

drawings of some portions of the Anglican and Roman cathedrals at Liverpool by Sir Giles Gilbert Scott and Sir Edwin Lutyens respectively; they are hung side by side (Nos. 704 to 708) so that comparison is made easy. Plans for domestic dwellings are few, but protest must be made against No. 666, "War-time Housing on the Wirral"; not even war-time can excuse the mechanical dullness of these brick boxes.

Much of the sculpture is pleasant and intimate although not profound. Particular mention may be made of "Head of Young Bull" by Georg Ehrlich (No. 817), the "Leopard" by Hermon Cawthra (No. 796), and "Siamese Cat" by Margaret Heaton (No. 820). "Cart-horse Lying Down" by Tonie Brignall (No. 818) is stylized but not unsuccessful.

On the whole, then, there is little of primary scientific interest in this year's Academy, but this is all to the good. The natural reaction to a picture of 'scientific interest' is to examine it for its accuracy—the science comes before the art; but this year science takes a back seat and her devotees can give themselves up to the pleasure of getting on good terms with the exhibits and, through the exhibits, with their authors. Viewed in this light, the Summer Exhibition of the Royal Academy of Arts, 1942, is very much to be commended.

OBITUARIES

The Rev. T. E. R. Phillips

IT is with great regret that we record the death of the Rev. T. E. R. Phillips, so soon after the University of Oxford had conferred on him an honorary D.Sc.

Theodore Evelyn Reece Phillips, the son of the late Rev. Abel Phillips, was born on March 28, 1868, and was educated at Yeovil Grammar School. He proceeded later to St. Edmund Hall, Oxford, and graduated B.A. in 1891, in which year he was ordained to the curacy of Holy Trinity, Taunton. He took his M.A. in 1894 and two years later, while curate at Hendford near Yeovil, he used a 9½-inch altazimuth reflector for the systematic observation of the planets, especially Mars and Jupiter. This work was continued when he moved to Croydon, and when he was appointed curate at Ashted in 1906 a 12¼-in. equatorial reflector by Calver was substituted for the 9½-in. An 8-in. refractor by Cooke, which was lent to him by the Royal Astronomical Society in 1911, was used for about thirty years, chiefly for double-star work.

In 1916 Phillips was appointed rector of Headley, and he set up an observatory in the rectory glebe where, in addition to the instruments referred to, an 18-in. reflector (mirror by With), lent by the British Astronomical Association, was mounted on the equatorial stand which had previously carried the 12¼-in. reflector. This 18-in. reflector was used mostly for planetary work and especially for investigating the surface currents on Jupiter.

A short record of Phillips's work on the planets, double-star measurements and light curves of long-period variables appeared in NATURE of February 28 (p. 241), and it is unnecessary to repeat this. Some reference may be made to his analysis of the light-curves of long-period variables, which he undertook on the suggestion of the late Prof. H. H. Turner about thirty years ago. He conducted a harmonic analysis

of the light-curves of nearly eighty stars, and a full account of this appeared in his second presidential address to the British Astronomical Association (*J. Brit. Ast. Assoc.*, 27, 1; 1916). In this address he referred to his work on *S. Herculis* (*Mon. Not. Roy. Astro. Soc.*, 75, 7), where he had gone as far as the fifth harmonic. He felt that certain assumptions were adding encumbrances to the problem and remarked "... we have now reached a stage when the theory of stellar variation calls for reconsideration and revision".

In addition to his interest in planetary features, variable stars and double stars, Phillips was a keen meteorologist and was elected a fellow of the Royal Meteorological Society in 1918. He kept an unbroken record of daily temperature and rainfall at Headley for twenty-five years and was working on the results before his death. He was analysing harmonically a large number of temperature curves for the British Isles and hoped to publish the results after the War. He was also interested in botany, more especially in British and Alpine flora, as well as in sketching, and he took an active part in the preservation of the countryside.

Phillips was a member of Commission 16, which is specially concerned with the physical study of the planets, of the International Astronomical Union, and was president for some years. In 1922 he was appointed by the late Archbishop Davidson as his representative on behalf of the Church of England to consider the stabilization of Easter. Later he sat on the special committee of six formed by the International Union to consider calendar problems in general. For many years he was a university extension lecturer for Oxford, Cambridge and London, and also Gilchrist Trust lecturer. In connexion with the British Astronomical Association he was director of the Jupiter Section, 1900–33, director of the Saturn Section, 1935–40, president during 1914–16, and recipient of the Walter Goodacre Medal and Gift in 1930. In 1918 the Royal Astronomical Society awarded him the Jackson-Gwilt Gift and Medal. He was secretary of the Society during 1919–26 and president during 1927–29. In February of this year, Oxford conferred on him the degree of D.Sc. *honoris causa*, an honour which he greatly appreciated.*

His published works include his revision of Ball's "Popular Guide to the Heavens", and "Astronomy and Modern Thought". In addition to these, he collaborated with Dr. W. H. Steavenson in editing "Splendour of the Heavens", 2 vol., and he contributed articles in the "Encyclopædia Britannica" on "Planets".

Phillips's genial disposition made him very popular in astronomical circles, where he will be greatly missed. During his illness many anxious inquiries were made about his progress and there were hopes that he might rally and attend the meetings again, but early in May it was known that his condition was extremely grave, and he died on May 13. The interment took place at Headley on May 16, when a number of astronomical and other friends were present. In 1906 he had married M. H. Kynaston, who, with a son, survives him. M. DAVIDSON.

Mr. W. A. Douglas-Rudge

WE regret to record the death, on February 14, of Mr. W. A. Douglas-Rudge, late science master of Rugby School. Mr. Douglas-Rudge was a scholar of

St. John's College, Cambridge (B.A., 1899; M.A., 1903), where he obtained a first class in Part I of the Natural Sciences Tripos. He was science master of Woodbridge School from 1903 until 1907, when he was appointed professor of physics at University College, Bloemfontein. During his residence in South Africa he made a special study of atmospheric electricity in that part of the world. Several of his

papers were published in the *Transactions of the Cambridge Philosophical Society*. He returned to Great Britain and was appointed science master at Rugby in 1916, a post which he held until his retirement at the end of 1930. Many of his old students at Woodbridge, Bloemfontein and Rugby will remember with gratitude his inspiring lectures, which were always illustrated with many experiments.

NEWS and VIEWS

U.S. National Academy of Sciences : Elections

THE following elections were made at the annual meeting of the U.S. National Academy of Sciences held during April 27-28: *Foreign Secretary* (to succeed the late Prof. L. J. Henderson): Prof. Walter B. Cannon, Harvard Medical School, Boston, Massachusetts (term: four years ending June 30, 1946); *New Members of Council*: Prof. George W. Corner, professor of anatomy, Strong Memorial Hospital, Rochester, N.Y.; *Foreign Associate*: Prof. Robert K. S. Lim, professor of physiology, Peiping Union Medical College, Peiping.

Members of the Academy: Prof. Homer Adkins, professor of chemistry, University of Wisconsin, Madison, Wisconsin; Dr. Lyman J. Briggs, director, National Bureau of Standards, Washington, D.C.; Prof. H. T. Clarke, professor of biochemistry, Columbia University, New York City; Prof. Ralph E. Cleland, Indiana University, Bloomington, Indiana; Prof. C. H. Danforth, professor of anatomy, Stanford University, California; Prof. C. A. Elvehjem, professor of agricultural chemistry, University of Wisconsin, Madison, Wisconsin; Prof. Michael Heidelberger, professor of biochemistry, Columbia University, New York City; Prof. John Gamble Kirkwood, Cornell University, Ithaca, New York; Dr. Paul D. Merica, metallurgist, 67 Wall Street, New York City; Dr. Thomas Midgley, jun., chemist, Worthington, Ohio; Prof. Francis D. Murnaghan, professor of applied mathematics, Johns Hopkins University, Baltimore, Md.; Dean John T. Tate, professor of physics, University of Minnesota, Minneapolis, Minnesota; Prof. Alfred M. Tozzer, professor of anthropology, Harvard University, Cambridge, Massachusetts; Prof. E. E. Tyzzer, George Fabyan professor of comparative pathology, Harvard Medical School, Boston, Massachusetts; Prof. S. A. Waksman, professor of soil microbiology, Agricultural Experiment Station, New Brunswick, New Jersey. Prof. Albert Einstein, professor of mathematics, Institute for Advanced Study, Princeton, New Jersey, was also elected a member; his status as a foreign associate, dating from 1922, before he became an American citizen, will not be affected by the new election.

History of Science in Scotland

THE Regional Committee for Adult Education of the University of St. Andrews has followed up the issue of twelve pamphlets on "Britain and its People" by the publication of a further dozen under the general title "Scotland and its People". These pamphlets provide, in a very readable form, much general information about Great Britain, and particularly about Scotland. Through the help of the Pilgrim Trust, it has been possible to distribute them free

of charge to members of H.M. Forces and Allied troops. Among the titles in the second series are "The History of Science in Scotland", by Sir D'Arcy Thompson, "Scotland and Advances in Medicine and Surgery", by Dr. J. Patrick, "The Scottish Universities", by Sir James Irvine, and "Scottish Agriculture and Industry", by Mr. J. W. Nisbet. In his rapid survey of Scottish science Sir D'Arcy Thompson points out that Napier of Merchiston was the first true man of science in Scotland since Michael Scot. Soon after Napier's death, began the long line of "academic Gregories", contributing some fourteen professors of mathematics, medicine and chemistry to the Scottish universities during the succeeding two hundred years. "There is hardly such another instance known of scientific heredity, unless perhaps that of the Cassinis, who directed the Paris Observatory for nearly as long." John Napier, James Gregory, Colin Maclaurin and James Stirling are characterized as the four great Scottish mathematicians; "but there came after them many a good man", including Ivory and Tait.

Among outstanding figures in chemistry are Black, Graham, Couper, Dewar, Ramsay and James Young; in physics and engineering, emphasis is laid upon Watt (whom Davy likened to Archimedes), Robison, Russell (the builder of the *Great Eastern*), Brewster, Clerk Maxwell and Lord Kelvin. Of the last-named Sir D'Arcy writes: "Somehow he is not quite so great, he is not near so lovable, as Clerk Maxwell; but his achievements were in touch with the spirit of his time, and his fame was prodigious." In astronomy, John Lamont of Braemar became Johann von Lamont, head of the Munich Observatory and an authority on terrestrial magnetism, and with him are mentioned Broun, Buchan and Henderson. Geology is represented by James Hutton, 'the father of modern geology', and many another; for "Scotland has done so much for geology that this science seems peculiarly her own". Finally, in natural history and botany we encounter Sir Robert Sibbald, founder of the Edinburgh medical school, Goodsir the anatomist, Edward Forbes, Wyville Thomson, and Robert Brown of Montrose—Humboldt's *facile princeps botanicorum*. One lays down this attractive and admirable account with a lively sense of the truly remarkable nature of Scotland's contribution to pure and applied science.

Irish Sea and Inland Fisheries

A VERY satisfactory state of affairs is shown in the report of the Minister for Agriculture (Eire) on the sea and inland fisheries for 1940. The yield of sea fish exceeded that of any year since 1930 and was appreciably larger and of greater value than in 1939. The position has been affected materially by the