

## Preliminary results of archaeological investigations in the Bache Peninsula region, Ellesmere Island, N.W.T.

PETER SCHLEDERMANN<sup>1</sup>

### INTRODUCTION

The results of the 1977 archaeological investigations in the Bache Peninsula region on the east coast of Ellesmere Island, N.W.T. (Schledermann 1977) suggested that extensive prehistoric human occupation had taken place in the area over the last four millenia or more. Based upon an assessment of data collected in 1977, a number of research problems were slated for investigation during the 1978 season. The primary research focus centered upon the excavation of archaeological sites believed to represent various stages of the High Arctic cultural continuum from the initial arrival of the people of the Arctic Small Tool tradition (ASTt) to the later stages of the Thule culture occupations. To facilitate this stage of the investigations, two principal site areas were selected, each containing a number of individual sites of various cultural affiliations. The first area (Fig. 1, A) is located along the northeast coast of Knud Peninsula adjacent to a relatively large polynya which, according to LANDSAT images, begins to appear in late April or early May. The polynya is an expanse of water which remains free of solid ice cover considerably longer than the regular open water season. Upon arrival in this area in early July large numbers of walrus were observed in the polynya, and approximately 300 animals, distributed on 18 ice floes, were noted at one point. The second area of primary investigation (Fig. 1, B) was Skraeling Island located about 5 km northeast of the R.C.M.P. Station at Alexandra Fiord. Two large Thule culture winter sites, as well as a number of ASTt sites were originally recorded on this island in 1977.

In addition to the principal areas of investigation, test excavations were conducted on a number of sites in the Bache Peninsula region in order to ascertain their future research potentials and their temporal and cultural placements. Extensive helicopter reconnaissance flights from Wade Point on the west coast of Smith Sound to Norman Lockyer Island in Princess Marie Bay (Fig. 1), resulted in the location of 125 new sites of various cultural associations. A survey flight through Sverdrup Pass yielded at least twelve site localities east of the divide with only two sites noted westward to Irene Bay. Approximately 15 muskoxen were seen in the Pass east of the divide, and one animal was observed near site area (A), on Knud Peninsula.

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<sup>1</sup>Arctic Institute of North America, and the Department of Archaeology, University of Calgary, Calgary, Alberta

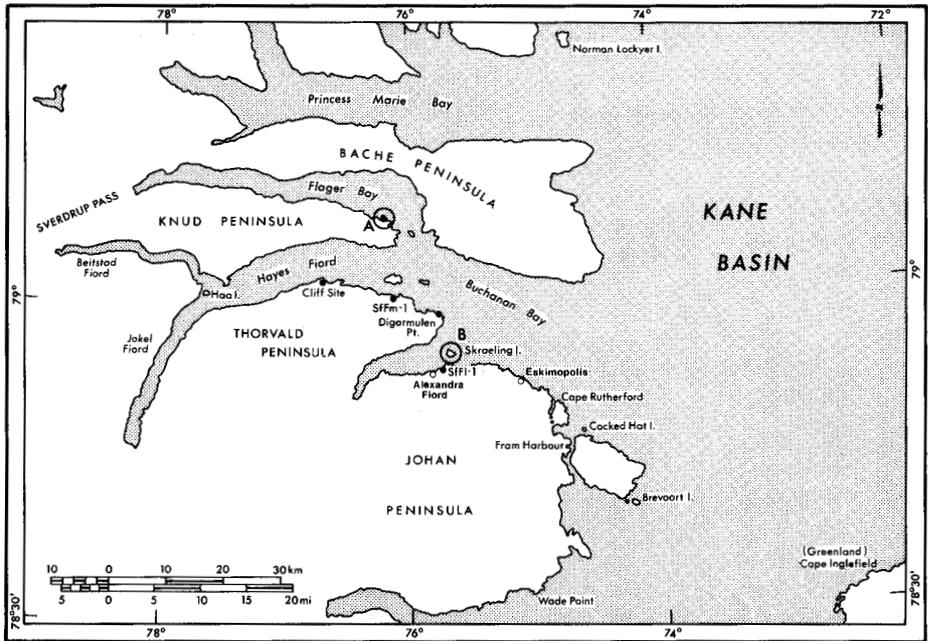


FIG. 1. Study area.

The preliminary results of the 1978 investigation are presented in a chronological sequence beginning with the earliest evidence of human occupation noted in the study area.

#### *Arctic Small Tool Tradition*

Arctic Small Tool tradition sites have been noted at various elevations throughout the study area, particularly in the vicinity of Digermulen Point and along the north coast of Johan Peninsula, east of Alexandra Fiord (Schledermann 1977). A number of lithic artifacts, including burins, microblades (Plate 1, a-e) and biface and needle fragments were obtained from an ASTt site (SFFk-6) located between 29 and 30 m ASL (above sea level) on Skraeling Island. Associated structural features were inconclusive in design with indications of singular hearth features (no charcoal) and remains of possible tent rings. In 1977, a partially buried walrus tusk was located on this gravel terrace yielding a radiocarbon date of  $5390 \pm 380$  B.P. or 3440 B.C. (R1-834). The association of the artifacts with the unmodified tusk can only be inferred. However, the possibility remains that this site relates to Eigil Knuth's "Gammel Nūgdlit" phase of the Arctic Small Tool tradition, supposedly representing an older (than presently accepted) ASTt occupation in the High Arctic (Knuth, pers. comm. 1978).

The principal research area (A) on Knud Peninsula contained a number of ASTt sites which appeared to represent various stages of that tradition. The Ridge Site (SgFm-6) contained ASTt dwelling features at various elevations

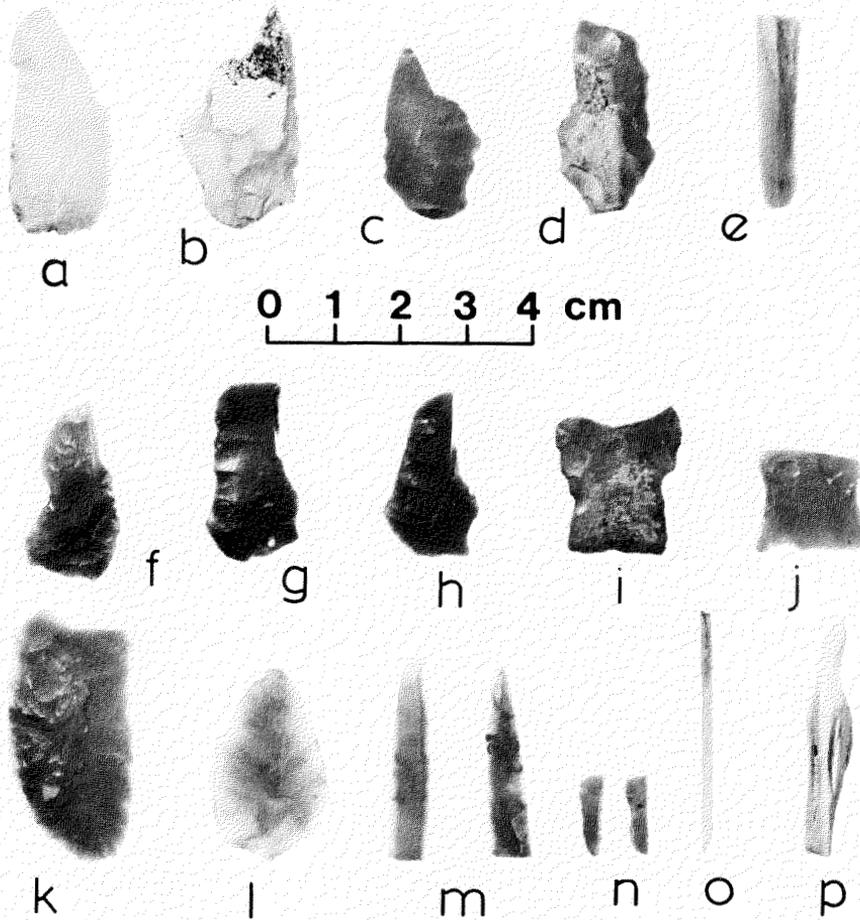


PLATE 1. Early ASTt artifacts: a-d) burins; e) microblade. Middle to late pre-Dorset artifacts: f-h) burins; i and j) stemmed end blades; k and l) side blades; m) microblades; n) burin spalls; o) bone needle; p) ivory carving.

between 12 m and 24 m ASL. The excavation of one of these structures, House 2, located at 20 m ASL, yielded an artifact assemblage most closely related to a middle to late pre-Dorset occupation (Plate 1, f-p). With the exception of a few lichen-covered cache structures, located about 60 m ASL, no evidence of the earliest human habitation period could be found in research area (A). The cache structures may pertain to early ASTt hunting activities in this area, but decisive proof of temporal and cultural association is lacking. The great amount of prehistoric cultural activities in this area must to some degree relate to the presence of the polynya between Knud and Bache Peninsulas. The polynya with its associated sea mammal population should have been as attractive to the early ASTt hunters as was the case during later time periods. It is tempting to suggest that the apparent lack of very early

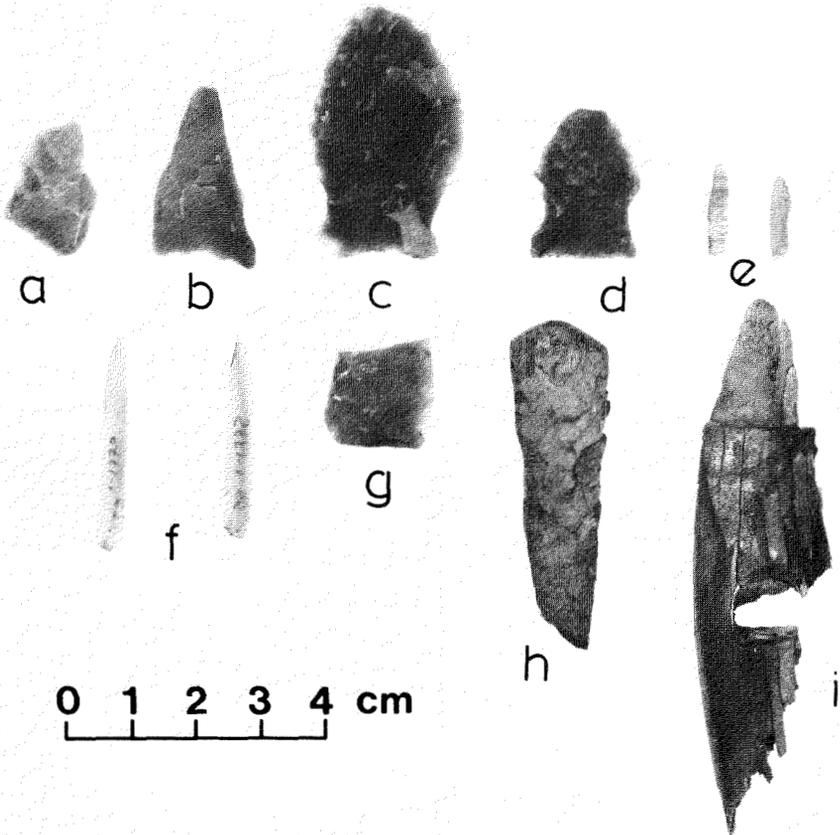


PLATE 2. Transitional pre-Dorset/Dorset artifacts: a) burin; b) partially ground burin; c and d) notched bifaces; e) burin spalls; f) microblades; g) biface fragment; h) flint flaker; i) harpoon head fragment.

ASTt camps in research area A may relate to a possible absence of the polynya at a time when sea level stood about 30 m above present sea level.

The Baculum Site (SfF1-1), located on a marine terrace about 12 m ASL and 2 km east of the R.C.M.P. Station, is a possible pre-Dorset/Dorset transitional site. Four excavated test units produced several thousand waste flakes, notched biface points, sideblades, microblades, a harpoon head fragment of the Tyara Sliced type (Taylor, 1968, Fig. 22-A), a small chipped burin, burin spalls and a partially ground burin (Plate 2, a-i). Two additional harpoon head specimens (Plate 3, d and e) from the Longhouse Site may also relate to this important transitional stage.

The late stage of the Dorset culture was most impressively represented within the Knud Peninsula study area. The "longhouse" originally discovered in 1977 (Schledermann 1977) measured 45 m in length and 5 m in width (Fig. 2). A number of test units, excavated within this structure, resulted in the recovery of several diagnostic late Dorset culture elements, including harpoon

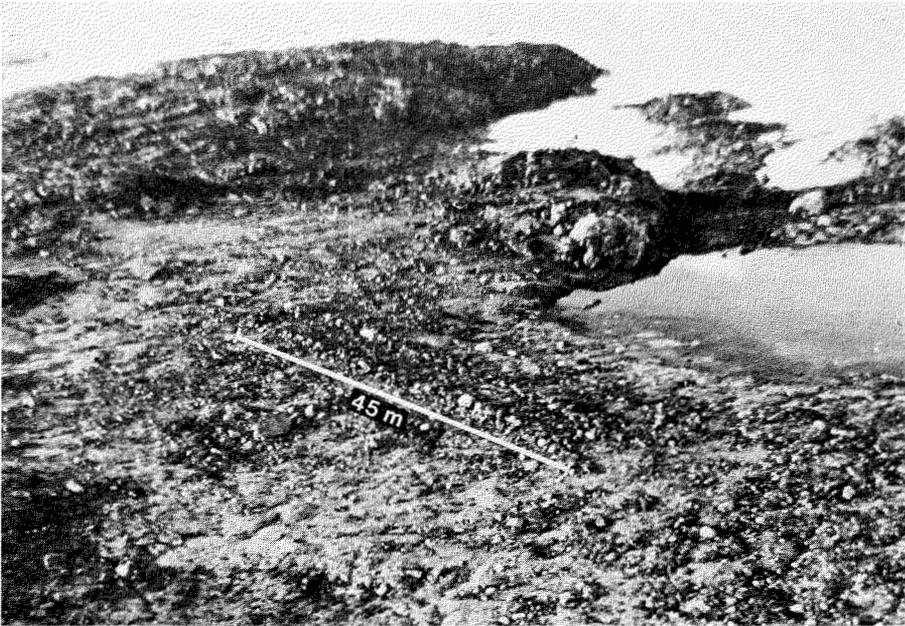


FIG. 2. Longhouse #1, Site SgFm-3.

heads, foreshafts, knife and microblade handles and flint flakers (Plate 3, a-c, f-j). The faunal remains obtained within the longhouse included bird bones suggesting a seasonal summer occupation of the structure. Hearth features were not noted and the boulders within the structure were nearly all overlying artifacts and faunal remains, indicating secondary placement of most of the interior stone features. Additional "longhouse" structures (Fig. 3) of similar, albeit smaller, configurations were located within a 500 m radius. Secondary use of wall-boulders for cache construction, probably related to Thule culture activities, occurred on all three structures.

Several stone rows of various lengths were noted in close proximity to all the "longhouses". Upon closer examination, the stone rows turned out to consist of long lines of joined hearth and platform arrangements (Fig. 4). Most of these communal cooking rows contained anywhere from 3 to 18 hearth and platform units, the longest unbroken sequence measuring 32 m in length. Excavation of individual hearths produced large quantities of charred willow and bone, for radiocarbon assessments. The abundance of charred material will also provide good data for determining the degree of age differentiation between willow and sea mammal bones. A notched biface and a large ivory needle located within and immediately adjacent to the cooking rows indicated a late Dorset association and it can be tentatively suggested that the "longhouses" and the cooking rows were contemporaneous. The presence of faunal remains and the apparent lack of interior hearth features within the "longhouse" further suggests that the meals were prepared communally along

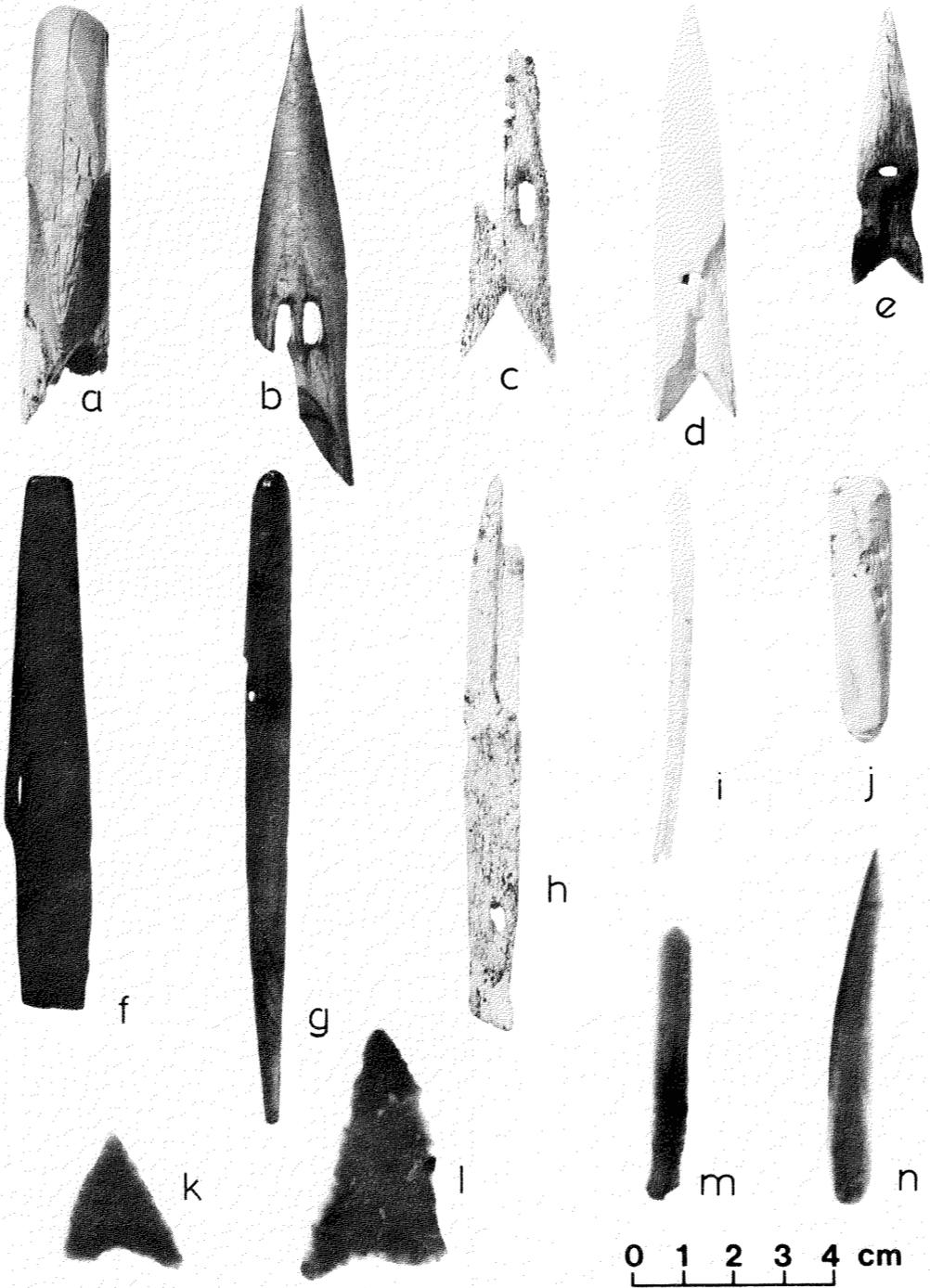


PLATE 3. Late Dorset artifacts: a-c) harpoon heads; f and g) foreshafts; h) knife handle; i) microblade handle; j) flint flaker; k and l) bifaces; m and n) microblades; Late pre-Dorset/early Dorset artifacts: d and e) harpoon heads.

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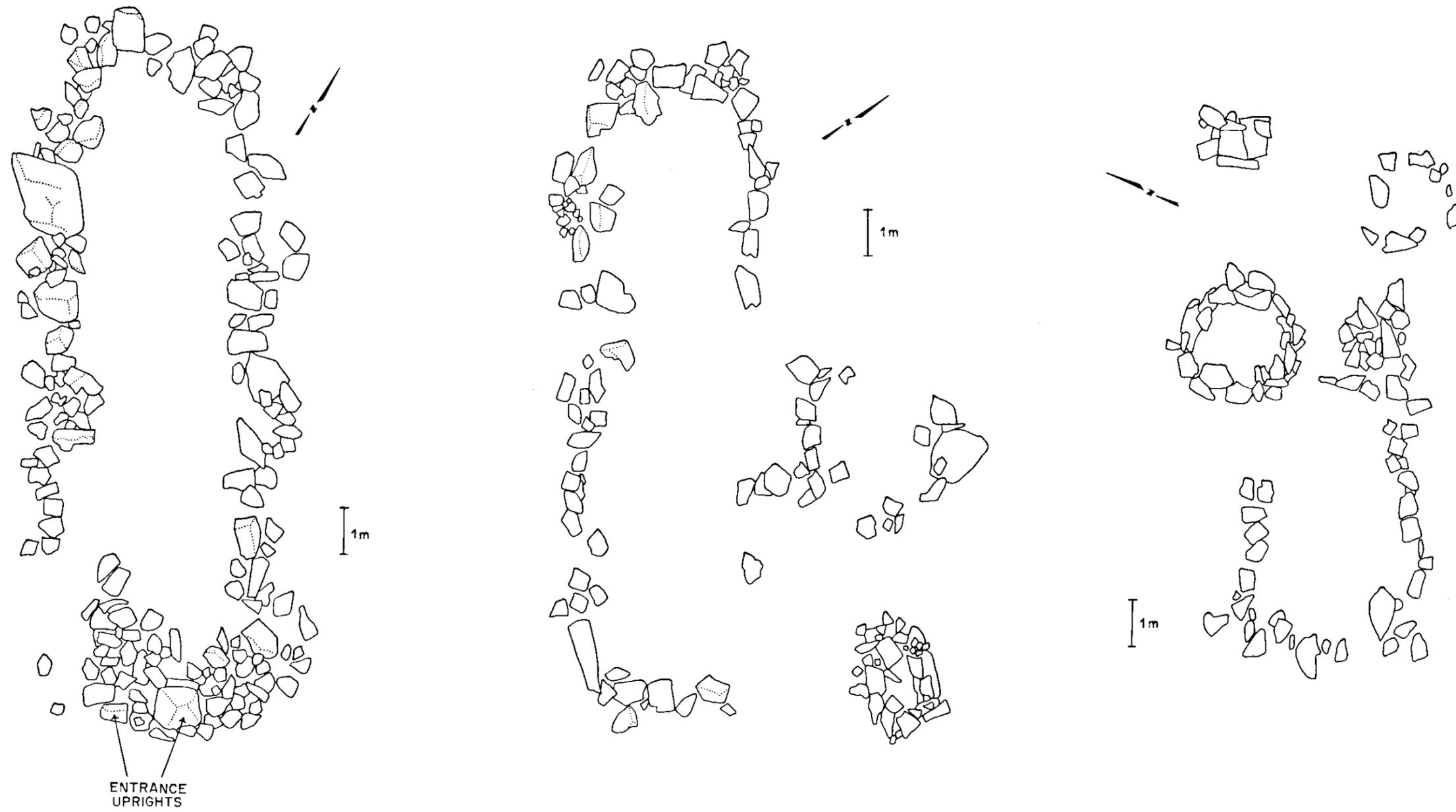


FIG. 3. Longhouse structures from site area A on Knud Peninsula.

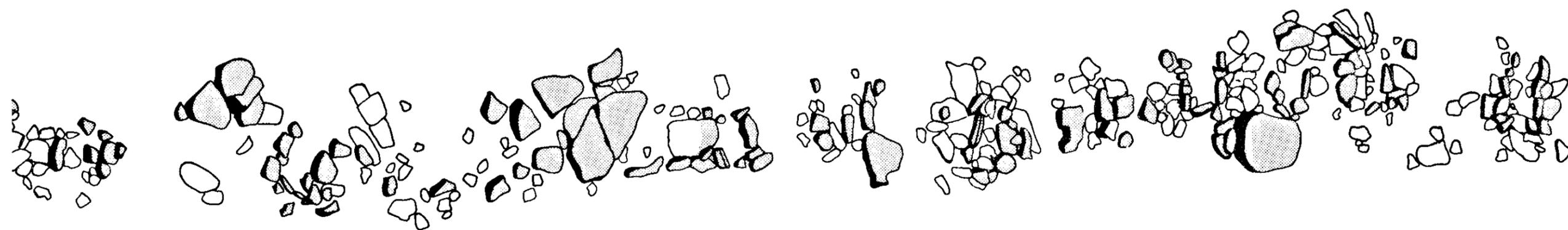


FIG. 4. Stone Row #1. Site SgFm-3. Note, original is a single row which has been split for space reasons.

the cooking rows and subsequently eaten in the "longhouse". Dorset culture "longhouses" have been reported from various Canadian Arctic and sub-Arctic regions (Plumet, 1969). In the Arctic Islands, stone structures closely related to the Ellesmere Island structures have been noted on Victoria Island (W. E. Taylor, pers. comm.; McGhee, 1978). In addition, McGhee (pers. comm. 1978) has noted a smaller longhouse feature on Brooman Peninsula, Bathurst Island. The designation "house" for these features is probably somewhat misleading at least as far as the Arctic Island structures are concerned. I would tentatively suggest that these "longhouses" served as festival or gathering structures similar perhaps to the later Thule culture *qaqqi*. In a structural sense the stone wall enclosure may have been more symbolic than functional, and the "longhouses" were probably never roofed. To what extent these structures may have served as men's houses will be a topic for future investigations.

One of two gravel-walled depressions situated in close proximity to the big "longhouse" was excavated in order to determine its cultural association and seasonal occupation. The dwelling structure was of late Dorset culture origin and the lack of internal hearth arrangements plus the limited number of faunal remains suggest a summer occupation probably by the people who were also the users of the communal cooking rows and the "longhouse" structures. The current lack of evidence pertaining to late Dorset winter dwellings in the study area suggests the use of snow house communities.

#### *Arctic Whale Hunting Tradition*

The Thule culture phase of the Arctic Whale hunting tradition was the only recognized prehistoric occupation of this area prior to the 1977 survey. Nares (1878) noted several seasonal camp remains during his short stay in the Bache Peninsula region in 1875. Sverdrup (1903) and his men observed, named and in a couple of instances, dug into some of the winter house remains on the Thule culture sites. Some of these sites as well as new ones were observed by members of the Royal Canadian Mounted Police following the establishment of the R.C.M.P. detachment on Bache Peninsula in 1924. Additional sites were later noted by R. L. Christie, T. Frisch and W. Morgan of the Geological Survey of Canada and T. C. Lethbridge (1939) spent a few days excavating and mapping Eskimopolis, a site originally noted by Sverdrup. During the 1978 season, excavations were conducted on several large Thule culture sites in the Bache Peninsula region: 1) Eskimobyen on Knud Peninsula; 2) the Sverdrup and Skraeling Island sites on Skraeling Island; 3) Haa Island site; 4) Cliff site on the north coast of Thorvald Peninsula; and 5) Site SfFm-1 located about 15 km east of the Cliff site (Fig. 1).

Evidence relating to the earliest known Arctic Thule culture stage "Nûgdliit" (Holtved 1954) was found during the testing of a vaguely defined dwelling structure on Skraeling Island site. A harpoon head section (Fig. 5 and Plate 4, a) closely resembles specimens located by Holtved (1954, Plate 1, Fig. 1) in northwest Greenland. A specimen from Maxwell Bay on the south coast of Devon Island is similar to the Skraeling Island harpoon head in many

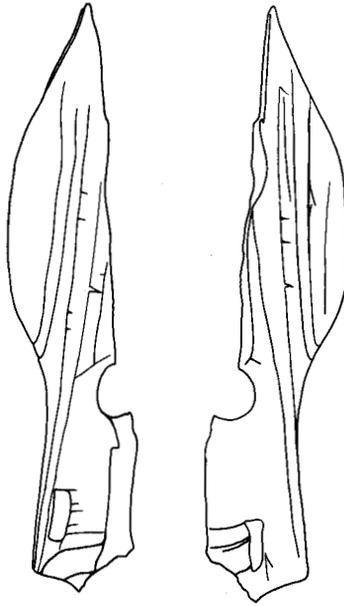


FIG. 5. Harpoon head related to the Nûgdliit phase of the Thule culture, Skraeling Island site. Scale 1:1.

of its stylistic attributes (Schledermann, in press). This is also true for one of the harpoon heads located in House N on the M1 site near Resolute (Collins 1952: Plate X, 9). A harpoon from Eskimobyen (Plate 4, b) may also relate to the Nûgdliit stage. The linear incisions along the base of this specimen resemble the design patterns on several illustrated harpoon heads from Gamble, on St. Lawrence Island (Collins, 1932, Fig. 4, 23-24). The stylistic attributes of these harpoon heads are clearly traceable to the Bering Sea area, particularly to St. Lawrence Island (Geist, 1936, Plate 58, D) and are usually associated with the Puvuk stage of the Arctic Whale Hunting tradition. In an earlier paper (Schledermann, in press), it has been suggested that the pioneering movement of the Arctic Whale Hunting tradition into the Canadian Arctic was more directly related to the Puvuk stage, conceivably bypassing in its initial migration, the Birnirk/Thule developments on the north Alaskan coast.

Excavation and testing of a number of Thule culture winter dwellings on Skraeling Island produced a considerable amount of data relating to the problematic Ruin Island phase. The original formulation of this phase was forwarded by Holtved (1944) following his work on Thule culture winter houses along the northwest coast of Greenland, in particular his findings on Ruin Island off the coast of Inglefield Land. Some of the cultural finds and a series of radiocarbon assessments in particular suggested an early occupation period in the ninth century A.D. However, the location of Norse artifacts within the house structures seemed to suggest a later settlement period. Subsequent dating of a Norse cloth fragment resulted in a date of  $680 \pm 100$

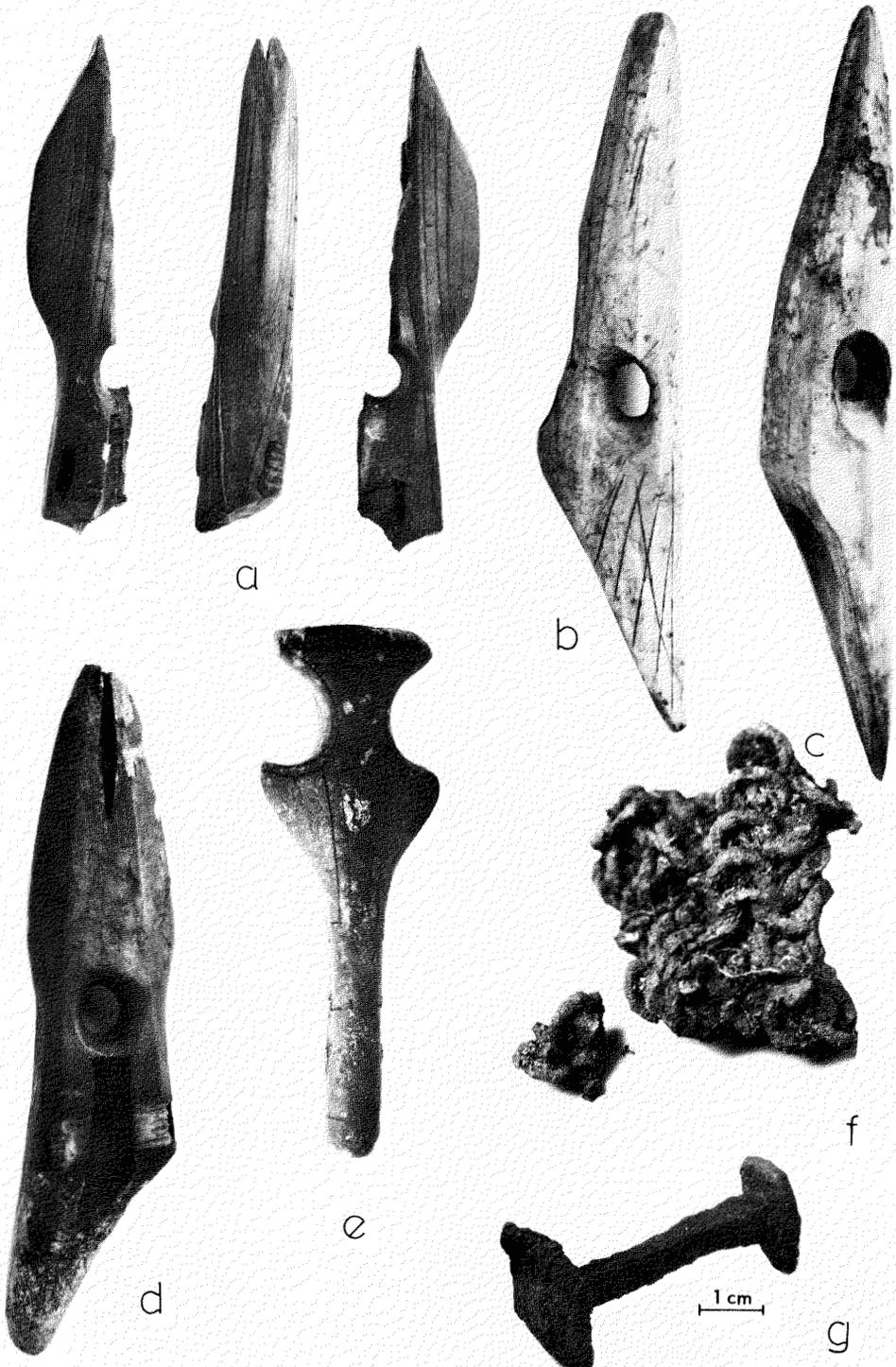


PLATE 4. Thule culture and Norse artifacts: a-d) harpoon heads; e) needle case; f) chain mail; g) clinch nail.

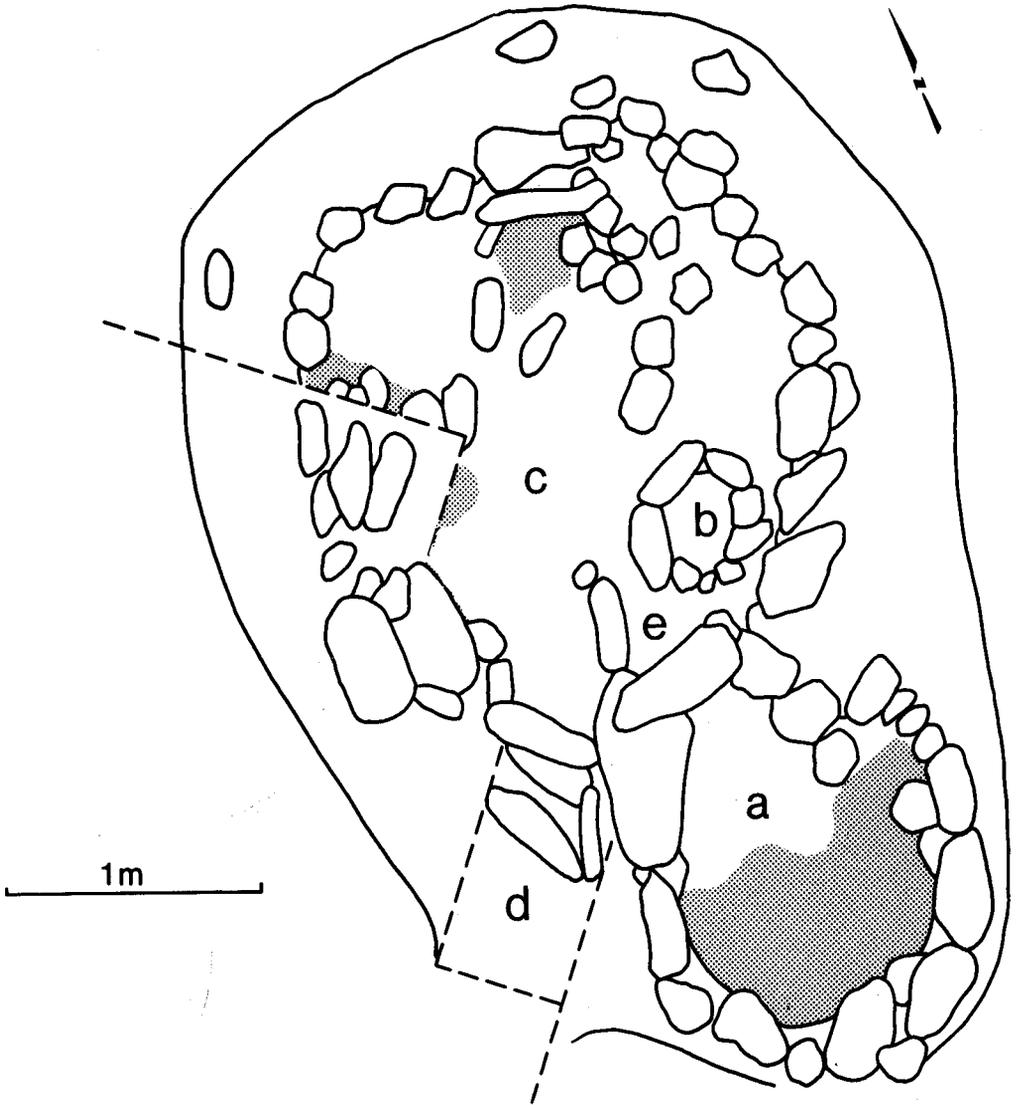


FIG. 6. House 6, Skraeling Island site: a) kitchen; b) meat pit and location of clinch nail (Plate 4, g); c) gravel floor, d) entrance passage, and e) location of chain mail and needle case (Plate 4, e and f). Shaded areas indicate charred material (blubber, wood and bone pieces).

B.P., or 1270 A.D. (K. 1489). The discrepancies between the various radiocarbon assessments, the western Arctic affinity of the building style, and many of the artifacts have caused a good deal of debate among Arctic prehistorians for several decades. The configurations of the Ruin Island type houses from Skraeling Island include both rounded and squarish designs, with diagnostic kitchen offshoots parallel to the entrance passages (Fig. 6). The associated festival houses, or qaqqi, were all of square construction. The

building style is very reminiscent of house styles associated with the western Thule culture of Alaska and the Bering Strait region. Most of the excavated dwellings from this phase on Skraeling Island lacked clear evidence of raised platforms. A number of artifacts presumably of Norse origin were located *in situ* in several of these dwellings. These finds, consisted of chain mail (Plate 4, f), a boat rivet (Plate 4, g), a piece of oak, and several pieces of iron and copper. A decorated ivory needle case (Plate 4, e) was located within a few centimetres of the chain mail and is clearly of western derivation. A needle case illustrated by Ford (1959: Fig. 102, d) from Nunagiak clearly resembles the Skraeling Island find. Another specimen from Tigara Phase Burial 265 (Larsen and Rainey, 1948: Plate 92, 19) is an even closer replica, showing the side handles which are indicated on the Skraeling Island specimen by three bilateral breaking surfaces (Fig. 7). Examples of the predominant harpoon head types found in these houses (Plate 4, c and d) strengthen the western association of this culture phase. If the "Ruin Islanders" represent a relatively rapid migratory movement from the Bering Strait region, it is possible that some of the iron and copper articles could be of western Arctic derivation. If most, or all of these finds are of Norse origin two possibilities exist in terms of their arrival in Ellesmere Island. Firstly, it is very possible that these articles made their way northward through Eskimo inter-group

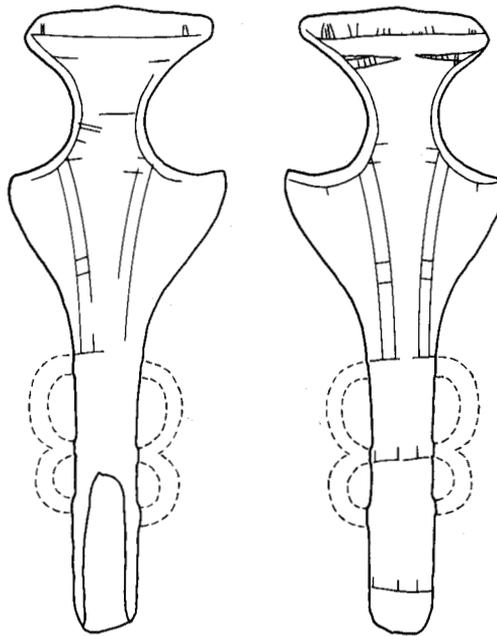


FIG. 7. Needle case from House 6, Skraeling Island site. Scale 1:1.

trade along the west coast of Greenland. In this regard one might perhaps question the rather non-utilitarian nature of some of these finds such as chain mail of chess pieces (from the Ruin Island site in Greenland), unless the "exotic" nature of these items was of sufficient value for trade. A second explanation deals with the intriguing possibility that a group of Norse traders (explorers?) actually entered Smith Sound and established direct contact with the Ruin Islanders, or that a Norse journey of exploration, similar perhaps to the supposed journey by the Bishop of Lynn (Ingstad, 1966) came to a tragic end somewhere in the Smith Sound Kane Basin region, resulting in the eventual distribution of the party's material belongings among the Eskimo groups in the area. During the Danish Pearyland Expedition (1947-50), the remains of an Eskimo umiaq were located at Herlufsholm Strand in northeastern Greenland (Knuth, 1952). The *umiaq* frame contained several pieces of wood which were identified as oak. A radiocarbon assessment of this material resulted in a date of  $730 \pm 100$  B.P. or A.D. 1220 (K. 1449 - uncorrected). The *umiaq* is, as Knuth (1952) has observed, of an Alaskan design. This may not be too surprising if the boat belonged to the Ruin Islanders, who in so many ways seem to have retained the western stamp of their culture. A radiocarbon assessment of charred pieces of oak, located in the Skraeling Island winter dwelling which contained the chain mail and clinch nail has resulted in a date of  $670 \pm 110$  B.P., or A.D. 1280 (GX. 6069 - uncorrected). The evidence from Skraeling Island and other Thule culture sites in the Bache Peninsula region should clarify the position of the Ruin Island phase within the Thule culture continuum.

Later stages of the Thule culture were observed on several of the large winter sites, Haa Island (Fig. 1) in particular, and the total number of winter dwellings from the Thule culture period now exceed 200. Extensive systems of stone-row-snares were observed near two of the large Thule culture winter sites, and large stone caches are present throughout the area. Observed Thule culture cairn burials were relatively few and preliminary indications are that they represent a reasonably late stage of that culture period (Way, pers. comm. 1978).

#### DISCUSSION

The preliminary findings as presented here have indicated the importance of the Bache Peninsula region in terms of cultural/historic developments in the High Arctic. The task ahead is one of expanding and testing the various hypotheses which have resulted from the present investigations. In addition to verifying the time of the initial arrival of the Arctic Small Tool tradition, the overall development of this tradition is seen as a major research topic. In an earlier paper (Schledermann, 1978) it has been argued that cultural continuity of the ASTt in the High Arctic may have been greater than previously assumed. In the Bache Peninsula region, preliminary indications are that this cultural tradition is represented at various stages from the initial arrival over 4000 years ago to the Late Dorset period. This latter development, which for decades has been the subject of debate among Arctic prehistorians, still

requires our most diligent efforts. The accumulating evidence strongly suggests that the pre-Dorset/Dorset transition occurred in different places, perhaps during slightly different time periods, resulting in regional expressions which may or may not conform completely to what we stereotypically think of as "true" early Dorset. Some cultural elements may appear earlier in one place, later in another and perhaps not at all in a third. The lack of ground slate artifacts in proto or early Dorset assemblages in the High Arctic (so prominent in Central Arctic, early Dorset) does not necessarily preclude their assignment to that culture stage; no more, than the complete lack of ground slate artifacts in the early Thule culture assemblages from the Bache Peninsula region should exclude these sites from a Thule culture designation. In a vast geographical region such as the North American Arctic, variation within the same general culture stage should be the norm rather than the exception. Too much emphasis on cultural differences clearly has led to some difficulties with one proclaimed stage of the ASTt, i.e. Independence II. For the time being our energies are probably better spent in gathering and reporting new data, leaving the taxonomic debates for a future symposium.

The impressive amount of late Dorset culture material, particularly in the vicinity of the Knud Peninsula polynya with its abundant walrus population, is further evidence of the relatively extensive High Arctic occupation by these people. The longhouses, cooking rows and other camp features attest to a sizable communal gathering at least during the spring and summer season. Further studies of the cooking rows, their contemporaneity and association with the longhouse features should result in a number of interesting socio-cultural hypotheses. The possibility of direct contact between the late Dorset people and the Thule culture pioneers is a distinct possibility and presently, it would seem a more difficult task to offer an explanation for the lack of contact between these two cultures in the study area.

One very important aspect of future research in the Bache Peninsula region will be an investigation of cause and effect relationships between cultural and environmental factors through time. The presence of a polynya adjacent to the major site area on Knud Peninsula obviously served as an important factor for settlement selection over several millenia. The choice of other settlement locations in the study area is less obvious, given the present environmental and ecological conditions, emphasizing the need for a better understanding of these conditions in the past.

Present evidence suggests that the Thule culture is represented in the study area from the time of its earliest appearance in the High Arctic. The continuity and duration of this culture stage remains the subject of future studies. The use of this region as a seasonal hunting territory by Greenlanders has continued until recent times. However, the cessation of the use of permanent winter settlements in the area probably took place prior to modern white contact, beginning with John Ross in 1818 (Ross 1819). That the Thule culture winter settlements were inhabited by ancestors of the Polar Eskimos is a reasonable supposition. To what degree the abandonment of the area as a

permanent settlement location may be related to environmental and ecological effects during the little ice age remains a hypothesis to be tested.

The "Ruin Island" phase is quite clearly and reasonably directly related to cultural developments in the Bering Strait region. It will be the subject of future studies to examine the relationship between the earlier "Nûgdliit" phase and the "Ruin Island" phase in terms of cultural continuity in the study area. The question of Norse trading or exploration voyages into the Smith Sound/Kane Basin region is a tantalizing topic and one can only hope that an enterprising Norseman with a sense of history left a runed message somewhere in this area.

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