

water. A new use of cellulose is the manufacture of shoes. With this material all sewing and nailing of the soles to the uppers are eliminated. The cement used to stick them together is a cellulose nitrate cement. It is now only necessary to hold them together for fifty seconds. A single operator in 8 hours 15 minutes applied soles to 1,580 pairs of shoes. The value of cellulose as a raw material is continually increasing as our knowledge increases.

#### Fenland Archæology

AMONG the objects which the recently founded Fenland Research Committee, of which Prof. A. C. Seward is chairman, has in view is the preparation and publication of a map, or series of maps, showing the extent of Roman or British occupation of the Fens and of the watercourses as they existed at that period. As was pointed out when the Committee was formed, the scientific investigation of the Fenland to a great extent has been neglected, and if it should be possible to complete the survey for the purpose of this map on the scale contemplated, it will prove of very considerable importance for the study of the physical and human geography of the period. It is estimated that something like a million acres will be added to the map of Roman Britain. In the meantime, an appeal has been issued by the Committee for assistance towards the cost of printing a map of the Fens on the scale of two inches to the mile in a series of twenty sheets, of which four have already been prepared. The maps are to be reproduced by photography from the six-inch Ordnance map and will show all that is shown on that map. It has been found by experience that the two-inch scale is more convenient for survey work than the six-inch, hence the necessity for the reproduction. The maps are intended for use as a basis for the research work of the Committee, especially in connexion with the work of plotting from air-photographs showing abandoned drainage channels, the Celtic, or Romano-British, system of fields and drainage and the like. A sum of £500 is required. Contributions may be sent to the Hon. Secretary, Dr. Grahame Clark, Peterhouse, Cambridge.

#### Afforestation in Great Britain

IN view of the conditions of drought experienced in 1933, the fourteenth Annual Report of the Forestry Commissioners for the year ending September 30, 1933 (H.M. Stationery Office, 1934) may be read with satisfaction. Since the Commissioners commenced their afforestation work, the only comparable drought in Great Britain was that of 1921; the losses in the nurseries and new plantations were far less in 1933 than in 1921. Equally satisfactory is the comparison of fire losses with those of the bad fire year 1928-29, even though the drought in 1933 was more prolonged. This is attributed to the fact that the whole system of fire prevention and fire protection was overhauled after 1928-29, and with success; since the acreage burnt in 1932-33 was 1,313 compared with 4,574 acres in 1928-29. It is of interest to note that 50 per cent of the fires in plantations

during 1932-33 originated from sparks from railway engines, whilst 19 per cent were caused by the general public. With the growing area of coniferous woods in the country, as a public property, it would appear that railway managements should take steps to minimise this wasteful destruction. The Commissioners continued their planting work, the total area dealt with (planted or sown) during the year amounting to 21,037 acres, of which 19,160 acres were conifers and 1,877 acres broad-leaved species. The total area planted by the Commissioners during the fourteen years amounts to 232,711 acres, of which 217,919 acres are under conifers and 14,792 under broad-leaved species. During the same period, 95,228 acres have been planted by local authorities and private owners with the help of State assistance; the area during 1932-33 amounting to 4,580 acres. Land acquisitions during the year amounted to 17,591 acres, 15,335 acres being classified as plantable land. The Commissioner's policy of establishing training camps for the unemployed resulted in five new camps being formed, the total number being thus augmented to twelve.

#### Agricultural Industries Congress

THE fourth International Congress of Agricultural Industries will be held in July 1935 in Brussels. The third congress was held last Easter in Paris. Many aspects of agricultural research and technology were considered, including the importance of pH (intensity of alkalinity-acidity) in agricultural practice; improvement of wheat and sugar beet by genetical methods; fermentation studies, and various other subjects connected with the food industry. The April number of the *Bulletin de l'Association des Chimistes de Sucrierie, de Distillerie et des Industries Agricoles* contains an account of the Congress, the final report and the resolutions passed. The scientific proceedings have been published in a separate volume. As a result of the last Congress, a permanent International Commission of Agricultural Industries has been established in Paris (156 boulevard de Magenta). Its purpose is to organise international congresses and exhibitions and to notify the various States and organisations concerned of the results of such activities. Among the resolutions passed by the last Congress was a recommendation that some suitable international organisation be requested to correlate the present knowledge concerning water pollution by industrial wastes, and to facilitate further study of the conditions that must be fulfilled by water from industrial wastes in order that it shall not be harmful.

#### Fauna of Caves

A BIBLIOGRAPHY of cave faunas is now being published (*"Animalium Cavernarum Catalogus"*, auctore B. Wolff, Pars 1: Vorwort; Einleitung, Band I, S. 1-16; Band II, S. 1-32; Band III, S. 1-64. 18 M. Pars 2: Band I, S. 17-32; Band II, S. 33-64; Band III, S. 65-144. 18 M. Berlin, W. Junk, 1934). This work is to be completed in three volumes which will form respectively a biblio-