allow. In dealing with those problems to which the scientific method of investigation has not yet been successfully applied we shall all need to philosophize, that is, to use our best judgment in the light of the facts which are available to us. This philosophizing, however, can best be done as an integral part of the consideration of each particular educational problem. There is no justification for setting apart those aspects of educational problems on which the evidence is not yet complete and treating them in a separate discipline. Furthermore, we may look forward to the gradual reduction in the scope of problems which must be attacked by this method, and we should use our best efforts to enlarge the scope of those problems which may be successfully attacked by the scientific method.

OBITUARY

WALDEMAR M. W. HAFFKINE

THE sudden death on October 27 in Lausanne at the age of seventy of Dr. Waldemar M. W. Haffkine, bacteriologist and immunologist, deprives the world of one of its most illustrious scientists. Inasmuch as Haffkine's work in combating and, to a large extent, conquering epidemic scourges was of universal benefit and inasmuch as his career as an investigator was truly international—being carried on under the auspices of various nations and races—it is appropriate to devote a few words of appreciation to his memory in SCIENCE.

Dr. Haffkine was born in Odessa, in southern Russia, on March 15, 1860. At the age of twelve he entered the gymnasium at Berdiansk and from the very first he exhibited a bent of mind in the direction of science and experimental investigation. In 1879 he entered the University of Odessa as a student in the faculty of science and in 1883 he took his degree of doctor of science. He remained at Odessa for five years, working in a laboratory fitted out for his special use in connection with the zoological museum of the university, and devoted himself to the study of difficult problems relative to the fundamental phenomena of organic life. At the beginning of 1888 he was appointed assistant to Dr. Schiff, professor of physiology in the University of Geneva, a position which he held for a year and a half. About the middle of 1889 he found his true sphere of work on being called by Pasteur to Paris. He became one of Pasteur's most eminent pupils.

In Paris he began the study of typhoid fever and cholera and soon discovered the principle and method of inoculation with attenuated virus against the latter. As early as 1891 his work along that line had progressed so far that when Prince Damrouy, brother of the King of Siam, called on Pasteur and asked him to supply a remedy for cholera, the illustrious scientist referred him to Haffkine for aid. A few months later Haffkine's first paper on the subject was given to the world.

The two of Haffkine's most important contributions to the science of medicine are his investigations of the devastating scourges, cholera and the plague. It is perhaps in connection with cholera that Haffkine is better known. In 1893 he went to India to conduct investigations on cholera for the Indian Government, making Calcutta his headquarters and extending his operations over the whole of Bengal and into the Punjab, the Northwest Province and Assam. In 1896 he was deputed by the Indian Government to inquire into the bacteriology of the plague and to devise means of combating it. Here again he discovered an effective method of inoculation and succeeded in reducing the mortality from 80 to 90 per cent. In recognition of his services to the British Government, he was created Companion of the Order of the Indian Empire. The Haffkine method of inoculation for both cholera and plague has been generally adopted throughout the Orient, and the government research laboratory which he founded issues many thousands of doses of vaccine for the effective inoculation and treatment of epidemics in various tropical countries.

Haffkine's contributions to biological research and medicine include various monographs and official reports not only on the cholera and the plague but also on a variety of other subjects, heredity, biology of monocellular organisms, general problems of bacteriology, etc. Although retired from active work for the past few years, he continued to interest himself in various scientific investigations, which he carried on particularly at Lausanne.

Haffkine's work on cholera and the plague places him in the class of those pioneers in medical research who have immortalized their names through the alleviation of suffering and reduction of mortality caused by such wide-spread infections as malaria, diphtheria, yellow fever and trypanosomiasis. As a scientist, Haffkine was meticulously careful and accurate in his work as well as ingenious in his methods. As a man, his character might be summed up in the following words, a quotation from a letter received by the writer from Dr. M. Ascher, Bex, Switzerland, who attended the funeral: "Great was his scientific work in that he literally saved millions of lives but equally great was the personal character of the man and, most particularly, his modesty and humility. He never asked for help from any man but he was always ready to help

others and befriend the needy." The memory of Waldemar M. W. Haffkkine will be cherished not only by those who had the privilege of being his friends and those who are devoted to the advancement of medical science but also by all those interested in the promotion of human welfare and the betterment of the race.

DAVID I. MACHT
DIRECTOR, PHARMACOLOGICAL RESEARCH LABORATORY, HYNSON, WESTCOTT & DUNNING, INC., BALTIMORE, MD.

E. GLEY

To American biologists has come the tardy news of the death of Professor E. Gley on October 28. Professor Gley endeared himself to every one with whom he came in contact. In spite of his seventy years, his electric vitality enthused every one about him. Those who heard his address at the International Congress of Physiologists at Stockholm in 1926 and the address given at the International Congress in Boston in 1929 recognized in him not only the savant but a man of the widest international interests. One of the first to extend the hand of friendship to the opposed nations of the war, Professor Gley has done a great deal to reestablish international amities. About his hospitable table at his home in Paris one could be sure to meet a representative of nearly every country of Europe. His loss will be very severely felt by the Collège de France, for in a relatively short time the Station Physiologique has lost not only M. Pézard but now Professor Gley. Working with a wholly inadequate laboratory and under almost impossible conditions, Professor Gley maintained high scientific standards and his loss to biological science as a whole is irreparable. Ever expressing his enthusiasm for France, Professor Gley was extraordinarily international-minded and not only has biology lost a great scientist and France a great citizen, but the world has lost a great man.

FRANCIS G. BENEDICT

MEMORIALS

A MEMORIAL meeting to the late Dr. Thomas W. Salmon was held at the New York Academy of Medicine on January 10. The committee in charge has collected $100,000 to establish a permanent memorial. This will take the form of an award to be made each year to a psychiatrist who has, during that period, made distinguished contributions in the field of psychiatry and mental hygiene. He also will be chosen to give the Thomas W. Salmon lectures. Speakers at the memorial meeting included Mr. George W. Wickersham, chairman of the committee, and Dr. Harry Emerson Fosdick.

THE College of Forestry of Syracuse University was closed at 12:00 o'clock January 5 for the balance of the day in honor of the memory of Professor John W. Stephen, head of the department of silviculture. Professor Stephen, after having joined the faculty of forestry as one of its pioneer members in 1912, was soon promoted to the rank of professor, and was appointed head of the silviculture department in which capacity he has served since. The books and articles which he wrote concerning his field of work include "Making Best Use of Idle Lands in New York," "Basket Willow Culture in New York," "Forest Conditions in Oneida County," and "Top-Lopping of Branches in Lumbering Conifers." Professor Stephen was a native of Michigan and was graduated from both Michigan Normal College and the University of Michigan. He received an A.B. degree in 1907 and an M.S.F. degree in 1909 from the latter institution. While on leave from Syracuse University in 1915, he received the degree of M.Ped. from Michigan Normal. He became a state forester in New York in 1908, being given charge of the state tree nursery at Salamanca. He was a member of Sigma Xi fraternity, a fellow of the Society of American Foresters and a member of Phi Kappa Phi, honorary scholastic fraternity.

RECENT DEATHS

DR. HENRY LEFFMANN, professor of chemistry at the Wagner Free Institute, Philadelphia, an honorary member of the Franklin Institute, died on December 25. Dr. Leffmann was eighty-three years of age.

DR. CHARLES KRUMWIEDE, professor of hygiene and bacteriology at New York University and assistant director of the New York Health Department's research laboratory, died on December 28, at the age of fifty-one years.

MR. GEORGE G. AINSLIE, associate entomologist of cereal and forage insect investigations of the Bureau of Entomology at West Lafayette, Indiana, died on December 19.

THE death is announced of Professor John Munro, emeritus professor of mechanical engineering at the University of Bristol at the age of eighty-one years, and of Professor Eugene Goldstein, of Berlin, at the age of eighty years.

SCIENTIFIC EVENTS

THE MONONGAHELA NATIONAL FOREST

EIGHT meetings were held at various points contiguous to the Monongahela National Forest on January 5, for the purpose of taking concerted action at a general meeting toward securing an adequate allocation of forest funds for the construction of roads and trails and the relief of the unemployed.

Initial action was taken by the Elkins Business