

A Major Cause of Hay-fever

EXTRACTION from ragweed pollen of a colourless, nitrogen-containing chemical believed to be one of the major causes of hay-fever was announced by Prof. Harold A. Abramson and Dr. D. H. Moore of the Columbia University School of Medicine and Dr. H. H. Gettner of Mount Sinai Hospital, at the Wilder D. Bancroft Colloid Symposium held at Cornell University under the auspices of the National Research Council and the American Chemical Society on June 20. The molecular weight of the chemical was found to be "surprisingly low—only 5,000". This small size is significant, it appears, from the explanation that in order to produce hay-fever, pollen must not only be blown into the nose and eyes, but also the molecules causing the symptoms must pass through the mucous membranes into the deeper tissues beneath. "Our study indicates that the ease with which allergic individuals will become sensitized to the contents of pollen grains may depend to a great extent upon the small size of the allergenic molecules which have now been isolated and studied quantitatively by electrophoresis, by ultracentrifugation, and by diffusion experiments for the first time".

Industrial Research Bureau, India

THE report of the Industrial Research Bureau of the Government of India for the year 1939-40 (Delhi: Manager of Publications. 1s. 9d.) refers to the reorganization entailed by the decision to curtail severely plans for expanding the staff of the Bureau and the Government Test House. The Industrial Research Bureau and Research Branch of the Government Test House have now been merged by the formation of the Board of Scientific and Industrial Research and the office of the Director of Scientific and Industrial Research, the first director being Sir Shanti Swarup Bhatnagar. The report on the work of the Industrial Research Council refers to investigations carried out on oils and soaps as well as on the development of the glass industry, and particularly to progress made in the designing and installation of improved glass-melting furnaces. Progress has been made in the survey of deposits of glass-making materials as well as in the survey of the oil-seeds crushing industry.

In regard to the co-ordination of the universities and research institutions in India with the development and extension of industrial research, attempts are being made to obtain the co-operation of the universities in preparing the combined list of industrial researches completed, in progress and proposed to be undertaken in Government laboratories, universities and research institutions in India. Publication of an annual combined list is contemplated. The report on the work of the Industrial Research Bureau also refers to the co-ordination of universities and research institutions. The number of laboratories in India capable of undertaking industrial research work is limited, and after considerable attention had been given to the matter it has been decided to provide funds to be allocated to selected

institutions for the payment of grants to workers engaged in research falling within the programmes to be arranged on the recommendations of the Board of Scientific and Industrial Research.

The Indian Lac Research Institute has continued its work on the development of moulding powder compositions containing a considerable percentage of shellac. The Research Branch of the Government Test House has continued its investigations on paints, particularly on accelerated weathering, paint formulae, fungus growth on paints, and the physical properties of paint films. Work on the factors affecting the properties of dry cells has been continued during the year and some correlation established between the chemical constitution and electrical performance of ores. An automatic cooking machine for dry cells has been designed and constructed in the laboratory. Work on vegetable oils as lubricants has indicated that phenyl- α -naphthylamine, as.-diphenyl-hydrazine, *p*-toluidine and phloroglucinol are the most effective stabilizers for castor oil and rape-seed oil in the presence of iron. A number of blends were prepared for engine tests, and details of these trials are included. Other work has covered the use of vegetable oils as Diesel fuels, building materials, particularly the use of Surkhi as pozzolana.

Trees of the Past

A SHORT interpretation of the fossil herbaria of the rocks by the late Sir Albert Seward (*J. Roy. Hort. Soc.*, 66, Pt. 6, June, 1941) provides a useful epitome of palaeobotanical knowledge. The paper deals particularly with trees, and the story commences with *Cercidiphyllum japonicum*, an Eocene fossil species which is still indigenous in China and Japan. Cretaceous strata brought the first geological appearance of the genus *Magnolia*. Tulip-tree, plane, hazel and oak are present-day trees with stratigraphical antiquity. The maidenhair tree, *Ginkgo biloba*, is one of a group of plants which flourished in the Jurassic and Triassic periods. It is curious that many trees which now only appear in China and Japan were inhabitants of Europe and North America in earlier geological time; west and east seem to have changed places. The Norfolk Island pine, *Araucaria excelsa*, also had a divergent distribution in the past, for fossil leaves, cone scales and seeds were discovered in 1931 from Tertiary sediments in the Kerguelen Archipelago, where now is found only a scanty flora of flowering plants, ferns, mosses and lichens, but no trees.

Wild Flower Society

THE 264th issue of the Wild Flower Society Magazine is an enlarged double one covering January-June 1941, an evidence of the Society's decision to carry on during war-time. Many contributors stress the danger of the Women's Institutes' Herb Scheme exterminating rare British plants unless the Government-encouraged collection of wild drug plants is botanically supervised. The chief paper in the issue is the first supplement to Green's "Flora of Liverpool"