

OBITUARIES

Dr. H. Eltringham, F.R.S.

HARRY ELTRINGHAM, who died on November 26, was the eldest son of J. T. Eltringham of South Shields, and was born in 1873. Educated at South Shields High School, and then at Durham School, he was destined for a business career with science as a background. His natural leanings to science owed much in his youth to his father's encouragement. He entered Trinity College, Cambridge, in 1891, and took an honours degree in natural science, after which he spent a year in the engineering 'shops' studying mechanical drawing and practical work. His father's shipbuilding business claimed him for some years after, but in 1908 he retired, and devoted himself to the study of insect mimicry, which had already attracted his attention.

Eltringham went to Oxford to study under Prof. E. B. Poulton, and in 1910 his fine book, "African Mimetic Butterflies", profusely illustrated with plates from his own coloured drawings, was published by the Clarendon Press. The intricacies of mimicry among Acraeinae butterflies attracted him, and in 1912 he wrote a monograph on the African species of *Acraea*, thoroughly revising this difficult genus and describing new forms and species. Later, he treated similarly the neotropical genus *Heliconius* in a superbly illustrated paper (1916), discussing the specific and mimetic relationships.

Taxonomic studies necessitate anatomical research, and Eltringham was led to the histological studies for which he will be chiefly remembered. Field naturalists in Africa had described the habits in courtship of *Amauris* butterflies, which seemed to depend upon the charging of an abdominal brush with secretion from special areas on the wings, and dissemination of this presumed scent to the female by protrusion of the brush. Eltringham in 1913 described fully the histology of the parts in two species, following this account with a further paper in 1915. Similar structures in the allied Oriental genus *Euploea* were described in 1935 in a communication to the Royal Society, to which he had been elected in 1930.

These studies led Eltringham to consider other specialized structures, and numerous papers on glandular, tympanic, and brush-organs, and special sense-organs of unknown function in Lepidoptera and other insects came frequently from his pen at Oxford and, after 1935, from Stroud, where he equipped his own laboratory. One of the best known, entitled "Butterfly Vision", described with very finely executed drawings the minute anatomy of the compound eye. A microphotograph of Prof. Poulton, taken through the eye of a glow-worm, added interest to the discussion of theories of insect vision. One of the latest studies, in 1936, dealt with the eyes of tsetse flies. Eltringham's greatest histological successes were the description in 1920 of the apparatus, apparently for producing scent, concealed in a protrusible pouch in the back of the head of *Hydroptila*, a caddis-fly only a few millimetres long, and the account in 1933 of the anatomy of tarsal sense organs in Lepidoptera; also the account, published in 1928 by the Royal Society, of the silk-producing glands in the front tarsi of the small Empid fly *Hilara*, the amazing courtship of which had been watched by A. H. Hamm.

Eltringham's aptitude for drawing was enhanced by his engineering training: he despised no mechanical

aid to producing accurate representations, and his illustrations demonstrate clearly what he describes. Similarly, his ingenuity enabled him to devise and make a vertical projection apparatus for drawing microscopical preparations, and a camera for very low-power microphotography. Other apparatus, such as a rocking stage for the microscopical examination of insects, keeping them always in focus, and an improved air pump for laboratory use, are on the market. His book on "Histological and Illustrative Methods for Entomologists" (Oxford, 1930) was the outcome of his own experience.

Eltringham also wrote in 1923 an engaging little book, "Butterfly Lore", dealing with the economy of a butterfly from egg to adult, and, in 1933, "The Senses of Insects". His last published work was "The Mind of the Bees" (1936), translated from the French of Julien Françon. The majority of his papers, numbering about seventy, were published by the Royal Entomological Society of London, of which he was president in 1931-32.

Eltringham was no mean athlete: he secured his Trial Eights cap at Cambridge and was well known as a skater in Switzerland, where he was twice among the judges at the English championships: he held the Gold Badge of the 'Bear' skating club. He was a friendly man but surprisingly self-contained: he had a keen appreciation of beauty in music and a colourful garden. He left Oxford to help his sister tend their mother at Stroud in her failing health, and after her death lived there. He was unmarried.

G. D. HALE CARPENTER.

Mrs. Hertz

THE death occurred on December 29 of Mrs. Hertz, widow of Dr. Heinrich Hertz, whose name will always be associated with the beginnings of radio communication.

Mrs. Hertz came to England in 1936, at the age of seventy as, although 'Aryan' herself, her husband's Jewish ancestry made it undesirable for her to continue to live in Germany. Admirers of her husband's work and the Marconi Company made it possible for her to live in England, and her two daughters also. The elder daughter had had a large medical practice among children at Bonn, where she lived with her mother; the younger did distinguished work in psychological zoology in Berlin, which she has continued at Cambridge.

Mrs. Hertz was a native of Karlsruhe, in Baden. A few years ago the late Pope made her a donation of £200 in acknowledgment of a gift of one of her husband's manuscripts to the Vatican Library. Another manuscript Mrs. Hertz generously gave to the library of Trinity College, in commemoration of Sir J. J. Thomson's eightieth birthday.

JOAN THOMSON.

WE regret to announce the following deaths:

Mr. J. P. d'Albuquerque, formerly director of science and agriculture, Barbados, on December 20, aged seventy-five.

Major Edwin C. Eekel, chief geologist, since 1933, of the Tennessee Valley Authority, on November 22, aged sixty-seven.

Prof. D. D. Jackson, formerly professor of chemical engineering in Columbia University, aged seventy-one.

Prof. R. D. Rudolf, emeritus professor of therapeutics in the University of Toronto, on November 2.