

Scientific program at the Arctic Research Laboratory, Point Barrow, Alaska

As a result of negotiations with the United States Office of Naval Research, the Arctic Institute has assumed responsibility for the scientific program at the Arctic Research Laboratory, Point Barrow, Alaska. Basic research relating to problems affecting northern engineering, communications, public health, and other fields will be carried on under the guidance of a special committee of the Institute, and will be coordinated by Mr. Joseph T. Flakne.

Mr. Flakne, the former Chief of the Alaska Division, Office of Territories, Department of the Interior, has spent most of his adult life in the north. Born in Beltrami, Minnesota, he graduated from the University of Alaska in 1934. Formerly Director of the United States Employment Service for Alaska and Alaska Specialist for the War Manpower Commission, he served during the Second World War in the Alaskan Headquarters of the United States Army.

The Chairman of the Institute's Arctic Research Laboratory Committee is Dr. Hugh M. Raup. The committee includes:

Dr. C. Earle Albrecht, Rear Admiral L. O. Colbert, Dr. Henry B. Collins, Jr., Dr. John Field, Dr. John C. Reed, Rear Admiral Edward H. Smith, Dr. A. L. Washburn, Dr. Alexander Wetmore, Dr. Ira L. Wiggins, and Mr. Walter A. Wood.

Arctic session at the A.A.A.S. meeting in December

The Institute has accepted an invitation from the Western Society of Naturalists to join them in joint sponsorship of a program of papers in arctic science, with emphasis on biology, to be presented at the 121st meeting of the American Association for the Advancement of Science at the University of California, Berkeley, California, on 27, 28, and 29 December 1954.

Associates and Fellows of the Institute who wish to offer papers at this meeting should write to the Secretary of the Western Society of Naturalists, Dr. John L. Mohr, University of Southern California, Los Angeles 7, California, for details and "Call for paper" forms. Abstracts of papers should be in his hands by October 1. Papers are limited ordinarily to fifteen minutes reading time.

NORTHERN NEWS

Position of ice island T1

On the annual polar flights by the R.C.A.F. Specialist Navigation Course from the Central Navigation School a reconnaissance of ice island T1 was carried out.

On April 30 T1 was seen about seven miles north of Cape Stallworthy lying in an east-west direction with its wider end to the west; its size appeared to be

unchanged. T1 has therefore moved about 110 miles from its position in April 1953 at the entrance to Yelverton Bay as reported by the 1953 R.C.A.F. Specialist Navigation Course flights (see *Arctic*, Vol. 6, pp. 164-5).

No other ice islands were spotted although a lookout was maintained. T3 was flown over on the flight from the pole, but was hidden by low stratus.

The 1951 Census in the Northwest Territories¹

The first official census in Canada was taken by Jean Talon, Intendant of New France, in 1666, and records a total of 3,215 persons. Subsequent censuses were taken at fairly frequent intervals, and the present decennial censuses date back to the passing of the British North America Act, which provided for the First Census of Canada to be taken in 1871. By this year the population had grown to 3,689,257 persons and in 1951 it had reached 14,009,429.

Figures for the population of the Northwest Territories, or, simply, "The Territories" as they were at first called, are given in all the decennial censuses, and a special census of Manitoba and the Northwest Territories was taken in 1886 ('Sixth Census of Canada, 1921', Vol. 1, p. ix). At that time the population figures for the more northerly areas were estimates only, and until 1912 the area of the Northwest Territories was considerably larger than it is today, at different periods including Alberta, Saskatchewan, and the Yukon, as well as parts of Quebec, Ontario, and Manitoba.

It was not until 1901 that the first enumeration of "the unorganized Territories of Keewatin, Athabasca, Mackenzie and Yukon was undertaken . . ." The 'Report on the Fourth Census of Canada, 1901', records that "For this service 110 enumerators were employed, with packers and canoemen to help in traversing the country, and wherever people were found—in mining camps, on fishing grounds, at trading posts or mission stations—a record of them by name was made in the usual way. But for greater convenience a special schedule with a limited number of inquiries was used for those Territories. The task was arduous and frequently perilous for the men who were engaged in it, but it is very gratifying to record that neither in those remote regions or elsewhere in the wide Dominion has the taking of the Census been attended with the loss of one life." (Vol. 1, 'Population', p. xiii).

¹Reprinted from the *Arctic Circular*, Vol. 6 (1953) pp. 37-42.

The first figures for the Eskimo population are given in the Census of 1921. Previous to this time both Eskimo and Indians were classed as Indian. In 1921, 3,269 Eskimo were recorded, though a considerable proportion of the population must have been omitted.

The taking of decennial censuses involves a great deal of preparatory work, even in the settled parts of the provinces. In the Northwest Territories and in northern Quebec, the task is much more difficult because of the sparsity of the population, the distances to be covered, and the poor communications. In the District of Mackenzie, the arrangements for the 1951 Census were made by a Census Commissioner appointed at Yellowknife. He in turn appointed enumerators for each area. In other districts the Northern Administration and Lands Branch of the Department of Resources and Development cooperated with the Dominion Bureau of Statistics in appointing enumerators, in sending in the necessary supplies, and in collecting the completed returns. In many cases forms had to be sent in and all preparatory arrangements made a year in advance. The task of documenting a population with a density of only 0.01 per square mile spread over an area of 1¼ million square miles is extremely difficult. Yet all returns were completed and sent in to the Bureau of Statistics for tabulation by the autumn of 1951. The official 1951 figures for the population in the Northwest Territories are given at the end of this note, and the totals for the Yukon Territory are also included.

The accuracy of the Eskimo census has improved with each decade. In 1941 7,178 Eskimo were recorded¹, exclusive

¹The 1941 and 1951 figures for the Eskimo population were prepared by the Department of Northern Affairs and National Resources and are the correct final figures. Slight discrepancies between these and the figures as published in the census reports are mainly due to duplication in the enumeration of Eskimo temporarily confined to hospitals in the provinces. In the 1941 Census the total Eskimo population is given as 7,205. The corresponding census figure for 1951, excluding Newfoundland-Labrador, is 8,646, and the total population 9,733.

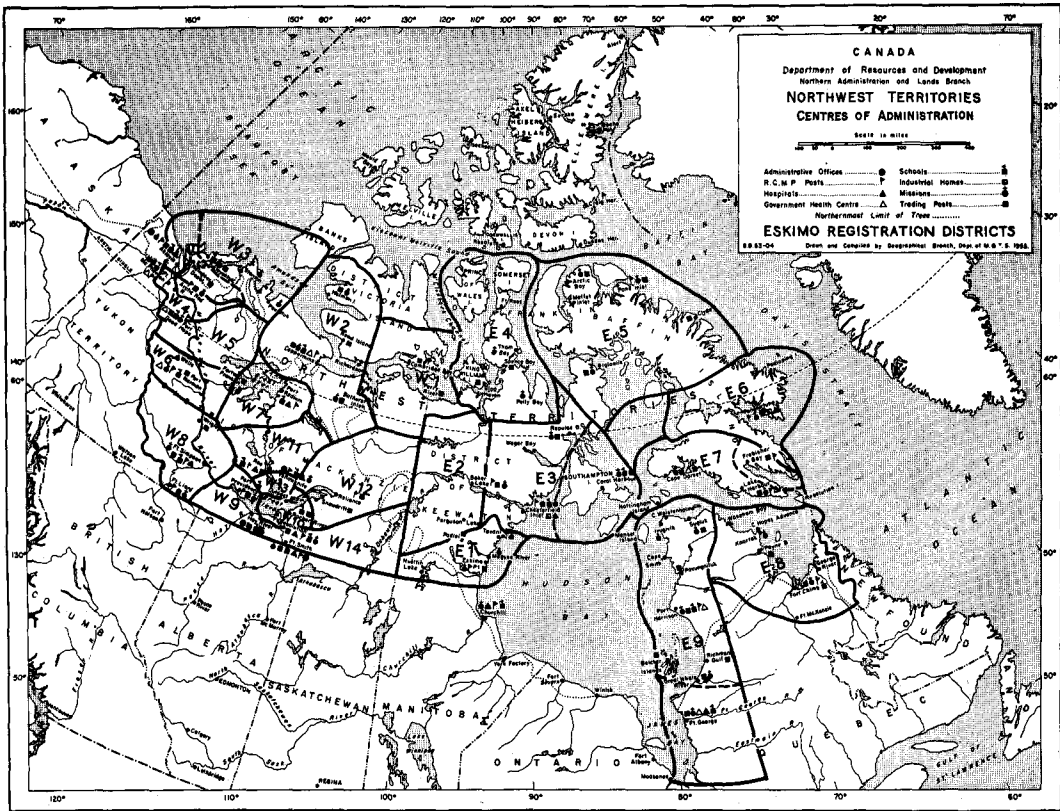


Fig. 1.

of Newfoundland-Labrador, which was not part of the Dominion at that time. In 1951 the total Eskimo population, if Newfoundland-Labrador is excluded, was 8,646. This increase of 1,468 in the population should probably be reduced by about 500, as a few isolated groups were known to have been omitted in 1941. With improved means of communication and the fullest cooperation from all organizations in the field, the 1951 figure is believed to be a very accurate record.

Comparisons between the 1941 and 1951 figures for the Eskimo population in the Cambridge Bay, Coppermine, and Pond Inlet districts are complicated by changes in the registration districts, made to agree with changes in the R.C.M.P. patrols. Since 1941 the Spence Bay district has been formed from areas previously included in the Cambridge Bay and Pond Inlet districts. In 1941 Bathurst

Inlet was included in the Cambridge Bay figures, in 1951 in the Coppermine, but since 1951 it has been returned to the Cambridge Bay district. The map shows the registration districts at the time of the 1951 Census.

The present Eskimo population is surprisingly youthful. Of the total of 9,493 in 1951, 2,018 were children 5 years of age and under, 1,141 were between 6 and 10 years of age, 1,163 were between 11 and 15, and 1,037 between 16 and 21 years of age. Less than 44 per cent of the total population was over 21 years old, as compared with a figure of 60 per cent for the whole of Canada. Only 483 Eskimo were over 55 years old.

It is reasonable to assume that, with greater security against want and steadily improving medical care, the increase in the Eskimo population will be maintained or accelerated in the next few decades.

TOTAL POPULATION — NORTHWEST TERRITORIES, 1951
(Figures based on the registration districts as shown on Fig. 1)

	Eskimo	Indians	Others	Total
Eskimo Point (E1)	446	—	38	484
Baker Lake (E2)	413	—	20	433
Chesterfield and Southampton Island (E3)	647	—	125	772
Spence Bay (E4)	462	—	19	481
Pond Inlet (E5)	908	—	32	940
Pangnirtung (E6)	591	—	17	608
Lake Harbour and Frobisher Bay (E7)	1,014	—	75	1,089
Fort Chimo (E8)	31	—	—	31
Port Harrison (E9)	330	—	2	332
Cambridge Bay (W1)	295	—	11	306
Coppermine (W2)	624	—	31	655
Aklavik (W3)	1,080	175	261	1,516
Arctic Red River (W4)	—	463	36	499
Fort Good Hope (W5)	—	257	28	285
Fort Norman (W6)	—	270	175	445
Port Radium (W7)	—	35	311	346
Fort Simpson (W8)	—	668	197	865
Fort Providence (W9)	—	470	688	1,158
Fort Resolution (W10)	—	277	336	613
Fort Rae (W11)	—	680	151	831
Reliance (W12)	—	62	8	70
Yellowknife (W13)	—	345	2,379	2,724
Fort Smith (W14)	—	101	341	442
Other Areas	16	—	63	79
TOTAL	6,857	3,803	5,344	16,004

TOTAL POPULATION — YUKON TERRITORY, 1951

Others	7,563
Indians	1,533
Total	9,096

ESKIMO CENSUS ONLY

(Figures based on the registration districts as shown on Fig. 1)

Northwest Territories	1941	1951	
Eskimo Point (E1)	423	446	
Baker Lake (E2)	267	413	
Chesterfield } (E3)	476	427	
Southampton Island } (E3)	136	220	
Spence Bay (E4)	—	462	
Pond Inlet (E5)	798	908	
Pangnirtung (E6)	551	591	
Lake Harbour } (E7)	841	716	
Frobisher Bay } (E7)	—	298	
Fort Chimo (E8)	—	31	
Port Harrison (E9)	—	330	
Other Areas (Craig Harbour)	—	16	
<i>Total — Eastern Arctic</i>	—	3,492	4,858
Cambridge Bay (W1)	468	295	
Coppermine (W2)	429	624	
Aklavik (W3)	685	1,080	
<i>Total — Western Arctic</i>	—	1,582	1,999
<i>Total</i>	—	5,074	6,857
Quebec			
Fort Chimo (E8)	615	627	
Port Harrison and Moose Factory (E9)	1,489	1,162	
<i>Total</i>	—	2,104	1,789
Labrador			
<i>Total</i>	—	not included	847
<i>Total Eskimo population</i>	—	7,178	9,493

Population of Eskimo peoples¹

In the preceding note on "The 1951 Census in the Northwest Territories", figures are given for the Eskimo population in 1941 and 1951 in this area. The following table, which includes figures for Alaska², Greenland³, and the Soviet Arctic⁴, may therefore be of interest as it gives some idea of the Eskimo population, including Aleuts and Greenlanders, throughout the world.

	1926	1939	1941	1945	1950	1951
Alaska						
Aleut		5,599			3,892	
Eskimo		15,376			15,882	
Greenland						
Native population			19,360			22,890
Soviet Arctic						
Yuity (Eskimo)	1,293			1,300		
Canada		7,178				9,493 ⁵
Newfoundland-Labrador				701		

Comparative figures for the age groups of the Eskimo population are not readily available. In Alaska, in 1950, 54 per cent of the total native population (including Indians, Negroes, and Asiatics) was under 20 years of age, and in Greenland, in 1951, 36 per cent of the native population (Greenlander) was under 12 years of age, whereas in Canada, in 1951, 66 per cent of the Eskimo population was under 21 years, and 33 per cent was under 11 years of age.

Expeditions to north Ellesmere Island

During the summer of 1953 Geoffrey Hattersley-Smith of the Defence Research Board of Canada and R. G. Blackadar of the Geological Survey of Canada carried out glaciological and geological investigations in northern Ellesmere Island.

The party, with two Greenlanders and their dog teams, was flown in to Alert on April 21. May and the first part of June were spent travelling about

¹Reprinted from the *Arctic Circular*, Vol. 6 (1953) p. 43.

²From the 'United States Census of Population, 1950', Vol. 2.

³From 'Report on Greenland, 1953', published by The Prime Minister's Second Department, Copenhagen, p. 2.

⁴From Webster, C. J. "The growth of the Soviet Arctic and Subarctic", *Arctic*, Vol. 4 (1951) p. 44.

⁵Including Labrador-Newfoundland.

900 miles by dog team along the Ellesmere Ice Shelf. On the first of their two journeys they reached as far west as Markham Bay. Stakes were set up along the ice shelf so that movement, surface wastage, and increment during the next year could be determined by the larger party planned for the summer of 1954, and observations were made of the extent and condition of the ice. Following these journeys the Greenlanders returned to Thule.

In July the party studied the ice cap and geology of the Unites States Range, covering about 350 miles on foot. They left Alert by aircraft on August 16.

An account of the geological results has been published by Blackadar.¹ Previous to this party no trained geologist had travelled along the north coast of Ellesmere Island, and all subsequent discussions were based on the paper written by Feilden and De Rance² from material collected by Feilden in 1875-6 on Nares's expedition.

Several significant facts emerge from the geological study made during the summer of 1953. First, the existence of highly metamorphosed strata and of granitic rocks on the northernmost coast of Ellesmere Island has definitely been established. Secondly, the possibility that there are many structural unconformities indicates that the geological evolution of the region was a complex one. An apparent unconformity between a fossiliferous Middle Silurian limestone and the Cape Rawson group suggests that the latter is either Middle Silurian or older. Another probable unconformity, in the Late Carboniferous or Early Permian rocks on Feilden Peninsula, points to a second orogeny in the region. Finally, a third orogeny is indicated between undisturbed Tertiary beds and the youngest Palaeozoic strata.

¹Blackadar, R. G. 1954. 'Geological reconnaissance north coast of Ellesmere Island, Arctic Archipelago, Northwest Territories'. *Geol. Surv. Can. Paper* No. 53-10, 22 pp. and map.

²Feilden, H. W. and C. E. De Rance. 1878. "Geology of the coasts of the arctic lands visited by the late British expedition under Captain Sir George Nares, R.N." *Q. J. Geol. Soc. Lond.* Vol. 34, pp. 556-67.

On 24 April 1954 a joint Canadian/United States party led by Geoffrey Hattersley-Smith of the Defence Research Board of Canada was landed on the Ellesmere Ice Shelf by the U.S.A.F., three miles west of Ward Hunt Island. The members of the party are: R. L. Christie, Geological Survey of Canada, A. P. Crary, Geophysics Research Directorate of the U.S.A.F. Cambridge Research Center, and E. W. Marshall, Snow, Ice, and Permafrost Research Establishment of the U.S. Corps of Engineers. As in 1954, two Greenlanders and their dog teams were taken in from Thule to assist the party.

Request for arctic postal information

One of our Associates, Lieut. G. J. Raymond, U.S.A.F., is making a study of arctic postal history and postmarks. He is searching for envelopes from letters posted in the north, information on past, present, and proposed post offices, photographs of post offices and postmasters, and other related material for his reference collection. Offers of any of these items would be welcomed by Lieut. Raymond with gratitude and/or suitable remittance, according to the wishes of the sender. His address is 3715 Alberta Street, Houston 21, Texas, U.S.A.

OBITUARY

W. R. B. Battle (1919-1953)

On 13 July 1953 Ben Battle was accidentally drowned in Baffin Island while returning from a lone walk near the Base Camp of the Arctic Institute's 1953 expedition.

Walter Ravenhill Brown Battle was born on 23 December 1919 in Leeds, England, and educated at Leeds Grammar School, and at the University of Leeds, graduating in geography in 1949. Having registered as a conscientious objector he spent most of the duration of the war working on English farms. Ben was early interested in mountains and in climbing, and with this background it was natural that he should become a keen glaciologist. In 1948 and 1949 he went to east Greenland with the Danish Pearyland expeditions. Then from 1949 to 1953 he carried out research for a doctoral degree of the University of Cambridge, on the formation of corries. He tested the validity of the hypothesis that freeze-thaw action within a bergschrund results in corrie erosion by gradual shattering of the rock wall. During this time he took temperature recordings in bergschrunds in Norway and Switzerland, and made laboratory experiments, beam-testing rocks which had been exposed to alternate freezing and thawing.

In 1952 he was awarded the Senior McGill University-Arctic Institute Carnegie Fellowship, and he and his wife, Barbara, went to live in Montreal. He continued his studies on the Institute's 1953 Baffin Island expedition. His results indicate that it is unlikely that freeze-thaw action in bergschrunds can cause corrie formation. A number of his glaciological papers have been published in scientific journals. He firmly believed in the application of more experimental and quantitative research in geomorphology.

Ben was in many ways a man of unusual and firm ideals, many of them at variance with contemporary society, but springing from his deep humanism. Ever cheery and open hearted, he delighted in his fellow men, and so got on famously with them. To have him as a companion, in city life, in winter skiing, and on the Baffin expedition was a constant pleasure. For the writer it will always be a joy to relive these memories again.

ADAM WATSON