

Obituary.

SIR ARTHUR EVERETT SHIPLEY, G.B.E., F.R.S.

IT is impossible for me to write without a profound sense of personal loss of the death of the first of the new scientific friends whose acquaintance I made as a freshman at Cambridge in the Michaelmas term of 1880, and with whom I was closely associated during the next twenty-eight years. Shipley obtained a first class in the Natural Sciences Tripos of 1882 (Part 1) and 1884 (Part 2), and his scientific contemporaries included Adami, Bateson, Chree, Fitzpatrick, J. R. Green, Harker, Head, Sherrington, Threlfall, and D'Arcy Thompson. In the interval between the two parts of his Tripos he had spent several months at the Zoological Station at Naples, the results of his studies being contained in his first scientific paper, on Brachiopoda (*Argiope*). He did not specially follow up this line of investigation in later years, but his continued interest in the subject is shown by the fact that he wrote articles on Brachiopoda for "The Cambridge Natural History" (1895) and the "Encyclopædia Britannica" (1902).

The atmosphere of Cambridge in Shipley's undergraduate days was eminently calculated to encourage and stimulate the imagination of pupils who were ready to take an interest in science. Liveing, Humphry, and Michael Foster had been mainly instrumental in establishing the claims of natural science to an honoured place in the University. Lord Rayleigh was Cavendish professor, and zoology was represented by Alfred Newton as professor, supported by J. W. Clark in charge of the Museum, and by F. M. Balfour and Sedgwick at the laboratory. Vines, a member of Shipley's college, was engaged in teaching botany on modern lines. Balfour had given a great impetus to the study of embryology; and his personal qualities, no less than the scientific eminence he had achieved, endeared him to his pupils in a way few teachers are beloved. The news of the Alpine accident in early life, was, I think, first broken to me by Shipley, and it produced on us a supreme consciousness of personal grief. Balfour's example had had its influence, and Shipley took up the study of vertebrate embryology, producing, in 1887, a memoir on the development of the lamprey. Soon afterwards he turned his attention to the Gephyrean worms, an interest which he maintained for many years, his first substantial paper on this subject having appeared in the *Quarterly Journal of Microscopical Science* (1890). He afterwards contributed a series of papers on this group to this and other journals, and he described the Gephyrea collected by various expeditions, including those of Prof. Stanley Gardiner to Rotuma and Funafuti and the Maldive and Laccadive Islands, and of Dr. Arthur Willey to the Loyalty Islands and New Britain.

Shipley's interest shifted, in later years, to aspects of zoology which are not merely academic. So early as 1889 he had contributed to the *Kew Bulletin* a note on beetles destructive to rice-crops

in Burma, and he continued to take a special interest in economic entomology, a subject which is predominantly represented in his charming "Minor Horrors of War" (1915) and "More Minor Horrors" (1916). He was largely instrumental in the inception, by the Colonial Office, of the Imperial Bureau of Entomology, which was established in 1909, at first under another name, with Lord Cromer as its first chairman.

A substantial part of Shipley's scientific work was concerned with parasitic worms, with one or two papers on the Pentastomida, curious worm-like parasites which appear to be degenerate Arachnida. Here, too, the practical side of the subject made a special appeal to him, as for example in his work for the Departmental Committee on Grouse Disease, and for the report to the Ceylon Government on the pearl oyster fisheries. His sense of humour was stirred by the reflection that a lady wearing a pearl necklace is usually not aware of the fact that the production of a pearl may have been due to the effort of the mollusc to protect itself against a young intrusive tape-worm.

In 1893, Shipley produced his "Zoology of the Invertebrata," a text-book which has been largely used by students; and he collaborated with his friend Prof. MacBride in the preparation of another text-book ("Zoology"), which appeared in 1901 and has had an equally successful career. He had previously been associated with Dr. Schönland and Prof. Poulton in issuing as an English translation Weismann's "Essays upon Heredity," a work which greatly assisted in familiarising English readers with Weismann's work. He was joint editor of "The Cambridge Natural History," which appeared in ten volumes from 1895 to 1909, and editor of the Pitt Press Natural Science Manuals (Biological Series) and of the Fauna of British India Series. He was perhaps at his best as a popular exponent of zoology. His writings in this capacity, in the columns of the *Times* and elsewhere, abound in humorous touches which give them a specially readable and attractive quality, and they include many acute observations made by himself during his numerous journeys to the United States and other parts of the world.

Shipley was born at Datchet on Mar. 10, 1861, and was educated at University College School and for a short time at St. Bartholomew's Hospital. He entered Christ's College, Cambridge, in 1880, and became successively Fellow and Master of his College and Vice-Chancellor of the University. He took a substantial part in lecturing, and for many years he was secretary to the Museums and Lecture Rooms Syndicate, a position involving the practical management of many of the affairs of the numerous buildings under his charge. His capacity for work was unlimited, and he did very notable service to his College and University, and to the country generally, particularly during the years of the War. As early as 1887 he was sent by the Colonial Office to the Bermudas to investi-

gate a plant disease, and late in life he was specially concerned in the establishment of the Imperial College of Agriculture in Trinidad, which he visited on more than one occasion and of which he was chairman. He was also chairman of the Council of the Marine Biological Association, a member of Royal Commissions on the Civil Service, Trinity College, Dublin, and the importation of store cattle and of the departmental inquiry into grouse disease; and he was a trustee of the Hunterian, Tancred, and Beit Foundations. His scientific distinction was recognised by honorary degrees conferred on him by Princeton, Michigan, and Philadelphia, and by being made foreign member of the American Association of Economic Entomologists and of the Helminthological Society of Washington, and honorary member of the Société Zoologique et Malacologique de Belgique. His period of office as Vice-Chancellor of the University of Cambridge, in 1917-1919, was described by the *Times* of Sept. 23, in an interesting account of the invaluable services which he performed for the country, fitly recognised by the award to him of the G.B.E. in 1920. He died at the Master's Lodge of Christ's on Sept. 22.

Few men have had a wider circle of friends than Shipley, whose gifts of sympathy made him

persona grata to all sorts and conditions of men, from cabinet ministers to undergraduates fresh from school. He died full of honours and universally respected as a man who consistently maintained the highest standard of public and private duty, and in the midst of responsibilities which might well have absorbed all his attention, was always ready to give his time to the performance of innumerable acts of kindness.

SIDNEY F. HARMER.

WE regret to announce the following deaths:

M. Emile Hug, *membre titulaire* of the Section of Mineralogy of the Paris Academy of Sciences, professor of geology at the Sorbonne and a past president of the Geological Society of France, on Aug. 28, aged sixty-six years.

Prof. L. R. Lenox, for thirty-five years a member of the faculty of chemistry at Stanford University, on July 25, aged sixty-two years.

Dr. Thomas W. Salmon, medical director of the U.S. National Committee for Mental Hygiene and professor of psychiatry in Columbia University, New York, on Aug. 13, aged fifty-one years.

Prof. Adrian Stokes, Sir William Dunn professor of pathology in the University of London, while with the Rockefeller expedition investigating West African yellow fever, at Lagos on Sept. 19, aged forty years.

News and Views.

MANUFACTURERS in Great Britain have been the targets of much deserved criticism on account of their long neglect of the assistance which systematic chemical and physical research is able to offer them, but in recent years their attitude has implied a growing faith. Doubtless their policy in the past has been conditioned more by the fact that research organisations adequate to the study of many of their problems cost a great deal of money than by any hostility to the idea of progress, although this is probably not universally true; 'small profits and quick returns,' however excellent a maxim, does not stimulate the long view when business is brisk, and cannot afford it during a slump. The realisation, however, that industrial competition does not necessarily exclude scientific co-operation has led to the establishment and profitable operation, with State assistance, of a number of research associations. The youngest member of the family is the Research Association of British Paint, Colour, and Varnish Manufacturers, which was incorporated in September 1926, and the laboratories of which were opened at the first annual general meeting at Teddington on Sept. 21 last.

THE new Association, of which the president is Mr. S. K. Thompson and the director is Dr. L. A. Jordan, comes into existence at an interesting, if difficult, stage in the history of paint and varnish making. The ingredients of the good old varnish, often made by a secret process, find themselves challenged by new materials having unchallengeable protective and decorative qualities; the new materials require careful study in a variety of conditions, and the

relation of the character of the protective film to those of the liquid applied are by no means fully understood. It is now realised that the paint or varnish, as manufactured, is, after all, only an intermediate product; its properties are of interest chiefly so far as—subject to the interference of external conditions such as climate and weather—they govern those of the film. Decoration, as well as protection, also moves with the times. The statement that the United States of America is using wood four times as rapidly as it is growing, or that that country wastes thirty million dollars annually on rust and decay, is adequate enough to support the 'more and better paint' movement, but a generally enhanced appreciation of the decorative value of paint coatings, with its demand for new shades of colour, new surfaces, and new properties, cannot be ignored.

CLEARLY, the wide problems of the paint and varnish industries are beyond the resources of single manufacturers. Co-operation, however, has already made possible the equipment for the new research association of three chemical and physical laboratories, with offices and library, and work is now proceeding on the equipment of a workshop and technical laboratory, so that processes can be tested on a semi-manufacturing scale. Already several specialised pieces of plant and apparatus have been presented or lent to the Association by firms or individuals interested in its work. Whilst the technical side of the work is in its preliminary stages, laboratory research on several important problems is already in active progress. Economies and profits will doubtless accrue to the promoters from many of the investigations