

of epicentres in the Mediterranean zone, and along the east and west boundaries of the Pacific. Interesting, too, is the line of epicentres in mid-Atlantic, which follows so accurately the continental boundaries on either side, though whether this is due to a line of weakness or to a mere accident of distribution, the material available is still too small to settle.

Particularly interesting among these epicentres are those, to which Prof. Turner first directed attention¹, where the focus occurs at depths greater or less than normal. In the period concerned, there have been found 350 deep-focus and 30 shallow-focus epicentres; the positions of these are shown in Fig. 2, which is another equal area projection, centred on longitude 160° E. and latitude 20° N. It will be noted, as pointed out by Prof. Turner², on the basis of much less complete material, that the deep-focus epicentres appear to define the "boundary of an oval region about 180° long., centred with fair accuracy on

the Equator, and enclosing a considerable part of the Pacific Ocean, though its eastern boundary intrudes into S. America".

Maps such as these, which are a by-product of the work of preparation of the *Summary*, are not only of interest in themselves, but also serve to emphasize the need for a more uniform distribution of seismological stations. While approximately one third of the recorded earthquakes in the period under review occurred in the southern hemisphere, not one eighth of the existing five hundred seismological stations are located in that hemisphere. It is clear that such a one-sided distribution of stations cannot fail to affect the distribution of recorded epicentres, and it is greatly to be desired that new stations, with the accurate timing now made possible by the wireless broadcast of time signals, should be established in South America and South Africa.

¹ *Geophys. Supp. Mon. Not. Roy. Ast. Soc.*, 1, 1 (1922).

² *Inter. Seis. Sum.*, 1927, 1, 108 (1930).

Obituary Notices

Dr. L. H. Dudley Buxton

BY the death of Dr. L. H. Dudley Buxton, which took place at Oxford on March 5, at the early age of forty-nine years, the University of Oxford, Exeter College, and the study of anthropology alike suffer great loss.

Leonard Halford Dudley Buxton, the son of Dr. Dudley Wilmot Buxton, a well-known London medical man, was educated at Radley College, where he was senior scholar, and at Exeter College, Oxford, which he entered with an open classical scholarship in 1908. In addition to Honour Moderations and *Literæ Humaniores*, he read for the diploma in anthropology, which he gained with distinction. Being more attracted by his scientific than his literary and philosophical studies, Buxton's interests turned to anthropology, and more especially, under the influence of the late Arthur Thomson, then professor of anatomy, to the study of physical anthropology. After a period of field work in the Sudan, he accepted a demonstratorship in physical anthropology in his University. Shortly afterwards the outbreak of War interrupted his work, and for four years he served in France in the Cameron Highlanders and in Intelligence—the latter a duty for which his facility in languages peculiarly fitted him. At the close of the War he returned to Oxford to carry on his work as demonstrator in the anatomical department of the University Museum, performing a highly useful service in arranging, classifying and cataloguing the osteological material, much of it, in some instances almost or quite forgotten, of no little value and interest in the annals of physical anthropology.

Not long after his return to Oxford, Buxton was awarded the Albert Kahn travelling fellowship, with which he travelled for a year in the United States, India and China, staying for some little time in the last-named country in order to travel inland. The opportunity thus afforded him of obtaining a first-hand acquaintance with a people still living in a condition of relatively primitive nomadism was one which his quick powers of perception could readily turn to account in its bearing on general theories of cultural development. How deeply he had been influenced by his contacts in China is apparent in the books, more especially the second, which he wrote on his return, "The Eastern Road" and "Primitive Labour", both published in 1924. In a further publication, "The Peoples of Asia" (1925), also, the quickness of his perception in marking racial character, and aptitude in ethnological analysis are readily to be noted.

This power of analysis was not confined to investigation of living peoples. Buxton had already excavated prehistoric osteological material on Cretan sites, and a visit to Mesopotamia, as well as the examination of the material which came from the excavations at Kish and elsewhere, led to an account of the basic types of the early peoples of the region, which is perhaps, in the technical sense, Buxton's best piece of work. No less valuable in a different context was the survey, anthropological in the broadest sense, which Buxton initiated of the peoples of the remoter districts of Oxfordshire, in which folk-lore, social history and custom, and anthropometric observation combined to produce studies of lasting interest.

In recognition of his discovery among family papers of the lost correspondence of Descartes with Huygens Buxton was awarded the *Légion d'Honneur*.

In due course, Buxton was elected to a fellowship on the foundation of his College, of which later he became bursar. The business ability which he showed revealed capacities of which the University also readily took advantage. In carrying out these duties, his success was at least in some measure due to a geniality which had won him the affection of his pupils, his colleagues and his contemporaries.

Mr. Howard Carter

It is with regret that we have to record the death, on March 2, of Mr. Howard Carter, the painter and archaeologist, whose name will always be remembered as the discoverer of the tomb of Tutankhamen.

Born at Swaffham in Norfolk in 1873, Carter was the youngest son of Samuel Carter, the animal painter. Owing to delicate health he never went to a public school but as a lad worked at painting with his father. At the age of eighteen years he first went to Egypt as a draughtsman on the staff of the Archaeological Survey of Egypt, then being carried out under the auspices of the Egypt Exploration Fund. His earliest line-drawings were published in the present writer's "El Bersheh I" (1893), and many of his water-colour drawings of the animals and birds figured in the tombs at Beni Hasan, and executed in 1892, are reproduced in colour in "Beni Hasan IV" (1900). In 1892 he was for three months assistant to Mr. (now Sir) Flinders Petrie in the excavations that were then being carried out at El Amarna, Lord Amherst of Hackney defraying all Carter's expenses.

In the autumn of 1893 Carter was again in Egypt, this time as draughtsman to M. Naville at Deir el Bahari, and with Naville he worked for six years; the greater number of the plates of the six folio volumes of Naville's "Deir el Bahari" (1895-1903) were printed from Carter's drawings. In 1900 he was appointed inspector-general of the monuments of Upper Egypt under the Egyptian Government and during the four years that he held this post he did much restoration work in the temples of Western Thebes, Edfu, and Kom Ombo. In the Valley of the Tombs of the Kings he installed electric light in six of the more important tombs, and the electric light installation in the Temple at Abu Simbel in Nubia was also carried out by him.

In January 1902, at Carter's instigation, Theodore M. Davis, an American, undertook to finance a systematic exploration of the Valley of the Tombs of the Kings at Thebes for the benefit of the *Services des Antiquités*, and this work was entrusted to Carter. Among the discoveries he then made were the royal tombs of Tuthmôsis IV (Carter-Newberry, "The Tomb of Thoutmôsis IV", 1904), and Hatshepsût (Naville-Carter, "The Tomb of Hatshopsitu", 1906). When Lord Carnarvon began excavating at Thebes in 1908, Carter, at the express desire of Sir

Gaston Maspero, then director-general of the *Service des Antiquités*, was appointed to supervise the excavations and record all 'finds'. After five years work, there appeared the handsome volume "Five Years Explorations at Thebes" by Carnarvon, Carter and others. In 1914 Carter by a lucky chance found the long-sought-for tomb of Amenhotep I (*J. Egyptian Archaeology*, 3, 147; 1916), and soon afterwards he located a tomb of Princess Hatshepsût, which the Arabs had recently found and plundered (*ibid.*, 4, 107; 1917).

At the conclusion of the Great War, Carter persuaded Carnarvon to let him once again explore in the Valley of the Tombs of the Kings, and in 1922 he was rewarded by the discovery of the tomb of Tutankhamen with its extraordinary wealth of jewels and tomb furniture. Carter at once realized that only with the help of a large staff of expert workers could he attempt to clear the tomb of all the treasures it contained. Fortunately, this problem was quickly solved through the generosity of the Egyptian Expedition of the Metropolitan Museum of Art, New York. In answer to Carter's appeal, Mr. A. M. Lythgoe, the curator of the Egyptian Department of the Museum, placed at his disposal Mr. A. C. Mace, one of the associate curators, Mr. Harry Burton, their expert photographic recorder, and Messrs. Hall and Hauser, draughtsmen to their expedition. At the same time, Mr. Lucas, director of the Chemical Department of the Egyptian Government, offered his aid, and all were soon at work. During the years that followed other workers were enrolled, including Dr. Alexander Scott and Dr. Derry. Altogether it took ten years to record the contents of the tomb and to preserve the objects so that they might be safely packed for transport to the National Museum at Cairo. Carter and his staff published three popular volumes on the tomb and its contents between 1923 and 1933; but much remains still to be published and this it is hoped will soon be done by the Cairo Museum authorities. Only a few weeks ago Prof. Georg Stoindorff published, in the *Annales des Services des Antiquités de l'Égypte*, 38, 641-667, a full account of the paintings on the walls of the tomb.

PERCY E. NEWBERRY.

Mr. E. R. Bolton

EDWARD RICHARDS BOLTON, who died on February 10, was born in Dublin in 1878, and was the only son of J. A. Bolton of Blackrock, Co. Dublin, of long Irish ancestry. He was at school at Bedford (Elstow) and studied chemistry at King's College, London, and in Fresenius's laboratory, Wiesbaden. On his return to England he was engaged for a short period in heavy chemical industry in Newcastle and in 1902 became chemist to the East India Products Oil Mills, Hammersmith, later Loders and Nucoline, Ltd. At these mills, Bolton carried out the first caustic refining of coco-nut oil in Great Britain. He became a director of the firm, having in the meantime started in analytical and consulting practice in Hammersmith.