

NEWS and VIEWS

Science and the Classics

WE had thought that the old controversy between science and the classics had been finally disposed of, but a resolution submitted on January 22 to the Lower House of Convocation of Canterbury came perilously near raising it once more. The resolution was moved by Dr. E. G. Selwyn, dean of Winchester, who urged that the revival of classical education is necessary for the good of the Church and of the nation. The classical outlook, in his view, stands for humanism, which includes the belief in absolute standards of conduct and in individual personality. Classics must, however, be made less specialized, and more room must be found for science. On the other hand, it must be recognized by science that concentration on material things imposes certain limitations. Thus in Dr. Selwyn's view, although modifications in the classical type of education are desirable, science would be admitted almost as a poor relation, presumably in deference to the needs of the times.

While no broad-minded man of science would wish to deny that an educational system based on science alone has very definite shortcomings, it is surely out of the question to suggest that any useful purpose can be served by relegating science to a subordinate position in twentieth-century studies. Science and the classics both have a place in modern culture, but should competition arise, it is to be expected that science should be given the greater share of attention. Dr. W. R. Matthews, dean of St. Paul's, discussing the resolution, emphasized that scientific studies have provided openings for many minds not naturally able to profit by classical studies, and pleaded for an all-round education including science. Eventually, the original resolution was modified and carried, with two dissentients, in the following form: "That this House, while recognizing the great value of scientific and other modern studies, is of opinion that wider recognition of the importance of classical education is urgently needed in the interests of the Church and nation and for the maintenance of a stable civilization and culture after the war."

Endeavour

Imperial Chemical Industries, Ltd., has just issued the first number of a new quarterly journal, *Endeavour*, which is designed to record the progress of the sciences in the service of mankind and as evidence of British scientific enterprise. The issue, which is priced at 5s., is well produced, carrying forty-eight pages of text, and well bound, with a drawing on the cover of the barque *Endeavour* which, commanded by Captain Cook, was sent out in 1768 by the British Admiralty to chart the South Pacific Ocean and observe the transit of Venus. After a brief statement by Lord McGowan of the purpose of the new journal, the number opens with a short article on "Science and the Community" by Sir William Bragg. The main feature of this initial number is Dr. H. Spencer Jones, the Astronomer Royal, on the "Distance of the Sun". Other articles are equally as authoritative, as may be judged from the following selection: Dr. C. H. Waddington, "The Epigenotype"—the author's name for the whole complex of development processes which lie between genotype and phenotype; J. G. Crowther,

"Sciences in the U.S.S.R."—though the author confines himself to the physical sciences; we suggest that this be followed by one on the biological, agricultural and medical sciences, for which the world has much to thank the U.S.S.R.; A. L. Bacharach, "The Manufacture and Use of Vitamins"—in which emphasis is placed on British contributions to this important branch of science; G. V. Jacks, "Prospects for Soil Conservation"; F. Fairbrother, "The Cyclotron"; etc.

The edition of *Endeavour* before us is in English. There are to be other editions in Spanish, French and German, and a total distribution of 25,000 copies is contemplated to be sent to colleges, scientific institutions, universities and prominent individuals in foreign countries and the British Empire. The influence of the journal will therefore be much more than national, and we warmly welcome it since, as Sir James Jeans says in a communication, it "will help to make the beneficent advances of science the common property of all nations and of all races". As Lord McGowan points out, *Endeavour* will help to throw the light of science overseas especially to those parts of the globe where intimate contact with Great Britain is at present more difficult to maintain. Emphasis is laid on British scientific work, but as Lord McGowan says, the journal will not be marked by any narrow insularity, as is sufficiently guaranteed by the contents of this inaugural number. We congratulate the editor and Imperial Chemical Industries, Ltd., on this remarkably attractive and efficient achievement and wish it the success which its cause so richly deserves.

Wealden Iron Ore

It is well known, as was recently mentioned in a letter in *The Times*, that iron ore occurs in various parts of the Weald, where mining and smelting were carried on by the Romans, and were continued until the nineteenth century. Smelting ceased in 1828, and mining in 1858. The Wealden iron industry was highly decentralized, and consisted of a large number of small works. It bears no comparison with that of modern times. E. Straker, in his book "Wealden Iron" (1931), lists more than 225 furnaces, forges and bloomeries spread in time over several centuries. The life of many of these was short. The largest works were at Ashburnham; of these, Mr. Straker records that the annual output was about 350 tons. Wealden iron ore is usually a clay-ironstone and occurs in nodules and in thin beds up to a maximum of two feet in thickness, interbedded with shale. Sometimes a pale grey sideritic rock is present. The Wadhurst Clay furnished the bulk of supplies, but the other Wealden formations, and also a ferruginous superficial deposit—an ironstone 'pan' or 'shrave'—yielded their quota. Much was mined from bell-pits, which were rarely more than twenty feet deep, although some were upwards of forty feet in depth. Shale excavated with the iron ore was sold as 'marl' for agricultural purposes; indeed, agriculture and iron ore working seem to have gone hand in hand in many instances. Many quarries were opened primarily as 'marl pits', but all ironstone encountered was separated and sold when sufficient had been accumulated.

The last attempt at exploiting Wealden iron was at Snape Mine, Wadhurst, during 1857-58, ore being sent to Staffordshire. Two beds were worked, one up to two feet in thickness. Both beds were irregular in occurrence, sometimes dying out completely for a

distance. The roof was bad, and required timbering. A long account of the Wealden iron industry is given by C. Gould in the Geological Survey Memoir "The Geology of the Weald" (1875), compiled by Topley, and additional information, notably an analysis of the Snape Wood ore, in the Geological Survey's "Special Reports on the Mineral Resources of Great Britain", 12 (1920). This analysis, made in 1908 for J. W. Gregory by Messrs. R. R. Tatlock and Thomson, showed the following, in percentages: FeO, 30.42; Fe₂O₃, 10.10; SiO₂, 26.10; CaO, 0.86; SO₃, 0.06. These show about 30.66 per cent of metallic iron, but the high percentage of SiO₂ would prevent the use of this stone as an iron ore. On the contrary, the Ashburnham ore showed FeO, 42.08; Fe₂CO₃, 6.85; SiO₂, 6.46; CaO, 3.87; SO₃, 0.2; giving 37.49 per cent of metallic iron, with relatively little silica. Unfortunately not only are the beds of ore thin, but they are also very irregular in their composition, and there seems little prospect that ore of this kind, which occurs in thin beds and can only be excavated together with a large amount of shale, could be profitably worked by existing methods. The usable reserves of iron ore in the Weald are, in the present circumstances, negligible.

Awards of the Geological Society of London

THE following awards of the Geological Society of London have recently been announced: *Wollaston Medal* to Prof. R. A. Daly, Sturgis Hooper professor of geology in the Museum of Comparative Geology at Harvard University, in recognition of his fundamental researches in many branches of geology, especially those concerned with the origin of igneous rocks, the constitution of the interior of the earth, and the controls of coral-reef formation; *Murchison Medal* to Prof. H. H. Swinnerton, professor of geology in University College, Nottingham, for his stimulating contributions to the philosophy of palaeontology; *Lyell Medal* to Mr. W. S. Bisat, for his studies in the stratigraphical palaeontology of Carboniferous rocks; *Wollaston Fund* to Dr. E. S. Hills, for his contributions to Australian palaeontology and geology; *Murchison Fund* to Dr. K. C. Dunham, for his investigations into the mineral deposits of the North of England; a moiety of the *Lyell Fund* to Dr. S. R. Nockolds, for his mineralogical and petrological work and his contributions to the study of assimilation processes; a second moiety of the *Lyell Fund* to Dr. J. Shirley, for his researches in palaeozoic palaeontology and stratigraphy.

Institute of Metals: Platinum Medallist

THE Platinum Medal of the Institute of Metals for 1942 has been awarded to Mr. W. Murray Morrison, vice-chairman and managing director of the British Aluminium Co., in recognition of his outstanding services to the non-ferrous metals industries. Mr. Morrison is an original member and a fellow of the Institute of Metals, on the Council of which he served for sixteen years—in the last two as vice-president. He may be described as the father of the aluminium industry in Great Britain, having been associated with the British Aluminium Co. since its inception in 1894. He is also the pioneer of the developments of Highland water-power upon which depend the electro-metallurgical operations for the production of aluminium at three great Scottish factories.

Institution of Mining and Metallurgy: New President

MR. J. ALLEN HOWE has been elected president of the Institution of Mining and Metallurgy for the year 1942–43. Mr. Allen Howe was educated privately and at the Royal College of Science, and holds the London B.Sc. degree. For a year he was demonstrator in geology at the Royal College of Science and Royal School of Mines, and in 1901 was appointed to H.M. Geological Survey, where he served for thirty years on the field staff and as curator of the Museum of Practical Geology, and from 1922 onwards as assistant director. During his service he took an active part in stimulating the economic side of the Survey's work, and he is the author of several works mainly dealing with building stone, broken stone, and refractory materials. On these and other subjects he has made numerous contributions, including many articles on topographical geology and stratigraphy in the *Encyclopædia Britannica* (thirteenth edition). He was a member of the International Conferences on Testing Materials, and was for a number of years adviser on stone to H.M. Office of Works and since 1918 to the Imperial War Graves Commission. He was a member of the Committee on Coal Conservation and the Imperial Economic Committee. Since 1931 Mr. Allen Howe has practised as a consultant in economic geology.

Chronica Botanica

THIS international plant science news magazine, formerly published in Holland, continues to appear now from Waltham, Mass., U.S.A. Vol. 6, Nos. 17–18 appeared in November 1941 and is an exceedingly interesting number. Under the heading "Nomina ad Infinitum" Dr. F. C. Bawden asks for a more vigorous effort to rationalize procedure in the naming of virus diseases of plants, and then in the "Plant Science Forum" a number of subjects of general botanical interest are raised by well-qualified contributors. Very general interest will be aroused by a brief note from Dr. W. C. Darrah on the fossil embryos in Iowa coal balls; in particular, in the record of the discovery of the embryo and young seedling of a Lepidocarpon. There then follows a series of brief "Progress Reports" on plant science in Latin America, for example, on forestry in Mexico (Meyer), natural resources of Costa Rica (Skutch), etc.

International activities naturally do not bulk largely in the present day, but there is a note on the International Forestry Centre, which, established in May 1939 as a division of the International Institute of Agriculture, held its third meeting in March 1940 in Berne. The "Chronicle" of events has a very full statement of Kew activities in view of the centenary of the Royal Botanic Gardens in 1941: there is an interesting account also of the All-Union Agricultural Fair held in Moscow during 1939 and 1940 and again re-opened in the early summer of 1941. Details of the activities and vicissitudes of various botanical departments under present disturbed conditions make interesting reading to botanists, and similarly the many changes in personnel chronicled will often bring news of colleagues to readers. Very naturally the editors have contemplated closing this venture with the completion of vol. 6, and the extension of the War to the Pacific will possibly force them to reconsider their present decision to proceed at least with the issue of Vol. 7 in the form of twelve numbers to be issued once every