

## NEWS and VIEWS

## Carbon-13

FIVE isotopic forms of the element carbon are known, having atomic weights ranging from 10 to 14. Two of them,  $C^{12}$  and  $C^{13}$ , exist stably in Nature, while the others are radioactive, and are known to us only through their production in various nuclear reactions. The recent great development in the techniques of isotope separation have made it possible to produce substantial quantities of carbon compounds in which the ratio of  $C^{13}$  to  $C^{12}$  has been increased far beyond the 1.1 to 98.9 characteristic of natural carbon. This will be important in chemical and biological research, for  $C^{13}$ , being chemically the same as natural carbon, but distinguishable from it by the sensitive techniques of mass-spectrography, may be used as a 'tracer' to follow the history of carbon atoms in their passage through chemical and biochemical reactions. For example, if a small quantity of  $C^{13}$ -enriched sugar is eaten by or injected into an animal, the distribution and state of chemical combination of the carbon of this particular dose may be determined by measuring the  $C^{13}$ - $C^{12}$  ratio of appropriate specimens taken from the animal at a later date. The importance of  $C^{13}$  is all the greater because two of the three radioactive isotopes of carbon decay too rapidly to be suitable tracers, while the remaining one ( $C^{14}$ ) has so long a life (3,000 years) that its detection by radioactive methods is relatively insensitive.

It is understood that  $C^{13}$  is to be produced in quantity by the Sun Oil Company and the Houdry Process Foundation at plants situated near Philadelphia in the United States. The process employed will be that devised by Prof. H. C. Urey (formerly professor of physical chemistry at Columbia University, New York, and now at the Institute of Nuclear Studies, Chicago), and Dr. Allen Reid. Material will be provided free to qualified non-commercial biological and medical research organizations "which can justify such donations". The Medical Research Council is endeavouring to arrange for the supply in the United Kingdom of this and other isotopic indicators, including radioactive species of all elements of biological significance. Facilities for analysis by mass-spectrographic methods and by counter technique must be made available to workers wishing to employ isotopic tracer methods in their investigations before these can have any wide application.

British Association Secretaryship: Mr. D. N. Lowe, O.B.E.

MR. D. N. LOWE, who has been appointed to succeed Dr. O. J. R. Howarth as secretary of the British Association (as already reported in *Nature*) after the first post-war meeting of the Association, is a Scot and is thirty-six years of age. As a Kitchener Scholar he studied at the University of St. Andrews, where he graduated M.A. (literature and history) and B.Sc. with first-class honours in botany. He was president of the Union, of the Students' Representative Council, and of the Mountaineering Club of the University. After a short period of research on the marine algae of Fife, he was appointed assistant secretary of the British Association in 1935. Shortly after the outbreak of war he was seconded for national service. On the secretariat successively of the Ministry of Supply, the Ministry

of Production and the Cabinet, he has served as administrative secretary to various Whitehall committees concerned with priority and allocation of materials, and was awarded an O.B.E. in the recent New Year's Honours List.

## Wool Research in Australia

THE passage of the Wool Use Promotion Act (1945) through the Commonwealth Parliament is an Australian reaction to what is commonly termed the threat of synthetic textile fibres to wool. This Act is supplemented by a Wool Tax Act (1936-1945) which imposes a levy of 2s. per bale, payable by the grower, on all wool received or produced by a wool-broker or dealer, or exported on and after June 1. The proceeds of the levy (estimated at £300,000 in a normal year, but considerably less in 1945-46) are to be paid into a Wool Use Promotion Fund. In addition, a Wool Research Trust Account is established into which the Treasury will pay annually from consolidated revenue a sum equal to that raised by the levy. The total available may therefore reach as large an amount as £600,000 per annum. A committee of Ministers will determine each year what sum (if any) shall be transferred from the Promotion Fund to the Research Account. The balance left in the Fund will be applied by the Australian Wool Board to promoting, by publicity and other means, the use of wool in Australia and throughout the world, and for performing such other functions for the benefit of the wool industry as may be approved by the Ministers.

The Research Account, the minimum sum in which will be the equivalent of the 2s. levy on the clip, is to be applied, according to the Act, for "scientific, economic and cost research in connection with the production and use of wool and goods made wholly or partly from wool; and the co-ordination and application of the results of any such research". It is understood that the Council for Scientific and Industrial Research will undertake full responsibility for all scientific work. Its present programme of investigations on the production side will be considerably increased, and it is probable that a new division will be set up to handle a wide diversity of problems associated with the manufacturing side. Detailed plans are at present under discussion.

## New Method of Sound Recording

FOR many years past it has been the practice with broadcasting organisations to record sound programmes for reproduction as and when required. In some cases this technique makes use of ordinary gramophone records or of metal disks coated with a preparation of cellulose acetate. In other cases, the sound programme to be recorded is made to influence the longitudinal magnetization of a continuous steel tape which passes under the recording head. This latter process is suitable for long programmes, which can either be reproduced immediately or after an interval, the tape being rewound and passed under a suitable magnetic pick-up. The recording can afterwards be effaced or 'wiped off' the steel tape by a demagnetization or saturation process, and the tape can thus be used many times for different programmes.

According to a recent report in *The Times*, an examination of the equipment in use at broadcasting stations in Germany indicates that the Germans were ahead of Britain and the United States of America