OBITUARIES

The Rev. Pierre Teilhard de Chardin, S.J.

FATHER TEILHARD DE CHARDIN, whose death occurred on April 10 at the age of seventy-four, was noted for his substantial contributions to mammalian palaeontology (with particular reference to Palaeocene and Eocene genera) and for his geological and archaeological studies in the Far East. His scientific career may be said to have started in 1903 in Jersey, where he was studying philosophy, for while there he published a few notes on the mineralogy of the island which appeared in a local journal. Then, after a period of two years at the Collège de la Sainte Famille in Cairo as lecturer in physics and chemistry, he was sent to a Jesuit College at Hastings to pursue theological studies. It was while there that he assisted in the excavations at Piltdown and later found the canine tooth which was presumed to belong to 'Piltdown man' (though he himself took no part in the study of these alleged fossil specimens).

From 1914 onwards, de Chardin published a series of excellent monographs in the *Annales de Paléontologie* on fossil mammals from Tertiary deposits in France and Belgium. These dealt mainly with the Carnivora and Primates, and among the latter he described one of the earliest known anaptomorphids, which in some of its characteristics proved to be (apart from tupaoids) the most generalized and most primitive of all known Primates. He supposed this early Primate to be congeneric with the American type *Omomys*; but Simpson showed later (1940) that it was a distinct form and, in honour of its discoverer, renamed it *Teilhardina*.

In 1922, Teilhard de Chardin was elected president of the Geological Society of France, and in 1923 he went to the Far East, where for a number of years he took part in geological expeditions organized by American universities and the American Museum of Natural History. His work in China was particularly noteworthy for the detailed records which he made of the sequence of Tertiary deposits in that part of the world. As a result of these observations, he was able to establish important stratigraphical correlations between the different regions of China, and between these regions and India and Burma. He also extended his studies of fossil mammals to include the Pliocene Camelidae, Giraffidae and Cervidae of South-east Shansi, Pliocene and Pleistocene rodents from North China, and a collection of Miocene cervids from Shantung. From the sites at Choukoutien where remains of *Pithecanthropus* (= *Sinanthropus*) had been found, he described a number of the associated mammals, and then turned his attention more particularly to a stratigraphic examination of the cave deposits and a study of the lithic industry found in relation to the human remains. The stratigraphy of the deposits posed a difficult problem because of the complicated fissuration of the limestone formations; but Teilhard de Chardin adduced a considerable amount of evidence to show that the fossiliferous strata were older than the loessic formation of China but younger than the uppermost Pliocene beds of Nihowan.

Teilhard de Chardin's palaeontological publications are all characterized by a clarity of style combined with conciseness of description. He also had a facility for designing illustrations which were particularly effective in their simplicity, in the sense that they immediately focused the attention of the reader

on the morphological essentials of the specimens which he described. Almost up to the time of his death, he continued to maintain a very active interest in palaeontology.

W. E. LE GROS CLARK

Dr. Julius Podolanski

DR. JULIUS PODOLANSKI, senior lecturer in theoretical physics in the University of Manchester, died suddenly on April 12. He was born in Poland in 1905 and his family moved to Germany while he was an infant. He read physics and mathematics at Leipzig and Jena, obtaining the degree of Dr.Phil. of the latter University. Because of the Nazi attitude towards Jews, he was unemployed for a long time in the 'thirties, but eventually found work as a reader with the publishing firm Akademische Verlagsgesellschaft. One of his tasks was to read a proof of Prof. H. A. Kramers's book on quantum mechanics. He did not confine himself to purely technical corrections but detected some actual mistakes in the treatment of the subject. Kramers was so struck by this criticism that he inquired about such an unusual corrector. The result was that Kramers arranged for Podolanski to join him in Leyden in order to assist in the research work of his Department.

Podolanski went to Leyden in 1939; but after the German invasion of Holland he was forced to leave the coastal area and went to Utrecht, where he lived on a small stipend. He was officially forbidden to go to the University because of his race; but seminars were held at my house in order that Podolanski could attend. As the War went on even this difficult way of life became impossible and he was driven into hiding. For a time he carried forged papers and lived alone in an isolated windmill. After the liberation he became my assistant at the University of Utrecht and rejoined me in Manchester in 1948. Shortly before coming to England, he married a Dutch student, Marietje van Rossem, who had courageously helped him while he was in hiding.

Podolanski's scientific activity was originally centred on the more abstract aspects of the theory of fields. He had a thorough and profound knowledge of the general theory of relativity and of the geometrical disciplines connected with it. However, his interests covered the whole range of physics, and he always found time and energy to discuss the most varied problems with research students and colleagues at the different places where he worked. A great reserve and somewhat exaggerated propensity to self-criticism prevented him from publishing the results of his investigations, and apart from the few papers which he was persuaded to publish, the only testimonials to his unceasing activity are the many acknowledgments of his help and inspiration that appear in the papers of other authors. His work on unified field theory in six dimensions published by the Royal Society is one of the most original contributions to this somewhat abstract subject. It is typical of his versatility that another of his significant contributions is the elaboration of a method for the analysis of cloud-chamber photographs of heavy mesons.

Podolanski was outstanding as a teacher; his devotion to his students was unexampled. In fact, he was incapable of refusing any request for help or guidance even when this help was given at the expense of his own investigations. His interest in people showed itself most strikingly by the way