A R C T I C C I R C U L A R

Vol. 8

THE ARCTIC CIRCLE

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CONTENTS

Vol. VIII, 1955

NO. 1

NO.2

NO. 3

NO. 4

THE ARCTIC CIRCULAR

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Since the date of the last Circular the following meetings have been held:

Fifty-fifth Meeting, 1 December 1954. "Geological Survey work in the arctic islands during the summer of 1954". By R.G. Blackadar, W.L. Davison, R. Thorsteinsson, and E.T. Tozer.

Fifty-sixth Meeting, 5 January 1955. The Annual General Meeting. Mr. A. Glen Dyer, Chief of Arctic Projects of the U.S. Weather Bureau, showed a film on the work of the United States icebreakers in the north.

Fifty-seventh Meeting, 2 February 1955. A "press conference" was held by the Honourable Jean Lesage, Minister of Northern Affairs and National Resources, who answered questions on government policy on the north put by members of the press and of the Arctic Circle.

Fifty-eighth Meeting, 2 March 1955. "Scientific projects during the 1954 arctic cruise of H.M.C.S. Labrador". By D.C. Rose.

Fifty-ninth Meeting, 6 April 1955. A colour film of the "Perry River expedition 1949" was shown by Mrs. G.W. Rowley.

Sixtieth Meeting, 12 May 1955. Two films were shown: "Highway of the atom", a description of the work of the Northern Transportation Company on the Mackenzie River, with a commentary by Mr. R.C. Powell, and "Mackenzie River Patrol", an account of R.C.M.P. activities, introduced by Superintendent Henry Larsen.

Officers and Committee members for 1955

At the Annual General Meeting on 5 January 1955 the following Officers and Committee members were elected:

President:	Mr. A.D. McLean
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Secretary:	Mr. A. Stevenson
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Archaeological work on Southampton and Coats islands. By H.B. Collins

During the summer of 1954 an expedition sponsored by the National Museum of Canada, the National Geographic Society, and the Smithsonian Institution made archaeological investigations at Dorset and Sadlermiut sites on Southampton and Coats islands. The party, consisting of myself, J. Norman Emerson, Assistant Professor of Anthropology at the University of Toronto, William E. Taylor, Jr., Research Assistant at the Anthropology Museum, University of Michigan, and Eugene Ostroff, photographer, of Washington, D.C., left Montreal by R.C.A.F. aircraft on June 23 and arrived at Coral Harbour the following day. Our primary purpose was to excavate at Native Point, particularly at a Dorset culture site that had been discovered by W.D. Bell, a member of J.B. Bird's geographical party of 1950.[1]

Through arrangements made by A.T. Swaffield, Hudson's Bay Post Manager, we left Coral Harbour with four Eskimo dog teams on the afternoon of June 25. The sea ice was still safe for travel, though leads were beginning to develop and there were extensive areas of meltwater on the surface. The trip to Native Point, 40 miles down the coast, took fourteen hours, including frequent stops while the Eskimo hunted seals. Arriving at Native Point, we set up camp near a small stream below the raised beach line on which the old Sadlermiut village is located.

Tunermiut, as the old village is called, was the principal settlement of the Sadlermiut tribe of Eskimo, which became extinct here in an epidemic in the winter of 1902-3. The Sadlermiut are one of the puzzles of Eskimo ethnology; they were a strange, primitive group, different in many ways from the other Canadian Eskimo.

1. Bird, J. Brian. 1953. 'Southampton Island'. Canada, Department of Mines and Technical Surveys, Geographical Branch Memoir 1, 84 pp, map.

They have been regarded as the last of the Thule Eskimo, but there is a strong possibility that they were also in some way related to the Dorset Eskimo. The Sadlermiut harpoon head, for example, was demonstrably derived from one of the Dorset types. There are 85 stone and sod house ruins at Native Point and numerous other house pits and tent rings left by the Nivilik Eskimo who have camped or lived there more recently. In contrast to Sadlermiut house ruins on other parts of the island, those at Tunermiut contain very few whale bones, the construction being almost entirely of stones and sod blocks. Material excavated from some of the houses, middens, and graves was sufficient to provide a fairly complete picture of Sadlermiut material culture.

One mile to the east of the Sadlermiut site, on an 85-foot elevation and almost a mile from the sea, is a much older site of the Dorset culture. Covering an area of well over 20 acres, this is one of the largest Dorset sites thus far known. The Dorset culture today is the outstanding problem of Eskimo anthropology. It was very different from and considerably older than the Thule culture. It was an outgrowth, apparently, of the ancient Denbigh Flint Complex recently discovered by Giddings in Alaska. Though the Dorset culture extended from Newfoundland to east Greenland, and was the basic Eskimo culture throughout the Central and Eastern Arctic, we still know very little about it; in many respects it remains as puzzling and mysterious as when first discovered and described by Jenness 30 years ago.[1] One of the difficulties has been that most Dorset sites are no more than a thin culture layer at the bottom of Thule middens or beneath Thule houses.

The Native Point site, fortunately, is a pure Dorset site, with no overlay of Thule or Sadlermiut. It consists entirely of midden deposits, on a flat level plain, with no surface indications of houses or other structures. Our limited excavations at different parts of the site yielded thousands of typical Dorset artifacts and many others that are new to the Dorset culture. The site represents a phase of the Dorset culture different in certain respects from any previously reported. Chipped stone implements occur in enormous numbers. Some of them, including lamellar flake knife blades, closely resemble those of the ancient Denbigh Flint Complex in Alaska. Among the new types are delicately chipped microblades less than 15 mm. in length,

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1. Jenness, Diamond. 1925. "A new Eskimo culture in Hudson Bay". Geogr. Rev. Vol. 15, No. 3, pp. 428-37

and slender, pointed, triangular blades of specialized type recalling forms characteristic of the Upper Paleolithic and Mesolithic of Eurasia but not previously found in America. Though driftwood must have been used extensively for harpoon shafts and many other purposes, it seems to have completely disappeared, for we did not find a scrap of wood at the site. Also, the bird and mammal bones and the ivory, bone, and antler artifacts are uniformly patinated and weathered, in striking contrast to the fresh, well preserved similar material from the Sadlermiut site. There are indications that this and other Dorset and pre-Dorset sites in Canada and Greenland were occupied at a time when the climate was milder than today.[1] On the whole, this is one of the most promising Dorset sites I know of, and excavations there, which we plan to resume in 1955, should reveal for the first time an adequate, rounded picture of Dorset material culture. A second, smaller Dorset site, which seems to differ somewhat from the one just described, was found buried beneath the surface not far from the Sadlermiut site.

In the course of our work particular emphasis was given to ecology. This included counting and identifying as many mammal bones as possible from the various cuts (bird, fish, and other animal remains were brought back for identification). A detailed study was made of midden stratification and content, soil deposition, and sod cover, for bearing on possible climatic and physiographic changes; this involved collecting samples of soil, sod, bone, and other organic materials for pollen, chemical, and radiocarbon analysis. Close attention to such background factors should provide valuable information on the environmental conditions affecting these two distinct Eskimo populations at the same locality, one of them dating from the 17th to 19th century, the other probably more than 1,000 years old.

We counted over 45,000 mammal bones from the various cuts at the Dorset and Sadlermiut sites and made species identifications on over 6,000 of them (phalanges, some ribs, and vertebrae being too difficult to identify in the field). The result was the demonstration of some striking differences in the food economy of the Dorset and Sadlermiut people, as well as seasonal differences in occupation of various parts of the sites, as shown principally by the relative abundance or paucity of bird bones, birds being summer migrants.

1. Collins, Henry B. 1953. "Recent developments in the Dorset Culture area" in "Asia and North America;, Memoirs Soc. Amer. Arch. No. 9, pp. 32-9.

The seal was the most important food animal of both peoples, represented by 68 and 64 per cent of the bones, respectively, at the Dorset and Sadlermiut sites. Next came the walrus, 10.2 per cent at the Dorset and 5.2 per cent at the Sadlermiut site. Bearded seal bones occurred in about the same proportion — 10 per cent and 7.1 per cent. Polar bear bones were scarce, 0.1 per cent at the Dorset site and 1.3 per cent at the Sadlermiut site. One somewhat surprising result of the bone count was evidence that the Dorset people made little use of caribou — one half of one per cent in contrast to 11.5 per cent of caribou bones at the Sadlermiut site. Fox bones were more numerous at the Dorset site, 10.6 per cent as compared with 2.6 per cent, but dog bones were completely lacking. The absence of dog bones is evidence that the Dorset people had no dog sleds and therefore no effective means of winter travel. This was probably the reason they got so few caribou, for lacking the mobility of the later Sadlermiut, who possessed the dog sled, they would have been unable to make long trips to the east side of the island where the caribou mostly lived.

In addition to archaeological material, we collected Eskimo skeletons, polar bear, seal, dog, wolf, fox, and caribou skulls, lemmings, insects, freshwater invertebrates, plants, and ectoparasites from lemmings and birds.

On July 18 an Eskimo Peterhead boat came from Coral Harbour to take us over to Coats Island. We excavated two of four houses at a small Sadlermiut site on the north coast directly opposite Bencas Island and examined two other house ruins near the northeastern end of Bencas. Late in August we returned to Coral Harbour by Peterhead and were flown to Montreal, via Churchill, by the R.C.A.F. Emerson, Taylor, Jim Wright, and I plan to return to Southampton Island in June 1955 for another season of work at Native Point.

Northern Ellesmere Ice Shelf expedition, 1954[1]. By R.L. Christie

The expedition to the ice shelf of northern Ellesmere Island in 1954 was organized to carry out studies in glaciology, glacial geology, and geology on the coast between Cape Aldrich, the northernmost point of Ellesmere Island, and Lands Lokk, the northwest extremity of that island.

1. Published by permission of the Deputy Minister, Department of Mines and Technical Surveys, Ottawa, Canada.

A reconnaissance of shelf ice and geology had been made by G. Hattersley-Smith of the Defence Research Board of Canada and R.G. Blackadar of the Geological Survey of Canada in 1953, and the 1954 expedition continued their work to the west.

The field work of the 1954 expedition was supported by four organizations: the Defence Research Board of Canada, represented by G. Hattersley-Smith, the leader of the project; the Geological Survey of Canada, represented by R.L. Christie; the Air Force Cambridge Research Center of the U.S. Air Force, represented by A.F. Crary, geophysicist; and the Snow, Ice, and Permafrost Research Establishment of the U.S. Army, represented by E.W. Marshall, glaciologist. In addition, considerable support was provided by the Northeastern Air Command of the U.S. Air Force and by the personnel of the Department of Transport of Canada and the United States Weather Bureau at Alert weather station. General food supplies were obtained in Ottawa, C-rations from the U.S. Army, fuel from the U.S. Air Force at Thule Air Base, man pemmican from the United Kingdom Ministry of Food at Aberdeen, and dog pemmican from London, England.

Imina and Karkutiaak, Eskimo from Thule, Greenland, accompanied the party as dog drivers, and supplied 24 dogs. These men left in June for the summer hunt, travelling by dog team to Alert weather station and by aircraft and dog team to their new village at Kanak, Greenland.

The party, including the Eskimo and their dog teams, was flown in ski-equipped C-47 (Douglas Dakota) aircraft to Ward Hunt Island, which lies off the coast of northern Ellesmere island about 40 miles west of Cape Aldrich. Good landings were made on the ice shelf about three miles west of Ward Hunt Island.

During the field season, data on the weather, snow and ice accumulation and ablation, and ice temperatures were obtained, and collections of airborne pollen were made at the base camp. Activities at camp before the melt period also included coring of the ice shelf to a depth of about 80 feet, surveying of the ridge and trough topography, and measuring the movements of the ice at tide-cracks. E.W. Marshall made petrographic studies of the ice cores.

In late spring, a trip was made by Crary and Hattersley-Smith along the edge of the ice shelf to obtain oceanographic data, including water samples, temperatures, and depths.

During the melt season, some time was spent on Ward Hunt Island and on the mainland opposite the island, and plant collections, geological reconnaissance trips, and glaciological studies were made. During this season, the structure in the ice shelf is exposed, and in spite of difficulties due to the flooding of the troughs extensive trips were made on foot.

During the spring and after freeze-up, several journeys were made along the coast by dog team, and much geological and glaciological data of a reconnaissance nature was obtained. A 24-day trip was made to Lands Lokk, and shorter trips were made across Disraeli Bay to Cape Aldrich, to Cape Nares and Markham Bay, and into McClintock Bay.

Collections of rocks, fossils, plants, insects, ice, and water were made in the course of the project and these are now being studied in various Canadian and U.S. centres. In addition to these scientific collections, records and relics of several previous expeditions to Ellesmere Island were recovered.

Until recently the geology of northern Ellesmere Island was almost unknown. The results of the field work carried out in 1954 indicate that the geological history of the region is complex. Evidence of several periods of mountain building was found and fossils of Ordovician, Carboniferous, and Permian age were collected.

Soundings by seismic methods and by wire line indicate depths of about 200 to 300 feet along the outer edge of the ice shelf off Ward Hunt Island, about 12 miles from the mainland. The fiords are greatly over-deepened, and the bottom of Disraeli Bay was not reached with a 1,000-foot line.

From the coring and seismic surface studies of the shelf ice it is apparent that this is a complex deposit of salt-saturated ice, lake ice, and firn ice, reaching a thickness of about 160 feet. The salt-saturated 'basement' ice is overlain unconformably by stratified firn ice at the base of which there is an old ablation surface.

The origin of the unique ridge and trough topography of the shelf ice is not known as yet. The distance between ridges and troughs averages 760 feet and the relief 7 feet although near land ridges 24 feet in height were observed. Temperatures in a ridge remained constant at -15°C during the period of observation. The

temperature increases slightly with depth at least down to 70 feet, the greatest depth at which measurements were taken. Approximate temperatures obtained during the drilling of a hole in a trough to a depth of 35 feet were about 7°C higher than those obtained in an adjacent ridge. This may be due to the freezing of the lake water in the troughs.

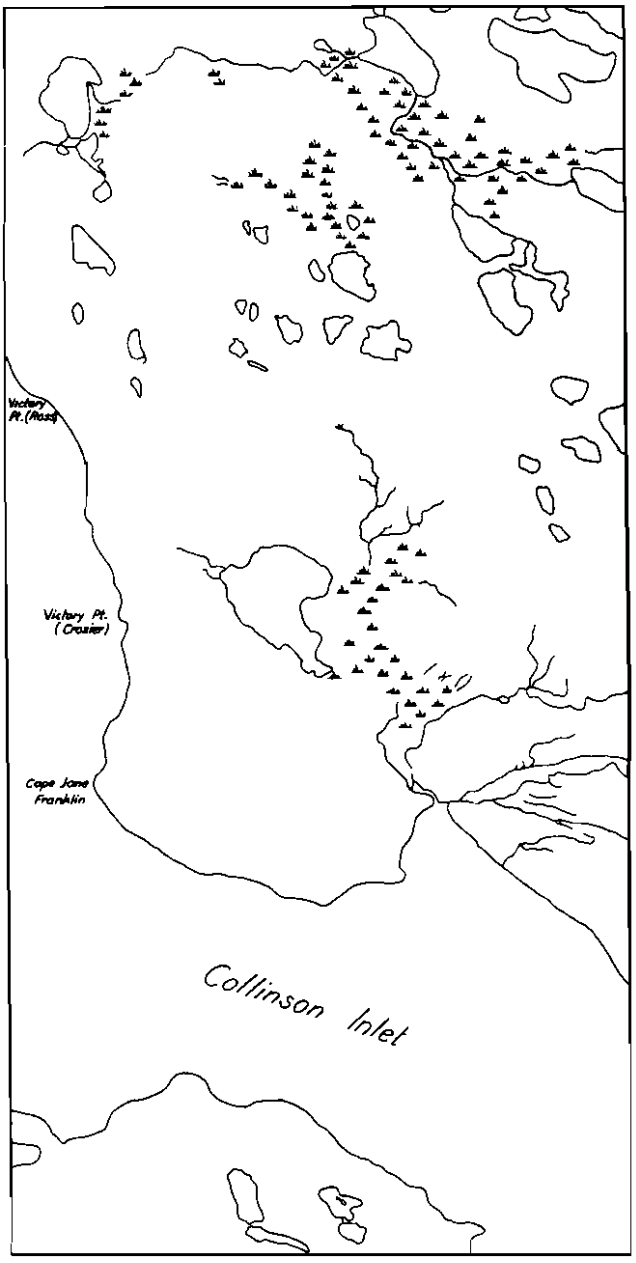
The discovery on the ice shelf of debris from a camp made by members of Peary's 1906 or 1909 expeditions indicates that there has been no net accumulation of ice in the past 45 years. The presence of driftwood on the shore inside the ice shelf suggests that there was an open polar sea in relatively recent times.

The historical finds made in 1954 include a note and map left at Cape Fanshawe Martin in 1876 by Lt. Pelham Aldrich, a note left by Dr. H.K.E. Krüger in 1930 in a cairn built by Peary north of Lands Lokk, and a cache and note left in 1909 by D.B. MacMillan on Ward Hunt Island. A komatik from the MacMillan cache was relashed and served admirably during the last months of the field season for dog team trips along the coast.

A trip to King William Island in 1954. By Paul F. Cooper.

In August 1954 the writer, accompanied by his wife and son, Paul F. Cooper, Jr., and Mr. John Richards, flew to King William Island with Charlie Weber of Arctic Wings for an eight-day trip. During this time we visited many of the points of historic interest on the island, and in particular the site where Crozier and his men camped after coming ashore from the Erebus and Terror in April 1848.

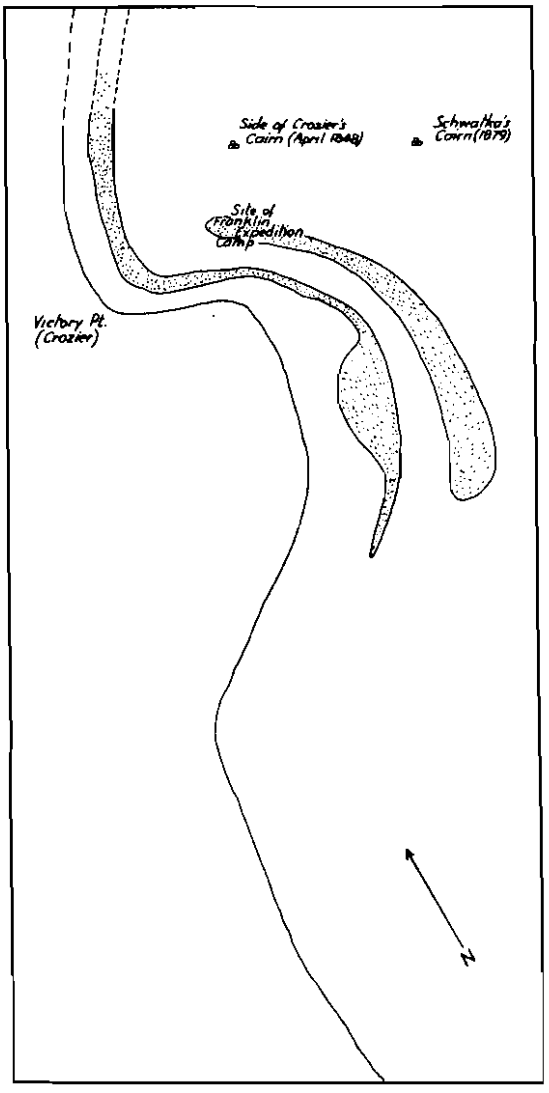
We left Churchill on August 5 and flew directly to Gjoa Haven. On the 6th we flew over O'Reilly Island, hoping to see some sign of the Franklin expedition ship reported to have sunk there, but saw nothing. We then stopped at Terror Bay and afterwards at Cape Herschel, where the ruins of Simpson's cairn, built in 1839, are still easily found. That night we spent at Spence Bay, and late on the evening of the 7th we flew to the northwest coast of King William Island, taking with us Father Henry, whom we later left at his mission in Gjoa Haven. We landed north of Cape Jane Franklin on a good-sized lake where Burwash and Finnie had camped in September 1930.



VICTORY POINT AND VICINITY, KING WILLIAM ISLAND

SCALE 1:63360 (1 INCH = 1 MILE)

1 0 1 2 3 Miles



CROZIER'S LANDING PLACE (VICTORY POINT)

SCALE 1:2400 (1 INCH = 200 FEET)

200 0 100 200 300 400 600 Feet

REFERENCE

▲ Cairn Swamp Grassy Slough

The next day we walked to the shore. The site of Crozier's encampment is beside a long, shallow bay, about four miles from end to end, named Irving Bay by Schwatka. Behind it the land rises in a series of broad terraces of broken limestone to a bleak ridge nearly a mile inland. Cape Jane Franklin, a mile and a half south of the camping site, marks the southern tip of the bay. The northern tip is a point supposed by Schwatka and later explorers to be Victory Point, James Clark Ross's farthest in 1830, where he built a pillar. Thus the more recent tendency is to distinguish between the true Victory Point of Ross and the place where the Franklin crews made their camp; though Crozier, despite not finding Sir James Ross's pillar, believed himself to be at the spot where it once had stood. [1]

We spent the day examining the locality, making a sketch-map, and walking down to Cape Jane Franklin. The present cairn, which marks the grave of Lieutenant Irving, was originally built by Schwatka in July 1879. It has twice been taken down and rebuilt, once in 1930 by Burwash, who believed it to be a Franklin cairn, and again by Larsen in 1949. It stands 625 feet inland from the tip of the small promontory that forms the northern side of a tiny bay.

Some 250 feet NW. by W., between this cairn and the end of the promontory, are the ruins of a second cairn, the one in which Crozier left the record found by Hobson on 6 May 1859. It is now only a circle of stones, so flattened out that, even at a short distance, it can hardly be distinguished from the surrounding rocks. To the south and west of it, on a lower terrace, lies the site of Crozier's camping place. Here, as well as in the crevices between the rocks around the ruined cairn, bits of cloth and rusted metal and hemp can still be picked up, though nothing of any size was found.

Our proposed stay was cut short the following morning by an on-coming fog. We flew south to Washington Bay, where, on a small island, we found the ruins of two cairns. They appeared to have been built by white men, and their location and the fact that they stood so close together called to mind the two cairns in

1. For a full discussion of this subject see R.J. Cyriax, "The position of Victory Point, King William Island", Polar Record, Vol. 6, No. 44 (1952) pp. 496-507.

Washington Bay, possibly Franklin ones, mentioned to Schwatka by an Eskimo. At this date, of course, no positive identification could be made. And it always had to be borne in mind that they might be cairns built by members of the Schwatka party itself.

We returned to Churchill via Pelly Bay and Repulse Bay and Chesterfield. Throughout the trip, at every stopping place, plants were collected. During the whole time we were favoured with almost uninterrupted good weather, although for ice it was an unusually late season.

The status of the Atlantic walrus, Odobenus rosmarus (L), in Canada.[1]

By M.J. Dunbar

There is an account in Hakluyt quoting Jacques Cartier as having seen walrus breeding on Sable Island, off the Nova Scotia coast, in the year 1534. Within the past two hundred years walrus hunting was a common pastime, both commercial and "sportif", in the Gulf of St. Lawrence. The rapid restriction in range which the Atlantic walrus has suffered is succinctly expressed by R.M. Anderson, late of the National Museum of Canada: "North Atlantic and Arctic Oceans within historic times as far south as Gulf of St. Lawrence to Magdalen Islands; now seldom if ever appearing south of Hudson Bay and Hudson Strait; north to northwest Greenland and Ellesmere Island; rare or casual west of Barrow Strait, Somerset Island, and Fury and Hecla Strait". In west Greenland, Otto Fabricius could record as early as 1780 that "it has now become scarcer". The process of decline appears to be continuing today, if one is to believe the reports of old-timers in the north, and of the older Eskimo. It is reported, for instance, that a little over a generation ago walrus were common in summer at the Gyrfalcon Islands, in southwest Ungava Bay, whereas at present they are seen in this area at Akpatok Island only, and in Hudson Strait.

The most recent evidence on the behaviour of the North Atlantic climate, obtained by Dr. J.D. Wiseman of London from a study of deep sea sediments, indicates a 400-year period of cycle with the present years as the crest of the "amelioration". The

1. Paper prepared for the Annual Meeting of the Danish Nature Conservancy, August 1954.

effect of this climatic change on the waters of the former walrus range is difficult to estimate except for the last hundred years, and especially the last thirty years, and it will be assumed for the present that the restriction in the walrus range cannot be ascribed to such change in climate, at least not to any significant degree in Canada.

There is little doubt that the depredations of commercial hunting have been decisive in the process, from the late middle ages down to the end of the nineteenth century. In the early days of the trade, walrus hides, obtained mainly in northern Europe, were in great demand for use in the making of ships' rigging, quite apart from the value of the ivory. Walrus were still killed for commercial purposes in this present century, up to 1948 at least, particularly by Norwegian ships, and notably in Davis Strait. It is understood that this practice has stopped, by agreement. In Canada, walrus may be killed only by native Eskimo, and even in native hunts there is officially supposed to be a government agent, usually a member of the Royal Canadian Mounted Police, present to supervise the hunt. It is not possible, however, to obey this regulation to the letter in practice.

In spite of the cessation of commercial killing of walrus by white men, there is no sign of recovery in the walrus population. There is indeed at least one good a priori ground for suspecting that the numbers are still declining, namely the deterioration of the native hunting methods in certain parts of the north. I believe there is a regulation operating in the Thule district, to the effect that a walrus must be harpooned before the rifle is used. This most excellent rule, if introduced into Canada, might go far to remedy the present situation. But unfortunately the rifle has been used for so long as the first weapon of hunting that it is very doubtful whether the regulation could be enforced. Meantime, the introduction of the rifle has, amongst other things, had the effect of making some Eskimo "trigger-happy", especially since government relief to families, and family allowances, have made cartridge-thrift less important. The result is that hunting parties in Ungava Bay, for instance, formerly models of stelth and cunning, now rival those fairy-tale hunters in "Peter and the Wolf", "coming through the forest, and shooting as they come". The total fire-power of the hunting party is let loose on the herd of walrus, wounding rather than killing, and allowing many maimed animals to escape, to die later. Pregnant females are killed and wounded as well as males, so that the total waste is difficult to estimate.

Quite apart from the waste involved in the escape of mortally wounded animals, there is also the danger, in summer, of animals sinking before they can be harpooned, particularly in this haphazard method of hunting. The loss involved in this way in walrus is not known, but estimates for seal are of the order of three animals lost for every one landed, a situation which would never be tolerated in sport hunting or fishing farther south. (The loss of walrus in the Bering Sea, by this method of hunting, is known to be quite large).

Two things are being done to remedy this trouble: (1) methods of so supervising the annual walrus kill as to avoid all waste are being worked out by the Department of Northern Affairs, and (2) basic research is being undertaken by the Wildlife Service and by the Fisheries Research Board, with the continuation of the research the responsibility of the latter organization.

In a memorandum to the Department of Northern Affairs Mr. I.M. Gardner, whose 1954 address was Sugluk, on Hudson Strait, has suggested that a number of boats, of the Peterhead type commonly used in the Canadian north, should be employed exclusively in walrus hunting, each boat supplying a small group of settlements or trading posts. The crew would be Eskimo, but there would be an officer on board responsible for the regulation of the hunting. Something of this sort has been considered for some time, and will probably prove the answer to the immediate problem of eliminating wasteful hunting. Only males would be killed, and each animal hunted individually.

In point of fact, the problem of walrus conservation is only one part of the whole problem of the rehabilitation of the Eskimo economy in Canada, a matter which involves the exploration of other possible resources at present unused or under-exploited, such as shark fishing, cod fishing in Ungava Bay, the full use of the widely distributed arctic char, and the development of sheep farming in certain parts. The development of other activities of this sort will not only relieve the pressure on the walrus but also allow the beginnings of a "corporate" organization of settlements, with a greater division of economic employment between the members of each settlement than is the case at present.

This, however, is not the whole solution. Before the walrus take can be rationally controlled it is necessary to know a great deal more about the biology of the walrus than we know now. Research designed to meet this need is in progress, comprising the study of the reproductive rate, age composition, distribution, migratory habits and present numbers. This is not the place to describe this work in detail. One point, however, the migratory habits of the walrus, might well be mentioned.

Only one local population of walrus in Canada, that of the Igloolik region on Foxe Basin, is known for certain to remain in the locality in winter. Others, such as the summer populations at Coats Island, Southampton Island, Akpatok Island, and Frobisher Bay, are transient, and their winter distribution is unknown. There are indications, arising from the dates at which the walrus appear at various places, that the Hudson Bay and Hudson Strait animals, including the Frobisher Bay group, may be parts of a large population which moves into Hudson Strait in the spring and out again in the late fall, wintering perhaps in the neighbourhood of the ice edge in Davis Strait. Here they may well join with the walrus of west Greenland, those which support the walrus hunting activities of the Holsteinsborg Greenlanders.

Winter spotting from aircraft might go far towards settling this interesting question; and much can be done by a programme of tagging. Tagging of walrus, which presents a formidable problem in technique, is now being attempted experimentally. Mr. A.G. Loughrey of the Canadian Wildlife Service has adapted the native Eskimo harpoon to the designing of a stainless steel tag with a short chain and disc attached to the head, which is intended to remain in the fat layer of the walrus. The writer has designed a stainless steel dart whose shaft is approximately as long as the walrus hide is thick, the dart being applied with a hand harpoon from a whaleboat.

During the summer of 1954, 30 walrus were tagged off the coast of Coats Island by the Wildlife Service, using the modified Eskimo harpoon, and 23 were tagged with the Fisheries Research Board's tag. By the end of the 1954 hunting season 2 wildlife tags had been turned in by Eskimo who had killed the walrus off Southampton Island.

Canadian Government work in the north

With the recent increase in government activity in the Canadian north it is no longer practicable to publish notes on the work of all departments. In future, beginning with the summer of 1955, we plan to include a list at the end of each field season giving the names and areas of work of all government parties in the Arctic and Subarctic, and to publish notes on certain parties only. In 1954 the work of some departments has already been covered by notes, and other notes will appear; the following list includes only a few of the government agencies concerned with northern work:

Entomology Division, Department of Agriculture

Northern Insect Survey

Eureka	: P.F. Bruggemann
Hebron	: J.F. McAlpine, E.E. Sterns
Indian House Lake	: W.R. Richards, W.R. Coyles
Payne Bay	: R. McCondochie
Sugluk	: H. Huckel

Geographical Branch, Department of Mines and Technical Surveys

Mackenzie delta (physical geography)	: J.R. Mackay, J.K. Stager, V. Sim
Coppermine area (physical geography)	: M. Marsden, G. Falconer
Bathurst Inlet (physical geography)	: J.B. Bird, M. Beryl Bird
Aklavik (survey of new sites)	: J.K. Fraser

Geological Survey, Department of Mines and Technical Surveys

Yukon

Keno Hill	: E.D. Kindle
Mayo District	: R.W. Boyle
Mayo Lake	: L.H. Green
Glenlyon map area	: R.B. Campbell
Kaskawulsh map area, St. Elias Mountains	: J.C. Wheeler
Wolf Lake map area, Cassiar Mountains	: W. H. Poole

Northwest Territories

Northern Ellesmere Island	: R.L. Christie
Mould Bay	: E.T. Tozer
Arctic Bay	: R.G. Blackadar
Pond Inlet	: W.L. Davison
Operation Baker	: G.M. Wright, R.C. Shields, C.H. Smith, J.A. Fraser, J.G. Fyles
Hill Island Lake (west half)	: R. Mulligan
Hill Island Lake (east half)	: F.C. Taylor
S.E. District of Mackenzie (aeromagnetic surveys)	: F.P. Duvernet (in charge)

National Museum, Department of Northern Affairs and National Resources

Firth River valley (archaeological reconnaissance)	: R.S. MacNeish
Southampton Island (archaeology, joint party with Smithsonian Institution)	: H.B. Collins, W.E. Taylor
Isachsen (natural history study and collecting)	: S. MacDonald

National Research Council

Aklavik (survey of new sites)	: J.S. Pihlainen, G.H. Johnston, R.J.E. Brown
H.M.C.S. Labrador (cosmic rays)	: D.C. Rose

Revised Eskimo Grammar

In 1883 the Rev. E.J. Peck, Church of England missionary at Little Whale River on the east coast of Hudson Bay, produced the manuscript of an Eskimo grammar. In part this was an adaptation of the earlier works of the Moravian Brethren on the Coast of Labrador and Kleinschmidt's grammar of the Greenlandic language.

This manuscript was printed and reprinted by the Geographic Board of Canada in 1919, the Council of the Northwest Territories in 1931, and by the Diocese of the Arctic (Church of England in Canada) in 1943.

A revised and enlarged edition prepared by the Rev. Maurice S. Flint was printed in 1954. There have been several outstanding additions to the earlier editions. A history and explanation of the syllabic characters is now included and of even greater value, for the present at least, is the translation of all Eskimo words into their syllabic equivalents. A vocabulary of some 300 common words has been added and follows the section on grammar. A comparison of the 1931 and 1954 editions shows that changes have been made in word order in many of the examples, that new words have been used to translate English words, and as is to be expected that there are changes in spelling in the rendering of Eskimo words into Roman characters. The rearrangement of some sections has clarified the text considerably. The arrangement of the new edition makes the book very readable and those responsible deserve the thanks of all who will have occasion to use it.

The 1954 edition can be obtained from the Rev. Maurice S. Flint, Trinity Church, 425 King Street, East, Toronto, at a cost of $1.50 per copy postage free.

Letter to Mr. T.H. Manning:

The following letter has been reproduced as it contains interesting references to the wildlife in Banks Island.

Sachs Harbour,
March 23, 1955.

Dear Tom:

I was very glad to hear from you also glad you liked the skulls I sent you. Too bad I couldn't fill out what you want but I did my best. Too bad I didn't get your letter soon enough. I just got it on the 20th of March but I'll do my best to try and get some skulls. Only ones hard to get are bearded seals -- always the heads are smashed up. I came across here to Banks Island by Fred alone. I left my family in Tuk and I sent Ernest to school last fall. He sure didn't like going to school but when I told him he had to go he said okay. I sure missed him on the trail. He trapped with me last winter and he got 40 foxes. I think if I had him this winter he would have got more. There were lots of foxes this winter but we lost lots by wolves and the foxes were eating each other up so that made it worse. We got several crazy foxes this winter so it's a bad sign for next year. It's been pretty good all along the mainland coast from what we have been hearing for foxes.

Pat Kivik would like to find out just where the cache is in De Salis Bay. He wants you to draw a map of the bay and where you made the cache. Fred says he often thinks of you. He did good this year with his family in trapping. They got over 1,200 foxes up till now. They all still have one more trip to make. The caribou are dying off again this winter -- mostly cows and fawns and there have been a lot of wolves in Nov. and Dec. Soon as the sun came back they seemed to go some place -- maybe further north going with the caribou. The D.P.W. building up here in Sachs next summer somewhere on top of the hill by the ice pond. That'll be all for now.

I am sincerely yours,

(Sgd.) Bertram Pokiak

Change of Address

Members are earnestly requested to advise the Treasurer, Mr. H.M. Cox, 196 Metcalfe Street, Ottawa, promptly of any change of address.

Editorial Note

The Editor would welcome contributions from those who are at present in the Arctic or have information about work in the Arctic. All material for the Circular should be sent to:

Mrs. Graham Rowley,
10 Maple Lane,
Ottawa 2, Ont.

THE ARCTIC CIRCULAR

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Sixty-first Meeting

The sixty-first meeting of the Arctic Circle was held in the P.L.D.G. Mess, 60 Queen Street, on Friday October 14. The President, Mr. A. D. McLean, was in the Chair, and introduced the speaker, Mr. J. S. Tener. Mr. Tener gave an account of a "Canoe trip on the Back and Thelon rivers".

Sixty-second Meeting

The sixty-second meeting of the Arctic Circle was held in the P.L.D.G. Mess, 60 Queen Street, on Thursday November 8. The President, Mr. A. D. McLean, was in the Chair and introduced the speaker, Mr. C. L. Merrill. Mr. Merrill described the work of "Site selection and construction at Aklavik, 1954-5", and illustrated his talk with a film.

An anthropological survey of the Belcher Islands. By Claude Desgoffe

The following account of work in the Belcher Islands during the summer of 1954 was written by Claude Desgoffe shortly before he returned to the islands in June 1955 to continue his anthropological studies for the Department of Northern Affairs and National Resources. Mr. Desgoffe was accompanied by Gilles Lefèbvre of the University of Montreal. Early in September it was learned that Mr. Desgoffe and his two Eskimo companions had been drowned, presumably on August 6. The circumstances of this tragic accident are described in another note in this issue. Editor, A.C.

The Eskimo are often considered to be one of the best known aboriginal people. There is no doubt that their culture has been carefully observed in Canada, as well as in Alaska and Greenland. But as far as Canada is concerned, most studies, such as

the outstanding work of Jenness, Birket-Smith, Boas, Rasmussen, Hawkes, and Turner, have been historical and descriptive, rather than functional and comprehensive, and were made at a time when the Eskimo were relatively free from outside influences. It is unfortunate that today, when the Canadian Government is starting a program of help for the Eskimo, we do not have a single exhaustive study of a community made with the techniques of modern cultural anthropology. Such a study would give a detailed insight into the way in which a contemporary Eskimo group is organized. We do not yet know how the internal forces which integrate the different facets of such culture into a homogeneous whole operate, and how the process of disruption works whenever external influences are not integrated into the original culture.[1]

The main purpose of my visit to the Belcher Islands in the summer of 1954, which was made possible by a scholarship from the McGill University-Arctic Institute Carnegie Program, was to find some of the answers to these problems. I planned this "community study" as the first of a series, which would range from the study of a rather simple, well-integrated group to that of more complex groups, highly disturbed by intense contact with the white man. Each group was to be chosen as characteristic of some definite geographical environment and historical development. It was hoped that the conclusions reached in this work would give a fairly comprehensive idea of the direction of the socio-cultural evolution of the Canadian Eskimo. Furthermore, that hypotheses formulated in the course of these investigations would be of assistance to the administration in anticipating the numerous implications of a planned change.

I am interested in the Eskimo for themselves, and not merely as a group of people on which to test hypotheses for the sake of anthropological theory, therefore I think that the community studies should have a historical background, provided by interviews and archaeological excavations, whenever such information is not readily available.

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1. Some work along these lines has been done by J.J. Honigmann, who published a paper on "Intercultural relations at Great Whale River", Amer. Anthropologist, Vol. 54 (1952) pp. 510-22. In Alaska G.D. Berreman has made a detailed study of Nikolski in 1952, but his M.A. thesis for the University of Oregon, "A contemporary study of Nikolski, an Aleutian village", has not yet been published.

The Eskimo of the Belcher Islands seemed the most suitable group for the first study. It was a conveniently small community of Eskimo who had lived in fairly complete isolation, but were beginning to be affected by the outside world. The year 1954 appeared crucial as a mining company[1] had made plans to send in a group of technicians. Moreover, no data had ever been collected about the physical characteristics, language, and ethnography of these Eskimo, and no systematic excavations had been made, although archaeological artifacts had been collected.

On 24 June 1954 I left Moosonee in a Canso of Austin Airways, which planned to drop me at the Belcher Islands on its way to Port Harrison. Heavy fog over the Belchers, however, made a landing impossible and the aircraft continued to Port Harrison. An enforced stay of three days there gave me an opportunity to copy the complete census of the Belcher Islands which was kept by the local member of the R.C.M.P. and to examine the many archaeological sites on Patterson Island.

On June 27 the Canso dropped me at the Belcher Islands on its way back to Moosonee. For the first four weeks I remained near the Hudson's Bay Company's outpost on Tukarak Island, which at that time was the main point of concentration of the Belcher people (15 families). Here I was able to study the community through interviews and participant observation. I also made short trips across Tukarak Island and over to Innetalling Island to survey some archaeological sites.

From a census taken at the beginning of August 1954, the natives living on the Belcher Islands numbered 185, of whom 161 were islanders of long standing, 20 came from Port Harrison and had established themselves on the islands since 1953, and 4 came from Great Whale River with the new trader. The living conditions were not very cheerful when I arrived as the store had

1. Accounts of the plans of the Belcher Mining Corporation have been published in the Northern Miner for 14 January 1954, pp. 17, 22 and for 7 April 1955, p. 22.

been empty since March and game was scanty in this part of the archipelago. There were two other main camps, one on French Island (8 families) in the south and the other in the vicinity of Eskimo Harbour (10 families) in the north. The food situation was rather better at the northern camp.

The mining party arrived on July 22 in the Agamiski and Fort Charles, which had been chartered from the Hudson's Bay Company. Both ships called at the post, where they unloaded a first shipment of supplies, mainly flour, for the store, and then proceeded to "Iron Cove" in the vicinity of Haig Inlet, Flaherty Island, where the mining camp was to be set up. The Belcher Mining Corporation brought in a party of fourteen, including geologists, drillers, and carpenters, for a 2-month drilling program. L. F. Gauvreau was the mining engineer in charge. Constable E. J. Ard of the R.C.M.P. and Bill Woodrow, who was to take charge of the trading operations for the summer, also came in with the group.

From July 23 until August 28 I camped near the mining installations where I made a careful study of all native - white relationships. Twelve natives were hired by the mining company and three families from Tukarak moved their quarters near the camp. During this period I also made a short trip to Eskimo Harbour for archaeological work and another to the post as I wanted to be present when the Fort Charles called for the second time on August 2 and when the medical party arrived on August 6.

During my stay on the islands I excavated five Thule house ruins. No traces of the Dorset culture were found. There are numerous Thule-type houses on the Belchers, mainly on the northern part, around Eskimo Harbour, which was surprising as G. I. Quimby noted: "The semisubterreanan house characteristic of the Thule culture seems to be lacking in this area".[1]

On August 28 I finally moved back to the post, where I remained until September 23, as the greatest concentration of natives was in this area at the time. The bustling activity

1. G. I. Quimby, 1940. "The Manitunik Eskimo culture of east Hudson's Bay". Amer. Antiquity, Vol. 6, pp. 148-65.

which characterized the period from July 22 to the end of September was in sharp contrast with the quiet days we had known before, and had obvious consequences on the traditional pattern of life, I was fortunate to be present at this period of culture contact.[1]

Other visitors to the islands during the period July 22 to September 23 were Douglas Banks, president of the mining company, James Houston, of the Department of Northern Affairs, who started carving activities among the islanders, the Reverend S. Wilkinson, the Anglican missionary at Great Whale River, Dr. L. M. Scofield, mining geologist, and Lloyd Lockhart of the Toronto Star. On September 23 all white people on the Belchers left by aircraft for Moosonee.

On my way south, I spent a week in Moose Factory visiting and interviewing Eskimo from the Belcher Islands who were patients at the Indian Hospital.

This study of the Belcher Islands community will be continued in the summer of 1955. Gilles Lefèbvre, a linguist from the University of Montreal, plans to join me for the summer.

I should like to take this opportunity of thanking the members of the R.C.M.P., both on the Belcher Islands and at Port Harrison, and the officials of the Belcher Mining Corporation, who all gave me much valuable assistance.

Hydrographic survey vessel for the Canadian Hydrographic Service

The Minister of Mines and Technical Surveys announced on 30 March 1955 that the keel of the new hydrographic vessel Baffin had been laid at the shipbuilding yard of Canadian Vickers in Montreal. This vessel was designed by Milne, Gilmore and German to meet the special requirements of the Canadian Hydrographic Service for survey work in Canadian Arctic waters.

The vessel had to be able to operate for long periods of time under arctic conditions. This meant that she required the unusually long cruising range of 14,000 miles and had to be able to extricate herself from any unfortunate situations in ice.

1. An account of this culture contact by Claude Desgoffe was published in Anthropologica, No. 1 (1955) pp. 45-61.

She had to be sufficiently strong to ride out violent northern storms, and be capable of manoeuvering and navigating in restricted, shallow, and often dangerous waters and yet provide comfort for her complement of scientists, officers, and crew. Space had also to be allowed for carrying six special sounding launches and two helicopters.

In order to meet these requirements at a reasonable initial capital expenditure, it has been necessary to keep the principal dimensions within close limits. The vessel is 285 feet in over-all length, and has a beam of 49 feet 6 inches and a maximum draft of 16 feet 6 inches. Additional breadth, although desirable from the point of view of more spacious quarters, greater tank capacity, and longer cruising range, would result in uncomfortable stiffness and a quick period of roll which would be most unpleasant to all on board.

Comfortable quarters have been planned for a total of 102 persons, which will include hydrographers, helicopter pilots and mechanics, sounding launch mechanics, electronic specialists, draftsmen, and other technicians, the crew of the vessel, and from time to time oceanographers, geologists, geodesists, and other scientists.

Ample power is essential for operations in heavy ice. The Baffin will be equipped to deliver a total of 8,000 shaft horsepower on two shafts through modern geared diesel machinery connected to the shafts through special quick-emptying fluid couplings and reduction gears. Shaft and rudder stock will be 40 per cent in excess of the strength required by Lloyd's Register of Shipping for vessels navigating in ice. The coefficient of weight to horsepower is about 0.325. Machinery is arranged slightly aft of amidships with fuel tanks, for the large supply of fuel necessary, in the double bottoms forward and under the engine room; in addition there are deep tanks for fuel immediately forward of the engine room and, besides the usual forepeak tank, provision has been made for a trimming tank. Abaft the engine room, tanks have been placed abreast of and between the shaft tunnels for fresh water, gasoline, and water ballast. There is a cargo hold in the forward part of the vessel immediately in front of the deep fuel tanks.

In conformity with the requirements of the International Convention for Safety of Life at Sea for vessels carrying up to 29 passengers on international voyages, and in conformity with the

requirements of the Board of Steamship Inspection, subdivision has been provided for a one-compartment vessel. The upper deck has been planned as the bulkhead deck. The main deck is also continuous and the lower deck is continuous except for the engine room.

Forward of the deep fuel tanks on the lower deck are store rooms, refrigerating chambers, gyro room, and carpenter's and boatswain's stores and workshops. Abaft of the engine room the space on the lower deck has been used for a large projection room, laboratory, photographic and printing rooms, laundry, salvage gear store, steering gear store, and general and linen stores.

On the main deck are the accommodation for the crew, recreation rooms, mess and galley spaces, canteen and quarters for engineer officers and stewards.

Four of the six sounding launches have been placed on the continuous upper deck. They must be kept as near to the water-line as possible in order to simplify launching and hoisting operations. Both lifeboats are also on this deck, immediately under the helicopter flight platform in the aft part of the ship. Accommodation for the hydrographic personnel and hydrographer's and officer's dining rooms are in the forward part of the upper deck. Aft is space for officer's recreation, hospital, ship's doctor, and technician's cabins.

The forepart of the boat deck provides space for the hydrographer-in-charge and two assistant hydrographers and also a drafting office to facilitate on-the-spot chart making. Space for two Bell helicopters is in the after part of the boat deck. These aircraft, used for aerial photography and reconnaissance work, will be housed in a large hangar fitted with a specially designed aluminum weathertight door. A mobile diesel crane will also be housed in the hangar; it will be used for handling the helicopters and to store and service the ship.

Quarters for the ship's Master, the principal deck officers, and the wireless officers are on the bridge deck.

Another feature connected with the primary function of the ship, is a plotting house on the flying bridge. From this vantage point and with the aid of the special echo-sounding instruments, plotting operations can be carried out during much of the day with greater facility than from the hydrographic drawing office below.

Special attention has been given to fire prevention in the new vessel. No wood is used except in the officer's and scientist's quarters, where built-in furniture is of wood but the bulkheads are of fireproof material. In the crew's quarters all furniture is metal and the bulkheads are steel or fireproof material. All paints and varnishes used in the quarters are of fire-retarding type and no inflammable paint is to be used on the ship. Floor coverings are mainly latex base compositions.

The "Rich Audio" combined system of detecting and extinguishing fire will be used in the hold and storage spaces. Detection is by means of smoke tracers led through pipes from the protected compartment to a sight cabinet. An electronic device sets off the alarm as soon as smoke is drawn into the sight cabinet and carbon dioxide is discharged into the compartment by hand, to safeguard against the suffocation of anyone before escape from the affected area could be made. An electrically supervised system combined with an automatic sprinkler system will be used in the accommodation spaces. Standard equipment, such as portable extinguishers, will also be provided.

Electronic aids to navigation will be included in the ship. Two radar sets and special position fixing equipment will be installed. Loran equipment will be carried and also additional position fixing instruments for use in survey operations which are carried on beyond accurate Loran range. Three echo-sounding sets will be provided and will be of two types: one for extreme depths, and the other for shallower depths.

Standard wireless telegraph and radio telephone equipment, and other instruments such as electrical logs and wind velocity recorders will be filled.

PRINCIPAL PARTICULARS OF THE BAFFIN

Length over-all (O.A.)		285 feet 0 inches
Length between perpendiculars (B.P.)		262 feet 0 inches
Breadth moulded		49 feet 6 inches
Depth moulded to upper deck		29 feet 6 inches
Depth moulded to main deck		20 feet 6 inches
Design draft in salt water		15 feet 0 inches
Displacement at 15 ft. 0 ins. draft		3,700 tons
Propulsion-geared diesels	Total	7,060 B.H.P.
Speed		15 1/2 knots
Radius of action		14,000 nautical miles

PRINCIPAL PARTICULARS OF THE BAFFIN (cont'd)

Crew and operations officials	99
Spare	3
Total complement	102
Hold capacity, bale, not less than	14,000 cubic feet
Refrigerated storage space capacity, not less than	5,000 cubic feet
Helicopters, Bell	2

Activities of the Canadian Hydrographic Service in northern waters, 1954. By D'Arcy Charles.

In 1954 the Canadian Hydrographic Service sent two chartered ships and four other survey parties to the north to continue the charting of arctic and subarctic waters. These parties were in the north from June to mid-October.

As in previous years a hydrographic survey party accompanied the Department of Transport's ship C.D. Howe on her Eastern Arctic Patrol voyage of some 12,000 miles. This party, under the direction of R. B. Campbell, obtained thousands of miles of "track" soundings in previously unsounded waters. L.P. Quick headed a similar party aboard the Department of Transport's icebreaker d'Iberville and D.D. LeLievre carried out similar duties aboard the new Naval icebreaker H.M.C.S. Labrador. H. R. Blandford was aboard the U.S. Navy icebreaker Burton Island in the Western Arctic

The chartered sealers, the Theron and the Algerine, were fitted out at Pictou, Nova Scotia, whence they sailed in mid-June for subarctic waters. The Theron, for the third consecutive year on hydrographic operations under the command of J.E.V. Goodwill, continued the survey of the harbour and approaches at Hopedale, Labrador. In July she proceeded to Rankin Inlet, on the west coast of Hudson Bay, where the discovery of nickel and other minerals has created the need for an ore-loading port. More than 3,000 linear miles of sounding were made from the Theron's three launches in shoal waters, and 200 square miles of the large-scale charting necessary to allow passage of deep-draft ore ships was completed.

The Algerine returned to Ungava Bay for the third year; it was her fifth year with the Hydrographic Service in the Subarctic. Again she sailed through the reef-infested waters of the "Iron Coast" while soundings were made in strong currents and exceptional tides. The charting of Leaf Basin and the 40-mile long channel from Leaf Bay, begun in 1953, was completed and another potential ore-port 70 miles to the north at Payne Bay, was surveyed. Three large-scale charts have been issued including Payne River to the head of navigation.

The work being done in Ungava Bay and Rankin Inlet is of great importance for the eventual development of these potential mining areas.

Stamps of the North

Many of the recent stamps of Canada reflect the increased interest in the northern part of the country. As far as the Post Office Department's stamps are concerned, this appreciation of the north is of quite recent date; the red and blue map stamp of 1898 depicted none of the arctic islands, the 12 cent blue of 1927 included only part of Baffin Island, but the 5 cent green and gold stamp issued in 1955 to commemorate the Boy Scout Jamboree held at Niagara-on-the-Lake showed all of the arctic islands, at least in a general way.

The mention of a commemorative issue brings up the subject of the types of postage stamps issued in Canada. There are two main types in use at present; those issued for a limited period of time are called commemorative issues whereas those designed for use during a period of years are called ordinary issues.

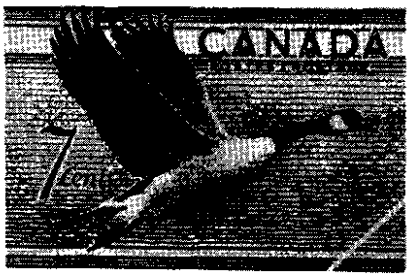
The 1927 20 cent orange Special Delivery stamp was an ordinary issue and depicted the five stages of mail transportation including a dog team.

The 1938 6 cent blue Air Mail stamp (No. 1) was another ordinary issue and showed the S.S. Distributor on the Mackenzie River and a mail plane in flight above the river.

The ordinary issue 7 cent blue Air Mail stamp of 1946 illustrated a Canada Goose in flight. The engraving for this stamp was made from a photograph, unlike the preceding stamps which were engraved from drawings.

1

2



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Another ordinary issue stamp which came out in 1946 was the 10 cent olive postage stamp illustrating the arm of Great Bear Lake where radium was discovered.

The Canada Goose was again featured in 1952, this time on the 7 cent blue ordinary issue (No. 2). This was a close-up of the bird, and the drawings were prepared by the well-known Canadian artist, Emanuel Hahn of Toronto.

In 1953 the Post Office Department began to issue commemorative series of wildlife stamps. The purpose of the wildlife series is, in the words of the late Hon. Alcide Côté, then Postmaster General, "to increase the interest of the Canadian public, and others interested in Canada, in the importance of our wildlife resources. It is the Department's hope that the wildlife series of postage stamp issues will emphasize to all Canadians the importance of securing and restoring the wildlife resources of Canada, not only for their considerable economic value but also because they are a constant source of pleasure to thousands in every walk of life." These stamps have been very popular and the demand for them has far exceeded that for a second group of commemorative stamps which was issued during roughly the same period of time.

Three wildlife stamps were issued on 1 April 1953. The 2 cent blue stamp (No. 3) showing a polar bear was designed by John Crosby, an artist of the National Museum of Canada. The other two stamps (Nos. 4, 5), depicting a moose and a bighorn sheep, were designed by Emanuel Hahn. The moose was illustrated on the 3 cent brown and the bighorn sheep on the 4 cent black.

In 1954 an addition was made to the northern aspect of the wildlife series when the 4 cent grey postage stamp of the walrus was issued (No. 6). This stamp was also designed by Emanuel Hahn and an interesting feature is the incorporation of "sundogs" into the background.

The following year two additional postage stamps were issued in support of Canada's National Wildlife week. The 4 cent stamp was purple in colour and illustrated the head of a muskox (No. 8). It was designed by Emanuel Hahn and, it may be recalled, was the subject of much comment. The 5 cent issue was blue in colour and showed two Whooping Cranes in flight (No. 7). This stamp was designed by William Rowan, a zoologist of Edmonton, Alberta.

The preceding stamps were all commemorative issues and were only issued for a short period of time. In the spring of 1955, however, an ordinary issue postage stamp was released which has been of exceptional interest to the public. This stamp was designed by Harold Beament of Montreal, and depicted an Eskimo in his kayak against the background of a towering iceberg (No. 10). This stamp, a 10 cent brown, replaces the famous "Fur Resources" stamp (No. 9) in which distortion of perspective gave rise to a race of giant beavers. At the time of issue of the new stamp, the late Postmaster General stated, "This stamp is a tribute to the remarkable people of our last frontier." The stamp has been well received and it is a matter of satisfaction that it will be in use for several years.

Additional stamps in the wildlife series are in preparation and will be issued from time to time.

Notes on the northern activities of the Canadian Wildlife Service, 1954.

In April W. W. Mair accompanied the spring inspection flight from Churchill, visited the major settlements of Keewatin and eastern Mackenzie districts, and secured useful information regarding the availability and use of wildlife resources. In July V.E.F. Solman made wildlife observations while on a series of ice reconnaissance flights carried out by the R.C.A.F. from Resolute, Cornwallis Island.

Several field officers were responsible for studies in mammalogy. In the early spring E. H. McEwen continued his studies of muskrats on the Mackenzie delta; later he surveyed all sites at which beaver had been introduced in 1953 and initiated a second beaver study in the Arctic Red River region. In addition to these projects, Mr. McEwen continued the aerial surveys of the Yukon-Alaska-Northwest Territories caribou herds, made routine observations in connection with the reindeer roundup, and in the summer made studies of white whale and arctic fox on the outer edge of the Mackenzie delta.

D. R. Flook continued a study of moose in the Mackenzie River district during the summer and in the course of this work he travelled parts of the Liard, Nahanni, and Willowlake rivers. A preliminary survey of the abundance

of beaver in the vicinity of Fort Simpson was made and this was later combined with a more extensive aerial survey undertaken in the autumn. During the winter, using aircraft and dog teams, predator control work and animal studies on moose and caribou ranges were carried out in the Keller Lake area.

Routine studies of buffalo and fur-bearing animals were made in Wood Buffalo National Park during the spring by W. A. Fuller, who later carried out a beaver survey east of Fort Smith, an area in which the only previous travellers who have left written records were Samuel Hearne in 1771 and Charles Camsell in 1914.

J. P. Kelsall continued research on caribou in the District of Mackenzie.

In late February 1954, A. G. Loughrey opened a Canadian Wildlife Service office in the Defence Research Northern Laboratory at Fort Churchill. In March he made aerial surveys of barren ground caribou herds in northern Manitoba and the District of Keewatin. Data on winter range distribution, spring migration, and calf counts were obtained and several aerial census techniques were tested. In April he went to Frobisher Bay to make an aerial survey of caribou; in May similar work was done at Fort Churchill. The period from July to early September was spent in the study of the Atlantic walrus. During a week on Walrus Island observations were made while the herd was undisturbed and a technique for tagging adult walrus was initiated. Thirty were tagged. In addition a method of counting the animals in a herd was developed and used. Measurements and biological specimens were also obtained from walrus collected by the Eskimo. During the same period 25 Brünnich's Murres were banded at the colony on Coats Island. Greater difficulty was experienced in catching the birds than during the previous summer, when 500 were banded, because banding was attempted after the young had hatched and the adults were not "sitting" as closely.

Brünnich's Murres were also studied by L. M. Tuck and a student assistant on Akpatok Island. Despite the difficulties inherent in the site valuable life-history data were acquired in July and August.

D. A. Munro visited Iceland in May to make a study of the thriving eider-down industry which is in operation there, for use in setting up a similar industry for the Canadian Eskimo.

An aerial survey of breeding populations of eider ducks along the east coast of Hudson Bay and on both sides of Hudson Strait was made by Graham Cooch in the last week of June. Later he made an investigation of the Blue and Lesser Snow geese breeding at McConnell River, south of Eskimo Point, and a total of 1,600 moulting geese were banded. The fall populations of these birds were studied by him and G. M. Stirrett along the southern coast of Hudson and James bays from Fort Severn to Rupert House. In late June E. H. McEwen made a brief survey of Snow Geese breeding at Kendall Island in the delta of the Mackenzie River.

Lake Claire in Wood Buffalo National Park has been the site of commercial fishing operations for goldeye (Amphiodon alasoides Raf.) on several occasions in the past. As a result of investigations carried out by W. A. Sprules of the Fisheries Research Board, commercial nettings were permitted in 1948, 1949, and 1950. A licenced commercial fishery for this species was again in operation in 1954. The 250,000 pound round weight quota used in the past was not reached prior to 1954. At the request of the Northern Administration and Lands Branch, basic biological information concerning goldeye in this lake was obtained in 1954 by a limnologist of the Canadian Wildlife Service. Test nets were set before commercial operations began and random samples of goldeye were obtained. The fishing operations produced a remarkable catch of 240,000 pounds of goldeye (dressed weight), as well as nearly 8,000 pounds of walleye. The quality of all fish was rated good by the Department of Fisheries. The population of goldeye which ran into Lake Claire in 1954 was found adequate to provide for the licenced quota. Future commercial operations at this lake will be carefully scrutinized and licenced in accordance with annual biological findings.

Canoe accident in the Belcher Islands, summer 1955.

On August 6 Claude Desgoffe and two Eskimo companions, Levi Ayagatawa and Noah Kodlayok, left the Hudson's Bay Company post in the Belcher Islands, planning

to visit Eskimo Harbour and Johnson Island in the northern part of the Belcher group, and to return about August 20. Concern for the party was felt when the mining engineer at Eskimo Harbour learned that they were overdue, and at search was at once made. The first evidence of an accident was found on the west shore of Omarolluk Sound, about eight miles north of the post, where part of the burned gunwale of the canoe in which the party had been travelling, and charred bits of their equipment, were found washed up at the high tide mark.

The R.C.M.P. detachment at Port Harrison was notified on September 1, and sent an aircraft from Churchill to assist the Great Whale detachment with further searching, but no trace was found in any survivor. It is presumed that the party of three must have drowned on August 6.

Claude Desgoffe was born at Djidjelli, Algeria, in 1927, and graduated from the University of Paris after specializing in anthropology. He took post-graduate studies at the University of Copenhagen, where he studied Eskimo culture. After field work in Finland and Greenland, he spent the summer of 1954 making anthropological studies of the Eskimo on the Belcher Islands (see pp. 19-23) with a scholarship from the McGill University-Arctic Institute Carnegie Program. He was engaged by the Department of Northern Affairs and National Resources to continue his study of the life and social organization of the Belcher Islanders during the summer of 1955.

Both Eskimo were young men.

"G" Division of the R.C.M.P.

The headquarters of "G" Division of the R.C.M.P., which is responsible for all northern work, is at the R.C.M.P. Headquarters in Ottawa. The following list gives the members in charge at headquarters and at the four sub-divisions.

Officer Commanding	- Supt. H.A. Larsen, Ottawa
Officer in Charge CIB G Division	- Insp. W.J. Fitzsimmons, Ottawa

Whitehorse Sub-Division		Members in Charge
Sub-Division Headquarters	- Whitehorse	- Insp. J.R. Steinhauer
Detachment Commander		- Sgt. J.B. Fitzgerald
Detachments	- Whitehorse	- Staff Sgt. W.A. Allen
	- Carmacks	- Cst. S.W. Bates
	- Dawson	- Cpl. C.L. Restoule
	- Haines Jct.	- Cpl. W.G. Thurber
	- Mayo	- Cst. H.D. Ferguson
	- Old Crow	- Cst. R.E. Moore
	- Teslin	- Cst. J.G. Vincent
	- Watson Lake	- Cpl. R. Bakewell
Aklavik Sub-Division		
Sub-Division Headquarters	- Aklavik	- Insp. W.G. Fraser
Detachments	- Aklavik	- Cpl. L.C. Thorson
	- Arctic Red Riv.	- Cpl. C.W. Smith
	- Fort Good Hope	- Cpl. H.H. Aime
	- Fort McPherson	- Cpl. J.H. Biensch
	- Herschel Is.	- Cst. J.T. Hickling
	- Sachs Harbour	- Cst. R.J. Hunter
	- Tuktoyaktuk	- Cst. W. Yakemishin
Fort Smith Sub-Division		
Sub-Division Headquarters	- Fort Smith	- Insp. R.J. Belec
Detachments	- Fort Smith	- Sgt. L.A. Gibbs
	- Cambridge Bay	- Cpl. E.E. Jones
	- Coppermine	- Cpl. D.C. McDougall
	- Fort Liard	- Cst. H.K. Hodgson
	- Fort Norman	- Cpl. D.A. Coleman
	- Fort Providence	- Cst. D.G. Wilson
	- Fort Reliance	- Cst. J.B. Ballantyne
	- Fort Resolution	- Cpl. T. Auchterlonie
	- Fort Simpson	- Cpl. S.A. Byer
	- Hay River	- Cpl. R.R. Johnson
	- Norman Wells (temporary)	- Cpl. D.A. Coleman
	- Port Radium	- Cst. M. Prentice
	- Rae	- Cst. T.J. Garvin
	- Spence Bay	- Cpl. A.C. Fryer
	- Yellowknife	- Cpl. A.N. Lindsay

Eastern Arctic Sub-Division

Sub-Division Headquarters	- Ottawa	- Supt. H.A. Larsen
Detachments	- Alexandra	-
	- Fiord	- Cst. F.J.R. Stiles
	- Baker Lake	- A/Cpl. C.J. Dent
	- Cape Christian	- Cpl. D.S. Moodie
	- Chesterfield Inlet	- Cpl. C.E. Boone
	- Craig Harbour	- Cpl. G.K. Sargent
	- Eskimo Point	- Cst. W.F. Gallagher
	- Fort Chimo	- Cst. R.E. Hopley
	- Frobisher Bay	- Cst. B.A. Deer
	- Great Whale River	- Cst. W.H. Canam
	- Lake Harbour	- Cst. G.C. Barr
	- Pangnirtung	- Cpl. H.A. Johnson
	- Pond Inlet	- Cst. J.R. Johnson
	- Port Harrison	- A/Cpl. J.E. Decker
	- Resolute	- Cst. F.R. Gibson

New York Showing of Mrs. J.R. Woolgar's water colours of arctic plants

Readers of the Circular living in the New York area should make a point of visiting the Garden Club of America, 15 East 58th Street, New York, where, from the end of January to the end of March, Mrs. J.R. Woolgar of Yellowknife, N.W.T. will be showing a selection of her exquisite water colours of arctic wild flowers.

Correction to the date of the last index issued

The last index issued was dated 1954 in error. It should be bound up with Volume 6 for 1953. An index and contents list for Volume 7, 1954, will be distributed later.

Change of Address

Members are earnestly requested to advise the Treasurer, Mr. H.M. Cox, 196 Metcalfe Street, Ottawa, promptly of any change of address.

Editorial Note

The Editor would welcome contributions from those who are at present in the Arctic or have information about work in the Arctic. All material for the Circular should be sent to:

Mrs. Graham Rowley,
10 Maple Lane,
Ottawa 2, Ont.

THE ARCTIC CIRCULAR

VOL. VIII NO. 3 Published by The Arctic Circle 1955
Ottawa, Ontario

Among the Sessional Papers of the British Parliament there are a number which deal with the work of expeditions to the Canadian Arctic during the nineteenth century. These papers are an important source of material, particularly on the work of the many Franklin Search expeditions. The full sets of the Sessional Papers are not common, and the annual indexes are not always detailed or complete. Some of these papers, popularly called "Blue Books", are well known and to be found in many libraries, others have been almost entirely neglected. In the course of historical research on the Canadian Arctic, Andrew Taylor compiled a "Preliminary Guide" to these papers. Since many members of the Circle will find this reference useful, his list is issued as a complete number of the Circular. The guide cannot give a full account of what is in each paper, for these frequently contain a number of sledge patrol reports or letters, and the list is not necessarily complete. If any member of the Circle knows of any paper of the nineteenth century dealing with the Canadian Arctic which has been omitted, Mr. Taylor would appreciate being sent the reference. His address is: 293 Island Park Drive, Ottawa.

Ottawa members of the Circle will be pleased to know that there are two nearly complete sets of the Arctic Papers in the Northern Affairs Library, Vimy Building. There is a full set of the Sessional Papers in the Parliamentary Library, but it is naturally very much simpler to work with the Northern Affairs volumes.

Editor, A.C.

A Preliminary Guide to the Arctic Blue Books and Parliamentary Papers of the Nineteenth Century

by
Andrew Taylor

The Arctic Blue Books (more comprehensively described as the Parliamentary Papers) have long been the basic source of officially recorded information concerning nineteenth century exploration of much of the Canadian Arctic. Scattered through the voluminous tomes of parliamentary proceedings, they have never been fully exploited by researchers. Lacking tables of contents in most cases, and completely unindexed, the wealth of information they contain is extremely difficult to search with thoroughness. These Arctic Papers should be systematically examined and indexed to facilitate the use of their valuable contents, recorded at such high cost, financially and physically.

To varying degrees, reports of British arctic explorers were incorporated into the Sessional Papers of the Houses of Parliament, to become inherent components of the Parliamentary Papers. The contents of Sessional Papers were not limited to arctic expeditions, but covered the entire gamut of Parliamentary interests and activities, and occasionally bulked more than a hundred volumes annually. "The papers of the nineteenth century number over fifty thousand, and in the bound sets, take up several thousand volumes" (Ford and Ford, 1953, p. vii).[1]

Only 47 papers in this period are known by the writer to concern the Canadian Arctic. Certain subjects recorded in these Sessional Papers warranted broader dissemination outside Parliament. These were printed in larger numbers, and were separately bound usually in deep ultramarine paper wrappers to become known as Blue Books. These Blue Books "...give information of new discoveries; they are the official records of society; they gather from all quarters illustrations of the evils which Parliament is asked to remedy; they almost invariably refer to what is novel,

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1. Ford, P. and G. Ford. 1953. Select list of British Parliamentary Papers, 1833-1899. Oxford: Basil Blackwell, xxii + 165 pp.

and are very often the first authentic accounts published of the actual progress of society, or the formation of those new phases with which it is the duty of legislation especially to deal" (Jones, 1904, p. viii).[1]

Parliamentary Papers

Parliamentary Papers have been defined as "...either papers of the House of Lords or papers of the House of Commons. Being presented during the session of Parliament, they are termed the Sessional Papers of either House" (Adam, 1913, p.v).[2] Sessional Papers of each House of Parliament may be subdivided into two categories:

(1) Papers presented to the House in pursuance of an Act of Parliament, or in return to an order of the House.

(2) Papers presented by Command of Her Majesty.[3]

The Sessional Papers concerning arctic expeditions were all published as small folios (measuring 8.2 by 13.1 inches), although in later years other papers were bound as octavo volumes. Each House had its own system of numbering the papers. Workable collections of the Sessional Papers of the House of Lords are so rare, however, that a preference has developed amongst researchers to use the House of Commons Papers for reference purposes.

Following presentation, House of Commons Papers required a dated Order of the House to be printed. Hence, all but a few of the Command Papers contain the inscription,

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1. Jones, Hilda Vernon. (c. 1904). 'Catalogue of Parliamentary Papers, 1801-1900, with a few of earlier date'. London: P.S. King, viii+317 pp.

2. Adam Margaret I., John Ewing, and James Munro, 1913. 'Guide to the principal Parliamentary Papers relating to the Dominions, 1812-1911'. Edinburgh: Oliver and Boyd, vii + 190 pp.

3. All such Command Papers concerning arctic expeditions were published during the reign of Queen Victoria.

"Ordered, by The House of Commons, to be Printed...", on such and such a date. These House of Commons papers form a numbered series for each session beginning anew with Paper No. 1 for the new session. To cite them by number, it is usually necessary to give the sessional year to identify a paper. Normally the Sessional Paper number is in chronological sequence throughout the year, but occasionally where a second session has begun in that same year, a new sequence will be started, for example, amongst the Arctic Papers, H.C.-501 of the 1852 Session (1852k) was printed on 22 June 1852, and H.C.-82 of the 1852-53 Session (1852m) was printed on 20 December 1852, near the beginning of the new session.[1]

Sessional Papers of the House of Commons record material covering a great variety of subjects, much of it being in the form of correspondence, journals, or as reports of Parliamentary Committees. "...I do not think that there is anyone who more values the labours of Parliamentary Committees than myself. They obtain for the country an extraordinary mass of valuable information which probably would not otherwise be at hand or available; and formed as they necessarily are of chosen men from the two most important bodies of the State, their Reports are pregnant with prudent and sagacious suggestions for the improvement of the administration of affairs." (Lord Beaconsfield in Hansard, 3rd Series, Vol. 235 (1877) p. 1478).

"Parliamentary Papers do not usually have authors or titles in the commonly accepted sense....The paper cover and title-page may have the short title at its head and a longer title, consisting of the whole or part of the terms of reference, in its centre; and sometimes none of the words used in the short title... are to be found in the 'long' title." (Ford and Ford, 1953, p. ix). The use of the short and long title by two different authors for the same paper has occasionally been a source of ambiguity.

The pagination of volumes of Sessional Papers of both Houses was not done at the time of printing. The pages of some volumes were officially numbered in manuscript, but the same volumes were also issued completely bound, without being paginated.

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1. In the bibliography given below, the date of publication of the paper has been used, exclusive of the sessional date, and a purely chronological arrangement adopted.

Some of these have found their ways into libraries unnumbered and others have been numbered in manuscript without reference to the official pagination which is given at the front of each volume.[1] Where charts and maps have been inserted, they may in one instance have been included in the pagination, and in another omitted. Although reference to the sessional year and volume may lead to the discovery of the paper sought, the pages of a paper within different copies of the same numbered volume may vary somewhat. Consequently, reference to pages of Sessional Papers numbered in manuscript may be only approximate. However, each paper has its own printed pagination, which is a much more reliable one to use than that of the Sessional Papers.

There are occasional discrepancies in pagination even between papers which have printed page numbers. In 1852, the House of Commons issued the "Additional papers Relative to the Arctic Expedition under the Orders of Captain Austin and Mr. William Penny" /No. 1436/, which was numbered to page 368. An earlier edition of the same paper was dated 1851, and numbered 370 pages, yet the contents are apparently the same in both papers (see 1852b).

Command Papers

Command Papers are those Sessional Papers which were presented by command of Her Majesty the Queen, in order to convey to Parliament and to the public, information which the government of the day considered should be widely disseminated. Until comparatively recent years, presentation to Parliament was the sole method of publication possessed by the government, with the exception of the Gazette. This channel became increasingly used with the growing influence of public opinion, in order to inform and guide the opinions by which it existed.

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1. e.g., The table of contents of the Sessional Papers of the House of Commons, 1834, Vol. XVIII, is headed with a note which reads in part as follows: "...the Figures at the end of the line, refer to the MS. Paging of the Volumes arranged for The House of Commons." Usually, this manuscript pagination was done in ink, and on the odd-numbered pages only.

During the nineteenth century, Command Papers greatly increased in numbers, as the government discovered the wisdom of issuing spontaneous information on matters of current public interest, without awaiting a request by Parliament. This outlet was not available when the House was in recess, and in order to create a means of publication to cover urgently developing situations (such as those in foreign affairs), the agency of H.M. Stationery Office was created.

Command Papers in printed form were issued in numbered series, the numbers always being enclosed in square brackets. Three series have been developed to date, as follows:

(a) /1/ to /4222/, terminating with the Session of 1868-69.

(b) /C. 1/ to /C. 9550/, ending with the Session of 1899.

(c) /Cd. 1/ to /Cd. .../ in current use.

The Arctic Papers are confined to the first two of these series.

Public Sale of Parliamentary Papers

The publication of Parliamentary Papers in bound volumes appears to have begun in 1773 (Journal of the House of Commons, Vol. XXXIV, p. 385). Prior to 1800, House of Commons Papers comprised the bulk of the published Parliamentary Papers, which by that date totalled only 110 volumes. By mid-century, the number of volumes of a single session exceeded this number, with Command Papers proportionately increasing.

Until the Session of 1836, Parliamentary Papers were not sold to the public. Prior to 1801, reports, estimates, etc. were published only in the Journals of the House of Lords and/or House of Commons. After several abortive efforts to find a practical solution to the problem of publication, a Select Committee of the House of Lords, early in 1834, resolved that it would be "... generally convenient and might lead to a further saving of the public money", if the Parliamentary Printers were permitted to accept orders from booksellers for copies of the Papers printed for the use of the House. A Second Report (1835) by this same Committee recommended: "That the Reports and Parliamentary Papers printed for the use of the House should be rendered accessible

to the public by purchase, at the lowest possible price at which they can be furnished ..." The final details with regards to printing and prices were settled in May 1837, with which public circulation of Parliamentary Papers was finally established (Jones, 1904, pp. v-vii).

Arctic Papers

The Arctic Papers located to date by the writer number 47, all of which have been referred in the bibliography to the Sessional Papers of the House of Commons.[1] Command Papers form only 30 per cent of the numerical total, but comprise 79 per cent of the 4,300-page bulk of all Arctic Papers.

Despite the reverence in which these papers are held by some authorities, there is at least one exception amongst them. Lieut. Commander R.T. Gould[2], R.N., has written of the Arctic Blue Books as follows: "They are a most singular collection. A complete set /i.e., of the Arctic Blue Books/ would rival in bulk the four Shakespeare Folios, and contain even more words, of all kinds, than the minutes of the Royal Oak court-martial (happily left unprinted). Nothing like selection appears to have been attempted -- every scrap of paper that found its way into official channels, from the most valuable hydrographic and other information down to begging letters and mediumistic ravings, was sure to be cast up in one of these Blue-books, in an order partly chronological, largely fortuitous, and, as a whole, defying analysis. In many cases the Blue-books must now be regarded as the best procurable authorities, the original documents from which they were compiled being no longer extant -- but they are by no means easy reading, and probably never were, even in their heyday, widely read" (Gould, 1928, p. 87).

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1. References to Arctic Expeditions occur in the Journals of both Houses, but the entries there are brief, and generally seem more concerned with the mechanics of Parliamentary procedure. Arctic references in the Journals have not been included in the bibliography below.

2. Gould, R.T. 1928. 'Oddities: a book of unexplained facts'. London: Phillip Allan, 336 pp.

Gould's opinion may be regarded as essentially correct; examples substantiating his statements are not difficult to find. That the Arctic Papers have continued to "defy analysis" for almost a century is a challenge which does us little credit, since until quite recently, they have been the basic source of knowledge of broad areas in the Canadian Arctic.

These papers depended for their content upon the safe transmission of explorers' journals and reports from the Arctic to London by tenuously stretched nineteenth century lines of communication. The activities of a single expedition occasionally extended through several sessions of Parliament. Blue Books were hurriedly compiled for early presentation of the latest information on a subject of burning public interest to an avid reading public, and it is not surprising that they contain numerous errors, and much duplication. There are many instances where a letter or report has been printed twice, and at least one instance where one was printed three times.

The Arctic Papers may be grouped into four main sections:

(1) 1818 Northwest Passage and North Pole Rewards (1 paper)

(2) 1833-4 Captain John Ross's expedition (3 papers)

(3) 1846-58 Captain Sir John Franklin's expedition, and the subsequent search expeditions (35 papers)

(4) 1875-8 Captain Sir George Nares's expedition (8 papers)

(1) Northwest Passage and North Pole Rewards (1818)

The payment of cash rewards to encourage the solution of certain national problems of an exploratory or scientific nature was a principle established early in the eighteenth century, and became applied directly to arctic problems by 1745. The single 9-page paper given here was designed to excite interest in improved methods of establishing longitude at sea, as well as to renew national interest at the conclusion of the Napoleonic wars in the problems of the Northwest Passage, and of the North Pole.

1818 A Bill For more effectually discovering the Longitude at Sea, and encouraging Attempts to find a Northern Passage between the Atlantic and Pacific Oceans, and to approach the Northern Pole.
Ordered, by The House of Commons, to be Printed, 9 March 1818.

(9 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Bills Public, 1818, No. 99, Vol. I, pp. 151-9.

(2) Papers relating to the expedition of Captain John Ross (1833-4)

The three papers issued in 1833-4 total only 52 pages and concern the expedition of Ross into Prince Regent Inlet and his remuneration for this service. Since the arrangements concerning the public distribution of Parliamentary Papers were not completed until 1837, and since these three papers antecede this date, they are seldom seen separated from the bound volumes of Sessional Papers.

1833 Estimates, &c. for Miscellaneous Services; for the Year ending 31 March 1834. Item 13. An Estimate of the Sum proposed to be granted in the year 1833, as a Contribution from the Public in aid of a Voyage of Discovery to the Polar Regions.
Ordered, by The House of Commons, to be Printed, 3 April 1833.

(10 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Estimates and Accounts, 1833, No. 168, Vol. XXIV, pp. 451-60.

1834a[1] Report from Select Committee on the Expedition to the Arctic Seas, commanded by Captain John Ross, R.N.
Ordered, by The House of Commons, to be Printed, 28 April 1834.

(40 pp., chart). Great Britain, Parliament, Sessional Papers, House of Commons, Reports from Committees, 1834, No. 250, Vol. XVIII, pp. 43-86.

1. 1834a is listed in Vol. 1 of the 'Arctic Bibliography' as No. 6107. This seems to be the only reference to any of the 47 Parliamentary Papers given here, in the first five volumes of the 'Arctic Bibliography'.

1834b Captain Ross. An Estimate of the Sum required to enable His Majesty to make a Grant to Captain Ross.
Ordered, by The House of Commons, to be Printed, 18 July 1834.

(2 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Estimates and Accounts, 1834, No. 493, Vol. XLII, pp. 457-8.

(3) Papers relating to the expedition of Captain Sir John Franklin (1846-58)

The papers in this group number 3[illegible], and form the most voluminous of the three sections, totalling 2979 pages. Beginning with a copy of Franklin's sailing orders, they also include the instructions given to James Clark Ross, initiating the search. They then proceed through a long series of instructions, proceedings, and journals of Anderson, Austin, Belcher, Collinson, De Haven, Frederick, Hooper, Inglefield, Kane, Kellett, Kennedy, Maguire, M'Clure, M'Cormick, Moore, Penny, Pullen, Rae, Richardson, James Clark Ross, John Ross, Saunders, Simpson, Stewart, Trollope, and others: it is a roll call of the Franklin Searchers, complete but for the records of the man who solved the problem that all concentrated upon -- M'Clintock, whose successful voyage in the Fox in 1858-9, occurred after the British Admiralty had abandoned the search.

In addition, there are proceedings of boards of enquiries, and the expression of private opinions concerning the Franklin problem, as one man's mind after another was dredged for new proposed plans of search. Interspersed throughout, are copious extracts of correspondence between various people and agencies engaged on the problem. Individual papers are of great variety of size and of subject. One deals with the "...Adjudication of £10,000 as a Reward for ascertaining the Fate of the Crews of Her Majesty's Ships 'Erebus' and 'Terror'"; another, investigating the possibility of food poisoning of Franklin and his men, mentions "the state of the Salt Provisions issued to Her Majesty's Ships on the West India Station during the Year 1851". From it all, came not the answer to the question of Franklin's fate, but the northward advance of our knowledge of the lands fringing the icy seas of the continent, the accomplishment of the Northwest Passage, and the recorded observations of details of the coasts which, in most

cases, have not been improved upon since. This series of papers dealing with the Franklin Search forms the richest source of written material extant concerning the Canadian Arctic Archipelago, and remains in the same hopelessly disarranged condition in which it was bequeathed to us a century ago.

1846 Navy Estimates, for the year 1846-47. No. 1. Wages to Seamen and Marines, (A) Explanatory Statement (pp. 5-7).
Ordered, by The House of Commons, to be Printed, 13 February 1846.

(62 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers (2), Estimates, 1846, No. 51, Vol. XXVI, pp. 183-246.

1848a[1] Arctic Expedition. Return to an Address of the Honourable The House of Commons, dated 21 March 1848; -- for,
"Copies of Instructions to Captain Sir John Franklin, R.N., in reference to the Arctic Expedition of 1845:"
"To any Officer or Officers appointed by the Admiralty on any Expedition in Search of Captain Sir John Franklin, R.N.:"
"And, Copies or Extracts of any Proceedings and Correspondence of the Admiralty in reference to Arctic Expeditions, from 1845 to the present Time, together with Copies of Charts illustrating the same."
Ordered, by The House of Commons, to be Printed, 13 April 1848.

(84 pp., 5 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1847-48, No. 264, Vol. XLI, pp. 163-256.

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1. The title on the back page of 1848a is abbreviated: "Copies of Instructions to Sir John Franklin, R.N., in reference to the Arctic Expedition of 1845, and to Officers appointed on any Expedition in search of him: also, of Correspondence in reference to the Arctic Expedition, from 1845 to the present Time, with Charts illustrating the same."

1848b Arctic Expedition. Return to an Address of the Honourable The House of Commons, dated 26 May 1848; -- for,

A "Copy of the Orders from the Lords Commissioners of the Admiralty, under which Captain Sir James Clark Ross, R.N., has proceeded on an Expedition in search of Captain Sir John Franklin, R.N."

Ordered, by The House of Commons, to be Printed, 7 June 1848.

(4 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1847-48, No. 386, Vol. XLI, pp. 257-60.

1849a[1] Arctic Expedition (North Star). Expense of the Estimates of the Equipment of Her Majesty's Ship "North Star"; and Copy of Minute of the Board of Admiralty respecting the Equipment of the "North Star," for the purpose of taking out a Supply of Provisions, &c. for the Crews of Her Majesty's Ships "Investigator" and "Enterprise," employed on an expedition to the Arctic Regions.

(Presented to Parliament by Her Majesty's Command.)

Ordered, by The House of Commons, to be Printed, 23 March 1849.

(2 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1849, No. 152, Vol. XXXI, pp. 203-4.

1849b Arctic Expeditions. Return to an Order of the Honourable The House of Commons, dated 15 March 1849; -- for,

Extracts "of any Proceedings or Correspondence of the Admiralty, in reference to the Arctic Expeditions, -- (In continuation of Parliamentary Papers, Nos. 264 and 386, of Session 1848, up to the present Time)"

Admiralty, 27 March 1849, J.H. Hay, Chief Clerk.

Ordered, by The House of Commons, to be Printed, 30 March 1849.

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1. The title on the back page of 1849a is given as: "An Estimate of the Expense..." and not "Expense of the Estimates..." as given in the main title.

(28 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1849, No. 188, Vol. XXXII, pp. 177-204.

1849c[1] Arctic Expeditions. Further Return to an Order of the Honourable The House of Commons, dated 15 March 1849; -- for,

Copies or Extracts "of any Proceedings or Correspondence of the Admiralty, in reference to the Arctic Expeditions. -- (In continuation of Parliamentary Papers, Nos. 264 and 386 of Session 1848, up to the present time.)"

Return of the Opinions of the most experienced Officers connected with the Arctic Expeditions, on the Necessity of sending a Ship to the Entrance of Lancaster Sound, with Supplies for Sir James Ross's Expedition; and their joint Opinion as to certain Measures proposed to be adopted.

Admiralty, 19 April 1849, T. Crofton Croker, For the Chief Clerk.

Ordered, by The House of Commons, to be Printed, 20 April 1849.

(12 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1849, No. 188-II, Vol. XXXII, pp. 205-16.

1849d[2] Arctic Expedition. Return to an Address of the Honourable The House of Commons, dated 11 June 1849: -- for,

"Copy of any Communication from Her Majesty's Consul at Washington to Her Majesty's Principal Secretary of State for Foreign Affairs, in reference to Measures adopted by the Government of the United States, on the subject of the Expedition sent forth by this Country, under Command of Sir John Franklin, to the Arctic Seas."

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1. The title on the back page of 1849c is abbreviated: "Opinions of the most experienced Officers..."

2. The title on the back page of 1849d is abbreviated: "Correspondence respecting the American Expedition to the Arctic Seas, in Search of Sir John Franklin;..."

Correspondence with Her Majesty's Chargé d'Affaires at Washington, respecting the Intention of the Government of the United States to send Two Ships of War in Search of Sir John Franklin's Expedition to the Arctic Seas.

Ordered, by The House of Commons, to be Printed, 13 June 1849.

(2 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1849, No. 387, Vol. XXXII, pp. 217-8.

1849e Arctic Expedition. Copy of a Report from Sir John Richardson, dated Fort Confidence, Great Bear Lake, 16th September 1848, reporting his Proceedings in Search of Sir John Franklin's Expedition.

(Presented to Parliament by Her Majesty's Command.)

Ordered, by The House of Commons, to be Printed, 12 July 1849.

(4 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1849, No. 497, Vol. XXXII, pp. 219-22.

1850a[1] Arctic Expedition. Return to an Order of the Honourable The House of Commons, dated 5 February 1850; -- for,

Copies "of any Reports or Statements from the Officers employed in the Arctic Expeditions, or from any other Persons, which have been laid before the Lords Commissioners of the Admiralty, in respect to the Resumption of the Search for Sir John Franklin's Expedition:"

"Of any Plan or Plans of Search, whether by Ships or Boats, up to the present Date:"

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1. This paper, 1850a, was also published with a blue paper wrapper, bearing the simple title, "Return. Arctic Expedition. Ordered by The House of Commons, to be Printed, 5 March 1850 / Price 3s. 3d. / 107, Under 28 oz." It is sometimes referred to by the sub-title: "Papers relating to the Arctic Relief Expedition".

"Copy or Extracts from any Correspondence or Proceedings of the Board of Admiralty, in relation to the Arctic Expeditions (since the Date of the last Return to this House in 1849);"

"Copies of the Orders issued by the Board of Admiralty to the Captains Collinson, Kellett and Moore, and to Lieutenant Pullen; and, also, Copy of the Instructions given to Dr. Rae, through the Hudson's Bay Company;"

"Of any Reports made by any Officer or Officers employed in the late Expeditions, and addressed to the Board of Admiralty;"

"And, of the latest Chart of the Polar Sea compiled by Order of the Board of Admiralty -- (in continuation of Parliamentary Papers, Nos. 264 and 386, of Session 1848, and of Nos. 188 and 387, of Session 1849)."

Admiralty, 4 March 1850. J.H. Hay, Chief Clerk.

Ordered, by The House of Commons, to be Printed, 5 March 1850.

(vi + 157 pp., sketch, 2 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1850, No. 107, Vol. XXXV, pp. 175-342.

1850b[1] Arctic Expedition. Return to an Order of the Honourable The House of Commons, dated 12 April 1850; -- for,

An Account "of the Charge for the Purchase, Repair, and Outfit of the Vessels now fitting for the Arctic Expedition".

Ordered, by The House of Commons, to be Printed, 23 May 1850.

(2 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1850, No. 368, Vol. XXXV, pp. 343-4.

1850c Arctic Expeditions. Return to an Address of the Honourable The House of Commons, dated 10 May 1850; -- for,

"Copies of Instructions from the Admiralty to Captain Austin, R.N., C.B., and to any other Officers in Her Majesty's Service engaged in Arctic Expeditions, since the Date of the last Parliamentary Return."

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1. On the back page of 1850b the title includes the words "(April 1850)" after "...now fitting..."

Admiralty, 28 May 1850. J.H. Hay, Chief Clerk.
Ordered, by The House of Commons, to be Printed, 31 May 1850.

(6 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Reports and Papers, 1850, No. 397, Vol. XXXV, pp. 345-50.

1851a[1] Arctic Expeditions. Return to an Address of the Honourable The House of Commons, dated 7 February 1851; -- for,

"Copy or Extracts from any Correspondence or Proceedings of the Board of Admiralty, in relation to the Arctic Expeditions, including those more recently sent forth in resumption of the Search for that under the Command of Sir John Franklin;"

"Copies of any Instructions from the Admiralty to any Officers in Her Majesty's Service, engaged in Arctic Expeditions, since the Date of the last Parliamentary Return on the said subject (in continuation of Parliamentary Papers, No. 107 and No. 397 of Session 1850);"

"And, Copy or Extracts from any Correspondence or Communications from the Government of the United States, or from Her Majesty's Minister at Washington, in relation to any Search to be made on the part of the United States, or from its Territory, for the Expedition under Sir John Franklin."

Admiralty, 7 March 1851, J.H. Hay, Chief Clerk.
Ordered, by The House of Commons, to be Printed, 7 March 1851.

(iv + 106 pp., 2 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1851, No. 97, Vol. XXXIII, pp. 195-308.

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1. On the back page of 1851a the title is abbreviated:"Copies or Extracts of Correspondence on Proceedings of the Board of Admiralty; of Instructions to Officers in Her Majesty's Service; and of Correspondence, &c., from the United States, relative to the Arctic Expeditions." The paper is sometimes referred to by the sub-title: "Papers relating to the Arctic Relief Expeditions".

1852a[1] Arctic Expeditions. Report of the Committee Appointed by the Lords Commissioners of the Admiralty to Inquire into and Report on the Recent Arctic Expeditions in Search of Sir John Franklin, together with the Minutes of Evidence taken before the Committee, and Papers connected with the Subject.

Presented to both Houses of Parliament by Command of Her Majesty. London. Printed by George Edward Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. For Her Majesty's Stationery Office: 1852.

(lix + 199 pp., 2 sketches, 2 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, Vol. L, No. /1435/, pp. 1-268.

1852b[2] Additional Papers Relative to the Arctic Expedition under the Orders of Captain Austin and Mr. William Penny.

Presented to both Houses of Parliament by Command of Her Majesty. London: Printed by George Edward Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. For Her Majesty's Stationery Office. 1852.

(iii + 368 pp., 66 sketches, 28 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, Vol. L, No. /1436/, pp. 269-668.

1852c Arctic Expedition. Further Correspondence and Proceedings connected with the Arctic Expedition.

Presented to both Houses of Parliament by Command of Her Majesty. London: Printed by George Edward Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. For Her Majesty's Stationery Office. 1852.

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1. The First Arctic Blue Book of 1852. Copies are known bearing date 1851. Paper 1852a may also be found in the Sessional Papers of the House of Lords, Accounts and Papers, 1852, Vol. V, No. /1435/, pp. 1-266.
2. The Second Arctic Blue Book of 1852. Copies are known bearing date 1851, having a printed pagination to 370. Paper 1852b may also be found in the Sessional Papers of the House of Lords, Accounts and Papers, 1852, Vol. V, No. /1436/, pp. 273-666.

(216 pp., 9 sketches, 4 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, Vol. L, No. /1449/, pp. 669-890.[1]

1852d Copy of an Account of the Naval Receipt and Expenditure, for the year ended the 31st March 1851.

Ordered, by The House of Commons, to be Printed, 3 February 1852.

(6 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, No. 14, Vol. XXX, pp. 191-6.

1852e[2] Preserved Meats (Navy). Return to an Order of the Honourable The House of Commons, dated 5 February 1852; -- for,

Returns "showing the Date and Terms of all Contracts for Preserved Meat for the Use of Her Majesty's Navy with Goldner; also the Quantities issued since the commencement of the above Contracts; specifying the Quantities fit for Use, as well as the Quantities either Condemned or returned into Store as unfit for use, from any of Her Majesty's Stores or Ships, whether at Home or Abroad;"

"Complaints when first made; and whether, after such Complaints,

1. The Third Arctic Blue Book of 1852. Copies are known bearing date 1851. Paper 1852c may also be found in the Sessional Papers, House of Lords, Accounts and Papers, Vol. V, No. /1449/, pp. 669-890. The writer has been unable to discover the explanation for there being two editions bearing dates 1851 and 1852 of the three papers described here as 1852a, 1852b, and 1852c. There is not only a difference in publication date, but also in pagination. The Volume 50, House of Commons, Sessional Papers, 1852, on file in the Parliamentary Library in Ottawa contains all three papers, the first being dated 1851 and the other two 1852.
2. The title on the back page of 1852e is abbreviated: "Preserved Meats (Navy). Returns showing the Date and Terms of all Contracts for Preserved Meat for the Use of Her Majesty's Navy; also the Quantities issued since the commencement of the above Contracts; specifying the Quantities fit for Use, as well as the Quantities either Condemned or returned into Store as unfit for Use, from any of Her Majesty's Stores or Ships, whether at Home or Abroad..."

further Contracts were entered into with the same Parties;"

"Whether these Meats were issued to the Arctic Voyagers:"

"Whether Captain Austin's Stores were examined and found bad; and if so, were they served from Goldner's Contract:"

"Of the Quantity of Cases, if any, the Contractor has been allowed to withdraw from her Majesty's Stores after having supplied the same, stating how long such Cases had been in Store:"

"Of Complaints, if any, made of the state of the Salt Provisions issued to Her Majesty's Ships on the West India Station during the Year 1851; showing the Extra Quantity issued to make up the Regulated Allowance, and the Quantities Condemned or Sold on Her Majesty's account:"

"And the Contract Prices of Beef and Pork for the Years 1848, 1849, 1850, and 1851."

Admiralty, 12 February 1852. J.H. Hay, Chief Clerk.

Ordered, by The House of Commons, to be Printed, 13 February 1852.

(6 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, No. 59, Vol. XXX, pp. 317-22.[1]

1852f Arctic Expeditions. Return to an Address of the Honourable The House of Commons, dated 20 February 1852; -- for,

"Papers in connection with the late Arctic Expeditions, or with any which may be in preparation. -- (In continuation of the Papers presented to The House on the 7th March 1851, and on the 3d February 1852.)"

Ordered, by The House of Commons, to be Printed, 27 February 1852.

(18 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, No. 115, Vol. L, pp. 891-908.

1852g Arctic Expedition. Return to an Order of the Honourable The House of Commons, dated 6 April 1852; -- for,

1. Paper 1852e may also be found in the Sessional Papers, House of Lords, Accounts and Papers, 1852, No. 29, Vol. XVII, pp. 469-75.

Copy "of the Report of Dr. Rae, of the Proceedings of the Arctic Searching Expedition under his Command, since the 10th day of June last, with a Sketch of his Route."[1]

Admiralty, 6 April 1852 J.H. Hay, Chief Clerk.

Ordered, by The House of Commons, to be Printed, 6 April 1852.

(12 pp., chart). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, No. 248, Vol. L, pp. 909-22.

1852h Arctic Expedition. Return to an Order of the Honourable The House of Commons, dated 4 May 1852; -- for,

A Return "of the Sailing Orders given to Sir Edward Belcher relating to the Arctic Expedition."

Admiralty, 6 May 1852. J.H. Hay, Chief Clerk.

Ordered, by The House of Commons, to be Printed, 7 May 1852.

(4 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, No. 317, Vol. L, pp. 935-8.

1852j Arctic Expedition. Return to an Order of the Honourable The House of Commons, dated 6 April 1852; -- for,

A Copy "of any further Correspondence which has been transmitted to the Admiralty between Admiral Sir John Ross and the Danish Inspector-General, touching the Fate of the Expedition under Sir John Franklin."

Admiralty, 18 May 1852. J.H. Hay, Chief Clerk.

Ordered, by The House of Commons, to be Printed, 21 May 1852.

(12 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, No. 390, Vol. L, pp. 923-34.

1852k Vessels in the North Atlantic. Return to an Address of the Honourable The House of Commons, dated 4 June 1852; -- for,

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1. The title on the back page of 1852g is abbreviated: "Copy of a Report of Dr. Rae, of the Proceedings of the Searching Expedition under his Command, since the 10th June 1851, together with a Sketch of his route."

"Copies of Communications between the Admiralty and any Public Authorities at Home and Abroad, in reference to certain Vessels observed on an Iceberg in the North Atlantic in 1851, and supposed to have been Abandoned."

Ordered, by The House of Commons, to be Printed, 22 June 1852.

(40 pp., 2 sketches, chart). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852, No. 501, Vol. L, pp. 939-82.

1852m[1] Arctic Expeditions. Return to an Address of the Honourable The House of Commons, dated 19 November 1852; -- for,

"Copies of any Correspondence received at the Admiralty from Sir Edward Belcher's Squadron, detailing the Proceedings thereof since leaving Greenhithe, and from any other of the Arctic Expeditions since the Dates of the last Returns from the same respectively:"

"Of any Communications received at the Admiralty from Mr. Kennedy, of the 'Prince Albert' Discovery Ship:"

"Of Correspondence from Commander Inglefield, of the Screw Vessel 'Isabel,' reporting his Discoveries and Proceedings in the Polar Sea:"

"Of any Plans or Suggestions of Search for Rear-Admiral Sir John Franklin, and the Ships and Crews of his Expedition:"

"And, of any further Correspondence on the subject of the Arctic Regions, since the last laid before this House in the late Session (in continuation of Arctic Papers, Session 1852)."

Admiralty, 16 December 1852. J.H. Hay, Chief Clerk.

Ordered, by The House of Commons, to be Printed, 20 December 1852.

(iv + 88 pp., 3 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852-53, No. 82, Vol. LX, pp. 125-224.

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1. On the back page of 1852m, the title has been abbreviated: "Correspondence received at the Admiralty from Sir Edward Belcher, Mr. Kennedy, Commander Inglefield, and others, on the subject of the Arctic Expeditions (in continuation of Arctic Papers, Session 1852)."

1853a[1] Ship "Rattlesnake." Return to an Order of the Honourable The House of Commons, dated 27 April 1853; -- for,

Copies of Extracts "of any Minutes or other Documents connected with the Selection by the late Board of Admiralty of the Ship 'Rattlesnake,' in preference to a Steamer, for the purpose of endeavouring to communicate with the 'Plover;'"

"And, Copies of Instructions given by the Board of Admiralty to the Captain of the 'Rattlesnake.'"

Admiralty, 3 May 1853. J.H. Hay, Chief Clerk.

Ordered, by The House of Commons, to be Printed, 4 May 1853.

(4 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852-53, No. 444, Vol. LX, pp. 75-8.

1853b[2] Arctic Regions. Return to an Order of the Honourable The House of Commons, dated 1 August 1853; -- for,

Copies "of the Sailing Orders and Instructions to Commander Inglefield, of Her Majesty's Ship 'Phoenix,' employed in the Arctic Regions;"

"Of the Instructions to Mr. Kennedy, in command of the 'Isabel,' which vessel is also employed in the Arctic Regions:"

"Of any Orders and Instructions given to Captain Collinson, of the 'Enterprise,' of a later date than the 15th day of January 1850:"

"And, of any Reports received from Captain Collinson of a later date than the 9th day of July 1851."

Admiralty, 19 August 1853. John Jones Dyer, Acting Chief Clerk.

Ordered, by The House of Commons, to be Printed, 20 August 1853.

(4 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1852-53, No. 1013, Vol. LX, pp. 121-4.

1. On the back page of 1853a, the title is abbreviated as follows: "Ship 'Rattlesnake.' Copies of Instructions given by the Board of Admiralty to the Captain of the 'Rattlesnake.'"
2. On the back page of 1853b, the title is abbreviated: "Arctic Regions. Copy of the Sailing Orders and Instructions to Commander Inglefield, of Her Majesty's Ship 'Phoenix,' employed in the Arctic Regions."

1854a[1] Papers Relative to the Recent Arctic Expeditions in Search of Sir John Franklin and the Crews of H.M.S. "Erebus" and "Terror."
Presented to both Houses of Parliament by Command of Her Majesty. London: Printed by George Edward Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. For Her Majesty's Stationery Office. 1854.

(225 pp., 26 sketches, 5 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1854, No. /1725/, Vol. XLII, pp. 101-338.

1854b Arctic Expeditions. Return to an Address of the Honourable The House of Commons, dated 17 March 1854; -- for,
"Copy of Letter addressed by Lady Franklin to the Lords Commissioners of the Admiralty, dated the 24th day of February 1854, in reference to their Lordships' Announcement in the London Gazette of the 20th day of January 1854, respecting the Officers and Crews of Her Majesty's Ships 'Erebus' and 'Terror;' and of a Copy of such Notice."
Ordered, by The House of Commons, to be Printed, 24 March 1854.

(14 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1854, No. 129, Vol. XLII, pp. 339-52.

1854c[2] Arctic Expedition. Return to an Order of the Honourable The House of Commons, dated 4 April 1854; -- for,
Copies "of any Instructions which have either been Issued, or hereafter may be Issued, during the present Season, to the Commanders of Her Majesty's Ships now engaged in the Arctic Regions in the Search for Sir John Franklin's Expedition."

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1. This is the Arctic Blue Book of 1854, and may also be found in the Sessional Papers, House of Lords, Accounts and Papers, 1854, Vol. XII, No. /1725/.
2. The title on the back page of 1854c is abbreviated: "Copies of Instructions Issued, during the present Season, to the Commanders of Her Majesty's Ships now engaged in the Arctic Regions in the Search for Sir John Franklin's Expedition."

Admiralty, 7 April 1854. John Jones Dyer, Chief Clerk.
Ordered, by The House of Commons, to be Printed, 7 April 1854.

(4 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1854, No. 171, Vol. XLII, pp. 353-6.

1854d Arctic Expedition. Instructions from the Lords Commissioners of the Admiralty for the Arctic Expedition.
(Presented to Parliament by Her Majesty's Command.)
Ordered, by The House of Commons, to be Printed, 28 April 1854.

(4 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1854, No. 200, Vol. XLII, pp. 357-60.

1855a [1] Further Papers relative to the recent Arctic Expeditions in search of Sir John Franklin and the Crews of H.M.S. "Erebus" and "Terror."
Presented to both Houses of Parliament by Command of Her Majesty. January 1855. London: Printed by George Edward Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. For Her Majesty's Stationery Office. 1855.

(iv + 958 pp., 74 sketches, 37 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1854-55, No. [1898], Vol. XXXV, pp. 1-1010.

1855b Estimates &c. Civil Services, for the Year ending 31 March,1856. Item 43 -- Arctic Discoverers (Rewards). Item 44 -- Monument to Sir John Franklin.

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1. This is the Arctic Blue Book of 1855, and is by far the most voluminous item in this bibliography. A bound copy, which Collinson once described as "that stupendous hummock", weighs 9 pounds. The manuscript pagination of the copy of this paper (1855a) in the Library of Parliament, Ottawa, extends to p. 1015.

Ordered, by The House of Commons, to be Printed, 27 March 1855.

(46 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1854-55, No. 140-VII, Vol. XXXI, pp. 619-66.

1855c Arctic Expeditions. Return to an Order of the Honourable The House of Commons, dated 29 March 1855; -- for,

A Return "of the Cost of the Further Papers relative to the recent Arctic Expeditions, presented to both Houses of Parliament by Command of Her Majesty in January 1855; distinguishing under each head the Expense of Paper, Printing, Lithographing of Charts and Illustrations, and other Expenses, and of the Number of Copies Printed,[1] and Distribution of the Same."

Her Majesty's Stationery Office 13 April 1855. J.R. M^c Culloch, Comptroller.

Ordered, by The House of Commons, to be Printed, 18 April 1855.

(2 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1854-55, No. 181, Vol. XLIV, pp. 189-90.

1855d Report from the Select Committee on Arctic Expedition; together with the Proceedings of the Committee, Minutes of Evidence, and Appendix.

Ordered, by The House of Commons, to be Printed, 20 July 1855.

(xx + 38 pp., chart). Great Britain, Parliament, Sessional Papers, House of Commons, Reports from Committees, 1854-55, No. 409, Vol. VII, pp. 1-60.

1856 Further Papers Relative to the Recent Arctic Expeditions in Search of Sir J. Franklin, and the Crews of Her Majesty's Ships "Erebus"

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1. Two thousand copies of the Arctic Blue Book of 1855 (to which this paper refers) were printed (1855e).

and "Terror;" including the Reports of Dr. Kane and Messrs. Anderson and Stewart. And Correspondence relative to the Adjudication of £10,000 as a Reward for ascertaining the Fate of the Crews of Her Majesty's Ships "Erebus" and "Terror". (In continuation of Papers presented in September 1854-5).

Presented to The House of Commons, 1856. London: Printed by Harrison and Sons.

(vi + 96 pp., 2 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1856, No. [2124], Vol. XLI, pp. 111-216.

1858 Correspondence respecting H.M.S. "Resolute," and the Arctic Expedition.

Presented to The House of Commons by Command of Her Majesty, in pursuance of their Address dated May 21, 1858. London: Printed by Harrison and Sons.

(ii + 40 pp., chart). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1857-58, No. [2416], Vol. LX, pp. 11-52.

(4) Papers relating to the expedition of Captain Sir George Nares (1875-8)

The fourth and last section into which this series of Arctic Papers divides itself is concerned with the expedition led by Sir George S. Nares into northeastern Ellesmere Island in 1875-6. Here again may be found details of the preparations made to ensure the success of the venture, the cost of which approached £100,000. The Journals and Proceedings (1877a) record, amongst other things, Markham's effort towards the pole. Other papers deal in great detail with the health of both men and dogs, particular attention having been paid to the outbreak of scurvy with which the expedition was attacked following its winter in the field. The 8 papers comprising this section total 1,280 pages.

1875a Arctic Expedition. Papers and Correspondence relating to the Equipment and fitting out of the Arctic Expedition of 1875, including Report of the Admiralty Arctic Committee.

Presented to both Houses of Parliament by Command of Her Majesty. London: Printed by George Edward Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. For Her Majesty's Stationery Office. 1875.

(40 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1875, No. [C.-1153.], Vol. XLV, pp. 523-62.

1875b Chart to Accompany Papers and Correspondence Relating to the Equipment and Fitting out of the Arctic Expedition of 1875.
Presented to both Houses of Parliament by Command of Her Majesty. London: Printed by George Edward Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. For Her Majesty's Stationery Office. 1875.

(2 pp. + chart). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1875, No. [C.-1153.-I.], Vol. XLV, pp. 563-6.

1875c[1] Arctic Expedition. Supplementary Estimate of Her Majesty's Navy, for the Year 1874-75. An Estimate of the Sum required to defray the Charges on account of the Arctic Expedition which shall come in course of Payment in the Year ending the 31st March 1875.
(Presented to Parliament by Her Majesty's Command.)
Ordered, by The House of Commons, to be Printed, 15 February 1875.

(4 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1875, No. 44, Vol. XLV, pp. 231-4.

1876 Arctic Expedition. Further Papers and Correspondence in Continuation of Parliamentary Paper [C.-1153.] of 1875.
Presented to both Houses of Parliament by Command of Her Majesty. Admiralty, July 1876. London: Printed by George Edward Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. For Her Majesty's Stationery Office, 1876.

1. The title given on the back page of 1875c adds: "...under Votes 1, 2, 5, 6, 7, 10, Section I.;10 Section II.; 12, and 14 of the Annual Estimates of Her Majesty's Navy."

(25 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1876, No. /C.-1560./, Vol. XLV, pp. 463-88.

1877a [1] Arctic Expedition, 1875-6. Journals and Proceedings of the Arctic Expedition, 1875-6, under the Command of Captain Sir George S. Nares, R.N., K.C.B. /In continuation of Parliamentary Papers, C 1153 of 1875, and C 1560 of 1876./

Presented to both Houses of Parliament by Command of Her Majesty, 1877. London: Printed for Her Majesty's Stationery Office, by Harrison & Sons, Printers in Ordinary to Her Majesty, St. Martin's Lane.

(vii + 484 pp., 44 illustrations, 18 charts). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1877, No. /C.-1636./, Vol. LVI, pp. 1-556.

1877b [2] Report of the Committee appointed by the Lords Commissioners of the Admiralty to enquire into

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1. The First Arctic Blue Book of 1877. Some parts of 1877a were published as 'separates', being possibly advance forms of the report. The writer has two such in his possession:
   a) Arctic Expedition. Report of Proceedings. Report of G.S. Nares, addressed to the Secretary of the Admiralty, dated H.M.S. "Alert", at Valentia, 27th October, 1876. 40 pp. indexed. /This corresponds with that of pp. 2-38, of 1877a, evidently printed from the identical setting of type, though not precisely in the same page arrangement. This 'separate' has a foot-number (200 10/76 -- H & S 2448) in the lower left of its title page./
   b) Arctic Expedition, 1875-6. Northern Sledging Party. Commander Markham's Journal. 32 pp., /with foot-number (25 11/76 -- H & S 2596) at lower left of the title page. Again, with but minor changes, the type-setting is apparently identical with that given on pp. 134-57 of 1877a./

   The foot-numbers presumably indicate the number of copies of the 'separate', the month and year of the printing, and Harrison & Sons (H & S) order number.

2. The Second Arctic Blue Book of 1877.

The Causes of the Outbreak of Scurvy in the recent Arctic Expedition;

The adequacy of the provision made by the Admiralty in the way of Food, Medicine, and Medical Comforts; and

The propriety of the Orders given by the Commander of the Expedition for provisioning the Sledge Parties.

Presented to both Houses of Parliament by Command of Her Majesty, 1877. London: Printed for Her Majesty's Stationery Office, by Harrison & Sons, Printers in Ordinary to Her Majesty, St. Martin's Lane.

(lv + 505 pp., 9 illustrations). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1877, No. / C.-1722./, Vol. LVI, pp. 557-1136.

1877c Arctic Expedition (Scurvy). Return to an Order of the Honourable The House of Commons, dated 7 June 1877; for,

Copy "of the Letter addressed by the Admiralty to Captain Sir George S. Nares, R.N., K.C.B., on the subject of the outbreak of Scurvy in the Arctic Expedition, 1875-6."

Admiralty, 7 June 1877. Thos. Wolley, Chief Clerk.

Ordered, by The House of Commons, to be Printed, 7 June 1877.

(2 pp.) Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1877, No. 246, Vol. LVI, pp. 1137-8.

1878[1] Arctic Expedition. Results derived from the Arctic Expedition, 1875-76.

I. - Physical Observations by Captain Sir George Nares, R.N., and Captain Feilden, &c.

II. - Medical Report on the Eskimo Dog Disease, by Fleet Surgeon B. Ninnis, M.D.

Presented to both Houses of Parliament by Command of Her Majesty. London: Printed by George Edward Eyre and William Spottiswoode, Printers to the Queen's Most Excellent Majesty. For Her Majesty's Stationery Office. 1878.

1. The Arctic Blue Book of 1878.

(156 pp., 8 coloured ills., 7 graphs). Great Britain, Parliament, Sessional Papers, House of Commons, Accounts and Papers, 1878, No. [C.-2176], Vol. LII, pp. 615-800.

The above bibliography of 47 items has been compiled over the past several years largely from searches made in the following libraries, through the kind courtesies of those whose names are given in brackets:

American Geographical Society Library, New York, N.Y. (Miss Nordis Felland)

Baker Library, Dartmouth College, Hanover, N.H. (Mr. Richard W. Morin)

Library of Congress, Washington, D.C. (Miss Marie Tremaine)

New York Public Library, New York, N.Y. (Mr. F.-X. Grondin)

Stefansson Library, Dartmouth College, Hanover, N.H. (Dr. Vilhjalmur Stefansson)

Through the kindness of Mr. T.E. Monette, all items have been checked against the Sessional Papers of the British House of Commons in the Library of Parliament, Ottawa. The Sessional Papers of the House of Lords were not accessible at any of the libraries visited, so that it has been possible to check only a few of the items given here against corresponding publications by the House of Lords.

The assistance provided by Mr. John F. Phillips, of Her Majesty's Stationery Office, London, England, is also gratefully acknowledged.

Editorial Note

The Editor would welcome contributions from those who are at present in the Arctic or have information about work in the Arctic. All material for the Circular should be sent to:

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Ottawa 2, Ontario

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Ottawa, Ontario

Sixty-third Meeting

The sixty-third meeting of the Arctic Circle was held in the P.L.D.G. Mess, 60 Queen Street, on Tuesday, December 13. The President, Mr. A.D. McLean, was in the Chair and introduced the speaker, Dr. R.S. MacNeish. Dr. MacNeish gave an illustrated lecture on "New light on arctic prehistory".

Archaeological excavation on the Yukon arctic coast in 1955. By Richard S. MacNeish

During the summer of 1955 an archaeological field party of the National Museum of Canada, under my direction, excavated at a site on the east bank of the Firth River about twenty miles from the Arctic Ocean. The other members of the party were my wife, an Iraqi archaeologist, Jajil Jawud of Baghdad, and Elijah Allen, Hugh Rogers, and the Stefanssons from Aklavik.

The archaeological site was situated on a small plateau and covered an area of 1,200 feet by 600 feet. The stratigraphy on the plateau was extremely complicated. Eskimo remains of three different complexes appeared in the humus, and a fourth culture was sealed in below a layer of gray clay, and there were the remains of five other complexes in a number of pits found between the humus and the gray clay. Fortunately some of these pits had been dug into earlier pits or through other refuse areas, and this made it possible to arrange all nine complexes in chronological sequence. Work planned for the summer of 1956 should clarify the stratigraphy and provide a more complete picture of the various archaeological complexes.

This fortunate discovery of nine archaeological cultures in sequence should throw light on a number of crucial problems of New World prehistory. The earliest complex, called the British Mountain Complex, is found underneath marine gray clays which were deposited when the sea level was more than 200 feet higher than it is at present. Furthermore, faunal remains show that these people, besides hunting caribou, also hunted some sort of giant buffalo, now extinct. As yet there is no way of dating this culture exactly, but it must be among the earliest found in North America. It is represented by ten artifacts, most of which are choppers and scrapers so crude that it is impossible to determine their cultural relationships.

The earliest culture layer above the gray clays is the Engigstciak Complex (Eng-ig-stciak -- meaning "young mountain" in Eskimo). The projectile points include a number of Angostura points, a Plainview point, and a fluted point. There are also a number of crude end-scrapers, side-scrapers, and bifacial blades. All of these artifacts occur in the Great Plains farther south, where they are from 6,000 to 10,000 years old. The northern material is however distinctive in having a few crude burins and prismatic blades associated with it, indicating some sort of Asiatic connection. Though the data are still incomplete one cannot help but speculate as to whether this culture complex does not represent peoples who have recently moved from Asia, and are beginning to develop a type of material culture that is typical of the early horizons in the North American Great Plains.

Above these remains were materials that included a number of small burins, micro-blades, side blades, and smaller projectile points, called the New Mountain Complex. In many ways this complex is similar to the earliest found in Alaska at Cape Denbigh and the earliest found in the Eastern Arctic, called Sarqaq, which may well be an ancestor to Dorset. Associated with the New Mountain Complex are elk (wapiti), buffalo, and muskox, indicating that the climate along the Firth River was perhaps more pleasant than it is today. These New Mountain remains also suggest a movement out of northeastern Siberia, in this case of Early Neolithic or Mesolithic peoples, who ultimately spread across the New World Arctic as far east as Greenland during the postglacial optimum.

Following these earlier cultures are three complexes which include pottery along with a very few burins and micro-blades,

adzes, and a number of new types of small arrow points. The pottery is cordmarked, dentate stamped, and grooved paddle impressed, appearing in the order mentioned. All these kinds of pottery appear in Siberia and in the Eastern Woodlands of North America in roughly the same order. These ceramic remains from the Firth River may then represent a step in the diffusion of Asiatic pottery to the more southerly regions in the New World.

Eskimo remains occur in three different areas in the humus. These three cultures have tools adapted to a maritime way of life and lack burins and micro-blades. One includes check-stamped pottery and a number of other traits that seem to connect it with Near Ipiutak in western Alaska, which has been dated as about 2,000 years old. The other two complexes, though having slightly different harpoon and pottery types, may both be considered to be Thule. Perhaps they are directly ancestral to the Eskimo found in historic times along the Yukon arctic coast.

Archaeological excavations, supplemented by geological studies, will be continued in 1956.

Danish archaeological expedition to Danmarks Fjord, northeast Greenland, summer 1955. By Eigil Knuth

The 1955 archaeological expedition to Danmarks Fjord, which was sponsored by the Danish National Museum, consisted of only two members: Kristen Sørensen, a radio-operator from the Royal Danish Navy, and myself as archaeologist.

The expedition planned to map and to excavate paleo-Eskimo sites in the inner part of Danmarks Fjord, which had not been investigated since the journeys of Mylius-Erichsen and Ejnar Mikkelsen at the beginning of this century. We chose Cape Holbaek (ca. 80°39N., 23° 26W.) on the west coast of the fjord as our base camp, because I had found paleo-Eskimo sites and flint implements there during a four-hour visit by Catalina aircraft in the summer of 1954.

The real starting point of the expedition, as in 1954, was the weather station Nord, in northeast Greenland (81° 36N., 16° 41W.) Transport from Copenhagen there and back was partly by the S.A.S. transpolar route between Copenhagen and Søndrestrøm and partly by American M.A.T.S. aircraft between Søndrestrøm, Thule Airbase, and Nord.

We had hoped to obtain the use of dog sledges or vehicles from the weather station at Nord to transport our 450 kg. of supplies, but were disappointed to find that these could not be made available. Fortunately our problem was solved by the kindness of Captain Raider Ramstad and Captain Charles Block of the U.S.A.F., who made free drops of our supplies at three points along the east coast of Danmarks Fjord when their C-54 was returning from a regular flight to Nord.

The expedition left Nord on May 30 to walk the 115 miles to Cape Holbaek. We travelled on skis, each dragging a Swedish "pulka" loaded with more than 100 kg. of supplies. Deep soft snow at the start made it impossible to carry more than half-loads, even though we travelled at night when the temperature was about 17° -23° F, and we therefore had to cover more than 200 miles on the journey. Meltwater caused difficulty during the last thirty miles to Cape Holbaek, and open leads ran from shore to shore, but we reached the cape on June 19.

On the way we found the three caches dropped by Ramstad and Block, lying just a few hundred feet from shore. They had melted pools in the ice, but were easily visible; unfortunately, one drum filled with crackers, oatmeal, tea, chocolate, and sugar was damaged, so that the rest of the summer the expedition was rather short of supplies.

The archaeological results included the finding of eight former settlements, seven of which were paleo-Eskimo. The artifacts from these showed that there had been two different paleo-Eskimo cultures, corresponding to two paleo-Eskimo invasions to the north of Greenland, separated by a time interval of at least 1,000 years. Radiocarbon tests indicate that the younger of these cultures might be about 3,000 years old. In all 270 paleo-Eskimo flint and bone implements were collected, and more than 1,000 pieces of flint debris found. A considerable amount of animal bone, pieces of wood, and charcoal were brought back for radiocarbon analysis.

Sørensen assisted in the excavations, and also took meteorological observations, of temperature, wind, pressure, and ceiling three times a day for comparison with observations taken at Nord. I collected plants for the Danish Botanical Museum when possible, and found 35 of the 96 species collected by Kjeld Holmen, botanist of the Danish Pearyland Expedition from 1947-50.

Finally, at the time of full moon, early in July and also in August, we made half-hourly tidal observations during three days.

The expedition ended on August 19 when a Danish PBY aircraft landed in open water at Cape Holbaek and took us back to Nord. We reached Copenhagen by S.A.S. aircraft on August 28.

We did not find any traces of Mylius-Erichsen's sledge party which spent their last summer in Danmarks Fjord in 1907, and perished shortly afterwards. Two men from the Danish Sledge Patrol in northeast Greenland, who travelled the length of Danmarks Fjord by dog team only two months before the time of our expedition, also failed to find any trace. Since the visits of Mikkelsen in 1910 and Knud Rasmussen in 1912 these two men - Ole Lütz høft and Holger Madsen - were the first to leave their tracks on the ice of Danmarks Fjord.

Field work on arctic gulls at Cape Dorset, Baffin Island.[1] By Andrew Macpherson

The object of the summer's field work was to study the southwest Baffin Island representatives of three species of gull which were known to nest there. These are the Glaucous Gull, Larus Hyperboreus Gunn., Kumlien's Gull, Larus kumlieni Brewster, and the Herring Gull, Larus argentatus smithsonianus Coues. The work included a study of their breeding biology and the collection of a large series of skins, skulls [2], skeletons, stomach contents, and gonads. Of the 233 bird specimens collected, 146 were gulls. Eighteen mammal specimens were also taken.

Much has been written about these gulls and their relations, which together make up in arctic North America a complex which Rand (1942, p. 126) has called "a chain of ill-defined, merging

1. This work was done under a grant from the National Research Council (Wildlife Committee) made to Dr. M.J. Dunbar of McGill University, who supervised the project.

2. The taxonomic study will be based in part on skull measurements. A study of the material in the National Museum of Canada has been made by Mr. John Crosby to whom I am indebted for originating the idea.

entities". There have been several attempts made to classify forms as races of one or more species, but as data on distribution and overlap have been lacking and good series of immature and adult birds have not been collected, the arguments put forward have been inconclusive. Rand (1942, p. 126) has suggested that kumlieni, which breeds on the coasts of the southern part of Baffin Island, is a race of the Iceland Gull, Larus leucopterus Vieillot, which is confined to subarctic Greenland as a breeding bird, and that this species also includes Nelson's Gull, Larus nelsoni Henshaw, which is a form of doubtful authenticity (Bailey, 1948, p. 242). Salomonsen (1950-1, pp. 319-20) would like to include another gull in the Iceland-Kumlien's species: Thayer's Gull, Larus thayeri Brooks[1], which is the common cliff-nesting gull of the Western Arctic coast, leaving the Glaucous Gull with its race, the Point Barrow Gull of northern Alaska, and the Herring Gull as forms outside the complex. Bailey (1948, p. 240), however, has suggested that the Point Barrow Gull is a link between the Glaucous and the Iceland gull. If this is so, then only the Herring Gull remains outside the complex.

Through the courtesy of the Foundation Company of Canada, I was able to fly direct to Coral Harbour, Southampton Island, where I arrived on April 24. On May 7, I reached Cape Dorset by chartered Arctic Wings Norseman aircraft, and camped near the floe edge on the island until May 16. Between that date and June 11, I searched the surrounding country for prospective gull colonies, and did some general ornithological collecting. The first Kumlien's Gull eggs were found on June 7 near Sangasuk, five miles southwest of the settlement, and, as this colony appeared suitable for study, I moved out to it on June 11 by dog sled and boat, taking as assistant and companion a native, Pingnuatok. We remained there until July 6, observing the progress of laying and incubation. A few Glaucous and Herring gull nests were within reach, and these were also under observation during the period. On the 6th we went in to Dorset settlement and, hearing that the C.D. Howe, the government supply vessel for the Eastern Arctic, was about to arrive, I deferred my return to the colony until July 9. Part of this interval was spent examining a lake colony six miles northeast of Dorset. We remained at the Sangasuk colony until July 22, when I returned to the settlement. The next ten days I spent in making banding and collecting excursions in the neighbourhood.

1. Rand (1942, p. 126) calls this gull a race of the Herring Gull.

Between August 3 and 14 Pingnuatok and I travelled with two other Eskimo as far east as Amadjuak to examine gull colonies and to band the young. On the 16th I went with Mr. Graham Cooch[1] of the Wildlife Service, his wife and Eskimo, to an island off Cape Dorset where I collected a few birds.

On August 21, Pingnuatok, his crew, and I again left Dorset, this time to look for colonies west and north. We went up the western Foxe Peninsula coast as far as the Wildbird Islands. Opposite the mainland was a shore station put down by H.M.C.S. Labrador, which we visited. We arrived back on August 30, and the period before the arrival of the Rupertsland in mid-September was spent in collecting and making field observations and in packing.

Nineteen colonies of Kumlien's Gulls were found between Amadjuak and Pikiolialuk, a small island lying between Lloyd Point and the Trinity Islands. All but three of the colonies were on steep cliffs facing the sea or a tidal inlet; two of these colonies were on relatively flat, rocky islets, but the third was on a rugged, crannied part of a larger, higher island. These three exceptions were also remarkable because the colonies were shared with Herring Gulls; two of them also contained Glaucous Gulls, a more common feature of Kumlien's Gull colonies. No Kumlien's Gull colonies were seen along the west coast of Foxe Peninsula between Pikiolialuk and the Wildbird Islands, and it is thought that none of these gulls breed in that area or on the coast of the peninsula to the north and east. I estimated that there were 695 breeding pairs of Kumlien's Gull between Amadjuak and Pikiolialuk. Immature and non-breeding birds were present during the egg-laying period in insignificant numbers. The size of the Kumlien's Gull colonies varied between 13 and 75 pairs, and averaged about 40. Glaucous Gulls were almost invariably present in the cliff colonies, there making up about 15 per cent of the breeding gulls.

Kumlien's Gulls began egg-laying about June 4 and continued until the 28th. Chicks began to hatch on July 5, nearly all being hatched by July 21. About 50 per cent of the gulls at the Sangasuk colony succeeded in hatching one or more eggs, 20 per cent in hatching two or more, and 4 per cent three eggs. The

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1. Cooch was studying eider duck at Dorset during the summer from the standpoint of future down utilization.

average number of eggs per nest was a little over 2, varying between 1 and 3. Of 77 Kumlien's Gull eggs known to have been laid, 15, or 19.5 per cent, were lost before hatching. This is a minimum figure as I have not made allowance for an egg having been laid and lost between observations. No figures are available for chick mortality, which is commonly the major fraction of breeding failure in colonial gulls. During the field season 189 Kumlien's Gull chicks were banded.

Glaucous Gulls, like Kumlien's Gulls, usually nested on the steep cliffs fringing the shore line, frequently, as noted before, in the company of breeding Kumlien's Gulls. One colony of 4 Glaucous and 2 Herring gull pairs was also found. However, they sometimes formed small pure colonies of 5 or 6 pairs and occasionally nested singly on shoals or cliffs. Another, though rare, type of nest was the solitary nest on a lake boulder - a typical Herring Gull situation (only 2 nests in sites of this sort were found, although they occur in Newfoundland (see Bent, 1921, p. 53)). Egg laying began about June 1 in one of the four nests under observation but the peak came about June 20. No egg loss was observed. The first chick hatched on July 1, the majority not before July 15. It is harder to estimate the population of Glaucous than of Kumlien's gulls because of the scattered nesting sites; however, it is thought that the 106 breeding pairs seen comprised about 80 per cent of the total breeding population between Pikiolialuk and Amadjuak. The total breeding population is therefore estimated at about 130 pairs. As with Kumlien's Gull, no breeding pairs were seen from Pikiolialuk north to the Wildbird Islands, although several places, such as Cape Enauolik, appeared to have suitable nesting sites. Forty-four Glaucous Gull chicks were banded.

Most Herring Gull nests were on boulders in small lakes, usually only one or two pairs to a lake. However, three lake-island colonies were found with 12 to 30 pairs on each (average 18). Egg laying began about June 6 and reached a peak about July 10. Breeding Herring Gulls were even more scattered than breeding Glaucous Gulls and only 5 nests were under observation and only 6 chicks banded. Judging by comparative numbers seen at the floe edge, Herring and Glaucous gulls probably occur in about the same numbers. Although a few were collected, immature birds were uncommon during the nesting season.

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A second trip to King William Island. By Paul F. Cooper

In August 1955 the writer, accompanied by his wife and son, Paul F. Cooper, Jr., made a second flight to King William Island with Charlie Weber of Arctic Wings (for an account of the 1954 trip, see Circular, Vol. 8, No. 1, pp. 8-11). It was planned, if possible, to set up camp on the northwest coast of the island, somewhere between Wall Bay and Cape Felix, and to search that area for relics of the Franklin expedition. Unfortunately, bad weather so handicapped us everywhere that in the end the trip turned out to be more notable for what was not accomplished than for what was.

We left Churchill on the afternoon of August 13. Owing to bad flying conditions and ice in the harbour at Gjoa Haven, it was the morning of the 15th before we could come in to that post. The next day, accompanied by Father Henry, we flew up the east coast of King William to Cape Felix, then started down the west coast, hoping to find a place to land. Fog, however, soon enshrouded us, leaving no choice but to continue southward to where it was clear and come down on a lake just north of Cape Jane Franklin, about a mile inland from where Crozier and his men camped after abandoning the Erebus and Terror in April 1848. Here bad weather soon closed in, grounding our party for four days and three nights and vividly calling to mind M'Clintock's experience on that part of the island, where "the air was almost constantly loaded with chilling fogs." On the morning of the 19th, taking advantage of a clear spell, Charlie Weber and my son flew back up to Cape Felix, only to be driven away again by fog. This ended all efforts to reach

our destination, and on the afternoon of that same day we returned to Gjoa Haven, where gales and rains and snow made a take-off inadvisable until the 24th, when we went back to Churchill.

Obviously all field work was badly curtailed, and few observations of any consequence were made. From the air above Cape Felix a small island was seen to the north, probably the same one reported by Larsen in 1949.

On the evening of the 18th we visited the headland at the northern end of Irving Bay. On its south side, not far from the tip, a spot was found from which the view towards Cape Jane Franklin and Franklin Point was remarkably like that shown in the sketch of "Land between Comr. Ross's furthest and C. Jane Franklin", as it appears on the map accompanying the published narrative of the Victory expedition. This would seem to support the belief that this headland, and not Crozier's landing place about 2 1/2 miles south, is the true Victory Point of James Clark Ross, marking his furthest and being the place where he and Abernethy spent an hour from midnight, 29 May 1830, until one o'clock the next morning. It was near here, no doubt, that they built a 6-foot-high cairn, enclosing in it a canister containing a record. But no certain trace of this cairn now remains, nor could we find the cairn built in this locality by Larsen in 1949. On the return to camp a stop was made at the monument marking Lt. Irving's grave.

Throughout the trip, whenever it was at all possible, Mrs. Cooper collected plants, which have been turned over to the National Museum in Ottawa. Her collections in 1954 and 1955 have added twenty-four species to the flora known from King William Island.

Eastern Arctic Patrol, 1955

On 26 September 1955 the government's thirty-fourth Eastern Arctic Patrol arrived in Quebec on board the Department of Transport's icebreaker, the C.G.S. d'Iberville. For the greater part of the summer the 12,000-mile patrol was carried out by the Department of Transport's vessel C.D. Howe, as in previous years. The members of the government party and Eskimo patients were transferred to the d'Iberville at Wakeham Bay on the return trip as the C.D. Howe was needed on another assignment in the north.

The work of this year's expedition included hydrographic surveys, postal services, medical services, and the moving of Eskimo to better hunting areas in addition to the normal administrative work.

Although the vessels are operated by the Department of Transport, the work of the patrol is the responsibility of the Department of Northern Affairs and National Resources. Representatives of that department this summer were Mr. R.A.J. Phillips, Officer-in-Charge from Montreal to Resolute Bay, Mr. A. Stevenson, Officer-in-Charge from Resolute Bay to Quebec, Miss Joan MacArthur, Secretary, Mr. M.L. Manning and Miss Paulette Anerodluk, interpreters. Mr. E.N. Grantham, Educational Officer, travelled from Montreal to Churchill inspecting mission and day schools.

The medical party, under Dr. J.S. Willis, Department of National Health and Welfare, carried out an extensive medical program which included X-rays and a complete medical and dental examination of every Eskimo who could be reached at the eighteen ports of call. Innoculations for whooping cough, diphtheria, and tetanus were also given at various settlements. Other members of the medical team were Dr. F.M. Graham, Dr. G. Secord, who served for two years at Pangnirtung hospital and was relieved by Dr. O. Schaefer, who was on the C.D. Howe from Montreal, Miss L.M. Long, X-ray technician, Miss Ann Webster, R.N., and Mr. P. Wilson, medical assistant.

Twenty of the Eskimo, who returned to their homes from hospitals in the south, were carried by the C.D. Howe, and seventy were brought out for medical treatment. Some of these left the C.D. Howe at Churchill and Resolute Bay to continue their journey south by aircraft. Thirty-four arrived in Quebec on the d'Iberville.

One of the most interesting projects on the patrol was the moving of seven Eskimo families from the Port Harrison area and northern Baffin Island to Resolute and Craig Harbour. This voluntary migration continues a program started two years ago by the Department of Northern Affairs and National Resources to improve economic and living conditions among the Eskimo people. The first movement was regarded more or less as an experiment to determine how well Eskimo from southern areas could adapt

themselves to conditions in the far north and make a living for themselves by hunting and trapping.

The projects are designed to be entirely self-contained. Each group has been placed under the supervision of the local R.C.M.P. detachment and has its own supplies sent in under a loan issued to a leading Eskimo in each group. The outcome has been even more satisfactory than had been anticipated. The Eskimo have been able to obtain all the country food they need and sufficient fur and other produce to purchase their other requirements from the native store. They have adapted themselves quickly to the changed conditions and have requested the department to make arrangements to have some of their relatives transferred north.

This was the second year that the Canadian Government had undertaken the sea resupply of the joint arctic weather stations. Previously cargoes were taken in by United States Navy and Coast Guard vessels. The C.G.S. C.D. Howe met the Supply Mission at Resolute Bay to assist in carrying out this task, which was hindered this year, by adverse weather and ice conditions.

On the Patrol, Mr. W. Henderson was the Post Office Department's representative, and Staff-Sergeant H. Kearney of "G" Division was the inspecting N.C.O. for the R.C.M.P.; in addition Department of Transport radio and meteorological personnel and members of the R.C.M.P. on exchange were carried as well as missionaries and members of the Hudson's Bay Company.

Hope for the whooping crane

In 1954 William A. Fuller, of the Canadian Wildlife Service, following a report from a helicopter pilot engaged in fire protection in Wood Buffalo Park, had flown over the area and had identified a young whooping crane on the ground with its parents. It appeared likely that the park, which straddles the border between Alberta and the Northwest Territories, held the long-sought nesting area. Unhappily the young bird did not survive, as only adults arrived in Texas that fall.

In the summer of 1955, the Canadian Wildlife Service, the United States Fish and Wildlife Service, and the National Audubon Society collaborated in an aerial exploration of the key area in Wood Buffalo Park, and proved that it was the nesting region by

spotting no fewer than six young whooping cranes, of which two pairs were twins. The discovery of the nesting grounds is of the greatest importance for the protection of the species, and the number of birds reaching Texas was most encouraging.

On 4 November 1955 watchers in the Aransas National Wildlife Refuge on the coast of Texas, counted twenty-eight white whooping cranes and their rusty-brown offspring. Twenty-one adults had gone north in the spring; one had failed to return, but the presence of eight young birds, following a year in which no young had survived, gave new hope for the species.

The eight young birds of 1955 are the largest number of juveniles known to have reached the Aransas refuge since it was created in 1937. The prospect may be even brighter than it seems. Some reports of sightings of whooping cranes in 1955 do not agree with the counts and movements of the known birds, and cannot be easily explained away (as are a goodly percentage of reports each year) by mistaken identification of swans or pelicans. It is just possible that a small flock of whooping cranes nests in some northern area still unknown and winters in an equally secluded wilderness spot in the southern states or Mexico.

The Aklavik Journal

The first number of the Aklavik Journal appeared in November 1955. It is a mimeographed paper of 8 pages, published monthly by Father Brown, O.M.I. at the R.C. Mission, Aklavik, N.W.T. Subscription rate by mail is $1.00 for six months.

The Aklavik Journal provides very full coverage of events in Aklavik and the surrounding area and does not avoid controversial issues.

Subscriptions for 1956

Members are reminded that their subscriptions for 1956 ($2.00 for Ottawa members, or $3.00 for combined membership for husband and wife, and $1.00 for out-of-town members, other than institutions), are payable to the Treasurer, Mr. H.M. Cox, Apt. 104, 196 Metcalfe Street, Ottawa.

Owing to currency regulations it is not always convenient for members of the Arctic Circle residing in Europe to pay their

subscriptions to the club in Ottawa direct. Through the courtesy of the Director, the Scott Polar Research Institute will now receive the subscriptions of members from the United Kingdom and from the Continent of Europe and will transmit them to Canada from time to time. European members should forward their 1956 subscriptions (5/-) to the Director, Scott Polar Research Institute, Cambridge, England and mark them "Arctic Circle Subscription".

Pagination of Volume 8, Number 3

In Number 3 of Volume 8 the pagination referred to the number only instead of to the volume as a whole. Both paginations should have been included in this number, which it is felt will be used for library reference purposes. For those binding copies of the Circular the pagination for this number should be changed to 38 - 69, and it will be referred to in this way in the index.

Change of Address

Members are earnestly requested to advise the Treasurer, Mr. H.M. Cox, 196 Metcalfe Street, Ottawa, promptly of any change of address.

Editorial Note

The Editor would welcome contributions from those who are at present in the Arctic or have information about work in the Arctic. All material for the Circular should be sent to:

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245 Sylvan Road,
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Ottawa 2, Ontario

INDEX TO VOLUME VIII, 1955

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

W

Y

Note: Owing to an error in pagination there is no page 69 in this volume. Vol. VIII. No. 3 has been renumbered in the index to refer to the volume as a whole.