

from two sources, the inflows and the bottom deposits, and for this reason the Lake may be extremely productive. Chemical analyses (Table 2) show there has been an overall decrease in the total concentration of dissolved solids since 1958, which may be accounted for by remarkable plankton blooms, *Salvinia auriculata* and the expansion of the fish population during the past two years.

Limnological research at Kariba during 1961 will include such specific studies on the abundance of phytoplankton, the hydrology and chemistry, the ecology and abundance of fishes and the autecology and control of *Salvinia auriculata*, and will continue

throughout the period of filling, which is expected to be completed in 1963/64, until the Lake enters its permanent phase of development.

¹ Jackson, P. B. N., *Kariba Studies: Ichthyology, the Fish of the Middle Zambezi* (Manchester University Press, 1961).

² Edney, E. B., *S. Afr. J. Sci.*, **55**, 255 (1959). Balinsky, B. I. and James, G. V., *S. Afr. J. Sci.*, **56**, 101 (1960). Jackson, P. B. N., *The New Scientist*, **7**, 877 (1960). Crowcroft, P., *ibid.*, **8**, 938 (1960).

³ Jackson, P. B. N., *Proc. First Fed. Sci. Congress, Salisbury* (1960).

⁴ Beauchamp, R. S. A., *J. Ecol.*, **41**, 226 (1953). Harding, D., in Jackson *et al.*, *A Report on a Fisheries Survey of Lake Nyasa* (Govt. Printer, Nyasaland) (in the press).

⁵ Beauchamp, R. S. A., *Intern. Rev. Hydrobiol.*, **39**, 316 (1939). Dubois, J. Th., *Hydrobiologia*, **10**, 215 (1958).

OBITUARIES

Prof. J. H. Andrew

THE death on May 5 of Prof. John Harold Andrew, at the age of seventy-four at Ruthin Castle Hospital in North Wales, was no surprise to his friends; he had been in ill health for a number of years, and Mrs. Andrew, to whom he was devoted, had died in January. Andrew retired from the chair of metallurgy in the University of Sheffield in September 1950, having been advised medically to take this step two years before the end of his statutory period of office; he was made emeritus professor. For reasons of health and because they loved the country, he and Mrs. Andrew retired to Llandudno.

A native of Ashton-under-Lyne, he was educated at Bickering House School, Birkdale, and the University of Manchester, where he graduated in chemistry in 1907 and was awarded the degree of D.Sc. in 1915. In 1910 he was appointed a Research Fellow and demonstrator at Manchester, where he was a Dalton Scholar. After six years as head of the Metallurgical Research Department of Sir W. G. Armstrong Whitworth and Co., Ltd., he was, in 1920, appointed professor of metallurgy at the Royal Technical College, Glasgow, succeeding the late Dr. C. H. Desch. With an established reputation in the field of metallurgy, he again succeeded Desch as professor of metallurgy and dean of the Faculty of Metallurgy at Sheffield in 1932.

Andrew was an original member of the Institute of Metals, was elected a member of the Iron and Steel Institute in 1911 and was a founder Fellow of the Institution of Metallurgists. He was a prominent member of the Heterogeneity of Steel Ingots, Alloy Steel Research and Steel Castings Research Committees of the Iron and Steel Institute, all which have now been incorporated in the committees of the British Iron and Steel Research Association.

During his thirty years as a professor at Glasgow and at Sheffield he published a very large volume of research covering extensive fields of interest. As a director of research, his fertility of mind, his unorthodox points of view and his continuing encouragement were a source of inspiration to many postgraduate students. The number of joint papers he published bears testimony to his great sense of loyalty and co-operation.

Andrew was not only well known for his research work. His administrative ability and great talent for organization brought about a striking development of the Departments of Metallurgy at Glasgow and at Sheffield. In recognition of his work in metallurgy,

he was awarded in 1949 the Bessemer Gold Medal of the Iron and Steel Institute, an honour which he richly deserved. Shortly after his retirement in 1950, a group of Sheffield steel firms established the J. H. Andrew Senior Research Fellowship tenable in his old department, where a laboratory is also named after him.

To his staff, from the most senior to the humblest laboratory assistant, he was a friend who, with his sympathetic understanding and lively sense of humour, made difficulties seem trivial.

Prof. and Mrs. Andrew leave friends in Glasgow and Sheffield in all walks of life who will not forget their unflinching kindness, courtesy and generous hospitality. It was the hope that some of the happiness they had given should have been theirs in retirement; unfortunately, their retirement was sadly marred by continued ill-health. W. R. MADDOCKS

Dr. H. Horn af Rantzien

ON September 15, 1960, Dr. Henning Horn af Rantzien was killed at Montmorency, France, by a stone which slipped while, in the company of his wife and a French friend and colleague, he was examining a quarry for fossil plant remains.

Henning Horn graduated at Stockholm and, from 1945 on, held research positions in the Botany and Palaeobotany Departments at the Riksmuseum, Stockholm, and later in the Geology Department of the University of Stockholm, where he taught historical geology. During 1948-51, he was an editor of *Svensk Botanisk Tidskrift*. At the time of his death, he was pursuing a long-term research programme on the taxonomy and phylogeny of the Charophyta, a work to which he had devoted most of his time during the past ten years and which had carried him, at the age of thirty-eight, to a leading position in the field of micropalaeontology.

Those who knew him only as a highly specialized palaeobotanist may be surprised to learn that a great part of his early writings were on recent vascular plants. He paid particular attention to the taxonomy and distribution of *Phleum*, *Pleurospermum*, and the West African and Latin American species of *Mayaca*, *Najas*, and *Triglochin*. Simultaneously, he revised the American *Nitellae* and thoroughly reviewed the literature available on all American Charophyta. In 1951, following extensive field-work, he published an ecological-geographical study of aquatic and amphibious plant associations (including bryophytes

and charophytes) of the shallow lakes and temporary pools of the peculiar 'alvar' limestone barrens of the island of Öland, in the Baltic. It was in the course of this work that his interest in the charophytes became definitively established.

This broad approach did not shatter his conviction that only on a firm morphological basis can useful work be done on plant systematics and distribution. Therefore, when extending his attention to the fossil Charophyta, he ventured on a detailed description of the fructifications of modern, Cenozoic and Mesozoic forms. In doing this work he developed his own techniques for preserving and examining these minute objects. The newly recognized value of such fructifications as layer markers over a wide range of geological strata, from Upper Silurian to late Tertiary, lends special importance to the results he achieved.

It is sad to reflect that this voluminous pioneer work was but the first step on a road which he was not to complete.

Privately, Henning Horn had a gift for finding pleasure in all manifestations of living Nature and in the most diverse fields of learning. He took particular interest in history and archaeology, and in the life-history of land vertebrates (he was an expert herpetologist). A shyness which he never quite overcame usually caused him to avoid gatherings of more than a few people, a fact much to be regretted, for his versatile mind, coupled with a great sincerity as soon as basic facts were under discussion, made him an impressive and uncommonly stimulating partner in discussions with friends within and outside his own scientific domains. He is survived by his wife and five children.
C. EDELSTAM

NEWS and VIEWS

Royal Institution Fullerian Professorship of Physiology : Prof. R. J. Harrison

THE Managers of the Royal Institution have elected Prof. R. J. Harrison to be Fullerian professor of physiology, Royal Institution, in succession to Prof. J. Z. Young. Prof. Harrison is University professor of anatomy in the London Hospital Medical College, a post he has held since 1954. He was educated at Oundle School and Gonville and Caius College, Cambridge, and received his medical training at St. Bartholomew's Hospital Medical College. He has held appointments in the University of Glasgow and Charing Cross Hospital Medical School, and is the author of *Anatomical Terms* and *Man the Peculiar Animal*, in addition to numerous papers on embryology and anatomy. He is especially known for his research on the physiology of diving seals. The Fullerian professorship of physiology was endowed in 1834 by the gift of John Fuller, an early generous benefactor of the Royal Institution. P. M. Roget was the first holder of this office. Richard Owen, Thomas Huxley and Sir Charles Sherrington are among the other previous Fullerian professors. The appointment is normally for a period of three years.

Research on the Effects of Radioactivity in the Sea : Prof. Ilmo Hela

PROF. ILMO HELA, at present director of the Institute of Marine Research, Finland, has been appointed chief scientist in charge of the programme of research on the effects of radioactivity in the sea, to be conducted in Monaco under a trilateral agreement between the International Atomic Energy Agency, the Government of the Principality and the Institute of Oceanography. Prof. Hela is expected to take up his new appointment at the beginning of October. Prof. Hela was educated in the Universities of Helsinki, Königsberg and Hamburg. He received his Ph.D. in oceanography from the University of Helsinki in 1945; earlier he had studied physics and meteorology as well. After several years research work at the Institute of Marine Research in Finland, he joined the Marine Laboratory of the University of Miami as associate professor of oceanography and meteorology in 1951. In 1955 he returned to the Institute of Marine Research as director and professor. The programme of research in Monaco, which Prof. Hela will direct, has three major objectives.

First, it will be aimed at acquiring knowledge about the movement of water and marine organisms and the deposition of organic and inorganic matter. Secondly, there will be a special study of the distribution in marine organisms of radioactive materials already existing or that may be introduced into various locations. Finally, investigations will be carried out on the effects of radioactive materials at various concentration-levels on the marine ecology. The research will be conducted at the Oceanographic Museum in Monaco, but the laboratories and working facilities of the scientific centre of the Government of the Principality, including a wide variety of electronic and monitoring equipment, will also be available.

Mathematics at Leeds : Prof. J. W. Craggs

DR. J. W. CRAGGS, reader in applied mathematics in the Newcastle division of the University of Durham, has been appointed to the newly created chair of mathematics in the University of Leeds. Dr. Craggs graduated with first class honours in mathematics at the University of Manchester and afterwards obtained the degree of doctor of philosophy both at Manchester and Cambridge. At Cambridge he held a senior studentship awarded by the Commissioners for the Royal Exhibition of 1851. Dr. Craggs has had teaching appointments at the Military College of Science, at the University of Manchester, University College, Dundee, and at King's College, Newcastle upon Tyne, University of Durham. He has been at Newcastle since 1951 and was later appointed to a senior lectureship and then to a readership. Dr. Craggs's research interests have ranged over a wide field. His first work was concerned with potential and diffusion problems and with three-dimensional elastostatics. He then moved on to compressible fluid-dynamics and more recently has made important contributions to problems of wave-propagation in elastic and plastic bodies.

The Leopoldina German Academy of Sciences : Elections

THE Deutsche Akademie der Naturforscher Leopoldina, Halle, recently elected the following new members in the sections indicated: *Physics*, Prof. Helmut Hönl (Freiburg-Br.). *Chemistry*, Prof. T. R. Seshadri (Delhi). *Biology*, Sir Ronald A. Fisher (Cambridge). *Agriculture*, Prof. Walter Fuchs (Göt-