

introduction into Britain of the Colorado beetle after its establishment on the Continent of Europe.

In 1941, the Ministry formed the Agricultural Improvement Council to act as a bridge between science and practice in agriculture, and Fryer became its first secretary. His work for some years had involved close contacts with the Agricultural Research Council, and in 1944, following the death of Dr. W. W. C. Topley, he accepted appointment as secretary of the Council. It was with some misgiving that he undertook this onerous task, for it meant continuous office-work in London, and he knew that there would be little or no time for his entomological interests.

In addition to his scientific attainments, Fryer possessed high administrative ability, and his appointment was quickly justified. His practical knowledge of farming, acquired in his early days, combined with a long experience of the application of scientific method in agriculture, admirably fitted him for the work. Moreover, he had, to a rare degree, the capacity to see and state clearly and succinctly the essential points of any problem, and many who sought his advice could testify to his clear-sighted,

logical and helpful discussion of their difficulties. He was especially good in committee, where his sure grasp of essentials and his tactful guidance often brought a rambling discussion to a point.

Fryer was a real countryman and naturalist and a keen fisherman. He was at his best on a collecting expedition in some remote part of the country, and the briefest holiday was spent, if possible, where he could search for specially interesting or rare insects. He had fine collections of British Lepidoptera, Coleoptera and Hemiptera-Heteroptera and was an expert on the Microlepidoptera. He took great interest in the conservation of the British fauna and flora and was an active member of the Society for the Promotion of Nature Reserves and of various committees of the National Trust. He served as president of the Association of Applied Biologists and of the Royal Entomological Society; he was elected a fellow of the Royal Society in 1948. His official services were recognized by a knighthood in 1946.

In 1919, he married Constance Joan Denny-Cooke, of Bergh Apton, near Norwich, who, with a son and daughter, survives him. He was buried at Bergh Apton.
C. T. GIMINGHAM

NEWS and VIEWS

The National Physical Laboratory, Light Division:
Mr. T. Smith, F.R.S.

ON his retirement last July, Mr. T. Smith completed a period of forty-one years service at the National Physical Laboratory, where he was in charge first of the Optics Section of the Physics Department and later of the newly created Light Division. The long series of investigations on geometrical optics which have established Mr. Smith as a leading authority in the subject were begun a few years after he entered the Laboratory with a paper to the Optical Society entitled "Practical Optical Calculations". This was the key for much of his later work. His outstanding contributions have been to the theory of algebraic, as distinct from trigonometric, methods of optical design, and in the development of methods of computation based on the use of calculating machines. A feature of many of his later papers has been the masterly application of matrix methods to optical problems. As is so often the case when alternatives to old-established procedures are offered, the adoption of Mr. Smith's design methods in the industry has been slow; but there are now signs that their value is being appreciated. Mr. Smith's work was recognized by his election to the Royal Society in 1932, and he has held the office of president both of the earlier Optical Society and the Physical Society. The younger workers in his subject recall with appreciation the care he always took that they should have the fullest opportunity to develop their views however unorthodox or immature. It is appropriate that the council of the Physical Society should have invited Mr. Smith to deliver the sixteenth Thomas Young Oration; this he has agreed to do in June 1949.

Dr. L. A. Sayce

DR. L. A. SAYCE, who has succeeded Mr. T. Smith as superintendent of the Light Division at the National Physical Laboratory, is fifty years of age.

After serving in the Honourable Artillery Company in the First World War, he went to the University of Durham to study chemistry, taking honours in 1922, when he was awarded the Saville Shaw Medal. He remained at Durham carrying out research in inorganic chemistry, was awarded his Ph.D., and in 1927 was appointed University lecturer in chemistry. He remained at Durham until 1940, carrying out during this period considerable fundamental work in inorganic chemistry, instrument design, chemical kinetics and photography.

In 1940 Dr. Sayce joined the Ministry of Home Security to initiate a research group in connexion with camouflage, where he did excellent work until 1943. He was then transferred to the Ministry of Supply to take charge of alginate research. Unfortunately, he fell seriously ill soon after receiving this appointment and was away from active work for a year. On recovery he was appointed to the Scientific Research Department of the Admiralty as a principal experimental officer, and in this capacity he was responsible for considerable advances in the development of all kinds of instruments for laboratory use in the Admiralty experimental establishments. In particular he did excellent work in the applications of high-speed photography for laboratory purposes. On the re-organisation of the Admiralty Scientific Service in 1946, he was appointed assistant director of physical research. Dr. Sayce has earned a very high reputation in a wide field of science, and he brings to his new appointment a keen appreciation of the value of fundamental research and an exceptional ability to plan and supervise it.

Zoological Society of London:

Mr. G. S. Cansdale

MR. G. S. CANSDALE has been appointed superintendent of the Zoological Society's Gardens in Regent's Park, London, in succession to Dr. G. M. Vewers, who retired on December 15 (see *Nature*, November 6, p. 727). Mr. Cansdale was educated at

St. Edmund's Hall, Oxford; he graduated in forestry and afterwards obtained a research degree for work on black poplars and their hybrids. He was appointed to the Colonial Forest Service in 1934 and served in the Gold Coast from then until 1948. During these years he took full advantage of the opportunities of studying the local fauna and made large collections of reptiles, birds and small mammals for the London Zoo, many of which were new to the collection; in addition, he made extensive collections for the British Museum (Natural History). He has published various popular articles dealing especially with small mammals and their ecology, and is the author of "Animals of West Africa", a general account of the more common mammals and reptiles of that region. In addition to being a keen naturalist, Mr. Cansdale has the advantage of practical experience in keeping live animals, for he and his wife maintained a private collection in Africa and were successful in the rearing and maintenance of a wide range of species, including some which are very difficult to adapt to a life in captivity, with the necessary dietary modifications involved. This experience will be of value in dealing with the many problems which arise in connexion with the maintenance of such a varied collection of animals as that in Regent's Park.

Physics To-day

THE avowed purpose of the American Institute of Physics is "the advancement and diffusion of physics and its applications to human welfare". For the research worker, the teacher, the theoretical or experimental physicist, and the investigator engaged in pure or applied science, the Institute or its member societies publish eight journals of very high merit. They are the well-known *Physical Review*, *Review of Modern Physics*, *Journal of the Optical Society of America*, *Journal of the Acoustical Society of America*, *American Journal of Physics*, *Review of Scientific Instruments*, *Journal of Chemical Physics* and the *Journal of Applied Physics*. To these, in order to fulfil an ever-growing demand for a medium for relatively non-technical surveys of physics progress, there has recently been added *Physics Today*. This new monthly magazine (published by the New York American Institute, May 1948; 50 cents) is described as "a general-interest journal on physics", and its editor is Dr. D. A. Katcher.

The first four numbers of *Physics Today* are very well produced and contain some excellent articles, besides regular features such as book reviews, Institute and Journal notes, and notes from abroad giving details of physics progress in Italy, Great Britain, Scandinavia and elsewhere. Of the articles, "A Newsman Looks at Physicists", by Stephen White, in the May issue is highly to be commended. It is packed with sound advice to the physicist who is called upon either to write for the general Press or to describe his work to some enterprising reporter. Of particular interest to British readers will be a brief but informative report in the May issue by D. L. MacAdam on the 1947 International Conference on Colour Vision held at Cambridge, England, and an illustrated account in the July issue, by the general secretary of the Royal Institution, T. Martin, of the Royal Institution Christmas Lectures. Other articles include: "Trends in American Science", by Vannevar Bush; "The Reality of Neutrinos", by Prof. G. Gamow; "Detecting Atomic Particles", by Prof. S. A. Korff; and "Helium, the Unruly Liquid", by Prof. L. Tisza. Perhaps the best way

to summarize the scope and policy of the magazine, which assuredly has come to stay, is to quote from the editorial of the first number. "Physics Today" is for the physicist, to inform him in comfortable, everyday language of what goes on and why and who goes where. But it is also for the chemist, the biologist, and the engineer, to tell them of the science towards which they are driven by so many of their investigations; it is for the student, the teacher, the lawyer, the doctor, and all who are curious about physics; it is for the administrative officials who deal with research; it is for editors and writers whose profession puts them midway between what is done and how it should be reported".

World Power Conference: 1950 Meeting in London

As already announced (see *Nature*, June 26, p. 1,005), the Fourth World Power Conference will be held in the building of the Institution of Civil Engineers, London, during July 10-15, 1950, and the theme of the Conference will be "World Energy Resources and the Production of Power". Sir Harold Hartley will be chairman of the Conference. The technical programme of the Conference has just been published, and copies may be obtained on application to the General Secretary, Fourth World Power Conference, 201-2 Grand Buildings, Trafalgar Square, London, W.C.2. It will be seen that the programme falls into three divisions. Division 1 will contain single reports, from each national committee, to include: (a) a survey of the energy resources of the country; (b) a historical record of the development of the resources of the country and of prime movers for utilizing them, covering the period since the First World Power Conference in 1924. Division 2 will consist of individual papers, dealing comprehensively with the preparation of fuel of every kind. Division 3, which is perhaps the most important, is headed "Production of Power". In addition to the traditional sources of power, papers will be included on gas turbines, jet engines, hot-air engines, tidal power, wind power, solar energy, terrestrial heat, thermal energy derived from the sea, and atomic energy. It is hoped that, despite the manifold difficulties surrounding the preparation of papers on atomic energy, some valuable contributions will be forthcoming. Although the technical programme does not contain a separate division on utilization, the hope is expressed that papers will be presented dealing with the design and relative advantages of different types of prime movers for specific purposes, for example, aviation, land transport and marine propulsion. Unesco has recently made a grant towards the statistical work carried out by the World Power Conference.

Arctic Ice

THE publication of the *Year-Book of the State of the Ice in the Arctic Sea* issued by the Danske Meteorologiske Institut, which was suspended in 1940, has been resumed on the traditional lines with charts for the spring and summer months. The Institute is trying to collect material for the years 1940-45 to make possible the publication of a report for that time. The present issue is for 1946. In that year the Barents Sea had rather less ice than usual. Details from the Kara Sea are lacking. Spitsbergen was open on the west for most of the summer, and in the north for longer than usual; but in the east, including Storfjord, there was continuous pack-ice until late in