

in Ottawa, and will operate over the Hudson's Bay Railroad between Portage la Prairie and Churchill. One round trip will be made every three months, in each of the four seasons of the year, with week-long stops going and coming at such intermediate points on the rail line as The Pas, Waboden, Pickwitonei, Gillam, Herchmer and Churchill.

The auroral (northern lights) zone, which covers all of northern Canada, is highly suitable for the study of ionospheric conditions because charged particles, emanating from the sun, are deflected closer to earth by the earth's magnetic field in this area. The charged particules come from sun spots which last year reached their highest point in 200 years of recording.

The new mobile ionospheric station will send radio beams as high as 200 miles above the earth. These are reflected by the ionosphere to the point of origin, and from the beams can be deduced required information about conditions in the upper regions. Based on this information, predictions can be made of future radio transmission conditions and selection of suitable frequencies for long distance radio communication is made easier.

The recordings of Canadian stations are coordinated with those of 63 other stations in various parts of the world, and from the mass of information are produced monthly predictions of useful radio frequencies and daily ionospheric storm warnings.

### Zoology

Mr. H. F. Quick, of Colorado A & M College, Fort Collins, Colorado, continued his study of the habits and economics of fur animals as factors of management and conservation. Field work

was curtailed during April in order to do laboratory work. Only a few trips were made for the purposes of studying methods of beaver hunting and obtaining notes on the habits and abundance of animals. An unusual and prolonged break-up resulted in serious delay and limitation of the activities of the beaver hunters. Travel in the bush during this period was not impossible but due to snow conditions was quite difficult. The beaver hunters were idle for about a month during the hiatus between seasons suitable for travel by dog team and by boat. Professor Quick travelled about 200 miles by dog team during April.

The greater part of the period from April 1 to June 30 was spent examining zoological specimens which were procured earlier. Specimens of fur animals examined totalled 223, and altogether more than 500 specimens of animals were examined. Over 3000 raw furs were examined for primeness and quality. Among the materials preserved were 209 fur animals skulls from which sex-age classification studies will be made. Other material also preserved were stomach contents, reproductive organs and endoparasites of the fur bearing species.

In order to evaluate comparatively the conditions of the fur resource a period of three weeks was spent interviewing traders and trappers in the territory adjacent to the Fort Nelson region. This objective was approached by visiting trading posts on the Nelson, Liard and Lower Mackenzie rivers between Fort Nelson and Aklavik. The trip of about 1200 miles was made by river boat. Information was obtained in this manner regarding conditions of fur animal and prey species populations and of trapping and travel techniques.

## NEWS FROM HIGH LATITUDES

### Shipping at Churchill

A record season of grain shipments was reported from Manitoba's arctic seaport Churchill during 1948. The navigation season opened officially on August 8 with the arrival of two steamers from the United Kingdom. A record of 5,250,000 bushels of wheat was reported

to have been exported before the season closed.

Three Canadian naval vessels entered Hudson Strait during the past summer, two of them continuing to Churchill. The third, H.M.C.S. *Magnificent* an aircraft carrier went as far as Wakeham Bay, Que., before returning to Atlantic

waters. The two others, both destroyers, spent five days at Churchill, and made other calls at Coral Harbour, Southampton Island and several small settlements on Hudson Strait. The vessels carried, in addition to their usual crew, a few scientific observers including representatives of the Defence Research Board, Department of Transport and Department of Mines and Resources.

### Reforms in Greenland

Reports from Denmark and Greenland make it clear that important reforms are to be anticipated during the next few years. Shortly after the end of the last war, the Greenland Council, sitting in Godthaab, recommended certain reforms to the Danish Parliament. In 1946 negotiations were carried on in Copenhagen between representatives of Greenlanders and the Danish government, and a five year plan of economic, educational and social reform was drafted. Experience since 1946 has demonstrated that progress in Greenland can be much more rapid than was anticipated, and a completely new approach to the question is now being made.

Prime Minister Hans Hedtoft with two Parliamentary representatives visited the colony during the past summer. A meeting was held with Greenland representatives at Godthaab on August 4 and agreement was reached about proposed reforms. It is reported that industrial plants such as the coal mines at Kutdligssat on Disko Island are to be modernised, new power plants, harbour works and better roads are to be built, and for the first time private capital is to take part in the fishing industry and possibly in other commercial activities. New schools are being erected including two for training in home economics. An interesting change is to be the emphasis on the use of Danish as the medium of instruction in schools—a reform requested by Greenlanders in 1945.

Navigation along the intricate west coast of Greenland is to be facilitated by erection of a number of lighthouses, possibly as many as twenty. They are likely to be erected at important ports such as Julianehaab, Egedesminde, Frederikshaab, Godthaab and Sukkertoppen. The lighthouses are to be auto-

matic and operated by gas supplied from cylinders.

### Weather station program

Little has been reported in North America about the elaborate program of weather station construction going on in Greenland under Danish auspices. It has been estimated that about six and a half million kroner will need to be spent to set up the stations at present planned. Apart from such new installations, it should be recalled that Denmark took over a number of United States stations built during the war. New weather stations are being built, or have already been completed at Thule, Upernavik, Godhavn, Egedesminde, Holsteinsborg, Sukkertoppen, Godthaab, Frederikshaab, Tingmiarmiut (south-east coast), Angmagssalik, Aputiteq, Kap Tobin (Scoresbysund) Daneborg, Danmarkshavn. To make this elaborate building program possible a considerable number of skilled craftsmen were sent to Greenland from Denmark, 28 being needed to complete the work at Tingmiarmiut alone. Future plans call for new stations at Umanak, Kutdligssat, Christianshaab, Jakobshavn, Faeringerhavn, Tovkusak or Ravns Storø and Julianehaab.

About 98% of the equipment used in the new stations is of Danish manufacture, and is valued at about four million kroner. The work has required the shipping to Greenland of numerous motor vehicles—a new departure in all but a few settlements. Operation of the new stations will require the services of more than a hundred additional trained personnel, the cost of operations being about three million kroner a year.

It is hoped that at any rate a part of this very large cost may be borne internationally through the International Civil Aviation Organization.

### H.B.C. Trading Transport in Arctic Canada

During the summer of 1948 entirely different freighting arrangements were established as compared with previous years. In place of the *Nascopie*, the motor vessels *Terra Nova*, *Clarenville* and *Earle Trader* were chartered by the Hudson's Bay Company and these boats, together with the H.B.C. Motor Vessels *Eskimo* and *Fort Severn*, took care of

all the Company's freighting obligations throughout the Eastern Arctic. In the Western Arctic the R.C.M.P. Schooner *St. Roch* and the Company's Schooners *Fort Ross* and *Nigalik* delivered a record tonnage. The Air Transport Division is making an important contribution in the general supplying of posts and in facilitating inspection tours of Company executives. In the first six months of 1948, three quarters of a million pounds of freight were carried by the three aircraft (two Norseman and a Canso) and 103,000 passenger miles flown. In their travels, the aircraft have covered every area in which the Fur Trade operates.

In August, the Canso-Polar Bear—piloted by J. S. Coombes, veteran bush and R.C.A.F. flier, carried out a 7,000 miles tour of inspection, visiting all posts on Baffin Island, and a number more in the Straits and Bay, and Western Arctic. In the course of this trip a site was selected in Spence Bay for the establishment of a new post which will replace Fort Ross, closed earlier in the year. In August, 1947, the same plane had made another 10,000 mile Arctic flight. Although freighting is the main function of these planes, they are also used extensively for inspection work and the transportation of personnel and their families to and from posts.

### Norwegian Polar Activities

Two items of interest are reported from Norway concerning the Antarctic. The Government has introduced legislation to change the status of the Norwegian Sector of the Antarctic continent (Queen Maud's Land). This territory was annexed in 1939. In future it is to become a *biland* or dependency having the same status as Svalbard. Bouvet and Peter I islands have been administered in this way since 1939.

The Norwegian Parliament considered on May 21st, 1948, a Bill submitted by the Ministry of Commerce about the proposed Norwegian-Swedish-British Antarctic Expedition. The Bill outlines preliminary plans for the Expedition and states the scientific aims as including studies of meteorology, topographical mapping, geology, cartography, ice reconnaissance, aurora photography, magnetism and cosmic ray observations. It

is stated that a preliminary map of the Queen Maud Land coast has been compiled from airplane photographs taken by the German "Schwabenland" expedition in 1939.

Aircraft will be used for survey and transport, and a party of at least twelve, of whom six should be scientists, is contemplated. General direction of the expedition is to be under the Norsk Polar-institutt in cooperation with the Norwegian Geographical Society and with the United Kingdom and Sweden. Costs will be shared between the three countries. Work will begin during the 1949-50 season, the party remaining for two winters.

### News items from beyond the North Pole

News about the Soviet Arctic is not easy to secure. *Arctic* is all the more grateful to Dr. Vilhjalmur Stefansson for making a number of brief news items available from his library.

*News of the USSR from Vokrug Sveta, No. 6, June 1948*

The North-Western Section of the Expedition of the Institute of Ethnology is carrying on an anthropological-ethnographical study on the Chukotsk Peninsula and in Kamchatka.

Leningrad astronomers are working in the Murmansk Region studying Aurora Borealis. They are taking coloured photographs of the northern lights.

This year, the dean of Russian ice-breakers, *Ermak*, is celebrating her 50th birthday. She was built in Newcastle in 1898, according to the plans of Admiral Makarov.

L. S. Berg has discovered in the Leningrad Archives seven books of notes by F. P. Litke, taken during his round the world trip. They contain notes on England, Germany, Italy, Denmark, Turkey, etc.

A committee has been set up in Leningrad to organize the celebration of the 300th anniversary of the discovery of Bering Strait by Semen Dezhnev. He proved that Asia and America were not connected. A special conference will be held on the day of the anniversary, and several exhibitions will be on view. A popular pamphlet on great discoveries by Russian seamen will be published.

### Books

V. Y. Vize has completed a new historical work devoted to 100 Russian explorers-navigators. Among them are: Savva Loshkin, the first to circumnavigate Novaya Zemlya; Fedor Rakhlin who wintered for 26 consecutive winters on Novaya Zemlya; Semen Dezhnev, the discoverer of Bering Strait.

On the occasion of the 60th anniversary of the death of the Russian explorer Miklukhamaklai, the All-Union Geographical Society and the Institute of Ethnography of the Academy of Sciences, are preparing an edition of the works of the explorer, in 5 volumes.

A collection of documents on G. I. Shelekhov is soon due to appear, published by *Geographical Publishers*.

A second edition of the Diaries of O. E. Kotzebue—the first edition appeared in 1821-23—describing his three round-the-world voyages, is due to appear shortly.

In 1947, the State Geographical Society published three books in the series "Russian Travellers". One is by K. Kunin, *The Travels of Afanasii Nikitin*; the other by Bessonov & Yakubovich, *In Inner Asia—The Travels of Valikhanov Potanin*; and the third by V. V. Obruchev & Fradkin, *In Inner Asia—Travels of V. A. Obruchev and M. V. Pevtsov*. Two other travel books are ready for publication: A. D. Dobrovolski, *The Voyage of F. P. Litke*; and S. N. Markov, *Semen Dezhnev*.

### Roster of Arctic Specialists

The Arctic Institute Roster of Arctic Specialists is progressing satisfactorily. Approximately 5,000 questionnaires have been distributed in Canada, Alaska and the continental United States. More than a thousand completed questionnaires are already prepared for inclusion in the roster. In addition to Associates of the Arctic Institute, persons invited to provide information have been selected from government agencies in Canada and the United States, from traders, mining companies, missionary organizations and others having business in the North.

### Free Ride to Arctic Port

Travellers from the Canadian western arctic report an unusual journey by

the Roman Catholic Mission supply ship *Lady of Lourdes* during August, 1947. The vessel was enroute from Tuktoyaktuk to Coppermine when she became caught in heavy ice. Forced on top of the ice about 200 miles west of Coppermine, she drifted to within about twenty miles of the post during the next three days. In Coronation Gulf, the Hudson's Bay Company trading schooner *Fort Ross* was able to tow *Lady of Lourdes* off the ice into the water. The schooner was undamaged.

### Aklavik on the Air

Radio station CHAK operated at Aklavik, N.W.T., by the Royal Canadian Corps of Signals is bringing news, music and education to the far north-western part of Canada's mainland. The station was constructed from odds and ends as a hobby by operators of the Canadian Government commercial radio station. In January, 1948, its staff shared in a joint program with Australian operators on Heard Island in the Southern Ocean.

### Canadian Need for Qualified Scientists and Administrators in the North

Dr. H. L. Keenleyside, Commissioner of the Northwest Territories of Canada, and a Governor of the Arctic Institute, recently wrote to the Presidents of Canadian Universities to draw their attention to northern careers open to graduates. Recalling that certain fields of science remain almost untouched in northern Canada, Dr. Keenleyside suggested that both government and private agencies are interested in assisting outstanding students to become Arctic specialists. The Arctic Institute was mentioned as one organization prepared to advise on professional openings likely to be available to young graduates.

### Explorers in Carnegie Hall New York

Carnegie Hall has placed in the entrance lobby photographs of distinguished polar explorers who have appeared on programs there. Under each photograph is a brief caption, which Dr. Vilhjalmur Stefansson was asked to prepare. He has been good enough to provide a copy of the texts so that readers

of *Arctic* may have a record of them. The six names follow:

**ROALD ENGELBREGT GRAVNING AMUNDSEN**, medallist of the Explorers Club, was first to navigate the Northwest Passage all the way through in one direction by ocean-going ship. He was first to reach the South Pole and first to cross the Arctic Sea in a dirigible.

**RICHARD EVELYN BYRD**, medallist of the Explorers Club, was one of the early flyers to cross the Atlantic. He was first to reach both North and South Poles by air, and commanded the largest expedition that ever sailed to the Antarctic.

**ROBERT EDWIN PEARY**, medallist and president of the Explorers Club, discovered Peary Land, the most northerly land in the world. He was first to prove that Greenland is an island and first to reach a pole of the earth, the North Pole.

**ERNEST HENRY SHACKLETON**, medallist of the Explorers Club, was first to make a

notable overland journey in the Antarctic, when he got within 97 geographic miles from the South Pole. This is considered the greatest achievement with man-hauled sledges in the history of exploration.

**VILHJALMUR STEFANSSON**, medallist and twice president of the Explorers Club, discovered the last islands to be found in the North American Arctic. He introduced the exploration method of supporting men and dogs on Arctic sledge journeys both on sea and land exclusively through hunting.

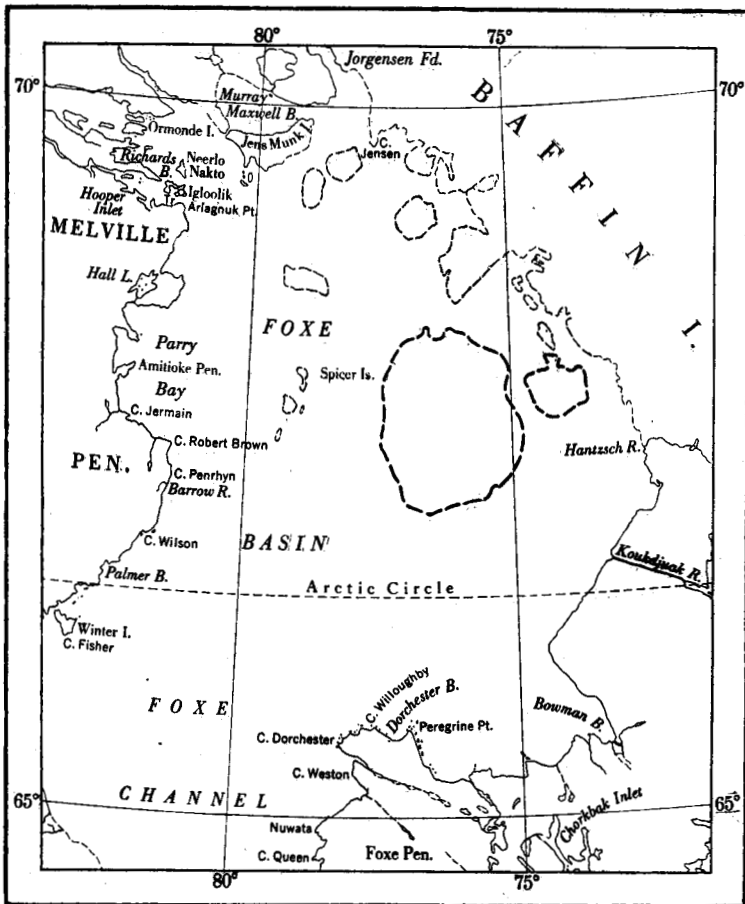
**GEORGE HUBERT WILKINS**, first explorer who ever discovered new land from the air, was also first to cross the Arctic by airplane and first to make an extensive discovery flight in the Antarctic.

#### New Land in Foxt Basin

Canadian geographers were delighted, and a little embarrassed during July, 1948, when the Royal Canadian Air Force announced the discovery of about 5,000 square miles of territory in the

middle of Foxt Basin. The discovery was made by a photographic Lancaster aircraft based at Frobisher Bay, southern Baffin Island. The land was first seen through a rift in clouds, and the navigator assumed that he had miscalculated his position and that he was over the coast of Baffin Island. A later check proved that the land was in fact an unmapped island about 85 miles by 75 miles, lying east of Spicer Islands. It has since been photographed and located approximately on Canadian 8 mile

Two newly-discovered islands are here shown added to the map of Foxt Basin. Their precise shape and character still remain to be determined.



aeronautical charts. This recent addition to Canada's arctic territories is some compensation for the large piece of Foxe Peninsula which was removed from the map following the Putnam expedition of 1927.

Location of the new land need not have been a complete surprise to careful readers of T. H. Manning's reports on his exploration of Foxe Basin. Writing in "The Foxe Basin coasts of Baffin Island" (*Geog. Journal* Vol. CI, Nos. 5 and 6, May-June 1943) on page 240 he states: "The behaviour of both ice and tides in Wordie Bay suggest the probability of islands farther south than any I have shown on the present map. The first time I was on Parry Point I was almost certain there was land some 30 miles due west. When I was again there however conditions were not favourable for observations."

#### French Expedition to Greenland

Reports have been received at the Institute Headquarters from M. Paul Emile Victor on the progress of Expeditions Polaires Francaises. The first report dated July 22, 1948 comes from the Greenland expedition which was at that time establishing its fourth camp on the western edge of the Ice Cap at an altitude of about 1500 metres, inland from the crevasse zone in about latitude 70° N. Having laid this depot the expedition had achieved the main objective of the 1948 season. It has now returned to France to complete arrangements for the one or two year main expedition to start in the spring of 1949. Readers of *Arctic* having access to *Grönlandsposten* can read in the issue for July 1st, 1948 a report on progress of the expedition to that time, illustrated with an attractive woodcut map. Work of the expedition has been greatly assisted by the services of twenty Greenlanders under the leadership of Peter Rosing. The latter will be remembered as having been clergyman and school teacher at Angmagssalik in the early thirties when Gino Watkins' expeditions were based in that area.

#### French Antarctic Expedition

The Adelle Land Antarctic Expedition is referred to in a progress report received at the Institute. Two members

of the party, including the leader-designate M. André Liotard visited the Antarctic during the 1947-48 summer on British and Australian vessels. A ship of the same type as that used by the Ronne expedition has been obtained and plans were well advanced for a preliminary expedition in September 1948.

#### University Seminar in North American Arctic

McGill University, Department of Geography has organized a graduate seminar in the North American Arctic to be held in Montreal between October 1948 and April 1949. The program is comprehensive and because of its novelty is reproduced in outline:—Landforms, Dr. A. L. Washburn; Mining and Mineral Resources, Dr. A. W. Jolliffe; Glaciology and Permafrost, P. D. Baird; Climate, F. K. Hare; Oceanography and Marine Biology, Dr. M. J. Dunbar; Plant Life and Agriculture, Dr. Nicholas Polunin; Wildlife, T. H. Manning; Fur Trade, L. Butler; Native Peoples, Douglas Leechman; Political Considerations, Col. Wilfred Bovey; Commercial Aviation, Dr. Trevor Lloyd; Economic Future, Dr. G. H. T. Kimble.

#### Antarctic Whaling

It is estimated that more than 6,400 Norwegian whalers and factory workers will be spending the coming season in Antarctic waters. With the addition of the new floating factory *Thorshövdi* the 1948 fleet will be made up of ten factory ships and a hundred whale boats. This is approximately the size of the pre-war fleet. Several firms have purchased wartime corvettes which will be used to tow the whales from the catchers to factory ships, in this way increasing the effectiveness of the fleet.

Using nine factory ships, Norwegian whalers in 1947-48 caught and processed 935,902 barrels of whale oil and 54,741 barrels of sperm oil. Including the output of one land station the total production was 1,046,100 barrels. If as is anticipated the catch for 1948-49 reaches 1,200,000 barrels, and there is no change in prices, the whaling industry may bring in about \$88,000,000. The opening date of the coming pelagic whaling season is December 15.

### Alaska Railroad Being Modernized

On July 15, 1948 the twenty-fifth anniversary of the driving of the golden spike into the last tie of the Alaska Railroad was celebrated. In the past the line has been operated at a considerable loss to the United States Government which owns and operates it. As part of a three-year plan to spend \$50,000,000 in modernizing the 425 mile line which runs from Seward on the Gulf of Alaska to Fairbanks, about \$21,000,000 is being expended in the first year on converting railroad cars, improving the roadbed, purchasing 200 miles of steel rail and constructing new terminal buildings. Nearly four hundred wartime military sleeping cars are being converted to box-cars; a new freight and passenger terminal is being built at Fairbanks and much of the line is being reconstructed by widening, filling and raising the roadbed.

### Trichinosis from polar bear meat

Dr. Vilhjalmur Stefansson has passed on to *Arctic* an interesting item of news received in correspondence with Captain John Giaver of the Norsk Polarinstitutt, Oslo, Norway. The Institutt learned through a report made by a German meteorologist Dege that a German weather station had been established in the western part of Frans Josef Land early in October 1943. The party consisted of eight to ten men. In the late spring of 1944 the whole party was taken ill after eating polar bear meat infected with trichinae. The leader, Lieutenant Markus, was able to inform the German naval authorities and a plane was sent to the rescue. In making a very dangerous landing the wheels were damaged, but the doctor on board was able to care for the invalids. Finally the whole party was flown out to Oslo, where some members remained in hospital for several months.

Apart from the news that there was a German weather station in Frans Josef Land, this communication introduces the extremely important question of the infection of polar bear meat with trichinae. Captain Giaver in writing to Dr. Stefansson states that all Norwegian Arctic stations have been warned of the danger of eating infected bear meat, and that

samples taken from all animals are being collected for examination. Beginning in the 1949 Spring all Norwegian sealers will cooperate in collecting specimens. Professor C. S. Aaser of the Norwegian Veterinary Institute has already examined seven samples from different bears shot in Svalbard. All of them contained trichinae.

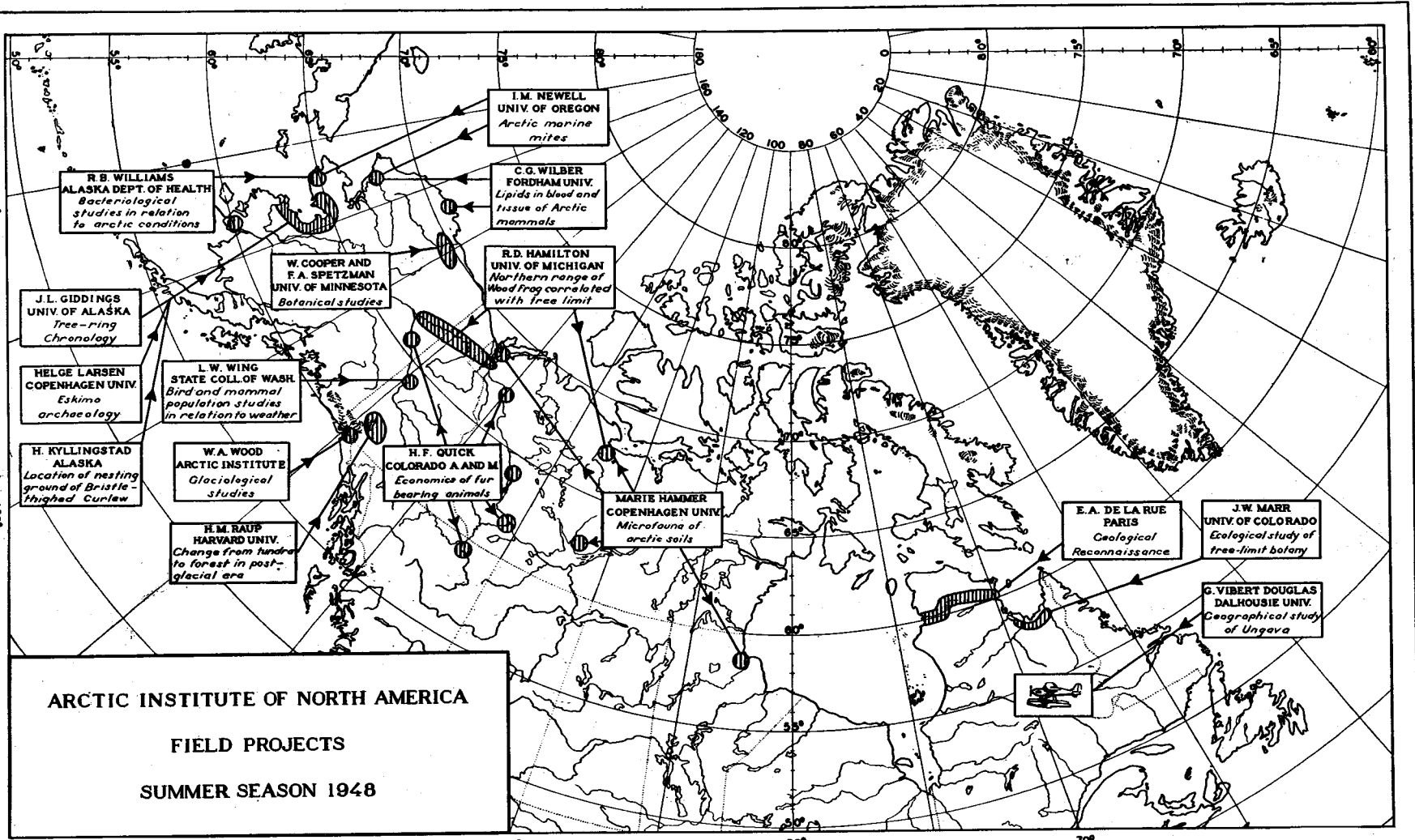
Norwegian scientists believe that it may be worth while for tests to be made in arctic North America to discover whether polar bears are infected with trichinae, and if they are to trace the source of the infection. Reports of cases of trichinosis among northern residents would also be a useful addition to the present enquiry.

### New Arctic Fishing Bank

A new hunting ground for Greenland sharks, a source of medicinal liver oil, has been discovered by fishermen from Aalesund, Norway, recently returned from a 4-month expedition north of the 76th parallel. Operating two deep-sea fishing craft, the men reported a successful season in these new waters and had aboard some 800 barrels of shark liver oil. The new field is said to lie off northwestern Greenland south of Ellesmere Island. Skipper Rasmus Ervik described how the two boats arrived at the edge of the ice in early June and how they fished in front of the receding ice line north to Ellesmere Island by September. Radio telephone communication between the boats makes it possible to plot the course of the fish schools.

### Short-Wave to Antarctica

With over 6000 Norwegian whalers in the Antarctic this season, Norway's powerful short wave transmitter at Fredrikstad is being readied for a full schedule of broadcasts. Crews and workmen aboard Norwegian whaling factories generally sail in late September or early October, returning home in April or May of the following year. For them, the radio is the only tie with the homeland during this whole period. The new 100 KW station at Fredrikstad, which opened in May of this year, beams regular daily programs to the men aboard these vessels. Antarctic broadcasts are transmitted on the 13 and 25 m. bands.



**R.B. WILLIAMS**  
ALASKA DEPT. OF HEALTH  
*Bacteriological studies in relation to arctic conditions*

**I.M. NEWELL**  
UNIV. OF OREGON  
*Arctic marine mites*

**C.G. WILBER**  
FORDHAM UNIV.  
*Lipids in blood and tissue of Arctic mammals*

**J.L. GIDDINGS**  
UNIV. OF ALASKA  
*Tree-ring Chronology*

**W. COOPER AND F.A. SPETZMAN**  
UNIV. OF MINNESOTA  
*Botanical studies*

**R.D. HAMILTON**  
UNIV. OF MICHIGAN  
*Northern range of Wood Frog correlated with tree limit*

**HELGE LARSEN**  
COPENHAGEN UNIV.  
*Eskimo archaeology*

**L.W. WING**  
STATE COLL. OF WASH.  
*Bird and mammal population studies in relation to weather*

**H. KYLLINGSTAD**  
ALASKA  
*Location of nesting ground of Bristle-thighed Curlew*

**W.A. WOOD**  
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*Glaciological studies*

**H.F. QUICK**  
COLORADO A AND M  
*Economics of fur-bearing animals*

**MARTE HAMMER**  
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*Microfauna of arctic soils*

**H.M. RAUP**  
HARVARD UNIV.  
*Change from tundra to forest in post-glacial area*

**E.A. DE LA RUE**  
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**J.W. MARR**  
UNIV. OF COLORADO  
*Ecological study of tree-limit botany*

**G. VIBERT DOUGLAS**  
DALHOUSIE UNIV.  
*Geographical study of Ungava*

**ARCTIC INSTITUTE OF NORTH AMERICA**  
**FIELD PROJECTS**  
**SUMMER SEASON 1948**

130°

110°

90°

70°