

may be some recession in that pessimism which has become so common in the consideration of the world's food supply.

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OBITUARIES

Prof. C. J. van der Horst

PROF. C. J. VAN DER HORST died in Johannesburg on Oct. 10. He was born in Holland on May 11, 1889, and educated in that country, studying under Profs. Hugo de Vries and Max Weber in the University of Amsterdam. His thesis for the doctorate was on the structure of the brain in fish. On graduation he was appointed chief assistant to Prof. Sluiter in Amsterdam, and there wrote a monograph on the corals of the *Siboga* expedition. He soon returned to neurology, working with Judson Herrick in Chicago, and becoming sub director of the Institute for Brain Research (Herseninstituit) in Amsterdam in 1925 under its director, the late Prof. C. U. Ariëns Kappers. Van der Horst was thus a zoologist of unusually wide interests and knowledge when he was appointed senior lecturer in zoology in Johannesburg in 1928 under the late Prof. H. B. Fantham. There he soon established a reputation as a man of scientific distinction, of sound judgment, and of great personal charm. Thus it was natural that he should succeed to the chair of zoology in 1932, when Prof. Fantham accepted the chair of zoology in McGill University, Montreal.

In the meantime, van der Horst had turned his attention to the Enteropneusta, soon becoming recognized as the authority on those animals. His review of the group in Bronn's "Tierreich" is an original and lasting contribution to systematic zoology.

Then, at a relatively mature age, following the example of his illustrious fellow-countryman, A. A. W. Hubrecht, van der Horst turned to the study of mammalian embryology and began to collect developmental material of many of the rarer and more interesting South African mammals, gradually building up magnificent collections of the elephant shrew (*Elephantulus*), the golden mole (*Eremitalpa*), *Pedetes* and other forms. The first fruits of this work appeared in a series of papers (1940-46) in collaboration with Dr. J. Gillman, in which the authors elucidated the reproductive cycle of *Elephantulus*, providing detailed descriptions of the ovarian and uterine changes and valuable discussions of the mechanism of ovulation and the history and functional significance of the corpus luteum. They showed that *Elephantulus* far surpasses all other mammals in the number of ova shed at each ovulation (up to 120 or more), and that

out of this large number only two eggs become implanted and survive (one in each uterus). In two outstanding papers on the early development of *Elephantulus* (1942, 1943) van der Horst showed that it displays features of very great interest, some of them, indeed, unique; for example, the attainment of a vesicular blastula already in the four-celled stage and the formation of the embryonal knot from amoeboid cells detached from the blastocyst wall. In later papers, he described for the first time early stages in the development of the golden mole and the first phases of placental development in the aardvark (*Orycteropus*); and in a highly important paper (1949) he showed that the placenta of the tree-shrew (*Tupaia*) is not haemo-chorial, as Hubrecht believed, but belongs to the more primitive endothelio-chorial type, a discovery of significance in view of the discussions as to the systematic position of the tree-shrews. His last contribution (1950) provides a detailed account of the placentation of *Elephantulus*, together with an interesting discussion of the relevant literature. The contributions he has made to mammalian embryology show how very greatly we must regret that his work in this field has come to so untimely an end.

Prof. van der Horst's influence on the development of zoology in South Africa has been great; the courses given in his department have presented the subject as a whole, extending far beyond the comparative anatomy which was his own field. Thus, impressed with the impossibility of teaching students who had no access to the sea, van der Horst found an island off Lorenzo Marques to which he took students, living in camp and working in a temporary hut. This course proved so successful that a year ago the Portuguese Government built a permanent marine station on the island for the use of the University of Johannesburg, in effect as a tribute to van der Horst himself, an account of which by Mrs. Tattersall will be found in *Nature* of December 1, p. 946. It is to be hoped that the station will be permanently associated with his name.

Prof. van der Horst was one of the kindest and most generous of men, and his unexpected death will be felt with a deep sense of loss not only by his colleagues in South Africa but also by his many friends in Great Britain and other European countries. He was elected a corresponding member of the Zoological Society of London in 1943, and in 1950 was awarded the Linnean Gold Medal of the Swedish Academy of Science, an honour he greatly appreciated. He was a member of the International Institute of Embryology (1948) and a Foreign Member of the Royal Netherlands Academy (1950) and of the Norwegian Academy of Science (1951). His wife and daughter survive him, and to them we offer our sympathy.

Mr. F. O. Barlow

FRANK OSWELL BARLOW, well known for his casts and restorations of fossil human skulls, died at Merston, Sussex, on November 12. In August 1896, when fifteen years old, he entered the Geological Department of the British Museum (Natural History) as an unpaid learner in the workshop. In 1908 he there succeeded his father as "mason" (as the chief preparator was then called). Caleb Barlow had been in the Museum since 1874, developing, modelling, casting and mounting fossils, mainly vertebrates

His son carried on the same kind of work with great distinction for forty-five years, until he retired in 1941.

During 1903-4 Mr. Barlow spent a year in the Fayum (Egypt) excavating Cænozoic vertebrates with Dr. C. W. Andrews, and afterwards made restorations of the most important finds, such as *Arsinoitherium*. He developed Sir Arthur Smith Woodward's collection of Pliocene mammal remains from Pikermi, Greece, and many other famous specimens, including *Archæopteryx*. His last major work at the Museum was to carry out the difficult task of restoring the head of the Triassic amphibian *Cyclotosaurus* from mere cavities in the rock.

To the outside world, he was best known for his work in palæoanthropology, and particularly for his modelling of Smith Woodward's restoration of the Piltdown skull. He is one of the figures seen standing behind Sir Arthur Keith in the painting by John Cooke, R.A., illustrating the Piltdown controversy (1913), which now hangs in the rooms of the Geological Society of London. He was not placed on the pen-

sionable staff of the Museum until 1921, and, like his father, he had worked in his spare time with the firm of R. F. Damon and Co., which he eventually took over, and developed on the anthropological side. For many years he provided scientific institutions all over the world with casts of the chief specimens of fossil men, produced with unparalleled skill and fidelity. His stock of moulds has now been taken over by the Wenner-Gren Foundation in order that his work may be continued.

Mr. Barlow will be remembered by all who knew him for his personality, his massively imposing figure, resonant voice and courteous approach. He was a man of wide culture, as his conversation revealed. He had an extensive knowledge of literature and, like his father, he was musical. His rich bass voice was for many years heard in male voice choirs, and he sang at coronations and other special occasions in Westminster Abbey. He spent his last decade in the pleasant half-timbered Old Parsonage at Merston near Chichester.

W. N. EDWARDS

NEWS and VIEWS

Queen's University of Belfast

At the Queen's University of Belfast three appointments to chairs have recently been made as follows.

Agricultural Botany : Dr. P. A. Linehan

The whole of Dr. P. A. Linehan's working career has been with the Department of Agricultural Botany in Queen's University and with the Botany Division of the Ministry of Agriculture, Northern Ireland; he has held simultaneous appointments in these two bodies, the most recent being reader and head of the Division, respectively. Dr. Linehan was part-time chairman at the Ninth International Seed Testing Congress, held in Washington, D.C., in 1950, and is a member of various technical committees on seed-testing. He was a foundation member, has been honorary treasurer, and is at present a member of the executive committee and editorial board of the *British Grassland Society*.

Comparative Pathology : Dr. H. G. Lamont, O.B.E.

After being engaged for a number of years in veterinary and pathological research, Dr. H. G. Lamont was appointed in 1931 to be head of both the Veterinary Research and Dairy Bacteriological Divisions of the Ministry of Agriculture, Northern Ireland; at the same time he was made a lecturer in both veterinary science and dairy bacteriology in Queen's University, and in 1947 was promoted to be reader in veterinary science. In 1941 he was awarded the D.Sc. degree of the University for a thesis on "Observations on Aujeszky's Diseases in Northern Ireland", a neurotrophic virus disease of domestic animals. Dr. Lamont is a member of the Agricultural Research Council committee on pig disease, tuberculosis and tuberculin, and mastitis. He was created an O.B.E. in 1950.

Pure Mathematics : Dr. S. Verblunsky

Dr. Samuel Verblunsky goes to the chair of pure mathematics in Queen's University in place of Prof. T. G. Room, who was unable to take up the appointment (see *Nature*, April 21, p. 630). Dr. Verblunsky was born in London and was educated at Magdalene College, Cambridge, where in 1927 he was a Wrangler with distinction in schedule B,

later becoming a Rayleigh prizeman and Allen scholar of the University. He was for nine years a lecturer at the Manchester College of Technology and then was appointed to a lectureship at Queen's University, being promoted reader in 1950. He is author of a book on "An Introduction to the Theory of Functions of a Real Variable".

Pittsburgh Award of the Pittsburgh Section, American Chemical Society : Dr. W. A. Gruse

The Pittsburgh Section of the American Chemical Society has announced that the Pittsburgh Award for outstanding service to chemistry has been made to Dr. W. A. Gruse, administrative fellow of the Petroleum Refining Fellowship at the Mellon Institute, Pittsburgh. The Award is in recognition of Dr. Gruse's activities as a technical administrator and acknowledged expert in the field of petroleum chemistry, and more particularly for the work of his Fellowship, financed by the Gulf Research and Development Co., which has resulted in fundamental improvements in the refining of petrol, lubricating oil, waxes and other petroleum products. After graduating at Johns Hopkins University and taking his Ph.D. at the University of Wisconsin, Dr. Gruse taught for some years, and then served in the Chemical Warfare Service during the First World War. He became a fellow of the Mellon Institute in 1919 and a senior fellow in 1923, and then in 1945 took up his present appointment at the Institute. During the Second World War he was awarded a Certificate of Merit from the United States Office of Scientific Research and Development, and the Distinguished Service Award of the Ordnance Department. Dr. Gruse has been very active in the American Chemical Society, having been first secretary of the Petroleum Division in 1921, and chairman of the Pittsburgh Section during 1943-44; he is chairman of the Committee on Automotive Engine Oils of the American Society for Testing Materials.

Part-time Work in Chemical Engineering

THE would-be chemical engineer is in the unfortunate position of having to acquire a knowledge of the fundamental principles of both chemistry and engineering before he can embark on the application