Arctic Research in North America

DURING the past few years arctic research has assumed a new stature and importance, largely as a result of popular interest which has grown with the realization that the North is a region of economic and military significance. Minerals, fishes, and furs are significant assets, but overshadowing them today is the proximity of Communist Russia, only 2.1 miles away.

New research centers in Alaska and northern Canada are vigorously stimulating arctic research. Geophysics, particularly the physics of the atmosphere, is emphasized at the newly established Geophysical Institute at the University of Alaska, and geophysical work is also being carried out in northern Canada, in part in connection with the Canadian–U. S. military research program at Fort Churchill on Hudson Bay. Meteorological and ionospheric studies are receiving great impetus from observations at new joint Canadian–U. S. weather stations among the Canadian arctic islands and the Danish–U. S. weather station at Thule in northwest Greenland. Physical oceanography is also getting increased attention in the investigations carried out at Point Barrow, Alaska, by the Woods Hole Oceanographic Institution and the Scripps Institution of Oceanography.

In geology extensive work continues in Alaska, northern Canada, and Greenland, primarily by government surveys but also by private organizations. Recent oil exploration by the U. S. Navy in the vicinity of Point Barrow is producing rapid advances in geological knowledge of the Arctic slope, and glaciological work in Alaska by the American Geographical Society and the Arctic Institute of North America is providing basic information. Similarly, the Snow, Ice and Permafrost Research Establishment of the U. S. Army Corps of Engineers illustrates the increasing specialization that characterizes physical investigations pertaining to the North. Photointerpretation of arctic phenomena is part of the research programs sponsored by Cornell and Purdue.

Arctic biology is benefiting greatly from work at the ONR Arctic Research Laboratory at Point Barrow, operated under contract with The Johns Hopkins University. Investigations of the U. S. Public Health Service Research Center at Anchorage, and those of the U. S. Air Force Aeromedical Laboratory at Ladd AFB, Fairbanks, Alaska, are contributing very substantially to progress in medical research, as is work by the Defence Research Board of Canada at Fort Churchill and by Queen's University in northern Canada. The U. S. Fish and Wildlife Service, the Fisheries Research Board of Canada, and the Canadian Wildlife Service have been making significant contributions in subarctic biology for many years and are now extending their investigations farther northward. Agriculture is also pushing poleward with the aid of U. S. and Canadian government financing.

Anthropological research is producing particularly fruitful results in northwestern Alaska, where the New World meets the Old across Bering Strait. Investigations by the University of Alaska are in the forefront among recent contributions to arctic archaeology, although field parties from the Bureau of American Ethnology of the Smithsonian Institution and investigations sponsored by the National Museum of Canada are also yielding noteworthy results.

Favorable influences promoting the general advancement of northern research, especially in Alaska, are the recent Alaskan Science Conferences and the newly founded Alaska Division of the AAAS. Arctic research in general is likewise benefiting by the work of the Arctic Institute of North America, a cooperative U. S.–Canadian organization which, by encouraging and supporting field investigations, is aiding in the development of experienced arctic research personnel, as well as in the acquisition of scientific knowledge. More than fifty universities and private research groups in the United States and Canada are actively engaged in some phase of northern research. In spite of all this activity, many parts of arctic North America remain scientifically unknown.

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