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 (Herseninstitut) 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 amœboid 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 hæmo-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 Lorenço 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 kindliest 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