Current Topics and Events.

A LARGE party from Section D (Zoology) of the British Association visited Hayling Island on Monday for the formal opening of the British Mosquito Control Institute which has been built there by Mr. J. F. Marshall. Anti-mosquito work was commenced at Hayling in 1920, and we have on several occasions referred to the very valuable results achieved. By draining and other operations, the mosquito nuisance in the district has been almost entirely removed, and the measures adopted have been followed with success at other places around the coast. Mr. Marshall's work in connexion with both salt-water and fresh-water mosquitoes has become so widely known that inquiries from medical officers and others continually reach him from many parts of the country, and numerous people interested in the subject have visited Hayling to see his laboratory and his control work in inter-tidal and other areas. This led to the erection of a building containing a demonstration museum, laboratory, drawing office, photographic room, and other facilities for study and research in various branches of mosquito control work. The building, the design and equipment of which are based upon five years' experience in the laboratory and the field, is the first example of an institution devoted exclusively to what may be termed the non-medical side of mosquito investigation. Sir Ronald Ross, in an address at the opening ceremony, described the growth of the organisation at Hayling and expressed high appreciation of Mr. Marshall's work, both as to its scientific value and practical service. We hope to give some further particulars of the Institute and the opening ceremony in our next issue.

THE recommendations of the Committee on the use of preservatives and colouring matters in food have already been noticed in these columns (February 14, p. 217). It will be remembered that the Committee considered that the use of boric and salicylic acids and their salts should be prohibited completely, that sulphurous and benzoic acids and their compounds should be permitted in certain articles of diet in quantities not exceeding a definite limit which varied according to the food, and that a list of permissible colouring matters should be drawn up. The Minister of Health has now issued regulations under the Public Health Acts dealing with this subject. (The Public Health (Preservatives, etc., in food) Regulations, 1925. Statutory Rules and Orders 1925, No. 775, and Circular 606. London: H.M. Stationery Office, 3*d*. and 1*d*.) Certain previous regulations as to the use of preservatives in butter and cream are revoked, and the use of any thickening substance in the latter is forbidden. The foods in which preservatives are allowed, whether sulphur dioxide or benzoic acid, and the maximum amount permissible, are given in a schedule: it will be remembered that the articles of diet concerned are sausages, fruit preparations, wines, non-alcoholic beverages, syrups, gelatin, coffee extract, pickles and sauces. As regards colouring matters, a short list of those forbidden has been drawn up and includes certain metallic salts, a few coal-tar dyes and gamboge. The regulations include a section prohibiting the sale as a preservative of any article the use of which as a preservative is forbidden, and also details as to the labelling of certain of the food products in which a preservative is permissible and of articles sold specifically for use as preservatives. The regulations come into force on January 1, 1927, except in the case of butter and cream, where their operation is postponed for a further year.

THE issue of the Journal of the British Science Guild for August contains a valuable report, prepared by a committee of the Guild, on the supply of trained research workers in Great Britain and their utilisation in industry. According to it, in the year 1923–24, the number of full-time students of science at British universities was 60 per cent. greater than in 1913–14; the number of students who obtained science degrees was three times, and the number engaged in full-time scientific research four times, the corresponding numbers in the former year. While the universities are in this way doing what they can to supply the industries with the research workers they require if they are to hold their positions against their competitors, the industries themselves are doing little to absorb the trained men available. This is particularly the case in the chemical industry, and the Department of Scientific and Industrial Research has taken steps to reduce the number trained in this subject. The committee recommends that a staff of research workers should be maintained in a national institution, and that any firm should be able to secure the services of one or more of them for work at its own private problems.

IN a recent address to the American Institute of Electrical Engineers, published in the June issue of the Journal of the Institute, Mr. E. M. Herr discussed the future of railway electrification. Up to June 1924, the electric locomotives built and under construction in the world numbered 2351, of which the aggregate horse power was more than four million. Of these locomotives 905 were operated by direct current. In Italy there were 504 locomotives, and in the United States 465. Then came France, Germany, and Switzerland with 366, 304, and 214 locomotives respectively. No other country had so many as 150 electric locomotives in service. Great Britain, however, has constructed and is constructing a large number of electric locomotives for use overseas. One curious development in the Italian railways is the use of portable substations. These are of use in the event of a breakdown of an ordinary substation or when part of the line gets overloaded. All the devices, including 100,000 volt transformers, are carried on a railway bogie waggon frame which can be coupled to an ordinary train and travel at a speed of 50 km. (31 miles) per hour. At present they are in regular use in places where the substations have not yet been constructed. One of these substations is being exhibited at the Grenoble Exhibition.

In an address to the Water Power Congress held at Grenoble in July, a translation of which appears in *Engineering* for August 14, Mr. Bouchayer discusses the regulation of the import and export of electrical energy between neighbouring countries. In France, the demand for electric energy greatly exceeds the supply, and so the main problem is concerned with the import of electrical energy from abroad. Switzerland supplies most of the imported energy. Belgium supplies energy to both works and distributing stations. A small amount of energy also is transmitted across from Italy and Spain. The amount sold to French consumers in 1923 by the Swiss hydro-electric industry amounted to 521 million kilowatt hours and is constantly increasing. This export is watched with some misgivings by the Swiss Federal Council. They are afraid that the use of cheap hydraulic power may enable a foreign industry to compete successfully with one of their own. Should there be a drought, the export "permits" limit seriously the amount of energy that can be transported, and this may be very awkward for the foreign consumer. The suggestion is made that the Swiss law should provide for an indemnity when an authorisation is withdrawn. From the point of view of the French authorities, the import of cheap energy may prevent the development of French hydro-electric power, which, as it has in general to be transmitted over long distances, cannot be sold so cheaply. Mr. Bouchayer suggests that an inquiry should be held and also that a tax should be put on energy imported over a distance of 100 km. (62 miles) into France. The tax suggested is 0·005 franc per kilowatt hour. Electrical energy should only be imported within the limits required by the national interest.

The Rowett Research Institute has recently issued Volume I. of Collected Papers consisting of 62 communications to a score of different journals. All but two of these have been published within the last five years. The wide distribution of these publications, serving as they do the sciences of agriculture, bacteriology, chemistry, and medicine, make it most convenient to have all the publications in one volume. The name of the editor of the volume, Dr. J. B. Orr, Director of the Institute, is associated with half the papers. The field of research covered by a number of investigators in four different departments is naturally extensive, but the activities of the Institute as a whole have been focussed on problems of nutrition. Although much work has been published on the subject of calorimetry, the staff, while recognising the importance of this aspect of nutrition, realised that other essential factors had in the past been neglected. Several papers are devoted to work on vitamins, but this work seems to have stimulated a reluctance to accept the explanation of deficiency of these accessory factors as the chief cause of lack of growth and of such diseases as rickets, attributed to vitamin deficiency by the majority of modern investigators. Other possible explanations have therefore been sought; the neglected field of mineral metabolism offering the most scope for work. The possibility of a lack in the food supply of any of the normal mineral constituents of the animal body, *e.g.* calcium, phosphorus, iron, etc., and the effects produced by deficiencies of these substances, are complicated by hypotheses of the necessity of rigid mineral balances in the food, thus presenting a very wide field for investigation. The Rowett Research Institute is to be congratulated on the whole-hearted way in which the staff has attacked these problems, for much more work on animal nutrition is urgently required by our oldest industry to make good the deficiencies arising from new animal environments. It is well to remember, however, that this is the output of only five years' work, and the too speedy application of scientific results to agricultural practice has its dangers.

The British Research Association for the Woollen and Worsted Industries, Torridon, Headingley, Leeds, is awarding next session a number of research fellowships and advanced scholarships. The fellowships will be of the annual value of not more than 200*l.* each and are tenable at an educational institution or at a works. The scholarship grants are such as to cover expenses and maintenance and are intended to enable students to specialise after completing their secondary or university education; they are also open to factory workers. A wide choice of studies is available to textile students who enter for these scholarships.

Applications are invited for the following appointments, on or before the dates mentioned: An assistant lecturer in agricultural zoology in the department of agriculture of the University of Leeds—The Registrar, The University, Leeds (September 14). A lecturer in metallurgy in the University of Liverpool—The Registrar, The University, Liverpool (September 15). A secretary to the Public Instruction Committee, Jersey—The President, Public Instruction Committee, Greffe Office, Jersey (October 1). The Jenner Memorial Research Studentship at the Lister Institute of Preventive Medicine—The Secretary, Lister Institute, Chelsea Bridge Road, S.W.1 (October 3). A director of the new pharmacological laboratories of the Pharmaceutical Society of Great Britain—The Secretary, Pharmaceutical Society of Great Britain, 17 Bloomsbury Square, W.C.1 (October 5). A senior lecturer in philosophy in the University of Melbourne—The Agent-General for Victoria, Melbourne Place, Strand, W.C.2 (October 15). A director of the department of medical entomology, and lecturer on noxious and venomous animals, at the London School of Hygiene and Tropical Medicine (Division of Tropical Medicine and Hygiene)—The Secretary of the School, 23 Endsleigh Gardens, N.W.1 (October 31). An assistantship in the Department of Logic of the University of Glasgow—The Secretary, The University, Glasgow. A junior scientific assistant in the ignition and electrical department of the Royal Aircraft Establishment—The Superintendent, Royal Aircraft Establishment, South Farnborough, Hants (quoting A. 78). A chemist in the establishment of a large textile firm—The British Woollen Research Association, Torridon, Headingley, Leeds.