

large ships and great sums of money; therefore the affair of national governments chiefly. And we have to thank Helland-Hansen and the other Scandinavian oceanographers for our present realization that physical and chemical work of the most exacting kind can be done on the high seas on small craft; that the use of sails on oceanographic ships is not obsolete, but may be of high advantage. Trained in a hardy school on the little research steamer *Michael Sars* under Johann Hjort (Agassiz medalist also) and Captain Iversen, Helland-Hansen in 1914 announced to the oceanographic world the launching, the year before, of the still smaller auxiliary ketch *Armauer Hansen*, and of her maiden cruise. It was not

long before the fame of this little craft, only 73 feet long, and of her commander, Helland-Hansen, spread far and wide; her voyages crisscrossed the Norwegian sea and northeastern Atlantic; to Iceland; to Portugal; to Morocco; to the Azores. So successful indeed was she, and such a wealth of contribution came from her cruises, that she has served as a model for other research ships; most recently for our own slightly larger *Atlantis*. We thank Helland-Hansen for the fact that these little vessels go and come on the open ocean, carrying on their work with the highest standard of precision, in foul weather as in fair, accumulating threads of data from which a fabric of modern sea science is being spun.

OBITUARY

CARL EWALD GRUNSKY

IN the passing of Dr. C. E. Grunsky, the scientific world has lost an indefatigable worker, a man possessed of a happy combination of faculties which fitted him especially for the rôle he chose to follow. Primarily a civil engineer of renown, his interests were broad and his activity great. He became associated with the California Academy of Sciences in 1896 as a member and served on the Board of Trustees from 1898 to 1904. In 1911 he became corresponding secretary and was elected president in 1912, a position he held until his death. In addition he acted as director of the Museum of the Academy and the Steinhart Aquarium from 1932, succeeding the late Dr. Barton Warren Evermann. He became a patron on May 21, 1934.

He was born in San Joaquin County, California, on April 4, 1855, and attended the public schools of Stockton. In 1872 he went to Germany, thinking of medicine as a career, but changed to civil engineering, which he studied at the Realschule and Polytechnikum at Stuttgart. He graduated from the latter in 1877 and was given the Dr. Ing. degree in 1910. The same honor was received from Rensselaer Polytechnic Institute in 1924. Standard works of reference show the many positions of trust which he held in engineering circles; he was city engineer of San Francisco, 1900-1904; member of the Panama Canal Commission, 1904-1905; consulting engineer, U. S. Reclamation Service, 1905-1907, etc. Much of his life was devoted to matters pertaining to irrigation, drainage and river control.

He received the Norman Medal of the American Society of Civil Engineers in 1910, was vice-president in 1922 and president in 1924. In 1924 he was also president of the Pacific Division of the American Association for the Advancement of Science. He was president of the American Engineering Council in 1930-1931.

One faculty he possessed fitted him particularly for presiding over meetings and groups of people; he was a very clear thinker and could organize his subject-matter rapidly, yet he spoke with deliberation and crisp enunciation.

Political science, particularly those phases dealing with rates, taxation and forms of money, fascinated him and he published extensively on the subject.

He was always interested in art and during his later years found time to paint some of the backgrounds of the habitat groups of African animals now being installed by the academy. His death came suddenly at his home in Berkeley, California, on June 9, while he was mixing pigment and oil.

G. D. HANNA

RECENT DEATHS

GEORGE W. FULLER, consulting engineer of New York City, an authority on municipal sanitation and water supply, died on June 15, in his sixty-sixth year.

DR. CHARLES HENRY GORDON, emeritus professor of geology and mineralogy at the University of Tennessee, died on June 12 at the age of seventy-seven years.

DR. ROBERT GIBSON ECCLES, formerly professor of organic chemistry and dean of the Brooklyn College of Pharmacy, for ten years a member of the committee on revision of the U. S. Pharmacopoeia, died on June 9 as a result of injuries received when struck by a trolley car. He was eighty-six years old.

W. L. FOSTER, professor of civil engineering at the Iowa State College, died on May 22, as a result of an automobile accident.

MARCUS E. JONES, explorer, formerly curator in botany at Pomona College, a resident of Salt Lake City, was killed in an automobile accident on June 3. He was eighty-two years old.