

persists. When forest conservation was introduced into the tropical and sub-tropical portions of the British Empire, fire protection was considered to be one of the first important steps to inaugurate. The success achieved in India in this respect is well known; but, efficient and energetic as the forest service of that country showed itself in the fine system of fire protection introduced into the State forests, it would never have achieved success without vigorous official support. A Science Service Mail Report (Washington, D.C., July 30) states that owing to the drought, there has been a 66 per cent increase in forest fires for 1934 over the average of the past three years. National and State forests have, it is said, become like tinder in a great many areas, and the smallest spark is sufficient to light them. In 1933, there were 140,722 fires, the area burnt being 43,889,820 acres, the total damage being estimated by the U.S. Forest Service at 60,274,960 dollars. If the number of fires increases at the same rate as already experienced this year, the totals will exceed those of 1933. Attention is directed to the fact that a sum of 75,000,000 dollars has recently been earmarked for the 1,300 mile shelter belt of trees extending from the Canadian border to Texas, and the work is expected to continue for ten years. A comparison of the annual expenditure on this new forest belt with the destructive losses from forest fires shows that eight times the money spent each year for the next decade on planting trees would barely equal the value of the loss by fire in 1933.

#### Field Museum of Chicago

THE Field Museum of Natural History, one of the most progressive in the world, has suffered from the adverse financial conditions of the times, which have brought about declines in the value of securities held in endowment funds and reduction in income from endowments, contributions and memberships. Schemes of expenditure have had to be very much curtailed and economies enforced, but the result has been a gratifying reduction of the deficit carried forward from the previous year. Part of the success was due to the influx of visitors to Chicago for the Century of Progress Exposition, for the museum visitors for 1933 numbered 3,269,390, an annual attendance exceeding that ever attained by any museum in the United States, and probably a high record for the world. The growing fame of the Field Museum has something to do with its success. Consider the two major exhibits opened to the public in 1933: one, the Chauncey Keep Memorial Hall containing sculptures representing the principal races of mankind, and the Hall of the Stone Age of the Old World, with its restorations of types of prehistoric men and phases of their cultures. Both these new halls are unique—no other institution has exhibits illustrating these subjects on the scale of the Field Museum. In the zoology halls there were added natural groups of African lions, gaurs or seladangs of Asia, Florida manatees, orang-utans, bowerbirds, and many series not treated as natural groups. Expeditions and field work had to be avoided

except where they were financed by special funds contributed for the purpose; even so, zoological collecting was carried on in Guadalupe Island, in Guatemala and in West Africa, fossil collecting in Colorado and the eastern States, and archaeological excavations on the site of the Lowry ruin in south-western Colorado.

#### Agriculture in New Zealand

IN opening the annual Dominion Conference of the New Zealand Farmer's Union at Wellington, Lord Bledisloe, the Governor-General, reviewed some of the current problems of the agricultural industry. After expressing the view that in no other country has the farmer brighter prospects, he urged the need for 'planning' control if economic success is to be realised. The lack of uniformity that still exists in both the dairy and cattle industries of New Zealand is preventing the extension of markets, and the elimination of second-rate produce must be effected as soon as possible. This cannot be brought about by Government intervention or control, but lies in the hands of the farmers themselves. Comparison with successful agricultural countries, such as Denmark, shows that this type of self-organisation is the most satisfactory. Speaking with reference to the cattle industry, Lord Bledisloe deplored the continuation of the embargo imposed on the importation of British livestock. The measures adopted in Great Britain for the suppression of epidemics such as foot-and-mouth disease are so drastic, he said, that the risk of introducing this complaint into New Zealand is nil. On the other hand, the loss to their cattle industry (especially in view of the present hopeful prospect of a remunerative trade in chilled beef and bacon pigs) is a very serious matter. In general, the outlook for the future is a hopeful one, but harmonious co-operation between town and country, factory and farm must be achieved if a lasting prosperity is to be assured.

#### Abattoir Design

A REPORT on abattoir design has recently been issued (Economic Series, No. 40. H.M. Stationery Office. Price 1s. net) by a technical committee appointed by the Ministry of Agriculture and Fisheries last December to consider the output, structure, layout and equipment of factory abattoirs. The Committee recommends that the principal characteristics of a factory abattoir should be single control, specialisation of labour, continuous process, the killing being spread fairly evenly over at least four days of the week, and a uniform condition and appearance of the finished product in place of the variations at present existing in the condition not only of the meat but also of the by-products. The Committee prefers a multi-floor factory abattoir to the single floor type found in nearly all the public abattoirs in England, on grounds both of hygiene and economy. It is recommended that in order to raise the general level of the condition of home-killed meat, all the meat and red offals should be adequately cooled before removal. Provision should also be made for

the production of dripping, sausages, skins, tripe and calves' feet, tallow, meat meal, blood manure, and animal glands for medicinal purposes. In conclusion, the Committee suggests that the difficulties of adjusting the slaughtering charges and the prices of by-products retained at the abattoir for processing might be minimised by leasing the abattoirs to slaughtering and by-product companies or associations. The local authority would thus be relieved of the difficulty of fixing service charges and yet could reserve to itself the right of general supervision.

#### Generic Names of British Insects

UNDER this title, the Council of the Royal Entomological Society of London has decided to issue, in parts as completed, a work designed to promote stability in the use of scientific nomenclature as applied to the insects of Great Britain. The scheme has been entrusted to a Committee on Generic Nomenclature, under the chairmanship of Sir Guy Marshall, with the assistance of the entomologists at the British Museum (Natural History). The terms of reference involve the preparation of "lists of scientific names to be fixed as genotypes of genera of British insects with a view to the suspension where necessary of the law of priority in respect of those generic names". The separate orders of insects are being dealt with by small panels of specialists acting as sub-committees of the central committee. The first list of generic names to be published under this scheme is entitled "The Generic Names of the British Rhopalocera with a Check List of the Species" (Feb. 1934) by Mr. Francis Hemming, and is to be obtained, price 3s. 6d., from the Society at 41, Queen's Gate, S.W.7. In this publication, the authority for fixing the genotype is given in each case, followed by the chief synonyms and the accepted names of the British species, for each genus concerned. There follow, wherever necessary, notes on special questions of nomenclature that may arise. In the case of four generic names, namely, *Argynnis*, *Vanessa*, *Strymon* and *Colias*, it is contended that the strict application of the rules of nomenclature should be suspended since, otherwise, it would involve the disturbance of these long-established names to no real advantage. The whole undertaking should prove a useful guide to all entomologists and a strong incentive towards the attainment of uniformity.

#### Value of Experiments on Animals

THE eighth Stephen Paget Memorial Lecture of the Research Defence Society, on "Experiments on Man", delivered by Prof. J. Barcroft, appears in *The Fight against Disease*, No. 3, 1934. The question whether the results of experiments performed on animals can be regarded as being applicable to man is discussed. It is concluded that in a great many cases the relevant information can be obtained from animal experiments. In certain instances, it may be necessary to perform the experiments on man, as in the elucidation of sensation and mental performances, and in the communication of disease when animals

are unaffected by the virus. Attention is directed by the treasurer to the need for increased financial support for the Society.

#### Announcements

THE Trustees of Herbert Spencer have in the Press a book by Dr. J. Rumney on sociology, giving an account of the part Spencer played in founding the science, and showing to what extent his views have guided later scholars. The book will be published by Messrs. Williams and Norgate, Ltd., in the early autumn.

At the annual general meeting of the Lister Institute of Preventive Medicine, held on May 30, the governing body presented the Institute's fortieth annual report. In addition to items concerning administration and finance, the Report gives a survey and summary of the scientific work carried out in the various departments during the year, forming a record of much valuable research. The Institute also houses the National Collection of Type Cultures, a collection of authenticated cultures of bacteria and fungi, which are available for those who may require them.

THE British Federation of University Women, Crosby Hall, Cheyne Walk, S.W.3, has issued and published a revised and enlarged second edition of "A List of International Fellowships for Research" (Price 2s.). The purpose of the book is to provide both men and women graduate students and research workers in nearly all countries with information concerning the opportunities open to them for carrying on their work in other countries by means of travelling fellowships or scholarships. Most of the fellowships listed are open equally to men and women, but those restricted to either sex are distinctively marked.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A lecturer in mining at the Chesterfield Technical College—The Clerk to the Governors, Technical College, Chesterfield (Sept. 24). A chief lecturer in electrical engineering at the West Ham Municipal College, Romford Road, Stratford, E.15—The Principal (Sept. 27). A chief veterinary officer for the North Riding of Yorkshire County Council—The Clerk to the County Council, County Hall, Northallerton, Yorks (Oct. 1). A resident tutor in physics and mathematics at Borough Road College, Isleworth, Middlesex—The Principal. An assistant lecturer in education (especially in science subjects) at University College, Exeter—The Registrar.

ERRATUM. By a regrettable mistake, the Hardy Memorial Lecture at Aberdeen was referred to in early issues of NATURE of September 15, p. 411, as having been delivered by Sir Frank Heath. The lecture was, of course, given by Sir Frank Smith, whose name appears correctly in later issues.