

interior of western Asia. Brak has also afforded from its early levels objects belonging to a Sumerian civilization of the Archaic period, revealed in this area for the first time. Among other accessions are the now famous inscriptions on potsherds from Lachish, which are deposited by the Wellcome Trustees. These inscriptions, the Lachish letters, are the earliest known example of written Hebrew, and refer to events mentioned in the Bible and relate apparently to the siege of Lachish by Nebuchadnezzar. The Egypt Exploration Society, at the instance of Dr. Alan H. Gardiner, has presented to the Museum the antiquities allotted to it from the Society's excavations on the site of Sesebi in the Egyptian Sudan, which were exhibited at the Society's rooms in July last. It will be remembered that these excavations are of special importance for the light they throw on the earlier years of Akhnaton's rule.

Introduction of Plants into British Colonies

THE Colonial Office has performed a useful service to growers and exporters of plants and also to the British Colonies, by the issue of a digest of the legislation on plant introduction in force at the end of December 1936 (London: H.M. Stationery Office, 1937; 1s. net). Introduced pests and diseases have occasionally done much damage: instances cited are 'brown hardback' (*Phytalus Smithi*), causing serious losses to the sugar planters in Mauritius; the 'wither tip' disease, largely responsible for the ruin of the lime industry in Dominica; and the 'witchbroom' disease of cacao, now causing so much havoc in Trinidad. Since then, in 1876, Malta first instituted an ordinance "to prevent the introduction of diseases affecting agricultural produce", enactments have grown in number and diversity, and there is now real need for their comprehensive survey, such as is rendered possible by this publication, with the view of gradually simplifying procedure and introducing where possible more legislative uniformity.

To this end the third Imperial Mycological Conference, held in London in 1934, urged the adoption of a uniform type of health certificate throughout the Empire; and a standard form accepted by all Colonial Governments appears in the appendix to this summary. Furthermore, the geographical grouping of some Dependencies permits a measure of common action in these matters which has great practical advantages, and the colonies of West Africa have entered into a plant exchange convention under which each Dependency enacts similar legislation. A similar convention now links the Union of South Africa, Southern Rhodesia and the Belgian Congo, to which Northern Rhodesia and Nyasaland have since become parties. Proposals have also recently been approved for a similar arrangement in respect of East African Dependencies, and the necessary legislation is under consideration. This useful summary may supply the basis upon which further common action may be based that may lighten restrictions upon trade without removing

the necessary check upon the control of distribution of disease.

Manchester Scientists' Peace Association

THE Manchester Scientists' Peace Association, which has recently been formed with the objects of co-ordinating the influence and efforts of men of science of the Manchester district in the cause of peace, and of promoting a scientific and objective attitude to peace problems, held its first public meeting in the Milton Hall, Manchester, on December 13. The meeting was addressed by Prof. H. Levy, who stressed the importance of applying scientific methods to problems involving social relationships. He asked his audience not to be frightened by the feeling that the interaction of science and society is a political issue; politics it may be, but it is none the less amenable to attack as an objective problem. The professional politician, educated as a rule in the classical tradition, is frequently unable to appreciate this, and the entry into politics of more men of scientific training is most urgently required. But whether actively engaged in politics or not, the scientific man, especially if he has brought children into the world, cannot evade the responsibility of ensuring to the best of his abilities that the powers of science are used for the benefit, and not for the destruction, of the coming generation. A general meeting of the M.S.P.A. is to be held on January 17, at which a constitution will be proposed, officers elected and a programme of activities discussed. Particulars can be obtained from the provisional honorary secretary, Mr. D. C. Henry, The University, Manchester.

Impacts of Science

IN his Streatfield Memorial Lecture on October 15, entitled "Chemical Changes and Chances", Sir Martin Forster described some of his early experiences and the development of science in his early years which not only give a vivid and happy picture of Streatfield's personality but also afford a highly suggestive glimpse of the reactions of discoveries and personalities in the same period. He recalls being assured in November 1892 that all the most important discoveries in organic chemistry had been made, and then refers briefly to the way in which Nef, Claisen, Fischer, Pope and others rapidly enlarged our ideas of valency, intramolecular change, the configuration of sugars, the Walden inversion, etc. In discussing the reactions of science on industry, Sir Martin stresses the factor of the reaction of personality to background, and the rarity of finding a brain in which chemical and commercial instincts are co-equally powerful. He endorses Mr. Cronshaw's conclusion regarding the languishing of the dyestuffs industry in Great Britain and repudiates the unjustified condemnation of the business man in which chemists sometimes too readily indulge. On the contrary, he asserts that, in his experience, business men take reasonable trouble to ascertain the facts with which they have to deal, and he cites examples of benefits which the world enjoys through their enterprise.

IN the latter part of his lecture, Sir Martin discusses a number of problems arising out of the impact of science, and makes many shrewd comments on the attitude of chemists in such matters, which should stimulate a more rational attitude and wider scientific outlook in determining the conduct of the scientific worker as a citizen. In particular, he refers to the need for a practical attitude to the question of national defence if our liberty of thought and action is not to be lost, and of the need for more practical solicitude, enlightened by wider scientific outlook with increasing inter-communal tolerance and courage, to face ugly facts if the problem of productivity and distribution is to be solved. Equality of opportunity cannot be completed without equality of reception, which the human divergences render chimerical. The development of a community is the algebraic sum of self-development by its component members, although noteworthy material and ethical advance follow mainly from the deeds and ideals of its ablest members. The pursuit of science still does not liberate us from common human failings, and Sir Martin considers that one of our most serious problems is to prevent greatly increased comfort and opportunity for amusement from robbing our young people of self-reliance and ambition. On the solution of this problem the progress and happiness of our race will depend.

The Roads of France

IN a paper on "Transport in France" presented by F. J. Wymer to the Institute of Transport on October 19, it is said that the image which generally lingers longest in the mind of an Englishman who has motored through France is a section of 'route nationale' stretching ahead of his car into the far distance, with poplar trees passing the eye on each side like the pales of a fence. The same type of road was to be found 1,700 years ago in Great Britain from Dover to London and York, from Southampton to London and Chester, and many other roads, as the system in France is, like our own, undoubtedly descended from that of the Roman Empire. In contrasting the present roads in Great Britain with those in France, it has to be remembered that no hostile force of any appreciable dimensions has landed upon the shores of Britain for nearly a thousand years; our defences have been upon the sea and so the roads were built with this end in view. Hence the roadways of England tended mainly to be local links from village to village and so in a meandering way passed through a maximum number of towns and villages. In France they were designed on a plan connecting by the most direct routes the capital with the military centres. Having such different road systems, it is interesting to note that both France and England seem to be following similar tendencies in developing their systems unlike other great European countries. In France, after the Great War it was decided, instead of concentrating upon a few selected routes, to improve the standard of the whole system just as is being done in Great Britain. In France, the roads are being modernized by widening,

by the elimination of level crossings, by the re-designing of road junctions and the provision of modern surfacing.

THE construction and upkeep of the French roads depends upon their status. The 'routes nationales' are maintained by the State and the 'routes départementales' by the departments. The smaller roads known as 'chemins vicinaux de grandes communications et d'intérêt commun' are looked after by the communes, but sometimes the departments give them financial assistance. The 'chemins vicinaux ordinaires' and the 'voies urbaines' are kept up by the communes and municipalities alone. Taking 125 francs to the pound sterling, the total sum expended annually on the construction and upkeep of the road system is nearly eight million pounds, or about one seventh of the amount expended upon the roads of Great Britain. As a whole the roads of France are on a lower standard than those of Great Britain, and it is difficult to draw a direct comparison between expenditure in different countries as 'values' and 'exchanges' are always altering. Taxes are imposed on road vehicles, and also on their fuels. The total sums collected by the French treasury from this source amount to nearly four times the annual expenditure on the roads.

Golden Gate Fair

THE completion of 'Treasure Island' in San Francisco Bay has added about 400 acres of new territory to the United States. This man-made island will be the site of the 1939 Golden Gate International Exposition. It was formally delivered to the Government by the U.S. Army Corps of Engineers, who made the reclamation on November 21. The site of the Fair is an outstanding engineering achievement. It is happily situated between the world's two largest bridges. A special feature of the Exposition will be British Empire Day, which will be celebrated on May 27, 1939. A committee headed by Mr. A. G. Charlton, the British Consul General, is making plans for the occasion. In spite of the fact that the last of the filling material within the 17,760 ft. seawall has only recently been placed in position, two million pounds' worth of building construction work is already in progress. Large concrete and steel hangars have been completed. This Pageant of the Pacific will celebrate not only the completion of the San Francisco-Oakland and Golden Gate Bridges, but also the latest developments of science and engineering skill. These will include the Halls of the Mineral Empire and of Science, the Palaces of Business Progress, including electricity and communications, and pavilions devoted to Agriculture and Homes and Gardens. A new type of architectural design which is called 'Pacific' will combine Eastern and Western styles in a harmonious way. To beautify the grounds, £300,000 will be spent on landscape gardening and horticulture. The western States jointly with California will be hosts at this Pageant of the Pacific. British Columbia has announced that she will participate. Fifteen foreign nations have