about a more sympathetic attitude towards the usefulness of scientifically trained men in the works. Several speakers emphasized the paramount duty of research associations of carrying out long-range investigations essential to widening the boundaries of knowledge. Reference was made to the benefits conferred on the consumer by the improvement in products as regards utility and price and to the raising of the standard of living resulting therefrom, and for this reason it was urged that a continuation of a substantial contribution from government sources is fully justified. Attention was also directed to the importance of achieving stability of finance for the research associations as a means of securing the best work from those employed by them, or ensuring that the best scientific brains are available for that purpose and of making possible the planning of long-distance programs.

At the conclusion of the proceedings, Lord Rutherford referred to the statement made by Mr. Runciman the previous night on behalf of the Lord President as to the willingness of the government to afford increased financial help, and urged that as a next step the councils of the research associations should consider the scale of work required to meet the needs of their particular industries and submit proposals for the consideration of the department, in order to bring about at the earliest possible date a very different scale of operations.

THE NEW WEATHER FORECAST PROGRAM

ACCORDING to an announcement made by W. R. Gregg, chief of the Weather Bureau, with the cooperation of the War, Navy and Commerce Departments, the Weather Bureau of the U. S. Department of Agriculture, on July 1, 1934, will initiate part of its new program for increasing the accuracy of its forecasts. This new program calls for more stations for upper air soundings by airplanes and for more frequent daily forecasts. The part covering more airplane observations can now be put into effect.

The air-mass method of forecasting, long recognized as an aid to accuracy and to longer forecasts, has not hitherto been practicable because of the difficulty of getting the needed upper-air observations. Facilities offered by Army and Navy pilots at more than a dozen selected stations, at six specially-equipped Weather Bureau airway stations, and at one cooperative station at the Massachusetts Institute of Technology, now remove this difficulty. The Department of Commerce will provide for the transmission of the observations from the points where they are taken to the forecasting stations.

According to the present plan, Mr. Gregg says, observation flights will be confined to one a day, each beginning about half past five (E.S.T.) in the morning and reaching a maximum height of 17,000 feet above sea level. These flights will be made by Army and Navy pilots and by commercial aviators employed for the purpose by the Weather Bureau. Meteorologists of the Weather Bureau assigned to the air-observation stations will compute, code and transmit to forecast stations the information brought down by the meteorographs. Forecasters will thus be supplied with an important supplement to the morning surface observations in drawing the weather maps to be used in making the daily forecasts.

The Weather Bureau expects to maintain special airplane observation stations at the following airports: Nashville, Tenn., with La Crosse, Wis., as an alternate; Omaha, Neb., Cheyenne, Wyo.; Billings, Mont.; Fargo, N. Dak., and Oklahoma City, Okla.

The War Department will assign planes for this work at Mitchell Field, Long Island, N. Y.; Selfridge Field, Detroit, Mich.; Wright Field, Dayton, O.; Scott Field, East St. Louis, Ill.; Kelly Field, San Antonio, Tex.; Maxwell Field, Montgomery, Ala.; and, during the hurricane season, at Fort Crockett, Galveston, Tex. The National Guard unit at Spokane, Wash., has assumed the responsibility for collecting the needed information there.

The Navy Department will make the observations at the following stations: Anacostia, D. C.; Norfolk, Va.; Pensacola, Fla.; San Diego, Calif.; Pearl Harbor, Hawaii; and, on alternate days, at Philadelphia, Pa., and Lakehurst, N. J. Observation flights at Sunnyvale, Calif., and Seattle, Wash., because of darkness at the hour set for the flights, will be made at some daylight hour. Occasional flights may be made also from Quantico, Va., Dahlgren, Va., and Coco Solo, C. Z.

Certain battleships, when in port and sometimes at sea, send up planes to observe weather conditions. Although they are not expected to order routine flights, the following ships will contribute information useful to Weather Bureau forecasters at San Francisco, Calif., or at Washington, D. C., depending on the fleet's location: *Saratoga, Lexington, Langley, Ranger, Wright, California* and *Chicago.*

REPORT OF THE DIRECTOR OF THE FIELD MUSEUM

THE annual report of the director of Field Museum of Natural History to the Board of Trustees has been issued. How the museum is continuing to withstand the effects of the long-continued depression on its financial resources is described by Director Stephen C. Simms, in part as follows:

Like the preceding year, 1933 was marked by severely adverse financial conditions, which caused a further decline in the value of securities held in Field Museum's