

the Royal Flying Corps as an observer, being shot down and taken prisoner in 1918. There were few at that time who foresaw the special contributions that aerial survey could make to archaeological studies, but Crawford's field-work on the chalk downs had shown him the use of shadows in studying complicated earthworks, and his war-time flying experience impressed upon him the value of the aerial view for the understanding of archaeological sites.

At the time of the First World War archaeological posts were few and offered little prospect of a career, but Crawford's appointment in 1920, as the first archaeology officer at the Ordnance Survey, provided just the opening he needed. Until the time of his appointment, the archaeological information embodied in Ordnance maps was largely in the hands of the field staff, who might have little knowledge of archaeology, no matter how competent they were at surveying. The task confronting Crawford was immense; however, he found time not only for routine revision of archaeological detail on the Ordnance maps, but also for the preparation of a series of 'period' maps, of which that of Roman Britain was the first and best known. The value of this work at the Ordnance Survey, undertaken with a minimum of assistance, may be seen in the official large-scale maps of the United Kingdom, which attain a standard in archaeological cartography scarcely approached elsewhere. The results of Crawford's field surveys were published as individual papers or larger works, such as "The Long Barrows of the Cotswolds" (1925), an important account of a selected class of monuments.

It is probably as the pioneer of archaeological air photography and as the founder-editor of the quarterly journal *Antiquity* that Crawford will best be remembered. His achievement in the first sphere culminated in the publication, with Alexander Keiller, of "Wessex from the Air" (1928), a splendidly illustrated account of an archaeological air reconnaissance of Salisbury Plain and adjacent areas, which sets a new standard in archaeological research. In 1928, Crawford visited the Middle East, in an attempt to secure the preservation of air photographs taken by the Royal Air Force, and to direct attention to the unique possibilities open to air photography for research in that region. He was ever keen to foster the development of the subject in Britain, either publishing discoveries himself or making known the work of others in the same field. Much of his later work appeared in *Antiquity*, over which he took great pains, making several special journeys to Europe and North Africa. If the first dozen years of that journal represent its best period, it has always provided a forum for review and criticism and for exchange of ideas on all branches of archaeology.

As an archaeologist Crawford had a flair for field survey, which served him well when studying earthworks, either on the ground or from the air. He was a marked individualist, gifted with considerable powers of expression, to which the pages of *Antiquity* bear witness. For such a person, relations in an official department cannot always have been easy, but he had a great capacity for friendship, and was able to awake in others something of his own immense enthusiasm for his chosen subject. He was created C.B.E. in 1950, elected Fellow of the British Academy in 1949 and awarded honorary degrees by the Universities of Cambridge and Southampton.

J. K. S. ST. JOSEPH

Prof. W. J. Jongmans

THE sudden death of Prof. Jongmans, at Heerlen on October 13, robs the world of one of its most active palaeobotanists. Willem Josephus Jongmans was born on August 13, 1878, at Leyden, where he received his early education. A student of the University of Leyden and later of the University of Munich, he was awarded a D.Phil. of the latter University in 1906. In the same year he was charged with palaeobotanical research in one of the Dutch Government Services concerned with fuel resources, and the following year, 1907, was appointed a curator at the Rijksherbarium in Leyden. In 1919 he was released from the post at the Herbarium to become head of one of the departments in the Government Geological Service. While holding this position Jongmans was nominated head of the office at Heerlen, which led directly to his appointment as director of the Geological Bureau of the Netherlands Mining District at Heerlen, a post which he held from 1924 until his retirement in 1946. In addition to being director of the Bureau he was, from 1932 onwards, extraordinary professor of palaeophytology in the University of Groningen.

Throughout his career, Jongmans's interest was directed towards the study of the flora of the Carboniferous period, and his extensive knowledge led to the publication of many authoritative papers on the plants from such widely distant places as Limburg and Sumatra, North America and Anatolia, Peru and Egypt, Spain and the U.S.S.R. But perhaps he is best remembered in Britain for the excellent "Monograph of the Calamites of Western Europe", written in collaboration with Kidston (1915-17), and the monumental "Fossilium Catalogus", published in twenty-two parts between 1913 and 1937. Jongmans's interest was not, however, confined purely to the plants, but extended over the floral assemblages of which they had been members. Early in his life he made a specialist study of the stratigraphic relations of the Carboniferous floras and he was responsible for many publications on this aspect of palaeobotany. We should remember also his very important opinions on the nomenclature of fossil plants.

Though he officially retired in 1946, Jongmans carried on active research until the very last, and he was often to be seen in the Geological Bureau, which was only a short distance from his home at Heerlen. Time was always found to welcome and encourage a visiting palaeobotanist who had come to see the magnificent collections and discuss problems with the master who had done so much for the furtherance of his subject. In recognition of his services to his country and science, Jongmans had been elected an Officer in the Order of Orange-Nassau and a Knight of the Order of the Netherlands Lion.

ALAN WESLEY

Mr. C. T. Gimmingham, O.B.E.

THROUGH the death of Conrad Theodore Gimmingham on November 16, agricultural entomologists and plant pathologists have lost one of their pioneers and dearest friends.

Gimmingham joined the staff of the Ministry of Agriculture's Plant Pathology Laboratory at Harpenden, as entomologist in 1928, at a most important time in the development of agricultural entomology. The specialist biological advisory services in agriculture had started some years earlier when several young and enthusiastic biologists were stationed at