

News and Views

Sir Thomas Holland, K.C.S.I., F.R.S.

THE Albert Medal of the Royal Society of Arts for 1939 has been awarded to Sir Thomas H. Holland, "for his services to the mineral industries". Sir Thomas Holland is principal and vice-chancellor of the University of Edinburgh, and in the course of a long and distinguished career has rendered eminent services to industry and industrial research, both at home and in the Empire. Outstanding among the results of his overseas activities is his close connexion with the development of Indian industry, which to-day is based upon the recommendations of the Indian Industrial Commission over which he presided in 1916. He has held many high appointments in institutions connected with science, geology, mining, metallurgy and petroleum, and was chairman of the Council of the Royal Society of Arts during 1925-27. The Albert Medal was instituted in 1862 as a memorial of H.R.H. the Prince Consort, for eighteen years president of the Society, and is awarded annually for "distinguished merit in promoting Arts, Manufactures or Commerce".

Use of Oxygen in Climbing

PROF. YANDELL HENDERSON's article on "The Last 1,000 ft. on Everest", published in *NATURE* of June 3, p. 921, gives expression to the physiologist's doubts about the possibility of climbing to 29,000 ft. without the use of oxygen. Prof. Henderson attempts the difficult task of analysing the fall in climbing speed with increase in altitude and suggests that it reaches zero at 29,000 ft. If this conclusion is correct, it is folly to attempt the ascent of Mount Everest without oxygen, but mountaineers may answer that information about climbing speeds at great altitudes is too scanty to justify any precise estimate of limiting altitudes and may point out that, so far, climbers have done as well without oxygen as with it. The most compelling argument in favour of the use of oxygen would be the production of a really effective apparatus. On this point Prof. Henderson is emphatic that the so-called open apparatus is valueless and that a closed unit, involving absorption of carbon dioxide, is essential. But in spite of the possible theoretical advantage of the latter type, it has never been successfully used for climbing at high altitudes. The open apparatus, however, as is pointed out in an article on p. 961 of this issue, by a member of last year's Everest expedition, has twice been used with some success. For the future, it is clear that there is ample room for improvement in methods of oxygen administration in climbing. Increase in efficiency of utilization is desirable provided that it does not sacrifice other essential qualities, but another and perhaps easier line of attack is the reduction of weight by mechanical improvement of valves and cylinders.

Scientific Psychology in France

THE centenary of the birth of Theodule Ribot, and the jubilee of the foundation of the chair of experimental psychology in the College de France, of the Laboratory of physiological psychology at the Sorbonne, and of the famous thesis, "L'Automatisme psychologique", submitted by Pierre Janet, will be celebrated by a gathering at the Sorbonne on June 22, under the presidency of the Minister of National Education. Among those who will take part will be E. Faral, head of the College de France, Prof. P. Janet, and Prof. H. Pieron, who succeeded Binet as director of the laboratory at the Sorbonne. A jubilee volume, in which many psychologists are collaborating, is to be published in honour of Ribot, Binet and Janet, who were the pioneers of scientific psychology in France in its chief lines of advance, namely, physiological psychology and laboratory investigations, the study of the child, pathological psychology and the study of mental anomalies. The general principle of the comparative method affirmed by Ribot has dominated the development of scientific psychology in France, and has contributed notably to the application to teaching and to industry of the science of the mind. The secretary of the committee responsible for the commemoration is Prof. H. Pieron, College de France, Paris.

Philosophical Approach to Religion

THE sixteenth Unity School was held at Jordans Hostel in Bucks on May 12-15. The general subject was "The Philosophical Approach to Religion", and an address introducing the subject was given by Mr. F. S. Marvin on the evening of May 12, when he reaffirmed his belief in positivism, possibly modified in certain aspects to relate it to certain more recent ideas. In the discussion, Lord Samuel put forward a view involving in one aspect the idea of causality leading to a creator God. On May 13, Dr. Helen Wodehouse, Mistress of Girton, in an address characterized by beauty of expression, introduced the question of what is the philosophical approach to religion. The discussion was opened by Prof. J. H. Muirhead, and the Rev. J. H. Brittain contributed some remarks on the historical element in current religion. Prof. John MacMurray gave a stimulating discourse in opening a session on "Religion as the Basis of Reality" and sought to find the essence of religion in personal relationship. He also made some comments on the differences between the scientific and the religious attitudes; discussion of this subject was continued on May 14, when Dr. C. H. Desch spoke on the effect of the development of science on religion. In a concluding address on the future prospects of religion, Prof. Harvey considered a number of factors that have to be taken into account, and put forward some tentative conclusions. Though

the discussions sometimes seemed to show difference rather than unity of opinion, at the last meeting it was felt that there was common agreement in rejecting the objects of devotion put forward by the military States and in seeking to unite men to serve some worthier purpose, which has been known by various names. Valuable interludes were provided by Dr. R. N. Salaman, who spoke on the Society for the Protection of Science and Learning, and by Mrs. Beer, who described a recent visit to Germany and Austria. Further information on the Unity Schools can be obtained from Mr. F. S. Marvin, Pantiles, Coneydale, Welwyn Garden City, Herts.

Experimental Work on A.R.P.

DR. R. E. STRADLING, chief adviser for research and experiment, A.R.P. Department, Home Office, delivered the first of three lectures arranged by the Institution of Civil Engineers on air raid precautions. After referring to the creation some months ago of the special Research Branch of the A.R.P. Department of the Home Office, and to the recent appointment of a Civil Defence Research Committee under the chairmanship of Dr. E. V. Appleton, which would ensure that the full resources of the scientific world would be enlisted in the services of that section of Government activity, Dr. Stradling dealt with the question of protection from the effects of the high-explosive bomb. On detonation, a very high pressure is produced which causes the metal case to expand to possibly one and a half times its original size and then burst into fragments. In addition to the formation of splinters, the expanding gases have two effects: actual movement of gas giving the effect of a very 'high wind', and a wave sent out through the air which is similar to a sound wave. The first effect causes major destruction on a surprisingly local scale; about 30 feet from a large bomb, the effect has practically disappeared. Outside that zone the acoustic type of wave can spread a very long distance. Its effects on a structure can be disastrous, but more especially on those portions which have a high-natural frequency, such as windows and the like. Experiments show that the effect is dependent upon the structure itself, as well as upon the form of the wave. Due to the adoption of basements as shelters, the question of earth movements around an exploding bomb is also of importance. There is a zone around the bomb in which few normal structures can be expected to stand, but it is very limited in extent. The wave which is effective at longer distances is somewhat similar to a very slight earthquake and has little effect upon a normal building. Further lectures in the series will be given by Colonel F. J. Wyatt, on camouflage, on June 12; by D. Anderson, on the design of bomb-proof shelters, on June 20; and by Brigadier C. A. Bird, on the work of the military engineer in war, on June 27.

Roman Frontiers in the East

SIR AUREL STEIN has recently completed a survey of the boundary line of the ancient frontier of the Roman Empire in Iraq and Transjordan. This is

a part of a projected survey of the eastern frontier of the Empire, of which the Syrian section, with which Sir Aurel Stein's work connects, has been surveyed by Father Poidebard. Sir Aurel Stein's expedition was supported by the British Academy and the Society of Antiquaries of London and carried out with the co-operation of the Royal Air Force and the Iraq Petroleum Company. In a summary account of the survey (*The Times*, June 1) Sir Aurel states that he traced the line of forts along the south and north sides of the Jebel Sinjar. Between Nisibin and Mosul he found the old defences, which had commanded the road of invasion between Mesopotamia and northern Syria. Turning thence to Kirkuk, he visited and determined to his satisfaction the exact site of the battle of Arbela in Alexander's campaign, and along the middle Euphrates had made the remarkable discovery of a comparatively well-preserved castle, which was clearly Roman, and had at its side a barrage, which bore the stamp of Roman work. This affords evidence of the protection given to the trade route so far down as central Mesopotamia, possibly in the reign of Septimius Severus. The Roman track was traceable from the air and in places even on the ground. The last month of survey work covered the Via Nova, constructed in the reign of Trajan from the port of Aqaba on the Red Sea to Petra and the great centres of Syria. This route has now been determined and mapped for a distance of about 120 miles. Several old Roman milestones, from which the inscriptions had almost disappeared, were found in the Wadi Yitm. The distances between the milestones is remarkably accurate. Thence the road climbs to the top of the chain of mountains above the rift valley of the Wadi-el-Arabah, south of the Dead Sea, and follows the line of cleavage to Petra.

Finds from British Bronze Age Barrows

FINDS from the recent excavation of two bronze age round barrows, one at Stockbridge Down, Hampshire, and one at Reffley Wood, King's Lynn, Norfolk, are now on exhibition in the Prehistoric Saloon of the British Museum (Bloomsbury). Both barrows belong to the Early Bronze Age and date from about 1700 B.C. The Hampshire barrow was excavated by Dr. N. Gray Hill, and that at Reffley Wood by Mr. P. L. K. Schwabe and Mr. I. J. Thatcher. While the sites exemplify the two types of ground on which such barrows are found, namely, chalk down and sandy heath, in their characteristics they exhibit a striking similarity. In each the body had been laid approximately in the centre in the contracted position and accompanied by earthenware beakers. At Stockbridge the skeleton was in a remarkably good state of preservation and was accompanied by an almost intact beaker, but at Reffley Wood the skeleton had disappeared and no complete beaker was found, although the whole area under the mound was strewn with fragments. At both sites there were secondary interments in the mound, belonging to the later period of the Middle Bronze Age about 1400 B.C., when cremation was