men of advanced training and experience in air mass analysis. It is expected that these appointments will be made in the early autumn.

Much closer contact between central office and field officials and more frequent inspections of service generally are a part of the program for this coming fiscal year. It will not be possible, however, to do all that should be done along this line until more funds are provided. It should not be forgotten that the bureau's appropriation has suffered a reduction of some $800,000 during the past two years, and that much of the service then given up should be restored. Adding new features now, therefore, while still working on a greatly reduced budget is not a particularly easy task.

In conclusion, it is desired to express the very great pleasure with which I have noted the fine spirit of cooperation on the part of officials of other bureaus and departments whose services are closely related to, or dependent on, that of the Weather Bureau; also, the enthusiasm of our own personnel in connection with the new program and their eagerness in participating in it. Then, too, the support of outside organizations and individuals is most encouraging. In fact, as I see it, there has perhaps never been a period more potential of promise for real advances in meteorology than the present. The marvelous developments in communications, particularly in radio, provide information regarding conditions in regions that have heretofore been inaccessible, thus vastly extending our meteorological horizon. The successful design and construction of fast-climbing airplanes have resulted in giving us detailed data in the vertical. Improvements in instrumental apparatus provide more accurate data. Finally, the organization of strong meteorological courses at some of our leading educational institutions can not fail to yield large returns, both in research and its applications and in highly trained personnel.

I imagine that the most optimistic period in the entire history of meteorology was that when the first synoptic weather maps were drawn. Those who studied these maps and noted the changes taking place from day to day must have seen in them a promise of complete solution of the problems of forecasting. This optimism was not realized in full, yet most of the success that we have since had in weather forecasting had its origin in what these early pioneers saw in the synoptic weather maps.

We now likewise view the future with optimism. This optimism may not be fully realized, just as the other was not, but with the aid of the working tools to which I have referred, such as the extension of observations in the horizontal and vertical through the media of radio and the airplane, respectively, together with improvements in instrumental design and exposure and fundamental researches that are now in progress or in prospect, there seems to be little doubt that very real improvements will be realized in the accuracy of forecasts, in the period covered by them, and in the integrity and representativeness of the great body of statistical data that the Weather Bureau is accumulating through its far-flung network of observational stations.

SCIENTIFIC EVENTS

RESTRICTION OF THE NUMBER OF MEDICAL STUDENTS IN FRANCE

ACCORDING to a correspondent of the *Journal* of the American Medical Association, Dr. Georges Portmann, professor of otorhinolaryngology at the Faculté de médecine de Bordeaux, elected senator last year, has introduced a bill designed to limit the number of students to be admitted to the facultés de médecine. In 1930 the dean of the Faculté de médecine de Paris and the general secretary of the Confédération des médecins de France called attention to the deplorable situation in a circular letter addressed to the parents of pupils in the *lycées,* urging them to enlighten their children in regard to the future prospects of those who, under present conditions, take up the study of medicine. The number of physicians in France has increased from 16,815 in 1900 to 27,500 in 1928, whereas in this period the population has increased only two million. In spite of warnings, the situation has grown steadily worse. The number of students enrolled in the French medical schools has risen from 8,182 in 1929 to 9,780 in 1930, 9,842 in 1931, 10,242 in 1932 and 10,338 in 1933. The number of government diplomas issued to doctors of medicine by all the facultés de médecine was 1,076 in 1930, 1,102 in 1931 and 1,397 in 1932. But these figures correspond to the number of students enrolled five or six years previously. It is evident that in five years the number of graduates will be much greater. Overcrowding of the profession is reported from other countries. In Germany the Hitler government has recently decided that the number of medical students, which was 25,000 in 1933, shall be reduced to 15,000 in 1934. The bill proposed by Senator Portmann is not so rigid. It does not fix any maximum. It provides that the total number of medical students to be matriculated be fixed each year, according to the number of civil, army, naval and colonial physicians required, by a commis-

sion composed of the minister of public instruction, the minister of public health, the Confédération des syndicats médicaux, and the ministers of war, the navy department and the colonies. The selection would be made in two stages, the first at the end of the preparatory studies leading to the premedical diploma in physics, chemistry and biology, which affords entrance to the facultés de médecine, and the second after completion of the first year of study in the facultés de médecine. Only the number of holders of the premedical diplomas, as fixed by the ministerial commission, plus 50 per cent., would be admitted to the facultés de médecine, and this additional 50 per cent. would be eliminated at the end of the first year of medical study. This regulation would concern only candidates for the government diploma, which grants the right to practice medicine in France (and in Rumania). As to the students enrolled for a university diploma, a degree much sought by foreigners, no limitation will be placed on their number; but the later transformation of a university diploma into a state diploma will be made more difficult and will be brought into harmony with the number of state diplomas fixed by the projected legislation.

THE PROPOSED MIGRATORY BIRD RESERVE IN THE NORTHERN SAND HILLS OF NEBRASKA

ACCORDING to the New York *Sun*, a migratory bird reserve will be laid out in the northern sand hills of Nebraska by the Federal Government at the cost of a million dollars, the object being to provide a resting and nesting place for wild ducks, wild geese and other birds migrating between the Mexican gulf district and western Canada. One of the artificial lakes which will be constructed will cover more than 30,000 acres.

The sand hills comprise a strip of land, about one hundred miles wide, running from South Dakota southward almost to the Platte River. Very little vegetation grows except in the small valleys between the hills, and even in these valleys grass is practically all that is produced. There are many small lakes of cool, clear, pure water, caused by filtration of rain through the sand. A number of these small lakes are to be included in the federal game reserve, and the government agents have concluded an arrangement with the Nebraska State Game Commission under the terms of which state laws on fishing will not be interfered with when the property becomes a part of the federal reserve.

Nebraska is the stopping point for the birds between their winter feeding grounds along the Gulf and their summer breeding grounds in western Canada. Nebraska has more miles of rivers and flowing streams than any of the forty-eight states of the Union, and in both spring and fall these streams are simply covered with the migrating fowl.

The 30,000-acre lake will be formed by damming the Snake River, which passes through the reserve from west to east. This is not the Snake River of Idaho and Oregon, but a different and a smaller stream which flows into the Niobrara River. The proposed reserve is mostly in Cherry County, Nebraska. The land is not very valuable. One ranch of about 10,000 acres is being taken over by the government at $8 an acre. This ranch will be entirely covered by water when the big dam is completed. Other lands are worth $4 and $5 an acre.

The shortage of water in the last few years has lowered the water table in this district and many of the lakes are now but a fraction of their usual size, while the marshes are now pretty well dry. Water from the Snake River dam will be turned into these smaller lakes by connecting canals, and they, as well as the marshes, will be brought back to normal.

J. C. Salyer, director of the migratory waterfowl program of the U. S. Biological Survey, is at the head of the government staff working on the project. Other government officials on the work are the chief agricultural engineer, the chief acquisition officer, the principal duck food biologist and the program's coordinator for Nebraska and South Dakota.

RESEARCH IN DENTAL MEDICINE AT HARVARD UNIVERSITY

SEVEN research men in the Faculty of Arts and Sciences, the Medical School and the Dental School of Harvard University have been appointed by President James B. Conant members of a University Committee on Research in Dental Medicine.

In recognition of the fact that modern dental research is intimately bound up with and dependent upon research and expert knowledge in the fields of chemistry, biology and medicine, the committee has been given general supervision over research in the Dental School. Its province will be trifold: to promote important dental research; to act as a clearing house for such of that research as is important to other fields; and to provide official contacts through which the Dental School can readily get assistance for its research problems that overlap the other departments.

The committee consists of Elmer P. Kohler, professor of chemistry; Alfred C. Redfield, professor of physiology and director of the Biological Laboratories; Simeon B. Wolbach, Shattuck professor of pathological anatomy, and consulting pathologist to the Cancer Commission of Harvard University; Walter B. Cannon, George Higginson professor of physiology; Percy R. Howe, Thomas Alexander Forsyth