

when the land was submerged. The shells found at the altitude of 71.5 m. at Tingmisut Lake show that Melville Island was submerged at least to this level. The radiocarbon age of these shells $9,075 \pm 275$ (I-730) indicates that this was the oldest postglacial transgression and that at least at that time this part of the island was free of land ice. Radiocarbon dates of younger shell samples found at lower altitudes throw light on the course of the emergence of land since the maximum postglacial transgression, which had been discussed elsewhere.

It is difficult to find in the Arctic features close to sea-level that can be dated to enable reconstruction of the late phases of emergence. For this reason data obtained from the site at McCormick Inlet are of great value. Since it is unlikely that a dwelling would be built much closer to high water than 1.75 m., the present height of the site, it is assumed that the age of the moss collected from under the flagstones provides a good estimate of the positive movement of the land, relative to sea-level during the past $1,740 \pm 190$ years. The conclusion is that differential movement, if any, has been very slight.

The sample (GSC-148) of burnt moss from the fireplace has an age $1,150 \pm 160$ years, probably indicating when the fireplace was used for the last time. This is in general agreement with the sample (I-840); both indicate the antiquity of the site. But it should be borne in mind that theoretically the moss might have been brought for kindling of a fire from somewhere else and that it was dead long before it was used for kindling.

Assuming that the true dates of samples (I-840) and (GSC-148) fall within the specified range, the dwelling was probably seasonally occupied between 1,150 and 1,740 years ago. These two results are generally consistent and indicate that the maximum possible amount of land emergence in McCormick Inlet area during the last one and a half millenia was appreciably less than 1.8 m. They also indicate the antiquity of the most northwesterly

Eskimo site so far found in the Canadian Arctic.

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¹Parry, W. E. 1821. Journal of a voyage for the discovery of a northwest passage from the Atlantic to the Pacific performed in the years 1819-20 in H.M.S. *Hecla* and *Griper*. London: John Murray, 2nd ed., 310 pp.

²McMillan, J. G. in J. E. Bernier, Report on the Dominion of Canada Government Expedition to the arctic islands and the Hudson Strait on board the D.G.S. *Arctic* (1908-09). Ottawa: Government Printing Bureau. 1910.

³Stefansson, V. 1944. *The friendly Arctic*. New York: Macmillan Co., 784 pp.

ARCHAEOLOGY OF THE McCORMICK INLET SITE, MELVILLE ISLAND, N.W.T.

Transportation difficulties during the 1963 field season frustrated my plans to visit the McCormick Inlet site and another of several tent rings at a river mouth 15 miles to the north reported by C. R. Harington of the Canadian Wildlife Service in 1961. The tent rings reported by C. R. Harington are on the west bank of a river mouth at approximately $76^{\circ}05'N$. $112^{\circ}19'W$. R. Thorsteinsson of the Geological Survey of Canada, told me of a site he had seen in 1958. It was a tent ring of large stones and in the ring lay a tin can containing shoe wax. This is about 1 mile southeast of Harington's find, on the other side of the river, and 1 or 2 miles inland. Thorsteinsson suggested it might have been a Stefansson party camp, perhaps Natkusiak's hunting camp. Consequently one must be all the more grateful for the collection made by Henoch and others at the McCormick Inlet site. The Dorset identity of the site suggested by two radiocarbon dates (see preceding paper) is supported not only by the artifacts found there but also by the architectural features of the dwelling itself.

The Dorset culture is generally held to have existed approximately from 800 B.C. to A.D. 1300, although not necessarily through all that time span over its total area of occupation. Since the two McCormick Inlet radiocarbon determinations indicate an occupation in the first millenium A.D., the site clearly was occupied during the Dorset period.

Regarding architectural features of the McCormick Inlet dwelling, the rectangular plan, central interior passage or aisle, fire place set in that aisle, and the lateral sleeping areas each divided from the aisle by a row of stone slabs buried at an angle, recall Dorset features. Meldgaard¹ reports Dorset houses of the Igloolik area to have small open hearths on the floor, low benches along the walls, and an overall square or rectangular plan. Excavation in 1958 of a semi-subterranean late Dorset house on Sugluk Island revealed a central hearth in an aisle which, in turn, was distinguished from lateral sleeping areas on either side by a row of vertically-set stones². The Oxford site, a Dorset station found in 1963 some 26 miles westerly from Cambridge Bay on the southern coast of Victoria Island, included several shapes of tent ring, among them examples with a sub-rectangular plan.³ The McCormick Inlet dwelling also recalls Dorset and pre-Dorset structures found by Knuth in northeastern Greenland, especially at Cape Halbaek⁴. Conversely such structures have not been reported for the Thule or recent Eskimo cultures in the central and eastern Arctic. Solely on the basis of its architecture one could only infer that the site is pre-Thule; in conjunction with the other evidence a Dorset identity becomes certain.

The artifact collection consists of one antler, one chert, and four quartzite specimens. Lichen encrustation documents the surface provenance of all but the antler object, which Henoch found in the debris on the stone "table". This last object (Fig. 1, f), 13.8 cm. long, 2.7 cm. wide, and 1.4 cm. thick, was split longitudinally from a caribou antler to provide a plano-convex cross-

section. Its slightly convex butt shows some evidence of pounding. It has straight parallel sides converging to a spatulate sharp-edged forward end where the cross-section develops a concavo-convex form. Probably it served as a wedge; it is virtually useless for cultural identification. The dark grey chert object (Fig. 1, e) is a thick random-form core showing several large flake scars and a battered edge adjacent to a small area of cortex. It measures 6.6 by 4 by 3.9 cm. It too lacks diagnostic value.

One dark grey quartzite specimen is the sturdy side-notched rear part of a large straight-based biface end blade (Fig. 1, d), probably of a knife or thrusting spear. The specimen is 3 cm. in maximum width, 2.2 cm. wide between its broad side notches and 8 mm. thick. The notches are broad, 1.3 and 1.2 cm. wide respectively, well-defined, and dulled to prevent abrasion of the lashings. The base is also slightly dulled. When complete, the overall length of the specimen was perhaps 8 to 10 cm.

There is also a complete grey-beige biface side-notched quartzite end blade with a deeply concave base (Fig. 1, a). Its maximum measurements are 11.7 by 3.6 by 1.1 cm. The base is indented 3.5 mm. The well-defined broad side notches are 1.7 and 1.6 cm. wide and the width of the object between these notches is 2.5 cm. The notch concavities have been very thoroughly dulled. The base margin is slightly dulled and shows by its longitudinal flakes some attempt at basal thinning. One margin of the specimen is more markedly convex than the other which parallels the mid-line for most of its length. The resulting asymmetry strongly suggests that this object was hafted as a knife blade; its rounded tip supports that suggestion. Considering the coarse granular quality of the quartzite the margins of the specimen reflect a commendable skill in secondary chipping.

The second grey-beige quartzite specimen is also a large, biface, side-notched end blade (Fig. 1, b). It has a straight base. Although the forward part of the object is missing, the com-

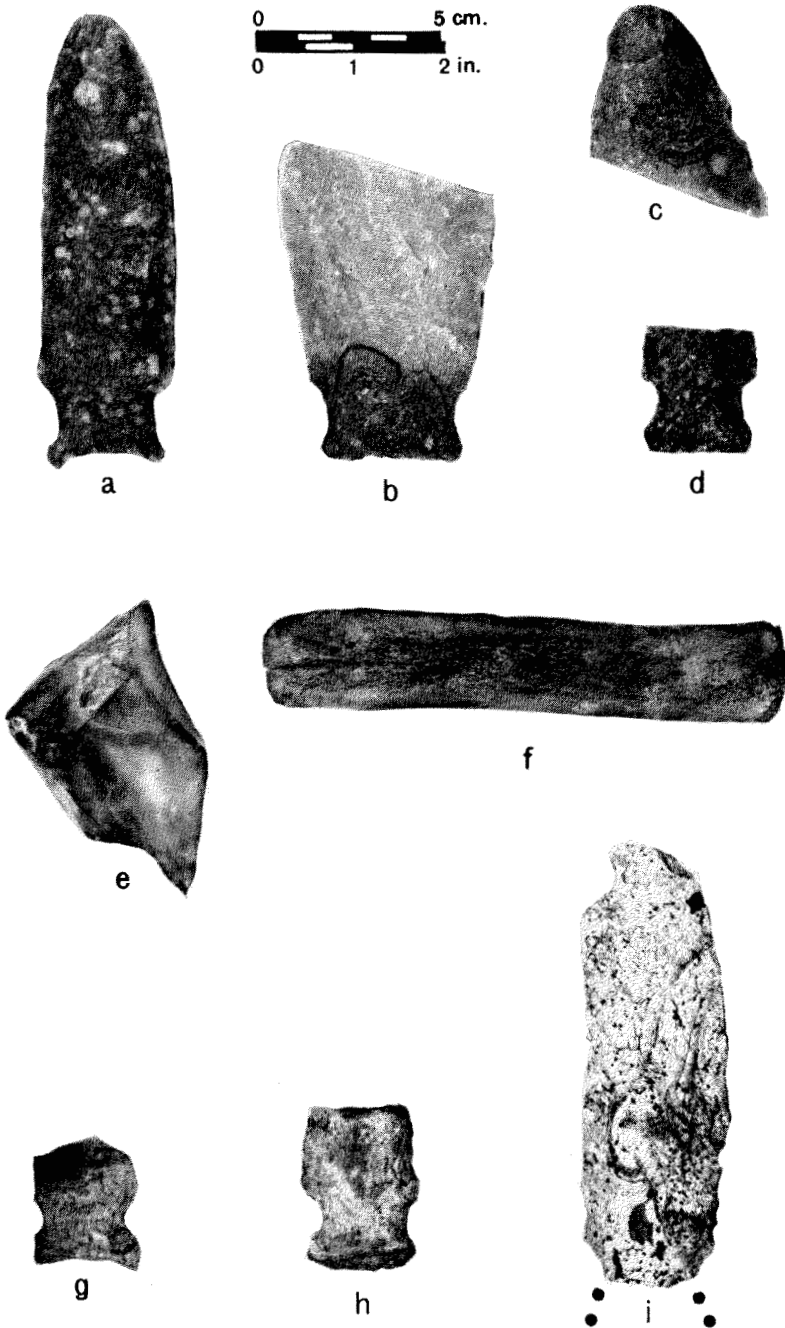


Fig. 1. Dorset artifacts from the Canadian Arctic. a to f: from McCormick Inlet, Melville Island, N.W.T.; g to i: from Mansel Island, Hudson Bay.

plete object probably measured between 12 and 15 cm. Maximum width was at least 5.5 cm. and thickness 1.3 cm. The slightly concave base is 3.7 cm. across

and very slightly dulled. The broad side notches are dulled, well-defined, 1.3 and 1.5 cm. wide, and 3.3 cm. apart. There had been some slight effort at basal thinning. Both margins of the specimen converge towards the base but one is less convex than the other, again suggesting hafting as a knife blade. The edge retouch is of mediocre quality.

Last, there is a grey-beige quartzite tip fragment of a large biface (Fig. 1, c). It might well be the forward part of the end blade just described. It has a rounded tip and a thickness of 1 cm. Two irregular notches on one edge of the fragment seem accidental.

Such large sturdy biface end blades with broad side notches have been reported by Collins for the T-1, T-3, and Walrus Island Dorset culture sites in northern Hudson Bay⁵ (Pl. V, figs. 11, 15, 16, Pl. VIII, figs. 15, 16, Pl. XII, figs. 18, 19, 22). Comparable but not identical specimens are reported from the Imaha site in Ungava Bay⁶ (Pl. III, fig. F), from northeastern Greenland⁴ (Fig. 3, 25, 26), and from Disko Bay⁷ (Pl. V, 18-22). I found examples of similar end-blades in two still unanalysed Dorset sites tested in 1958-59 on the east coast of Mansel Island; the examples, shown here, are from sites JIGu-6 (Fig. 1, g) and JIGu-5 (Fig. 1, h, i). Although it is too early to postulate any significance, a similarity does exist between Dorset end blades of this general category and comparable specimens from Giddings's Old Whaling stage at Kotzebue Sound, Alaska, dated at about 1,800 B.C.⁸ (fig. 7).

This McCormick Inlet Dorset collection is unusual in more than its geographic origin. Each of its five stone tools is a very large object by Dorset standards and the collection lacks the customary microlithic tools, used flakes, and lithic debris that one expects of a Dorset site. That the core is of chert but the bifaces are quartzite may be pertinent although the chert core weakens a suggestion that the region may lack a stone material suited to the making of small tools. Perhaps there

are smaller stone tools on the site, unnoticed by the collectors, not knowing what to look for in this regard and because such objects are easily overlooked in an irregular grey gravel matrix. Conversely, Hensch examined the site at some length and carefully gathered much material for radiocarbon dating. One may tentatively conclude that the typical small Dorset stone tools remain in the site overlooked, or that the McCormick Inlet site represents a Dorset complex with a variant lithic industry. The latter may apply, for the site is clearly at the periphery of the known range of Dorset, as well as of Eskimo, culture.

The nearest occurrence of Dorset culture constitutes a very few Dorset objects from a large Thule site I excavated in 1961 on the east coast of Bathurst Island, some 256 miles east of McCormick Inlet. The nearest distinct Dorset occupation site is that at Resolute^{9,10} some 324 miles away. Four hundred miles to the southeast I tested a mixed Thule-Dorset site at Creswell Bay in 1961. South of Creswell Bay and a similar distance from McCormick Inlet lies the Bellot Strait area from which VanStone¹¹ reported Learmouth's Dorset finds. Dorset sites also occur south of Melville Island at Bernard Harbour on the mainland and at Ekaluk River in southeastern Victoria Island³. These are 504 and 472 miles respectively from McCormick Inlet. It will be interesting to learn what lies between and, perhaps, beyond these old camps. With the known range of Dorset culture now extended westward to Bernard Harbour and McCormick Inlet, one may well wonder how much further west it will be found. Perhaps future work will revitalize the question of Dorset-Alaskan relationships, for between 1000 B.C. and 1000 A.D. there may have been important cultural exchange between Alaska and the Canadian Central Arctic. Among items that may need re-examination in that regard are the ice-creeper, ground slate tools, art and burial customs of Dorset culture.

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Nares Strait

The international passage between the Queen Elizabeth Islands and Greenland, which connects Baffin Bay with the Arctic Ocean, has been named Nares Strait in honour of Commander, later Sir George Nares.

The Minister of Mines and Technical Surveys has approved the name on recommendation by the Canadian Permanent Commission on Geographical

Names and the Greenland Committee for Place Names. On Danish maps the passage will be named Nares Straede.

Sir George Nares led the last British Admiralty expedition to northern Canada in 1875-6 and one of his ships, the *Alert*, which wintered at Floeberg Beach in northeastern Ellesmere Island, set a "farthest north" for any vessel at that time.

The five parts of Nares Strait, Smith Sound, Kane Basin, Kennedy Channel, Hall Basin, and Robeson Channel, will retain their names.

Snow cover as an integral factor of the environment and its importance in the ecology of mammals and birds by Prof. A. N. Formosov. Materials for the fauna and flora of the USSR, N.S. 5:1-152. 1946, has been translated into English by W. Pychodko and W. O. Pruitt, Jr. and edited by W. A. Fuller for the Boreal Institute of the University of Alberta, Edmonton, Alta., Canada. Among its contents is a gazetteer of about 450 Russian place names mentioned in the text. A limited multilith edition of 203 pages is available from the above address at \$2.00. Remittance should accompany each order.

Biology of the antarctic seas. Antarctic Research Series, Vol. 1. Washington: American Geophysical Union. 1964. 8 x 10½ inches. 220 pages. Illustrated. \$10.00.

This is the first volume of a new publication called "Antarctic Research Series". In it leading marine biologists present the results of recent work in antarctic waters. The new series is supported by a grant from the National Science Foundation, and further volumes are being planned in glaciology, meteorology, geology, aeronomy, pedology, and botany. Volume 1 can be obtained from the publisher at 1515 Massachusetts Ave., N.W., Washington, D.C. 20005, U.S.A.