enthusiasm and appreciation as an addition to knowledge, whether or not it seemed to have an immediate bearing on human welfare or the advancement of medical practice. Since that time medicine has become much more scientific, and workers in physiology trained in the professional schools of medicine turn to the fundamental as well as to the practical problems, although physics and chemistry rather than biology constitute the basis of preparation.

Hough's graduation dissertation was upon "The escape of the heart from vagus stimulation." While still a student he investigated the vexatious question of the physiology of the external intercostal muscles and solved the point neatly and completely by the use of the idea, introduced by Martin, that the inspiratory muscles must contract synchronously with the diaphragm and the expiratory muscles alternately with it. After graduation he was appointed instructor in biology with Sedgwick at the Massachusetts Institute of Technology. He was of material assistance to Sedgwick in developing the excellent course in biology for which the institute has been noted, and later the two of them collaborated in the publication of a book on physiology, hygiene and sanitation which in its particular field was a noteworthy and valuable contribution.

During his period of residence in Boston, Hough was in charge also of the biological work in the newly founded Simmons College. In 1907 he was called to the University of Virginia as professor of physiology and later served also as dean of the medical school. He filled both positions at the time of his sudden death on November 30, 1924.

He was one of the early members of the American Physiological Society and for many years was a faithful attendant and a frequent contributor at its meetings. His scientific work was not large in volume, but it was admirable in quality. In his Boston days his researches were devoted mainly to points bearing upon muscular work and fatigue, owing doubtless to the fact that he was engaged as a lecturer in a school of physical training. His somewhat infrequent papers from the University of Virginia dealt chiefly with problems of respiration. Hough was a well-trained physiologist fully acquainted with the literature and technique of his subject. He was very thorough and accurate in his work and was animated by the highest ideals. I can well believe that the medical students of the University of Virginia received from his hands an instruction in physiology as sound and as modern as could have been obtained at any university in the world. His qualities of mind and character easily explain why his colleagues pressed him into service as dean of the medical school. In this position he was as successful as in his teaching work. He took an active part in the national conferences on medical education and devoted a large part of his time and energy to the maintenance and development of his own school through some periods of storm and stress. While the University of Virginia must have profited greatly through his efforts it is, of course, a matter of some regret to his brother physiologists that administrative duties deprived him in large measure of the opportunity for investigation for which he was so well qualified by his training and by his ability. Those of our society who were his friends and comrades will ever remember him for his integrity and sincerity of character, his high ideals of scientific work and his cordial, manly personality.

W. H. HOWELL

JOHNS HOPKINS UNIVERSITY

SCIENTIFIC EVENTS

SCIENTIFIC EXPEDITIONS PLANNED BY FIELD MUSEUM OF NATURAL HISTORY FOR THE YEAR 1925

THE Field Museum of Natural History, of Chicago, has completed arrangements to send into the field during the year 1925 fourteen important expeditions. While several of these expeditions are in continuation of investigations that have been conducted by the institution during the past three years, most of the new undertakings are for original scientific research in fields not heretofore explored by the museum. With one exception, the funds provided for these explorations have been contributed by Captain Marshall Field, through whose generosity the museum in 1922 was encouraged to make arrangements for extensive researches in various parts of the world, covering a period of five or more years. The beginning of the year 1925 finds the following expeditions either in the field or making arrangements for departure.

The museum has commissioned Dr. A. L. Kroeber to collect archeological material in Peru and Bolivia. Dr. Kroeber's initial researches will most likely be at Tiahuauac, on Lake Titicaca, high in the mountains between Peru and Bolivia. Although the Spaniards found the Incas ruling this territory, it has since been agreed that their dynasty was a comparatively young one, probably originating in the fourteenth century. Incomplete investigations made by various institutions have disclosed much that is mythical regarding the pre-Incas races. Sufficient material evidence has been discovered, however, to prove that civilizations existed as long ago as 1,400 years before the Incas.

The archeological expedition in Mesopotamia, conducted jointly by Field Museum and Oxford University, under the leadership of Professor Stephen Langdon, during the past two years, will continue its

operations through the present year. Important discoveries are expected to come from where excavations have gained great headway. The oldest pictorial writings have been unearthed from a palace believed to have been that of the first kings of Babylon. The excavators are now working into some of the more important burial places, temples and fortresses that are expected to yield material of vast importance in reconstructing the story of pre-Semitic and prehistoric Sumerian races.

Madagascar has been selected as the field for an ethnological survey, under the leadership of Dr. Ralph Linton. This is a most promising region for ethnological research. The inhabitants are of cosmopolitan lineage and many of the tribes are closely allied with the Malayan groups farther to the east. The island contains twenty-six different groups of people, which are sub-divided into a greater number of tribes. The southern tribes are almost unknown. They are believed to be descendants of people who ruled the island before the Hovas, the present so-called ruling class. The Hovas apparently came originally from Sumatra. Some of the other tribes are of the Mongolian type. Still others claim to be descendants of the Arabs. The expedition will attempt to make contributions to the early history of the migrations of the Malayan group.

An expedition to southern California, under the leadership of Charles L. Owen, will be financed by the Julius and Augusta N. Rosenwald Fund. Complete data concerning the Hupa, Yorok, Cahuilla and Chemehuevi Indian tribes of that region will be sought.

In continuation of the botanical research in Peru, the museum has commissioned the well-known phytogeographer, Dr. A. Weberbauer, to collect plants in that country. Many new species have already been described among the plants from Peru secured by J. Francis Macbride, of the Department of Botany of the Field Museum, during the years 1922 and 1923. It is believed that further collecting in this region will prove equally profitable.

Primarily for the purpose of adding to the museum exhibition and economic series in the department of botany, Dr. B. E. Dahlgren will conduct an expedition in Cuba.

Further botanical collections will be made in British Guiana by A. C. Persaud, who is in charge of the museum field work of collecting tropical woods.

Dr. Francis W. Pennell has been commissioned to collect botanical material in the central and southern Peru sections of the Andes and along the coast and in the Andes of Chile. The latter country is rich in Scrophulariaceae, to which Dr. Pennell devotes special attention.

The museum will receive material from the Third Asiatic Expedition of the American Museum of Natural History, under the leadership of Dr. Roy Chapman Andrews, through its cooperative agreement with the American Museum.

The paleontological expedition in Patagonia, which has been in the field since 1922, under the leadership of Elmer S. Riggs, will continue its operations during the present year.

The African expedition, which spent the year 1924 in Belgian Congo, will continue in that country. This expedition is in charge of Mr. Edmund Heller, who is accompanied by Mrs. Heller. Recently the expedition has been working in the vicinity of Mt. Ruwenzori and it is expected to spend some time in neighboring localities for special studies of the gorilla and chimpanzee while making general collections of mammals.

An expedition to central Canada, among the lakes and marshes of Saskatchewan, will be carried out by Ashley Hine early in the summer. The object of this expedition will be to secure material for habitat groups of American water birds.

An expedition to Newfoundland will be conducted by Julius Friesser and H. C. Holling to secure group material for large mammal exhibits, especially caribou.

The series of zoological expeditions which the museum has been making to South America will be continued by an extensive survey in central and southern Brazil. This expedition will be undertaken by John T. Zimmer and Colin C. Sanborn. If conditions permit, the party will penetrate into hitherto unexplored regions of the central forests of Brazil, where no zoological collecting has been done. This expedition will make a very thorough collection of mammals, birds and reptiles and will remain in the field into and perhaps throughout the year 1926. In addition to largely increasing the knowledge of the classification and distribution of vertebrates, it is planned to obtain selected examples of the fauna for exhibition purposes, including certain rare monkeys and carnivores and birds of exceptional interest through their rarity or unusual character.

The working collections of the museum will also be augmented during the year by expeditions conducted and privately financed by H. B. Conover, who is at present in the field in the state of Tampico, Mexico.

D. C. DAVIES

FIELD MUSEUM OF NATURAL HISTORY

MEETING OF THE INTERNATIONAL UNION OF SCIENTIFIC RADIO

RADIO research activities of wide scope were discussed at a recent meeting of the American Section of the International Union of Scientific Radio Telegraphy. The meeting was held at the National Re-