

News and Views

Protection during Air Raids

THE recent air exercises at Portsmouth have shown once more that in some states of the weather it is impossible to prevent a hostile air fleet from launching an attack upon a city. It is essential, therefore, that we should do all we can to minimise the effects of air raids, if unfortunately it should be found impossible to prevent wars. The Government is preparing a series of six handbooks dealing with different aspects of the problem, and the first of these has recently been issued (*Air Raid Precautions, Handbook No. 2. Anti-Gas Precautions and First Aid for Air Raid Casualties*. Pp. 110. London: H.M. Stationery Office, 1935. 6d.). Mr. C. B. O. Mohr, 147 Milton Road, Cambridge, the secretary of the Cambridge Scientists' Anti-War Group, writes, however, to say that his Group considers that with the proposed protection casualties up to 30 per cent of urban populations are likely to occur. This Group is investigating the technical side of the problem, and he suggests that other scientific workers should do likewise and make their results known. These dangers can no longer be ignored, but on the other hand they should not be exaggerated. It is not only sensational journalists who have published misleading statements about new engines of war of extraordinary potency, but even statesmen in responsible positions who are in a position to obtain accurate information. One of these has said that scientific men "will turn to making a high explosive bomb about the size of a walnut and as powerful as a bomb of big dimensions". The actual fact is, however, that every endeavour has failed to produce an explosive appreciably more powerful than nitroglycerine, which was discovered by Sobrero in 1846. Equally exaggerated statements have been made about the effects of gas bombs; but high explosives, incendiary and gas projectiles are all very serious sources of danger and should be investigated authoritatively and impartially.

Academic Freedom

THE Conference on Academic Freedom held at Oxford on August 14-16 was arranged by the provisional committee formed last October following the censure passed on addresses by Mr. H. D. Dickinson, of the University of Leeds, and Prof. H. J. Laski, of the University of London. The Conference opened with a discussion on academic and professional freedom, over which Prof. J. L. Myres presided, and a standing committee was formed to give permanent character to the protest against any infringement of the rights of academic freedom. Mr. G. D. H. Cole pointed out that, although in Great Britain we are relatively immune from interference with academic and professional freedom, there is a serious danger of a rapid growth of intolerance, and this applies particularly to the professional

worker in business or industry. What is wanted is not to prevent interference altogether but to keep it within the limits within which it is absolutely necessary. The difficulty arises over the exercise of the professional man's rights as a citizen and the rights he holds in common with other people in matters of personal conduct and behaviour. Bertrand Russell made a vigorous plea for freedom for teachers to express their opinions within as well as outside their professional activities, and for organised defence against victimisation.

At the second session of the Conference, over which Prof. Lascelles Abercrombie presided, the question of international professional relief was discussed. Reports were read dealing with the persecution of teachers of all grades in Italy, Spain and Bulgaria as well as in Germany. Prof. Abercrombie said that internationalism must be identified with civilisation itself. A resolution was passed recognising the need of relief for persecuted teachers in other countries besides Germany, and establishing a committee to co-ordinate such work internationally. The final session of the Conference, over which Prof. Julian Huxley presided, dealt with the utilisation of science, and Prof. Huxley suggested that a long-range policy of the utilisation of science would involve the transformation of the economic and social system. Mr. J. L. Hodgson insisted that no creative work of value is ever done for money, and Dr. L. E. C. Hughes said that if science is to have a broadening humanitarian future and the scientific worker is to have a share of responsibility for his actions, it can only be in accordance with his own standards of scientific procedure and not with those arbitrarily imposed by non-scientific politicians. A resolution was passed to set up a committee of representatives of scientific and technical organisations to co-ordinate the activities of scientific associations and scientific workers in carrying out the pledge to secure that, so far as lay in their power, science should be used only for the benefit of humanity.

Artificial Radioactivity and Therapeutics

A NOTE in *The Times* of August 24 states that Prof. Ernest Lawrence, of the University of California, reports further progress in the production of artificial radioactivity. By subjecting ordinary salt to high-voltage X-rays, he claims to have produced in his laboratory minute amounts of radio-sodium, which emits radiation only of the γ -type, and has a half-life period of only about 15 hours as compared with the 1700 years of radium, while the suggestion is made that great therapeutic possibilities are thus opened up. The high reputation of Prof. Lawrence leaves us in no doubt as to the validity of his experimental claim; but it seems all the more necessary to suspend judgment about therapeutic possibilities until a vast

amount of experimental biological work has been carried out. It was suggested that it might be possible to inject the radio-sodium into the tissues, apparently with the view of obtaining its local action upon malignant growths. How the localisation is to be effected will, we think, be rather a problem. A further point is that the short half-life period is not necessarily by any means an advantage from the therapeutic point of view. One of the certain facts which have resulted from the scientific study of radiation therapy is that uniform and carefully adjusted dosage is essential to success. The new product—radio-sodium—produces a form of radiation which is rapidly diminishing in amount; constancy of radiation, therefore, cannot be expected. It is certainly by no means the case that an initial heavy dose of radiation which rapidly decreases will have the same biological effect as the same total dose provided by a smaller constant source acting for a longer time. From the physico-chemical point of view, Prof. Lawrence's work is of the deepest interest, but to mention therapeutic possibilities at this early stage seems to us decidedly premature.

Red Kafirs of Nuristan

It is anticipated that further light will be thrown on the much-disputed origin of the Bashgali, or 'Red Kafirs' of Afghanistan, by recent investigations of their language and customs by Dr. George Morgenstierne, of the Göteborg High School, Sweden. In the meantime, *The Times* correspondent at Simla reports in the issue of August 17 that a German botanical expedition, which has worked its way through the Hindu Kush to the Chitral, has come into contact with the Red Kafirs among other strange tribes of Nuristan. The Red Kafirs—so-called to distinguish them from the Black Kafirs, whom some ethnologists regard as having negro affiliations—are sometimes credited with an origin which legend traces to Arabia, while on another view it has been suggested that they are descendants of the soldiers of Alexander. The most probable theory is that both racially and culturally they preserve a strain of the same stock as the Aryan invaders of India. Although they have been converted to Islam, they retain a number of pagan customs, in which some would see traces of ancient Greece. It is probable, however, that the resemblance is no more than generic, and that the strange customs reported of them are a debased survival of beliefs of the primitive Arya. Thus it is said that although they believe in one chief god, they also recognise forty or fifty other deities, to whom sacrifices are offered on high places, while the dead are placed in sacred groves. One of the most interesting features of their customs is a song and dance ritual in connexion with a central altar. Dead heroes are commemorated by wooden equestrian statues, which are sometimes accompanied by figures of an attendant and the hero's wives seated behind on chairs. The general character of these statues and their technique have been made the basis of a suggested connexion with the statues of Easter Island, and thought to point to one possible source of the 'Aryan' strain which some would see in Polynesia.

Restoration at Avebury

OPERATIONS for the exploration and restoration of the avenue leading from Overton Hill to Avebury, which were begun by Mr. Alexander Keiller last year, have been resumed. It is expected that all the surviving stones of the avenue will shortly have been placed in their original positions. The recent work has yielded information as to the original plan and method of construction additional to that obtained last year. Six stones, it is stated in a report in *The Times* of August 24, have been re-erected this year, including two of the largest megaliths known in the whole of the avenue, and the only two remaining stone-holes in the section have been identified; and at the time of writing two stones were still to receive attention. Of these, No. 9 is the only one which has never fallen. Advantage will be taken of the concreting, which will make it safe for future generations, to examine the method of packing followed when it was erected originally. The companion stone, No. 10, re-erected by Mrs. M. E. Cunnington in 1912, was shown by last year's examination to have been replaced some distance from its original position, as well as back to front and upside down. It will be placed in its correct position in its proper stone-hole, which has recently been discovered. In the next section, excavations are being undertaken on the sites of the stones between the north-western limits of last year's operations and the entrance to the circle. Here evidence has been found to show that at least two of the stone posts were broken up on the spot and without the use of fire. No. 39, partially uncovered in the laying of a pipe-line in 1913, and No. 40 have now been completely excavated, and will be re-erected shortly.

Further Discoveries at Colchester

LATER excavation of the remains of the remarkable wall discovered on the Romano-British site on Sheepen Farm at Colchester (see *NATURE*, August 17, p. 251) have served only to strengthen early impressions of its singular character. It has been found to run in an east-west direction for a distance of approximately 352 ft. At the eastern end, the possibility of further examination comes to an end at Sheepen Lane, so that it cannot be stated how far, if at all, it extended in this direction. At the western extremity, after a somewhat sinuous course, the wall turns in a right-angled bend to run northward, the construction continuing to be identical in form. The northern corner of what was evidently a large enclosure was located on this western side at a distance of 291 ft. from the southern turn. The course of the northern face is now being traced. Vestiges of cross walls, one running east and west, the other north and south, have been found at a point situated approximately 150 ft. east of the west wall. Of these, the former is the more substantial, its foundations having a breadth of 4 ft. 6 in., while those of the latter are only 2 ft. 6 in. wide. Further excavation showed these to be part of the walls of a Romano-Celtic temple, of which the enclosure was the *temenos*. The walls of the temple have now been completely traced (*The Times*, August 28).