

## Antarctica: Colonization Ends Era of Exploration, Emphasis Shifts To Organized Polar Science Program

The United States is dug in deeply in Antarctica, and there is every prospect that the nation will be kept committed there for the foreseeable future by a combination of scientific and political considerations. An earlier pattern of periodic assaults on Antarctica by expeditions which stayed a year or two and then decamped has been supplanted by one of occupation, with stations manned the year around and a continuing scientific program.

The new era in Antarctica began with the International Geophysical Year of 1957-58, when, as part of the worldwide study of man's physical environment, the United States and 11 other nations carried out an extensive cooperative scientific program in Antarctica, and in doing so made heavy investments in bases and equipment. Most of the participating governments concluded that to abandon Antarctica at the end of the IGY would be both wasteful and imprudent.

Gone, to a great degree, therefore, are the ways of Scott and Amundsen, even of Ellsworth and Byrd, of dashes to the pole, of derring-do and improvisation. Dangers and hardships remain, but the characteristic figure in Antarctica is no longer the polar explorer behind his dog team but the scientist and technician.

American operations in Antarctica have become a matter of annual appropriations in Congress, long-range planning, and interagency cooperation. For scientists, the government's interest in Antarctica opens new horizons for research and new opportunities for federal research grants.

United States activities in the Antarctic have been continued on the general lines laid down during the IGY. The Navy provides logistical support and people to maintain installations, while the scientific personnel run their projects themselves. Civilians are responsible to "scientific leaders" at each base, and only in emergencies are they subject to military authority. Though this arrangement has not worked without friction, particularly during the long winter months when small parties live confined, the division of authority and responsibility has worked well enough to satisfy both groups.

Control and coordination of the United States scientific program in the

Antarctic is centered in the National Science Foundation. The NSF's Office of Antarctic Programs, headed by Thomas O. Jones, is responsible for science funding and planning, and the office works with the Defense Department's Antarctic Projects Office on logistical planning to insure that the scientists will get where they want to go with the equipment and supplies they need. The NSF office performs a wide range of tasks, from awarding grants to universities for antarctic research projects to staffing and charting the voyages of its ocean-going research station, the U.S.N.S. *Eltanin*, which is operated for NSF by the Military Sea Transport Service.

The National Academy of Sciences is interested in the antarctic effort but has played an advisory rather than an operational role. The Academy's committee on polar research, made up of a cross section of experienced polar scientists, in 1960 and 1961 produced a report aimed at setting long-term goals for scientific research, and which included suggestions for projects to accomplish these goals. The Academy committee also represents the United States in the Scientific Committee for Antarctic Research (SCAR)—the committee set up to oversee international scientific cooperation in Antarctica. In practice, say observers, most things done in the way of cooperation in Antarctica have been handled through bilateral agreements between nations which signed the Antarctic Treaty.

Of the 12 nations which participated in IGY activities in Antarctica and signed the treaty, three—Belgium, Japan, and Norway—do not currently operate programs there. Active in Antarctica now, in addition to the United States, are Argentina, Australia, Britain, Chile, France, New Zealand, the Soviet Union, and South Africa.

The United States itself maintains four bases including the main supply station, McMurdo, and the South Pole station, where the winter temperature reaches  $-100^{\circ}\text{F}$ . The United States and New Zealand jointly operate Hallett Station on the Cape Adair coast.

The Soviets list four year-round stations, all in the Eastern half of the continent.

In terms of men and material the United States program is the biggest in Antarctica, and an arrangement with New Zealand enabling us to use dock and airport facilities at Christchurch

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## Readers' Comments

### Congress and Research

I have read with interest your editorial, "Congress and Research," in the 25 January issue of *Science*. While fully agreeing with your thought that Congress is moving in the direction of giving closer scrutiny to the management of the large and rapidly increasing federal funds for scientific research, I cannot accept your thesis that this is undesirable.

I find especially open to question your assumption that what you call the "increasingly liberal" policies pursued by the National Institutes of Health in the past are more beneficial to scientific accomplishment than the more fiscally responsible policies urged by our Committee.

When you state: "It has been alleged that the agency is not exercising sufficient control over the expenditure of government funds," you imply that this finding has not been well documented and established. I am taking the liberty of sending you under separate cover the reports issued by our Committee concerning the administration of the NIH grant programs (House Report No. 321 and House Report No. 1958 of the 87th Congress), together with the related Subcommittee hearings. These, I believe, amply demonstrated the need for clear and objective government policies for assuring the most prudent expenditure of public funds as well as the equitable treatment of scientific investigators.

In this same connection I would refer you to the excellent article, also appearing in the 25 January issue of *Science*, which analyzes irregularities in the handling of National Science Foundation funds by the American Institute of Biological Sciences. These irregularities appear to have resulted from the kind of "liberal" policies advocated in your editorial.

L. H. FOUNTAIN

*Representative Fountain, Democrat from North Carolina, is chairman of the Intergovernmental Relations Subcommittee of the House Committee on Government Operations. The subcommittee has been extremely critical of the fiscal practices of the National Institutes of Health, and has been the principal source of pressures that have resulted in NIH adopting tighter administrative policies.*