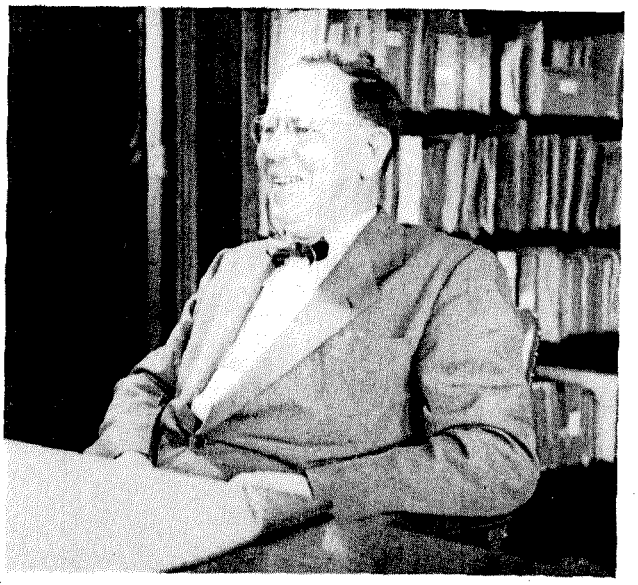
THE MONTH AT CALTECH



Chester Stock

THE DIVISION OF THE GEOLOGICAL SCIENCES, the California Institute, and American paleontology suffered a severe loss in the passing of Dr. Chester Stock, Professor of Paleontology and Chairman of the division. Death came without warning to Dr. Stock in his sleep in the early morning of December 7, 1950 from cerebral hemorrhage at the age of 58. The previous evening he had chatted in his usual jovial way with colleagues and students after a meeting of the Geology Club, and a few days earlier he had returned from a meeting of the Geological Society of America at Washington, D. C., of which he had just been elected president.

From the time of his coming to the Institute in 1926 shortly after the geological division was organized Dr. Stock prosecuted a very vigorous program of research in vertebrate paleontology. He was interested mainly in the mammalian fossil remains secured from the Tertiary formations of the United States west of the Rocky Mountains and in the northern part of Mexico.

There were several aims in these researches. One was to determine from the collections of bones and teeth made in a large number of Tertiary sandstone and shale formations of diverse ages what kinds of animals roamed over the mountains and plains of western America in the successive epochs of the 60 million-years-long Tertiary period. These creatures were very different from the mammals now living in these regions; virtually all the species are extinct and some whole lineages, such as the oreodonts, disappeared millions of years before Man appeared on this continent or had even originated.

A second purpose in vertebrate paleontology is to determine accurately the geologic age of the formation containing the fossils; because of their rapid evolutionary change mammalian remains are especially serviceable.

Another aim is to infer from the types of mammals found in a formation something of the topography and climate of the country in the geologic epoch when they lived. Further, by assembling the fossil skeletal parts of successive species in the same lineage, such as horses or camels, it is possible to discern the evolutionary development and changes from creatures small and primitive to later or living species usually much larger and more complex in skeletal structure.

Finally, from the structural changes in the animals and the contemporaneous alterations in topography, climate, and food supply it is possible to derive some clues to the causes of evolution. Along the line of each of these aims in paleontology, Dr. Stock contributed (in an important way) through his writings and his teaching.

To secure the fossil material Dr. Stock, with the aid of the late Eustace L. Furlong, Curator, and of William J. P. Otto, Sculptor and Preparator, and students and other assistants, organized many successful collecting expeditions to a large number of fruitful sites and areas in the West. The excellent collections he amassed and catalogued at the Institute for study and comparison purposes compare favorably with those in much older institutions. Age determinations of formations which Dr. Stock was able to make with these materials have been of very great value to petroleum and other geologists.

Dr. Stock's published contributions to paleontology were both numerous and important. He was author of some 170 papers, ranging from short descriptions of individual new species of Cenozoic mammals or brief popular articles to voluminous monographs treating whole groups of species or genera of one family or all the various mammals found at one locality, each of these studies representing months or years of intensive research.

One such group, the peculiar heavy and herbivorous

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but clawed ground sloths, like the horses and camels only recently extinct in North America, claimed Dr. Stock's interest early in his scientific career and were treated in very important publications. He was the outstanding authority on this group for more than thirty years.

Another group to the evolutionary history of which Dr. Stock contributed in a very important way is the horse family, remains of which he collected and studied in forms ranging from the little five-toed Eohippus to the virtually modern horse. His published papers, prepared with great care and fully and effectively illustrated with drawings by the late John L. Ridgway and by David P. Willoughby, were outstanding examples of scientific accuracy and literary form.

His enthusiasm for and arduous application to research in vertebrate paleontology stimulated numerous graduate students to investigational work in that and closely related geologic fields. Striking skeletal mounts and complete restorations of extinct species of mammals and reptiles prepared under his direction are among the most interesting exhibits of scientific materials open to the public at the Institute.

Dr. Stock received his training between 1910 and 1917, and much inspiration, from the late Dr. John C. Merriam, then Professor of Paleontology at the University of California at Berkeley. (Dr. Merriam later became President of the Carnegie Institution of Washington; his son, Dr. Charles W. Merriam is now Associate Professor of Invertebrate Paleontology at the Institute.) Under John C. Merriam Dr. Stock early developed a deep interest in the remarkable and world-famous fauna of Rancho la Brea, now Hancock Park, and beginning in 1913 he published a long series of papers describing different groups of animals entombed there in the tar. In recent years he was very active in guiding the planning of a museum and other exhibits illustrating the fossil-recorded life at this fascinating paleontological site.

Initiated by study of Rancho la Brea collections at that institution, Dr. Stock participated in the scientific activities of the Los Angeles Museum of History, Science and Art in increasing degree for more than three decades and was responsible for the magnificent restorations of prehistoric animal life for the West being exhibited there. He was Chief Curator of Science at the museum in recent years.

Many honors came to Dr. Stock. He was elected a member of the American Philosophical Society, the National Academy of Sciences, the Geological Society of America, the Paleontological Society of America, American Society of Naturalists, American Society of Mammalogists, American Association of Petroleum Geologists, and several others.

With his genial personality and his diverse interests Dr. Stock won a very wide circle of friends. These and his colleagues and his students all respected him and grew very fond of him. He will be very sorely missed from our ranks. —*John P. Buwalda*

Kelvin Medal

DR. THEODORE VON KARMAN, Emeritus Professor of Aeronautics, last month received the Kelvin Gold Medal for 1950, one of the highest engineering science awards in the world.

The Kelvin Medal, awarded in London, is presented by a committee composed of the presidents of the eight major engineering societies of the United Kingdom for outstanding contributions to engineering science. The award was established in 1920, but has been made only eight times since then. It has previously been given to such men as Guglielmo Marconi; Sir Frank Whittle, creator of the first turbojet engine; and the Nobel Prize-winner, Physicist J. J. Thomson. Elihu Thomson, pioneer electrical engineer, is the only other American who has received the award.

Dr. von Karman is now chairman of the Scientific Advisory Board of the U. S. Air Force, and chief technical consultant to the Areojet Engineering Corporation, the rocket manufacturing and development company in Azusa which he helped found in 1942. Until March, 1949, when he resigned to devote most of his time to his work for the Air Force, Dr. von Karman was Director of the Institute's Guggenheim Aeronautical Laboratory and Chairman of the Jet Propulsion Laboratory Executive Board.

The Kelvin Medal is the latest in a long series of distinguished honors which have come to Dr. von Karman. He has received the Presidential Medal for Merit, the highest civilian award for outstanding contributions to the war effort; the Franklin Gold Medal, highest award of the Franklin Institute of Pennsylvania; and the John Fritz Medal, highest engineering award in this country. He has also received the Gold Medal of the American Society of Mechanical Engineers, the Sylvanus Reed Award of the Institute of Aeronautical Sciences, as well as numerous honorary degrees from universities here and abroad.

Student Junket

FORTY CALTECH STUDENTS have been invited to serve as official observers for the American Automobile Association in the annual Mobilgas Economy Run to be held this year from March 6th to 9th. The AAA will put a Caltech observer in each car making the run from Los Angeles to the Grand Canyon—and for their trouble the boys will collect $10 a day and expenses. The fact that the Run takes place just a week before final exams here has had little effect on the rush to sign up for this rich extracurricular experience.