

Summer in Antarctica

Like thousands of other Americans, more than 320 U.S. researchers will head south this winter — far south, to Antarctica. In the relative warmth of the Antarctic summer, the scientists plan to conduct about 90 studies during this 24th consecutive year of the U.S. Antarctic Research Program.

The largest study in the program, involving researchers from seven U.S. institutions and Norway, New Zealand and West Germany, will examine the interactions between ice shelves and the ice streams which feed them, and will use that information to piece together the history of the West Antarctic ice sheet. According to project coordinator George Denton of the University of Maine, the West Antarctic ice sheet is believed to have disintegrated during the last extremely warm interglacial period 120,000 years ago, significantly raising the global sea level. Though little is known about how the sheet collapsed, researchers have hypothesized the following scenario: A huge ice shelf, similar to the Ross Ice Shelf, lay in the sea at the edge of the West Antarctic ice sheet. Ice streams ("rivers" of ice that move several kilometers per year and, unlike glaciers, do not have bedrock walls) drained the western ice sheet into the ice shelf. Scientists believe that when the ice shelf, exposed to the warm interglacial sea, began melting, the ice streams were no longer held in check. They began to draw the ice sheet into the ocean, causing the sheet to break up and leave the huge ice-free areas now seen in the western part of the continent.

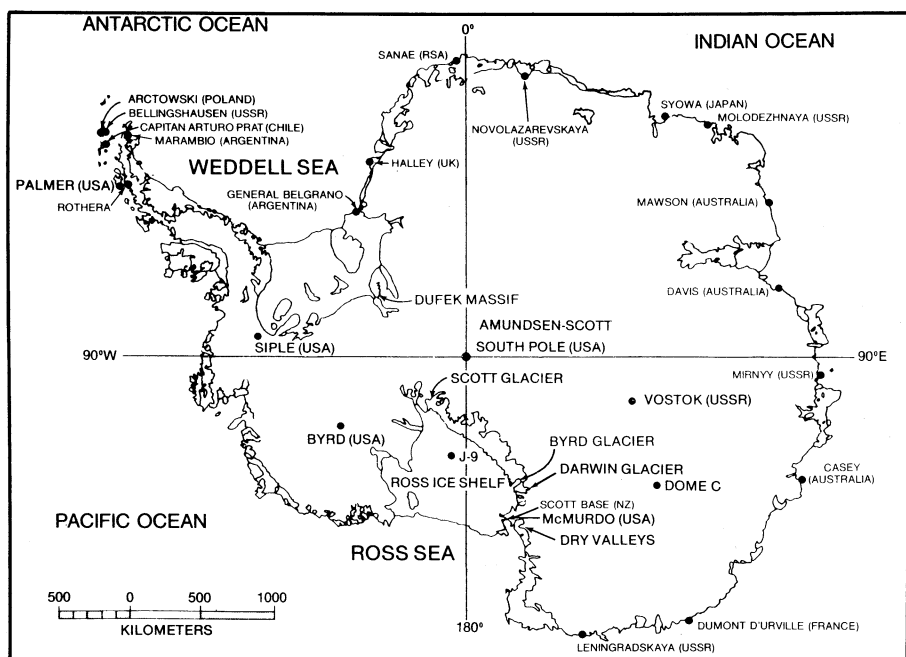
Fortunately for paleoclimatologists and

glaciologists, nature has provided a contemporary test of the hypothesis: An analogous relationship exists between the Ross Ice Shelf and the Darwin and Byrd glaciers that drain the East Antarctic ice sheet. Researchers have noted that the East Antarctic sheet may be deteriorating during the current interglacial period. If that is so, tracking what happens to the glaciers as they feed into the Ross Ice Shelf may explain how and why. Once scientists can understand that relationship, says Denton, they will know what to look for if the same situation did indeed exist in the west. Ultimately, Denton says, reconstructing the history of the ice sheets will provide valuable input for climate models of the glacial and interglacial periods.

Also included in the 1978-79 Antarctic research agenda are ongoing projects, such as population studies of the shrimp-like crustaceans called krill and the search for meteorites. Among new ventures are studies of mercury emission from the volcano Mount Erebus and of the behavior and habits of Weddell seals. From the high-altitude vantage point of the South Pole Station, scientists will study the sun's cosmic rays. Using new detectors, they will attempt to measure the motions on the sun's surface that result from oscillations in its interior. In the McMurdo area, another team plans to examine the distribution of man-made fluorocarbons and chlorocarbons by studying their accumulation in the snow, ice and atmosphere. Mark Leinmiller, an 18-year-old Boy Scout from Marietta, Ga., selected in national competition, will assist in a geological survey of the radioactivity of exposed rocks in the Darwin glacier. This season will also see the completion of the new Siple Station, which will replace the snow-crushed original built in 1969. □

National Climate Program enacted

The same day he enacted a plan for peace in the Middle East, President Jimmy Carter signed a humbler, but more scientifically significant, piece of paper establishing the National Climate Program. With an eye toward "anticipating the effects of climate fluctuations and changes in the United States and the rest of the world," the program will coordinate U.S. climate research and funding, stressing climate monitoring, the dissemination of data, the assessment of human effects on climate and the impacts of climate on agriculture and resource management. Gene Bierly, head of the climate dynamics program at the National Science Foundation, says the program will "fine tune" climate research, "coordinating, filling in the gaps, enhancing programs and starting new ones" and will add approximately \$50 million (in fiscal year 1979) to the estimated \$100 million currently allocated to U.S. climate research. The program will be administered by the National Oceanic and Atmospheric Administration and directed by Edward Epstein, the current acting deputy assistant administrator of research and development at NOAA. A management council composed of representatives from each agency involved in climate research and from the Offices of Management and Budget and Science and Technology Policy will provide federal involvement. An advisory council of nonfederal "users and producers of climatic data, information and services" will also review and make recommendations on the program's activities. The bill requires the program office to publish a five-year plan within one year. □



Major research sites in Antarctica: The 1978-79 summer research season begins.

Laetrile trial given green light

Laetrile has never shown any efficacy against cancer in animal tests, and case histories do not reveal whether or not Laetrile fights cancer. Nevertheless, the National Cancer Institute has decided to proceed with a clinical trial of Laetrile. The decision was announced last week by institute Director Arthur C. Upton.

Upton based his decision on a recommendation by the NCI's Decision Network Committee, a group of 29 NCI physicians and scientists that sets priorities for the institute's drug development program. The committee first analyzed the results of the NCI's retrospective analysis of 93 patient histories claiming benefits. Out of the 93 cases, only six patients could definitely be said to have been helped by Laetrile. Most of the cases contained insufficient data to say one way or the other. And a few cases showed no benefit (SN: 9/16/78,