

trustworthy information concerning the maximum speed of fish of known size. The behaviour of fish, as observed photographically in the laboratory, suggests that a trout 20 cm. long can only sustain a speed of 5 miles per hour for a relatively few seconds. On the other hand, the powers of acceleration of the animal are remarkably high—starting from rest, the fish may attain their maximum speeds in a fraction of a second. A sustained speed of five m.p.h. agrees with what is known concerning the available horse-power of the muscles and the resistance of the body of the animal as determined by Dr. Richardson. In the case of the dolphin, however, the speed of the animal appears very greatly to exceed that calculated from a reasonable estimate of muscular horse-power.

No final conclusions can be derived from this discussion; but the British Association is to be congratulated on a very successful attempt to concentrate attention on what is a very interesting, and possibly important, border-line subject.

OBITUARIES

Prof. Alfred S. Barnes

10/2

THE death on November 11 of Alfred S. Barnes removes another survivor of a former generation of the teachers of the Manchester Municipal School of Technology; most have passed away. The School—then the largest and best equipped in Great Britain—was opened in 1902; Barnes was appointed in 1901 as professor and head of the Department of Physics and Electrical Engineering. There were seven other professors, of whom F. Jackson Pope (afterwards knighted) and J. T. Nicholson may be specially mentioned. Though Barnes had not the scientific equipment of these two, his industrial experience, his acumen and regard for precision made him a good organiser. The Department developed; the number of students taking the evening part-time courses increased, partly by the diversity of the subjects catered for. In those early days all the electrical subjects taught in the day department were required for the associateship diploma of the School.

Barnes believed in amplifying the teaching by external lecturers from the industry. William Cramp and Julius Frith (consulting engineers) strengthened the day teaching of electrical design. Of others, Miles Walker succeeded Barnes as professor, and A. P. M. Fleming (now Sir Arthur Fleming) lectured on insulation.

In 1905, the day school became the Faculty of Technology of the University of Manchester, and Barnes was elected to the chair of electrical engineering. He was a good speaker and a power in the Faculty and in the Senate. He was of imposing presence, had clear-cut features, and on account of his hair brushed well back was affectionately called by his students "Airy Alf".

In his desire for precision he encouraged the late A. E. Moore to develop a standardizing laboratory, which was the best equipped outside the National Physical Laboratory. Barnes gave the present writer charge of a high-tension laboratory; thus was started the first 'School' in the country for high-tension techniques (later high-voltage engineering).

Barnes's researches were of a practical kind. A joint paper on "Fuses" read at the Institution of Electrical Engineers was awarded a premium.

Travelling by train from his Buxton home, he observed corrugations on the rails. Investigating the causes of their formation, he submitted another paper to the Institution. Near Buxton he discovered some flints which appeared to be worked by prehistoric man: further investigations led to a paper presented to the Manchester Literary and Philosophical Society. Even after he had retired, his interest in anthropology took him to many places, including France and Ceylon.

Barnes resigned his professorship in 1912 to become staff inspector at the Ministry of Education, retiring in 1928. He initiated the short courses for engineering teachers, organising them for many years. Even after his retirement he attended the Oxford Summer Course for Engineering Teachers, acting as chairman for about ten years. Barnes was largely responsible for the inception of National Certificates in Engineering. He was a religious man, and often would give talks on spiritual matters and the heritage of humanity to Brotherhoods in and around Manchester. Such were the facets of his life's work.

J. L. LANGTON

Mr. Willoughby P. Lowe

8/6

By the death of Willoughby P. Lowe there passes one of the last of the professional collectors who worked so successfully on behalf of the British Museum.

Willoughby Prescott Lowe was the son of the Rev. Edward B. Lowe and was born at Tyler's Green, Buckinghamshire, on December 10, 1872. From his childhood he was interested in natural history, and at the age of sixteen went to Colorado to join his brother on a sheep-run. There he remained for nine years and had ample opportunity for engaging in his favourite pursuit. In 1897 he returned to England and ten years later went to the Philippines on behalf of the British Museum to collect birds and mammals. Thereafter he became a professional collector and undertook some seventeen collecting expeditions, on behalf of the British and other museums, to many parts of the world. Most of his collecting, however, was done in Africa, and it is safe to say that he contributed more specimens from that continent to the British Museum collections than any other collector. He accompanied Abel Chapman and Admiral Lynes to the Sudan, and later spent two years with Lyres collecting in the Darfur Province of the Sudan. He also went with him to Tanganyika in search of *Cisticolas*.

By special arrangement Lowe was able, on two separate occasions, to visit the west coast of Africa on H.M. gunboats, and at different times he made expeditions to the Gold Coast, Gambia and French Guinea. In company with Dr. David Bannerman he made an important collection in Tunisia and, some years later, in January 1931, went as assistant to Colonel Meinertzhagen on a trip to the Haggar Mountains in the Sahara. Lowe took part in the Anglo-American expedition to Madagascar and on four different occasions made collecting trips to Indo-China with M. Jean Delacour. In 1922 he published an interesting account of his earlier expeditions entitled "The Trail which is Always New", and five years later "The End of the Trail", in which he completed the story of his collecting life.

Lowe's quiet and unassuming nature endeared him to his friends, and as a travelling companion he was always helpful and completely unselfish. After he retired from active collecting he worked for a number of years as honorary curator of the Royal Albert

Museum, Exeter, and did excellent work in arranging the bird and mammal collections in that institute. Early in the War he met with an accident in the black-out which seriously injured one eye, and later he became almost totally blind. To a man of such active habits this was a terrible blow; but he bore it with great fortitude. On October 3 he died after an operation, at the age of seventy-six. In 1895 he married Annie, daughter of Captain John Seals, who survives him together with a son and a daughter.

N. B. KINNEAR

WE regret to announce the following deaths:

Mr. W. E. Copleston, C.S.I., formerly chief conservator of forests, Bombay, on December 1.

Prof. René Maire, professor of botany in the University of Algiers, one of the twelve non-resident members of the Paris Academy of Sciences, on November 24, aged seventy-one.

Dr. Henry C. Williamson, formerly of the Fishery Board of Scotland, on December 9, aged seventy-eight.

NEWS and VIEWS

Geological Society: Awards for 1949

THE Council of the Geological Society has announced the following awards: *Wollaston Medal* to Dr. Norman L. Bowen, of the Geophysical Laboratory, Washington, in recognition of his eminent researches in quantitative experimental petrology and for his brilliant application of these and related studies in the elucidation of fundamental problems of petrogenesis. *Murchison Medal* to Mr. Tom Eastwood, lately assistant director of H.M. Geological Survey, for his long and distinguished work on the Geological Survey, especially in the realm of economic geology. *Lyell Medal* to Prof. S. J. Shand, for his outstanding contributions to the advancement of geology, embodied especially in his book on "Eruptive Rocks" and numerous published papers on the petrology of the felspathoidal rocks of South Africa, Canada and Scotland. *Wollaston Donation Fund* to Mr. G. A. Kellaway, in recognition of his work on the stratigraphy and structure of the Northamptonshire ironstone district and the Bristol-Somerset Coalfield. *Murchison Geological Fund* to Dr. H. Dighton Thomas for his researches in fossil corals, sponges and other invertebrates. A moiety of the *Lyell Geological Fund* to Dr. J. E. Hemingway for his studies of the stratigraphy, structure and sedimentary petrography of the Jurassic rocks of North-East Yorkshire; another moiety of the *Lyell Geological Fund* to Mr. J. Selwyn Turner for his contributions to Carboniferous stratigraphy and structural geology.

Food and Agriculture Organisation: Statistics Officer in the Far East

THE Economics and Statistics Division of the United Nations Food and Agriculture Organisation has appointed Mr. C. P. G. J. Smit to be regional representative for statistics in Asia and the Far East. Mr. Smit, who has been with the Netherlands Government for twenty-one years, was formerly deputy director-general of statistics at the Central Office of Statistics, The Hague, and was responsible for all statistical work done in that Office, including work with agricultural statistics. He has also acted as chairman of the Standing Advisory Committee on Statistics of the Food and Agriculture Organisation since that Committee was set up in 1946. In his new appointment Mr. Smit will work at the Organisation's Central Office of Statistics in Bangkok, and there he will work with Governments of the region, assisting them on statistics problems, especially with regard to the 1950 world census of agriculture. He will also be responsible for some of the statistical work needed for the International Rice Commission.

Joseph von Mering (1849-1908)

JOSEPH FRIEDRICH FREIHERR VON MERING, who was born in Cologne a century ago on December 28, is remembered as a pioneer in the work on diabetes; his paper, with Oscar Minkowski, in the *Archiv für experimentelle Pathologie und Pharmakologie* (26, 371; 1890), reported the production of diabetes in a dog following extirpation of the pancreas. Four years previously, von Mering had produced experimental diabetes by means of phloridzin, and his interest in this condition was probably derived from his teacher, Kussmaul, who introduced the term 'acetonæmia' in diabetic coma, later named 'acidosis' by Naunyn. After obtaining his M.D. at Strassburg in 1874, von Mering became assistant to Richard von Krafft-Ebing and to Friedrich Jolly. Having worked with von Frerichs, Kussmaul and Hoppe-Seyler, he was appointed professor of medicine and laryngology at Halle in 1890, and in 1900 director of the Medizinische Klinik. Von Mering synthesized veronal, and his "Lehrbuch der Inneren Medizin" (1901) went through four editions before his death on January 5, 1908. A true aristocrat, approachable and kindly, vivacious, impulsive and quick-tempered, von Mering was eminently practical in his scientific outlook; for theories and hypotheses he had neither time nor talent.

Defence Services Research Facilities Committee of the Royal Society

IN many fields of scientific work the Defence Services in Great Britain possess equipment, knowledge and personnel which, if available, might be used for helping scientific researches unconnected with any Service objective. In some cases facilities of this kind have been provided for several years. In 1948 the Defence Services Research Facilities Committee was set up by the Royal Society not, as some have supposed, to offer scientific help to the Services, but to enlist the help of the Services on behalf of scientific workers. The terms of reference of the Committee are: "To consider proposals for the use of Service facilities and personnel for assisting scientific research, and to make recommendations to the Council of the Royal Society, the Lords Commissioners of the Admiralty, the Army Council, the Air Council and the Minister of Supply". To give an idea of the facilities which the Committee hoped would be available, the subjects dealt with by the five panels which were established to consider applications for help are as follows: (A) submarine gravity measurements, (B) surplus explosives, (C) magnetic survey, (D) aerial photography, (E) scientific expeditions.

The Defence Services have been most co-operative; the following examples illustrate the scope of the