

"Mass media entail a heavy responsibility. A single misunderstanding communicated in a presentation to a large group of students can handicap the efforts of all the teachers who must deal with the students personally."

Acknowledging the concern of many educators lest the use of instructional film series seriously undermine the traditional and vital personal interchange between teacher and student, the board pointed out that, on the contrary, proper scheduling of recorded material can actually release a faculty for more individual contact with students than is now permitted by many teaching schedules. Further, it was the unanimous opinion of the board that in "an extended system of presentations offered in connection with a more or less conventional academic course . . . not more than half the time allotted to formal group instruction should be used for presentations [and] that such presentations should be devoted primarily to the exposition of basic ideas and principles. . . ."

Chairman of the Film Evaluation Board was F. A. Ficken, University of Tennessee. Other members were A. M. Gleason, Harvard University; T. H. Hildebrandt, University of Michigan; G. Hochschild, Institute for Advanced Study, Princeton, and the University of Illinois; J. D. Mancill, University of Alabama; and B. E. Meserve, State Teachers College, Upper Montclair, N.J.

In reporting to the Academy-Research Council, the board recommended the establishment of a standing committee on mathematical presentations to offer guidance to schools and film producers and to promote the participation of professional mathematicians in the program. The board also advised formation of similar committees in other fields of the natural sciences. Formation of such committees has already been undertaken.

Atherosclerosis Research

A baboon airlift from Africa to Texas began last month when the Southwest Foundation for Research and Education in San Antonio imported 20 baboons from Nairobi, Kenya, for research on atherosclerosis. The baboon is the only mammal other than man that is subject to the fatty deposits that characterize atherosclerosis. The foundation already has 30 domestically bred baboons. It plans to increase the colony to 1000 this year. The rapid expansion of the baboon program has been made possible by a recent gift to the foundation of \$50,000 by Douglas Marshall, a Houston oil man who is chairman of the Texas Heart Research Foundation.

Foundation scientists have joined with

investigators from three other institutions to form a group that is known as Cooperative Research on Atherosclerosis. The group includes research workers from Louisiana State School of Medicine, New Orleans; the Oklahoma Medical Research Foundation, Oklahoma City; and the Enzyme Institute of the University of Wisconsin.

Soviet Antarctic Station

Gordon D. Cartwright, meteorologist for the U.S. Weather Bureau, has returned to Washington, D.C., after spending 14 months on an International Geophysical Year assignment at the Soviet Antarctic IGY station at Mirny. Cartwright joined the Soviet expedition at Capetown on the 26 December 1956 and left it at Adelaide, Australia, on 4 March 1958. In describing his winter at the Mirny Station, where he was the only American among more than 100 Russians, Cartwright said:

"This was the most stimulating experience of my life. Antarctica by itself makes a vivid and lasting impression on anyone who touches it, and in addition I had an unusual opportunity to observe a group of Russians at work and off duty. I found them warm, hospitable, and with broad scientific and cultural backgrounds. They had a keen sense of humor and their differences of outlook were, of course, sometimes delightful and sometimes difficult to understand."

Cartwright joined in the regular weather analysis work at Mirny, where he was responsible for the preparation of daily upper-air charts covering most of the Southern Hemisphere. The IGY network of observing stations in the Antarctic has made possible for the first time in history the drawing of reliable weather charts of the South Polar regions. Hundreds of cloud photographs and several thousand feet of time-lapse color pictures of special cloud developments in the polar region were taken by Cartwright.

The Soviet expedition is operating in one of the most difficult and least known areas of the Antarctic. The interior stations are located near the central dome of the East Antarctic ice plateau at elevations near 12,000 feet. In establishing these stations the Soviet group was faced with two major problems: the "height-cold barrier," a combination of intense cold and great height that places exceptional strain on both men and equipment; and "soft snow," which can bog down the most powerful tractors and can make ski landings of aircraft highly dangerous except on specially prepared runways.

Cartwright reports that the height-cold barrier and soft snow prevented es-

tablishment last year of two stations the U.S.S.R. had planned in the deep interior. However, by a massive effort during the recent Antarctic summer, and by using new equipment designed on the basis of last year's experience, both stations are now in full operation.

The U.S.S.R. is now operating six scientific stations in East Antarctica. Mirny, which is the main station, is on the Antarctic Circle at 93° East Longitude. A second Soviet station is located on the edge of the ice sheet at Bunger Oasis, and a third station, called Vostok, is in the region of the south geomagnetic pole. The newest station, Sovietskaya, is near the so-called "pole of relative inaccessibility." Two smaller U.S.S.R. observation stations lie on the tractor route to Vostok and Sovietskaya. The leader of the Soviet expedition, Alexei Fyedorovich Troshnikov, is well known for his work as a hydrologist in Arctic regions. The chief meteorologist, Oscar Grigorovich Krichak, is a member of the Central Forecasting Bureau in Moscow.

Cartwright was especially impressed by the well-equipped ships, the *Ob* and *Lena*, which served not only as major transport ships for the U.S.S.R. expedition but also aided some of the most comprehensive oceanographic surveys and observation work ever made in Antarctic waters.

The scientific exchange in which Cartwright took part was so successful that U.S.A. and U.S.S.R. scientists have agreed that similar arrangements should be continued for another year. Morton J. Rubin, also of the Weather Bureau, is already at Mirny, where he will spend the next year doing meteorological work.

Atomic Clock Discrepancy

A discrepancy exists in radio comparison of British and American atomic clocks. These clocks, whose operation is based on the unvarying vibrations of the cesium atom, are accepted as the most accurate measurement standard available. The atomic clock, or Atomichron, has a possible accuracy down to one part in 10^9 . Last summer the frequency of radio signals controlled by the cesium standard at the National Physical Laboratory, Teddington, England, varied by nine parts in 10^9 from the frequency of similar equipment in this country.

In an effort to solve the difference, two Atomichrons from the Army Signal Laboratories at Fort Monmouth, N.J., have been sent to Teddington for comparison. A third clock has been sent to Cruft Laboratory at Harvard University for radio checks with Teddington.

The Atomichron, which in terms of time has an accuracy of one second per 300 years, is of great importance to the