was obtained. One of the remaining graves was untouched. The sepulchral chamber in this case was a cleft in one of the many small flat knolls found at certain places along the side of the ridge. Stones closed one end of the cleft and a few large slabs had been utilised for roofing purposes. The place had the appearance of being naturally formed and

it was therefore by a piece of good fortune that I discovered it. The skeleton of the person buried, lay there undisturbed, together with more than 80 ornaments and a small harpoon-head. Altogether skeletal remains were taken from four graves belonging to this settlement.

With one exception, I excavated all these huts and discovered many articles emanating from the Eskimo.

Another ancient settlement lies about 10 km farther along the coast of Gauss Peninsula, on a spot where the foreland again begins to widen, after having disappeared altogether for a considerable distance. Before the settlement is reached it is found that the mountain-side, with a talus at the bottom, plunges steeply into the sea. The traversible land is thus more to the west, to the forefront of the steep mountain mentioned, and, at the spot where the settlement is situated, it is of considerable extent. Originally, two old settlements lay



Fig. 36 a. House III, Settlement No. 4, Gauss Peninsula (8/8 1931).



Fig. 36 b. House III, Settlement No. 4, Gauss Peninsula (8/8 1931).

here: one, the larger, where the foreland commences to widen, the other of two huts only, about 500 m to the west of where the foreland is at its widest. Judging from the appearance of the huts the larger settlement is of a later date, while the smaller is partially from the same period as the settlements on the outlying parts of Ymer Island (see the sketch, fig. 39).

The largest settlement consists of 5 huts, four being somewhat in a row, the fifth

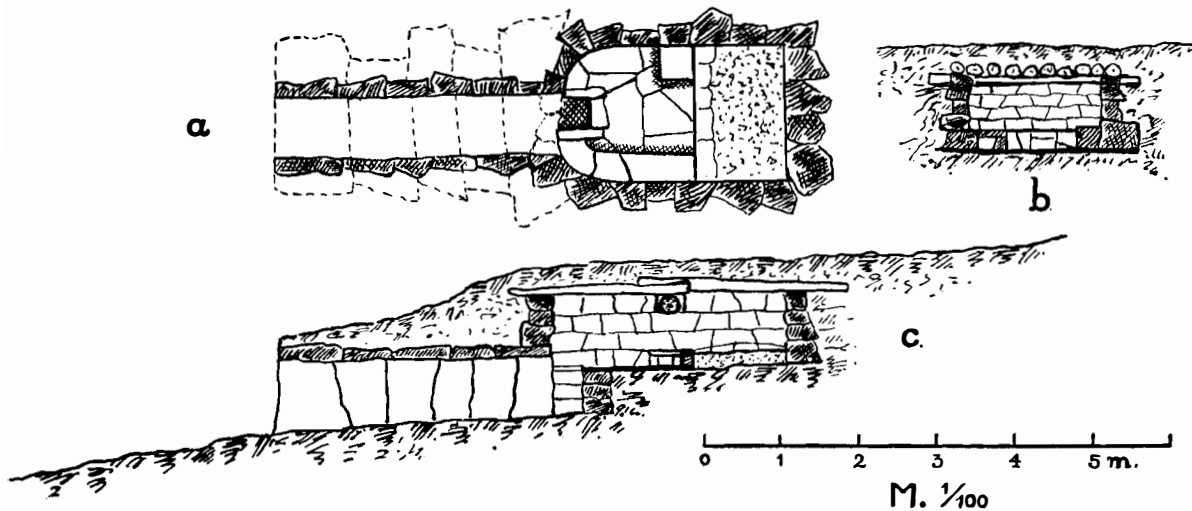


Fig. 37. House III, Settlement IV, Gauss Peninsula. Reconstruction. a. Ground plan. b. Cross-section in front of the sleeping bench. c. Longitudinal section.

lying to the rear and higher up the slope. In addition, 6 or 7 tent-rings and many caches were seen scattered in the immediate neighbourhood of the houses. On an old, sandy, river bank about 50 m to the east of this settlement were many graves all of which, however, had been opened and the burial goods removed. The skeletons, however, were untouched.

House No. I, of the larger settlement, was quite overgrown with turf and moss and had collapsed. In one corner only, a remnant of the walls remained standing. The four other huts were well-preserved on the whole. They had, however, been dug out from a damp earthy slope and, consequently, all wood-work had become rotten, whereas the stone walls of several of the huts still stood at their full original height. These four huts are of the larger type (I, II, IV and V) and one (III) is of the smaller, but they differ somewhat from the ruins of houses I have previously described. The living-room, for example, is comparatively broad in front; both longitudinal walls are convex quite close to the front wall, and a kind of shallow recess or niche therefore appears on either side. The ledge is somewhat deeper-in than usual and on the inside it has a rounder shape. Minor divergences such as these, in the shape of huts, can be indicated here and there from among a large number of house-ruins, but, on the whole, there is one common plan of construction.

A considerable amount of bone-remnants, particularly of narwhal, lay scattered in the vicinity of the settlement; also here, narwhal skulls had been used for the walls of many of the huts and, as at the previous settlement, several intact narwhal teeth were strewn about the ground, mostly in front of the entrances. Water hindered the work of excavation,

but, despite this obstacle, I came upon a considerable number of finds — some quite good — in several of the huts. In No. III house, I discovered on the ledge, an upper and lower jaw of what seemed to be two different people; further finds were made at the same spot. Similarly, in No. II house, I recovered three lower jaws of human beings.

As mentioned, the smaller settlement lies about 500 m to the west on the side of the river glen which debouches at this spot. It consists of two fallen-in,

overgrown ruins, one house being of the larger type, the other of the smaller. The stone walls of the little hut were almost intact. I excavated in both dwellings, but had no opportunity of examining the large house thoroughly. Some finds were made.

To the west of this settlement is another stretch where the foreland is non-existent but, on continuing about 10 km, the inhabitable land again becomes comparatively extensive and rich in the neighbourhood of the broad valley passage known as New Tromsdal, cutting across Gauss Peninsula. A short distance to the east of the mouth of New Tromsdal River, on the slope shelving to the sea, is a settlement with the ruins of three houses (see sketch, fig. 42). A large hut has occupied this spot with a hut of quite small dimensions on either side. The ruins, now partly collapsed, are overgrown with turf and moss. I examined all three dwellings, but made only a few finds. Some tent-rings are on the low terrace, but I saw no graves at this settlement.

This is the settlement farthest inland on the coast of Gauss Peninsula. Proceeding westwards, the coastal land throughout the whole length of the peninsula is found to be very narrow and its soil poor. It seems as if the Eskimo was not to be tempted into building permanent settlements in this particular district.

Some Eskimo huts lie in the large valleys running deeply into the country to the north of the Strindberg Peninsula. They were discovered by a hunter, but, so far, have not been examined. The Eskimo has also permanently resided along the upper part of the Musk-ox Fjord. Believing that I should find winter dwellings here, as the country seemed so admirably suited for permanent habitation, I have, myself, travelled along the north-western part of the fjord and in the district around the upper narrows. The sole Eskimo relic I have come upon, however, is a solitary tent-ring, but, subsequent to my visit, Norwegian hunters discovered, at a spot where the fjord forms an elbow about half way up its course, a settlement consisting of five huts. The expedition of Miss Louise A. Boyd which visited the

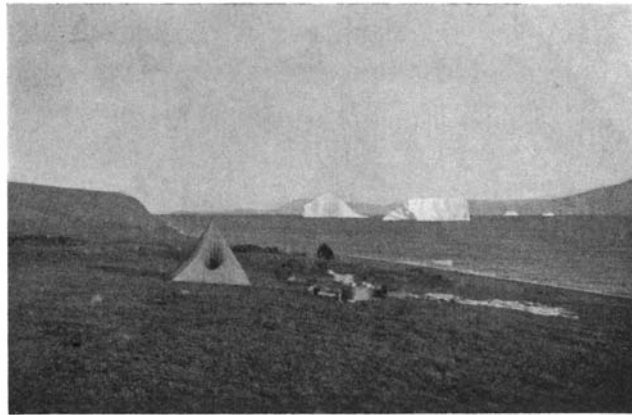


Fig. 38. From settlement No. 4, Gauss Peninsula (7/8 1931).

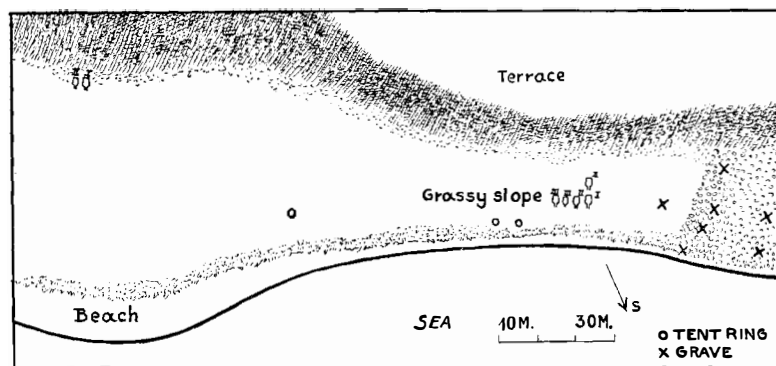


Fig. 39.

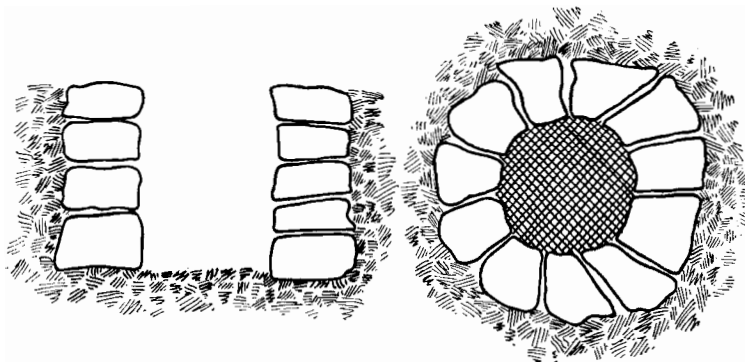


Fig. 40. 1 cm -- ca. 1/5 m.

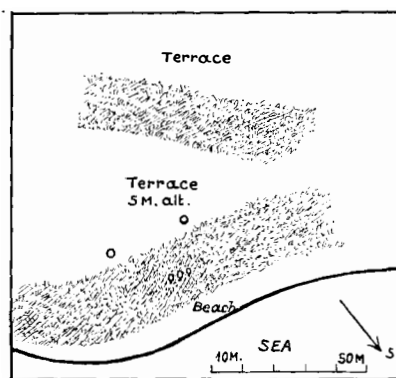


Fig. 42.

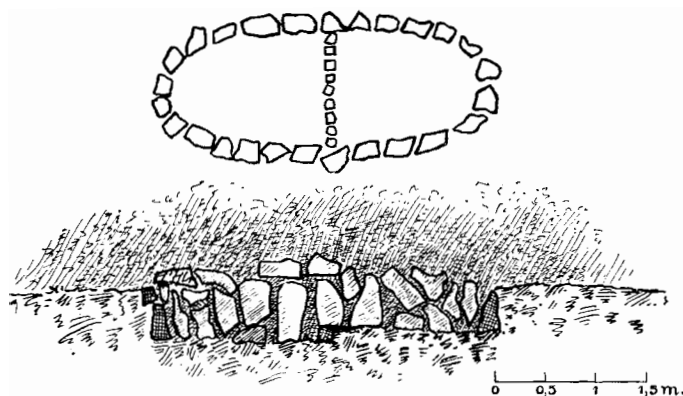


Fig. 43.

Fig. 39. Settlement No. 5, Gauss Peninsula.

Fig. 40. Partly reconstructed depot-place, settlement No. 5, Gauss Peninsula.

Fig. 42. Sketch of settlement No. 6, Gauss Peninsula.

Fig. 43. Sketch of the great grave (?) in Myggbukta.

vicinity last summer (1931) excavated in some of these huts.

We shall continue with the relics and native associations of Myggbukta and the adjoining country. I had anticipated finding much evidence of the Eskimo period in this, according to North-East Greenland standards, large, well-stocked, game district, but, contrary to expectations, it seems not to have exercised any special attraction, the reason being, perhaps, that the hunting of marine animals is very poor in the neighbouring bay, the greater part of which is shallow.

In addition to a few huts towards Hold with Hope, one old settlement only exists in this neighbourhood: it lies at the head of the bay, on the west side where the river comes down from the range of heights (see sketch, fig. 4).

On a small, marshy spot only a few meters high on an old strand flat, are six or seven more or less overgrown earth-holes, four of which it was possible to identify as old collapsed winter huts. So far as I could see they had all been houses of the smaller type and, the floors being unpaved, they must have been built in a more primitive manner than usual. The stone walls, moreover, which had been constructed of large and small pebbles, had fallen in.

Excavation has been done at various times by hunters; further, on one occasion some members of the British Cambridge expedition also visited and examined the settlement, but the work done prior to my arrival during the second half of August was, evidently, superficial only. In spite of the season being well-advanced my excavation labours were rendered more difficult by the frost which was still in the marshy ground at some places, but this did not prevent me from discovering several finds in each of the huts concerned.

Remnants of tent-rings and caches are found here and there in the vicinity. About 50 m to the rear of the settlement site, but on the same terrace was a cairn of a kind I had not previously seen (fig. 43, 44, 45). An oval-shaped hollow in the earth, about 3 m long and 1 m wide was fenced-in by massive stones poised



Fig. 41. House No. VI, Settlement No. 5, Gauss Peninsula (10/s 1931).



Fig. 44. The grave. Myggbukta (20/s 1931).



Fig. 45. The grave. Myggbukta (20/s 1931).

edgewise. Some of the upper soil within this enclosure had already been removed so it was not with great expectation that I began my investigation of this particular spot, especially as I also concluded it had been used as a kind of cache. After throwing aside the large stones in the upper layer, however, to my surprise there stood revealed, evenly spread over the whole hollow, utensils, ornaments and a large number of bone remnants, among the latter being 3 human lower jaws.

The oval hollow, if it has not been a dwelling of a type of its own, has perhaps

been a great grave. Further excavation showed that, in the half turned towards the settlement site, it was about 1 m deep; the rear half lay about 15 cm higher and was delineated in the fore-front by a stone kerb-like edge.

About a kilometer farther out on the east shore of the bay, lying on a low gentle slope declivous to the actual shore, were the ruins of a house with a large number of tent-rings and caches of various kinds. The hut has been of the smaller type; it had collapsed and was almost level with the ground. I unearthed a few finds here.

To the north of Myggbukta, I have only carried out excavation work at the two old Eskimo huts lying alongside the Norwegian hunters' station of Cape Herschel. When I saw them, both these earth holes were filled with station refuse. I examined one house carefully and many finds rewarded my work, but, with regard to the second house, I was only able to make a few tests at random. It happened that during my stay here we were busy unloading stores for the expedition and I was consequently obliged to do my archæological research in my evening leisure hours after unloading had ceased for the day. I was not to return during a summer season and was therefore unable to complete my work.

Including the ruins discovered by me, more than 150 old deserted Eskimo huts are now known in Eirik Raudes Land. I have typified some of the ruins as old, and some as new, without maintaining, however, that the difference in type denotes a considerable difference in age. Whether this or that hut appears old or comparatively new also depends to a large extent on the soil in which it has been built and on its manner of construction. If the stone walls have been badly made or if, as even seems to be the case at some places, the huts had earthen walls only, such walls in damp soil would soon sag and crumble and before long everything would be overgrown with turf and moss.

I do not believe that the natives living in North-East Greenland have at any time been particularly numerous. At all events, I think the result could justifiably be called in question if the number of the huts, for example, was taken as a method for calculating how many Eskimo this country had supported at any one time. Obviously many settlements were only occupied for a short period: I have, however, previously dealt with this theme and have presented evidence in its support; it remains to add a further factor to the same effect, by mentioning that, judging from the experience of the winters Norwegian hunters have spent in this country, these settlements were usually at places where the facilities the ground presented for locomotion and the potentialities for hunting were probably poor.

MATERIAL CULTURE

Hunting Requisites.

Harpoons. In North-East Greenland, as in most other Eskimo districts, the very existence of the natives was pre-eminently connected with the hunting of marine fauna. It is therefore proper to commence a review of the material composing the finds, by first taking the forms which originate in this hunting, the more so as such forms comprise the most prominent part of the majority of the finds made.

Of hunting requisites, none possessed greater importance for the daily sustenance of the native than the harpoon, many variants of which were employed, as required, for hunting from kayaks or for hunting on the fjord ice at the breathing holes of the seal.

It is not yet possible to determine precisely how great was the assortment of harpoons the natives of North-East Greenland possessed. Two varieties — although represented by fragments only — occur in the finds, the one a winged harpoon used with a throwing board and bladder when hunting from a kayak, the other, a stabbing harpoon utilized when hunting on the ice. Whether, in addition, a third and heavier harpoon has also been employed for hunting marine animals of the larger type, is a question which still remains open.

The shafts of the harpoon were of wood and therefore deteriorated more easily than their accessory parts of bone or reindeer-antler. Judging, however, from remnants discovered, the shafts, on the whole, were more massive and of a larger cross-section than most Eskimo harpoons, the cross-section, moreover, frequently seeming to have been broad rectangular, with rounded corners. The length, on the contrary, does not appear to have diverged from the usual harpoon forms found elsewhere; but in other respects, the special characteristics of the north-east coast harpoon will be apparent from the detailed description given below.

Harpoon Heads. The collection contains 13 harpoon heads, see fig. 46, and 3 blanks — material partly worked — for such heads.

The chief type of my finds is the broad harpoon head having a cleft basal barb and a faucet-hole situated more to the front than to the rear. The perforation taking the line is curved and it is bored from one side to the other about 2 or 3 cm above the faucet-opening, the distance accordingly varying with the size of the specimen.

The grooves the line follows proceed towards the butt, taking a direction slightly slantwise and of frontal inclination; only in a single specimen are the grooves more vertical.

The butt end is either chiselled concave or slantwise, and shows some variation in the fashioning of the flukes, which partly diverge and partly run downwards together. It should be noted, however, that the greatest variation concerns the tip of the head which is sometimes quite short and sometimes comparatively long, here cut in one piece with the remainder of the head, there, furnished with a loose blade. In one case the blade, which has been preserved, is made of iron; in the others, it has fallen out and it is therefore impossible to determine how many of the missing blades have been made from material of another kind, like stone or bone. In all the specimens concerned, the slot for the blade has been carved from one side to the other. The rear, or reverse, is convex, the front usually being on a more level plane, particularly the part between the perforation for the line and the butt.

The harpoon head, fig. 46¹¹, No. 32844, is of another and narrower type; it is damaged on top and in this case the faucet-hole also lies more to the front, but the openings of the line-perforation lie more towards the centre of the sides, whereas the grooves for the line run straighter down each side. The front towards the top is as usual convex in cross-section and more plane at the bottom between the grooves for the line. The rear part, on the contrary, — or rather its rear half which has been preserved — has a ridge running along the centre and ending in a single, powerful barb. The weapon has been fitted with a loose point.

Another object, fig. 46⁶, No. 32843¹, also shows a divergent type, agreeing, however, in many details with the main form, but it has been almost rhomb-shaped in cross-section

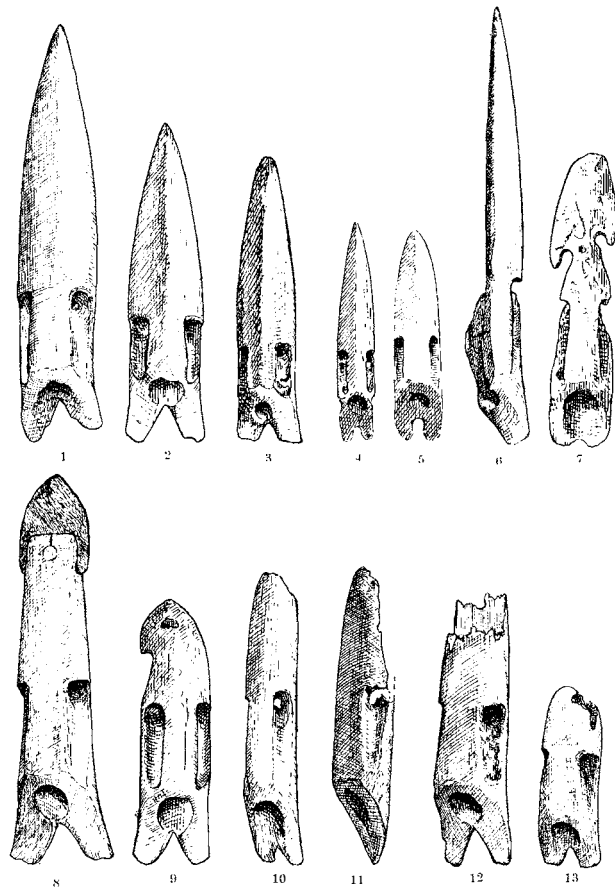


Fig. 46. Harpoon Heads. (Scale 1:2)

¹ The Cat. Nos. of the other harpoon heads are: 1—32800, 2—32803, 3—33061, 4—32941, 5—32942, 8—32801, 9—33110, 10—33111, 12—33041, 13—32802. 7 belongs to Tromsø Mus. Coll.

with a ridge running along the centre line of the front and reverse sides; it has been cleft longitudinally.

The collections one has of harpoon heads from North-East Greenland, hardly form a basis for the setting up of any definite number of types. Hitherto, the heads have been divided into the broad, comparatively flat type without a loose point, and the narrow, comparatively thick type with blade inserted, these two types being mainly determined according to the shape of the cross-section. A closer examination of my own finds, however, and of the collection from the Nathorst expedition, shows quite a number of intermediate forms between the broad and the narrow harpoon head, which fact seems to give to the division mentioned a qualified value only.

Moreover, like the narrow heads, the broad can also be furnished with loose points, a circumstance to which, up to the present, insufficient attention seems to have been paid. The richer material now available contains quite a number of such harpoon heads possessing loose points, and if definite types are to be determined, it would be equally correct to depict the two most important forms as, firstly, a harpoon head with a blade, and secondly, one without. But even this is liable to question. Personally, I would feel more inclined to consider the types of the north-east coast as arising from a composite-process whereby forms which in older periods have been distinctive types or have belonged to various Eskimo districts, have been employed in one and the same manner in this neighbourhood, frontiers delineating form thereby being obliterated.

Among my finds is a complete specimen of each of the two main types as given by earlier authors, both having been retrieved from the ruins of the same house, which, incidentally, was situated in one of the best preserved settlements I have seen in North-East Greenland. These two forms are thus contemporary. No chronological conclusion can therefore be drawn from the material of harpoon head types available, and an examination of the material of earlier expeditions leads to the same negative result when considered from the wider angle afforded by the field investigations of the three summers concerned.

It will be observed that, where the purely technical execution of the work is concerned, these harpoon heads vary, but that, in the main, they are similar. Their object is to transfix the prey by piercing the animal hunted and affording a hold for the harpoon line, the escape of the animal thus being prevented. To fulfil the demands thus required, the harpoon head accordingly had to be sharp, whether furnished with a loose blade or not, and a way has been sought to avoid everything likely to restrict the object of piercing from being achieved. It is also for this reason that the line on most heads runs in the, frequently, deep groove, rearwards from the aperture through which the line passes. To be fully effective the harpoon head had to penetrate its whole length into the prey, thus enabling the flukes of the butt end to obtain a secure hold. With the animal then

making off in its struggle to free itself from the projectile, small or no chance would exist of the harpoon being withdrawn from the wound; the fastening of the line at a place well up on the head, and the more or less downward-slantwise shape of the latter, of necessity caused the head to drive home more or less at an angle and hold firm.

I do not believe that any one of the slight variations the harpoon heads portray, has influenced to any great extent the function of the head as a hunting weapon. The one could render service as equally well as the other, if only it were chiselled slantwise towards the bottom and its line fastened well up on the head; but, surely, the dexterity and imagination of the owner has stamped its mark on many a harpoon head. Further, it must not be forgotten that the shape and hardness of the material employed has certainly played a part, antlers, for example, being easier to work than ivory. One of the harpoon heads in the Nathorst collection — a head fashioned from the lower part of a walrus tooth — has been given the attention only most strictly necessary.

Harpoon-hunting off the coast of North-East Greenland was mainly concerned with the ringed and bearded seal, the walrus and the narwhal. The large whale has hardly been hunted much in this vicinity although it is true that whale bones are found at a few places along the shore, and, lying on Gauss Peninsula and near a deserted settlement, is the skull of a whale of colossal proportions. There is no evidence, however, in support of regular hunting of the large whale, whereas the catching of the narwhal has been extensively carried on, particularly in the neighbourhood of Franz Joseph Fjord, and this latter animal has perhaps afforded the principal hunting for each of the six settlements lying on Gauss Peninsula. In support of this may be mentioned — as previously described — the utilization of narwhal skulls as building material in this particular neighbourhood.

To differentiate between harpoon heads used for hunting at the breathing holes during winter and those for hunting from kayaks during the summer must therefore seem to be impossible where the present heads are concerned. The sole factor which, I believe, has anything to relate regarding specialization in the use of the heads is the variation in size. It would be difficult, for example, to catch an ordinary small ringed seal with the harpoon head used for narwhal hunting. Two heads in the Nathorst Collection show a miniature form of harpoon head for whale-hunting reminiscent of the larger whaling harpoon heads found at various places in the regions inhabited by the Eskimo, not least along the south-west coast of Greenland. It is therefore perhaps possible to decide that harpoon heads of this shape and size are heads used when hunting the narwhal, but beyond this a conclusion can hardly be drawn in respect of any special function the heads might have possessed.

It must be repeated, therefore, that, on the whole, the harpoon heads of North-East Greenland are of a uniform character and to this extent distinctly contrary to those of the rest of the country. More to the south, on the east coast, is the large Eskimo district,

Angmagssalik, and at no greater distance away than this, the harpoon head in most common use differs considerably from the harpoon head of North-East Greenland.

On the west coast, however, among the amazing abundance of types peculiar to this part of Greenland, related forms are again found, although, it must be added, rather rarely. The comparatively broad head with loose point of my own collection, is represented in older collections from the neighbourhood of Disco, now kept at Oslo, Copenhagen and Stockholm.¹ A similar type is also found in the district of Cape York.

Loose Points. Three comparatively large points — two of stone and one of bone — were excavated at different sites. Judging from their shape they belong to the conventional type of harpoon points, but if they are to be classified in this manner, the largest must have belonged to a harpoon head of a type larger than hitherto known as coming from North-East Greenland. This particular specimen, fig. 472, No. 32963, is therefore entitled to be considered as a lance point. It is an undamaged, exquisite point of grey-green slate, with parabola-shaped, sharply-ground sides on which it is possible to engrave an isosceles triangle having a vertical angle of about 25°. Both flat sides are symmetrical and both are ground in three facets. On one of the broad sides an attempt seems to have been made to grind the two lateral facets hollow. The third facet which inclines towards the base of the specimen delineates the extent of the part which fitted into the cleft of the harpoon head; it is furnished with three perforations of which the largest and centre one is slightly withdrawn so as to allow of a better fastening being obtained. Delicate transversal grooves are seen on the upper part of this surface. The greatest thickness of the specimen is along the centre line running forward towards the rhomb-shaped point. Length: 7.5 cm.

Another blade, fig. 473, No. 33123, is of a light-coloured kind of slate and is somewhat defective. It has been ground in the same manner as the foregoing, but is very thin. The base contracts towards the centre thus giving to the lower corners a shape resembling that of a barb-like protuberance. Holes for nails are missing. Its length is 4.2 cm.

Fig. 471, No. 33121, is a blade made of reindeer antler. It has about the same shape as the first-mentioned, but with variations occasioned, however, only by the nature of the material. It is narrower and thicker and its tip is of greater elongation. The part which has been spliced into the harpoon head is defective, but the edge of a nail-hole is discernible. The specimen is 6 cm in length.

Lance Heads. In fig. 485, will be seen a lance head² with the blade missing. It is of whale-bone and somewhat bent. Its centre is of biconvex cross-section converging more and more to oval towards each end. At the bottom is a short faucet divided from the part in front by a transversally-cut shoulder. About 5 cm higher is seen the hole for

¹ G. Swenander: Harpun-Kastpil- och Lans-spetsar. Uppsala 1906. Th. Mathiassen: Medd. om Grønland LXXVII, pl. 5.

² No. 33120.

the strap which secured the head to the pole. On each side of this line-perforation a hollow has been drilled, forming, as it were, the commencement of a groove to take the line. The head tapers somewhat towards its fore-end and the slot for the blade is fashioned vertically at right angles to the broadest part of the specimen. It is 3.5 cm deep and 0.5 cm broad. It has a hole to take a nail for securing the blade in position. On each side from the nail hole downwards, a short groove has been made of hollows drilled closely together; its purpose is obscure. The length of the specimen is 31.5 cm.

Another object, No. 33145, has probably once belonged to the lower part of a lance head or a foreshaft. It has a powerful, oval faucet and a sharply incised shoulder-section and is a good example of the manner in which the natives drilled requisites from thick ivory material.

Harpoon Foreshafts. Only in certain types of stabbing-harpoons used in sealing, and in fishing-harpoons, is the harpoon head affixed to the pole direct. As a rule its position is on a detachable bone foreshaft fixed to the pole by means of short leather straps affording a kind of articulated joint rendering it easier for the harpoon head to slip off. On the north-east coast, however, the Eskimo have also had harpoons without an articulating forepart.

My finds include two loose foreshafts, both of which were found in the open field along the coast of Gauss Peninsula.

The specimen, fig. 483, No. 32890, is of whale-bone, and it is approximately oval in cross-section. It is broadest at the comparatively long, conical faucet which has fitted into the corresponding hollow in the upper end of the harpoon pole. Several transversal incisions are seen on the faucet. Towards the top the fore-piece decreases in thickness and, becoming more slender, ends in a blunt point on which the harpoon head was placed.

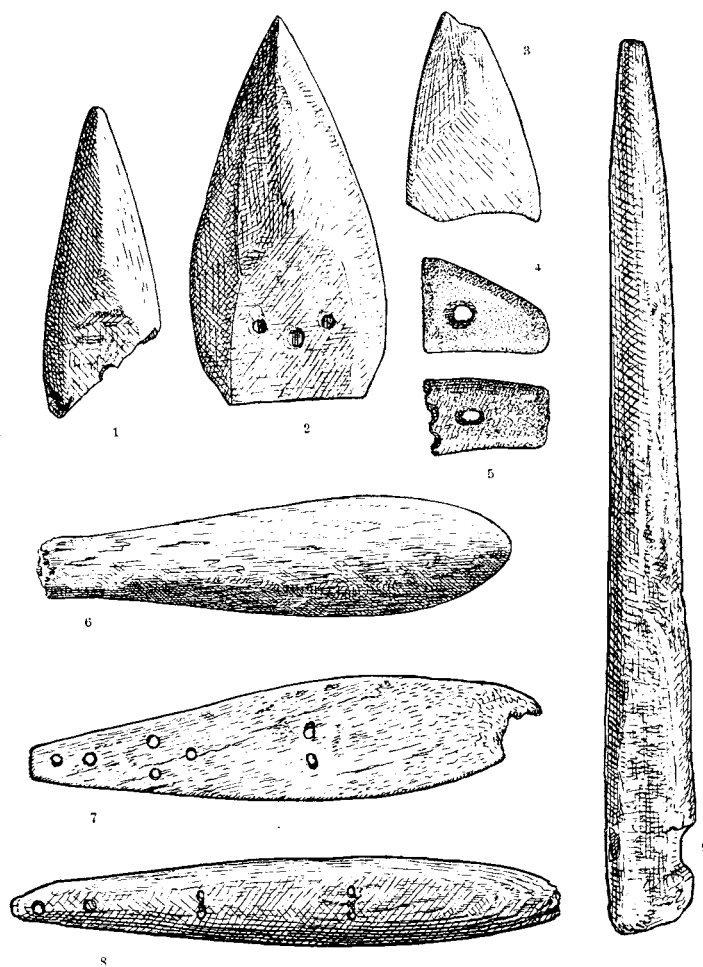


Fig. 47. Loose Blades, Steering Wings, etc.
(1-5, 9 scale 2:3, 6-8 sc. 1:3)

Slightly above the rear conical faucet are two perforations for the line which connected the foreshaft to the pole. The lower perforation is bored horizontally, the upper, obliquely; the perforations are connected by an inner channel running longitudinally, but not emerging to the surface of the specimen. Proceeding from the lower hole are grooves for taking the line. The specimen is 22 cm in length.

Another foreshaft, fig. 481, No. 32919, is of wood and is particularly long. It is thicker and rounder than the foregoing specimen and is thickest near its centre. Its end is formed by a short, round faucet, delineated from the fore-front by a cross-cut shoulder. Slightly above, on the shaft, are two perforations for the short strap destined to join the fore-piece to the pole. The perforations, however, are so small that it would perhaps be more correct to consider the fore-piece as unfinished, unless it is to be presumed that the lashings used for binding it to the pole were the sinews of an animal. The length of the specimen is 57 cm.

Fig. 479 depicts a tooth of a young narwhal, the lowest, thickest part of the tooth evidently having been fashioned to enable it to be inserted in a shaft. On two sides the rear end has accordingly been made flush, and slight transversal grooves have been cut in order to afford a firmer junction with the shaft; further, on the side lying free there is a comparatively broad hollow to take the lashings which secured the specimen in position.

One could therefore imagine that this is a kind of fixed harpoon foreshaft.

Socles. Fig. 881, No. 33035, is a kind of socle made of whale-bone. A broad, powerful ridge runs along the centre of both broad sides and one end of the object is somewhat wider than the other. In the centre of one broad end a hole, 1.8 cm deep and having a diameter of 0.8 cm, has been bored. The piece is about 3 cm in height, and its greatest breadth is 3.8 cm.

Judging from the shape of the object, this specimen could have been wedged into a cross-shaped incision for the end of a shaft, in which case the broad end with the hole would have faced outwards. It is thus possible that the specimen has served as a fore-piece; or rather, I think, as an end block for the pole of a winged harpoon.

No. 32656 is probably a ferrule of a lance or harpoon pole. It is of reindeer antler, is of oval cross-section, and is somewhat thicker at one end than the other. It has been threaded down on to the upper end of the pole without any special fastening — provided it can be accepted that the specimen has been in use at all. The upper end has been hollowed out to some extent to take the foreshaft of a lance or harpoon.

Faucets. The large throwing-weapon which was not cast by means of a throwing board was furnished with a faucet on the pole in order to give support to the hand when the cast was made. Fig. 474, No. 32809, is an ivory faucet, of this kind. It is fashioned as a conical faucet askew, and it has a hole for taking the strap which fastened it to the pole. It is 2.4 cm in height.

Fig. 475, No. 32850, is another such faucet, but of reindeer antler. In shape it resembles more an elongated dice, but, possibly, it is in an unfinished state.

Steering Wings. There is reason to consider the object in fig. 476, No. 32859, as being the wing of a winged harpoon. Its fore-section which has been fastened to the rearmost end of the pole is missing. It is of plane-convex cross-section, its plane side having been turned inwards on the wings. Length: 19 cm.

Fig. 477, No. 33159, reproduces the wing of a winged-harpoon. It is made of whale-bone and its tip is somewhat defective. The wing has been kept in position on the harpoon pole partly by nails as shown by three holes along the centre of the lower end; but two pairs of holes connected by a sunken channel show that lashings have also been used. The length of the piece is about 20 cm.

No. 32070 is also a wing of a winged-harpoon. It was found by the Hird Expedition and brought to Norway in 1929 by Mr. A. K. Orvin the leader of the Norwegian scientific expedition that year. It is short and has broad, rounded extremities. Five small holes, and one, a large oblong, have been bored along the centre line of the wing to allow of fastening to the pole. One lateral surface shows traces of red colouring, which, however, has probably been acquired during the time the wing has lain in the ground. The material is whale-bone and the length of the specimen is about 16.5 cm.

Ice Picks. The harpoons in use during winter seal-hunting at the breathing holes were furnished at their bottom end with a chisel-like instrument for enlarging the small breathing holes in the ice through which the seal could then be hauled; five such ice picks are in the collection, four being undamaged.

Fig. 493, No. 33114, illustrates an object of reindeer antler. The blade is comparatively lengthy, somewhat pointed towards one end and plane-convex in cross-section. The tang is rectangular in cross-section and converges towards the end. It is notched transversally in order to furnish better purchase for the binding; the shape of the tang gives ground



Fig. 48. Harpoon Foreshafts, Lance Heads.
(1,4 scale 1:4; 2-3 sc. 1:2; 5 sc. 1:3)

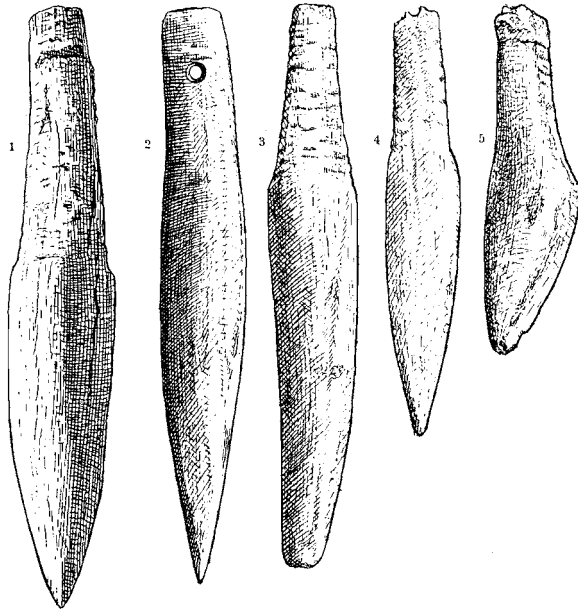


Fig. 49. Ice Picks. (Scale 3:8)

for belief that it fitted into a corresponding socket in the pole so as to render the fastening more secure. The length of the specimen is 19.5 cm.

A similar ice pick, of reindeer antler is seen in fig. 494, No. 33113. It is somewhat smaller and converges downwards to a pointed tip. Its length is 15 cm.

Fig. 492, No. 33040, does not possess the distinctly delineated tang of the previous specimens; it is perforated at the top, probably for a nail to afford a more secure hold; it ends in a sharp point; its length is 20 cm.

An ice pick of a slightly divergent shape is seen in fig. 495, No. 32863. It is of whalebone or reindeer antler and is shorter and more massive than those previously discussed;

it is, moreover, somewhat bent. The tang and the blade are of about equal length. The latter is comparatively broad and thick, but towards the end it converges to a point; the former also narrows slightly here and it has straight-cut sides in which notches have been made. Forming its end is a slight elevation on the upper side which served to give support to the binding. Also in this case the shape of the tang leads to the assumption that the pole was hollowed out to receive it. Length: 12.5 cm.

Throwing Boards. A front view of a throwing board for a harpoon is seen in fig. 502, No. 32921; its upper part is somewhat defective; below, the broad part has been fashioned to form a grip or handle; on the right is a deeply-cut groove for the thumb; on the left, slightly higher, is a hole for the index finger and below this is a long, curved hollow for the remaining fingers. Higher up, the specimen converges, thereupon broadens somewhat, and, finally, extends into an elongated fore-part tapering from the sides. A median groove runs along the whole of the front side. This groove is narrow and deep at the upper end, is almost obliterated at about the middle and thereupon increases in width towards the end. In the upper, narrow part of the groove are closely-spaced nail holes in some of which remnants of wooden nails still remain, and at the upper extreme end is an oblique larger hole perforating in a downward direction. There are also nail holes on the plane, lateral surfaces of the fore-part; in one, a wooden nail is still in position. The throwing board has here been furnished with a mounting of bone so as to give support to its slender extremity, and it is also evident that bone-mounting

has been fitted in position in the front side groove for a distance indicated by the nail holes.

A faucet of bone corresponding to a hollow in the rear end of the kayak-harpoon, has fitted into the oblique-shaped larger hole at the extreme end. A hollow has been made in the transverse end of the grip; beyond the hollow is a hole, and both hollow and hole have probably corresponded to bone faucets on the harpoon pole, thus serving to fasten the throwing board when not employed. The length is 58 cm.

Another throwing-board of the same character, but made for a left-handed man is seen in fig. 501, No. 32923. The handle has been fashioned in much the same manner, with a deep incision for the thumb and a hole for the index finger. On this specimen, moreover separate grooves have also been made for the two next fingers. Judging from its present appearance, the fore-part has had bone-mounting in the same manner as the specimen above-mentioned. The lower part of the board has split lengthwise, but has been held together by means of a thin shred of sinew, remnants of which still exist. This specimen was found washed ashore on one of the islands in Foster Bay; its length is 60 cm.

Fig. 503, No. 32987, shows a throwing board of a divergent shape, decayed, weather-worn and with a defective fore-part. It is of a shorter and more massive type than the two specimens previously described. The handle is furnished on one side with the usual groove for the thumb, but there is no hole on the opposite side for the index finger, merely a groove similar to that for the thumb. Moreover, the fore-part, in addition to converging from the sides, is bevelled from its ridge. On the front side, at about the centre of this tapering fore-part, is a slightly-sunken section 3 cm long. Signs of nail holes are still extant along both the foremost narrow part, and the rearmost, broad part of the groove. A mounting of bone has evidently also covered the back of the bevelled part of the fore-end. The length of the piece is 41 cm.

In addition, mention must be made of a very damaged and weather-worn throwing board, fig. 504, No. 33129, having a comparatively narrow grip with hollowed grooves for the thumb and index finger along the lateral edges. Bone-mounting has once been in place on the reverse side of the transverse-end, and faint traces of nail holes are discernible along the fore-part of the groove. Length: 42.5 cm.

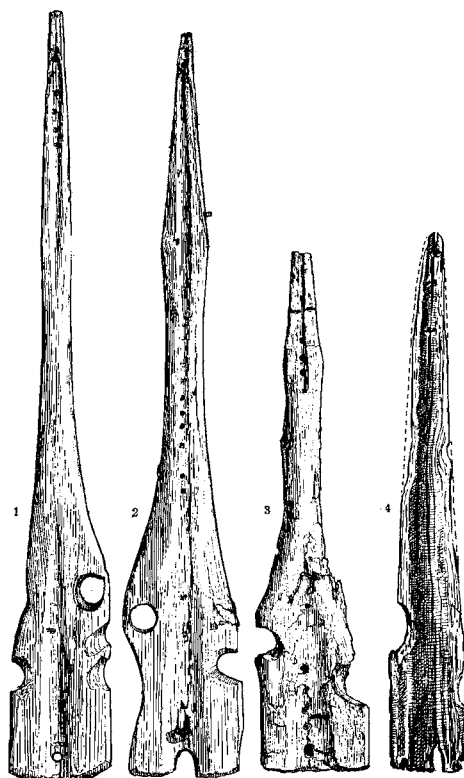


Fig. 50. Throwing Boards. (Scale 1:6)

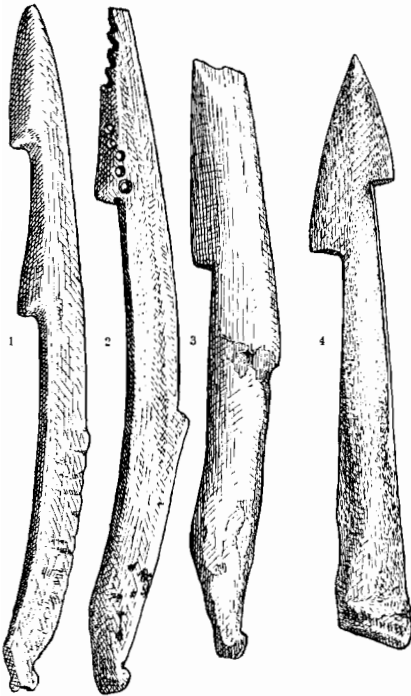


Fig. 51. Points for Bird and Fish Spears.
(Scale 1:2)

Points for Bird and Fish Spears. Fig. 51_{2,3}, Nos. 33664, 33039 shows two lateral branches belonging to bird-spears, or, possibly, salmon-spears. The objects are of reindeer antler; the point of one is defective and its barb, which has turned inwards, protrudes only slightly; the point of this particular specimen has a sharp inner edge and a comparatively blunt outer edge. At its lower end its inner side is bevelled, whereas its extremity is thickened, thereby affording support to the lashings. About mid-way along the branch, on its outer side, is a concavity which has probably been the bed on which the lashings have rested; on the same spot of the second specimen, however, there is a prominent faucet. The length of the specimens is 18 cm and 15.8 cm respectively. A somewhat similar point has been found farther north on the east coast.¹

Another point which, probably, has formed part of the armament of a fish spear is seen in fig. 51₄, No. 32889. It is of reindeer antler and originally straight, it has become bent from having lain in the earth. Its length is 18 cm.

The point is barbed once on each side at different levels and the tip tapers evenly and is edged on both sides. Towards its rear, the point is rectangular in cross-section with an augmentation in thickness on one broad side. Judging from its shape, the point must have been destined for lashing to the side of a pole and it therefore seems proper to presume that it is the centre prong of the trident-like armament of a fish spear. The possibility that it has been affixed to the fore-end of a bird spear seems to me to be less likely.

Fig. 51₁, however, certainly depicts the lateral branch of a bird spear. This specimen was found by Mr. A. Hoel's party on Daudmannsøyra.

Bows. In fig. 52₁, No. 32916, is seen the end section of a broken bow stave of wood. It is 48 cm in length, rectangular in cross-section, and it ends in a massive faucet having a broad shoulder on each side. The upper part of the specimen is narrowest, there being an increase in thickness downwards towards the faucet. It is thinnest at its centre, where, moreover, it arches somewhat frontally. On each side below the fracture are four symmetrical incisions where, presumably, the stretcher-lashings have been fixed. The shape of the specimen permits the surmise that this piece belonged to a bow of the widely-spread type having ends curvi-form in shape; where narrowest its cross-section is 1.8×3 cm, where broadest, 2×4.5 cm.

¹ Th. Thomsen: Medd. om Grönl. XLIV. Fig. 15.

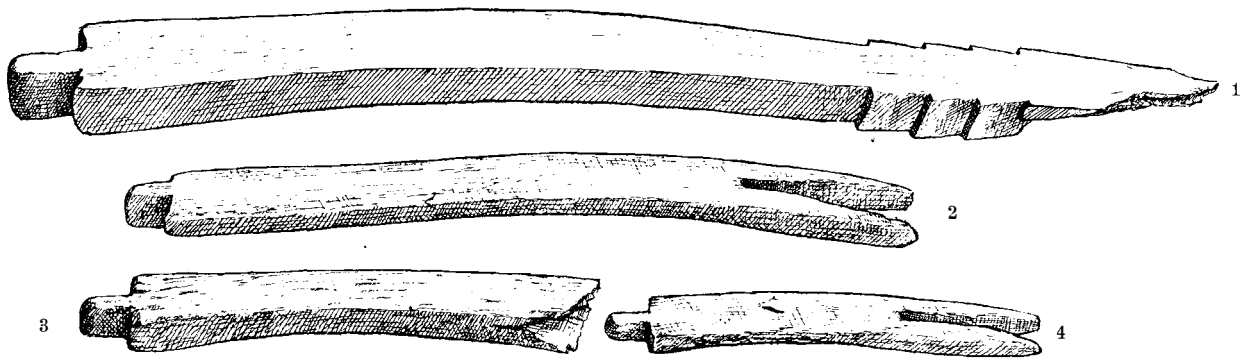


Fig. 52. Bow Staves. (Scale 1:3)

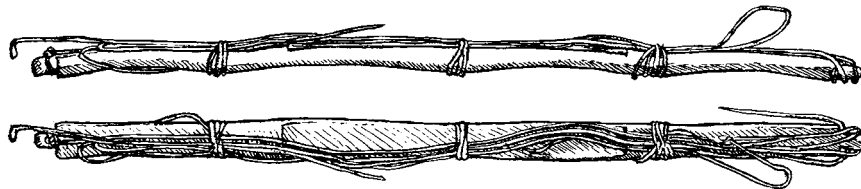


Fig. 53. Toy Bow. (Scale 2:3)

Fig. 522, No. 32917, depicts the end piece of a composite bow stave which has been spliced to the centre-piece by means of a simple mortise. The specimen has belonged to a more slender bow than the foregoing, but here again is found the same thin centre-section. Its length is 31 cm.

Fig. 524, No. 32977, represents a similar end piece, but shorter and more slender. It is only 17 cm in length.

Fig. 523, No. 32929, shows a broken-off end of a bow stave, 20 cm in length.

In the collection are several fragments of quite thin, slender bow staves, many of which have the above-mentioned lateral incision in the stave. These pieces have probably belonged to children's bows. No. 32851, is one of these fragments, 22 cm long and only 1.8 wide and 0.7 cm thick.

Fig. 53 reproduces a model of a wooden bow, 16.5 cm in length, retrieved during Mr. Hoel's excavations on Daudmannsøyra. It is cut in one piece and has about the shape of the intact bow stave described in the collection made by hunters from Tromsø, but it lacks the — for this type — characteristic lateral incisions near where the ends commence to arch. The centre part of the ridge section, when compared with both sides beyond, is flat and sunken, a factor which would seem to indicate that a loose piece has once been inlaid here.

The drawing also shows that the bow has been strongly bound, the sinews used being those employed by the Eskimo to increase the elasticity of their bows. Running backwards

and forwards along the ridge of the stave is a sinew which at each turn is carried round the faucet at either end; the longitudinal lashing thus made is held in position by means of three cross-bindings.

Arrows. The collection contains about 20 arrow points as well as various arrow fragments where point and shaft are cut in one piece. One point only has been fashioned to take a loose blade and only one of the points has been furnished with a barb.

Fig. 54₉, No. 32812, shows an arrow point, well-preserved, of reindeer antler. It is 19 cm long and 2.7 cm broad at its broadest; it is somewhat bent. The extreme tip itself is cut quadrilaterally. The tang is almost round. Its rear section, which has been mortised into the fore-part of the shaft, is delimited from the part above by a narrow shoulder section. This rearmost section is 3.5 cm long, its tip being quadrilateral and comparatively blunt. It is furnished with two threads for screws, one the larger, encircling once, the other, making a semi-circle only.

Fig. 54₁₀, No. 32813, shows a similar point of reindeer antler. It was found in a house-ruin alongside the specimen previously mentioned and it is fashioned in the same manner. It is, however, slightly shorter and narrower.

A well-preserved arrow point of the same type but with a much larger and comparatively narrow blade is seen in fig. 54₁₁, No. 32837. The sides do not possess the convex-curved shape; characteristic of the two first-mentioned specimens. This particular point is 28.8 cm long and 2 cm broad.

Fig. 54₂, No. 32836, exhibits an arrow point askew, and, on the whole, one not of such careful workmanship as those hitherto mentioned. It is 13.3 cm long.

No. 32838 is part of a blade taken from the same site and destined to serve as a similar arrow point.

Fig. 54₁₄, No. 33084, reveals a long, slender arrow point having a blade only very slightly broader than the tang. This is also of reindeer antler and, in its principal features, agrees with the specimens so far described. Its length is 16.4 cm.

Four somewhat defective and weather-worn arrow points of reindeer antler are depicted in figs. 54₄, 5, 11, 12, Nos. 32901—04, one being of the comparatively slender type.

Fig. 54₇, No. 32899, shows the larger of two small arrow points. It is 8.5 cm long.

Fig. 54₈, No. 32900, shows the smaller. Its length is only 5.5 cm, and it has a comparatively short blade with strongly convex-curved sides.

Fig. 54₁₃, No. 33109, depicts a point differing from those previously discussed in so far as the tang, which has been affixed to the pole, is of another shape, it being bevelled wedge-shaped on both sides and furnished with transversal grooves. It has been mortised into the fore-end of a shaft and thereupon bound. The length of the specimen is 14.5 cm.

Fig. 54₃, No. 32852, shows one of the better-preserved arrow-points found in the same house-ruin as the two first-mentioned. It belongs to the slender type of point having a

long, narrow blade, flat-triangular in cross-section; the two lowest cm of the round tang, however, are flattened and the point is wedged into the shaft. The specimen is of reindeer antler and is 12.3 cm in length.

Fig. 546, No. 33108, shows an arrow point of reindeer antler. The tang is defective. The foremost section is comparatively broad and flat, and on one side there is a straight-cut barb. The tip, itself, is broad, edged and semi-circular in form. (The part of the tang still extant is of oval cross-section and is comparatively massive.) The length of the piece is 11 cm.

Fig. 5418, No. 33133, is a well-preserved arrow point of reindeer antler; it is 9.9 cm long and it has a tapering tang, the cross-section of which is almost circular; the cross-section above this tapering section is oval, but the

upper end, being thicker, is again almost circular in cross-section. At the end of this head a socket has been drilled in a breadthwise-plane direction for the insertion of a blade. This socket is 1.5 cm deep and 0.2 cm in width. A nail has held the blade in position and remnants still in place seem to indicate that both blade and nail have been of iron.

It is possible that the four objects, Nos. 32909, 10, 11 and 33143, can also be considered as arrow points. They are round, tapered pieces of bone with chamfered rear ends made in this manner for lashing to another shaft.

In fig. 5415, No. 32938, is seen a long, slender arrow point of reindeer antler. The blade is long with slightly bulging sides; it is also somewhat bent, and, moreover, is very thin.

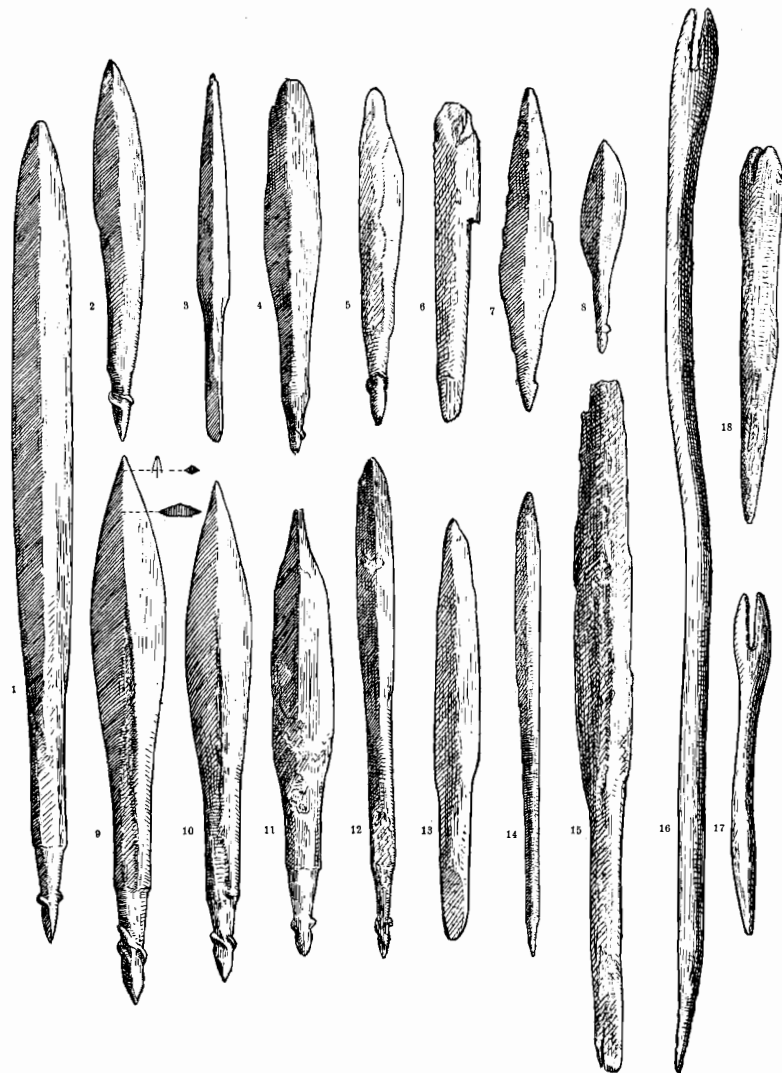


Fig. 54. Arrow Points. (1--6, 9-14 scale 3:8; 7-8, 15-18 sc. 1:2)

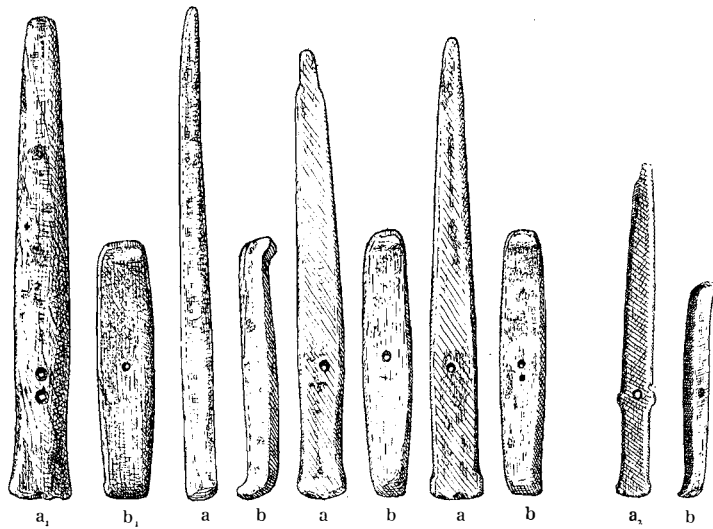


Fig. 55. Bow Accessories. (Scale 1:2)

The tang is of oval cross-section and the last two cm of its length have been bevelled and furnished with transversal grooves.

Bow Accessories. Everywhere where the Eskimo used the type of bow strengthened by having a strap or sinew binding along the back, the appliances employed for stretching the thongs were the same.

In fig. 55 several appliances of this nature are seen. The small objects (b) were used to twist, and thus tighten, the thongs or sinews, and the wedge-shaped article

(a) was for thrusting between the ridge of the bow and the longitudinal binding when it was desired to insert the loose end of the cross-lashing. In a single house-ruin I found eight of these objects in two separate bundles, two twisters and two wedges being in each bundle. A thin sinew, only slight evidence of which remained, had probably bound each bundle, all the pieces of which are made of narwhal tooth.

Fig. 55 b₁ shows a twister. It is a flat oblong, of rectangular cross-section, with its two ends turning in opposite directions. It is pierced through the centre. Length: 6.8 cm.

Fig. 55a, depicts a wedge. It has a weakly defined head and is of rectangular cross-section with somewhat rounded sides tapering downwards. It is perforated at two places 3 cm below the upper end and is 12.7 cm in length.

In the great grave at Myggbukta I also found a similar set of twisters and two wedges, all of reindeer antler but of slightly smaller dimensions.

To the right (a₂) is seen one of the wedges. It is 8.4 cm long and has a small protruding section on each side of the hole.

A twister, No. 32883, made of wood, is also in the collection. It is only 4.2 cm long, is broad, but has not been perforated through the centre.

Knives, Axes and Scraping Tools.

Knives for special purposes. In fig. 561, No. 32935, is seen a large, powerful-looking, knife-shaped object of whale bone and well conserved. It is somewhat bent and its shaft and blade are cut in one piece. The blade is broad and comparatively thin with

plane sides. It is double-edged and its edge-surfaces are broad. The one edge is convex, the other concave in contour, and both meet to form a broad, rounded point. The handle is affixed slantwise to the blade from which it is divided by two shoulders sharply incised at different levels. It ends in a lateral faucet which gave support to the outside of the hand. The corner of the higher shoulder is perforated, probably for taking a support strap. The length of the specimen is 43 cm. Another knife of the same type, is reproduced in fig. 565, No. 32975. It is also of whale bone, but it is somewhat defective and weather-worn. Its length is 24 cm.

Fig. 562, No. 32976, is another of the same type, also slightly defective. The faucet at the end of the shaft is broken off and part of the corner of one shoulder is missing. The blade is comparatively broad and tapers more than the two knives previously described. A hole for a strap has also pierced the corner of this particular specimen. Length: 25 cm.

A knife of wood is seen in fig. 563, No. 33127. The blade is straight and its cross-section bi-convex. The handle is bent and, as usual, is fixed at an angle to the blade. It has also had the faucet-like relief at its end, but this piece has been broken off. A hole has been bored through the upper end of the shaft and two through the centre of the blade, 18.5 cm from its tip. This knife was found near the large summer settlement on the extremity of Cape Wijkander Peninsula. The strap-hole through the centre of the blade leads to the assumption that the object has belonged to a kayak. Its length is 34 cm.

A second wooden knife found on the same site, is given in fig. 564, No. 33126. It is somewhat defective and differs from the foregoing in so far as one edge has certainly merged into the bent handle on one side direct, whereas on the opposite side there is the usual abruptly-cut shoulder. The length of the specimen is 36.5 cm.

There are three further wooden knives, Nos. 32991, 33134 and 33135, with shoulders cut at an unequal height and with handles fixed slantwise to the blade. All three are much decayed and somewhat defective. One has a strap hole through a shoulder. No. 33134 is 46 cm, No. 33135, 26 cm and No. 32991, 37 cm in length. Two miniature models in bone, Nos. 32945—46 are of the same type as the first-mentioned, one of them is given in the collection in fig. 842.

The type represented by seven of these specimens having shoulders at an unequal height, and a short, bent handle fixed at an angle to the blade, is also found in the Cape

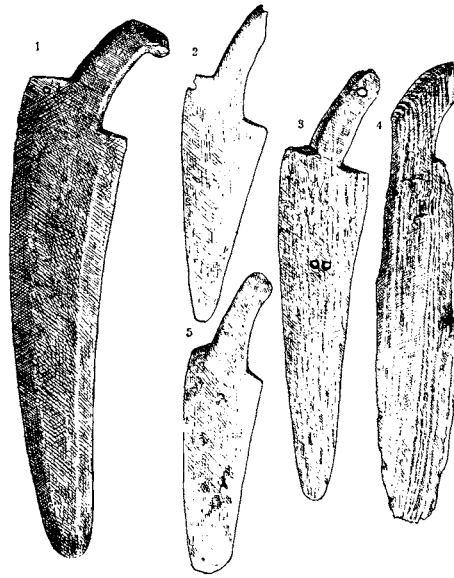


Fig. 56. Knives. (Scale 1:6)

York district and in the wide, central Eskimo regions, but outside these domains it seems to be almost unknown.

The special shape of the handle permits only a natural grasp being made by four fingers round the hollowed hilt fashioned between the lateral faucet and the lower shoulder. If the knife is grasped and held upright in front, the convex edge will accordingly face outward.

Knives of this type have hitherto been termed snow-knives, and, in the case of the just-mentioned large knife of whale-bone, an appellation of this description seems natural. The knife itself is massive, with relatively thin blade and good edges, and it appears, moreover, to have a shape suitable for cutting out blocks of snow.

The wooden specimens, on the contrary, can hardly be described as snow-knives. The weak, pliant material of which they are made, their shape and their comparatively thick blade with convex sides, render them little serviceable for use in hard snow-drifts. They could easily, however, have been employed for scraping off ice and snow from kayaks and umiaks, as knife-shaped articles for this work are known in all Eskimo districts.

So far as is known, large wooden knives have not previously been found in the north-eastern section.

Finds of snow-knives should possibly indicate that the Eskimo of North-East Greenland have not been unacquainted with the use of snow huts. In other words, it may be thought that the Eskimo have had two kinds of winter dwellings, namely, besides huts of earth and stone, the hut of snow, on occasion. Among the Cape York Eskimo, the snow hut is thus found in use together with the permanent winter dwelling of stone and turf. This active and far-roaming Eskimo tribe had hunting grounds at many places, frequently at considerable distance from the permanent settlements. They accordingly discovered the necessity of having snow huts they could erect rapidly at the end of a day's journey and capable of withstanding the severest cold.

In North-East Greenland, however, or, at all events, the part I know, the permanent settlements seem to be fairly evenly distributed over the whole area where hunting could be successfully undertaken during the winter as well; the same potentialities for lengthy and remunerative hunting expeditions were not available in these parts: the Greenland of the north-east had no Melville Bay where the seal lay scattered on the ice, mile after mile, and where the bear prowled in numbers throughout the whole of the winter; there was no such gigantic, reliable preserves of wild life to which the Eskimo could drive for hunting during the later part of the winter when the depots began to empty. There was thus no permanent need for the snow hut, but now and again a hunter has certainly been able to build a shelter for himself, or the hunter at the breathing hole has been able to erect a wall of snow blocks as protection from the wind.

An explanation is therefore forthcoming for the large number of snow knives found.

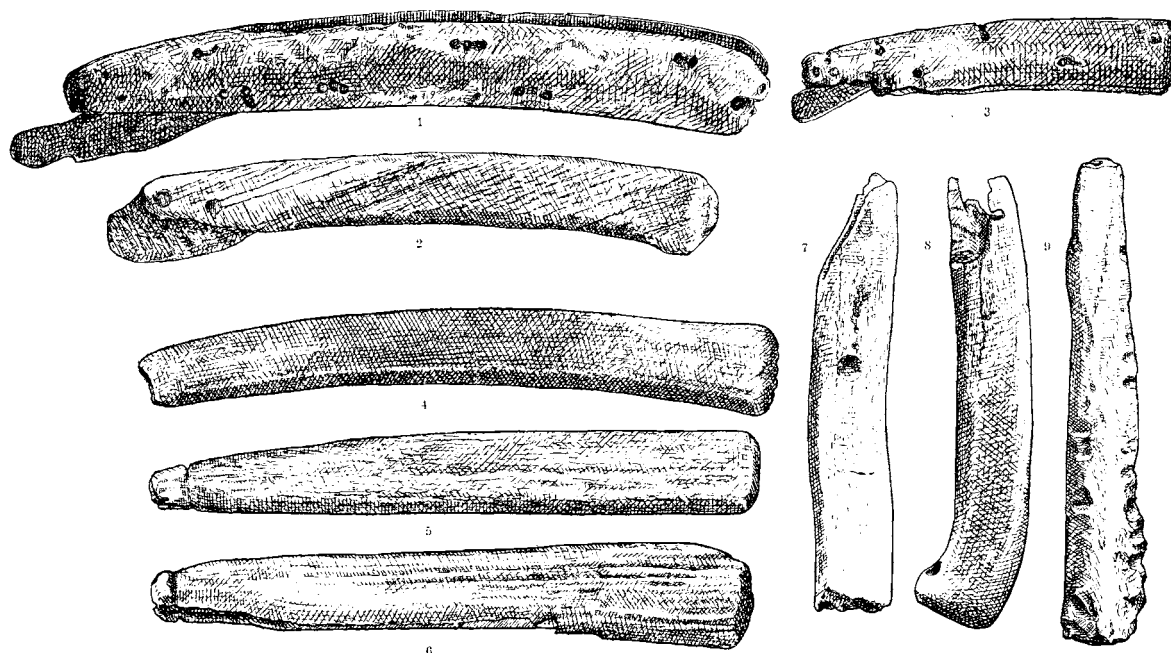


Fig. 57. Knives and Knife Handles. (Scale 1:2)

Another factor which, in my opinion, indicates that the snow hut could not have been in general use, is the irregular winter precipitation in Eirik Raudes land and the circumstance that the snow in certain extensive areas does not pack well. These conditions have rendered the erection of snow huts simply impossible at many places.

Ordinary Working Knives with Iron Blade. The use of the type of large knife dealt with above is greatly restricted both by the shape of the object and by the material employed. When required as an ordinary cutting instrument, the knife is most frequently of stone, but knife-blades of iron are also found although to a limited extent as the supply of this material has obviously been scanty.

In the collection are three knives each having an iron blade and there is also a single, loose iron blade which was taken from a grave.

Fig. 572, No. 32805, reproduces the best preserved of these knives, mortised into one side; near the end of the comparatively long shaft, is a small rounded iron blade projecting slightly beyond the end of the shaft itself. The shaft has been fashioned from a narwhal tooth; it is long and narrow, somewhat bent and almost rectangular in cross-section. The other end of the shaft, on the same side as the blade, is in relief, thus enabling a better grip to be obtained. The blade is small; it has a curved edge and, as mentioned, it protrudes somewhat beyond the shaft, its edge here being broad and almost round. Two iron nails hold the blade in position.

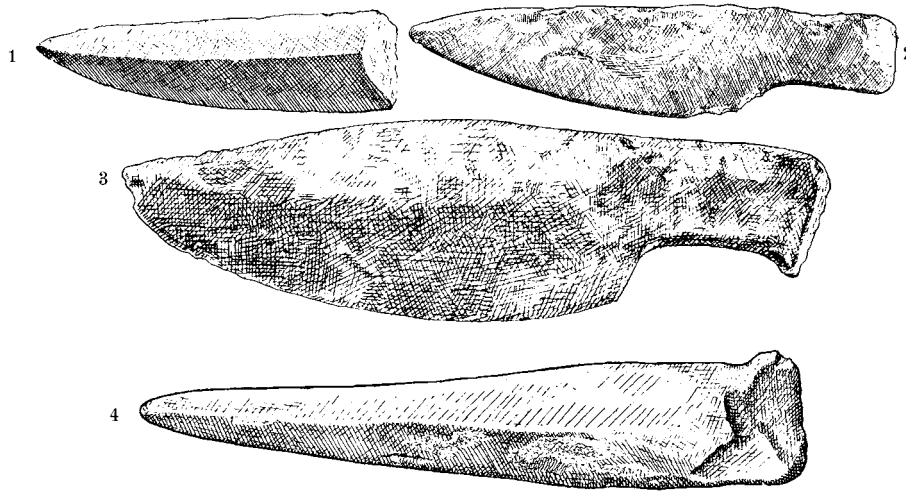


Fig. 58. Knives. (Scale 1:2)

The length of the object is 16 cm, of which the blade forms 3.5 cm. This specimen was found in the same house-ruin as the best preserved arrow points.

Another knife of the same type, but in a considerably worse state of preservation, is depicted in fig. 571, No. 32937. The handle is of reindeer antler and consists of two symmetrical halves

which have been held in position partly by nails and partly by lashings. It is somewhat bent and it converges evenly towards the end in which the blade is fixed.

This blade has had the same shape as, but is larger than, the one belonging to the knife previously described and it is also in a more rusty condition. It has been held in place by nails of bone. The lashings have been carried through pairs of holes having sunken grooves for taking the sinews. The length of the piece is 23 cm.

Another knife found on the same site, is seen in fig. 573, No. 32936. It is of the same make as the foregoing, but is appreciably smaller, being only 11 cm in length.

A loose iron blade is 6 cm in length and 2 cm in width; one end is cut obliquely, the other is round.

Several loose knife handles of narwhal tooth, reindeer antler and wood, each of which have similarly had a blade mortised in, and secured to, one end, are seen in fig. 574—9.

The sides of the wooden shafts, however, have been cleft and a chamfer has been made to take the binding wound round the shaft end.

Ordinary Working Knives of Stone. The stone knives are shaped either with the handle running longitudinally in one piece with the blade, or as an ulo — a knife used by women and shaped for being held by its back.

Fig. 583, No. 32932, shows the largest of the stone knives. It is made of reddish-brown slate and has a short tang divided from the blade by a shoulder. The blade is broad, thin and single-edged, the edge being considerably curved and comparatively sharp; the back is also somewhat curved. The edge-surfaces and the sides merge evenly into each other. The shaft-shaped tang is so short that it forms a very poor handle. The specimen is 18.5 cm in length. A knife of this type, but twice as large is housed in the Nathorst Collection.

Another stone knife of good construction, is seen in fig. 582, No. 33101. It is of grey-green slate and has a comparatively tapered, single-edged blade with broad edge surfaces. The tang of this specimen is also short. The length of the object is 12.8 cm.

Fig. 581, No. 33104, gives the fore-part of a knife blade of reddish brown slate. It is double-edged and carefully ground. The one edge arches evenly, the other is straight, but both converge to form a convex-curved point. The blade is of very careful workmanship; the edge surfaces on both sides join together in a sharp ridge which is broadest towards the curved edge. Its length is 9.5 cm.

Fig. 584, No. 33128, depicts a dagger-shaped weapon which should also be included among the knives. It is made of the same reddish-brown slate as the preceding specimen. It is double-edged and has a comparatively long, pointed, converging blade and a short, broad tang to which a handle has possibly been tied. A somewhat sunken channel in one lateral side and signs of wear at all the sharpest parts of the tang should, however, indicate that it is likely that this is the shaft itself. The blade is unevenly ground, with, however, a strongly-defined ridge along the centre of one side. On the opposite side, only the foremost part has been shaped to an edge. The edges are sharp. Its length is 18 cm, of which the tang forms 5 cm.

A fragment of a cutting implement having a concave edge is given in fig. 60¹⁰, No. 32907. It is made of a light kind of brownish-grey slate. Its length is 9 cm. Two smaller fragments, Nos. 33124, 32943, have probably been points on single-edged knives.

Uloes (Women's Knives). Fig. 59¹, No. 32934, reproduces a women's knife known as an Ulo. This is the special and paramount implement for women's work. In shape the blade resembles a sector; it has a sharp edge along its curved side and a straight-cut top mortised into a wooden handle. The blade is of green slate and is comparatively thin. It is perforated on top, once on each side, to allow of lashing to the handle. The latter is now split longitudinally, but originally it was certainly cut in one piece.

Another similar handle, No. 33067, cut in one piece, is found in the collection; incised to a depth of about one cm is a groove to take the upper end of the blade. The two lashings, probably of animal sinews, which hold the blade in position are bundles of fine, tangled fibres. Length: 6.5 cm.

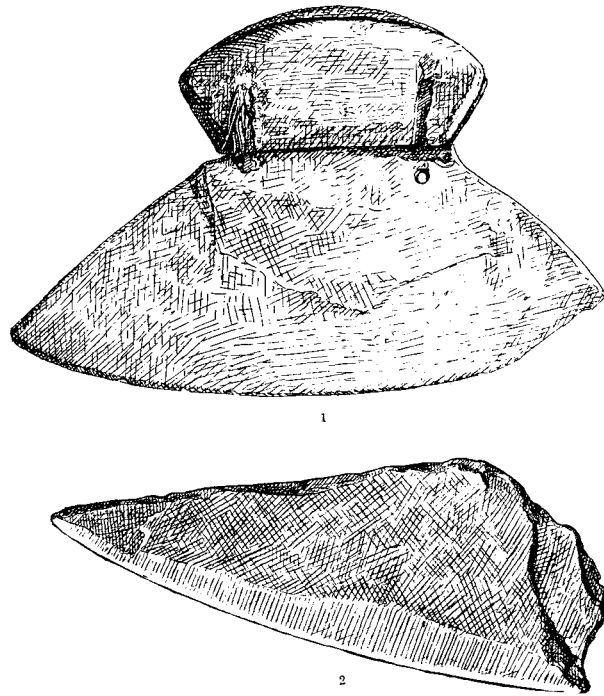


Fig. 59. Knives. (Scale 1:2)

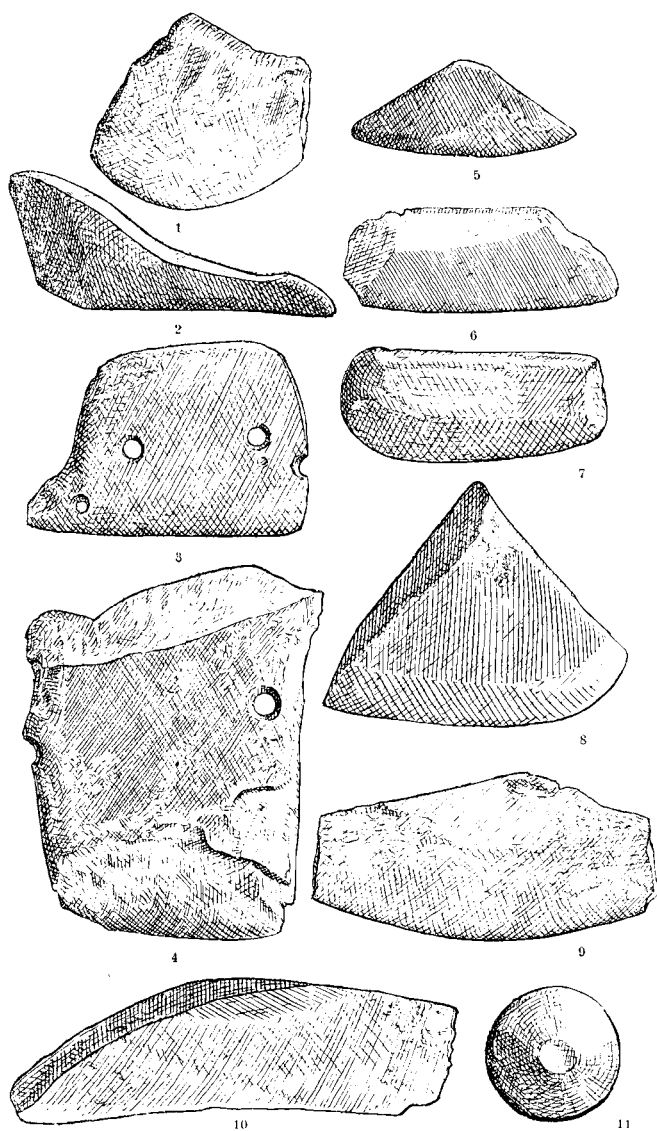


Fig. 60. Knives. (Scale 2:3)

and has a very sharp edge. It is of the same material as the foregoing. Length: 5.5 cm.

Fig. 601, No. 33063, is made of a lighter coloured kind of slate; it has a thin and strongly-curved, sharp edge. It does not seem to have been hafted. Its length is 4.3 cm.

No. 33046 is apparently a fragment of a hafted ulo. The edge of a hole for the lashing is seen. The material is of green slate and the length of the object is 3.5 cm.

Fig. 607, No. 33107, depicts an unfinished stone knife; at the same place was found a round piece of slate shown in fig. 6011.

Quite a small Ulo, in shape and material the same as the foregoing, but without a handle, is seen in fig. 605. It was probably used only for sewing. Its length is 4.5 cm.

Fig. 592, No. 32933, shows a fragment which, possibly, can have belonged to a large Ulo. It has a long, curved edge running at a sharp angle to the other longitudinal side. It has plane sides with comparatively short edge-surfaces. The material is the same as used for the two preceding specimens. Length: 15 cm.

Fig. 608, No. 32840, has belonged to one of the sector-shaped uloes; its edge is blunt and its edge-surfaces narrow. The material is the same. Length: 6 cm.

Fig. 609, No. 33122, has a curved, finely-ground, sharp edge, obliquely-cut ends, and a somewhat upturned, angle-shaped upper section. If this object has had a handle, its upper section must once have been larger than it is now; it is not possible to determine, however, whether the blade is defective or whether its present shape is the original. Length: 6.9 cm.

A second and similar object, which apparently has been used as it is, is seen in fig. 606, No. 33098. It is thin

No. 32959 is a fragment of a cutting instrument of a black sort of stone. It is short and has a blunt edge which is 2.8 cm in length.

An ulo-blade of reddish brown slate is depicted in fig. 603, No. 33095. The speci-

men is almost square in contour, but on one side the edge extends into a short tip. On each side of the centre of the specimen is a hole for taking the lashings which held the blade to the handle; similarly, there is a hole near the edge, and the border of another is seen on one of the lateral sides. The perforations have been made by boring from both sides. The edge is somewhat curved; it is comparatively sharp and its surfaces are convex. At one time the ulo has been much larger, but it has gradually been ground down until barely the tang is left. Length: 5.5 cm.

Fig. 604, No. 33096, portrays a cutting instrument of the same material. It is defective at the end which has been last used as an edge. It has a hole near one edge and the border of a second on the other. It is not improbable that the object is the handle only of a large-sized ulo with its blade section entirely missing. Its length is 5 cm.

Fig. 602, No. 33098, also reproduces a fragment of a cutting implement of the same material. The comparatively blunt edge has protruded into a point on one side. Its length is 6.8 cm.

The three specimens last discussed were found in the house-ruin which showed signs of being of the greatest antiquity.

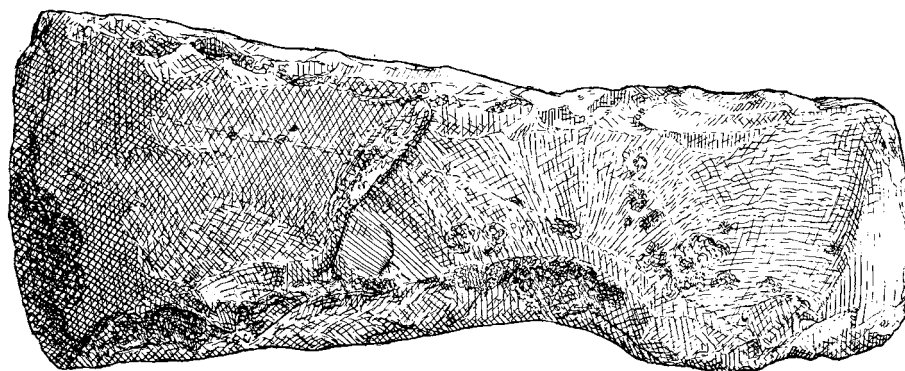


Fig. 61. Axe-head. (Scale 3:7)

Axes. Fig. 61, No. 33100, depicts an axe-head, 28 cm in length, fashioned from a flat piece of green slate by the shaving off of flakes on both lateral sides. It is 10.3 cm broad at the one end, and thereupon decreases evenly to a width of 7 cm at a short distance from the centre where the specimen contracts somewhat; the other end has a fairly even width of about 8 cm. The blade is double-edged, the edge at the broad end being somewhat curved and ground evenly from both sides with wide, convex edge-surfaces, the edge of the opposite end, however, being oblique, unevenly ground and splintered along its border.

The thickness of the object varies, it being more massive at the broad end where it has an even thickness of 2 cm. Running

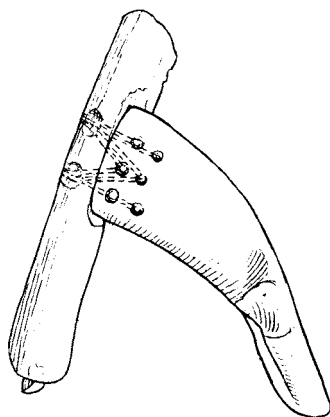


Fig. 62. Adze. (Scale ca. 1:4)

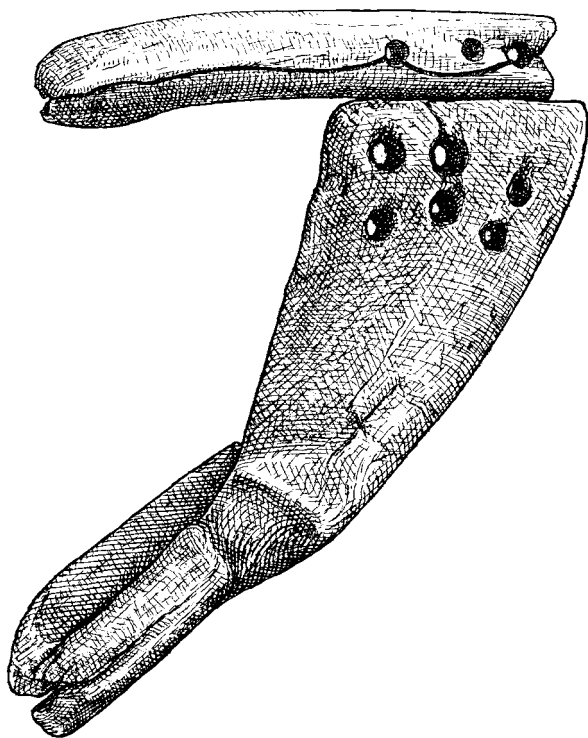


Fig. 63. Adze. (Scale 1:2)

Originating from Daudmannsøyra is a wooden shaft, probably of a cross-axe. It is comparatively short, only 22 cm in length, massive and somewhat bent. At the lower end of the shaft a handle has been cut of a shape which seems to be peculiar to the north-east coast. The shaft above this handle is of oval cross-section and it increases in thickness upwards. The topmost end of the shaft is cut obliquely and plane; here the shaft is pierced by six holes in two rows for the lashings of the axe-head, the latter presumably having been fixed to the shaft, necessarily at a sharp angle to it. Fig. 62 illustrates how an axe of this kind presumably appeared.

The shaft is reminiscent of the types of shaft which came into use on the west coast after the European hatchet-iron had been introduced and utilized by the Eskimo there for blades on adzes. It is therefore not altogether impossible that these new West Greenland adze-types are imitated in the axes of the north-east coast.

Heads for cross-axes of this type belong to the more frequent finds. In most cases they are made of reindeer antler with a blade for insertion at one end. In fig. 63 one of these heads is seen in position on the shaft

near the border along one broad side is a prominent ridge.

It is possible that this is not the head of one of the usual Eskimo adzes as the marks made by the wear of lashings round the narrowest, centre section may indicate a hafting of another kind, the shaft thus having been fixed in the direction of the edge and not transversally.

In North-East Greenland where wreckage has been strewn all along the coast, and timber in consequence has been a material used in activities of all kinds, large implements suitable for the first rough task of treating drifting logs have certainly been a valuable asset to the natives. This axe-head, therefore, judging from its material, has undoubtedly proved a useful implement for its purpose. It has the necessary weight and balance for delivering a powerful stroke and its edge is comparatively sharp and firm.

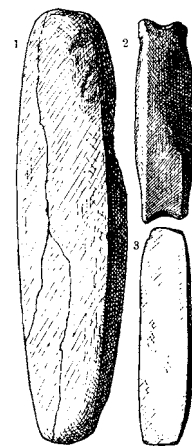


Fig. 64. Whetstones (Scale 1:3)

previously described; owing to the shape and size of its fulcrum, the blade must be viewed as having been of stone.

All things considered, axes like these must have proved themselves to be implements of quite a handy nature.

Whetstones. Whetstones also belong to the more frequent finds. Usually they are of slate, but specimens of a rougher-grained material better suited for initial grinding are found as well. Frequently, these whetstones are merely casually collected stones of no special shape with a grinding surface on one side only, but there are also specimens of a more careful finish.

Fig. 641, No. 32953, depicts a large, massive, whetstone of a kind of granulated material. It is oblong in shape, almost square in cross-section, and tapers towards both ends. It has been used on all four sides. Length: 17 cm.

Fig. 642, No. 32952, shows an oblong-shaped whetstone having sides curving slightly outwards and at each end a hollow for the two fingers by which it was held. Its length is 8 cm. Whetstones of this shape have been found on the east coast both to the north and south.

Fig. 643, No. 32845, is rectangular in cross-section and has whetstone-surfaces on two sides. Its length is 8.5 cm.

Bone and Antler Scrapers. In fig. 65 are depicted three edged instruments, Nos. 33087, 33064 and 32663, made of reindeer antler and bone, which could certainly have been used during the treatment and preparation of hides.

No. 3 has been fashioned from the parent-antler of a reindeer. It is bevelled wedge-shape half-way along one side so as to form a strong, somewhat bent edge with a broad transverse tip.

The end of the handle shows that the object has not, as is usually the case, been cut from the antler by means of a drill, but by superficial incisions having been made by a knife, the part concerned thereupon being broken off. The length is about 13 cm.

No. 2 is also of reindeer antler. A natural grip for the handle is formed at the top. Towards the bottom the specimen is bevelled from one broad side, thus forming an edge at the end. Its length is about 13.5 cm.

No. 1 which comes from Mr. Hoel's excavation work on Daudmannsøyra, is made from a large shoulder blade. One longitudinal side is broad and is formed by the ridge of the blade which affords a good hold for the hand; the other is ground from one side thus making a long and thin edge much like that of an ulo.

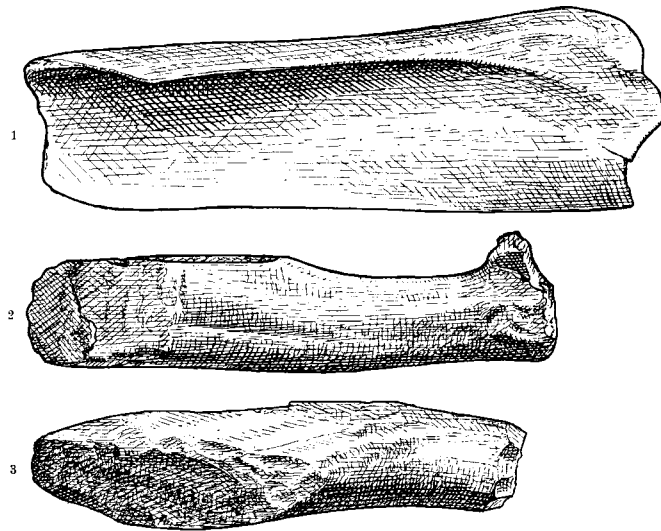


Fig. 65. Bone and Antler Scrapers. (Scale 1:2)

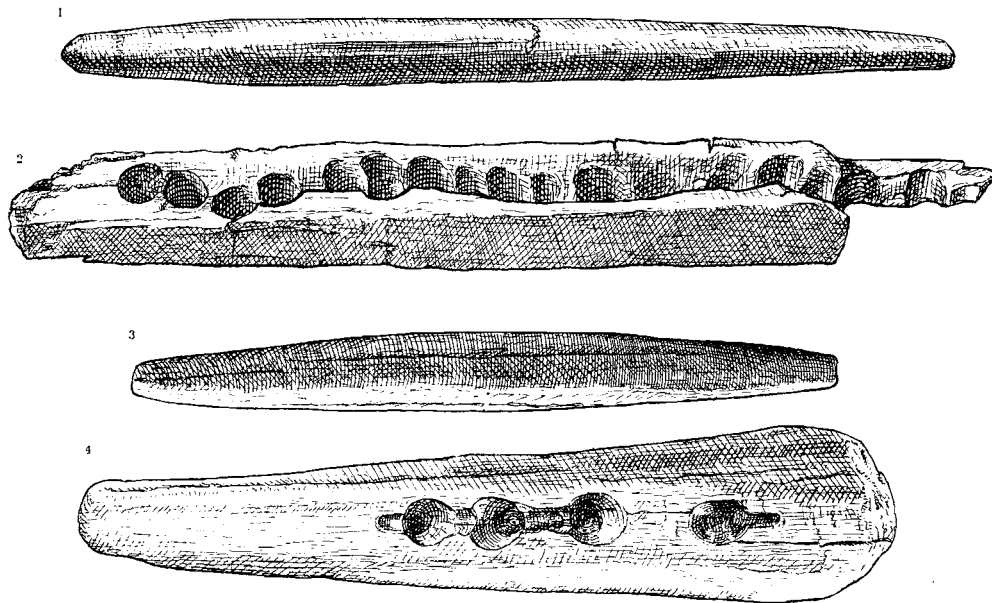


Fig. 66. Parts of Ignition Drills. (1—2 scale 1:2; 3—4 sc. 1:3.)

Drills.

Ignition Drill. The natives obtained fire by friction, a wooden stick (centre-piece) being rotated rapidly against another object, the base-piece; for a base of this nature anything of wood casually at hand seems to have been employed and there are several pieces in the collection showing signs of having been used for this purpose; there are also several centre-pieces which were rotated. These latter are round wooden sticks, thickest at the centre and having conical ends. They were forced down against the base-piece with the aid of a top-piece in which was a hollow corresponding to the conical upper end of the stick; but there is nothing in the finds, which can definitely be identified as a top-piece.

The centre-piece was probably set in rotation by the common Eskimo method of using a strap of hide with a handle at each end. Two persons were necessary for kindling fire in this manner.

A Norwegian hunter took from a settlement on the south side of the mouth of Davy Sound a piece of drift-wood, which has been used as the base-piece of an ignition drill. On its upper side are four comparatively large, round hollows, near the two outer of which are still to be seen grooves cut to collect the saw-dust made by the revolutions of the drill. Two of the cavities tend in a downward direction at a very noticeable slant. Depicted in fig. 664.

Fig. 663, No. 32990, shows a shuttle-shaped massive piece of wood the ends of which are very charred and rounded as though from having served as an ignition drill.

Fig. 66_{1,2}, Nos. 32865 and 32894, shows a centre-piece and a base-piece respectively.

Common Drill. Among the natives of North-East Greenland, the drilling and boring technique of the Eskimo remained in full use until the last. The drill was their most important implement and it was, moreover, a tool which, in proper hands, could be used for many purposes. The saw being unknown, the drill had to serve in its stead. By drilling a number of holes close together in the material to be worked, it was easy to snap or break off the object to the required shape; the drill was also much used for the first rough shaping of many implements and thus has partially replaced the knife as well.

It is the bow-drill which has principally been used by the Eskimo elsewhere in Greenland. It consisted of the following parts: shaft with a boring-point, bow, and a top-piece. I failed to find any complete set on the north-east coast, nor, so far as I am aware, has any such set hitherto been found to the north of Scoresby Sound, but in the collection are several separate parts of drills, described below, which go to prove that the drill in this part of the country has also been of the usual construction.

Fig. 67_{1,2} shows some forms of top-pieces. It may perhaps be doubted whether the pieces reproduced have actually been used as such, but they are included here, as in any case they seem to fulfill the demands required of an

object of this kind. The top-piece was often held between the teeth; in it was a hollow corresponding to the upper-end of the shaft thereby enabling the drill to be both guided and pressed down with the arms left free for revolving the implement by means of a bow.

There are no objects in the collection which can definitely be accepted as having been used as a bow or shaft, but there are, however, two points.

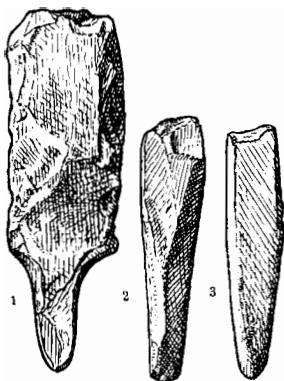


Fig. 68. Boring points.
(Scale 1:3.)

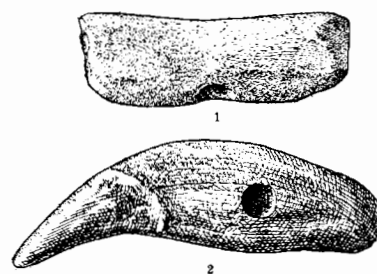


Fig. 67. Top-pieces for Drills.
(Scale 1:2.)

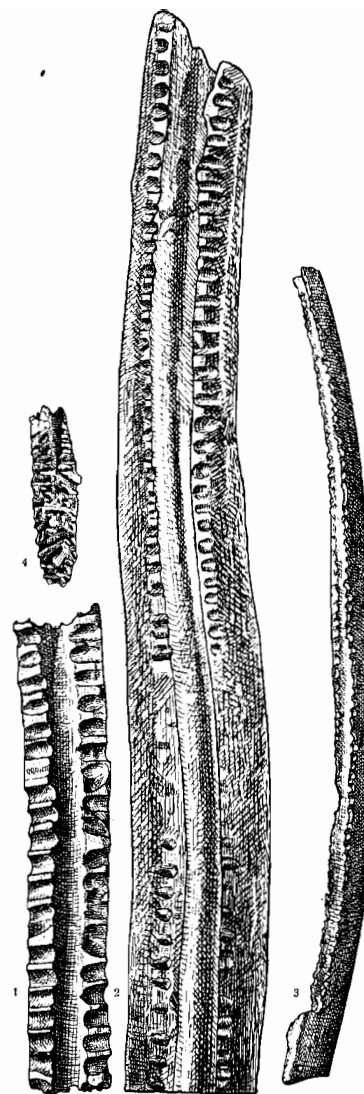


Fig. 69. Bone-pieces showing use
of Drills. (Scale 1:3.)

Fig. 683. No. 33103, gives such a point of grey slate. It is 5 cm long and 1.1 cm broad at its broadest. The specimen is somewhat defective at the end which last served as tang; the latter is of rectangular cross-section and has an even breadth; it is wedge-shaped and is possibly the original point. The lower half is comparatively thick; it tapers from the sides, has rounded edges and a blunt point ground to four facets. The max. thickness of the tip is 0.5 cm.

In fig. 682, No. 33102, a point of reddish-brown slate is reproduced. It has not so careful a finish as the foregoing; its length is 5.3 cm. It is comparatively broad and flat in the upper part which has been mortised into the shaft. Its lower part tapers somewhat and its end is ground to four facets which meet at an obtuse angle.

Fig. 681, No. 33045, depicts a larger boring-point of green slate, somewhat defective at its tip. It is 7 cm long, 5 cm of which comprises the tang. The latter is 2.3 cm broad, is comparatively thick and has been fashioned by scaling off shivers of material. The point has been short and strong. The lengthy, massive upper part has hardly been made for hafting but for use as it is. The specimen should therefore rather be looked upon as a hand-drill, possibly as a bodkin if it is to be presumed that the point has once been longer than now shown.

Fig. 69 reproduces certain pieces which show how the drill was employed. Bored holes are seen having a diameter from about 1 cm to between 2 and 3 mm. Where slate as a material was concerned, holes were commonly bored from both sides, probably to reduce the risk of splitting. No doubt, with the broad, stone points described above, only the softer materials like drift-wood, and probably, antler, could be bored. For use with bone and slate, however, as witness numerous objects found in refuse dumps, more delicate points were used, which, it must be presumed, were in most cases of iron.

Household Utensils.

Lamps. As I and my companions have more than once experienced in North-East Greenland when, during the winter, the oil supply has run out, blubber is an excellent fuel. It gives great warmth and in use goes a long way. With blubber as fuel the natives kept their huts at a temperature in which life could be sustained, and with it they cooked their food for so long a time as sufficient remained for their lamps. Properly attended to, blubber burns with a clear, yellow flame without smoking.

In many of the regions inhabited by the Eskimo, blubber is the only usable fuel. In North-East Greenland, however, where a good amount of drift-wood is available, this material seems to have been an important reserve alongside of blubber. In several house-ruins, particularly in the district of Franz Joseph Fjord, I have found ashes and charred wooden stumps in the front corner of the huts where the fire-places were situated.

The extremely narrow dwellings were poorly-suited for wood-burning, but at the many settlements where the stocks of blubber were exhausted early, the natives have certainly been obliged to burn drift-wood in order to live through the winter months.

The open fire pre-supposes ventilation of another kind than is usual in the Eskimo hut of original construction, but I am unable to state how the necessary draught has been provided for as in none of the dwellings was the roof over the fire-place intact. During the summer when cooking could be done in the open, much drift-wood was certainly used as fuel, ancient fire-places round the tent-settlements bearing testimony hereto.

Prior to being put in the lamp the blubber was beaten so as to destroy the membranes protecting the sebaceous glands, the oil thereupon issuing forth. The lamp in itself was a very simple contrivance, merely a dish-shaped stone: as wick, dry moss or something similar was used by being placed in the oil extracted and collected at the bottom of the dish. These lamps, however, are found fashioned in various ways which aim at a more complete utilisation of blubber as a fuel.

Soapstone seems to be the stone the Eskimo liked best as material for his lamps. It was a substance which could be worked easily and the lamp could therefore be given the shape desired. Lamps made from other kinds of stone are, however, also found.

The Greenlanders of the north-east coast do not seem to have paid any particular attention to the shape of the blubber lamp and in many huts they have been content with suitably large stones with presumably natural hollows, see fig. 70. Several lamps of this type which I have seen seem to have been hollowed out by the natural action of frozen water on the stone. The natives, however, have also worked on their lamps themselves, and earlier expeditions¹ have found several specimens exhibiting evidence of careful crafts-

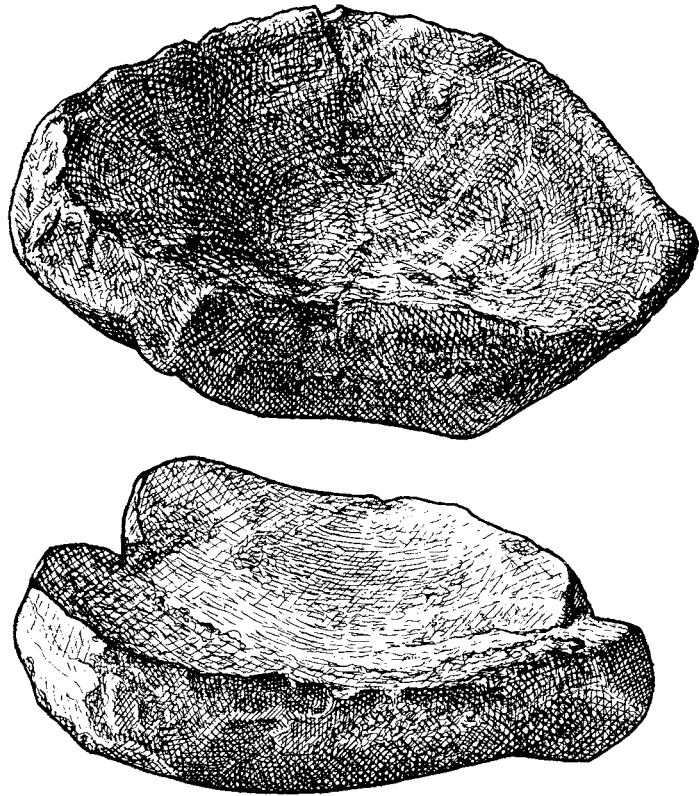


Fig. 70. Blubber Lamps (?). (Scale 1:4)

¹ Stolpe: Pl. III, Ryder: P. 327 and Thomsen: Pl. XXIV.

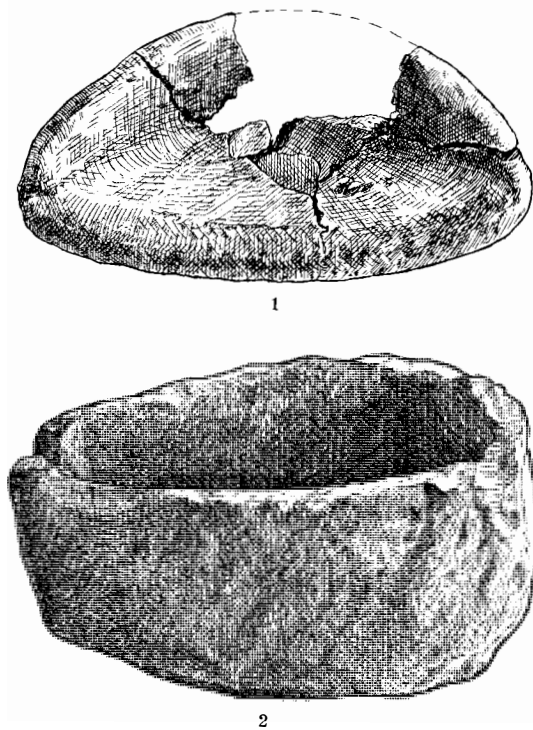


Fig. 71. Blubber Lamp and Pot. (Scale ca. 1:4.)

manship. I discovered fragments of two such lamps, one being in many small pieces which it was found possible to put together to form almost a complete lamp. This lamp, is depicted in fig. 71, No. 33033, and was taken from the great grave at the "Myggbukta" settlement. It is made of a kind of sandstone, somewhat half-moon shape in contour, but having rounded corners and a somewhat curved front. The fore-part of the dish is low, but its sides gradually rise rearwards from each corner and convey to the object the shape of an upright back. The dimensions of the lamp are about 28×17 cm, with a thickness of about 3 cm. The second specimen, reproduced in fig. 72, No. 33116, is, undoubtedly, also from a blubber lamp, from the side of which a piece has been broken off. The cup-like cavity in the case of this lamp has been even and very shallow, without the well-defined sides.

Cooking-Vessels and Pots. Cooking-vessels and pots were made of stone. Hitherto only fragments of such utensils have been found on the north-east coast. I returned home, however, with a cauldron, as good as whole, and several large fragments of objects of a similar nature. I had, moreover, parts of a large, well-made, soapstone cauldron which could have been put together to form a complete article had not, unfortunately, these pieces been forgotten on my departure and left behind at one of our stations.

Fig. 712, No. 33178, reproduces a massive stone cauldron of which only a small part of the edge is missing. It is roughly made of sandstone and its bottom and sides are about 4 cm in thickness. It is oblong in shape, but tapers towards one end; it is comparatively tall and has a domed outer side. The length is about 32 cm, the breadth 22 cm broad where broadest, and the height is 18 cm. This cauldron differs from the usual kind of Eskimo cooking-vessel by not having holes for support straps, and, provided therefore that no other method of suspending the cauldron is to be presumed, it has thus not served for use over the blubber lamp.

It has certainly been used as a cooking utensil, however, as this is apparent from its scorched and partially soot-covered outer side. If the winter dwellings have also had an open-hearth fire, it may be imagined that a vessel of this type has been in regular use.

A fairly large fragment of a similar, rough, sandstone cauldron also without holes for straps, is depicted in fig. 731, No. 33115. It is the end of the cauldron which has been preserved; it has measured, inside, about 14 cm in breadth and about 10 cm in depth.

That the North-East Greenlander has also had pots of a better make, is shown by the fragment depicted in fig. 732, No. 32879. Here again, it is the end of the vessel which has been preserved. The material used is the same as in the foregoing utensil, but it has been shaped with greater care, the sides being straight and its bottom flat with a thickness of about 2 cm only. As witness the holes in the upper corners, this pot has been made for suspension above the blubber lamp. Along the broken border are three holes for lashings, showing that the object was once broken and thereupon repaired by the parts being tied together. The inside measurements of the pot have been about 14 cm broad and about 8 cm deep.

There are two further fragments in my find, namely a larger and a smaller, Nos. 33117 and 32876, both of sandstone.

Among a number of objects excavated by Mr. Hoel near Daudmannsøyra on Clavering Island, is part of the bottom of a soapstone cauldron, No. 32671; it has belonged to the more carefully made vessels having a flat bottom. In the same collection is a fragment of soapstone, No. 32672, which probably, has belonged to a lamp.

Not very much by way of kitchen equipment has otherwise been discovered

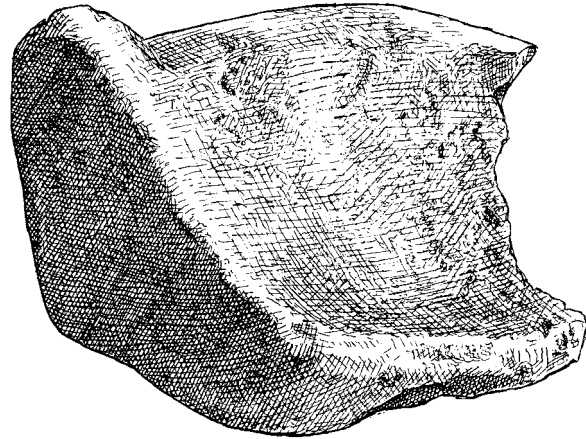


Fig. 72. Part of Blubber Lamp (?). (Scale 1:2)

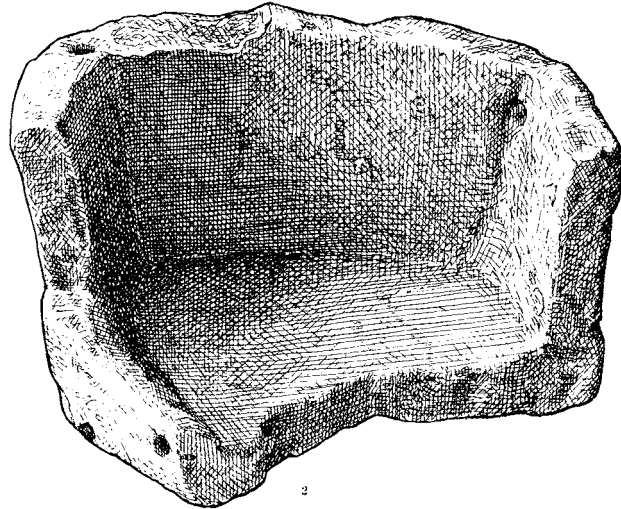
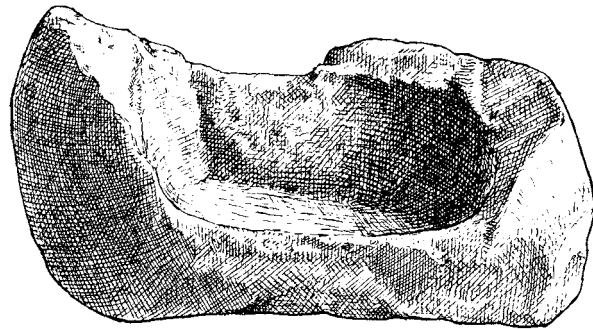


Fig. 73. Pieces of Stone Pots. (Scale 1:2)

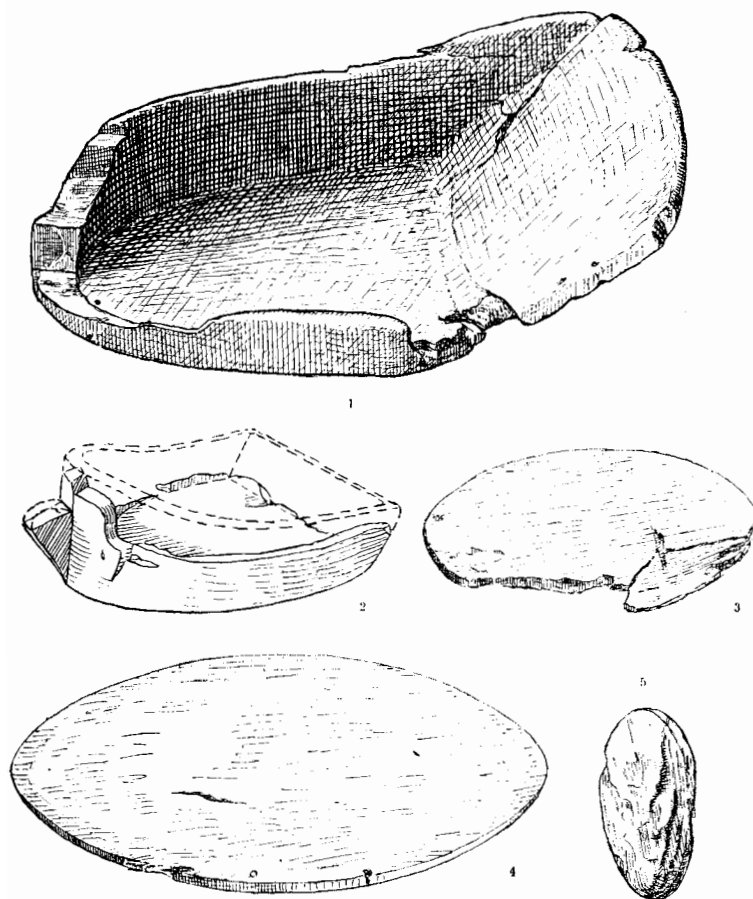


Fig. 74. Ladles and Bottoms for Boxes. (1--2 scale 1:2; 3--5 sc. 1:4)

32962, the centre one being defective. The dimensions of the largest are 28.5×19 cm, with a thickness of about 0.5 cm. All were found on the same site. There were no remnants of sides, which, however, were presumably thin and thus can have decomposed rapidly in the damp earth.

A somewhat defective wooden ladle is reproduced in fig. 741, No. 32915; most of one side and the whole of the shaft is missing. It has been cut from a single piece of wood and is well made. The handle has presumably been fixed to the extension of the cup-like part at its narrow end and has been of one piece with it. It has a flat bottom and upright sides. The specimen widens towards its front where it ends in a transverse, obliquely-aligned face. Its length forward is 19 cm, its greatest breadth, 3.5 cm. The fracture on one side is an ancient injury which is seen to have been repaired by lashing.

Another defective, wooden ladle is given in fig. 742. It was found on Daudmannsøyra by Mr. Hoel's party.

in North-East Greenland, and, as a matter of fact, no great wealth of vessels and kitchen utensils generally, was really required in Eskimo households; all the same, frequently surprisingly much of what might be included within the term household articles, is found among the Eskimo.

I do not know, therefore, whether it has much to say when delivering judgment upon what the house has contained of equipment for daily house-keeping, that hitherto comparatively few kitchen utensils have been found in this region.

Boxes and Ladles. The collection contains 4 oval wooden bottoms of various sizes, all of which are presumed to be the bottoms of vessels or boxes.

Fig. 743, 4, 5, depicts three of these, Nos. 32960, 32961 and

About twenty years ago, Norwegian hunters returned home with a ladle, No. 10278, of the same type but considerably smaller. It is also defective as the greater part of the cup is missing. Its length, handle included, is only about 9 cm. Belonging to the same older finds, is a large-sized ladle, No. 10293, made from the thick part of the horn of a musk-ox. Its back is somewhat defective as the substance of the tusk here seems to have decayed. A fracture at the bottom has been closed by two lashings. The length of this ladle is 18.5 cm, its breadth, 16 cm.

This specimen is of considerable interest as it furnishes evidence that the musk-ox

was already living in North-East Greenland at the time the Eskimo peopled those parts. It certainly seems the sole object from Eirik Raudes Land which shows that the North-East Greenlander has known and utilized the musk-ox, but it is true to say that possibilities are still open in respect of finds going to testify that the musk-ox was not so very rare when the natives hunted in these regions, even if these animals were not present in so large a number as to-day.

Trough and Clubs. A third article, No. 10290, also brought home by Norwegian hunters, is a trough-shaped, wooden dish. It is cut in one piece, is 15.2 cm long, 10.7 cm broad at its max., and is 4 cm deep. It has split along one side and has been repaired with the aid of 4 lashings.

Similar small troughs, used for storing miscellaneous articles¹, have previously been found in North-East Greenland.

No. 2 from the right on fig. 82, No. 32912, shows a club-like implement of wood. It has been fashioned from one piece and has probably been used for crushing blubber. Its length is 29 cm.

Sledge and Dog Harness.

In all high-arctic regions populated by the Eskimo, the dog-drawn sledge plays the principal part as a means of transport, and, as several finds testify, this sledge has also been used by the natives who once peopled Eirik Raudes Land.

The Koldewey Expedition found in 1869 the greater part of a complete sledge, and in 1899 the Nathorst Expedition returned home with a sledge-runner and some sledge

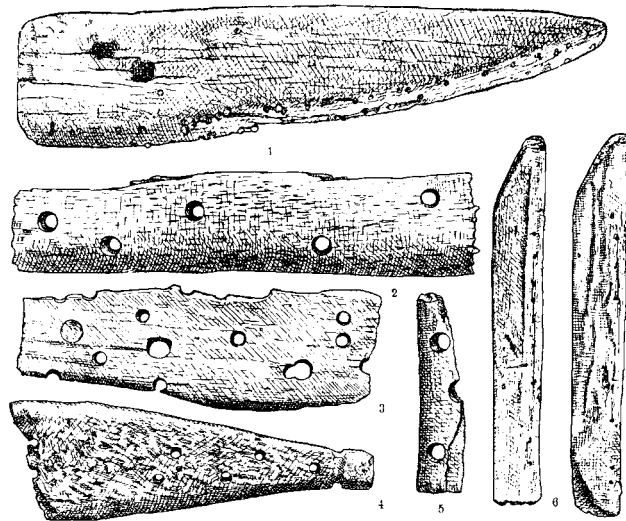


Fig. 75. Sledge-runners and Shoe-pieces.
(1 scale 1:9; 2-5 sc. 1:3; 6 sc. 1:6)

¹ Thomsen: p. 449. Medd. om Gr. I. 44. 1917.

cross-slats. The Danmark Expedition, 1906—08, which, however, returned chiefly with archæological material from areas north of those I have described, found a few fragments belonging to cross-slats of sledges.

Large and small specimens of bone shoeing-material — most pieces having very likely been used for mounting under the runners — belong to the objects most frequently found, but it should be borne in mind that many such pieces go to form the mounting for a single runner so that the numerous finds made, need not of themselves indicate that sledges in great numbers have been employed in the region of the north-east coast.

I also found remnants of sledges as seen in a single, unfinished sledge-runner not quite 1 m in length, and the fore-part of a runner of a larger type; I had in my collection a runner originally about 1.5 m long but, unfortunately, it was accidentally ruined when still in Greenland. Very many small fragments of mountings for sledges were also found, and, so far as I am aware, Norwegian hunters have not returned home with any sledge remnants other than pieces of shoeing-material answering this description.

Altogether, therefore, relics of sledge wood-work are very few and the fact that they belong to finds of the rarer type is well worth observing as the massive sledge-runners conserve well and they would have been easily discovered had they been in existence in very great numbers; sledges do not belong to the objects excavated from house-ruins.

The unfinished sledge-runner is depicted in fig. 79₁, No. 33050; it is 90 cm long, 11 cm high, 3.5 cm thick and has been made from a piece of drift-wood; holes for lashing the runner to the cross-bars as well as nail-holes for securing the shoeing-material, are missing. The under-side of the runner is shaped on the slant.

In fig. 75₁, No. 33177, is seen the runner fore-part, previously mentioned. It is 72 cm long, 4.5 cm wide, and has a long and gentle curve. Situated at irregularly-spaced intervals along the longitudinal under-side — which is also shaped slantwise — are numerous perforations for nails; in a few instances wooden nails remain intact. It appears probable that the runner has been shoed on various occasions. Two square holes are observed at about the centre part of the object, where the tip commences to curl; a strap has been fastened in one of these holes and has run to a corresponding hole in the second runner. To the strap thus stretched, the end of each single drag rope has been fixed. The rear end of the specimen concerned has not been broken off, but has been cut through with the aid of some tool or other.

The third runner found by me, but with which I did not return, also possessed the slanting under-side characteristic of the two specimens dealt with above; the special shape of the under-side could not have been without a particular purpose and if further material had been available I believe that it would have gone to show that the slanting under-surface had been given to facilitate driving over either smooth, or snow-swept ice. With a narrow edge of such fashion the runners would have glided with the minimum of friction.

Fragments of sledge shoeing-material are seen in fig. 752-5; most are of whale-bone and have a thickness of between $\frac{1}{2}$ and 1 cm; this mounting was fixed to the runner partly by wooden nails and partly by nails of bone; their holes have been bored slantwise in various directions, a better grip on the runner thereby being obtained.

Fig. 756, No. 33164 reproduces two wooden runners belonging to a toy sledge. They are 30 cm long, 4 cm high and between 1 and 1.5 cm thick; mounting has never been affixed. Along the upper edge of the runners are holes for lashing to the cross-bars which, however, were not found; seven such holes are on one runner and ten on the other and, in several, lashing-remnants which seem to consist of fine sinew-fibres, still remain. The two foremost holes which are cut somewhat lower than the others have been for the cross-strap to which the drag-rope of each dog was fixed.

Sledges of about the same type as used in North-East Greenland have been in use among the central Eskimo tribes down to quite recent times. The Eskimo of Cape York also seems once to have had a similar, primitive type of sledge¹ which, however, he gradually improved upon. The sledge of the north-east coast was heavy, comparatively low, and, presumably, has not possessed uprights. It was of little service in deep snow and it seems, moreover, to have lacked the upturned runner fore-part of the present Polar-Eskimo sledge which renders driving across rough, broken ice considerably easier.

A sledge of this latter type had small chance of developing in North-East Greenland where one was not hindered to any great extent by ice of this kind; the Eskimo sledge of these regions was therefore best suited for use on the level, where the condition of the snow underfoot was hard.

Remnants of dog harness were few. I retrieved on the site of an ancient depot at Cape Humboldt, the greater part of a set of dog's harness together with one of the bone buckles which were clamped in position at the end of the drag-ropes. Later, I discovered three more of these buckles. The dog's harness was very dry and shrivelled up, and as it had also crumbled to some extent, it was impossible to form any opinion as to its original appearance. It was cut in strips of ringed seal hide about 4 cm wide, the hair having been removed.

Fig. 761-4 depicts the 4 buckles, Nos.: 32834-32835-32939-33147, all made of ivory. Three have the same shape but, it will be noted, the specimen on the upper right has been fashioned with greater care. In shape it is like an elongated oval, tapering somewhat towards one end. It is flat and comparatively thin towards the bottom, but thicker and of more massive proportions at its upper, tapered end. It is perforated twice, one hole being larger than the other; the larger is oval and penetrates the lower, broad part of the object; the smaller, which is round, has been bored nearer the tapered end. Running from this latter hole in a forward direction on each side towards the point, is a groove for a line.

¹ Greely: Report of the Proceedings . . . Vol. I, Pl. VI.

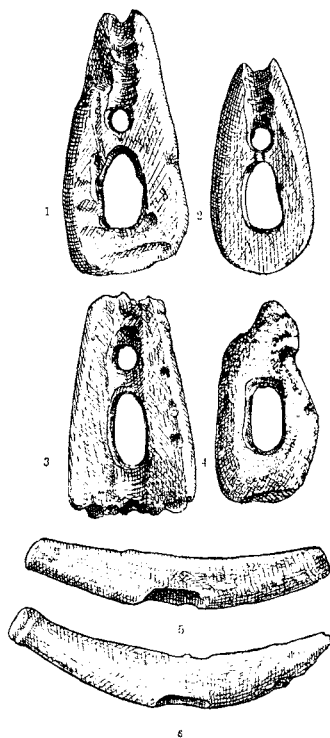


Fig. 76. Buckles and Handles.
(Scale 1:2.)

Two of the other buckles are of rougher make and are not finished off, but otherwise they resemble the specimen described above.

The fourth differs from the rest. In this case the small hole is at a right angle to the larger. On the whole, the shape of this object has probably been determined by the nature of the material available.

(Seen in fig. 852 are four miniature models of such buckles. They are made of reindeer antler and were found as grave goods.)

Kayak and Umiak.

On the south side of the entrance to Segelsällskapets Fjord, I found the skeletal remnants of a kaja k thrown far up on the beach. Evidently, the kajak had once been flung there by the force of the wind and waves and was, when I found it, a mere jumble of about 40 large and small pieces partly submerged in sand. Although too many parts are missing to render complete reconstruction possible, sufficient remain to elucidate the manner in which the skeleton was originally fitted together.

As part of the hull is missing the length of the kayak cannot be determined, but it may with certainty be said that it has exceeded 5 m; the sketch, fig. 77, shows that it has been a kayak of the type higher in the bow than at the stern. The frame-timbers, a few of which have been preserved, are slender, rectangular in cross-section and have tapered ends. They have been lashed to the keel and lateral laths, but have been mortised into the under-side of the strake. Most of the cross-struts have been recovered; they are similarly tapered at the ends and have also been mortised into the strake. The longest strut is 62 cm and, taking into consideration the diameter of both strakes, the kajak must therefore have had a max. width of at least 65 cm.

One half of a paddle has also been retrieved, but it is very weather-worn and decayed. The blade has been long and narrow. Fig. 78 reproduces a number of paddles, Nos. 33042—33049—33047—33043—33048, found at various places in Eirik Raudes Land. The one on the extreme right is the sole complete specimen; it is cut in one piece from a plank still showing the trimming marks made by a profile-plane so, presumably, this

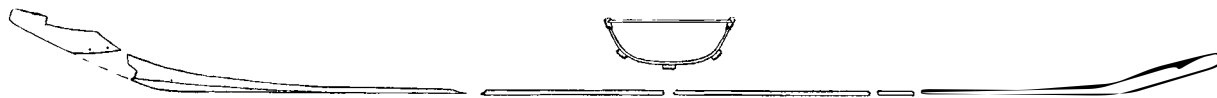


Fig. 77. Partial Reconstruction of Kayak. (Scale ca. 1:40.)

object has been part of the bulwarks of a wrecked ship; it exceeds 3.5 m in length and as it is heavy and massive it would probably be correct to assume that it is in an unfinished state. It was flung ashore at a spot on the outer coast of Gauss. The other paddles have each consisted of two similar halves spliced together. The best made specimen is the one in the centre; its blade is long and narrow and at its extremity is what is left of a wooden fitting which undoubtedly served to protect the tip; the length of the object is 1.65 m. This specimen was found among the ruins of a house on the coast of Gauss.

No. 2 from the right exhibits one half of a paddle blade round the edge of which mounting has been affixed. The two last-mentioned objects have evidently seen considerable service as the wear from handling is very great.

Common to all these kajak paddles is a collar, or two straightcut shoulders, delimiting the blades from the centre section.

Craft worked by women have also not been unknown along the north-east coast. Fig. 79, 2, 3, 4 illustrates 3 objects, Nos. 33169—33170—34267, all, it is conjectured, being parts of the skeleton of an umiak.

Stools.

Fig. 80, No. 33037, depicts an, originally, three-legged stool which was found driven ashore along Sofia Sound; only one of the 3 legs is intact. The seat is made of a single, large piece of wood and is about semi-circular in shape. It is deeply hollowed, low in the front and has sides gradually rising towards the rear. The seat itself is thus dish-shaped, ending abruptly in an almost upright back, the max. height of which is 14 cm. On the front of the seat are bulging, substantial corners facing somewhat forward, in which, on the under-side, are conical holes for the two front legs. At the back where the third leg has been fitted, is a similar thicker part which continues as a vertical back-piece as far as the upper edge of the seat. The area of the seat itself is 50 cm broad by 37 cm deep, but with the prominent corners the breadth is about 75 cm; it has a

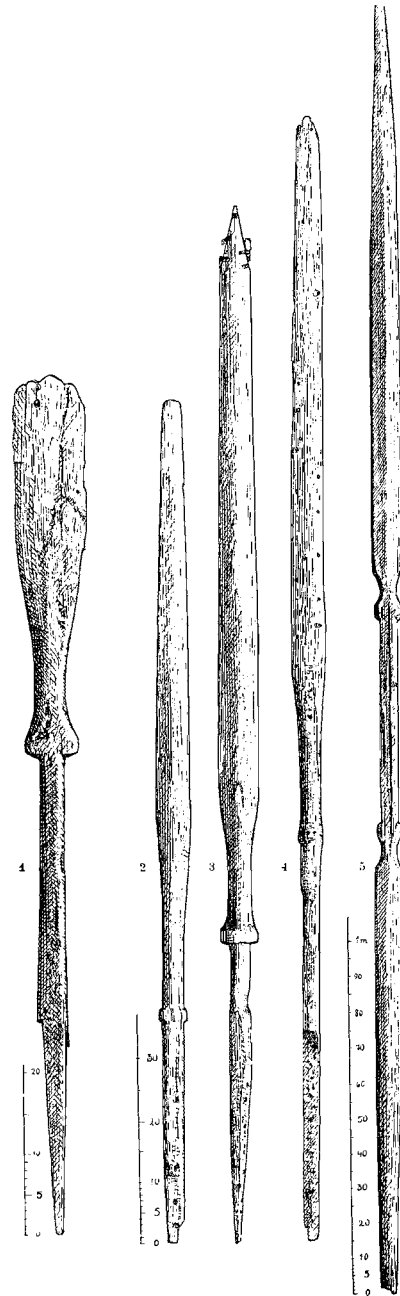


Fig. 78. Kayak Paddles.

somewhat even thickness of about 2 cm. Holes for taking the legs have been bored as mentioned on the under-side of the seat, but the legs also seem to have been kept in position by means of lashings which ran first through pairs of holes situated to the front and rear of the legs and thereupon down through and round the legs themselves. Judging from the leg preserved, the lashings must have passed through an oval hole about 5 cm below the upper end. A large crack on one side of the seat has been closed by lashings as shown by the holes on each side of the crack. In the front of the seat are also two holes; their purpose is obscure, but they possibly served to take a support strap.

The leg gives the stool a height of about 35 cm; on top the leg ends in a wedge-shaped faucet which has fitted into a corresponding hollow in the seat; it is of round cross-section at the centre and has a diameter of about 2 cm; towards the ends, however, it is more oval, its diameter here being 3 cm where greatest.

Another and similar stool seat, No. 32995, was found in a house-ruin on Gauss Peninsula. It is reproduced in fig. 811, and, as it has lain in damp mould, it has suffered more damage than the previous specimen. Its shape is the same but it is somewhat smaller, the seat being more even and having a concavity more dish-like and without the abrupt division of seat and back. This stool has only been 56—57 cm broad in front, and about 30 cm deep. The legs have been fixed in the same manner as in the foregoing specimen.

A flat, semi-circular seat of a stool, No. 32922, with its front curving inwards, also originates from Gauss Peninsula. It is seen in fig. 812. In the centre of the front side is seen the curved incision for the handle, bordered in front by a long mounting which was kept in place along the front side by means of wooden nails; the position of this mounting is seen in the drawing. This stool has similarly had three legs, one at each front corner and one at the rear; there are conical, bored holes into which the upper ends of the legs have fitted. The under-side of the seat is divided into two halves with a ridge running centrally from the concave to the convex side. It is narrow to commence with, before the handle is reached, but widens considerably towards the other end where it encompasses the hollow for the rear leg. The seat has a large crack which has been held together in the same manner as in the previous specimen, but in this case the lashings have been laid in sunken grooves. The length of the seat is 37.5 cm, the breadth 22 cm, and the thickness about 2.5 cm.

Among the Eskimo, the stool has belonged to the usual equipment at the breathing hole in the ice during winter sealing. The Eskimo then often had to wait for hours beside the hole and gladly sat or stood on quite a low chair or stool. In the central regions where drift-wood is very scarce, a block of snow or ice served instead.

The two first-mentioned chairs are of a type which seems to be peculiar to North-East Greenland. The Danmark Expedition also found a stool¹ of this shape, but it is less

¹ Thomsen, *Medd. om Gr.l.* Vol. XLIV. P. 394.

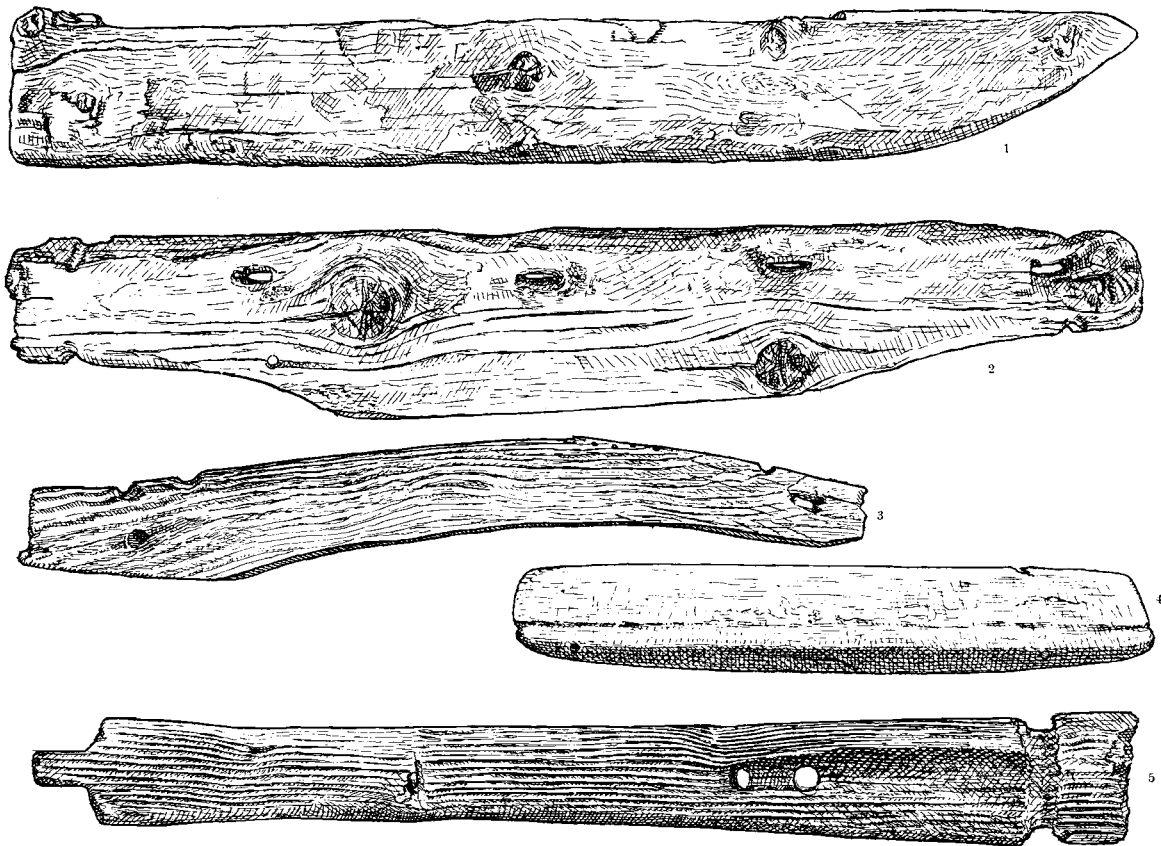


Fig. 79. Various Wooden Implements. (1 scale ca. 1:6; 2—3 sc. ca. 1:4; 4 sc. ca. 1:7; 5 sc. 1:2.)

well-preserved than the first described above. The flat seat, on the contrary, is repeated in somewhat similar shapes within the regions inhabited by the Eskimo.

There seems to be found on all seats of this shape from North-East Greenland, the characteristic, narrow under-side ridge which, perhaps, to some extent, has served to strengthen the seat. This seat has possibly belonged to the low type of stool made for standing on; two such were found by the Amdrup Expedition at Cape Tobin in Scoresby Sound, the legs also being intact. These stools had a height of about 10 cm.

Defective Wooden Shafts.

In fig. 82 is seen some shaft-ends, for implements which have not been finally determined. The upper part is broken; at the bottom end, where the shafts are thickest, a grip has been fashioned with a groove on the one side for the thumb, and on the front side, a hollow tapering to the top, for the four fingers. The cross-section above the handle is oval, its

greatest breadth being from front to back. The front side of the shaft is straight, but the rear is convex, the greatest thickness being at the centre.

As a parallel to this type of handle which seems to be peculiar to the region of the north-east a cubial knuckle of the left fore-leg of a polar bear is figured on the right side. Incidentally, this bone was found in a hut the summer of 1932 together with a shaft of the type dealt with above.

Miscellaneous Finds by Hunters.

The collection described below was presented to Tromsø Museum in 1930 by three hunters home from Eirik Raudes Land. The specimens were retrieved partly from house-ruins along the south side of Claveringfjord and partly from graves and refuse heaps on the coast of Gauss. The collection, 40 pieces in all, contains a number of interesting objects to which a special description is devoted.

Fig. 484 depicts an intact lance head found at a settlement on the south coast of Gauss Peninsula. It is about 50 cm long and has a blade-shaped bone point at its end. Its stem is a piece of a narwhal tooth cut across by means of a drill. It is somewhat obliquely cut towards the rear, but unevenly, as the holes have not been drilled in line with each other and the place of the fracture has not been finished off. For affixing the object to its pole a perforation for a line has been bored about 6 cm from the end; running downwards on each side from this opening is a short groove for the line. At a distance of about 1 cm from the base there is on one side a further perforation for a line, this hole, however, taking an angle-shaped course through the stem and emerging at a short distance from, and exactly opposite to, the lower opening; it has been required for a fine line.

The fore-end of the specimen is split in two by a fissure about 2 cm deep for taking the blade; it is somewhat tapered from the sides. The blade is about 8 cm long, it is comparatively narrow and has sharp edges and point. As is usual with blades for lance heads, this specimen, in order not to render withdrawal from the wound difficult, is only inconsiderably broader than the stem. It has been fastened by means of a wooden nail, remnants of which are still extant.

A lance head of this nature cannot have been secured in position in the usual manner by means of an articulated joint between head and pole. The uneven truncation at the base clearly shows that the purpose aimed at was not that of making the specimen revolve on a faucet on the pole, and, evidently, the purpose of the transverse-end has not been to rest against a supporting body.

It is reasonable, therefore, to suppose that the head was placed in position on a pole which fitted into, and filled, the somewhat conically-shaped channel in the stem.

The large perforation for the line has been for a lashing which has assured the proper junction of head and pole, whereas the small line-perforation has probably been for a carrying-strap only.

This is the sole, completely-preserved lance head of this type which, to my knowledge, has been found in North-East Greenland. The type seems to be local.

A further object of equal interest is depicted in fig. 831.

It is a bow-stave, also intact, of wood cut in one piece. Seen

from the side the bow curves very fully between the ends and the incisions for the centre-lashings, whereas the centre section, by comparison, curves very gently; the latter section is narrowest and is somewhat thicker about the middle, but it becomes broader and thinner towards the lashing-fastenings, and, towards the ends, increases further both in breadth and thickness. It is a piece of good workmanship. The site where the object was found is not stated, but it was retrieved at some place or other along the Gauss coast. This bow is closely related to the fragment of a larger bow-stave depicted on fig. 521. The length is 134 cm.

Some parts of a composite and very much more slender bow-stave also originates from the Gauss coast. This bow has consisted of two end-pieces and a centre-piece spliced simply into each other. Length: 92 cm.

Fig. 832 shows a miniature bow-stave, probably part of a toy. It will be observed that its shape conforms fairly truly to that of the large bow described above. Its length is 31.5 cm and it was found like the foregoing.

In fig. 467 is seen a somewhat weather-worn harpoon head of reindeer antler, 7.7 cm in length. It deserves attention as it is undoubtedly the only harpoon head hitherto found

along the north-east coast where the head possesses two lateral barbs set at unequal heights at about its centre, as well as the usual, broad, cleft dorsal barb; in this respect, however, the object conforms to the greater number of harpoon heads from the other parts of Greenland. It was found in a house-ruin near Cape Stosch, just east of the entrance to Loch Fine. Also coming from the same site are two weather-worn arrow heads of reindeer antler, originally

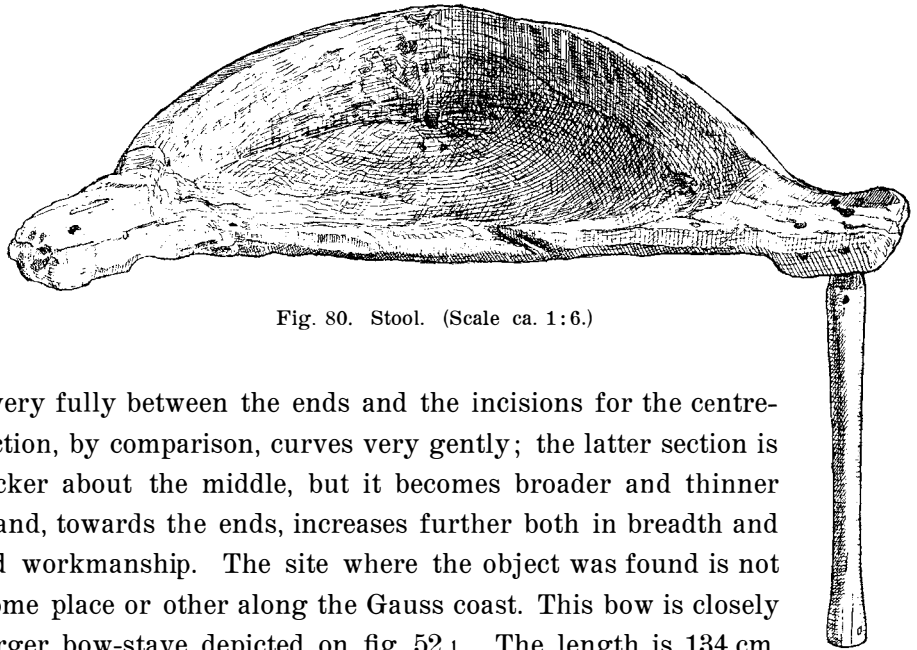


Fig. 80. Stool. (Scale ca. 1:6.)

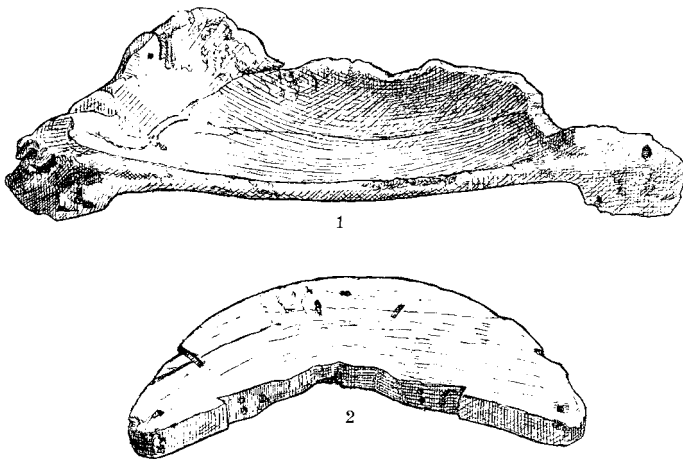


Fig. 81. Stools. (Scale 1:6)

fitted with blades which, however, are now missing. They are reproduced in fig. 54^{16, 17}. The longer of the two heads is about 28 cm in length; originally straight, time and weather have bent it. The head has evidently been fastened to the shaft in the same manner as with the large, blade-like arrow heads discussed on page 56, but now only insignificant remnants of screw-threads are seen. At the bottom, the stem is almost round in cross-section, becoming, however, more tapered-oval and ending in a thickened head in the front part of which is a fissure for a blade; the blade has not been nailed in place but wedged only. The shorter of the two heads is only 9 cm long but, presumably, its rear part is missing. It is made on the same lines as the first-mentioned and both are related to the one described on page 57, fig. 54¹⁸.

In fig. 84², the smaller of two fixed bone harpoon fore-pieces is depicted; the larger, which is 19.5 cm long, is rather disintegrated. A nail hole has been bored at the top of the obliquely-cut lower end of this object. The second specimen is 16.5 cm long and is perforated twice higher up above the oblique end. The former comes from Gauss Peninsula, the latter from Claveringfjord.

The two miniature harpoon fore-pieces reproduced in fig. 84^{3, 4}, belonged to certain grave goods found in the grave of a man. They are of ivory and are 12.9 and 10.5 cm in length.

Deposited in the same grave was the fine, small lance head depicted in fig. 84¹. It is only 15.5 cm long, but has certainly been used. The base of the specimen ends in the usual manner in a faucet having obliquely-incised shoulders. The perforation for the line is comparatively roomy and, running from the apertures down towards the bottom, are the usual two grooves for the line. The blade is of iron and, in so far as its sides contract, has a somewhat unusual shape. It has been fastened in position by means of an iron nail.

The small centre branch of a fishing spear shown in fig. 84⁵ also lay in this grave. It is of ivory and, presumably, its lower part is defective. The point has two barbs on one side and one on the other. The specimen is only 8.5 cm long, but here again, we are probably dealing with an object of which use has been made.

The lower part of an object found in the same grave and shown in fig. 84⁶, is missing. It is of ivory and is 14.5 cm in length.

Somewhere on the Gauss coast, two, undepicted, wooden wings belonging to a winged harpoon, were also found. They are about 22 cm long, have sides curving gently outwards and are of plane-convex section. They have been fastened partly by nails and partly by lashings in such a manner that the plane sides have faced inwards.

Finally, from the same coastal region comes a wooden shaft into a crack in the tapered end of which a loose blade has apparently been wedged. This blade, now missing, has been fastened partly by lashings and partly by means of a thin iron nail. The length is 19 cm.

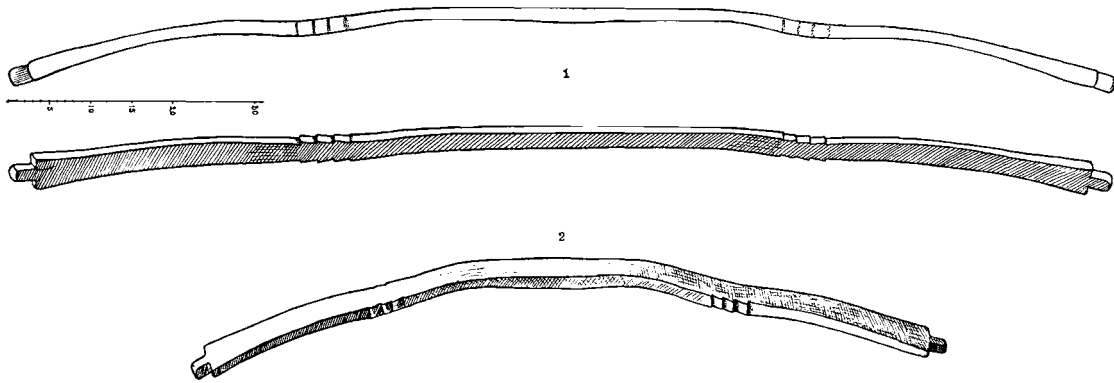


Fig. 83. Bow Staves. (1 scale 1:9; 2 sc. 1:3)

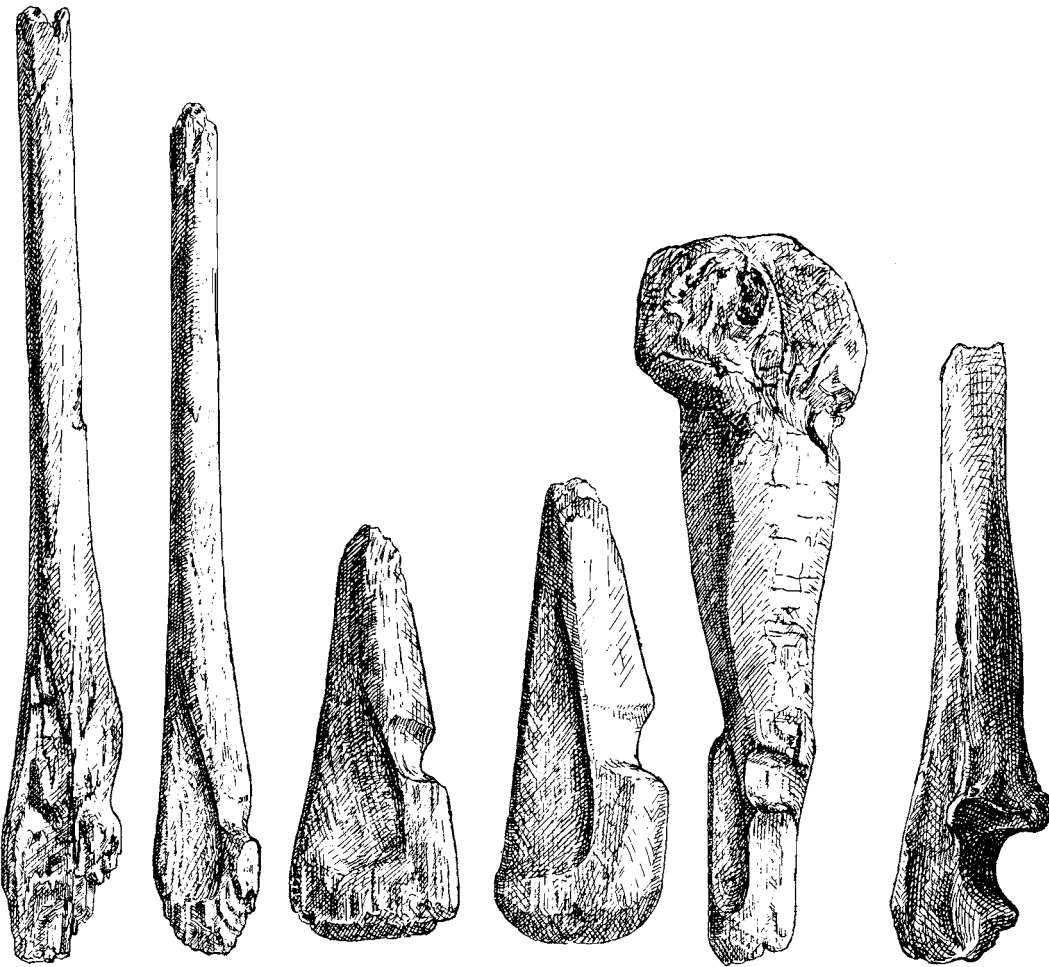


Fig. 82. Defective Shafts and Wooden Club. (1-4 from left scale 2:3; 5 sc. 1:3; 6 sc. 1:4)

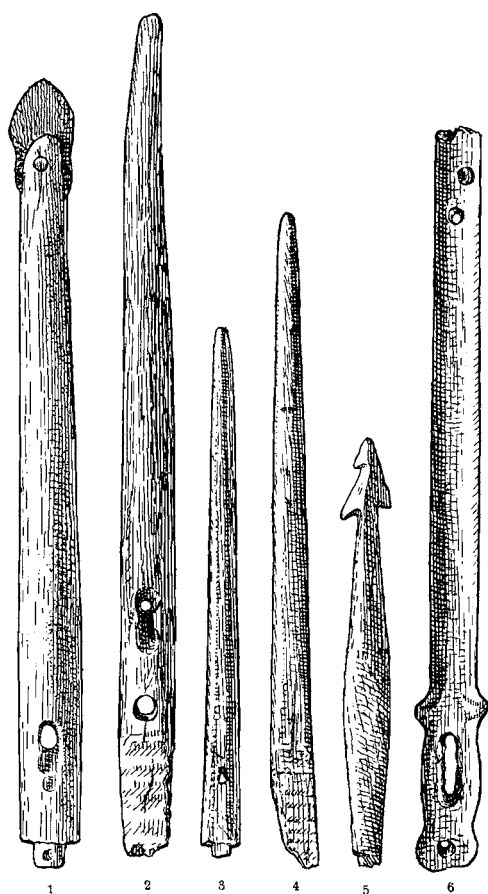


Fig. 84. Lance Head, Foreshafts etc.
(Scale 2:3.)

The remaining items in the collection made by the three Tromsø hunters consist of twisters, marline spikes, large leaf-shaped arrow heads, a point for an ice pick fig. 491, a buckle, a defective blade belonging to a lance head, a fragment of sledge-shoeing material, and some other fragments having no great interest.

Ornaments and Toys.

The articles of adornment which the collection contains chiefly consist of ornaments worn by the natives. Decorative work on utensils of everyday use has, however, not been unknown as testify the finds made by the Amdrup Expedition on Sabine Island, of the small bone figures with which the Angmagsalik Eskimo embellished his throwing boards and household utensils.

Nothing relating to the latter category is contained in my find, but against this I can claim quite a number of articles of personal adornment.

From an untouched grave on the coast of Gauss — in which lay a skeleton, evidently that of a woman — I retrieved 84 various small articles of adornment. They have all been slung on one, or possibly, several, threads, and are of the following kinds: 25

pear-shaped bone beads, all perforated at the tapered end and all varying in size; 11 bone figures of birds, all having a plane under-side perforated rearwards, and all of different sizes; 9 bone figures of seals, with a plane rear-side also perforated rearwards, and all different in size; 8 seal figures in bone each varying in size and each having a raised fore-section pierced at the same place as in the foregoing; three black-coloured, pear-shaped bone beads perforated at the tapered end, and finally, 28 animal teeth all pierced through the root. A selection of these articles is given in fig. 853.

In a second, similarly undisturbed grave, a collection of ornaments was found and most of the articles recovered are depicted in fig. 854. Seen on top are six cylindrical bone pearls; on the sides are broad, bone beads, and in the centre is a pendant fashioned with more than usual care and ornately engraved.

Found in the large grave at Myggbukta (page 41) were many ornaments in addition to utensils and reproductions of such in miniature. Fig. 851 reproduces a selection taken

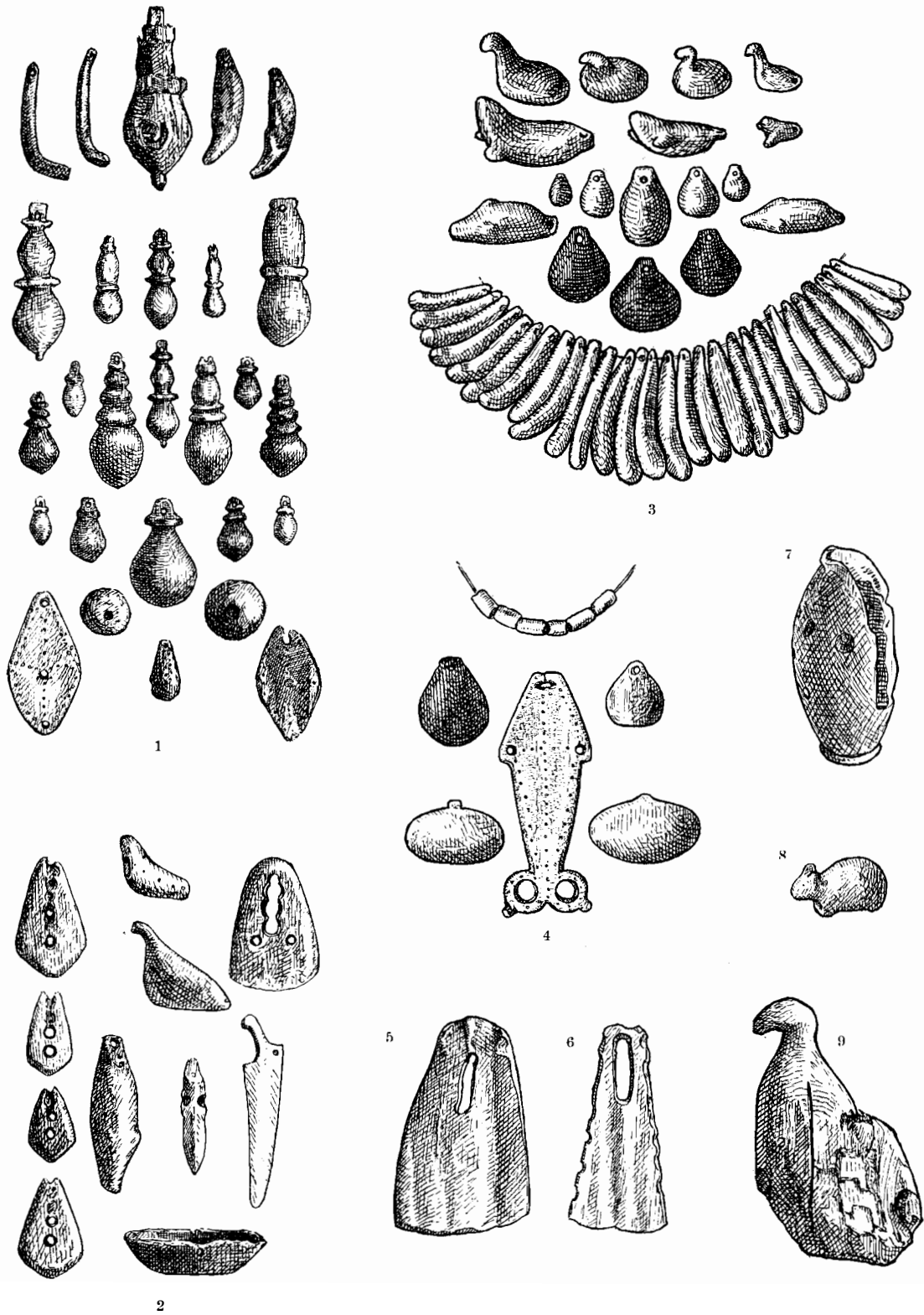


Fig. 85. Ornaments and Miniature Implements. (Scale 7:10)

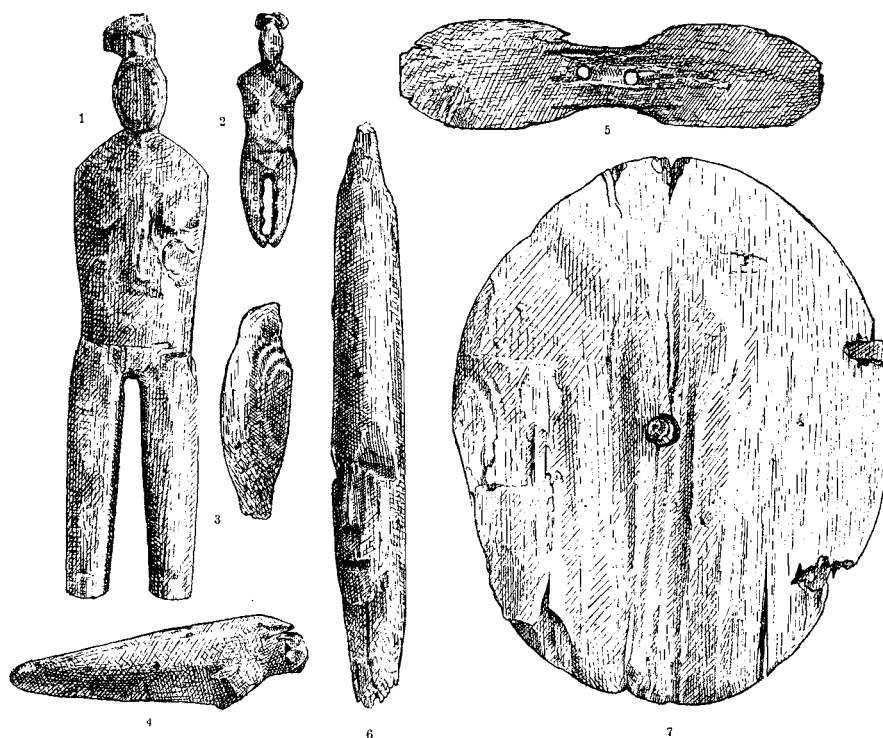


Fig. 86. Dolls, Toys, Wooden Carvings. (Scale 1:2)

On the top, to the left, two narrow, bent pendants of a peculiar shape are seen. The bead shown in the centre of the top row is of wood.

The miniature buckles and models of various utensils etc., seen in fig. 852, emanate from the same grave. It is probable that these articles have also been worn.

This grave from which altogether, I retrieved about 150 objects, showed signs of previous investigations which were apparently undertaken at the time the Cambridge Expedition of 1926 visited the settlement at Myggbukta.

Fig. 857, No. 32880, reproduces an ornament of a larger kind found in a house-ruin. It is an oblong pearl-like object, hollow on the inside, thickest across its centre, and damaged on one side. The surface has been decorated with holes and hollows produced by means of a drill. The length of the object is 5.5 cm.

Fig. 855, 6, depicts two triangular bone plates, Nos. 32830—33180a, each having, however, a somewhat blunt upper end; these may certainly also be looked upon as ornaments. The Angmagssalik Eskimo uses similar, triangular bone plates as ear-rings.

Several further examples of ornaments akin to those of the Angmagssalik Eskimo could be given although the local types of North-East Greenland form the majority.

Two dolls, Nos. 32930—32931, shaped to represent female figures, are given in fig. 86 1, 2. The larger has been carved from wood and is now somewhat defective and weather-worn.

from the articles of adornment which had been deposited in this grave. It will be observed that most of the articles differ in type from the above. Seen in the centre are round pendants of reindeer antler, some with a collar, some with several contractions round the centre section. At the bottom are depicted two rhomb-shaped plates, also of reindeer antler, and having corners which have been rounded-off; both plates are decorated by a series of dots running along the edge and cross-wise from corner to corner.

The facial features, and the arms, have not been finished; the head has a broad toupee, contracted at its centre and inclined rearwards. The height of this figure is 15,5 cm. The smaller doll, which is only 6 cm high, has been carved from antler on the lines of the foregoing.

Seen in fig. 863,4, are two animal figures of wood. No. 3 is presumably a seal and No. 4 a walrus. Fig. 859, presumably represents a bird. It may be surmised that these dolls and animal figures are to be considered as toys.

Of other playthings, mention may be made of whirlers. Fig. 865,7, Nos. 32877 and 32878 depicts two such objects made of wood. The one on the left is shaped like a two-bladed propeller with rounded, plane wings and a contracted centre section pierced by two holes. The one on the right consists of a wooden disc, almost round, having a diameter of about 14 cm, with a hole in the centre into which a wooden peg is stuck. Two cords are required to twirl the former, whereas the latter is worked by revolving the stick between the fingers.

Miscellaneous Articles.

Given in fig. 765,6, Nos. 32873 and 33085, are two handles, of reindeer antler probably for use with drag-ropes. The former is defective at one end and both are somewhat decayed and weather-worn. Both are bent, round in cross-section, and thickest at the centre. The preserved end of the defective specimen is decorated by an annular groove running along the thickened edge. The centre of each piece is pierced by two holes between which, on the convex side, there is a hollow, thus enabling the rope which emerged from the apertures on the concave side, to run clear of the surface. It seems reasonable to suppose that these objects have belonged to drag-ropes used in seal-hunting, but similar articles belonging to dog's harness are also found. One specimen in particular, however, has been too weak to permit of use in the latter sense.

Fig. 873, No. 32979, shows a large, bent, bone needle made from a rib; an eye pierces the blunt end; its length is 26.5 cm.

A smaller, bone needle seen in fig. 874, No. 33062, is straight. It is 14.5 cm long and tapers gradually from the upper end which is 1 cm broad and which is furnished with an eye. Fig. 875 depicts probably a wound pin; it was found near Daudmannsøyra.

We are not here concerned with sewing needles; the eye is there so that the objects can be threaded on a cord. The large, bent needle is reminiscent of the Angmagset needles

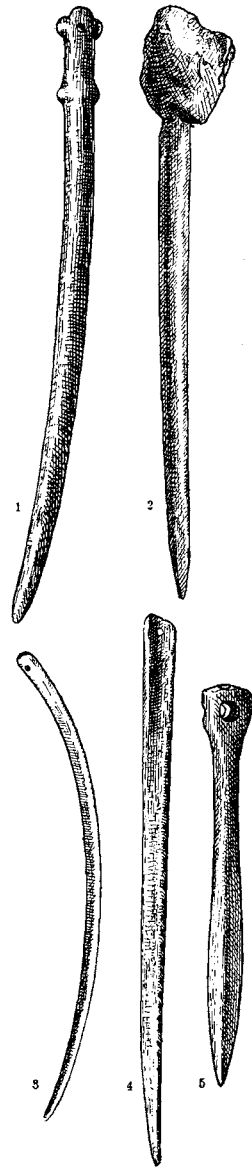


Fig. 87. Bodkins and Needles. (1—2, 4—5 scale 1:2; 3 sc. 1:4.)

of Angmagssalik and the south-west coast. A similar use, however, cannot be ascribed to the present specimen as Angmagset is not found in the northern parts of East Greenland, at all events, not according to the observations made to date.¹ The smaller specimen might have served as a bodkin. Thalbitzer² (p. 492) depicts a sewing-needle of the same shape, but the specimen here described is so broad at its upper end that it can hardly be looked upon as being parallel to the needle from Cape Borlase Warren.

A bodkin is given in fig. 872, No. 32856. It has been made from a small narwhal tooth, its head being formed by the thick, root-prong. Its length is 15.4 cm.

Fig. 88a6—9 shows four wedge-shaped, somewhat defective pieces of bone of narwhal tooth, each notched on the convex side.

A bodkin from Hoel's excavations on Daudmannsøyra is reproduced in fig. 871, No. 32660. It is made of ivory, is slightly bent and tapers towards one end. At the other, blunt, end it is perforated to take a line. Four lateral buttons, arranged in pairs, mark off the handle which, however, is so short that it can only be looked upon as an ornament. Length: about 16 cm.

Coming from the same place as the preceding object is a button of reindeer antler. It is given in fig. 88a15, No. 32662, and will be seen to have the shape of a rather massive, elongated dice with rounded edges. The hole for the strap which has held the button in position has been bored somewhat nearer to the narrower end. The length of the object is about 5 cm.

Bear teeth, cuspids with perforated root-prongs, belong to the more common finds. It may be presumed that they were worn as ornaments, but it may also be supposed that the North-East Greenlanders like the Angmagssalik Eskimo have possessed rattles of bear teeth.

Fig. 866, No. 32928, shows a round wooden stick on which a face has been carved. The length of the specimen is 15 cm.

A fragment of a flat, comparatively broad, wooden lath, No. 33162, exhibits remnants of two minor lashings which seem to have consisted of a kind of bast.

In the collection are three wooden pegs about 9 cm long which have possibly served as blood-props. Two are depicted in fig. 88a12—13, Nos 32875 and 32881.

Fig. 88a14, No. 32862, reproduces a square, rather massive plinth of narwahl tooth to which has been given a ridge running down the centre of one broad side. It is well preserved. A second specimen, No. 32657, found during Mr. Hoel's excavations on Daudmannsøyra, is made of reindeer antler; it is, however, not finished off so carefully as the foregoing, nor has it withstood time and weather so well. An oblong hollow, about 2 cm deep, has been cut in one end surface, and, hardly 1 cm from the other end of the object, are two perforations, one on each side, for fastening purposes. On the ridge side, a deep groove

¹ Mathiassen describes a similar object from Inugsuk, p. 240, as "a meat stick".

² Ethn. Descr. of the Amstrup Coll. Medd. om Gr.1. 28. 1909.

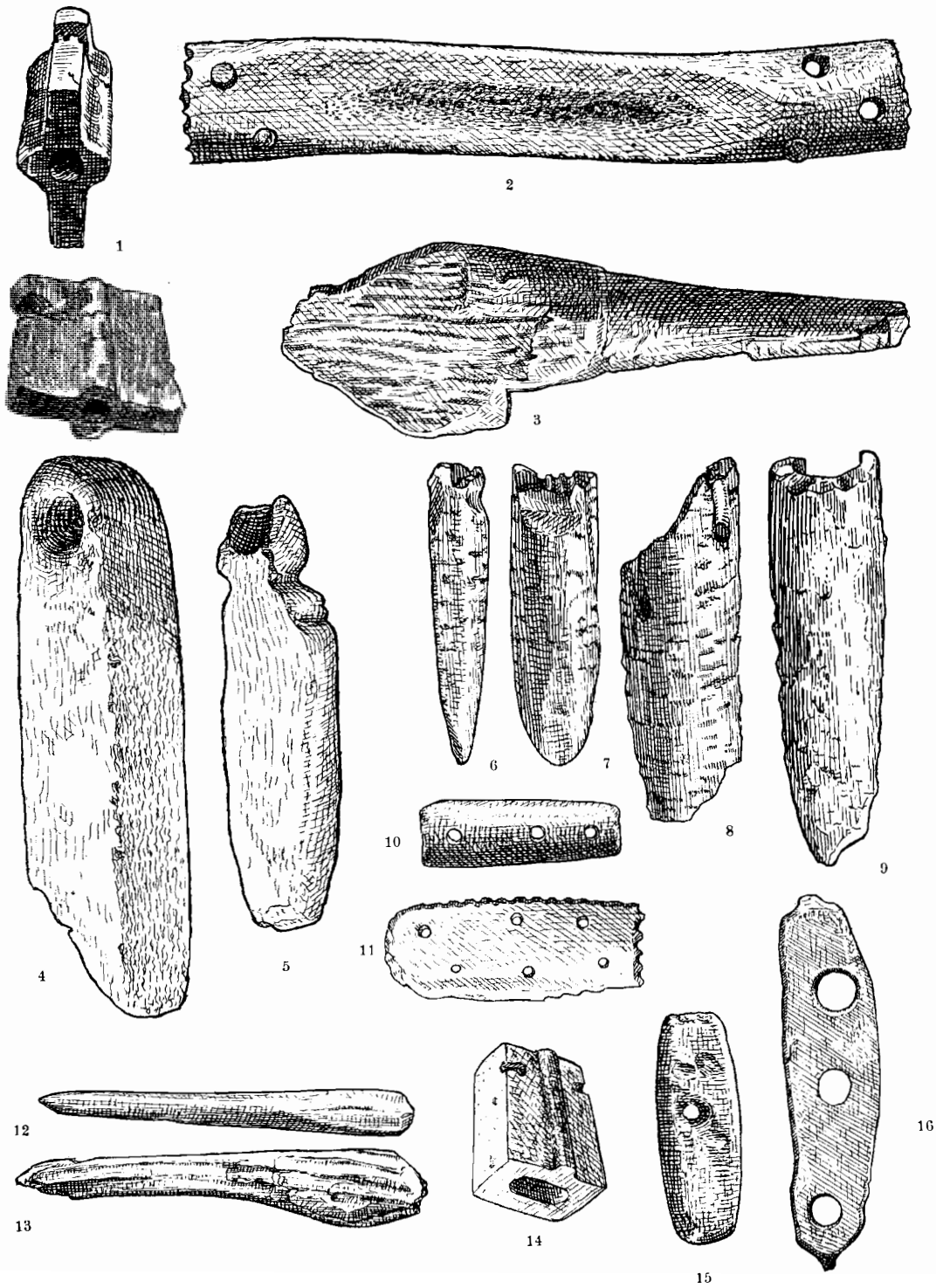


Fig. 88a. Miscellaneous Articles. (Scale ca. 2:3.)

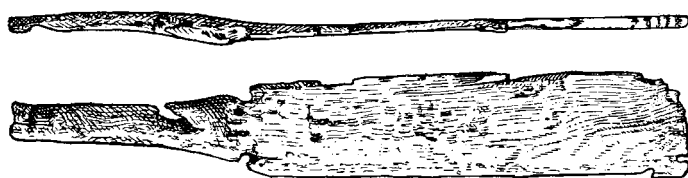


Fig. 88b. Defective Wooden Implement. (Scale 1:6.)

runs laterally from each of the apertures, and, on the opposite side, are also shallow, laterally-running grooves which one feels inclined to deem as grooves for lateral lashings. The length of the object is 3.2 cm and its base is 2.7×1.8 cm.

It is difficult to determine the use to which the articles depicted in fig. 88a 4, 5, have been put; one has been fashioned from a soft kind of steatite and the other from some sort of mica-slate; both have a round hollow at one end.

Fig. 88b, depicts an imperfect and weather-worn implement of wood, found on Gauss Pen.

The items shown in fig. 88a 2, 10, 11, 16 are presumably to be considered as mountings. The material is reindeer antler. Fig. 88a 3 is a wooden object; it is impossible to indicate its use, but it can be seen that it has been fashioned in a manner allowing it to be secured to some kind of implement or other.

Concluding Remarks.

(The following are also based upon the appendixes.)

As a result of my investigations from 1929—1933 I am now acquainted with about 270 Eskimo huts distributed among 58 settlements in the region of the North-East. In the areas to the north and south belonging to the abandoned north-east district the number of huts known is somewhere around 150. Assuming that all these huts were occupied at one and the same time a population of about 1500—2000 persons would thus be ascertained. But, as I have previously maintained, many — probably most — of the settlements, could only have been inhabited for a very short period, the North-East Greenlanders having led a migratory existence, and several of the dwelling places being decidedly of a somewhat later date than others. This number, therefore, should probably be reduced considerably. Taking into consideration the immense area it possessed everything goes to show that the tribe of the north-east has not been large.

In Eirik Raudes Land about half of the settlements consist of from one to three huts, two only has more than ten huts. The population is to some extent concentrated in certain districts, more than one fourth of all the known huts lying, for example, within a stretch of about 10 km along the south-east coast of Clavering Island.

I have already indicated that not one of the Eskimo settlements I have seen in North-East Greenland seems to have been inhabited for any lengthy period. In support of this contention it was claimed that even in the case of the larger settlements, the layer of refuse around the huts was very shallow whereas on the west coast, where the occupation

of the country is very ancient, refuse dumps can be found several meters deep and containing the accumulated remnants of the various successive households of the settlement.

If, therefore, the capacity of the refuse dumps is to be considered of precursory value when judging the length of time these settlements have been inhabited, it will be difficult, at all events when making a comparison with West Greenland conditions, to arrive at a result implying any long period of occupation of the north-east coast.

Another factor pointing in the same direction is that few graves or remnants of such are found in the deserted settlements of the north-east. At some of the old winter sites there are none at all. An exception is the large, and, certainly, according to North-East Greenland standards, old, place of concentration, Daudmannsøyra, on Clavering Island, where, so far as I know, about 20 graves have been discovered.

Farther north on the east coast are settlements unknown to me from personal inspection, but earlier archæological reports imply that the same point of view is also applicable there.

Thostrup, in his report of the Danmark Expedition, throws out the thought that there is a considerable difference in age between some of the settlements as evidenced by the present state of the winter huts; accordingly, some of the settlements which were as good as levelled with the ground should have been founded during an Eskimo invasion several centuries before the better preserved settlements became populated.

Lying within the district I know, are also huts so levelled that their contours are hardly visible in the field and, undeniably, it seems, therefore, that they must be much more ancient than the comparatively well preserved house-ruins. My investigations, however, have convinced me that in these cases I was concerned with excavated building sites only, upon which the huts, for some reason or other, had never been erected. Such building sites will in time become merely visible as slight depressions in the terrain and they will naturally convey the idea of ripe old age, provided of course, they are to be considered as having once been occupied houses.

I have also previously indicated the importance both the terrain and the method of building have where the durability of the huts is concerned, and so long as one cannot produce definite evidence in support of the various migrations into this region, it seems as if little weight need be attached to the point of view mentioned.

From Scoresby Sound to the northern point of Greenland, the huts are of the same fundamental type, undoubtedly one of the most primitive forms of Eskimo house to be found. The minor divergencies which occur are expressed in unimportant and often casual details of construction.

Characteristic of these huts is the fact that they have been built into the slope in a manner making the roof practically flush with the terrain. The walls have been built up

of single, broad stones or narwhal skulls placed edgewise, side to side, and serving mainly to prevent the sides of the hole from caving-in. The stones for the wall are placed on each other without any intervening layer of moss etc. The huts of the north-east also differ by reason of their insignificant size.

The huts of Angmagssalik, the nearest Eskimo district, are totally different. The natives have here shared large, roomy houses in common. At certain places on the southern half of the east coast, however, it seems as if one can find a type of house approaching that of the north-east coast, even if, judging from the still scanty information available, these houses were both larger and better and hardly more than a few generations old.

In West Greenland, where archæological investigations have been carried on of late years, long-deserted huts have been discovered which seem to have been built into the slope in much the same manner as in Eirik Raudes Land and which must probably be considered as being a kindred type.

The winter huts of the Cape York Eskimo seem to have little in common with the permanent house of the extinct North-East Greenlander, but certain mutual features can be indicated also here.

Notwithstanding all such similarity, one is confronted with a particular type of Greenland dwelling in the case of the natives of Cape York. Their dome-shaped huts are built upon the surface of the ground and are erected in an ingenious way. The Cape York hut undoubtedly denotes a considerable step from the construction of the North-East-Greenland type of permanent hut and must probably be looked upon as a local type. The special construction of this hut has presumably been acquired during a subsequent Eskimo invasion independent of the colonisation of the more southerly part of the west coast.

It has been maintained¹ mainly on account of Thostrup's description that the Cape York hut prevails on the north-east coast, but in my opinion the manner of erection itself particularly divides the types. The similarity in the ground-plan and fittings which certainly can be proved between the huts of these two districts, belongs, in my opinion, to the general, mutual features which more or less characterise the permanent dwellings of every Eskimo. According to its entire construction, the hut of the North-East Greenlander is of a more primitive, and, definitely, a considerably more ancient form, than the type of dwelling which has come into existence at Cape York.

A type of house, the characteristic features of which I have previously mentioned, can thus be followed from the country of the north-east, down the southern part of the east coast round to the west coast where traces can be found as far as the northern district of the West Greenlander, and if one judges only from the construction of the dwellings concerned, facts can accordingly be cited to indicate that the West Greenlander in ancient times penetrated to the north-east coast.

¹ Mathiassen: Archæology of the Central Eskimos II, p. 150.

It has been intimated earlier that conditions underfoot during the winter have had much to say with reference to the distribution of the settlements. I would now extend this connection between locomotion conditions and colonisation to include the length of time the inhabitants resided at the various settlements as it is not by mere chance that the settlements occupied longest were situated in country where conditions underfoot have been the best.

It seems to be the rule that a considerable amount of snow falls most winters in Eirik Raudes Land and, as previously mentioned, with the local and not very frequent winds in the southern districts, the snow lies deep and loose over large areas of both land and ice-covered sea.

It is natural that this has been of importance to hunters in earlier days, for the snow compels even our own men — be they ever so capable ski-runners and dog team drivers — to submit to inactivity for months at a time when the snow lies in meter-deep drifts. During the winter of 1930—31 conditions of this kind prevailed along King Oscars Fjord, and, for several months during the middle of the winter, the Norwegian hunters living there were obliged to cease their regular hunting trips. A deep, loose layer of snow drives game away and renders catching at the breathing holes considerably more difficult. Further, it may be added that the Eskimo has known neither skis nor snow-shoes as a means of transport, and without these auxiliaries the freedom of movement of hunters has been severely restricted in many parts of the country.

A hunting people depending entirely on the proceeds of the chase must be able to reconnoitre extensive territory if the daily demand for game is always to be met, and it may therefore be supposed that the difficult conditions underfoot which have prevailed at many places along the north-east coast during the winter have contributed to restrict the potentialities of the natives for obtaining sustenance.

My finds exhibit a culture where implements are concerned, of the same nature as that shown by the finds unearthed by the Danmark Expedition in the northernmost part of the north-east.

The form of culture which has reigned throughout the whole of this region is remarkable for its versatility. Marked sub-arctic cultural elements, as a highly developed employment of the kayak in hunting, are found, as well as high-arctic cultural elements little or entirely unknown to the rest of Greenland, like, to mention one example only, implements for use when hunting seal at the breathing-hole. Similarly, the chase of land animals has been of considerable importance.

From the point of view of obtaining a livelihood, the district of the north-east occupies a special place and it should not be without significance to mention that the natural conditions of the country to some extent also distinguish this neighbourhood as a special

section of the gigantic land: for three-quarters of the year the fjords and ocean along the coast are covered by a firm, unbroken layer of ice and for the rest of the year both the great fjords and the sea along the coast have open water.

The Eskimo regions corresponding best to conditions such as these are undoubtedly certain parts of the central domain where tribes are found whose culture, where the means of obtaining a livelihood is concerned, has approached that of the North-East Greenlander. This conformity is so great that certain investigators have held that the north-east tribe is a branch of the central Eskimo group and that it migrated into the country by way of the north. The employment of the kayak by the north-east tribe and the manner of its use represent, however, cultural elements which must have been developed under different climatic conditions, and, accordingly, came from the south.

Knud Rasmussen, the eminent Greenland investigator, found no trace of an Eskimo migratory path along the north coast and he denies, moreover, the possibility of immigration by this route¹.

With the knowledge one now has of the probable size of the north-east tribe, it may certainly be presumed that the first groups of immigrants were neither large nor numerous and thus need not have left many traces behind.

Neither the types of implements nor the outward appearance of artefacts indicate any great age. In the summer of 1931, however, some hunters made an isolated find and returned home with a collection of stone-ware subsequently dealt with by Professor Solberg in *Norsk Geografisk Tidsskrift* (Vol. IV, 1932—33, p. 255). Among these artefacts, types were proved as agreeing with some very old forms of stone implements from the Disko district, which fact must probably put the colonisation of the north-east as being 500 years old in any case.

During the summer of 1932 I examined the site where this interesting find was made. The artefacts proved to be taken from a small area on a sandy strip running along the beach quite close to the Norwegian station, Hoelsbu, on Musk-ox Fjord. My investigation revealed merely a few unobserved stone chips and I was not able to find any trace of occupation or of other deposits on the site. The chips, however, indicate that a working site for such stone articles must have existed there.

I learned subsequently that a hunter is said to have found near the settlement at Revet two objects having similar, ancient west-coast forms. I have not, however, personally been able to examine the old winter settlement situated there as the engine of my motor boat broke down when journeying to the place in the summer of 1932, but it would seem from the reports of hunters who have casually excavated on the site that the huts are of the usual North-East Greenland type and that they are well-preserved. The relics I have seen as coming from this settlement are of the type common to the country generally.

¹ K. Rasmussen: Grønland langs Polhavet. Kbh. 1919, p. 589.

I have not been able to obtain definite confirmation of this find, but the report seems to be well-founded. It would be interesting if further investigation could reveal more articles of this description and thus provide greater material and reliable find-conditions.

As previously stated, culture as seen expressed in the fashioning of implements, besides being multifarious and highly developed, harmonized excellently with the natural sustenance potentialities the country had to offer. Nevertheless, all the usual wealth of nuance found among the various types of implement used by the Eskimo tribes, is lacking; on the whole, the artefacts can be allotted to certain definite main types and assigned to rigid, narrow limits of shape.

Here and there I have indicated that the types of implement show affiliation with Angmagssalik and the older sites on the west coast south of Melville Bay as well as, to some extent, with the culture of the Polar Eskimo. The present Angmagssalik culture, however, in most ways shows a striking difference, surely indicating very few connections with the northern inhabited districts. The older culture in Angmagssalik, on the contrary, shows several implements of the same types as found in the north-eastern section; to mention only cross-formed end blocks for winged harpoons, cylindrical foreshafts, wound pins with lanceolate tip section and hole through the head, cooking pots with suspension holes passing through inside projections, bodkins with human-shaped upper part, and drill replacing saw.

Seen as a whole, however, the material culture of the north-east tribe primarily bears the imprint of being local only. Several of the implement forms typical of these Eskimos also serve to indicate that the original inhabitants must have lived isolated for a relatively long period.

The fact that the culture to which the implements give expression has such a marked local stamp is also, in my opinion, a moment in favour of my previous contention that the country of the north-east could never have witnessed immigration on a large scale, although certain small parties of aborigines may possibly have entered both by way of the route round the northern extremity and by traversing the difficult terrain to the south.

Arrived at this in many ways so charming country they settled and successively increased. Nothing, however, indicating regular connections with the other Greenland tribes, they have had to build up their material culture without outside contributions.

At first some intermingling occurred, but the North-East offered new conditions and demanded a readjustment of the views of implement-making held by both northern and southern immigrants and the result has become this form of culture so peculiar to Greenland in many ways.

INVESTIGATIONS DURING THE SUMMER OF 1932.

I returned this year with the Norwegian Greenland Expedition in order to continue my investigations regarding the ancient Eskimo habitations, my object being to work mainly at the large settlement, Daudmannsøyra, on Clavering Island, with which I had had previous acquaintance, but where I had not hitherto been able to excavate.

An assistant, Mr. Vilhelm Engstrøm, was placed at my disposal, as was a motor boat with supplies for four weeks. I desired to be dependent upon the expedition vessel as little as possible.

The first point of call was Sabine Island. "Polarbjørn" arrived at Germania Harbour on the evening of 21st July and was due to continue as early as the following morning; as I wished to go with the vessel to Clavering Island, short time only was available for investigation purposes here.

Lying to the west of the Observatory Point at Germania H. is a deserted Eskimo habitation known of old, and, consequently, several earlier expeditions have undertaken excavation work here on the ancient sites.

We visited the settlement which proved to consist of four house-ruins lying a good 100 m from the sea, on ground sloping evenly down to the beach. The soil is full of large and small stones, the deposits of ancient glaciers.

It is uncommon for a settlement to be situated so far from the sea, but the North-East Greenlander was evidently obliged to respect considerations other than the usual desire of the Eskimo to live practically on the sea-border.

It was obvious that the house sites, 3 together, 1 about 100 m away, had been chosen with a view to the conditions of the terrain. The habitations lie on small plots practically free from large stones; excavation for sites at almost any other spot nearer the beach would have encountered exceptional difficulty, and, in this connection, it should be remembered that the natives do not seem to have possessed any special implements for digging.

All the habitations situated here were of the large type. The size of one, however, had to be estimated as here two Norwegian hunters lie buried and, for this reason, we did not touch the site.

We did not make particularly many finds, but an exquisitely carved wooden figure of a polar bear which lay hidden beneath the floor of the platform in one of the huts, rewarded our labours.

Lying near the beach in front of the settlement were various large caches and graves, all, however, destroyed and empty. Tent rings were scattered over practically the whole of this headland, the majority being near the high-tide mark.

The last hours of our stay here were spent going westward, searching the beach for relics of antiquity. Nothing of interest was found, however, and large, deep drifts of snow prevented a more careful investigation.

Lying outside Germania H., as a bulwark against the ocean, is the small rocky island, Walrus Island. I have not visited the place myself, but hunters relate that the island is a maze of tent rings, caches and graves; no winter dwellings are to be found there, however.

The island seems to have been a favoured site for summer-hunting: this is a reasonable supposition as the island is one of the chief resorts of the walrus which unfailingly disports itself about the beach on the inner side of the island every summer; moreover, amid the cliffs and screes birds breed, in what for North-East Greenland must be considered, large colonies. The fox is also numerous on the island and ancient stone traps testify that it has been pursued.

The following evening the vessel was lying off the largest of the Finsch Islands situated at the entrance to Clavering fjord.

We went ashore here in order, first of all, to examine the island, as according to the statement of an old Arctic skipper, some well-preserved Eskimo huts should be found here.

The whole of the next day was therefore spent searching the island which, however, proved to be unusually barren and devoid of wild life. There are no winter huts on the place so it is possible that the island more to the south has been the one concerned. Situated, however, on a small bay on the west coast, are four or five tent-rings together with some caches and graves lying higher on a terrace; there are also two tent-rings at the southern extremity of the island, but on the north and east no traces of natives were found.

The following day, 24th July, we crossed to Daudmannsøyra, which, so far as I am aware, is the largest settlement of the north-eastern area. My first visit there was during the winter of 1929—30 when on a ski-ing trip northward along the coast, but at that time I could not obtain more than a general idea of the number of huts to be found. I then promised myself, however, that I would return one summer soon in order to make a closer examination of the place and now, I thought, my hope was at last to be fulfilled.

Danish archaeologists, however, had begun excavations at the site. The leader of the expedition and all its members, with one exception, had left just prior to my arrival and this one man neither knew how long they would be away nor how long the work here would be continued.

So I resolved to change my plans; we returned we returned on board and went westward following the coast of the island.

The information below with regard to this island is, however, perhaps of interest.

Daudmannsøyra, as Norwegian hunters call the place, lies at the entrance to the extensive broad valley opening almost due north of the largest island of the Finsch group. The valley-entrance, is, as it were, bisected, the western half being a broad, rocky river bed where until far on into the summer runs a mighty foam-capped glacial torrent difficult to ford; the eastern half, on the contrary, consisting of moraines bordered by a grass-grown foreland. Here, in three rows almost parallel to the water-line, are 33 house-sites, all very much collapsed and over-grown; the huts nearest the beach in no way convey the impression of being of a date later than those farthest from the sea. A thought causing further reflection is that most of the huts seem to be somewhat more roomy than those I have hitherto seen and I particularly noticed that the height under the roof perhaps was somewhat greater.

The burial place belonging to the settlement was situated on the moraine behind. The number of empty graves is considerable, probably between 20 and 30.

We left, as stated, and swung in again to the west side of the valley-entrance, where, on a small level site lying close in against the river bed, we found two undisturbed house-ruins, both, however, having collapsed and become considerably over-grown by moss. One ruin lacked every sign of the entrance-tunnel characteristic of these dwellings, and further investigation showed that we were confronted by a store-hut rather than a house proper. The second ruin, however, had been an ordinary dwelling. It was situated alongside the first, about 1 m apart. Signs of a communicating passage between the two sets of ruins were faintly discernible, but the fact could not be determined with absolute certainty. Fig. 89 depicts the hut before and after excavation.

The ground hereabouts alongside the river was saturated with water, excavation thus being rendered difficult; springs issued forth and flowed stream-like through the interior of the hut itself, but by means of a trench most of the water was run-off.

The hut was of the larger type, but, apparently, had not been built with any special care; moreover, only a few stones of irregular shape had been employed during erection; this, and the saturated nature of the ground during the summer have been the main reasons for the present over-grown, collapsed state of the huts.

We made a few finds, the most important of which, will be described later.

Camp was struck on 26th July and we continued westward along Clavering Island in search of fresh fields for investigation. We kept inshore as close as possible in order to obtain a good survey of the terrain.

At first we skirted a steep and barren coast with merely here and there on the mountain slopes a patch of green with a little vegetation. The weather was bad; the wind was

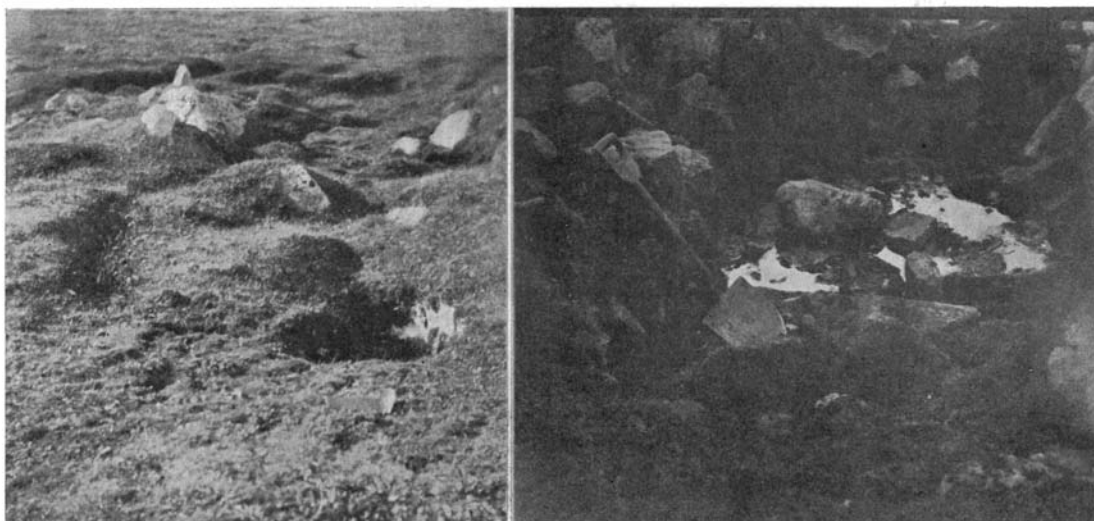


Fig. 89. Eskimo Hut before and after excavation.

strongly against us and, with a sea running, our outboard motor functioned poorly. We had, however, not proceeded more than a good 3 km, before the coast opened on to a bay within which gleamed a green meadow nestling amid the bluff mountain sides.

As I thought I could see the contours of old house-sites not far in on this patch we turned and found an excellent harbour inside of the small holms which here lie as a breakwater and shield from winds blowing in from the sea. See sketch fig. 90.

Obviously we were not the first to have sought refuge here. The beach was strewn with bone remnants, many of which had been fashioned, including one which proved to be the lateral branch of a bird-spear.

A passage leads from the spot past a crag rising steeply from the shore, but not particularly high, up to a level stretch behind situated at a height of about 5 m above sea-level.

At the other end of the crag is a more natural and easier ascent to this level ground, but conditions for landing are not so favourable here. This latter opening, however, has formed the natural way of descent to the sea-ice during the winter.

Up on the plain are 6 collapsed and very over-grown house-sites, see sketch fig. 90. There is first a hut standing alone about 10 m from the edge, and 15 m more to the rear are 5 huts almost side by side along a slight ridge that crosses the plot. In front of the lowest of the huts were two tent-rings, now, however, destroyed, as we had to use the stones for our own tent.

Behind the settlement, on the upper part of the plot, I found 4 graves, all containing skeletons. Graves 1 and 2 had already been opened, probably by someone in search of grave-goods. Both had been built up on the slope itself and both were of the usual shape.

The skeletons had been disturbed and the remains thrown into disorder and it was therefore impossible to determine at which end of the grave the head had rested.

Graves 3 and 4, fig. 90, on the contrary, had been arranged in a manner enabling the tombs to fit into a heap of stones, see fig. 91. Grave No. 3 had caved in and the skeleton had been partially crushed, but No. 4 was wholly intact. The latter was well hidden just beneath the surface of the heap of stones, but a protruding end of a flagstone attracted my attention. The walls and roof were formed of large, flat flagstones and the tomb itself was of the usual shape, being quadrilateral, slightly elongated, and having a length of about $1\frac{1}{4}$ m.

It was obviously a woman who had been entombed here; with her was a needle-case, some sewing-bodkins and a few minor articles, all placed at about the centre of the tomb. The position of the skeleton showed that the deceased had been laid on her back with the knees drawn up and the head towards the north.

Excavation did not yield much. The site nearest the sea was examined closest, but we only succeeded in retrieving a few ordinary whetstones. Deposits of bone were very rare. Only tests at random were made in the other huts as a continuation of the work here did not seem promising; even bone remnants were rare finds, and a stony, hard soil both delayed work and rendered it more difficult.

Scattered around in the neighbourhood were numerous fox-traps and I even found them on narrow ledges far up the mountain side.

We named this settlement Holmenbukta.

On the evening of the 27th we left the place and continued in a westward direction along the island. At first, the coast was once more steep and barren, but we had hardly proceeded 2 km before another more luxuriant patch came into our perspective near the sea-border. Green-clad slopes encircled a few small inlets and, even from a considerable distance off, we could see excavated house-sites showing up like dark cavities against the countryside.

Here was a settlement of 8 huts, most of which, however, had already been excavated. Hunters, to my knowledge, were the first to dig here on several occasions and an American and a Danish expedition have both worked on the site. I counted 6—7 empty graves in the vicinity of the huts and in one, lying rather apart from the rest, was a skeleton. We examined an untouched and almost obliterated house-site situated by itself quite close to the beach. There was no entrance-tunnel, but there were traces of stone-made walls; inside the hut itself was a considerable quantity of bone refuse. We also found a beautiful, small, knife-blade of slate.

After a stay of a few hours here we continued and once more swung in towards the large settlement situated near the Norwegian hunters' hut in Eskimobukta at the south-eastern extremity of the island. This is one of the largest habitations in the north-east area and possesses 22 house-sites.

In 1870 the Germans, as is apparent from their report, visited this place where the last of the original inhabitants of the north-east were seen. The Germans went on foot from Cape Mary, following the outer side of the island throughout, but they do not seem to have noticed the three settlements lying just to the east; their failure to do so is presumably due to the path taken being situated at too high a distance on the mountain side.

It is, however, open to altogether too much doubt, to connect with this settlement the small Eskimo group seen in 1823. According to Clavering's report the Eskimo tents must have been situated 1 km, or slightly more, to the west.

I knew that an American expedition had camped here in 1931 and had dug and done much with a large company of men; since then Danish archaeologists have also been engaged here on the careful excavation of most sites.

We laboured at the settlement that day and half the next and made some finds. Numerous splinters of flint-like kinds of stone and quartz testified to a one time extensive employment of such materials for the making of implements. In one hut in particular were also pieces of whalebone and straps made of the same substance.

Along the large river bed just west of the settlement I counted 6—7 graves and several large caches.

I had decided to pitch our next camp in the great valley, 10 km more to the west, where I contemplated concluding my investigations on Clavering Island and then crossing to Cape Stosch.

We started on the afternoon of 28th July. A strong wind blew seawards down the fjord and considerable sea was encountered immediately on rounding the headland, but we managed to keep our engine going until we were off the valley. There was no harbour, unfortunately, only a long, flat, sandy beach with the the wind right upon it. It was therefore only with considerable trouble that we at length saved both boat and cargo undamaged.

After having pitched camp we went out to examine the valley entrance, but found no relics of the ancient inhabitants of the country. The next day the wind abated and after getting our motor boat in order again we went out on a short trip to examine closer some

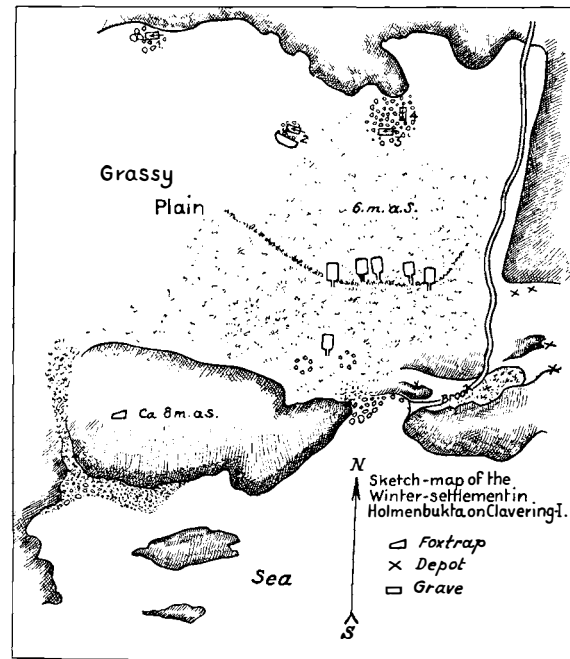


Fig. 90. (1 cm = ca. 15 m)



Fig. 91. Untouched Graves in Holmenbukta.

places lying more to the east. A southerly wind came on, however, and, when off Eskimoneset, the sea was too heavy and we were therefore obliged to seek shelter and await developments in an inlet at the extremity of the point. This happened to be an excellent solution in so far as this was one of the places I had destined for a closer examination.

Not far from where we landed we found the sites of three houses, one of which had already

been excavated; we examined one of the others and made several finds.

In a few hours the wind abated and we made preparations for continuing our journey. In starting, however, our engine failed and examination showed that the propeller shaft was broken; it had evidently had a prior fracture and could no longer stand the strain.

With no spare parts or tools we were unable to effect repairs; we accordingly took to the oars and pulled the heavy boat back to our camp.

If the remainder of our journey were not to be rendered altogether in vain I had now to acquaint "Polarbjørn" with the facts of our situation. The vessel — on which we could make good our damage — was due at Clavering fjord on 10th August. In order, however, to establish definite communication with the main expedition, I was obliged to go to Myggbukta, to reach which, we had, in any case, to touch at Cape Stosch first.

The following day the wind was too strong to permit us to cross the fjord and the time was spent by Engstrøm going eastward on foot along the shore and by myself going westward. In the whole of this region as far as Cape Oetker I only saw 2 caches, situated near small water-courses.

It continued to blow strongly throughout the next day and we found we could not commence the crossing to Cape Stosch before the wind eased off as usual about midnight. We rowed across the fjord in four hours.

A settlement found by a hunter was reputed to be somewhere on the cape and ample time would be available for excavation.

Cape Stosch, fig. 92, lies as though shot forth from the mainland as an isolated crested promontory having a length of about 2 km. Its outer coast is steep, there being a straight drop along its entire length. Facing inland, however, the cape slopes gently down to the broad,

quite low neck of land lying between the promontory and the solid mass of mountain beyond.

There is one spot, however, where the steep, outer side is broken; it is as though a natural ascent has been cut from the sea edge and it is on the plateau immediately above that the winter settlement is found. See sketch, fig. 93.

The sites are not visible from the sea and it may be mentioned as a curiosity that the huts face inland, not seaward, as is always the case elsewhere.

The settlement consists of 4 huts; some slight excavation had been done in No. 4, probably by the hunter who discovered the site three years ago. The other huts had not been disturbed.

We commenced operations in Huts Nos. 2 and 3, each taking one.

Hut No. 2 is situated on a dry, sandy, almost level spot. It was in a very collapsed state and was covered by a deep layer of turf. Heaped together inside the hut were large and small stones from the partially caved-in walls and here and there protruded decayed stumps

of timber from the collapsed roof.

Fig. 94 depicts the hut after excavation. In the centre of the fore-part of the bench is a square hollow, opening frontwards to the floor. Its three compact walls consisted of flat flagstones placed edgewise, and, as a roof, another large flagstone had been utilized. The dimensions of the cavity were 40×40 cm square, with a height of about 30 cm. This container has probably served as a cupboard for household and similar articles.

Such small recesses beneath the bench of the hut seem to be rare



Fig. 92. From Cape Stosch.

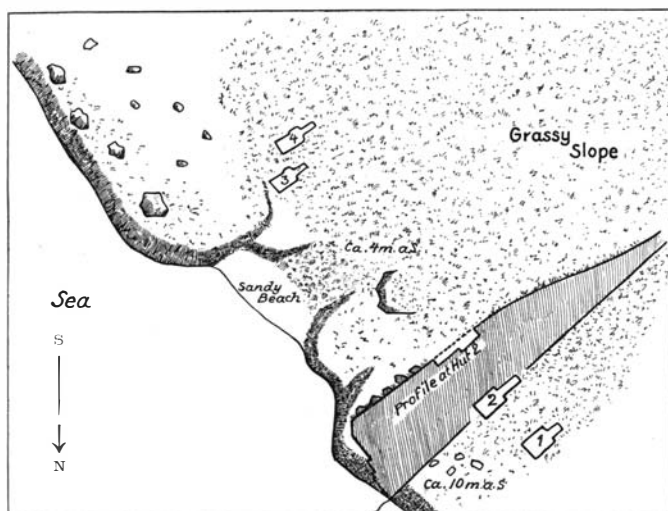


Fig. 93. Eskimo Settlement at Cape Stosch. (1 mm = ca. 1 m)

in the case of the dwellings of the north-east, but they are found in the Eskimo huts of both Angmagssalik and Smith Sound. Fire-places had been constructed in both front corners; in the corner on the left, a rectangular, basin-like contrivance had been built, its walls being flat flagstones raised on edge. This container was full of bone remnants and small charred pieces of wood; the earth and sand inside had been saturated with blubber-oil.

I also saw such stone-built containers — but circular in shape — in the kitchen-corners of some of the huts of the settlement situated at the south-east extremity of Clavering Island.

During the course of excavation I found bone relics scattered everywhere inside the hut, and, near the fire-place in the left-hand kitchen-corner, was a layer of refuse about 20 cm deep in which were both articles of everyday use and objects which had more or less been worked upon for the same purpose; moreover, stuck in the crevices of the stone walls were certain handicraft specimens.

The entrance-tunnel was about 2 m long and the stone walls were intact. The entire roof had fallen in, but no roof stones lay in the tunnel. Timber remnants, however, indicated that the roof had been supported by pieces of driftwood. Various bone remnants and some finished objects lay in the tunnel.

The sketch seen in fig. 95 depicts an attempt to reconstruct this hut. The exit of the tunnel is vertical and opens at ground-level; exactly at the bottom of the tunnel-exit lies a fair-sized stone which has probably served as a step.

Huts are almost invariably found built into a slope or along an elevation in the ground, probably because, primarily, less labour has been required when excavating the site for building purposes.

In the case of the two large settlements on Clavering Island, however, many of the huts are built on quite level ground and their tunnels seem to have been similar in shape to the one just described.

Hut No. 3 was full of large, unwieldy stones which made it difficult to obtain a proper impression of the shape of the hut-interior. The containers, characteristic of Hut No. 2, were not found here, however. Various articles were similarly found in this hut.

Hut No. 4 resembled No. 3 and although, as stated, some excavation had been done on a previous occasion, we made a few finds.

On 5th August, therefore, only Hut No. 1 remained to be dealt with, the work in connection with which was to be undertaken by my collaborator during my trip to Myggbukta. I counted on returning with the vessel in about a week.

Accordingly, on the evening of that day I left Cape Stosch to tramp by way of Loch Fine to Myggbukta. Loch Fine is poor in ancient relics. About halfway along its course, however, lie two single tent-rings and, right at the head of the fjord, lying on a terrace, are some caches and small rings of stones.

I arrived at Myggbukta during the afternoon of 6th August and learned that the "Polarbjørn", in accordance with a new decision, had gone north the day before, bound for Cape Stosch to discharge coal for the station lying some kilometres to the west.

A few hours after my arrival I received a telegram from the leader of the expedition that Engstrøm had been met and that the engine could be properly repaired by putting in a new part from a similar engine on board the "Polarbjørn".

I replied that if the engine could be got to function satisfactorily, my assistant should meet me at the head of Loch Fine in four days time; meanwhile, for my part, I would go to Hoelsbu station on Musk-ox fjord in order to make a more careful investigation of the site where a hunter had made an interesting find of ancient implement-blades fashioned from flint-like kinds of stone. I would then follow the fjord to its head, thereupon cross the neck of land dividing it from Loch Fine and immediately proceed northward to devote the remainder of my time to the examination of the settlements lying between Revet and Cape Herschel.

I was not, however, to execute my plan. The engine was not considered reliable and I had to recall my assistant and equipment to Myggbukta by the "Polarbjørn".

I had now to attempt to find a fresh field amid the fjords to the south. I was to be two days at Myggbukta before the vessel arrived and I therefore continued my investigations regarding the ancient Eskimo settlements in the immediate neighbourhood of the station. In the large grave previously described where I had already made so many finds, I now discovered four further objects which had been stuck in beneath one of the wall stones.

The "Polarbjørn" returned to Myggbukta on the evening of 9th August and was bound

for Musk-ox Fjord the following morning. I elected to go with the vessel as far as Hoelsbu.

A course was taken via Bontekoe Island and Cape Humboldt. On the west side of



Fig. 94. Excavated Hut on Cape Stosch.

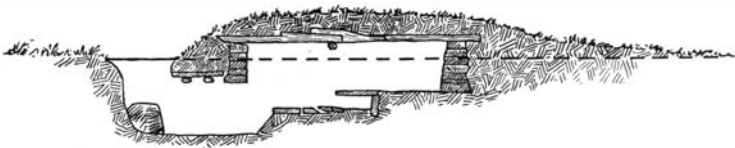


Fig. 95. Reconstruction of Hut No. 2, Cape Stosch.

the island, Mr. Orvin, the leader of the expedition, discovered an ancient winter settlement consisting of two huts.

We arrived at Hoelsbu on the evening of 11th August and once more parted company with the vessel.

The hunter who had made the discovery of flint blades previously mentioned, stated that he had made his find on the sandy stretch in front of the fox farm belonging to the station. This fox farm is placed about 20 m in, and on, a sandy ledge about 3 m in height running along the shore at a distance of 40—50 paces from the station; the ground between the fox farm and the border of the ledge — where the find was made — slopes somewhat and consists of sand with a few large stones. At about the centre of this area was a plot about 2×2 m showing obvious signs of having been thoroughly turned over and inspected. We did not need to search long before we found particles of quartz and flint-like kinds of stone.

We carefully examined the whole 50 m length of the ledge, which on one side merges into a heath and on the other into the bed of a stream, but only found such fragments within a 2 m circle of the spot previously examined and then only in the upper 5 cm layer of sand.

There thus seems to have been here what one could term a small workshop, but the hunter concerned had obviously taken with him all the implements and left nothing but chippings. There are no hut-ruins here, but in the neighbourhood were some traces of a tent-ring.

We left Hoelsbu the following morning and went up the fjord which is still little known even to hunters. I had on a previous occasion searched the countryside in this vicinity and also in that of the stream at the head of the fjord, but, lying in between and debouching on either side of the fjord, were large valleys in which I had long been interested with a view to examining them at some time or other; moreover, I knew that a settlement was thought to be situated within about 10 km of Hoelsbu.

After having touched at various places ashore to examine the country closer, we halted at the settlement mentioned. There were 3 huts here, see photograph fig. 96, but each one had been excavated completely. Danish cigarette ends and tins for canned provisions testified to whom had been here last.

I would have preferred to have proceeded immediately, but found we had first to give our engine a thorough overhaul; we also worked a little in the huts and retrieved a few objects.

We therefore spent the following day here especially as we were obliged to hunt to replenish a sadly depleted larder; we also put our net down at the outflow of a stream, but only for it to be destroyed by the 76 sea-scorpions we caught in it.

Early the next morning, 14th August, we broke camp and continued up the fjord with the wind strongly against us. We proceeded as far as the Norwegian sub-station lying

just inside the turn in the fjord without seeing a single relic of Eskimo times. Quite close to the station hut, however, there is a tent-ring and some caches. We went on the following day. Not far from the station hut a broad, fine valley opens where, frequently, game grazed in plenty. I was ashore at this spot and searched carefully for



Fig. 96. Old Eskimo Settlement on Musk-ox Fjord.

traces of ancient colonization, but two tent-rings and two caches were all I could discover.

We thereupon crossed to the large valley on the opposite side of the fjord, but all we found here was a single, small stone cairn.

A further 5 km to the east is the entrance to another large valley, but here again we failed to find relics from Eskimo times.

We accordingly resumed our journey along the fjord, landing here and there until, when opposite Hoelsbu, we crossed and spent the night at the station.

The winds of the Musk-ox Fjord frequently blow the whole twenty four hours round and as they follow the direction of the fjord, considerable seas for a motor boat, are to be encountered.

We left a message saying where the "Polarbjørn" was to meet us and continued the following morning when it was blowing as usual. Crossing to the other side of the fjord we ran down to Cape Kolthoff; no evidence of Eskimo occupation was found along this stretch.

Like Loch Fine, the Musk-ox Fjord is an inland water-way in the neighbourhood of which the hunting of land animals is good, but that of marine animals, poor. Seals are few in number and the polar bear is a rare visitor. Both fjords show an almost remarkable lack of all relics of the original inhabitants of the country, one of the probable reasons for this absence surely being the poor potentialities marine hunting here affords.

I intended crossing the Nordfjord from Cape Kolthoff to Cape Ovibos, but the wind blew strongly from off Waltershausen Glacier and we were obliged to head for the glacier front in order to ride the sea; we could thereafter continue by stages picking our way between some large ice-bergs which afforded shelter from wind and water.

On the site where Strindberg Peninsula juts into the fjord we found numerous tent-rings and caches; near a destroyed grave lay two skulls and a harpoon foreshaft.

Camp for the night was pitched in the large valley one km farther along. No traces of settlements were to be seen here, but, as testify the fragments of salmon-spears we

found on the bank, the early population has known the good salmon fishing the river offered.

The next morning, 16th August, we set off once more, this time with Cape Ovibos as our first objective. We had fine, picnic-like weather, with the sun shining and the sea smooth.

Towards Cape Ovibos the coast is steep and practically everywhere the mountains drop abruptly into the sea, but on rounding the cape the countryside assumes altogether another character, the steep formations cease and yield place to terrain opening on to rich, grass-covered plains and slopes. The length of this area is about 3 km; its coast runs almost due north-south, turns to the west where Geolog Fjord cuts in, and thereafter becomes steeper once more.

Immediately we rounded the north point of the cape, which here protrudes like a steep, prominent naze, I sighted a number of large caches skirting the water's edge. On the other side of the naze, where the ground falls away gently, lay a winter settlement, depicted in the sketch given in fig. 97, having 5 house-sites. All the huts were in an advanced state of collapse and very moss-grown; they had been constructed on a raised piece of ground running at a sharp angle to the shore line, the easternmost of the huts thus being at the sandy beach itself, the westernmost, about 40 m inland.

We began our investigation by first taking Huts Nos. 1 and 3; fig. 98 shows the former prior and subsequent to our excavation. This hut, a good 3 m in length, belonged to the larger type; its walls, especially the rear one, had partially caved-in and the whole of the interior of the hut was thickly overgrown by moss. Beneath the moss was a thick layer of rich mould, having a depth of about $\frac{1}{4}$ m in the fore-part of the hut. This layer contained a mass of bone-remnants, mostly seal; notably in the left-hand corner lay a considerable amount of refuse, including a heap of bones in which bones of birds formed a part.

Flagstones lined the floor of the hut; the ground beneath these stones was hard and contained no remnants; those parts of the walls still seemingly intact were about 1 m in height.

Utensils and ornaments were both found, most articles being taken from along the left wall in front of the bench.

The entrance tunnel was short, about 2 m in length. The roof had fallen in, but the walls of heavy stones stood intact.

Hut No. 3 had collapsed more than No. 1. There was little refuse to be found inside the huts and not many finds altogether elsewhere; similarly there was little refuse in No. 5 and only a few specimens of handicraft.

Huts Nos. 2 and 4 had collapsed to such an extent that they had almost been obliterated; we examined them, however, and decided that they were building sites only, upon which, for some reason or other, the dwellings had not been constructed. There were no building stones and no refuse.

I have seen similar, almost obliterated huts at other places, notably, settlement No. 4 on Gauss Peninsula.

Protruding here and there from the grassy slope in front of the huts were narwhal bones, and on tearing away the turf around, a shallow but close layer of bone-refuse was revealed.

In the bed of a stream about 100 m to the south of the settlement were 3 caved-in graves, in one of which I found a human skull.

A good km also south of the settlement is a small headland upon which were some tent-rings; a considerable quantity of bone-refuse lay scattered on the south side of the point.

We worked for three days at Cape Ovibos. The "Polarbjørn" arrived and picked us up about midnight on 18th August and on the evening of the following day we reached Myggbukta where we were to spend a day before commencing the journey home.

I wanted to utilize this wait in examining some Eskimo huts which a hunter thought he had seen this side of Hold with Hope. The engine of the motor boat proving fractious, I lost considerable time, however, in getting away, and it was not until the early hours of the morning that it was eventually possible to start.

We put our boat ashore at the Norwegian hunting hut "Geisha" about 10 km from Hold with Hope, and then proceeded along the coast. About 3 km beyond the station is a settlement consisting of 5 winter huts; they lie on a level piece of ground about 100 m inland and are very difficult to identify before one is almost on top of them.

There was only time to make a random test in each dwelling; bone refuse was scanty and all we found were some fragments of flint.

The collection brought home was made at 9 different places. Among the objects retrieved and not found in the older collection are some new implement-types to which a special description will be devoted below.

Harpoon Heads. The collection contains 9 harpoon heads and a partially worked blank for a head of this description.

Fig. 991, No. 33572, depicts a large harpoon head 14.2 cm in length, well preserved, discovered in Hut No. 1 of the Cape Ovibos settlement. It is furnished with a removable, leaf-shaped bone tip secured by means of thin wooden wedges. At its base the blade is obliquely cut and it is considerably broader than the head itself. Quite near the base just where the specimen commences to chamfer, the head is pierced by 4 holes arranged in close pairs, one pair on each side out on the edge. On the reverse side, a longitudinal

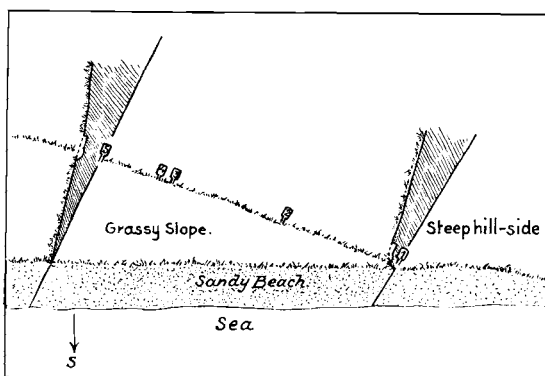


Fig. 97. Eskimo Settlement at Cape Ovibos.
(1 cm = ca. 30 m)

sunken groove connects the holes of one and the same pair, whereas on the front the two pairs are themselves connected to each other by means of two transversal grooves; in this manner a lashing to strengthen the sides of the faucet-hole could be carried across the front of the head.

The head, No. 33570, reproduced in fig. 993 was found on the same site. This specimen has an iron blade, but is considerably smaller than the object just described, its length being merely 6 cm. It has a single and powerful barb. The blade which is comparatively large is held in position by a nail.

Also found in the same hut are two harpoon heads of the type cut in one piece. The one fig. 992, No. 33571, is defective on one side towards the bottom; the specimen is made of ivory and its tip, or the part in front of the perforation for the line, is massive and comparatively obtuse. The perforation is at about the centre of the specimen. The barb has been double-winged. The length of the specimen is 8.7 cm. The second, No. 33569, is merely 5 cm long, but, all the same, it conveys the impression of having been an article required for use.

Taken from Hut No. 3 of the same site is an intact harpoon head, No. 33553, of the same shape as the one depicted in fig. 461. It is 11 cm long and is of reindeer antler. A similar, but not quite finished, harpoon head, No. 33509, comes from Hut No. 3 on Cape Stosch; there is another from the large settlement situated on the south-eastern extremity of Clavering Island. The last mentioned, however, differs from the others to some extent by the position of the line-perforation being situated more on the upper part of the specimen.

Two harpoon heads emanate from a hut on the extreme point of Eskimoneset. One, No. 33615, is a delicate head cut in one piece and must probably be considered as a toy; the other, No. 33614, has had a blade, and is comparatively short and thick. Its length is 6 cm. When found it had a wooden blade which practically crumbled to nothing after it had become dry; lashings have held the blade in place. Bored at right angles to the fissure for the blade and along the centre line of the specimen are two holes the apertures of which are on both sides connected by sunken grooves.

Harpoon Foreshaft. A harpoon foreshaft, No. 33530, was found at the tent settlement farthest inland on Strindberg Peninsula. It has faucet with a straight-cut shoulder section at the base, and a single perforation for the line. Length: 25 cm.

Fig. 9912, No. 33573, shows the lower part of a composite foreshaft or of a lance head; the thickness of the object indicates that it is more likely to have been the latter. The lower hole is the perforation for the line and the one through the centre also seems to have been for a line; a groove runs straight from the aperture to the upper edge of the specimen. The top hole has been for a nail which secured this part to the corresponding oblique end of the upper part of the specimen.



Fig. 98. Eskimo Hut before and after excavation.

Fig. 99₁₁ reproduces a similar object, No. 33559, but of wood. The specimen is 32 cm long and was found in Hut No. 3 on Cape Stosch; also found at the same site was part of a fixed foreshaft, No. 33596.

Faucets. Found in Hut No. 1 at Cape Ovíbos was a so-called finger rest, No. 33588, for harpoon poles.

Steering Wings. A wing, of reindeer antler, No. 33504, was found at Cape Stosch, and in the hut on the west of the valley near Daudmannsøyra, was one of wood. Both conform to the type of steering wings depicted on page 49.

Ice Picks. Also found in Hut No. 1, near Cape Ovíbos, is a massive tip, No. 33552, likewise made of antler for use as ice pick. It resembles fig. 49₅.

Salmon Spear Points. The two heads, Nos. 33620 and 33621, depicted in fig. 99_{7,8} were found on the bank at the outflow of the salmon river, on Strindberg Peninsula. Their shape indicates that they have been made for fastening securely to a pole; they have broad, comparatively bluntly tapering heads barbed on both sides.

No. 8 is 14.7 cm long, including that part of the specimen, 8 cm, which has fitted against the pole. Its upper part is almost rectangular in cross-section and its narrow sides are furnished with transversal grooves; this tends to show that the object must have been lodged into a bed prepared for it on the pole; two nails have held the head in position; the material is reindeer antler.

No. 7 is somewhat shorter and much more slender. It has been secured in position on the pole by means of lashings and a nail.

Fig. 99₉, No. 33595, depicts a similar head, found in Hut No. 1 at Cape Ovíbos. The head is massive and obtuse; it has broad barbs and does not seem to have protruded so

far in front of the pole as is the case with the two immediately preceding specimens. The part which has rested against the pole is comparatively slender and on one side it is seen that a piece has been cut away by means of a drill.

Lateral Branches of Bird Spears. In Holmenbukta, on Clavering Island, a lateral point, No. 33658, belonging to a bird spear was found. It is 23.5 cm long and very weather-worn; two barbs are on the side which has faced the shaft and rudiments of a barb exist on the outer side near the tip. About half-way down the inner, concave side, is a prominent section which has been perforated to take the lashing which held the head in position. The second piece seen in fig. 996, No. 33616, comes from the great grave at Myggbukta. It is 17.5 cm long, wholly intact and excellently conserved. It conforms closely to the lateral branch of a bird-spear originating from Washington Land on the north-west coast. (See Medd. om Grønland, LXXI, p. 201.)

Fig. 9910, No. 33604, depicts a large weapon point, made of slate, found by Mr. Orvin in the open near the entrance to Junction Valley. It is of green slate and, originally, must have been about 14 cm long, but the extremity of the point has been broken off. In its fore-part is a blade having evenly convex sides and carefully ground edges; in breadth it is about 2.9 cm and in thickness 0.6 cm. The blade merges into a comparatively long and broad tang rectangular in cross-section and shaped wedge-wise in order to facilitate insertion in the shaft. It is not the point of an arrow-head, but rather the head of a spear, used, for example, in reindeer hunting.

Arrow Heads. Found at the settlements on Cape Stosch and Cape Ovibos were several arrow heads of the usual type, the blade with more or less convex sides and triangular in cross-section, and the tang having screw-threads. An arrow head of the type supplied with a blade was also found at Cape Stosch, see fig. 994, No. 33514.

The head depicted in fig. 995, No. 33503, was found in Hut No. 2 near Cape Stosch. It resembles the first-mentioned heads, but the blade section in this instance has two insertions on one side and one on the other, broad barbs thereby being formed. The head below this part has convex sides in which there are numerous small incisions. Screw-threads are missing on the tang which, however, in other respects, is shaped as usual for arrow heads of this kind. Length: 14 cm.

There is a small arrow head of slate, No. 33512, from Hut No. 3 at Cape Stosch. It is of dark-grey slate, is 5.2 cm long, but the rear part of the tang is missing. The blade is broadest at its base where it has been cut square in order to form a tang; the corners, however, are broken off.

Knives, Uloes, etc. Fig. 1003 depicts a small, single-edged knife-blade, No. 33684, of red-brown slate, found on Clavering Island. At one time it had a handle to which it was affixed by nails.

Of knives for special purposes there are two specimens, Nos. 33560 and 33610. The one is a large, roughly-fashioned wooden knife having a length of 32 cm, the other a bone

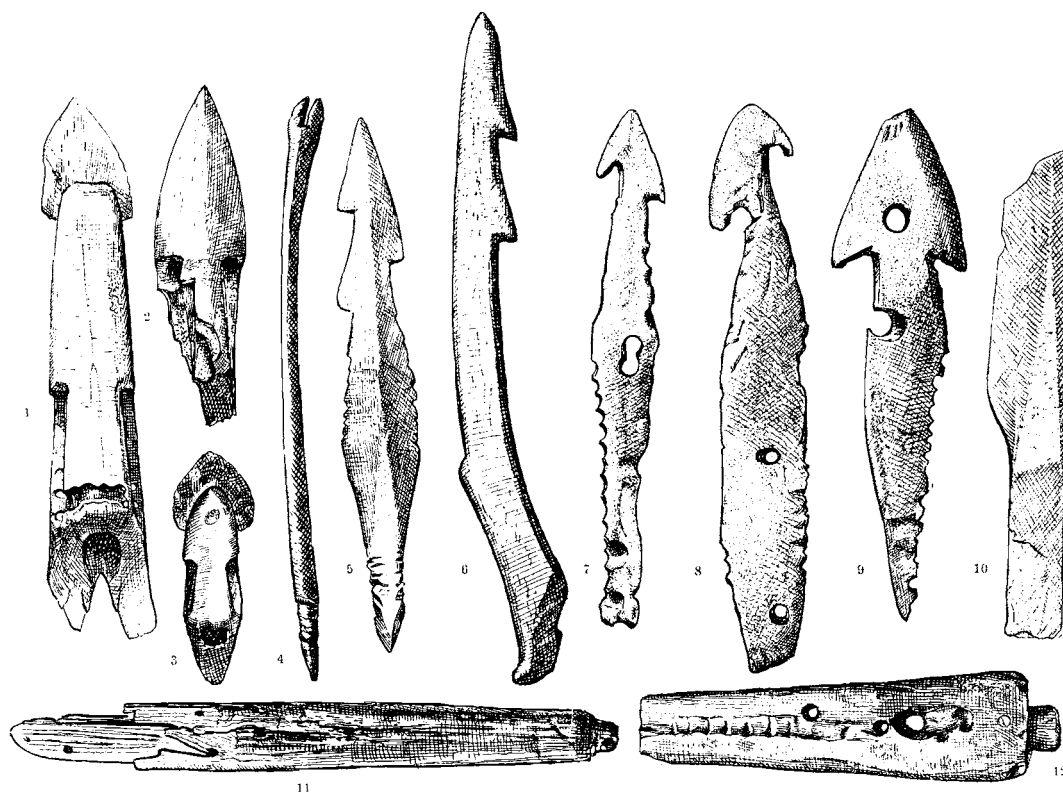


Fig. 99. Harpoon Heads, Arrow Points, Fish-Spear Points etc. (1—10, 12 scale 1:2; 11 sc. 1:4).

knife of the type described on page 59; its blade, however, only 9 cm long, being much shorter, see fig. 101 13. From Hut No. 1 on Cape Ovibos comes a fragment, No. 33 523, of a similar bone knife. The handle and forepart of the blade are broken off. The innermost part of the convex-edge is bevelled for a length of 8.8 cm, in a manner forming a plane surface which, however, has been rendered rough by means of transversal grooves; the fact that along the edge there are four holes with sunken grooves for lashings goes to show that an object, perhaps an edged instrument has been fastened here.

A few intact bone knives of this type brought home from the north-east coast by Norwegian hunters are already in the possession of the Ethnographical Museum, Oslo.

Uloes. In Hut No. 2 at Cape Stosch two slate, ulo-blades were found. The larger, which is comparatively thick and roughly fashioned, is of a dark slate-like kind of stone of the usual sector-shape and 8 cm in length, see fig. 100 2, No. 33 501; whereas the smaller, No. 33 534, is of green slate, quite thin, only 3.7 cm long, and round at both ends. A handle for an ulo-blade was found beside the largest of the pieces.

Fig. 100 1 reproduces an ulo, No. 33 629, with its head or handle missing. This ulo was found in the old hut-ruin on the west side of the valley at Daudmannsøyra. It consists of two

pieces, the one, an iron blade, the other, an upper part made of reindeer antler. The upper part has been cut from a fork in the antler, the broad and narrow ends of the piece thus being acquired in a natural manner. Cut along the centre line of the broad side is a fissure into which the iron blade has been wedged tight; this blade is 9 cm long and has a slightly curved edge rounded at each end. The blade protrudes about 2 cm from the upper piece. The narrow end is oval in cross-section and has been levelled and smoothed off. Just below the edge are two holes, the lashing remnants in which indicate how the missing blade was kept in position.

Some other, typical, women's articles forming part of grave-goods found at Holmenbukta are shown in fig. 101_{1, 2, 5}.

No. 1 is a needle case, No. 33551. It is 11 cm long and has been fashioned from the forepart of a narwhal tooth, the opening being a natural one formed by the nerve channel of the tooth. The object has been fashioned on top; it tapers downward and is rhomb-shaped in cross-section. Contractions have been made on either side, a centre section thereby being delimited. If a comparison is made with needle cases from other parts of Greenland the affiliation is clearly seen, although this specimen is of a simpler and rougher make.

No. 2 shows one of the bodkins, No. 33549. All taper at one end and at the other each has an eye beneath which are two or three circlets.

No. 5 depicts one, No. 33555, of 3 small uniform-shaped ornaments.

Drills. At the large settlement at the south-eastern extremity of Clavering Island an end piece of a drilling-bow, No. 33626, was found as well as the tip of a drill, No. 33644, the tip being of a dark, hard, kind of stone. The latter object, which is quite thin, has been fashioned by the scaling off of fragments, see fig. 101₇; it is 4 cm in length, and 1.2 cm in breadth where the head itself commences, and has therefore been used for boring comparatively large holes.

Fig. 101₆ depicts the point of a drill, No. 33619, of a peculiar shape. It is 6 cm long, round in cross-section and has quadrilateral tapered ends both fashioned into boring tips. It was found at the great grave at Myggbukta.

Scrapers. Found in Hut No. 2 at Cape Stosch are two scrapers, Nos. 33664 and 33584, of the same type as in fig. 65_{1, 3}.

Various Materials for Cutting-Implements. Practically all stone articles are made of slate, the material with which the North-East Greenlander has principally been concerned. To a certain extent, however, flint-like kinds of stone and quartz have also been utilized for smaller cutting-implements, and for scrapers, although such articles belong to the rarer types of find.

The use of the two latter materials apparently concentrates around certain localities. In the large settlements on Clavering Island, for example, these species of stone must have had a certain significance if we are to judge from the chippings found. Finished

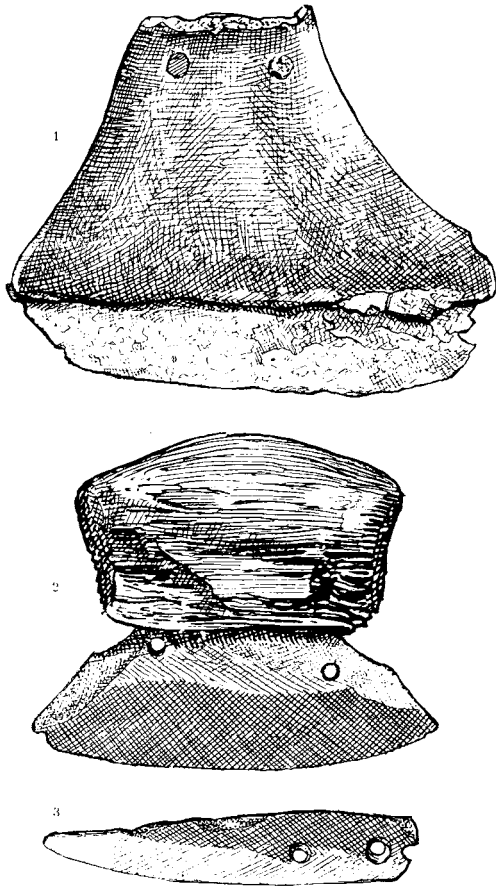


Fig. 100. Uloes and Knife Blade.
(Scale 2:3)

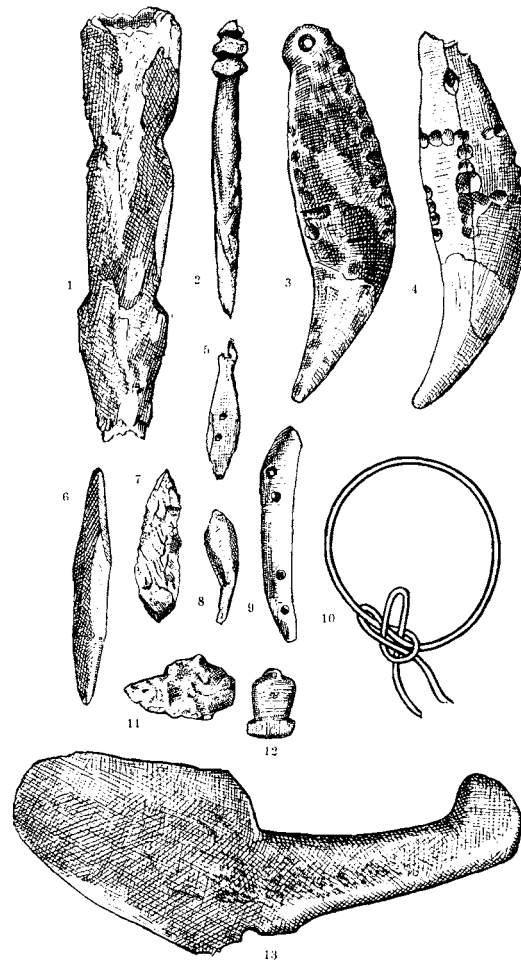


Fig. 101. Needle Case, Bodkin, Boring Points etc.
(1-12 scale 1:2; 13 sc. 1:3)

articles have also been discovered by several expeditions and in my collection there is a small, carefully made scraper, No. 33648, and a blade, No. 33532, both retrieved from one of the huts belonging to the large settlement in Eskimobukta on the south-eastern extremity of Clavering Island.

In one of the Eskimo huts at the Norwegian station at Revet, on the mainland west of Clavering Island, a hunter has found some small, delicate flint-made knives, but at the settlement to the north and south of the island, slate again seems to prevail altogether as a material for use in the making of cutting-implements.

Special Shaft. On page 81 is described a special type of shaft with its upper part missing in each specimen; but in the collection now described there is a similar shaft, No. 33535, almost intact. It is, however, comparatively small and slender, and has evidently

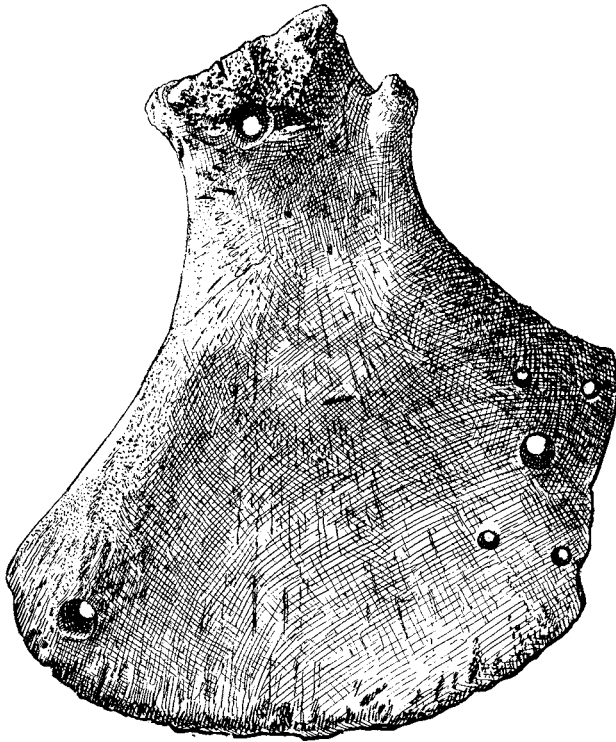


Fig. 102. Stool Seat. (Scale 1:3)

been made for a boy. It agrees in every respect with an intact object of the same nature found by the Nathorst Expedition. As it has been presumed that the natives used this type of object for picking out pieces of meat and blubber from the food cauldron, it has been termed a meat fork, although actual practice would undoubtedly prove it to be poorly suitable for such a purpose. The shape of the handle with its obtuse upper end with insignificant incisions on each side indicates a use other than that of merely piercing like a skewer, and I rather think it has been a special kind of throwing board.

Stools. Fig. 102 depicts a stool-seat, No. 33558, found in the layer of turf covering the entrance-tunnel of Hut No. 3 on Cape Stosch. It has been made from the shoulder blade of a large whale, the outer thin sections of the blade having

been cut off; three legs have fitted in the usual manner into conically-shaped holes. The shape, — the long protruding snout-like neck — makes the object eminently suitable for sitting on and it may therefore safely be presumed that it has formed the seat of a sitting-stool.

Household Utensils. Fig. 103⁹ shows a large wooden ladle, No. 33683, found in Hut No. 1 on Cape Ovibos. It is of the same type as the ladle described on page 74. Its length is 31 cm of which the handle forms 4 cm; its greatest breadth is 24 cm and its height about 8 cm. A large crack is seen to have been repaired by lashings, remnants of which are still in place, and by a large piece of bone-mounting embedded on the underside and fastened by 3 nails on either side of the crack.

On the gently curving fore-edge are traces of wooden nails which would indicate that mounting has also been in position here.

Two rectangular pieces of wood found in the hut on the west side of the valley near Daudmannsøyra have belonged to quadrilateral caskets or boxes.

Fig. 103⁸, No. 33642, depicts a spoon from the large settlement at Eskimobukta on Clavering Island. It is 12 cm long and has a large but only slightly arched blade.

Found on the same site as the preceding object was a strap of whalebone knotted in the manner shown in the sketch, fig. 101¹⁰.

Wood Carving. Depicted in fig. 103₁₋₇ is a collection of animal figures carved in wood. Such objects are often found, but, frequently, in a more or less disintegrated state. The seal, the most useful edible game the natives had, is also their most used model for such figures, but the polar bear and one particular kind of bird, probably the goose, are also often found reproduced in wood.

In numerous cases the figures have been destined for threading on a string and, being worn either as ornaments or as amulets, have thus become part of the native costume, but many of these figures not intended for personal adornment have also been found; they have perhaps been considered to possess some mystic significance, but even when looked upon wholly and solely as wood-carvings, they are of considerable interest.

Nos. 1 and 2 depict two polar bears carved in wood, Nos. 33608, 33622. The larger was found in one of the huts on Sabine Island, the smaller in the hut situated on the west side of the valley near Daudmannsøyra. The former is an excellent piece of wood carving and it clearly exhibits how well the sculptor has grasped the characteristic attitude and features of the polar bear. The figure has a sense of action about it; the hind legs of the animal are stretched rearwards; the high, powerful shoulders and the

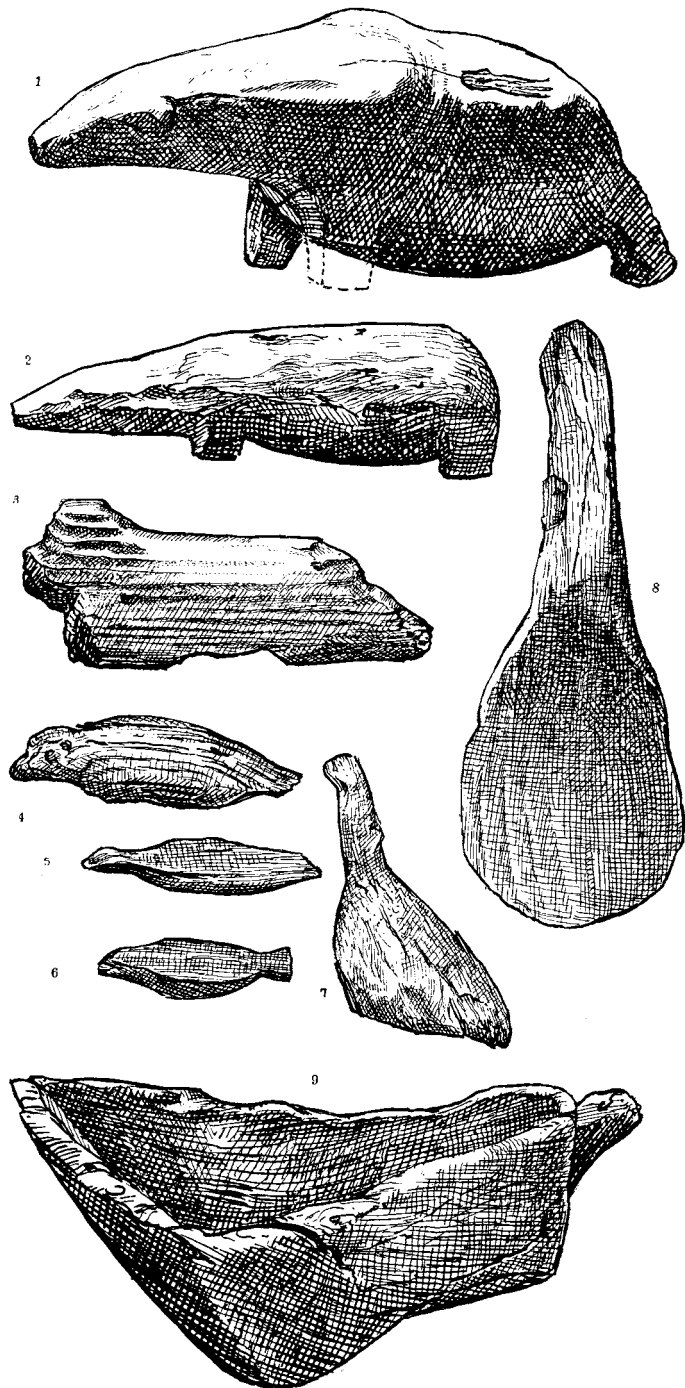


Fig. 103. Bear and other wooden carvings,
a Spoon and a Ladle.

(1-8 scale 2:3; 9 sc. ca. 1:4)

typical, long, outstretched massive neck and the comparatively small head are excellently reproduced. Various carved figures of polar bears have previously been found along the north-east coast, but they have all been executed in the stiff conventional style seen in specimen No. 2. No. 1 is 16 cm and No. 2, 9.5 cm, in length. No. 3 reproduces an animal, possibly a dog. The characteristic alert attitude of No. 7 seems to indicate a loon. The remaining figures represent seals.

Various Items. Fig. 101_{3,4,12} depicts 3 articles worn on clothing. No. 12 is a small pendant, No. 33590, of bone, shaped somewhat like a boot. Nos. 3 and 4 are polar bear teeth perforated in the usual manner through the root but they are, in addition, furnished with hollows cut by means of a drill; these objects were probably ornaments.

Of other articles of interest, mention may be made of an article, No. 33592, of the same shape as, but smaller than the object depicted in fig. 88 a₁₄; the characteristic ridge down the centre of one broad side is, however, missing. Fig. 101₉ shows a bone pendant perforated on four places and having probably the shape of a kayak. Found in hut 2 at C. Stosch. Fig. 101_{8,11} figures perhaps two scrapers of a flintlike stone. They are found in Eskimobukta.

INVESTIGATIONS DURING THE SUMMER OF 1933.

My earlier investigations had inclined me to believe that the region of the north-east must originally have been peopled mainly by immigration from the south. This was the question which I therefore put myself to elucidate further the summer of 1933 and it seemed to me that the best answer would be forthcoming by studying the ruins of the settlements situated in the southernmost parts of the region concerned.

In one respect, the vicinity of the entrance to Davy Sound formed the doorstep of, or the gateway to, the country — a defined and restricted area through which the parties of immigrants had necessarily had to pass before scattering over the immense fjord district to the north. There was much to support the view that here, concentrated at places indicated naturally, would be found all the relics still in existence of the immigration from the south. Further, these were the least known parts of North-East Greenland and, consequently, were worthy of investigation.

Moreover, Scoresby's account of all the settlement-ruins which were to be found on the north side of Davy Sound, along Traill Island, also seemed to indicate that here was a natural place of assembly sought by the migrating families immediately after having traversed the country, so difficult of access, lying to the south.

The first place called at by the expedition was the second largest of the Finsch Islands, where we arrived on 19th July. Our stay here was not a lengthy one, however, and there was only time for a short visit ashore.

On some small inlets about half way along the west coast of the island, I saw 3 tent-rings, 2 caches and 1 fox-trap, one tent-ring having the shape indicated in the accompanying sketch, fig. 104. Two men were left behind to attend a water-gauge and, later during the summer, they discovered near the northern point of the island a winter settlement of which fig. 105 is a sketch.

From here the "Polarbjørn" proceeded to the Norwegian station at Cape Stosch where we arrived the following morning.

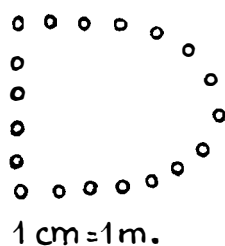


Fig. 104. Tent-ring (?).

A hunter had told me that an untouched grave was situated near the beach about 10 km to the east of the station, but on visiting the spot it proved to be a large dome-shaped fox trap. In the vicinity, however, I found the remnants of an almost obliterated Eskimo hut in which there was little to be seen although bone remnants of various kinds were retrieved.

The following day the vessel paid a hurried visit to Jordanhill where there was only time for an hour ashore. During that brief period, however, I came upon 3 destroyed grave-sites and 5 tent-rings, two of the latter being quite small, and one of these two having a shape the same as that depicted for the tent-ring on Finsch Island. A winter settlement of 3 huts is also said to be situated on Jordanhill.

The next place of call was Sabine Island where a full day's stay was to be made. Taking the opportunity, I accordingly went across to investigate on Walrus Island. The whole of the low western part of the island is replete with relics of Eskimo times, peculiar, semi-circular stone-walling — possibly a primitive shelter for hunters — tent-rings, caches and graves lying scattered over the plain. There are also the ruins of a rude type of stone house erected by Norwegian hunters; further, there was an intact grave, the skeleton in which was comparatively well-conserved, and a quantity of grave-goods.

Several of the destroyed grave-sites seemed to have a more arch-like shape, not the usual rectangular-square.

During the afternoon of 22nd July, the "Polarbjørn" anchored in Myggbukta and by the evening I had completed the excavation — begun in 1931 — of an Eskimo hut lying about 3 km to the east of the station.

The next day we were at Bontekoe Island with half a day at my disposal for investigation purposes. On a small bay on the south-east of the island I discovered an ancient winter settlement consisting of four quite over-grown huts showing merely as faint depressions in the turf. I was able to excavate the greater part of one hut; refuse remnants were scarce but among them were numerous fragments of a flint-like species of stone.

On 24th July we were lying at Kjelbotn Station, Cape Humboldt, where I continued the excavation of the large settlement which is situated there. We went southward with the "Polarbjørn" that evening, passing through Sofia Sound in order to reach Cape Simpson direct where I wished to be put ashore.

I was awakened the following morning by the vessel breaking her way through solid ice.

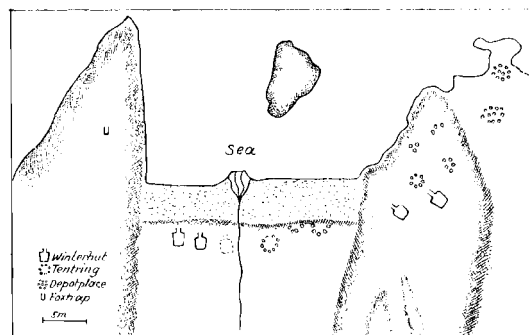


Fig. 105. Eskimo Settlement on the smaller Finsch Island.

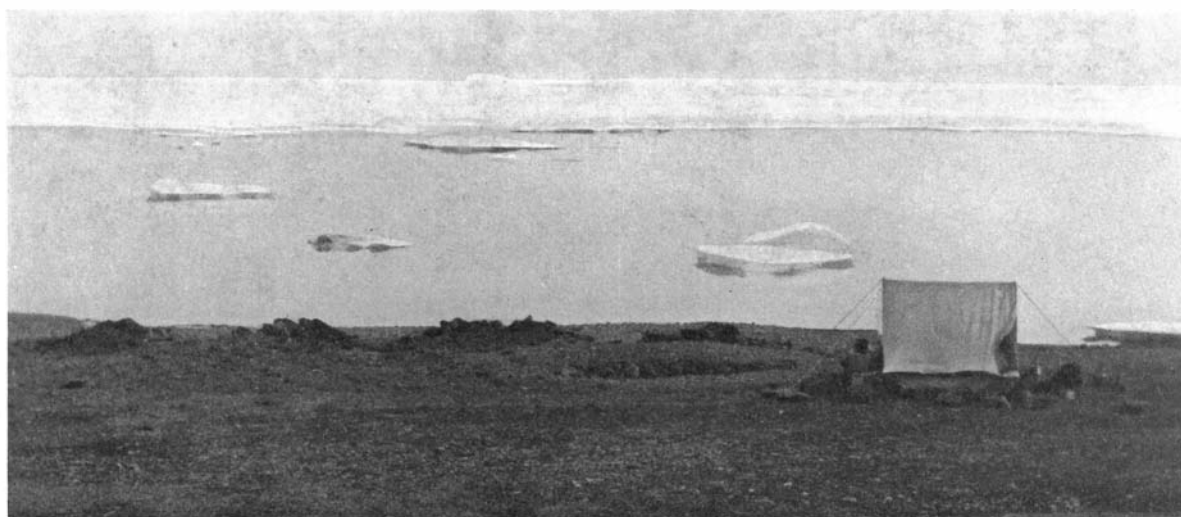


Fig. 106. The Eskimo Settlement at Cape Moorsom.

The ice in King Oscars Fjord had not yet broken up, and, when still about 20 km from Cape Simpson, the vessel had to relinquish any attempt to force a passage.

I saw, however, that it would not be long before the ice began to give, so I elected to land here all the same. I was given an assistant, Mr. Knut Olsen, and was provided with a motor boat and supplies for a month.

With help from the crew of the "Polarbjørn" the motor boat and equipment was dragged across the ice and safely secured ashore. It was difficult to find a suitable camping site as the cliffs along this coast drop precipitously into the sea, but a small, rocky, barren naze was eventually found and here we pitched our tent.

The following day we went along the ice-foot to a large valley-entrance about 5 km down the fjord.

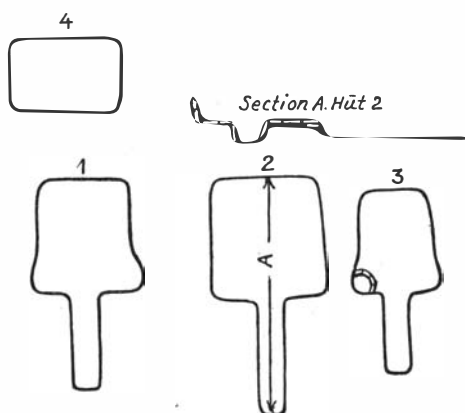


Fig. 107. Sketch of Eskimo Settlement at Cape Moorsom. (1 cm = ca. 2 m)

The valley proved to be wide and long and did not disappear until far in on the island.

A river, large accordingly to Greenland standards, ran through the valley and a few hundred metres from its outflow formed quite a large lake. The vegetation was very poor and no game was sighted. Of Eskimo relics I only found one tent-ring and two caches, barely visible.

We soon saw that the ice was on the point of breaking away from land along the entire length of shore, and on the following day we were able to put



Fig. 108. Hut No. 2, Cape Moorsom, before and after excavation.

our motor boat out into a lane of water, a few metres wide, skirting the beach, and just managed to force a passage as far as the entrance to the valley where we pitched our next camp.

The following day I continued on foot towards Cape Simpson. I had a fine walk on the ice-foot for a considerable distance; but at the steep nazes just where the coast swings there was a large open channel through the ice and no ice-foot; and as the terrain, itself, was very difficult to traverse I returned to our camp.

For the first 3 km the ice still remained land-locked and we found we would not be able to proceed before a further breach had been made. During the night, however, an off-shore wind blew and by the afternoon of the following day the ice-conditions had changed sufficiently to allow us to attempt to continue, but we were obliged to

give up after having forced a passage for about 1 km; camp was accordingly pitched on a small, barren spot at the foot of a steep cliff.

Later in the afternoon the wind began to blow from the west, and by the next day the ice-conditions, as a result, had become worse. The ice was now pressed up against the shore, and also up the fjord, in a manner imprisoning us completely.

The night was very cold and morning found all the streams of snow-melted water dried up and all the snow-drifts hard. As the day went on the weather turned cloudy and sleet fell; it also began to blow and the squalls promised a quick change in the ice-conditions.

The following day we found we could continue, as during the night the ice had been forced off shore somewhat and this enabled us, without great difficulty, to reach the wide lane of water off the southern point of the island.

The coast all along this stretch is very steep, but at Cape Simpson a narrow foreland commences to form and, somewhat farther on, a long, broad valley opens.

The wind now blew so hard that the waves were lashed to foam, and, finding it difficult to land anywhere, we were obliged to continue northward as far as Cape Moorsom where the lane of water along the shore ceased; more to the north, the ice still remained landlocked. The lane of water skirting the shore was about 200 m wide; beyond this the ice lay still intact, but far, far out at sea, fine, open water again gleamed for a distance as far as the eye could reach.

At Cape Moorsom where the foreland is quite narrow and barren, lies a solitary winter settlement. It consists of 4 huts seen on the left of the tent of the photograph, fig. 106; 3 are situated facing the sea, the fourth being more to the rear with its longitudinal direction at an oblique angle to the others. The distance from the water is about 45 m, and the terrain falls steadily to the shore. The height above sea-level is about 5 to 6 m.

Lying in the vicinity are about 5 tent-rings and about 10 more or less large-sized caches; the sketch, fig. 107, illustrates the settlement in greater detail.



Fig. 109. Hut No. 4, Cape Moorsom, before and after excavation.

Hut No. 1 was first examined. It was of poor construction and contained little refuse. That same day we went out to look at the large valley-entrance separating us from Cape Simpson, and, on a plateau about 300 to 400 m from the settlement, two destroyed graves were found. The valley-entrance is choked with barren moraines and by a mighty, stony river-bed; vegetation is extremely poor and all the wild life we saw was a lonely hare.

The next day, 1st August, the weather was again brilliantly summer-like, the sun was shining, there was a dead calm, and the weather was warm.

We completed our work on Hut No. 1 and thereupon commenced on Huts Nos. 2 and 3. Fig. 108 depicts Hut No. 2 prior and subsequent to excavation. The work seemed to promise satisfactory results; in the front right-hand corner was a thick layer containing bone-remnants and refuse of various descriptions, everything seemingly contained in a large sack of sealskin which, however, was so rotten that it was impossible to retrieve it anything like intact. Among this refuse were certain articles of daily use; an occasional hand-made object was also recovered from other parts of the interior.

As shown by the photograph and the longitudinal section of the sketch, this particular hut differs in respect of the arrangement of its interior. The entire floor space is on one and the same plane but running from one side to the other, slightly to the rear of the centre is a broad drain or gutter about 80 cm wide and 40 cm deep, with both its sides lined with flagstones set edgewise on. This gutter had, presumably, also been roofed with flagstones, of which, however, only two remained. Practically the whole of the flooring also consisted of flagstones. The stone walls were only about 70 cm high and it did not seem as if many had caved-in.

No. 3 was the smallest of the huts; it contained little refuse and the finds made were few.

Fig. 109, is a photograph of Hut No. 4 prior and subsequent to excavation. Every trace of the entrance-tunnel was missing and, at first, the ruin did not seem to be that of a dwelling house. Investigation undoubtedly showed, however, that this must have been a house destined for occupation as the walls were of good construction and, in one corner, were bone remnants, charred pieces of wood and soot-covered stones. At about the centre of the interior a round container had been built-in below the floor level; it was about 40 cm in diameter and its edge had been lined with evenly-shaped stones.

We made a few finds here, including two extremely rusty nails which, evidently, had once been wrenched from a piece of drift-wood.

The following day, 3rd August, was set aside for a journey north ward in search of archæological relics.

There was no change in ice-conditions. The water lane along the shore gave no signs of an early opening to any extent and if we were to see anything more of these southern domains we would have to go on foot.

Slightly to the north of Cape Moorsom another large, broad, valley opens. The southern half of its entrance mainly consists of a broad, stony river bed run dry, but after having crossed this, a small, flat naze is encountered on which there are relics of a large summer settlement; about 20 tent-rings and numerous caches lie scattered about on the naze itself and, about 100 m inland, there are 7 tent-rings situated along an ancient shore line.

A short distance to the north of the valley-entrance, the foreland again disappears and we were obliged to follow the ice-foot as far as Cape Young; off the naze, however, the ice had opened and we were forced to climb the precipitous cape.

Cape Young, being steep and consisting of loose rock, is difficult to cross on foot; on the other side of the naze the coast swerves abruptly to where Mountnorris Inlet cuts deeply into the country. We reached a fairly high altitude when crossing the cape and, the weather being clear and sunny, an excellent view across the fjord was obtained.

Mountnorris Inlet differs considerably from the reproduction given of it on maps. It is hardly more than 5—6 km long, and the Craig Islands do not exist.

In fig. 110 I have attempted to convey the main lines of these parts.

The fjord was still entirely ice-covered and the land-locked ice still stretched far out to sea. We skirted the shore until we reached the large river which empties into the head of the fjord. The large plain is bisected as it were, by a swarthy-looking crest, before reaching which, however, we came upon 2 Eskimo tent-rings; but around the innermost inlet of the fjord no Eskimo traces were found although the river undoubtedly offered excellent potentialities for salmon fishing. On a fjord ice-floe just off the mouth of the river, about 50 ringed seal lay sunning themselves.

There was no sign of winter huts; this was obviously not for the want of building sites as I saw two places where the erection of permanent dwellings would have been easy.

Mr. Askheim, a member of the Norwegian Expedition, who was surveying the outer part of Geographical Society Island, also had in mind the possibility of Eskimo relics.

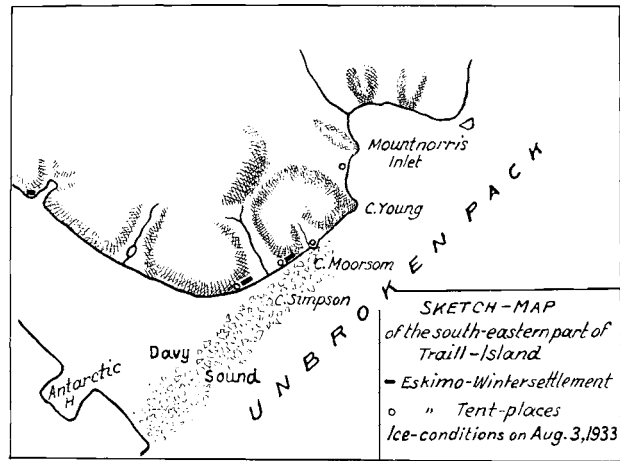


Fig. 110.

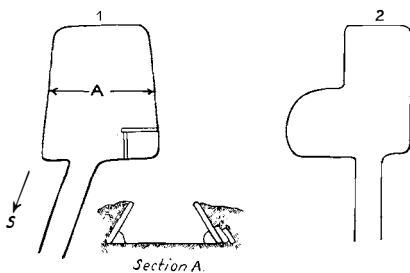


Fig. 111. Huts at Cape Simpson.
(1 cm = ca. 2 m)



Fig. 112. Eskimo Hut at Cape Simpson after excavation.

found nothing, however, although he traversed the greater part of the outer region of the island.

The terrain consisted of extensive but quite barren, lowland, and at many places along the beach large snow-drifts were still to be seen.

It therefore seems as if the outer limits of this large archipelago have not offered the Eskimo conditions sufficient to make life worth living and the path traffic has taken,

has obviously and reasonably enough followed King Oscars Fjord.

We made our return by way of a narrow valley cutting southward to the rear of the coastal mountains. The path chosen proved to be easily traversible and a low pass gave on to the large valley situated between Cape Moorsom and Cape Simpson.

The return to camp was made after an absence of about 11 hours.

The next day, 4th August, we broke camp and moved south to Cape Simpson. The first we did was to examine the country very carefully to acquaint ourselves with everything that could be found by way of permanent relics of the original population. A winter settlement of 5 huts is situated here; the huts are in two groups, one of 3 and one of 2, about 100 m apart. I counted 8 tent-rings besides 5 destroyed graves and some caches.

We commenced investigation in the northern group of 2 huts, depicted in the sketch, fig. 111; figs. 112, 113, show both huts after excavation.

Hut No. 1, fig. 112, belonged to the larger type of dwelling but differed in several respects. The entrance-tunnel, for example, which seems to have been very narrow, ran in a slantwise direction from one of the corners. The floor was partly covered by flagstones, but there does not appear to have been any raised sleeping-ledge; nor was the front edge of the couch delimited.

About half-way along each longitudinal wall, a flagstone about 70 cm high was fixed at an angle of 60° , the one leaning towards the other, the manner in which they were held in place, showing that they undoubtedly still occupied their original positions, see section on sketch, fig. 111. On both sides of these flagstones the walls were of the usual stone construction.

There was not much bone-refuse in the hut, but in the front left-hand corner lay several large pieces of blubber.

Hut No. 2, fig. 113, was characterised by a particularly large niche in one corner. The front part of the floor was laid with flagstones; also in the case of this hut it does not seem as if the sleeping-ledge had been raised from the ground; here, too, large pieces of blubber were found in the kitchen corner. Other remnants were few.

The weather was bad that day; there were fog-banks and a cold wind from the north-east.

The next day we commenced the excavation of the 3 remaining huts, one of which proved to be what I have termed incomplete. The other two were comparatively small and less work had palpably been put into their construction than is usually the case with the average type of North-East Greenland hut. Little use, for example, had been made of stone, although there was no lack of this building material in the vicinity; moreover, the floor had not been tiled with flagstones, nor had the couch been raised from the ground. Little refuse was found in the huts and only a few fashioned articles were recovered.

We broke camp the following day, 6th August, and entered Davy Sound.

The night had been cold and ice sheeting had formed across the lane of water skirting the coast. We hugged the shore as usual and did not stop until we reached the north side of the entrance to Drøm Bay where it seemed as if we could expect to find permanent relics of the original inhabitants.

I discovered a winter settlement, but, surprisingly enough, it was situated out on the north headland itself, near the entrance, where the soil was more like stony debris. The photograph, fig. 114, presents a view of the settlement which consisted of 3 huts. A man is seen in the hut in the background.

The settlement lies about 100 m from the edge of the sea on a site where the ground is least stony. The two outer huts were well preserved; the centre hut, on the contrary, was in a very collapsed state and was connected to a small annex-hut exactly as is the case with Hut No. 4, of Settlement 1 on Gauss Peninsula (see p. 33).

The hut in which the man is seen in the picture is almost quadrilateral in shape; its sides are 2.5 m long and its walls appear to stand intact. A large roofing-flagstone was intact and in place, covering one of the front corners. The height above the floor flagstones



Fig. 113. Eskimo Hut at Cape Simpson after excavation.



Fig. 114. Old Winter Settlement at the entrance to Drom Bay.

revealed itself at times as being quite pleasant foreland, occasionally of considerable extent. We landed at several spots, but nowhere did we find any evidence of the ancient inhabitants.

Holm B. was reached at length and proved to be protected on the south by a rather high promontory about 5 km in length, which, however, was cut through, at somewhere about its middle, by a narrow sound along which we accordingly went. We continued as far as the Norwegian hut lying nearly half-way round the bay and pitched camp after something like 20 hours by boat from Cape Simpson.

The country in the vicinity of Holm B. seems to offer many inducements for permanent occupation and I had therefore counted on finding winter huts. I therefore went out the next day on foot in order to examine as carefully as possible the country bordering the southern end of the bay, but in the whole of this area I only found 5 tent-rings and some caches. Situated near the sound bisecting the promontory are 3 tent-rings. During the evening of the same day we went in the opposite direction and branched off through the extensive low-lands where there are immense and, according to Greenland standards, luxuriant plains. The only traces discovered testifying to the one-time presence here of the larger types of land animals, were discoloured pieces of reindeer antler; as is known, the musk-ox is not found on Traill Island.

The next day, 8th August, we again took to our motor boat, and went northward, keeping inshore. The northern side of Holm B. is also protected by a promontory which swerves to the south and curls back on itself as it were; a motor boat following the coast and keeping close inshore will thus run into a cul-de-sac. At no place was evidence of Eskimo occupation detected.

was fairly accurately 1 m, which can thus be put as being the height of the hut under the roof.

The ground plan of the second was rectangular, the hut being 2.20 m in length and 1.5 m in breadth. Here again, little refuse was to be found and only in one hut were useful finds made. Although I carefully examined the neighbourhood for traces of graves, none were found.

The re-start was made after a stay of about 4 hours. The country from here to Holm Bay

To the north of Holm B. the country again becomes rugged and the foreland practically disappears altogether.

We now headed across the fjord to the north side of the entrance to Segelsällskapets Fjord, where, from previous knowledge, I knew that 2 Eskimo huts were to be found close to the Norwegian station, "Beinhaugen".

The photograph, fig. 115, gives a view of the country here. The two known huts lie to the right of the Norwegian Station, but I also discovered 3 additional huts. The sketch, fig. 116, explains their distribution.

We commenced investigation in Huts Nos. 1 and 2. The Norwegian hunters who had discovered this settlement had already excavated to some extent in Hut No. 1 but there was still much to be done. Hut No. 2, however, had not been touched at all.

Both huts were of medium size and neither seemed to have been built with any particular care. In Hut No. 2, for instance, the walls are of poor construction and a large stone entirely occupies one kitchen corner. Quite a considerable quantity of refuse was to be seen, however, and we made several finds.

The following day, 9th August, is particularly memorable because never before in Greenland had I experienced such terrible torment from mosquito swarms. There was no wind and the sun simply blazed. During the broiling hours of the afternoon when the mosquito torment was at its worst we therefore fled across to Åkerblom Island to investigate there.

Nothing of archæological interest was found, however.

As I wanted to finish by the afternoon of the following day, we worked throughout the greater part of the night. Huts Nos. 3 and 4 had collapsed to such an extent that they were difficult to distinguish in the terrain. Both belong to the poorest built huts I have seen in Greenland, although, in the vicinity, there was no lack of building stone.

Hut No. 4 was 2.5 m in length, but its width, apparently, had never exceeded 1.25 m. It does not seem to have possessed a flagstone-lined floor and the raised couch was



Fig. 115. The country at "Beinhaugen" St.

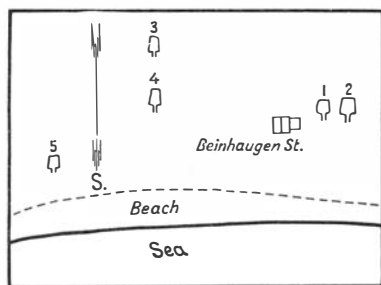


Fig. 116. Eskimo Settlement at the mouth of Segelsällskapets Fjord.

also missing. There was considerable bone-refuse in both huts, particularly in No. 4 where there was a deep layer of reindeer bones.

Hut No. 5 must be included among the incomplete huts; with the exception of the tunnel, the site had not been fully excavated for a dwelling; it had, however, subsequently been used as a refuse pit as, just beneath the turf, there was a layer, 5 cm in depth, of bone fragments, principally reindeer.

We left "Beinhaugen" the next day, 10th August, and continued along the same shore of King Oscars Fjord. A foreland, in parts very pleasant, runs along the whole coast as far as Narwhal Sound, but nowhere did we find any Eskimo relics. We thereupon crossed to Ella Island but found another expedition already working there. A short distance to the north of Cape Harry we passed a settlement the existence of which I had hitherto been unaware, as it lay just outside the periphery of my previous tramps on the island.

We thereupon proceeded to the headland on the north side of the entrance to Vega Sound. Here were two Eskimo huts which I had not hitherto had an opportunity of excavating, but I found I had been forestalled.

The next day we landed at various places along the north side of Vega Sound as far as Sverresborg; here, however, only tent-rings were to be found. The following day we completely excavated an Eskimo hut situated on a headland about 3 km inside of Sverresborg and retrieved several articles made of stone.

The engine of our motor boat now failed us for the first time and for two days we strived to get it into some sort of working order again. My plan was to visit the outer regions of Vega Sound also, but now there was lack of time and I resolved on proceeding northwards.

We did the journey to C. Humboldt in two stages and we arrived there during the night of 16th August. Careful excavation was carried out in two of the huts there the following day.

The 17th August proved stormy with strong winds, pouring rain, sleet, and driving fog-banks.

The next day, however, the weather was again brilliant and we therefore moved out to Cape Wijkander in order to complete the investigation of the settlement on which I had commenced operations three summers earlier. We worked on the site that day and the next, and made several finds. About midnight on 19th August the "Polarbjørn" came and took us off.

The next day I was able to work for about 6—7 hours on Bontekoe Island. The whole of the low-lying southern part of the island was traversed but, with the exception of the settlement we found on the south-east and three tent-rings on the east, there does not seem to be anything more than the small settlement on the west and the tent-ring on the south discovered last year by Mr. Orvin.

We therefore continued the investigation of the settlement I have already discussed. The two huts on the east are of the type I term incomplete. Stone had not been utilized;

there was no refuse and beneath the turf there was clean sand only. Finds, including numerous flint fragments, were, however, made in the two other huts.

This was the final place investigated, and, after a short visit to Myggbukta, the journey home was commenced.

A brief description of the most important of the finds is given below.

Hunting Requisites.

Harpoon Heads. Fig. 117₁, No, 34207, depicts a harpoon head from Walrus I. of the rare north-east type where broad barbs delimit the tip from the other part of the object;

it is of reindeer antler and is cut in one piece; it is very much decayed — its back in particular — as it was found exposed in an open grave; its original shape, however, is clear. From the lateral, obliquely-incised barbs downwards, the specimen is comparatively long and slender and its upper part has once been almost quadrilateral in cross-section. The perforation for the line penetrates from one side to the other; at its base the specimen has merged into a single broad, dorsal barb. Length: 9.7 cm.

The shape given to the harpoon head here described seems to have been the one commonly employed on the west coast of Greenland.

Loose Points. Fig. 118₁₋₇ shows a number of stone blades¹ retrieved from three different sites. No. 2 was found in the same grave as the harpoon head described above. It is made of the much-used species of greenish slate and is carefully and symmetrically fashioned with sharp, hollow-ground edges. There are no nail holes so it must be assumed that the object has merely been wedged tightly into a fissure in the shaft. Its length is 6.1 cm

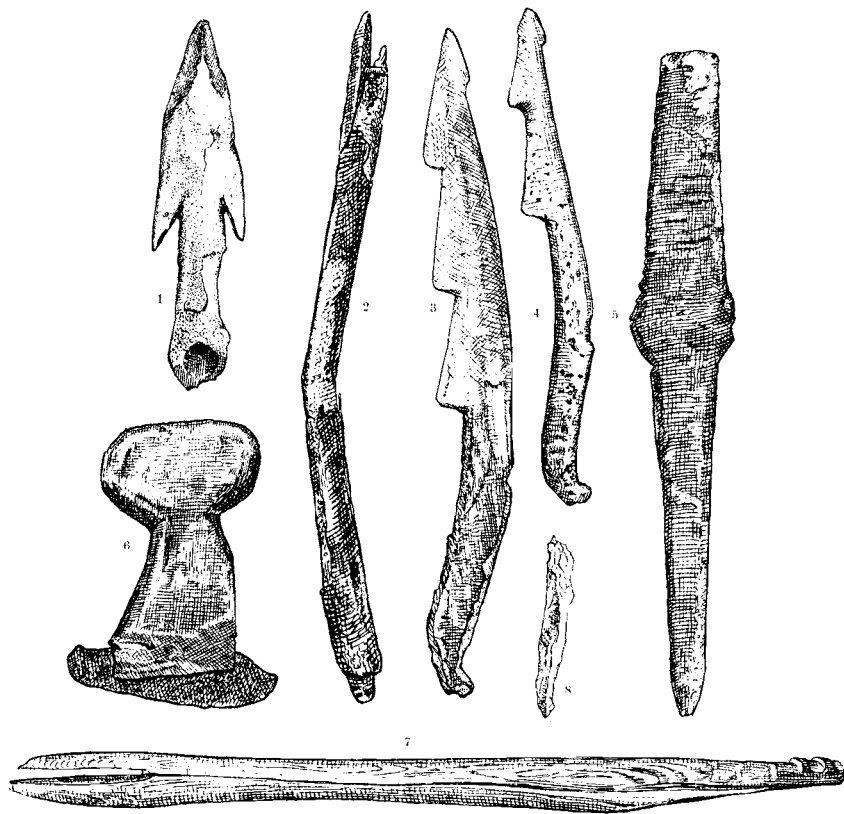


Fig. 117. Harpoon Head, Ulo, Lance Head etc.
(1, 5-6, 8 scale 1:2; 2, 7 sc. 1:4; 3-4 sc. 1:3)

¹ Cat. Nos. 34173 a-b, 34174, 34175 a-b, 34176 a-b.

No. 1 emanates from the settlement at Cape Moorsom. It is comparatively broader and flatter than the foregoing; it has not the same prominent ridges between the facets, but its shape is on the same lines. The material is a coarser and darker species of slate. The length of the specimen is 6 cm. No. 3 is from the same site as the foregoing. It is a small blade of greenish slate without possessing the characteristic facet-grinding; it is, all the same, carefully and symmetrically ground and is 4 cm in length. No. 4 and No. 5 came from a hut on Bontekoe Island; they are of reddish-brown slate; in No. 4 a corner is missing, whereas No. 5 lacks the whole of its base; there are, however, traces of a perforation showing that the blade has been fastened in position by means of a nail. Both specimens are ground unsymmetrically; they are 5.2 cm and 4.6 cm in length respectively. No. 6 is from the house-ruin in Vega Sound which I have already described as being one of the most ancient huts in appearance I have seen in North-East Greenland. The specimen is broad in comparison to its length and although it is somewhat lumpy in shape it certainly seems to be an intact blade. It has been unevenly ground and, like the two preceding specimens, it lacks the symmetrical shape usually found in the case of the slate blades coming from the north-east. It is 3.3 cm long and 3.1 cm wide. It is doubtful, however, whether No. 7 can really be included among weapon blades. It is thin, and flat on both sides, and its upper part is defective. Both the longitudinal sides and the obliquely-cut base have ground, obtuse edges with short edge-surfaces.

Lance Heads. Fig. 117₂, No. 34227, reproduces a large lance head of reindeer antler found in Hut No. 2 of the Cape Moorsom settlement. It has been damaged somewhat and is also rather decayed. It does not possess the usual blade-fissure cut into its tip; instead, on one side there is a loose, symmetrical piece secured by means of a nail and lashing. The blade has therefore come to lie on the broad-plane of the specimen. In length it is about 35 cm. Also found at the same site was a miniature model of a lance head, No. 34217.

Arrow Points. From the settlement near "Beinhaugen" are two arrow points of the usual type having a large blade-section and short screw-threads on the tang; and from the Cape Simpson settlement comes an arrow point having a wedge-shaped tang, No. 34245.

Points for Bird-Spears. Fig. 117_{3,4} depicts 2 of a collection of 6 lateral branches¹ for bird-spears; 3 such points were found in a hut belonging to the settlement situated near the entrance to Drøm B.; two were of the same kind, No. 3 being an illustration of one of them; the third, which was rather decayed, is somewhat smaller, and has only possessed two barbs on the inner side. The specimen depicted has three powerful barbs on the inner side and a lesser barb on the outer side almost at the tip. In length it is 25.5 cm.

In one of the huts on Cape Wijkander 3 lateral branches for bird-spears were also found, one of which is quite whole and is seen in the same fig. as No. 4. It is made of

¹ Cat. Nos 34 195, 34 196 a—c, 34 235, 34 236.

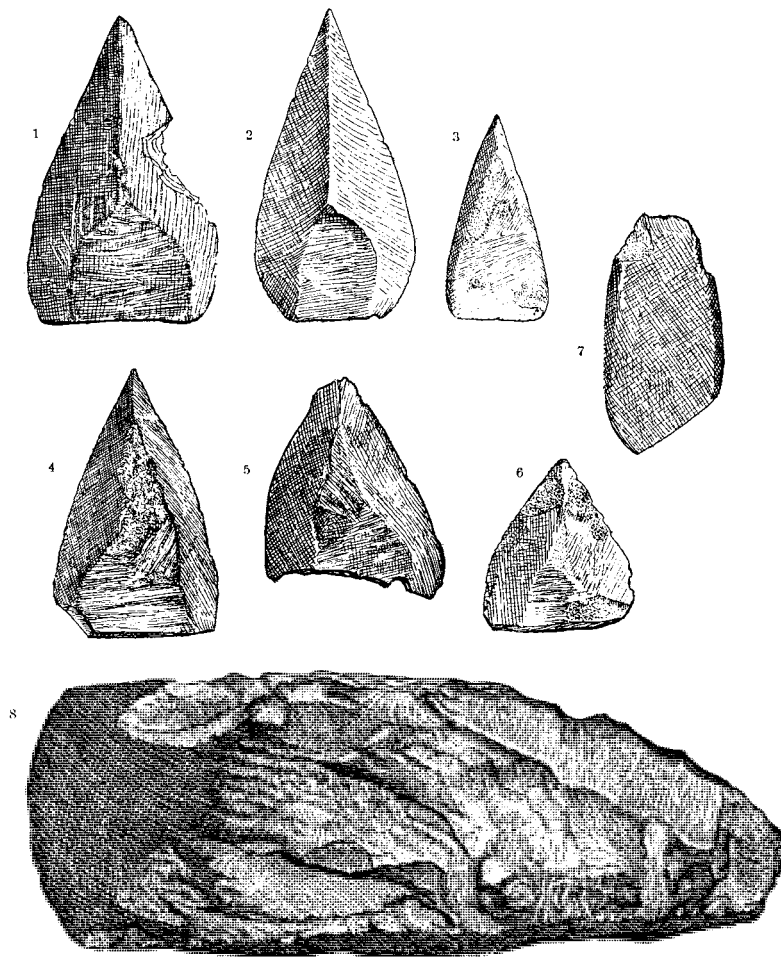


Fig. 118. Stone Points and Axe Head.
(Scale 2:3)

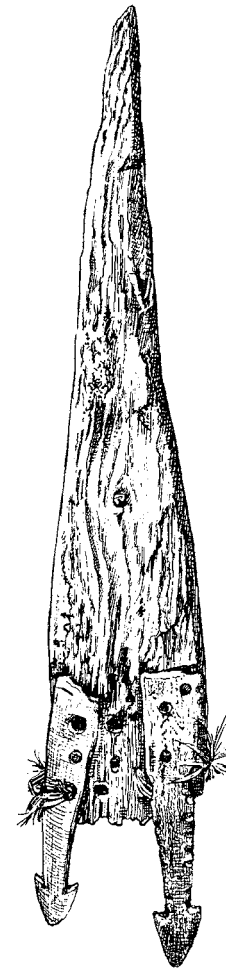


Fig. 119. Salmon Spear.
(Scale 1:4)

whalebone and has two barbs on the inner, and one on the outer side. Length: 19 cm. The method of fastening to the shaft has been the same as for all other objects of this nature.

Salmon Spear. Fig 119, No. 34230, depicts a salmon spear with points of antlers found near the large river on Strindberg Peninsula. The one point was fixed to the handle, the other was lying loose alongside. The latter, however, has probably belonged to the same weapon as it fits on the handle, for which reason it has been drawn in on the fig. Additional holes can be seen on the handle as though indicating that a third point has once been in position between the two points shown. A third point has not, however, been absolutely necessary for the utility and effectiveness of the weapon; but there possibly fails a centre point which presumably must have been thin and sharp.

The handle, which is of wood, is only 42 cm long; it is 8 cm wide at the bottom, is of rectangular cross-section and tapers towards the upper end. There is nothing to indicate whether the shaft was once longer.

The points are of reindeer antler and have broad tips with large barbs at equal distances. As a means of fastening, both lashings and wooden nails have been used. The points have protruded about 7 cm beyond the end of the handle.

It is perhaps to be considered strange that the salmon spear has not been longer than about $\frac{1}{2}$ m; but, personally, I believe it has proved a handy weapon in its present shape. The river is very shallow in places and whether one imagines the fisherman standing out in the river or sitting in his kayak at the outflow, a short spear of this description would possess many advantages. The salmon had to be pierced by one of the points and a rapid and sure thrust with the spear was required to make certain of the prey.

Everything taken into consideration, however, this weapon is to be looked upon as a primitive type when seen in comparison with the salmon spear used by the Eskimo elsewhere, the fish being caught between the prongs of a two-pronged fork having inverted barbs and flexible prongs. The chances of securing the fish were considerably improved when using this latter type of salmon spear.

In the Upernivik district on the west coast a fish-spear reminiscent of this North-East Greenland salmon spear has been used, but it had, however, a more developed shape. At the end were two points both barbed on each side; the points, moreover, joined to form a single base which, so as to be easily freed when the prey had been struck, only fitted loosely into an aperture at the end of the shaft, connection with the fisherman being made by means of a line fastened to the point.

Ice Picks. Seen in fig. 1175, No. 34198, is an ice pick although it might be considered as being somewhat slender for the purpose suggested. It was found in Hut No. 1 in the settlement at Cape Moorsom. It is made of reindeer antler; its upper broad part has formed the tang and, judging from its shape, it has fitted into a lodgment for it on the shaft. The bottom of the tang is delimited by a semi-circular enlargement on each side. The point itself is comparatively thin and is almost circular in cross-section. The piece is 17.5 cm in length.

Knives, Uloes and Axes.

Knives. Found in one of the huts near Cape Wijkander was a large bone knife, No. 34204, of the type described on p. 59. There are no fully intact stone knives in the collection, but only various large and small fragments some of which are depicted in fig. 120. No. 4 is a large knife of reddish slate with the fore-part of the blade broken-off and its edge seemingly frequently ground down. Its length is 13.2 cm. No. 2 is the

¹ Cat. Nos. 34177, 78, 79, 80.

broken blade of a knife of the same material as the foregoing. Both knives were found in Hut No. 2 of the settlement at Cape Moorsom. The blade of the latter ends in a sharp point and the edge shows an even and delicate curve. Two holes penetrate the blade, but they could hardly have served any special purpose. Length: 10.3 cm. No. 3 is a knife blade designed to be held along the back. It is of dark-grey slate and its broad cutting surfaces are excellently ground. It is perforated near the edge, but as the perforation could hardly have been for any particular purpose its presence is merely casual. The specimen was found in a grave on Cape Wijkander and it was the only article deposited with the person buried. It is 9.5 cm in length.

Uloes. Fig. 1176, No. 34206, shows an ulo having an iron blade wedged into an upper part or handle of wood. This upper part is cut in one piece; on top it has an oval ridge which served as the handle proper from the under-side of which the sides of the specimen diverged towards the obliquely cut base in which is cut the fissure for the blade. The upper part is somewhat defective at one end towards the bottom. At the other end is a hole having a groove running horizontally from it along each side seemingly indicating that the blade has also been kept in place by means of lashings. The blade is thin, is of an irregular shape, but is not particularly rusty. The ulo is about 7.5 cm in height.

Lying within a tent-ring on Bontekoe Island I found quite a small ulo blade of green slate. It has been carefully fashioned in the style of a sector-shaped ulo-blade; its length is 2 cm and its height, 1.6 cm.

Axes. Fig. 118s, No. 34188, depicts an axe-head of a dark, slate-like species of stone. It has been roughly cut and not finished off; it tapers from one side towards the neck. The edge is comparatively obtuse with convex-shaped cutting surfaces, but are now almost on the same plane as the front side, probably as the result of the considerable amount of grinding the object has undergone. The drawing depicts the side of the head which has not rested against the shaft. The

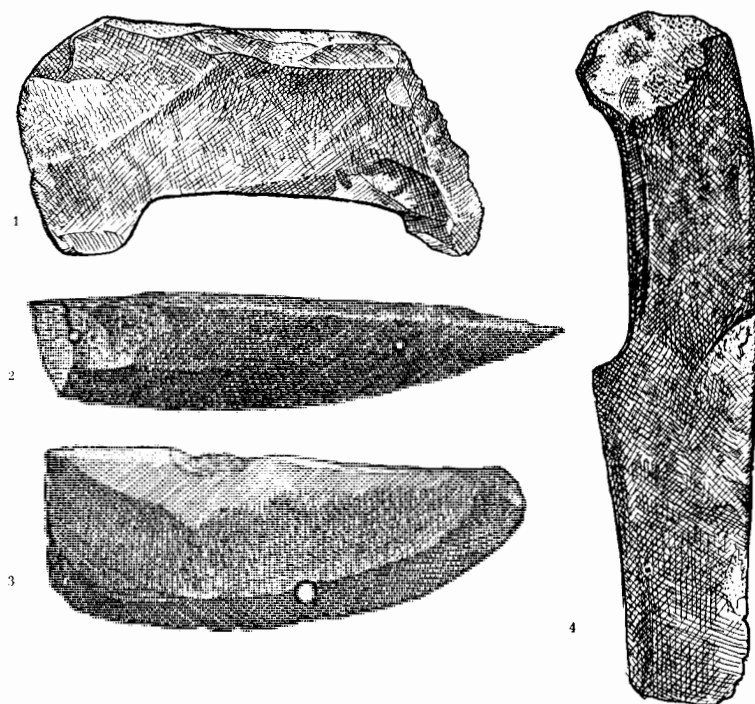


Fig. 120. Stone Knives. (Scale 2:3)

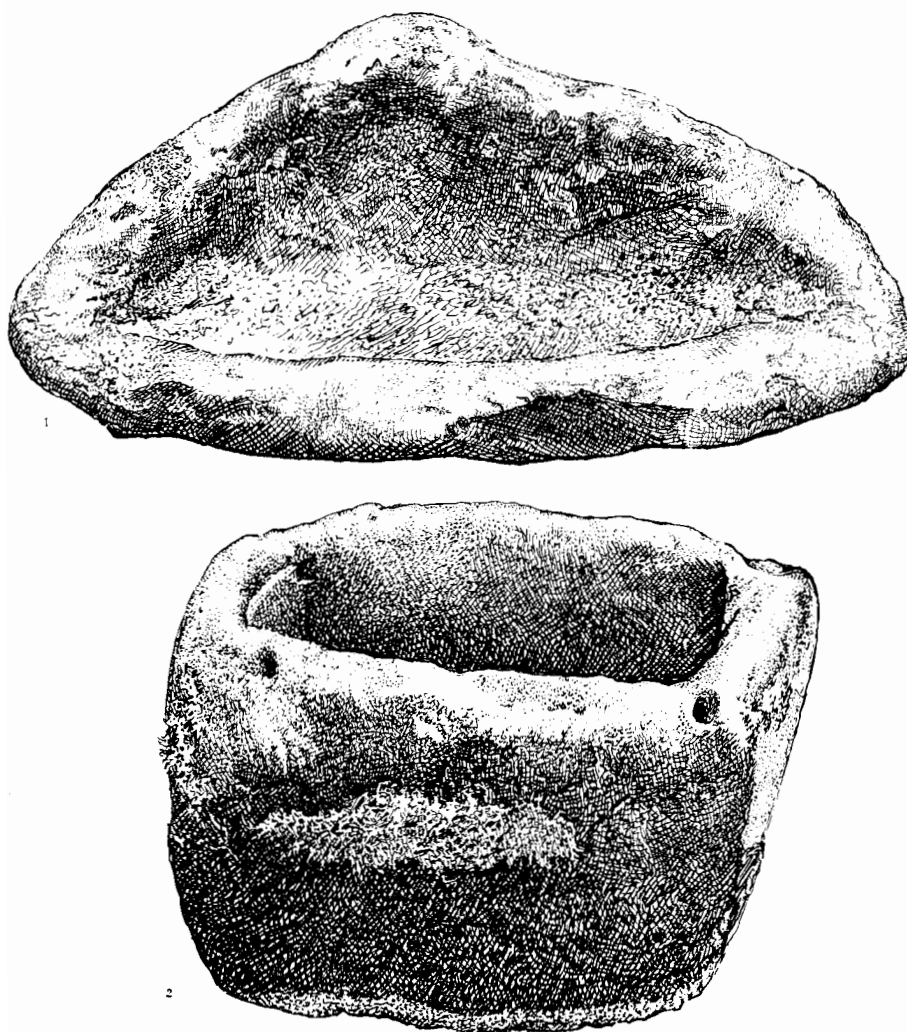


Fig. 121. Blubber Lamp and Stone Pot. (1 scale 1:3; 2 sc. 1:4)

deeply-worn grooves made by the lashings which secured the head to the shaft can be seen; the natural ridge on the head afforded the lashings the required purchase. The other side of the head is flatter and more even, and the marks of wear caused by contact with the shaft are revealed; these marks run diagonally to the longitudinal direction, thus rather seeming to indicate together with the marks of wear made by the lashings, that the head has been fitted to its shaft as an axe. In length, the specimen is 15 cm and in width 5.5 cm. It was found in Hut No.2 at "Beinhaugen".

Household Utensils.

Lamps, Cooking-Vessels and Pots. Fig. 121, No. 34239, reproduces a large, heavy, blubber lamp. It has the usual, half-moon shape, with rounded corners and arched outer-side. It comes from the Cape Moorsom settlement and is about 37 cm in length.

In fig. 1212, No. 34228, a cooking-vessel made from a block of sandstone is seen. It is irregular-square in shape, has a flat bottom and is somewhat longer than it is wide. It has been hollowed out rectangularly, 21×15 cm, with a depth of 13 cm; the work has been carefully done, the sides and bottom being finished off smoothly. There is a perforation at each corner so as to take a supporting strap; the thickness of the

walls varies between 3 and 4 cm. The vessel was found exposed bottom upwards on the smaller Finsch Island.

In one of the Eskimo huts on Cape Wijkander, I found a defective stone vessel, No. 34240, of which, however, sufficient is intact to show its original shape. It is made of a soft kind of stone resembling soap-stone, but it has not been made with the same care as the preceding specimen. It is oblong in shape; its length is about 40 cm, its breadth 20 cm and height about 12 cm; its walls are thick; the narrow sides are about 5 cm, and the longitudinal sides somewhat less. In each corner there is a hole for a supporting strap and, 5 cm below the edge, a horizontal groove has been made, presumably for a strap to strengthen the vessel which had probably been cracked.

Found at the same settlement were two fragments, Nos. 34237 a—b, fitting into each other and belonging to one and the same vessel. They are made of sandstone and exhibit traces of workmanship of greater precision than is seen in the vessel described. It is of an even thickness of about 2 cm. On one piece the strap fastening is seen, the hole having been bored vertically on the inner side through a semi-circular enlargement.

Fig. 122 1, No. 34193, reproduces a wooden vessel made from part of the root of a large conifer. It is circular in shape, flat-bottomed and broadest at the top. Near the edge is a short massive handle; a piece is missing at the corresponding place exactly opposite; it can be seen, however, that this piece has been strapped to the vessel and it is to be presumed that it has also had a similar handle. On top, the vessel has had a diameter of 23 cm; its

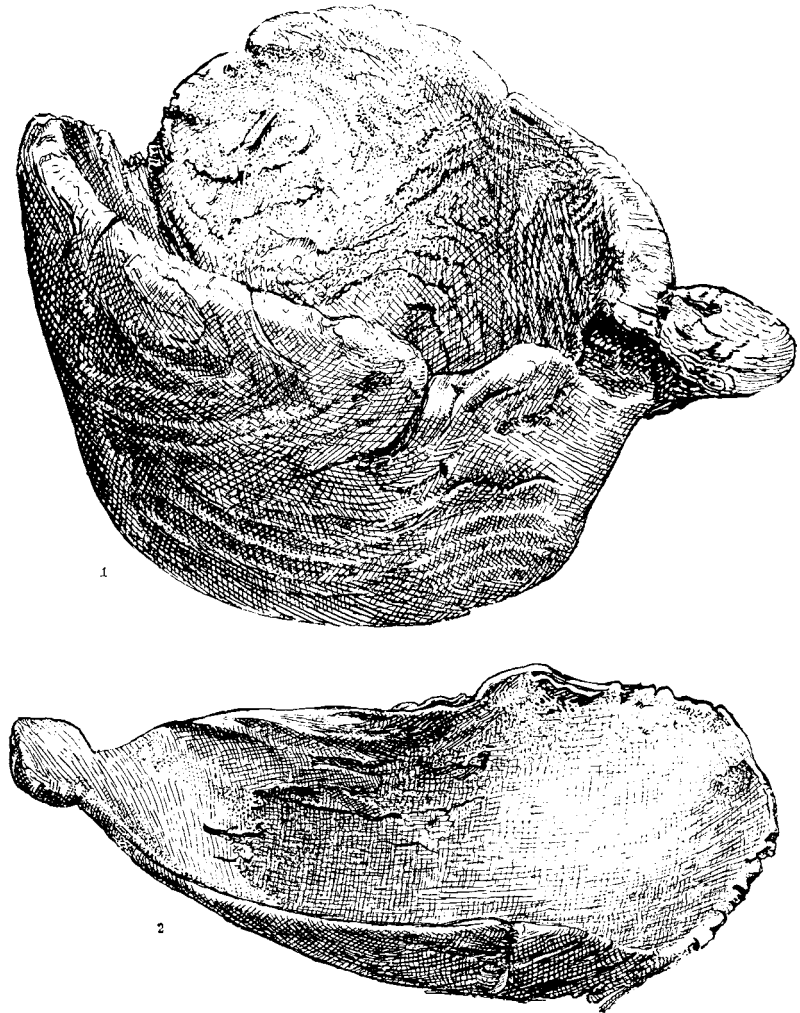


Fig. 122. Wooden Pot and Ladle of Musk-ox Horn.
(1 scale ca. 1:3; 2 sc. 2:3)

height is 12.5 cm, and the thickness of the walls about 1.5 cm. It was found on Strindberg Peninsula.

In fig. 1232, No. 34253, a wooden article is seen the shape of which is somewhat reminiscent of a blubber lamp with the exception of the front side which is curved concave. Two holes near the edge are presumably to be considered as lashing-holes and these should indicate that a piece here is missing. Its length is 23 cm. It was found in Hut No. 4 of the Cape Moorsom settlement.

It is not altogether certain that this object can be considered as belonging to articles of domestic use, but at all events it could have been used as a kind of ladle.

Fig. 1222, No. 34189, depicts a ladle or spoon of Musk-ox horn having a small, head-shaped handle. It lay in a grave on Cape Wijkander. Its length is 15.5 cm.

Found in the same grave were miniature models of a blubber lamp and of a stone cooking-vessel, Nos. 34170--71. The first is made of talc schist, the second of sandstone.

In one of the huts on Cape Wijkander Peninsula a small, wooden ladle was found, No. 34190. Although somewhat defective it is of the same shape as the wooden ladles previously described. The handle of this particular specimen, however, ends in an oblique barb pointing downwards.

Miscellaneous Articles.

Found at a settlement near the mouth of Geolog Fjord was the seat of a stool, No. 34229, of the flat, half-moon-shaped type. It is comparatively thick and is roughly made. See fig. 1231.

Fig. 1241, No. 34184, shows a large bodkin of reindeer antler having at its top end a kind of head delimited below by a small protuberance on either side. This head is perforated at about the centre and at its top there are traces of a hole. The specimen was found in Hut No. 2 near "Beinhaugen".

Seen in fig. 1178, No. 34175 b, is an object which is presumed to be a point for a drill. It is of quartz, is of triangular cross-section and tapers somewhat towards the bottom end which finishes in a comparatively obtuse tip. The object was found at the settlement situated near the south-east extremity of Bontekoe Island; it is 4.7 cm in length.

Fig. 1177, No. 34212, depicts part of a pole belonging to a weapon used either for stabbing or throwing. The specimen is chamfered at one end and has been lashed to another and corresponding part; below, are two ridges which have given support to the lashings. The other end of the pole is thicker and in it a longitudinal fissure has been cut more than 6.5 in length and 0.5 cm in width. A blade of some kind or other has probably been wedged into this opening.

Fig. 1242, No. 34172, reproduces an article of the same type as depicted in fig. 88a14. It is, however, much longer, being 11.4 cm altogether. A wooden faucet fits into an oval hole

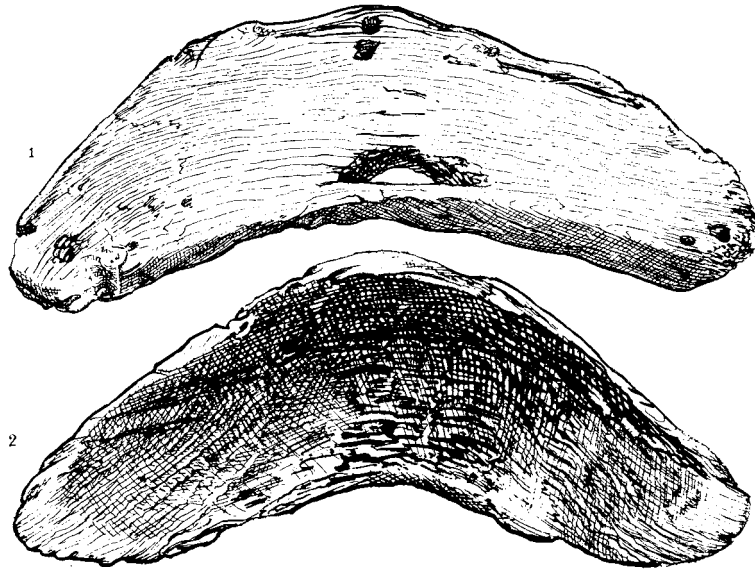


Fig. 123. Stool Seat and Ladle (?). (1 scale 1:4; 2 sc. 4:9)

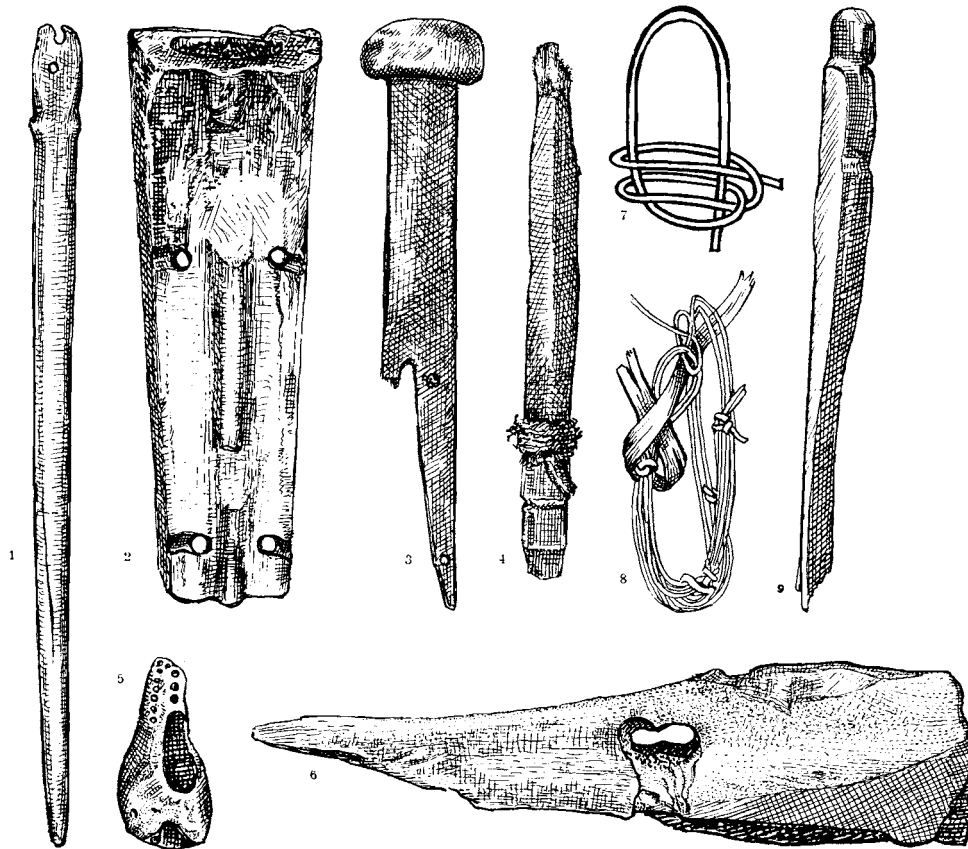


Fig. 124. Miscellaneous Articles. (1 scale 4:9; 2, 4—9 sc. 2:3; 3 sc. 1:4)

penetrating the broad end, and on the outer-side a hole has been bored showing that the specimen had been fastened to this faucet by means of a nail. The specimen is of ivory and it was found in Hut No. 2 at "Beinhaugen".

The object depicted in fig. 1249, No. 34187, is made of wood and at the top end it finishes in a head. It was found in a hut lying a little to the east of Myggbukta.

A thick, bent, wooden stick tapers somewhat towards one end. On one longitudinal side are two holes and at the tapered end, one. It is about 53 cm long. It was found near the entrance to Geolog Fjord.

An object, No. 34201, which has been used as a kind of scarf in cases when two pieces of wood have had to be fixed at an angle to each other, is not illustrated. It was found in Hut No. 2 of the Cape Moorsom settlement and is 15 cm long.

Part of a defective object of some kind is seen in fig. 1243, No. 34205. It is an oblong-like, flat, wooden shaft with one end mortised into a knob; the other end is split into a swallow-tailed joint one wing of which has almost been broken-off completely; along the inner side of the second wing are the remnants of two small sets of lashings. It was found in a grave on Strindberg Peninsula; its length is 23.2 cm.

Fig. 1245, No. 34208, shows an object of bone shaped something like a bear's head; drilled hollows indicate mouth, nostrils, eyes and ears. An aperture about 1 cm in width has been bored in the longitudinal direction on one side, and make the object resembling buttons on kayak-shirts from Angmagssalik. It was found in a grave on Walrus Island, and has presumably belonged to a costume.

From Cape Moorsom comes quite a large bead made of a dark kind of stone, No. 34209.

Fig. 1244, No. 34216, depicts a defective article from the Cape Simpson settlement; near the end which is intact, a strap of hide has been made fast with its ends hanging loose, one on each side. It is 10.3 cm long.

Fig. 1248, No. 34213, shows a bundle of sinews coiled round a holder. It was found in Hut No. 2 of the Cape Moorsom settlement.

A strap, looped as shown in fig. 1247, No. 34214, was found at the same place.

Found in Hut No. 2 of the Cape Simpson settlement were several more or less perished bundles of hide straps. The best-preserved is rolled up, the strap-end finally wound three times round the bundle and thereupon tucked in under the last turn.

In Hut No. 1 of the Cape Simpson settlement some pieces of seal-skin were found sewn together and a few specimens were retrieved in an undamaged condition; the seams have been most carefully sewn and the fine, even stitching is distinctly visible.

The remaining items of the collection are of no special interest: there are numerous wooden objects on which work has more or less been begun; pieces of bone showing lines of holes made by means of a drill; two dog's harness buckles; whetstones, and some pieces of slate also more or less fashioned for some definite use.

Concluding Remark.

The southern district or that part I have termed the gateway to the country, seems to be the region which, comparatively, has the fewest relics of the original population. The few settlements found are quite small and refuse-remnants everywhere proved very scarce; nor are there many tent-rings to testify to summer journeys.

The conjecture I put forward in the introduction to this section, has therefore not been proved and the question remains as to the importance to be attached to the negative result now revealed.

I cannot, however, accept this negation as a factor supporting the opinion that the country has chiefly been peopled from the north. I am more inclined to look upon it as agreeing with the view I have previously put forward that North-East Greenland has never possessed a large population and, therefore, to conclude logically, no very large parties of natives have ever penetrated to these isolated parts, and, that being so, the relative lack of settlements is explained.

Collections of loose bones picked up in two huts and one grave.

Hut No. III, Settlement No. 4, Gauss Peninsula:

92 seal bones, 21 whale bones, 8 musk-ox bones, 2 bear bones,
1 reindeer bone, 26 dog bones, 5 fox bones, 11 hare bones,
89 bird bones (mostly ptarmigan), and 1 indeterminate bone.

Hut No. III, Settlement No. 5, Gauss Peninsula:

1 human lower jaw and 1 human upper jaw, 16 seal bones,
11 dog bones and 2 fox bones.

The great grave in Myggbukta:

3 human lower jaws, 6 human bones, 18 reindeer bones, 15 seal
bones, 50 dog bones and 2 pieces of whale bone.

The bone material has been identified by Mr. A. Wollebæk,
Curator of the Zoological Museum, Oslo.

SITES OF FINDS

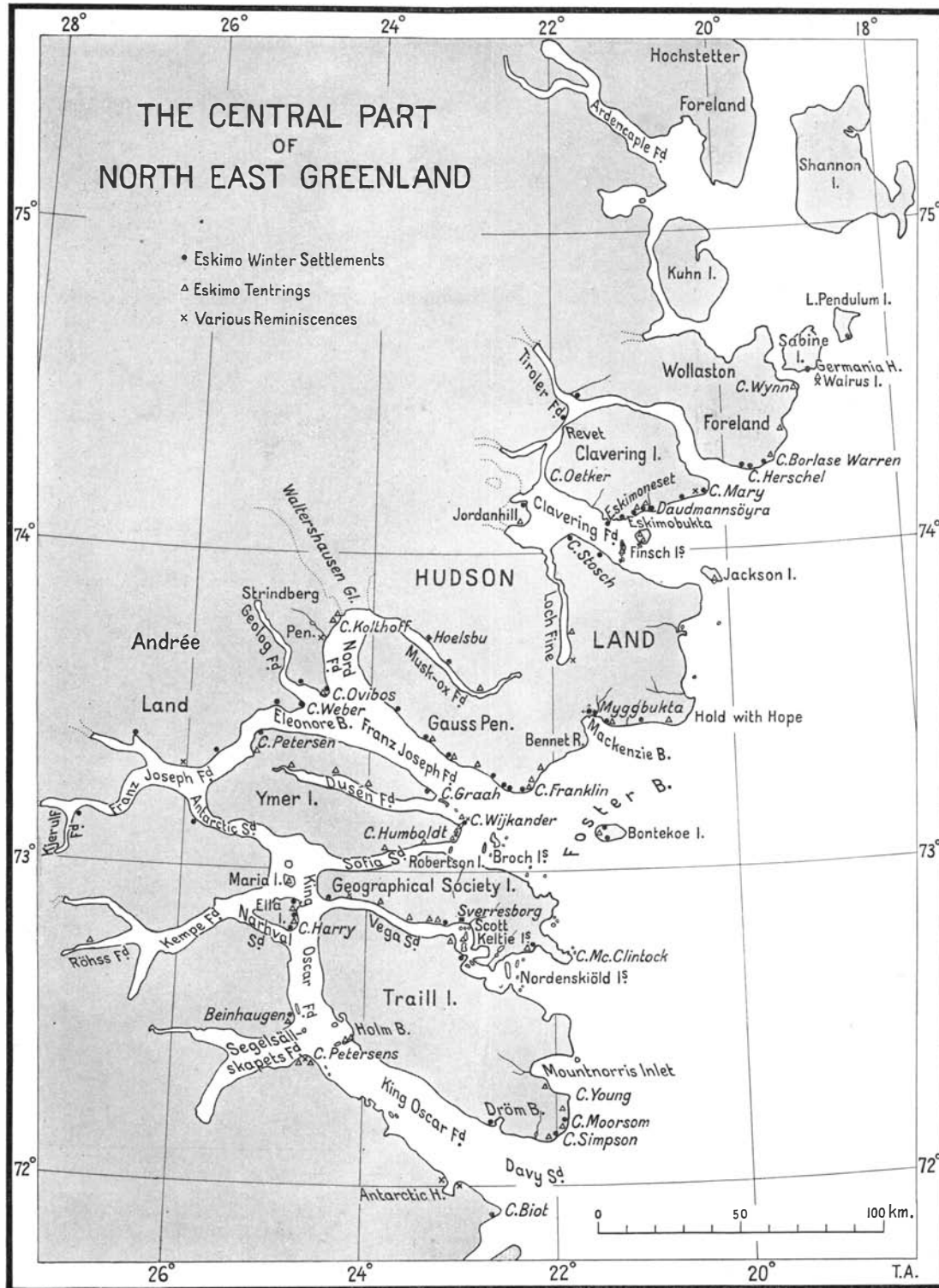
Museum number

32800—32832	Hut No. II, Settlement No. 5	Gauss Peninsula
833— 875	Hut No. III — No. 5	—
	876 Refuse Heap — No. 5	—
877— 882	Hut No. IV — No. 5	—
883— 885	Hut No. II — No. 6	—
886— 887	Refuse Heap — No. 3	—
888— 897	Refuse Heap — No. 4	—
	898 The Beach	Cape Humboldt
	899 Hut No. 8, Kjelbotn Settlement	—
	900 Hut No. 2, Settlement No. 6	Gauss Pen.
901— 903	.....	Clavering Island
	904 Refuse Heap, Settlement No. 4	Gauss Pen.
	905 Refuse Heap — No. 5	—
906— 915	.....	Clavering Island
916— 921	Refuse Heap, Settlement No. 5	Gauss Pen.
	922 Refuse Heap — No. 4	—
	923	Broch Islands
	924 Hut No. II, Settlement No. 6	Gauss Pen.
925— 926	Hut No. V — No. 5	—
	927 Hut No. III — No. 6	—
	928 Refuse Heap — No. 5	—
	929 Refuse Heap — No. 3	—
930— 974	Grave-goods	Myggbukta
	975	Ella Island
976— 977	Hut No. 8, Kjelbotn Settlement	C. Humboldt
978— 986	Grave-goods	Myggbukta
987— 993	Hut No. II, Settlement No. 6	Gauss Pen.
	994 Hut No. IV — No. 5	—
	995 Hut No. III — No. 4	—
996— 997	Grave-goods	Myggbukta
998—33004	.....	Clavering Island
33005— 036	Grave-goods	Myggbukta
037— 038	The Beach	Sofia Sound
039— 040	Hut	Myggbukta
	041	Clavering Island
	042 Hut No. III, Settlement No. 6	Gauss Pen.
	043 Refuse Heap — No. 6	—
	044 Grave-goods	Myggbukta
045— 046	.....	Ella Island
	047 Hut No. III, Settlement No. 5	Gauss Pen.
	048 The Beach	C. Franklin

Museum number			
	33049	.....	Clavering Island
	050	Hut No. III, Settlement No. 5	Gauss Pen.
051—	060	Grave-goods — No. 4	—
	061	Hut No. IV — No. 1	—
062—	069	Hut No. II — No. 1	—
070—	078	Hut No. IV — No. 1	—
079—	082	Grave-goods — No. 4	—
083—	085	Hut No. V, Kjelbotn Settlement	C. Humboldt
086—	089	.....	Ella Island
090—	094	Grave-goods, Settlement No. 4	Gauss Pen.
095—	099	Hut	Vega Sound
	100	Tent Settlement	Point of C. Wijkander Pen.
	101	Hut No. 8, Kjelbotn Settlement	C. Humboldt
102—	103	Hut No. 5 —	—
	104	Hut No. 6 —	—
105—	106	Hut No. 8 —	—
	107	Hut No. 2, Settlement	C. Wijkander Pen.
	108	Hut No. 6, Kjelbotn Settlement	C. Humboldt
	109	Hut No. 2, Settlement	C. Wijkander Pen.
	110	The Beach	C. Humboldt
	111	Hut No. 2, Settlement	C. Wijkander Pen.
	112	Hut No. 4 —	—
	113	Hut No. 6, Kjelbotn Settlement	C. Humboldt
	114	.....	Gauss Pen.
115—	117	Hut	C. Herschel
	118	Grave-goods, Settlement No. 5	Gauss Pen.
119—	125	Hut No. 8, Kjelbotn Settlement	C. Humboldt
126—	127	Tent Settlement	Point of C. Wijkander Pen.
	128	Hut No. 6, Kjelbotn Settlement	C. Humboldt
129—	130	Hut No. 5 —	—
131—	132	.....	Clavering Island
	133	Hut	C. Herschel
	134	Hut No. 2, Settlement	C. Wijkander Pen.
	135	Hut No. 8, Kjelbotn Settlement	C. Humboldt
	136	Hut No. 6 —	—
	137	The Beach	—
	138	Hut No. 6, Kjelbotn Settlement	—
	139	Hut	C. Herschel
	140	Hut No. 2, Settlement	C. Wijkander Pen.
	141	Tent Settlement	Point of —
142—	144	Refuse Heap, Settlement No. 5	Gauss Pen.
	145	Hut No. 4 — on	C. Wijkander Pen.
	146	Hut	C. Herschel
147—	148	.....	C. Humboldt
149—	151	Refuse Heap, Kjelbotn Settlement	—
152—	154	Hut No. 5 —	—
	155	.....	C. Wijkander Pen.
	156	Hut	C. Humboldt
157—	160	Hut	C. Herschel
	161	Refuse Heap, Kjelbotn Settlement	C. Humboldt
	162	Hut No. 8, Kjelbotn Settlement	—
	163	Hut No. 3, Settlement	C. Wijkander Pen.
	164	Hut No. 8, Kjelbotn Settlement	C. Humboldt

Museum number		
	33165	C. Humboldt
	166	C. Petersen
	167 Refuse Heap, Kjelbotn Settlement	C. Humboldt
	168 Hut No. II, Settlement No. 6	Gauss Pen.
	169	C. Petersens
	170 Refuse Heap, Settlement No. 5	Gauss Pen.
	171 Hut	C. Herschel
33172—	173 Hut No. 8, Kjelbotn Settlement	C. Humboldt
174—	175	C. Herschel
	176 Refuse Heap, Kjelbotn Settlement	C. Humboldt
	177 The Beach	Sofia Sound
	178 The Beach	Cape Petersens
	179 Hut	Cape Herschel
	180 Hut No. 3, Settlement No. 4	Gauss Pen.
	181 Hut No. 8, Kjelbotn Settlement	C. Humboldt
501—	547 Hut No. 2	Cape Stosch
548—	551 Grave-goods from Holmenbukta	Clavering Island
552—	557 Hut No. 3	Cape Ovibos
558—	565 Hut No. 3	Cape Stosch
	566 Refuse Heap	Cape Ovibos
	567 Refuse Heap	Cape Stosch
	568 Hut in Holmenbukta	Clavering Island
569—	606 Hut No. 1	Cape Ovibos
607—	609 Hut on Observatory Point	Sabine Island
610—	611 Hut near Daudmannsøyra	Clavering Island
612—	615 Hut on the point of Eskimoneset	—
616—	619 Grave-goods	Myggbukta
620—	621 River-Bank	Strindberg Pen.
622—	638 Hut near Daudmannsøyra	Clavering Island
639—	654 Huts in Eskimobukta	—
655—	656 Hut near Daudmannsøyra	—
	657 Hut in Eskimobukta	—
	658 Beach, Holmenbukta	—
659—	668 Hut near Daudmannsøyra	—
669—	672 Hut	Musk-ox Fd.
	673 Hut in Holmenbukta	Clavering Island
674—	680 In a tentring	Bontekoe Island
681—	682 The Beach	Antarctic H.
	683 Hut No. 1	Cape Ovibos
	684 Hut	Clavering Island
	685 The Beach	Musk-ox Fd.
	686 In tentring	Finsch Island
	687 Near Hoelsbu St.	Musk-ox Fd.
	688 In tentring	Cape Ovibos
34170—34171	Grave-goods	Cape Wijkander
	172 Hut No. 2 "Beinhaugen"	Segelsällskapets Fd.
	173a-b Hut No. 2	Cape Moorsom
	174 Grave-goods	Walrus Island
	175a-e	Bontekoe Island
	176a-e Hut near Sverresborg	Vega Sound
	177 Grave-goods	C. Wijkander

Museum number		
	34178	Hut No. 2 C. Moorsom
	179	Hut No. 1 C. Simpson
180—	182	Hut No. 2 Cape Moorsom
	183a-b	Hut No. 1 "Beinhaugen" Segelsällskapets Fd.
184—	186	Hut No. 2 — —
	187a-b	Hut near Myggbukta Hudson Land
	188	Hut No. 2 "Beinhaugen" Segelsällskapets Fd.
	189	Grave-goods C. Wijkander
	190	Hut —
191—	192	Hut No. 1 C. Simpson
	193	Grave-goods Strindberg Pen.
	194	Hut Drøm Bay
	195	Hut C. Wijkander
	196a-c	Hut Drøm Bay
	197	Hut —
198—	201	Hut No. 2 C. Moorsom
	202a-c	Hut Vega Sound
	203a-f	Hut —
	204	Hut C. Wijkander
	205	Grave-goods Strindberg Pen.
	206	Grave-goods C. Wijkander
207—	208	Grave-goods Walrus Island
209—	210	Hut No. 1 C. Moorsom
	211	Hut No. 4 "Beinhaugen" Segelsällskapets Fd.
	212	Bank of a lake Hold with Hope
213—	220	Hut No. 1 C. Simpson
	221a-b	Hut No. 1 —
	222a-b	Hut No. 2 —
	223	Hut Vega Sound
224—	226	Hut No. 2 C. Simpson
	227	Hut No. 2 C. Moorsom
	228	Near Settlement Finsch Island
	229	— Geolog Fd.
	230	Near the salmon river Strindberg Pen.
231—	236	Hut C. Wijkander Pen.
237—	239	Hut No. 2 C. Moorsom
	240	Hut C. Wijkander
241—	242a-b	Hut Vega Sound
	243	Hut No. 1 C. Moorsom
	244a-b	Huts C. Simpson
245—	246a-d	Hut No. 1 —
	247a-c	Hut No. 2 —
248—	249	In tentring C. Simpson
	250	Hut Vega Sound
	251	Near Settlement Geolog Fd.
252—	253a-e	Hut No. 4 C. Moorsom
254—	255	Hut No. 2 C. Simpson
	256	Beach Bontekoe Island
257a-b—	258	Huts C. Wijkander
259—	262	Hut No. 2 "Beinhaugen" Segelsällskapets Fd.
	263	Hut No. 2 C. Simpson
	264a-c	Hut No. 3 "Beinhaugen" Segelsällskapets Fd.
	265 (35 p.)	Huts Bontekoe Island



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ERRATA

P. 116 l. 19	from above:	No. 33 555	shall be	No. 33 550
- 136 - 34	-	Fig. 120	-	Fig. 120 ¹
- --- - 25	-	Hut No. 1	-	Hut No. 2
- 140 - 3	-	No. 34 253	-	No. 34 253a
- 142 - 4	-	No. 34 187	-	No. 34 187a
- 147	No. 33 612	from	Hut No. 3	..... C. Stosch
- ---	- 33 530		.....	Strindberg Pen.
- ---	- 33 552		Hut No. 1	..... C. Ovibos
- ---	- 33 584		" 2	..... C. Stosch
- ---	- 33 596		" 3 ---
- ---	- 33 626		Eskimobukta	... Clavering I.
- ---	- 33 664		Hut No. 2 C. Stosch
- 148	- 34 217		C. Moorsom
- ---	- 34 237 a-b		C. Wijkander

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