# National Smoke Abatement Society

## MEETING AT BRISTOL

THE annual conference of the National Smoke Abatement Society was held in Bristol on September 20–21 under the presidency of Dr. H. A. de Voeux. Dr. A. G. Ruston summarised the work done with the late Prof. J. B. Cohen on the damage caused by smoke in the West Riding of Yorkshire. Animal, as well as vegetable, life suffers. Land exposed to acid atmosphere becomes deficient in lime, and cows grazing on such land yield milk also deficient in lime.

Dr. R. Lessing reviewed sources of atmospheric pollution, and advocated systematic surveys. The generation of electricity in large units, while diminishing total pollution, has resulted in the localised emission of exceptionally large quantities of acid flue gases, often in thickly populated areas. The concentration of fuel burning has the advantage of facilitating efficient utilisation and also the scientific treatment of the flue gases. Within a few years, two processes have been elaborated for the desulphurisation of flue gases, in the Battersea and Fulham Power Stations. The Fulham process has the advantage of producing no liquid effluent. Dr. Lessing estimates that both processes, when in full operation, will reduce the sulphur acids passed annually into the London atmosphere by 40,000 tons. The London gas companies already recover, during gas purification, sulphur equivalent to 55,000 tons of acid. It may be estimated that the public utilities will eventually recover or remove 20 per cent of the sulphur present in the coal burnt in London.

Large power stations emitting flue gases at a high velocity may be an important source of grit and dust, which is an insidious but noxious polluting agent. Fortunately, the washing process also takes care of the grit and dust at the same time. Central heating of large buildings, institutions, blocks of flats is leading to analogous conditions of local atmospheric pollution on a smaller scale.

Hitherto, efforts to diminish atmospheric pollution have been due mainly to idealists possessing knowledge and vision but impotent to alter actual conditions. Those wielding political power, local and national, have been indifferent. Commercial interests have been passively or actively resistant. Conditions, however, change. Already it is recognised that smoke endangers air traffic, and may render a site ineligible for aerodromes. A recent report of an investigation conducted at Pittsburgh expressed the view that "Smoke is a major obstacle to the popularisation of aviation". Atmospheric pollution is largely responsible for the movement of urban population to the country, and this promotes 'ribbon development'. Smoke may make a district unsuitable or unattractive for new industries. The realisation of this by local authorities and chambers of commerce ought to engender a more active interest in ameliorative measures.

# Problems of Administration and Management

PROBLEMS of amalgamation and decentralisation were discussed at Norwich on September 9 by the Department of Industrial Co-operation of the Economic Science and Statistics Section of the British Association. Mr. L. Urwick opened the discussion with a paper on executive decentralisation with functional co-ordination in which he emphasised the necessity for a technical approach to questions of organisation. After discussing the nature of responsibility, and its relation to authority and power, he pointed out that reasons of time and space as well as psychological factors were important influences making for decentralisation. The steady and inevitable growth of functional specialisation made imperative the clear distinction between executive and administrative or policy-making responsibility, as well as the co-ordination of functional methods, and the reconciliation of these two tendencies was the central problem in modern business organisation. Failure to recognise the nature of the difficulty might easily involve the failure of a business combination. When a new duty arose, Mr. Urwick insisted that the only ultimate solution was to define that duty and assign it to individuals, properly selected and suitably trained. He regarded it as inevitable that business organisation should evolve towards a true system of 'staff' positions and relationships as distinct from either 'line' or 'functional' positions, and organised staff training was accordingly essential.

Mr. T. G. Rose described some examples of decentralisation problems in small undertakings, particularly of the management difficulties arising with a head office in London and works in the provinces, or in financial control from London while management and manufacturing activities are carried on in the provinces, or again in the decentralisation of management in a group of rationalised small firms.

Dr. K. G. Fenelon discussed problems of centralisation and decentralisation in the management and administration of combines. A choice between these two alternatives in practice has usually been made on an empirical basis, and frequently following an initial centralisation, a complete reorganisation had been undertaken to achieve decentralisation on a scientific basis. Such a task of reorganisation involves the careful study of each of the different functions and activities and the determination of the most suitable organisation for each. This reorganisation accordingly involves three stages: first the bringing of all the threads into the hands of the central management for the study of the problems and procedure of the different units; secondly, comparative analysis of the varying activities, leading to standard practice; and thirdly, the evolution of a process of decentralisation to give new elasticity.

Dr. Fenelon stressed the extent to which effective decentralisation depended not only on careful study

and preparation but also on getting the personnel to co-operate with one another and to think and act with enthusiasm. Centralisation of administration, that is, control of policies and centralisation of the management of each of the chief functions, did not always in practice go together. Improved management methods had greatly facilitated the centralisation of administrative control, and an economic research department or a statistical department frequently gave specialised assistance. The chief danger of administrative centralisation lies in pushing it to a point at which the initiative of local executives is destroyed and the organisation becomes unresponsive to variations in local conditions and the demands of local markets.

Administration and management, however, cannot be kept entirely distinct. It is essential to provide that a managerial staff shall be consulted in the formulation of policies, their active consent obtained and their interest aroused, and Dr. Fenelon referred to the advantages of the wise use of committees, and a budgetary system. With regard to the control of particular functions, the extent of centralisation or decentralisation should be determined by the nature of the function, and the relative importance of technical knowledge, personal contacts with customers, etc. Considering types of organisation, Dr. Fenelon referred to methods of co-ordination, through a system of committees, and to the use of staff on the lines advocated by Major Urwick. He suggested that in any industry there was a definite size of organisation beyond which smaller returns on capital and organisation were obtained. Moreover, success or failure was often determined by the willingness or otherwise of the chief executives to delegate authority and by the closeness of the attention given to the form of organisation and to the principles of administration.

# Fourth Imperial Entomological Conference

THE fourth Imperial Entomological Conference, which was summoned on behalf of the Imperial Institute of Entomology and attended by twenty-seven delegates, each representing a different Dominion, Colony or other area of the British Empire, was held in London on September 19–27. The delegates were received by Sir Charles J. Howell Thomas, chairman of the Executive Council, and devoted the remainder of the first morning to the appointment of committees concerned with questions affecting the future policy and activities of the Imperial Institute of Entomology. Afterwards, four mornings or afternoons were devoted to meetings of committees and a final business meeting, and five to public meetings at which papers were read and discussed. Visits were paid to Rothamsted Experimental Station, the Forest Products Research Laboratory, Princes Risborough, the Parasite Laboratory of the Imperial Institute of Entomology at Farnham Royal, and the Stored Products Research Laboratory, Slough. At Farnham Royal, much interest was taken in a cinematograph film shown by Dr. K. R. S. Morris, illustrating work on the collection in central Europe and Sweden of parasites of pine sawflies (*Diprion*) for export to Canada.

By the courtesy of the president and council of the Royal Entomological Society of London, the public meetings of the Conference were held in the meeting room of the Society at 41 Queen's Gate; the delegates were also given every facility to use the Society's library.

The papers read and discussed were: locusts and grasshoppers, by Dr. B. P. Uvarov; termites, by Mr. F. P. Jepson; cotton-stainers and their control, by Mr. W. Allan; sheep blowflies, by Dr. G. D. Morison; the biological control of insect pests, by Dr. W. R. Thompson; pests of stored products, by Prof. J. W. Munro; the need for forest entomologists, with special reference to the pinhole borer problem, by Dr. R. C. Fisher; and plant viruses and their insect vectors, by Dr. K. M. Smith.

It is impossible here to give even an outline of the contents of all these papers, but mention may be made of two, selected as typical examples. That by Mr. Jepson attracted great interest, as it was realised that it dealt with problems on the practical aspects of which much work is required and relatively little has been done. Authorities on termites are few, and most of them are primarily interested in the systematic branch of the subject. Mr. Jepson opened by indicating the enormous damage caused by termites to crops, forest trees and all structures in which timber is employed in the tropics and subtropics, and estimated the annual losses as several millions of pounds sterling in the Empire alone. He then devoted the main part of his paper to a very valuable account of the methods found effective in his experience for the construction of buildings of various types in order to render them proof against invasion by soil-nesting termites, the principle underlying all of them being the insertion between the superstructure and the soil of a barrier of concrete that the insects cannot pass through or round. In his experience (and this was confirmed by speakers in the discussion that followed), Government engineers are usually not inclined to welcome advice on the construction of termite-proof buildings, and great damage to or destruction of valuable buildings constantly results. In addition to excluding subterranean termites, however, it is further necessary, in many countries, to guard against the establishment of drywood termites in the timber of buildings. As these gain admittance in the winged state, the only solution is to use timber that is naturally immune or has been rendered so by artificial treatment. Owing to the contamination of food by the fæcal pellets of these insects, which occurs when they infest roof-timbers, food-safes, etc., the varied protozoan and bacterial fauna of their intestines deserves further study. In Ceylon, it is usually in houses attacked by them that cases of sprue develop, and there is reason for suspecting that the contamination of human food by their solid excrement is in some manner associated with the causation of this disease.

As a result of this paper and the discussion that