Canada. Fisheries Research Board. Pacific Oceanographic Group.
Canada. National Research Council. Division of Building Research.
Canada. Royal Society. Canadian Committee on Oceanography.
Canadian-Scandinavian Foundation.
Elisha Mitchell Scientific Society. Journal.
Engineering Institute of Canada. Library.
G. B. Foreign Office. Research Department. Antarctic Place-names Committee.
Hudson's Bay Record Society.
Iowa. State College. Iowa Engineering Experiment Station.
Life.
Mission Glaciologique Française au Hofsjökull (1954).
National Research Council, Washington, D.C. National Academy of Sciences.
Ontario. Department of Lands and Forests. Southern Research Station.
Swiss Foundation for Alpine Research.
U.S. Library of Congress.
Woods Hole Oceanographic Institution.

NORTHERN NEWS

Archaeological investigations in the Yukon Territory

During the summer of 1955 the National Museum of Canada archaeological expedition under the direction of Richard S. MacNeish excavated a site on the Firth River, Yukon Territory. The actual site is on the east bank of the river, close to the Richardson Mountains, about twenty miles from the Arctic Ocean, and thirty miles from Herschel Island. About 2,000 bone and stone tools were uncovered, along with about 6,000 pieces of pottery.

The site is a particularly large one, located at a caribou crossing and caribou lookout. Because of the strategic position it was occupied by numerous groups at different times. Preliminary excavations, to be continued next season, revealed nine different archaeological complexes. Three of these, all of which appeared in different places in the top humus, seem to be related to Eskimo remains from 400 to 2,000 years old. The other six archaeological complexes cannot be tied directly with the Eskimo and these peoples seem to have been adapted to caribou hunting rather than a maritime economy. The last three of these complexes have Asiatic-looking pottery, but lack ground slate, and have a large series of small end and side-blades as well as a few micro-blades and an occasional burin or burin-like tool.

The earliest of the pottery cultures has an artifact complex much like that found at Cape Denbigh, Alaska, with burins, micro-blades, and double-pointed end-blades, all very delicately chipped. Pottery was found in some of the pits that may be assigned to this cultural complex, but seemed to be absent from others. The pottery, while superficially resembling the grooved pottery is different in that its surfaces seem to have been struck with a cord-wrapped or thong-wrapped paddle.

Preceding these three pottery-making cultures are three earlier cultures. The latest appears to be related to that of Cape Denbigh, and is very like the latest pre-pottery manifestations that have been described from Siberia. Still earlier is a most interesting complex in which Early Man types of projectile points, known from the more southerly parts of the United States, are found in association with such Asiatic tools as crude burins and prismatic blades. All these cultural complexes are underlain by a still more primitive one represented by crude choppers and scrapers.

RICHARD S. MACNEISH

Arktisk Institut, a new Danish arctic institute

Although Greenland has belonged to Denmark for more than 200 years, and Danish scientists have been engaged in exploration and research in Greenland for over 150 years, Denmark was the last country with arctic possessions to found an arctic institute. The reason was that Denmark already had an institution to organize and coordinate scientific work in Greenland. This institution, Kommissionen for Ledelsen af de Geologiske og Geografiske Undersøgelser i Grønland (The Commission for the Direction of Geological and Geographical Investigations in Greenland), was appointed in 1878 and is still active, although under the more comprehensive name of Kommissionen for Videnskabelige Undersøgelser i Grønland (The Commission for the Direction of Scientific Investigations in Greenland). The importance and accomplishments of the Kommission cannot be overrated. Almost every year since it was founded expeditions have been organized and individual scientists have visited Greenland under its auspices, and there are few parts of this huge island that have not been studied at least once. Equally important is the series of publications entitled *Meddelelser om Grønland* which was started by the first Kommission and which, today, comprises 152 volumes. It is the oldest and most comprehensive series of arctic publications, containing information on all scientific subjects concerning Greenland.

Despite the indisputable significance of the Kommission, the need for an additional institution was felt to take care of the tasks which lay beyond its scope. For example, the Kommission has no permanent residence, and no place for the safe-keeping of journals, notebooks, maps, and photographs from the expeditions or individuals who have lived or travelled in Greenland or other arctic areas. Unfortunately much valuable material of this kind has already been lost, and it was this situation which primarily gave impetus to the founding of Arktisk Institut. That it was finally established is mainly due to the fact that a house owned by Skibsreder C. Kraemer og Hustrus Grønlandsfond was offered as a home for the new institute on very easy terms, and the interest of the Kraemer Greenland foundation was placed at the disposal of the institute. With this yearly income, other private contributions, and a state grant, the economic basis of the institute was secure, and on 4 June 1954 the statutes of Arktisk Institut were confirmed and ratified by His Majesty King Frederik IX.

According to Article 1 of the statutes "The objects of Arktisk Institut are to promote arctic research, particularly in Greenland, to disseminate knowledge of the arctic regions, and to keep contact between Denmark and foreign countries in all fields connected with this work". The ways in which the institute may further these objects are then listed. One of these is to collect, catalogue, and conserve diaries and papers from persons who have resided in or taken part in expeditions to Greenland or other parts of the Arctic. In addition the institute collects photographs and negatives; it already has a collection of several thousands from Greenland, some of them dating back to the 1890's. These photographs are available to the public who, on request and at their own expense, may have prints made and use them in publications. Arktisk Institut has a collection of lantern slides which is placed at the disposal of lecturers. A reference library, also open to the public, is being formed; it will be supplemented with a card catalogue of the literature on Greenland and other arctic regions available in the main libraries in Copenhagen and vicinity. Card catalogues of papers and photographs in other archives and institutions are contemplated. People intending to travel or do scientific work in the Arctic may obtain advice and assistance, and may borrow camping equipment, guns, cameras, and scientific instruments for field work.

Advice and assistance in practical and scientific matters are available to foreign research workers and institutions inter-

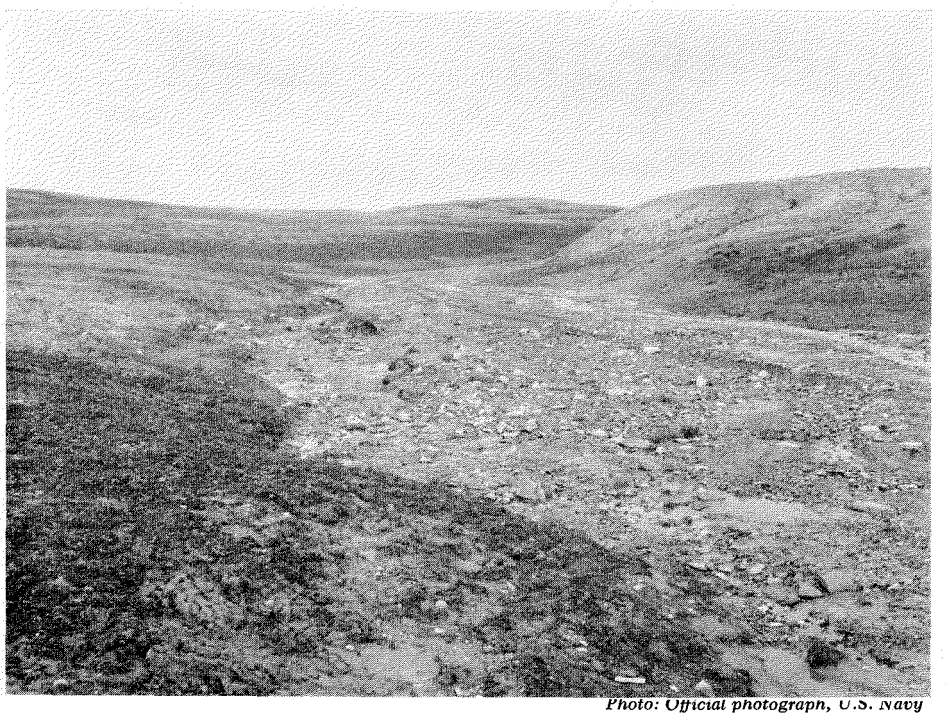

Photo: Official photograph, U.S. Navy

View inland, northeast Banks Island.

ested in studying Greenland, and Arktisk Institut offers its services in establishing contact between Danish individuals, scientific or public institutions and the corresponding individuals and institutions abroad. The institute will keep other countries informed of Danish research in Greenland and other arctic regions by a yearly report.

Arktisk Institut is directed by a board consisting of six members, of whom one is appointed by the Prime Minister, one by the Kommission for Videnskabelige Undersøgelser i Grønland, one by Skibsreder C. Kraemer og Hustrus Grønlandsfond, one by Grønlandske Selskab, and two are elected by the board. The day-to-day administration is carried out by a secretary, who may or may not be a member of the board. A council, the members of which are appointed by the Prime Minister upon the recommendation of the board, assists the board in all matters concerning the realization of the institute's objectives.

Although only a year old Arktisk Institut already proved its usefulness by the formation of archives containing much valuable material, and by assisting a number of people interested in Greenland from both Denmark and abroad. This is just the beginning. Much work in collecting and cataloguing is necessary before it is able to fulfil all the requirements laid down in its statutes.

HELGE LARSEN

Some notes on a trip to Banks Island

The writer was a member of the Joint Canadian-United States Beaufort Sea expedition in the summer of 1954. His primary responsibility was the installation and operation of electronics equipment to be used in surveying. The period from July 29 to August 28 was spent at a camp on the northeast coast of Banks Island, six miles south of Russell Point. During this time a number of field trips were made to explore the northeast portion of the island from Knight Harbour

on the northeast coast to thirty miles south of Russell Point on the south coast. We travelled mainly along the hard-packed beaches, because inland the area was almost totally inundated, due to the thawing of the active layer of the permafrost. This produced a sticky mud which restricted any form of travel inland.

While travelling along the beach shell specimens were collected. They were mostly Pelecypoda, and the most numerous species found was *Saxicava arctica*.[1] All the shells were dried and bleached. We saw no signs of marine life, and this lack of life was characteristic of the fauna of the area. Very few animals of any sort were sighted. The food and cover were such that the area could not support much wildlife. There were no lush plains similar to those in the southern portion of the island and the low hills were bare except for a sparse cover of yellow and brown moss, arctic willow, chickweed and arctic poppy.[2]

Inland the area was criss-crossed by numerous dry stream beds from which a number of specimens of loose rock fragments were collected. These included some fossils in limestone. Among the thirty-six fossils collected, Dr. W. H. Easton of the University of Southern California has identified coral specimens, including several Tetracoralla, and a few single specimens of several other anthozoans. He tentatively dates the Tetracoralla as Middle or Early Paleozoic, possibly Pennsylvanian or Mississippian.

[1]The following Mollusca specimens collected were identified by Dr. L. G. Hertlein, California Academy of Sciences, and Mr. W. K. Emerson, University of Southern California: Pelecypoda; *Saxicava arctica*, *Astarte* cf. *A. borealis*, *Serripes* cf. *S. groenlandicus*, and *Cyrtodaria kurriana*. Gastropoda and other classes; *Buccinum* cf. *B. solenum*.

[2]The following plants collected were identified by Dr. A. E. Porsild, Chief Botanist, National Museum of Canada: Arctic poppy (Flowering *Papaver radicatum*), Arctic willow (*Salix arctica*), Mountain sorrel (*Oxyria digyna*), Purple saxifrage (*Saxifraga oppositifolia*), Arctic mouse-ear chickweed (*Cerastium arcticum*), Chickweed (*Stellaria longipes*), and *Melandrium apetalum*.

Two small highly concentrated deposits of marine shells were found respectively three and four miles inland from the present-day beach. Both deposits are on hill tops several hundred feet above sea level, and both contained only *Saxicava arctica*. Apart from a few strand lines in the vicinity of Russell Point, no other evidence of raised beaches was found.

The writer was interested in the peculiarities of the streams and solifluction phenomena which occur throughout the area; future plans call for another visit to Banks Island to continue these studies. CHARLES RICHARDSON

Ornithological investigation of the mouth of the Anderson River and eastern Liverpool Bay, Northwest Territories

From 1 July to 25 August 1955 the writer made ornithological observations and collections in the Anderson River-eastern Liverpool Bay area.[1] It had been planned to begin work earlier in the season, but on arrival at Aklavik on June 4 I found that the Aklavik Flying Service was unable to take me to the mouth of the Anderson River until July 1. Stanton, the only settlement in the area was deserted of all its inhabitants that spring, and it was not possible to hire a native with a canoe and outboard motor as planned. This restricted my movements to what could be done on foot with a pack dog and a small ratting canoe, loaned to me by T. Lassard, a white trapper from the upper Anderson River, whom I encountered by chance two days after my arrival at the mouth of the river. Later Lassard and I launched a motor lifeboat belonging to the Roman Catholic Mission, Stanton, and on July 7 sailed it to Nicholson Peninsula, where we spent a few hours observing birds. From July 11 to 15 I walked from the mouth of the Anderson River to the mouth of the Mason River, returning to Stanton on the 16th. On July 18 a motor schooner in charge of J. R. Mackay, for the Geographical Branch, Ottawa, landed and I obtained

[1]This work was carried out under a Banting Fund grant to the Arctic Institute.

a passage to Harrowby Bay, the only point on the North American continent where the Slaty-backed Gull, an east Siberian species, is reported to have nested, in 1901. July 19 to 26 was spent on Harrowby Bay; from here I crossed Cape Bathurst peninsula to Amundsen Gulf, returning next day. In answer to a radio message from the schooner, a float plane of the Aklavik Flying Service arrived on July 26 and took me back to the mouth of the Anderson. The return journey included a low level flight over the creek draining into Harrowby Bay, and the Horton River from its mouth upstream for 20 miles. No Slaty-backed Gulls were seen and I believe that no breeding colony of these gulls exists in the area today, although one or two pairs might have been missed. There is reason to suspect that Ross's Geese might nest somewhere in this general area, but not on the lower Horton River, Harrowby Bay creek, or the mouth of the Anderson River and Wood Bay; however, I did not follow the Anderson upstream from its mouth. I had been told of a yellow-dyed goose seen at Toker Point in May 1955. This must have been one of a number of Ross's Geese so marked in California during the winter 1954–55. I hoped to determine whether the white-fronted geese nesting about the mouth of the Anderson were of the large subspecies *Anser albifrons gambelli*, the Tule Goose, the breeding grounds of which had not been found at the time of my operations. (Examples of Tule Geese were collected in the Mackenzie delta in the summer of 1955; A. C. Twomey, personal communication). White-fronted Geese with young were encountered on two widely separated lakes inland from Stanton on August 17, but I was only able to secure one of the immature geese and the skeleton with some adherent skin but only half grown wing feathers of an adult which must have been killed by some predator. The measurements of this bird strongly suggest that it was a Tule Goose, also when white-fronts were seen together with Black Brant the former appeared to be almost twice as large as the Brants making it highly probable that the Anderson River geese of this species are of the subspecies *gambelli*.

Estimates of local waterfowl breeding populations which I believe to be reasonably accurate were made as follows: Whistling Swan 3–400, White-fronted Goose 600, Lesser Snow Goose 500, Black Brant 1,000, Old Squaw 1,000. All species of birds observed in this general area by MacFarlane in 1861–66[1] were encountered in 1955 with the exception of the Eskimo Curlew, Ruddy Turnstone, Red Phalarope, Pomarine Jaeger, California Gull and Smith's Longspur. Species seen by myself not previously recorded for the area were Say's Phoebe and Rock Wren (observed at very close range) a remarkable record as this bird was fully 1,000 miles north of the normal northern limit of the range of this species. The Yellow Warbler and Rusty Blackbird, not recorded beyond the tree-line by MacFarlane, were found almost to latitude 70°N. in willow areas and the American Pipit, only presumed but not definitely recorded by him, was found in considerable numbers. As I worked alone, cooking and (net) fishing curtailed the time available for preparing specimens, but 45 bird skins, including a Hudsonian Godwit, an abnormally plumaged Glaucous Gull, and 13 mammal skins and skulls were collected in the area, in addition to 21 bird skins and 4 mammals collected at points on my journey to the Anderson.

Sketch maps of the areas covered on foot (about 85 miles, much of it traversed more than once) were prepared. These show the correct position of Stanton, differing by about 8 miles from that shown on the 8 miles to the inch map of the area, Canada National Topographic Series, 1945 edition, and also contain two other corrections for the mouth of the Anderson River area.

Mammals seen or collected in the area

[1]MacFarlane, R. 1891. "Notes on and list of birds and eggs collected in arctic America, 1861–1866". *U.S. Nat. Mus. Proceedings, 1891*, Vol. 14, pp. 413–46. (Reprinted with corrections from the *Hist. and Sci. Soc. of Manitoba, Transactions, 1888–89*, No. 39).

were moose and muskrat, as far north as latitude 69°50′, arctic ground squirrel, meadow mouse, collared lemming, tundra mouse, barren ground caribou, ringed seal, and white whale. Bear tracks were found which were judged from the localities in question to be those of barren ground grizzly and polar bear respectively.

1955 was a high lemming year on the Cape Bathurst peninsula. Runs were abundant and considerable piles of lemming or mouse droppings were seen; Snowy Owls were correspondingly abundant in this area, 5 adults being in view simultaneously from one point on July 24.

I continued working in the area of my base camp at the mouth of the Anderson River until August 25, when I obtained passage in an aircraft flying south to Norman Wells. A detailed ornithological account of the expedition will be published elsewhere. E. O. HÖHN

Symposium on polar atmosphere

The Advisory Group for Aeronautical Research and Development, NATO, is currently planning a symposium on arctic meteorological problems. The meeting will be held in Oslo, Norway, during the first week of July 1956. It is hoped that representatives from all the NATO countries will attend. The program is not yet complete, but will include papers and discussions on arctic geography and climate, weather analysis and prognostic techniques applicable to the Arctic, radiation and thermodynamic problems, problems of observation and ice forecasting, and other subjects in the field of arctic meteorology.

Errata, Vol. 8, No. 2

Page 92, Fig. 5. The lateral moraine of the Taku Glacier, dated 1910, actually dates back to the eighteenth century.

ELECTION OF FELLOWS

At the Annual Meeting of the Arctic Institute held in Montreal on 19 November 1955 the following were elected Fellows of the Institute:

Dr. Robert G. Blackadar, Geological Survey of Canada, Ottawa, Ont., Canada.

Dr. Max E. Britton, Northwestern University, Evanston, Ill., U.S.A.

Robert M. Chapman, P.O. Box 4004, College, Alaska.

Dr. I. McTaggart Cowan, Department of Zoology, University of British Columbia, Vancouver, B.C., Canada.

Dr. Jack C. Haldeman, U.S. Public Health Service, Washington 25, D.C., U.S.A.

Dr. F. K. Hare, Department of Geography, McGill University, Montreal, Que., Canada.

G. Hattersley-Smith, Defence Research Board, Ottawa, Ont., Canada.

B. F. Heinzleman, Juneau, Alaska.

Dr. D. M. Hopkins, U.S. Geological Survey, Washington 25, D.C., U.S.A.

Dr. Desmond F. Kidd, 5816 Kingston Road, Vancouver, B.C., Canada.

Dr. Svenn Orvig, Arctic Institute of North America, 3485 University Street, Montreal, Que., Canada.

Capt. O. C. S. Robertson, R.C.N., H.M.C.S. *Labrador*, H.M.C. Dockyard, Halifax, N.S., Canada.

Dr. E. F. Roots, Geological Survey of Canada, Ottawa, Ont., Canada.

Donald C. Rose, National Research Council, Ottawa, Ont., Canada.

Dr. Robert S. Sigafoos, U.S. Geological Survey, Washington 25, D.C., U.S.A.

W. E. C. Todd, Carnegie Museum, Pittsburgh 13, Pa., U.S.A.

Marie Tremaine, Arctic Institute of North America, Study Room 261, Library of Congress, Washington 25, D.C., U.S.A.

Dr. G. M. Wright, Geological Survey of Canada, Ottawa, Ont., Canada.