not merely illustrated the principles but also were immediately applicable as standards of reference and an illustration of the applications of a tool.

Largely because of this excellence of exposition, elaborated by Michaelis and others, there followed one of the most remarkable movements in the history of science. Every science having to do with water solutions soon instituted the measurement and control of "hydrogen-ion concentration" by the methods that Sørensen polished and in the terms that he introduced.

At a time when protein solutions were regarded as subject to study only by the unique methods of colloid chemistry Sørensen boldly applied the classical methods that work well in the study of the simple amino acids. Here, however, were problems requiring meticulous regard for detail, and because he had regard for what the problem demanded Sørensen's papers on protein solutions make difficult reading. In them will be found many of the bases of modern work, notably the application of Gibbs's phase rule in determining the homogeneity or heterogeneity of protein preparations, and the characterization of proteins by their isoelectric points and other indices of their properties as amphoteric electrolytes.

The meticulous exactitude that Sørensen displayed in his work on proteins is characteristic of his work as a whole—work that extended to analytical methods on the one hand and to organic synthesis on the other.

Born on a small farm near Slagelse on Sealand, Denmark, Sørensen developed early a penchant for science. He twice won the university's gold medal for outstanding work in science at the University of Copenhagen. After serving as assistant chemist in the Royal Technical College he became director of the chemical division of the Carlsberg Laboratory two years after receiving his doctor's degree in 1899. He became president of the Danish Academy of Sciences and last year was made a foreign associate of our National Academy of Sciences. He had honorary degrees from many universities.

In 1924 Professor Sørensen and his wife, with whom he had then and has since published several papers on proteins, visited America. We who had drawn inspiration from the written word were then impressed anew by this charming couple. Of a retiring disposition Professor Sørensen was every inch the gentleman who commanded respect by the quality of his thought and who won affection by the kindliness that shone in every glance and gesture.

WM. MANSFIELD CLARK
THE JOHNS HOPKINS UNIVERSITY
SCHOOL OF MEDICINE

FABIAN FRANKLIN

FABIAN FRANKLIN was born in Eger, Hungary, on January 18, 1853. He obtained his Ph.B. degree from Columbian University (now George Washington University) in 1869 and entered the department of mathematics of the newly established Johns Hopkins University in 1877. He remained at the university as fellow from 1877 to 1879, assistant from 1879 to 1882, associate from 1882 to 1889, associate professor from 1887 to 1892 and professor of mathematics from 1892 to 1895, at which time he resigned his position to enter professionally the field of journalism. He died on January 8, 1939.

Professor Franklin was a very unusual and inspiring teacher. After a lapse of almost half a century former students still remember how clear and satisfying his lectures were. He was never content to expound a theory as it was developed by its author, and his hearers had the distinct impression that the matter being presented had been thoroughly digested by the lecturer and carried the stamp of his individuality and artistic nature. He was most conscientious and painstaking with his students, frequently going to great pains to answer a question whose import the student barely realized. His simple demeanor and dignity of person commanded the instant respect of his students, a respect which was never lost.

In his mathematics itself were reflected the wide interests of his inquiring mind. This was a definite fault of his genius. To leave a mark in mathematics requires an *esprit de suite* which doggedly pursues to the bitter end some path into the unknown. The professional mathematician, on noting a characteristic flash of genius or originality in one of Franklin's short papers, may well wish that he had not been so versatile nor so interested in politics or world affairs; but such wishes are idle. In the short period of some fifteen years before he definitely abandoned mathematics for journalism, he published some thirty papers, most of which appeared in the *American Journal of Mathematics* or the Johns Hopkins University circulars. His earlier work on invariant theory shows clearly the influence of Sylvester, whilst his papers on circular coordinates and on bicircular curves demonstrate his geometrical insight. His elementary proof of a theorem on partitions has become classic.

In 1895, when Franklin was forty-two years old, he retired from his professorship of mathematics at the Johns Hopkins University to become editor of the Baltimore *News*. Later he became associate editor of *The New York Evening Post* and editor of the *Weekly Review*. He was a distinguished writer on economic, social and political subjects. His wife, Christine Ladd-Franklin, known for her work in psychology and logic, died in 1930.

F. D. MURNAGHAN
THE JOHNS HOPKINS UNIVERSITY

EARL E. HOOVER

EARL E. HOOVER, biologist of the New Hampshire State Department of Fish and Game, died at Con-

cord on January 8, after an acute illness of several weeks. Of all the younger workers he showed perhaps the greatest promise of leadership in the impending development of the science and art of freshwater fish management. Three annual survey reports, the last of which was only recently published, stand as tributes to his energy and competence. He made worth-while contributions to herpetology as well as ichthyology and fisheries science, and was engaged in a brilliant and pioneering research dealing with the effect of altered periods of daylight on the time of reproduction in fishes. An investigation of dwarfing in trout, from the systematic and evolutionary as well as fisheries view-point, was well under way and was to have been utilized for a doctorate dissertation at the University of Michigan.

Hoover was born at Somerset, Pennsylvania, on December 5, 1911. His undergraduate studies were carried on at Lebanon Valley College, and graduate work was done at the Johns Hopkins University, where he served as instructor in 1934–35. Before assuming the position in New Hampshire in 1936, he worked one year as field zoologist in the National Park Service. Despite a tragically short career, Earl Hoover made many friends and a very real impression in several fields of scientific endeavor.

CARL L. HUBBS

RECENT DEATHS

DR. WILLIAM EBENEZER FORD, since 1920 professor of mineralogy at Yale University, with which he had been connected since he graduated in 1899, died on March 23 at the age of sixty-one years.

DR. FRANK NELSON GUILD, professor emeritus, formerly head of the department of geology and mineralogy of the University of Arizona, died on March 12 at the age of sixty-eight years. Dr. Guild had been a member of the faculty of the University of Arizona since 1897.

THE death is announced of Dr. Gustav Hellmann, professor of meteorology at Berlin.

SCIENTIFIC EVENTS

EXCURSIONS AT THE CALIFORNIA MEETING OF THE AMERICAN GEOLOGICAL SOCIETY OF AMERICA

A SUMMER meeting of the Geological Society of America will be held under the auspices of the Cordilleran Section from August 8 to 10 at the University of California at Berkeley. In conjunction with the society there will be meetings of the Paleontological Society, the Seismological Society and the Society of Economic Geology.

An elaborate program of excursions has been arranged. These include three mutually exclusive local excursions to points of interest near San Francisco Bay scheduled for Thursday afternoon, August 10. One excursion will follow the course of the Haywards fault along the front of the Berkeley Hills. This fault is similar to the San Andreas fault in that the chief movement has been horizontal. Distinctive features of the fault will be visited. A second excursion will visit quarries where the Miocene bedded opaline cherts are exposed. A third excursion will visit Hunters Point in San Francisco. Here, Jurassic Franciscan rocks are well exposed.

More extended excursions have been planned to start on Friday, August 11. For these excursions, advance registration is necessary. If an insufficient number of reservations is made for a particular excursion, it will be cancelled. The cost of the proposed excursions can not be quoted at this time, but it is estimated that $5.00 to $6.00 per day should be ample for all expenses exclusive of transportation.

(1) An excursion to Yosemite Valley will illustrate the glacial phenomena of the Sierra Nevada, including the succession of the glacial periods. It is planned to conduct the excursion across the Sierra Nevada to Mono Lake, where the eroded fault scarp of the Sierras may be studied in its relationship to the glacial features.

(2) A second excursion for those interested in metalliferous deposits will include two of the mining districts in the Sierra Nevada and Virginia City.

(3) A third excursion has been planned to Lassen Peak, the source of the volcanic eruptions in 1914–1917.

(4) A series of one-day excursions has been arranged for those interested in paleontology and stratigraphy. With the exception of the excursion to San Francisco and Half Moon Bay, these are all within reach of Berkeley, so that participants in this group of excursions should reserve their rooms in Berkeley to Sunday, August 13. Friday, August 11, will be spent at San Pablo Bay, where Miocene invertebrate fossils can be collected. Saturday, August 12, will be spent collecting Eocene fossils near Martinez. Sunday, August 13, will be spent at the Museum of the California Academy of Sciences, in San Francisco, and participants will drive to Half Moon Bay in the late afternoon. Monday, August 14, will be spent at Half Moon Bay, studying recent organisms. In addition, some of the Tertiary rocks of the San Francisco peninsula will be examined.

(5) If a sufficient number of geologists are interested, an excursion will be arranged for Thursday, August 17, in Los Angeles. Some of the oil fields will be visited, and the Tertiary stratigraphy of the Los Angeles Basin will be examined.

All the excursions are open to fellows and guests;