bors with reference to shoreline changes: U. S. GRANT, University of California at Los Angeles.

Marine terraces of the California coast: WM. C. PUTNAM, Los Angeles Junior College.

Research in biology at the Oceanographic Laboratories of the University of Washington: R. C. MILLER.

Research in physical oceanography at the Oceanographic Laboratories, University of Washington: C. L. UTTERBACK.

Marine research, California Fish and Game Commission: W. L. SCOFIELD, Director, State Fisheries Laboratory, Terminal Island.

Research at the Marine Laboratory, California Institute of Technology, at Corona del Mar: G. E. MACGINITIE.

General oceanographic announcements and work of the Scripps Institution: T. W. VAUGHAN.

BUSINESS SESSIONS

Sessions of the executive committee were held on Tuesday, Wednesday and Thursday. In addition to routine matters immediately relevant to the arrangements and progress of the meetings, several items of more general interest were transacted.

Richard Chase Tolman, professor of physical chemistry and mathematical physics at the California Institute of Technology, was elected president of the division for the year 1935–36.

The requisite subcommittees for organizing the program of the 1936 meeting were established. This meeting will be held at the University of Washington, Seattle, in June, 1936. Dr. A. F. Carpenter will serve as chairman of the general committee in charge of the local arrangements.

A complete revision of the constitution under which the Pacific Division functions was ordered. The present constitution was adopted in 1916 and with numerous amendments has served effectively to the present time. The growth of the association on the Pacific Coast and in the western states, substantial increases in the number of affiliated societies and the inevitable expansion in the programs of our annual meetings have combined to render necessary a thorough inquiry into the machinery of organization to permit the division to serve most effectively in coordinating the activities of its associated societies.

At the general business session of the division held on June 26, the following were elected to the executive committee in succession to the retiring members, A. O. Leuschner, J. H. C. Smith and O. F. Stafford: Bennett M. Allen, professor of biology at the University of California at Los Angeles; Calvin P. Stone, professor of psychology, Stanford University; Thomas G. Thompson, director of the Oceanographic Laboratories, University of Washington.

The following schedule of future meetings was announced:

1936, Seattle.
1937, Denver (national meeting).
1938, Bay Region (tentative).
1939, Southern California (tentative).

This report of the Los Angeles meeting would be quite incomplete without recording the appreciation of members for the hospitality which was enjoyed. To the formal resolution of gratitude transmitted to the administrative authorities of the university, to the Los Angeles Chamber of Commerce and to the local committees in charge of arrangements it would be fitting to add an informal word of appreciation for the many unofficial courtesies which were extended and for the friendly environment of the meetings.

The General Committee in charge of local arrangements consisted of S. J. Barnett, *chairman,* B. M. Allen, L. E. Dodd, F. C. Leonard, *secretary,* D. G. Maclise, W. J. Miller, E. C. Moore, W. C. Morgan, Paul Perigord, H. M. Showman, E. K. Soper and O. L. Sponsler.

OBITUARY

CURTIS FLETCHER MARBUT

THE foremost authority on the soils of the world died of pneumonia while virtually alone in Harbin, Manchukuo, on August 25. No single individual has contributed more to soil science or been more important to American agriculture than Dr. C. F. Marbut. His untimely death overtook him en route to China, where he was to complete his examination of the soils of Asia at the request of the Chinese Government. He had planned to make a trip into India and then return to Rome, there to compile a soil map of the world for the International Institute of Agriculture.

Dr. Marbut was born on a farm in Lawrence County of the Missouri Ozarks on July 19, 1863. Short-term rural schools and intimate contact with an intensely rural community gave sufficient opportunity for his insatiable mind to develop early those habits of steady, honest inquiry which characterized all his scientific work and his way of life. Never, for any reason, could he be persuaded to deviate one iota from the path of scientific truth, regardless of where it led. After a brief period of teaching in the local rural schools and preparing himself for college he entered the University of Missouri, from which he graduated in 1889. A year later he was made a member of the State Geological Survey, and in 1893 went to Harvard University, receiving the master's degree in 1894. From 1895 to 1910 he taught geology in the Univer-

sity of Missouri first as instructor, then as assistant professor and as professor for the last eleven years. During 1899 and 1900 he traveled through Europe, studying land forms and geology. From that time to the day of his death he took every opportunity to extend his knowledge of geography and soils through travel. He made several subsequent trips to Europe and through South America, Canada and Mexico. There is scarcely a county in the United States in which Dr. Marbut has not made personal investigations of the soils and agriculture.

His first interest in soil science began in 1909, when he was appointed as cooperative agent in the Bureau of Soils of the U. S. Department of Agriculture. At the request of Professor Milton Whitney, then chief of the Bureau of Soils, he left the University of Missouri in 1910 to take charge of the Soil Survey Division, which had already been initiated by Professor Whitney some years earlier. In this position he directed the soil survey work in the United States, and made it one of the outstanding scientific enterprises of the nation, to say nothing of the great impetus he gave to soil research in other nations.

Early soil investigations in western Europe and the United States had been made almost entirely by agronomists interested in problems of plant growth from the experimental point of view. Having a broad training in geology and geography, Dr. Marbut early conceived of soil types as geographic entities to be studied as individuals and in relation to the landscape as a whole. These types were dynamic and evolutionary products produced not by, but with, the other phases of the landscape. He visualized the necessity of an exact knowledge of these soil entities, which knowledge might serve as the necessary ground work for studies of their capabilities for use and their response to management. Fortunately for American agriculture, his views have prevailed to the extent that there is now a large part of this essential information available.

Meanwhile there had been developing in Russia a strong school of soil science, but due to the barrier of languages this work was relatively little known to American and western European workers until the publication of K. D. Glinka's *Die Typen der Bodenbildung* in 1914. Dr. Marbut read this book and was so impressed by it that he translated it into English in order that it might be more readily available to American workers.

The Russian system of soil classification, based largely upon climatic régimes, was by no means directly applicable to American soils; yet the stimulation of the new points of view and the new methods was enormous. Although Dr. Marbut was insisting that the soils themselves must be studied, the Russian work had firmly established two principles: (1) The importance of the soil profile as a distinct entity; and (2) the principle of soil geographicity.

Although Dr. Marbut keenly realized the great advances made by Glinka and his coworkers, using climate as a basis for outlining great soil regions, he held his own work strictly to the inductive method. He was constantly admonishing his followers: "Describe the soils as you find them. Get the facts first and philosophize about the genesis of the soil later. Soils must be studied and classified as soils, not as geological products, climatic products or from the point of view of anything outside the soil itself." This all seems so logical now that it is hard to understand why there was ever a question, but new ideas seem frequently to meet an initial resistance.

To appreciate the work of Dr. Marbut one must realize that although there was much information regarding soils in the United States when he came into the Department of Agriculture, the data were isolated and scattered. There was no systematic body of knowledge and consequently no soil science. The early soil survey was more or less based on the geology of the underlying rocks, together with such additional factors as relief and drainage. But not until the soils themselves were studied could there be any great progress. His great contribution was the development of a system wherein these facts and data had meaning and significance. Years will be spent in perfecting the system, in correcting errors and in extending it, but its principal features are fundamental and enduring. In a large measure Dr. Marbut achieved for soil science what Darwin achieved for biology—he made a rational whole from scattered, seemingly unrelated facts.

He received his LL.D. degree from the University of Missouri in 1916. He held membership and honorary membership in a great many geographical, pedological and other scientific societies both here and abroad. The American Geographical Society awarded him the coveted Cullum Medal in 1930: "For his geographical work on the soil, 'the foothold of all things.'" For several years he was president of the Fifth Commission of the International Society of Soil Science, dealing with problems of soil morphology, genesis and classification. He had just presided over the meetings of the commission at the International Congress of Soil Science held in Oxford, England, during the early part of August.

Dr. Marbut published several books and papers dealing with various aspects of soil science. Advanced copies of his most recent and important work, "The Soils of the United States," were placed in his hands only last July. This work forms the last and final section of the "Atlas of American Agriculture," and includes a large colored map on a scale of forty miles to

the inch of the two hundred and fifty important groups of soils in the United States. Accompanying the large map are others showing particular details and an exhaustive text summarizing what is known regarding the morphology and genesis of the soils.

Although his work by itself is of the utmost significance and importance and will live for many years to come, perhaps his greatest influence has been exerted by more subtle means. Never did a man better exemplify the ideal scientific spirit through his whole being than Dr. Marbut. This attitude of steadfast devotion to scientific truth and freedom from prejudice was coupled with a modest, kindly personality that inspired all those fortunate enough to know him. The effect of this stimulation has permeated the whole science and been an inspiration to young men, not only in America, but throughout the world.

He married Florence L. Martin on December 17, 1891, and three sons and two daughters were born to them. Mrs. Marbut died in 1908, but his children all survive him.

CHARLES E. KELLOGG

RECENT DEATHS

DR. ALEXANDER CREVER ABBOTT, emeritus professor of hygiene and bacteriology at the University of Pennsylvania, died on September 11. He was seventy-five years of age.

WILLIAM MYNN THORNTON, professor emeritus of applied mathematics, formerly chairman of the faculty at the University of Virginia, died on September 11 at the age of eighty-four years.

OREL SAMUEL GRONER, since 1921 professor of chemistry at Bucknell University, Lewisburg, Pa., died on September 9. He was sixty-four years old.

DR. CHARLES NORRIS, chief medical examiner of New York City for the past eighteen years, previously from 1904 to 1918 director of the laboratories of Bellevue Hospital, known especially for his work in crime detection, died on September 11. He was sixty-seven years old.

THE death at the age of fifty-two years is announced of Lieutenant-Colonel Hugh William Acton, retired, for over eight years director of the School of Tropical Medicine, Calcutta, and of the Carmichael Hospital for Tropical Diseases.

The British Medical Journal records the death of Professor Manuel J. Rizzi, otorhinolaryngologist, of Buenos Aires, aged fifty-nine years; of Dr. Gustav Hauser, emeritus professor of general pathology and morbid anatomy at Erlangen, aged seventy-nine years, and of Dr. Adrien Bayet, professor of clinical dermatology at Brussels, aged seventy-one years.

SCIENTIFIC EVENTS

"CURRENT SCIENCE"

Current Science, "a monthly journal devoted to science," published at Bangalore, India, completed its third year in July and the management is making plans to issue the journal every two weeks. The journal is conducted on the general lines of *Nature* by a board of editors composed of Professor C. R. Narayan Rao, who is editor-in-chief, and Dr. V. Subrahmary, who is "joint editor." Dr. F. H. Gravely, Rau Bahadan and Professor Venkalesachu are members of the board and B. M. Sastri is secretary. They have the editorial cooperation of about fifty scientific men, residing in India and in England.

The articles in the first number of the fourth volume, which contains in addition editorials, original articles, letters to the editor, reviews, research and news notes, are:

"The Artificial Preparation of the Male Sex Hormone," Professor L. Ruzicka.

"Locust Research Work in India," Rao Sahib Y. Ramachandra Rao.

"Gaps in Our Knowledge of the Indian Protozoa. I. Ciliophora," B. L. Bhatia.

"Mining and Geological Institute of India."

"Insect Transmission of Spike Disease of Sandal (*Santalum album* Linn.)," S. Rangaswami and M. Sreenivasaya.

"Chemistry in the Customs Department," H. B. Dunnicliff.

"Some Biochemical Factors of Disease Resistance in Plants," A. V. Varadaraja Iyengar.

The first number of a second monthly journal, *Science and Culture*, was issued in July, the objects of which are given as follows: (*a*) Authoritative articles written in non-technical language on all scientific matters of general interest. (*b*) Short articles. (*c*) Short notices of original work and suggestions regarding matters of scientific interest. (*d*) News of interest to the scientific workers particularly from universities and learned societies.

In an editorial of welcome to the new journal *Current Science* writes in part:

We have pleasure in offering a warm welcome to *Science and Culture*, a new monthly journal of natural and cultural sciences, whose aim is to promote the cause of science by spreading scientific knowledge among the public. It is further explained that publication is promoted by a non-profit corporation of "some eminent scientists and