

that, "in spite of ignorance, folly and passion, the scientific method has won field after field since the days of Galileo. From Mechanics it passed on to Physics, from Physics via Chemistry to Biology, from Biology to Psychology, where it is slowly adapting itself to unfamiliar ground. There seems no limit to research, for as has been well and truly said, the more the sphere of knowledge grows, the larger becomes the surface of contact with the unknown."

This brief survey has revealed three salient features. In the first place, the spirit of inquiry, which is essential for scientific advance, is latent in the human mind. This spirit of inquiry has made its appearance at different times, in different lands and among different peoples. Secondly, this seed will not grow, this spirit will not blossom, in an atmosphere of suppression, inhibitions and restrictions. It must have freedom—freedom to think, freedom to speak, freedom to discuss, freedom to exchange ideas with others. If restrictions are imposed upon it, if it is fettered with chains, which may be those of authority, superstition, habit or prejudice, the spirit of inquiry will remain dormant, and ultimately it may even be extinguished. In order that the spirit of inquiry

implanted in our souls may blossom fully and flourish, freedom of thought, freedom of speech and freedom of expression are essential. Science can recognize only its own ideology. If attempts are made to impose any other ideology upon it, it can only be to the detriment of scientific advance and progress. The third salient feature which should be apparent from this historical survey is that all attempts to formulate a comprehensive system, aimed at explaining everything, have failed in the past when human knowledge was not so vast. Now that the bounds of knowledge have been vastly extended, such attempts, if made now or in the future, are bound to be even bigger failures. Those who claim to offer comprehensive systems, complete in themselves, as explanations for everything there is to be explained, are ignorant of the nature and extent of our knowledge; and unless they are themselves mistaken, they are attempting to mislead others. Although all knowledge is fundamentally inter-linked, progress is possible by making advances on its different sectors. This progress, though it may not be spectacular, is sure and certain. Only thus may we look forward to the gradual lifting of the mists which hide 'reality' from our vision.

NEWS and VIEWS

New York Zoological Society

A NUMBER of changes in the staff of the New York Zoological Park have been recently announced by the New York Zoological Society. The title of director of the Zoological Park, vacant for a number of years, has been revived by the appointment to that position of Mr. John Tee-Van, executive secretary of the Zoo and Aquarium since 1942. Mr. Tee-Van, who has been connected with the Zoological Society for forty-one years, started work as an assistant keeper in the Bird Department in 1911, at the age of fourteen, and five years later became an assistant in the new Department of Tropical Research, working with Dr. William Beebe in research stations in the West Indies, British Guiana, Venezuela, the Galapagos Islands, the Sargasso Sea, Haiti, Bermuda and off the coasts of Lower California, Mexico, Central America and Colombia. His scientific work has been done chiefly in ichthyology, a field in which he has published many papers, and he is a vice-president of the American Society of Ichthyologists and Herpetologists. Since 1940 Mr. Tee-Van has been editor-in-chief for a series of books on "Fishes of the Western North Atlantic". He is a fellow and recording secretary of the New York Academy of Sciences, a member of the Boone and Crockett Club and president of the Explorers Club.

Other changes are as follows. Dr. Leonard J. Goss, veterinarian since 1939, has been made assistant director of the Zoological Park and will continue as veterinarian. Mr. Lee S. Crandall, general curator since 1943, is retiring from active administration of the mammal and bird collections, although he will continue to maintain an office at the Park and will be engaged in the preparation of books on the care, feeding, maintenance and exhibition of wild animals in captivity, based on his experience of forty-four years with the collections of the Bronx Zoo. Mr. Robert M. McClung, who has been assistant curator

of mammals and birds under Mr. Crandall since 1949, has been appointed acting curator of the department. Mr. McClung is a graduate of Princeton and Cornell Universities and is the author of several animal books for children. Dr. William Beebe, who is retiring with the title of director emeritus of the Department of Tropical Research, is the only member of the staff of the Zoological Park who was connected with it before the actual opening of the Zoo in 1899. He was curator of birds during 1899–1920 and since then has been director of a separate Department of Tropical Research, under which field-stations have been maintained in many parts of the American tropics, and oceanographic work in both the Atlantic and the Pacific has been undertaken. One of Dr. Beebe's best-known exploits was the descent in the bathysphere to the record depth of 3,028 ft. off Bermuda on August 15, 1934. Dr. Beebe expects to go to Trinidad later this year and to resume research in the ecology of the Arina Valley, on which he has been engaged for the past two years. Miss Jocelyn Crane, a member of the staff of the Department of Tropical Research since 1930 and research zoologist since 1942, has been made assistant director of the Department. Miss Crane, who is a graduate of Smith College, is at present engaged in a study of the biology and behaviour of various invertebrates and sense perception in insects.

Jacobus Henricus van't Hoff (1852–1911)

ONE of the founders of modern physical chemistry, whose work also profoundly influenced physiology, biology, geology and mineralogy, Jacobus Henricus van't Hoff was born at Rotterdam a century ago, on August 30, 1852. Educated at Delft, Leyden, Bonn and Paris, he obtained his doctorate at the University of Utrecht in 1874, after having already published a pamphlet which laid the foundations of stereochemistry. An amplified version in French, "La chimie dans l'espace", appeared in 1875. Van't Hoff