

ago, and was connected with technical education practically all his life. He matriculated at the University of London in 1879, obtaining the degrees of B.Sc. and D.Sc. in 1882 and 1886 respectively. He was appointed senior demonstrator in electrical engineering at the Finsbury Technical College in 1883. He went to India in 1887 as Principal of the Sind Arts College of the University of Bombay. Returning to England a year later, he became the first professor of electrical engineering and applied physics at the Heriot-Watt College, Edinburgh. In 1896 he was appointed Principal of Northampton Institute, a post which he held until his death.

Dr. Walmsley was chairman of Convocation and a senator of the University of London, and for many years he played a prominent part on many committees. He was for fifteen years chairman of the University Extension Board. In 1909 he was chairman of the council of the Association of Technical Institutions, and in 1912 he was chairman of the Optical Convention. He had also served on the council of the Royal Aeronautical Society, and was a member of the Institution of Electrical Engineers and a fellow of the Institute of Physics and of the Physical Society. He re-wrote and greatly extended Dr. Urbanitzky's "Electricity in the Service of Man," and was the author of other educational works.

MR. F. MERRIFIELD.

By the death at Brighton on May 28 of Frederic Merrifield, at the venerable age of ninety-three years, British entomology loses one of its best known and most highly esteemed representatives. Mr. Merrifield was the son of a barrister of the Middle Temple, and was himself called to the Bar so long ago as November 1853. His mother, Mary Philadelphia Merrifield, was a lady of high scientific attainments, who quite late in life acquired a knowledge of the Norwegian language in order to correspond with Prof. Agardh on the subject of Algae, on which she was a recognised authority. Up to her death in 1888 at an advanced age, she was a frequent contributor to NATURE, and there can be no doubt that her son derived from her that wide interest and devotion to natural science which marked the whole of his long life.

In the intervals of leisure afforded by a strenuous public career at Brighton, where for many years he was Clerk of the Peace, besides serving on the County Councils of East and West Sussex, Mr. Merrifield became proficient in more than one branch of natural history. The study of the Order Lepidoptera, however, chiefly engaged his attention, and his masterly series of researches on the effects of various conditions of temperature in the early stages of certain butterflies and moths, on the resulting perfect insects, are familiar to all entomologists. These experiments were carried out between the years 1887 and 1896, and were in the first instance undertaken on behalf of the late Francis Galton in order to obtain data for the revision and extension of a general theory of simple heredity. The memoirs on these researches appeared in the Transactions of the Entomological Society of London, and are of high interest, especially with reference to experiments of a similar nature conducted independently by Standfuss, Weismann, and other investigators. An excellent

detailed summary of these papers, by Dr. F. A. Dixey, was given in NATURE, Vol. 57, of December 23, 1897, pp. 184-188.

Mr. Merrifield, who was elected a fellow of the Entomological Society in 1887, served as one of the secretaries in 1887 and 1898, and occupied the presidential chair of the Society with distinction in 1905-6. His genial address and kindly nature endeared him to all, and although an invalid for a good many of his later years, his mental powers and his keen appreciation of the beauties of Nature remained unabated to the very close of his long life. The collections of Lepidoptera which embody the results of his experiments will find a permanent and appropriate resting-place in the Oxford University Museum.

J. J. W.

CAPT. W. F. CABORNE.

THE sudden death of Capt. Warren Frederick Caborne occurred from acute peritonitis on June 14 at Loppington Hall, near Wem, Shropshire. He was nearly seventy-five years of age, being born in July 1849. At the age of sixteen Caborne joined the mercantile marine and served for some time under Capt. Henry Toynbee, who was the first marine superintendent in the Meteorological Office. He joined the R.N.R. in 1879, and became a lieutenant in 1882. He was in command of the transport *Adowa* during the Burma Expedition. Caborne retired from the R.N.R. in 1894 with the rank of Commander; he was a Nautical Assessor from 1898 until 1914, and served in the same capacity to the Court of Appeal from 1903 to 1908, and to the Privy Council. He was a fellow of the Royal Geographical Society, the Royal Astronomical Society, and of the Royal Meteorological Society. For many years he served on the council of the latter; he was also a vice-president, and for some time honorary secretary. He was the author of numerous papers dealing with the naval reserve and marine subjects.

In later years Caborne was a member of the council of the Royal United Service Institution, and he also gave active support to the Smoke Abatement Society. Offering his service to the Government during the War, he was employed under the Director of Naval Ordnance, and for his service was promoted to Captain on the R.N.R. retired list in 1918.

WE regret to announce the following deaths:

Dr. W. J. Beal, for forty years professor of botany in the Michigan Agricultural College, on May 12, aged ninety-one.

Sir James J. Dobbie, lately Government Chemist and formerly Director of the Royal Scottish Museum, Edinburgh, aged seventy-one.

Dr. R. H. Jude, for many years head of the Mathematical and Physical Departments of Rutherford College, Newcastle-on-Tyne, on June 1, aged seventy-one.

Prof. J. G. Longbottom, professor of mechanics in the Royal Technical College, Glasgow, aged fifty-four.

Charles Oberthür, naturalist and printer of Rennes, aged seventy-eight.

Mr. E. P. Rathbone, a foundation member and member of council of the Institution of Mining and Metallurgy, on June 14, aged sixty-seven.

Sir Adolphus William Ward, Master of Peterhouse, Cambridge, and Vice-Chancellor of the University of Cambridge 1901-2, on June 19, aged eighty-six.