phorus metabolism of nuclei," by A. Marshak; "Protein and energy utilization in riboflavin-deficient chicks," by M. Kleiber and T. H. Jukes; "Some analyses of purified poliomyelitis virus," by Hubert S. Loring and C. E. Schwerdt; "The effect of a water-soluble lemon peel extract on the circulatory system," by A. J. Leser, C. F. Lombard, C. H. Thienes, C. Wawra and J. L. Webb.

At the end of the afternoon session, a dinner was held for the group.

WESTERN SOCIETY OF SOIL SCIENCE

(Report by W. P. Martin)

The meetings of the Western Society of Soil Science were featured by a larger attendance, a more diverse program and greater discussions than heretofore. Approximately eighty soil scientists listened to and discussed thirty-one papers on current research during four half-day sessions. In addition to the above, six papers were presented during a symposium on deficiency diseases of plants under the chairmanship of D. R. Hoagland in which the soil scientists collaborated with the plant pathologists, the plant physiologists and the horticulturists.

Papers ranged from a description of the physical and chemical characteristics of mature soil profiles by J. Thorne to studies on the effect of root-nodule bacteria on seed pea production by S. C. Vandecaveye. Early sessions were devoted principally to the physical properties of soils, with papers being presented by J. E. Fletcher, L. H. Smith and P. I. Vlasoff, of the Soil Conservation Service, and O. W. Israelsen, G. B. Bodman, L. T. Kardos and J. P. Martin, of the State Agricultural Experiment Stations. Numerous papers presented various aspects of the moisture problem in Western soils; R. E. Moore, P. R. Day, J. R. Furr, L. A. Richards, R. F. Reitemeier, M. R. Huberty, T. F. Buehrer and I. S. Vanoni were active in this respect.

Papers on the significance of Donnan equilibria in soils and errors inherent in the interpretation of pH measurements were given by L. E. Davis and P. R. Stout. J. P. Conrad, A. B. Caster, W. P. Martin, J. S. Jones, D. W. Thorne and L. T. Kardos presented papers on the retention by soils of the nitrogen of amino acids, nitrite build-up in the oxidation of ammonia and a threshold pH for same, organic matter changes in dry farm soils, and both zinc deficiency and arsenic toxicity in soils, respectively. Two related papers on plant tissue analyses as an aid to diagnosing nutrient deficiencies of crops and the potash content of citrus trees in relation to the supply in the soil were presented by A. Ulrich, S. M. Brown and H. D. Chapman.

At the banquet on Tuesday evening, Dr. L. D. Batchelor, director of the Citrus Experiment Station at Riverside, discussed the work of the station relative to the fertilization of citrus trees, and M. E. McCollam showed a colored motion picture entitled: "Fertilizer experiments with Ludina clover pastures." Seventy persons were in attendance.

An interesting field trip to visit the laboratories of the United States Regional Salinity Laboratory and the Citrus Experiment Station at Riverside was made on Wednesday afternoon.

Officers of the society for the coming year are as follows: *President,* L. C. Wheeting, Washington State College, Pullman; *Vice-President,* T. L. Martin, Brigham Young University, Provo, Utah; *Secretary-Treasurer,* W. P. Martin, University of Arizona, Tucson.

OBITUARY

ERHARD FERNHOLZ

THE death of Dr. Erhard Fernholz occurred as the result of accidental drowning at Princeton, New Jersey, on December 14, 1940. Dr. Fernholz was born at Hiddenhausen, Westphalia, Germany, on June 9, 1909, and graduated from the Realgymnasium of Bünde in 1928. He received the degree of doctor of philosophy from Göttingen with highest honors in the Faculty of Mathematics and Natural Science in November, 1932, and during the following year worked on a stipend with Professor Windaus. From October 1, 1933, until March, 1935, he was university assistant in the Chemistry Faculty of Göttingen, in charge of the Biochemical Department of the Organic Chemistry Laboratory. In the spring of 1935 he received a fellowship from Princeton University on funds given the university by Merck and Company and came to this country to work in the Chemistry Department, where he was associated with Professor E. S. Wallis.

In the course of eight years, Dr. Fernholz contributed more than forty papers to the chemical literature. At an early date he established himself as an uncommonly original and able investigator. Most of his earlier work was concerned with the sterols and bile acids, and he was soon recognized as a leader in this field. His work on the constitution of stigmasterol led directly to the first successful partial synthesis of progesterone, accomplished independently by Fernholz and by Butenandt. This work established the structure of progesterone proposed by Slotta.

After coming to the United States, Dr. Fernholz continued to contribute papers on the steroids and maintained an active interest in the field. It was his desire to determine the structure of the more impor-

tant phytosterols, many of which are but poorly characterized.

In addition to his contributions to the steroid field, Dr. Fernholz performed outstanding research on other natural products. Soon after joining the research staff of Merck and Company, in 1937, he reported the isolation of durohydroquinone from the thermal decomposition products of α-tocopherol, the most active principle of Vitamin E concentrates. This furnished the essential clue to the structure of α-tocopherol, and in 1938 enabled Dr. Fernholz, almost entirely on the basis of his own experiments, to announce the complete structure of α-tocopherol. Subsequent work from other laboratories has completely confirmed this structure.

Early in 1938, Dr. Fernholz became head of the Division of Organic Chemistry of the newly founded Squibb Institute for Medical Research. While continuing his active interest in steroids, he also turned his attention to the Vitamin K problem, and with his colleagues contributed eight papers concerned with the chemistry of antihemorrhagic substances. He was the first to recognize that 2-methyl-1,4-naphthoquinone was biologically more active than the natural Vitamin K_1, a phenomenon unique among physiologically active natural substances.

Dr. Fernholz possessed the ability to visualize a research problem in its correct perspective, and therefore was able to reduce essential laboratory work to a minimum. It is not mere rhetoric to say that science has suffered a severe loss in his untimely death. More than that, all those who have had the privilege of being associated with him as colleagues or of being counted among his friends are acutely aware of a great personal loss.

GEORGE A. HARROP
HOMER E. STAVELY
THE SQUIBB INSTITUTE FOR MEDICAL RESEARCH

RECENT DEATHS

DR. ROBERT THOMAS HILL, geologist of the U. S. Geological Survey from 1889 to 1904, died on July 28 in his eighty-third year.

DR. JOHN FRANCIS WOODHULL, professor emeritus of physical science at Teachers College, Columbia University, from 1888 to 1922, died on July 27 at the age of eighty-four years.

DR. JOHN PRICE CROZER GRIFFITH, emeritus professor of pediatrics in the Graduate School of Medicine of the University of Pennsylvania, died on July 28. He was eighty-five years old.

DR. MAX AARON GOLDSTEIN, the otolaryngologist, founder and director of the Central Institute for the Deaf at St. Louis, died on July 27 at the age of seventy-one years.

BENJAMIN LEE WHORF, assistant secretary of the Hartford Fire Insurance Company, research fellow of the Committee on American Native Languages of the American Council of Learned Societies, known for his work on Aztec and Mayan civilizations, died on July 26. He was forty-four years old.

DR. EDITH FORD SOLLERS, assistant professor of chemistry at Connecticut College, died in Baltimore on July 27 from injuries sustained in a laboratory accident while she carried on voluntary research in connection with the National Defense program.

PROFESSOR MYRON HARMON SWENK, chairman of the department of entomology of the University of Nebraska, died on July 17 in his fifty-eighth year. He became a member of the department of entomology in 1907 and was appointed chairman of the department in 1922, a position which he retained until the time of his death. According to a correspondent, "throughout the course of his professional career he has been actively engaged in both teaching and research and has contributed a large number of publications on various phases of entomology, particularly in the fields of economic entomology and taxonomy. In addition, he has published numerous articles in the fields of ornithology and mammalogy. In the death of Professor Swenk the University of Nebraska has lost one of its outstanding men."

A CORRESPONDENT writes: "The recent death of James Henry Blake, zoologist and artist, at the age of 96, removes almost the last of Louis Agassiz's students and coworkers. Mr. Blake was a student at the Penikese Laboratory and a member of the Hassler Expedition in 1871–72. He was also one of the artists for the famous Vineyard Sound Survey of the U. S. Fish Commission. At the time of his death, he was the senior member of the Boston Society of Natural History (elected 1870), in which he had held various offices. In addition, he was a founder and former president of the Boston Malacological Club. His lifelong interest in whales and mollusks is fittingly perpetuated by a large collection of his colored drawings in the New England Museum of Natural History."

SCIENTIFIC EVENTS

THE ROYAL COLLEGE OF SURGEONS

DAMAGE caused to the Royal College of Surgeons, London, has been recorded in SCIENCE. Further particulars are given by the London correspondent of the *Journal* of the American Medical Association, who writes: