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

professor of dental science and instructor in pathology, Harvard Medical School; Lawrence W. Baker, professor of orthodontia, and Dr. George P. Matthews, instructor in anatomy. Dean Leroy M. S. Miner, of the Dental School, will serve as a member ex-officio of the committee.

The first project sponsored by the committee will be an elaboration of some research work in the effects of nutrition on teeth and their supporting structures, which has been carried on by Professor Howe, collaborating with Professor Wolbach.

The particular problem is as follows, in the general field of vitamin deficiency studies:

1. Extension of studies now in progress on the mode of action of Vitamin C or ascorbic acid to include: (a) testing, with scorbutic guinea-pigs, the activity of products intermediate in the synthesis of ascorbic acid from xylose; (b) the preparation and testing of substances formed by systematic changes in the structure of ascorbic acid; (c) an investigation of the manner in which ascorbic acid is produced by animals which are not subject to scurvy.

2. The study of the effects of inorganic deficiencies and especially the substitution of various elements for calcium in the diet.

3. The study of intercellular materials as solvents in the living animal for diffusible materials introduced into the blood stream at a rate faster than elimination can take place. There is much evidence that sugars diffuse into collagen to a point of equilibrium with the accumulation in the blood stream so that the studies should begin with sugars. It is possible that sugars may play a rôle in calcification of tissues. In any event, an attempt will be made to study calcified tissues, teeth and bone. It is to be anticipated that progress will be slow as the techniques required will have to be worked out.

For this work the committee has received a Milton Fund grant of $8,000 for the year 1934–35. It will be under the immeditae supervision of Professors Howe, Wolbach and Kohler of the committee.

It is proposed to obtain the assistance of a research organic chemist, who will develop the chemical aspects of the problem, under the guidance of Professor Kohler. Dr. Wolbach will supervise the work in the pathological field, while Dr. Howe will continue his general nutritional experiments.

Other projects now in progress deal with dental caries, the most prevalent of all diseases, and with studies of the growth and development of the jaws and teeth.

Since the naming of the Thomas A. Forsyth chair of dental science in 1925, there has been a liaison between research activities of the Dental School and the pathological department of the Medical School. But until the present step there has been no general, official cooperation between the research staffs of the University and of the Dental School.

RECENT DEATHS

DR. JOSEPH FRANK MCGREGORY, professor emeritus of chemistry at Colgate University since 1929, formerly head of the department since its formation in 1883, died on October 14 of injuries received in an automobile accident. He was seventy-nine years old.

DR. CARL LEOPOLD VON ENDE, head of the department of chemistry at the University of Idaho since 1908, died on October 9 at the age of sixty-four years.

HAROLD DEWOLFE HATFIELD, professor of industrial engineering and head of the department of civil engineering at Rutgers University, died on October 13 at the age of forty-six years.

DR. STUART CROASDALE, mining engineer and metallurgist, of Denver, Colorado, died on October 1 at the age of sixty-eight years.

SIR ARTHUR SCHUSTER, professor of physics at the University of Manchester from 1888 to 1907, secretary of the Royal Society from 1912 to 1920 and foreign secretary from 1920 to 1924, secretary of the International Research Council from 1919 to 1928, died on October 14. He was eighty-three years old.

DR. ROBERT FRANCIS SCHARFF, late Keeper of the Natural History Collections, National Museum, Dublin, and secretary of the Royal Zoological Society of Ireland, died on September 27 at the age of seventy-six years. He wrote on the origin and history of the European fauna, the fauna and exploration of caves in Ireland, the Atlantis problem and the distribution and origin of life in America.

PROFESSOR SIR EDGEWORTH DAVID died at Sydney, Australia, on August 28 at the age of seventy-six years. A correspondent writes: "His death will be a great blow to many of his friends in this country and throughout the world. Sir David was the Antarctic explorer who led the expedition to the South Magnetic Pole; he was in charge of the successful Funafuti boring of the Royal Society to determine the origin of atolls; the teacher of almost every Australian geologist worthy of the name, and altogether one of the finest men that ever lived. He had been working since his retirement to complete his masterpiece, 'The Geology of Australia,' and I am happy to say that a letter which I have from him dated August 1 intimates that the book was finished, but that ill health due to wounds received during the war, where he was chief geologist of the Australian Corps, had been causing a great deal of suffering of late so that he feared his trip to England to place his book in the hands of publishers would perhaps have to be delayed until New Year's."