

News and Views

Prof. H. C. Urey

IT is announced that the Nobel Prize for chemistry for 1934 has been awarded to Prof. H. C. Urey, of Columbia University, New York. Prof. Urey was responsible for the search for a heavier isotope of hydrogen, and for its detection by means of its spectrum. This heavier isotope, of mass about double that of the ordinary hydrogen atom, has since been obtained in the form of its oxide, 'heavy water', in a pure condition, and several other compounds, for example, an ammonia in which the three hydrogen atoms are replaced by heavy hydrogen. The new element has been called deuterium, and has been the subject of intensive investigation during the last two years. Unlike the isotopes of heavier elements, its properties differ in a marked and interesting way from those of ordinary hydrogen, and apart from its intrinsic interest, deuterium has already been put to several uses as an implement of research in various fields of chemistry and physics. Just as the discovery of the element radium by Mme. Curie, a chemist, opened out a new physics, so it may be expected that the discovery of deuterium by the present Nobel laureate in chemistry will have important consequences for physics as well as chemistry.

Robert A. C. Godwin-Austen (1808-84)

NOVEMBER 25 is the fiftieth anniversary of the death of Robert Godwin-Austen (whose name was originally Austen, afterwards changed to Godwin-Austen). Godwin-Austen was prominent in the ranks of the early British geologists, and a notable and constant contributor to geological science. He was born in 1808, and died at Shalford House, Guildford, at the age of seventy-six years. Austen's interest in geology had been stimulated whilst at the University of Oxford, where he had been a pupil of Buckland. He joined the Geological Society of London in 1830 (the year of publication of Lyell's "Principles of Geology"), when Sedgwick was its president, and read his first geological paper at Somerset House entitled, "An Account of the Raised Beach, near Hope's Nose, in Devonshire, and upon recent Disturbances in that Neighbourhood" on November 19, 1834. Austen was then residing at Ogwell House, near Newton Abbot, and this paper was the forerunner of pioneer field work in Devonshire, and a close association with De La Beche. The latter recorded that in the district extending from Dartmouth to Chudleigh he was principally indebted, as regards this part of the Geological Survey Map of Devon, to Austen; Phillips mentioned the "splendid series of fossils . . . fruit of the personal exertions of Mr. Austen". Further observations on south-east Devonshire were embodied in a classic paper covering the years 1834-40. Certain inferences respecting the Coal Measures were detailed in the paper "On the possible Extension of the Coal-measures beneath the south-eastern part of England" (1856). Godwin-Austen was awarded the Wollaston medal of the

Geological Society in 1862, and referred to as "eminently the physical geographer of bygone periods". In later years he resided at Shalford, Guildford, and there were consequent changes in his geological studies in a new area. Godwin-Austen was elected a fellow of the Royal Society in 1849.

David Douglas, 1798-1834

A BOTANICAL collector and explorer in many British territories, David Douglas, the Scottish naturalist, was born at Scone, near Perth, in 1798, and of humble parentage. To his zealous efforts are due the introduction into England from time to time of numbers of new trees, shrubs, and herbaceous plants, comprising hundreds of species. Much valuable information, in addition, was derived from him respecting the characteristics of the lands (some hitherto unexplored) that he visited. Douglas in early life began a seven years' gardening apprenticeship with the Earl of Mansfield, at Scone. On its completion, he worked at the Botanic Garden, Glasgow, where his abilities attracted the notice of Dr. W. J. Hooker, then professor of botany in the University of Glasgow, who took him as companion in journeys through the Western Highlands. In 1823, Hooker recommended Douglas to the Royal Horticultural Society of London, for botanical exploration work in North America, and under the Society's auspices he pursued this mission until the year 1827. Various and successive travels followed down to 1833. From California he penetrated northward into Russian America (Alaska) in one of these. Early in 1834, Douglas was at San Francisco and thence he embarked for the Sandwich Islands; in May of that year, he wrote home to Capt. Sabine giving accounts of journeys to the summits of the mountains and volcanoes. In November 1834 news reached England that on July 12, previously, Douglas had lost his life in an unfrequented track through the attack of a bullock. A monument exists at Honolulu recalling the fatality and Douglas's services to science.

Long Heads and Broad Heads in Germany

IT has always been a disconcerting fact to those who uphold the Nordic origin of German nationality that the predominant shape of head in the population is broad and flat, rather than of the long narrow Nordic form demanded by the favoured theory of racial origin. Various attempts have been made to explain away the anomaly; while some critics have not hesitated to say that the official figures of head measurements of the population were 'edited' before publication to eliminate the undue proportion of broad heads. Certainly Prof. F. G. Parsons, who measured German prisoners of war, found that they showed a greater breadth by several points than the figures accepted by German anthropologists as representing the German type of head. Some who admit the discrepancy invoke the Mendelian theory of

inheritance and regard the broad head as a dominant masking the long-headed Nordic element. A new theory has been put forward, or rather an old theory revived, in Germany, making the shape of the head fortuitous and eliminating its significance for the Nordic theory. Prof. Kruse of Leipzig, according to the *Times* of November 19, argues that the shape of the head depends upon whether babies are laid on soft or hard pillows. On soft pillows they lie on their backs and hence, he maintains, although originally long-headed, come to have broad heads as they grow. A broad head, therefore, is no disproof of Nordic ancestry. In the middle of the sixteenth century, Vesalius noted the difference between the rounded head of the Turk and the broad flat head of the German. The former he explained as due to the swathing of the head and the action of the midwife, and attributed the latter to the fact that German babies slept on their backs in their cradles, while the Belgians, sleeping on their sides, had longer heads. It is interesting to note that in Dürer's representations of German peasants at about the same date, the broad flat head is very marked.

Academic Assistance Council

LORD RUTHERFORD'S progress report of the Academic Assistance Council in a letter to the *Times* of November 16 is a statement in which the whole academic body of Great Britain may take legitimate pride. The Council, indeed, has not accomplished everything it would have wished; but its efforts nevertheless have effected much. Of the German scholars and men of science displaced since April 1933, Lord Rutherford says that 200 have found permanent places and 325 have been provided with temporary facilities for continuing their research outside Germany. In other words "at least two thirds of the whole number who were justified in looking to continue their scientific work have been assisted to remain in the academic world". Emergency grants have been given when needed and are still being given to 71 scholars and men of science while they are seeking posts. This is a remarkable achievement for an undertaking which was initiated in a period in which the whole world, and more especially the two countries which might be relied upon to respond generously to such an appeal, namely, Great Britain and the United States, were in a state of economic depression without a parallel. The need for effort, however, still remains, for the funds available for meeting present commitments will be exhausted in July 1935. Further, while Lord Rutherford is in a position to state that the work of the Council has now attained a basis of international co-operation, this announcement, unfortunately, coincides with a report of the financial collapse of national committees on the Continent.

LORD RUTHERFORD goes on to outline a further objective. The size and nature of the problem with which the Council has had to deal hitherto is now definitely known; and it is proposed to add to the functions of the Council the formation of a trust for creating a number of research fellowships which will

be available for scholars and men of science of special distinction, who are debarred from carrying on their work in virtue of their race, religion or political opinions. These fellowships will be awarded irrespective of nationality. It will be remembered that, although the work of the Academic Assistance Council has necessarily been directed to the alleviation of the difficulties of those who have suffered through the political situation in Germany, the purpose of those by whom the Council was founded is to assist any, of whatever nationality, who might be dispossessed on such grounds. The same principle will be applied in the award of the proposed research fellowships. Already Lord Rutherford has been able to announce the prospect of a contribution from America which will provide for 36 research fellowships tenable for a period of three years in any of the universities within the British dominions. This generous offer will no doubt stimulate other contributions. Should the proposal of the Council come to full fruition on a pan-national basis, it will confer upon it a unique position as a permanent international rallying point for the defence of academic freedom—a consummation eminently to be desired in the present trend of world conditions.

University Education

In his inaugural address to the Royal Statistical Society on November 20, the president, Prof. Major Greenwood, discussed the "Recent History and Function of University Education". Speaking of the statistical changes in the proportion of males in England and Wales who have entered upon a university course since 1801, Prof. Greenwood estimated that at the beginning of the nineteenth century, when Oxford and Cambridge were the only English universities, about one-half per cent of males had a university education, a very slightly larger proportion at the middle of the nineteenth century and now about 2 per cent. In Germany, before the Nazi regime, it was estimated that not more than 3 per cent of university students came from working class families. It is unlikely that the proportion is more than 10 per cent in England and Wales. An author writing in the first volume of the Society's *Journal* estimated that the universities of Great Britain had a total revenue in 1831 of £800,000 per annum; in 1931-32 their total income was £5,874,778, of which more than £2,000,000 came from Parliamentary grants.

THE renaissance of English university education which began rather more than eighty years ago led to a discussion of the functions of a university to which Cardinal Newman, Mark Pattison and Walter Bagehot all contributed; their views, however different the expressions, were essentially similar, namely, that higher education in its highest and best sense implied segregation; "a university should be situated," said Pattison, "like the poet's garden, 'Not wholly in the busy world, nor quite beyond it'." Prof. Valentine has recently shown that in universities now, even among scholarship entrants, a sensible proportion (in the modern provincial universities) fail