

vocational guidance should still be regarded as at the experimental stage" though "sufficiently encouraging to justify the continuance of experiments". It is therefore recommended that the Industrial Health Research Board in co-operation with the Ministry of Labour should carry out further experiment. Various suggestions are made for the co-ordinating of existent services and for a better interchange of information between the various bodies concerned.

#### Present and Past World Problems

DR. NICHOLAS MURRAY BUTLER has been protesting, in an address delivered at Columbia University's summer session convocation on August 7, against the absurdity of treating the world problems of our time as if they were unprecedented—as if there had been no tests in the past of theories and ideals of social, economic and political life as applied to conditions fundamentally similar. Between 1776 and 1789, the thirteen American States faced every single problem which the nations of the world face to-day. What those sovereign States were doing then, indulging in internecine tariff wars, boycotts, export prohibitions, pandering to short-sighted prejudices and particularist passion, the sovereign nations of the world are doing now. The substantial identity of the problems and of the futile tactics with which it was sought to circumvent them are illustrated by passages quoted from the works of F. S. Oliver and John Fiske and from State papers. It was Alexander Hamilton who, combining an acute intelligence, assiduous study, varied experience, indomitable courage, tenacity of purpose, persuasive eloquence and whole-hearted devotion to ideals, saved the States from the ruin towards which they were drifting, and it is by the application of the spirit of his policies to the needs of the nations of the world to-day that these may yet be saved from the world chaos with which we are threatened. The title of the address is "The World needs another Alexander Hamilton".

#### Work of the Meteorological Office

THE annual report of the Director of the Meteorological Office for the year ended March 31, 1934 (London: H.M. Stationery Office, 1s. net) is on the same general lines as previous reports, but is somewhat longer, numbering sixty pages; this expansion has its counterpart in an all-round increase in the activities of most of the different sections of the Office, in particular as regards the number of persons or institutions that were supplied with meteorological information, particulars of which are given in the report. In one respect, however, this report differs from those of recent years; it is made more self-contained by a modification of the introductory matter into a fairly detailed exposition of the normal work of the Meteorological Office, especially that part of it connected with synoptic meteorology which involves the collection of data broadcast by foreign countries and by ships at sea, and the supply of such data for the British Isles and neighbouring seas in return; little or no know-

ledge of such matters is assumed on the part of the reader. The statistics relating to the work performed in response to external demands for information show in some cases a striking rate of increase; for example, the forecast service dealt with 10,166 inquiries for the Press compared with 8,705 in the previous year, an advance that cannot wholly be explained by the abnormal weather of 1933-34, although this was doubtless partly responsible for it. In the section concerned with British climatology, where inquiries about past weather, some of which are of a very detailed character, are dealt with, the number of such inquiries was 2,222, and it is stated that in comparison with the annual figure ten years back, this represents a six-fold increase. The report not only summarises the activities of the branches of the Office at headquarters, located in Kingsway, London, and at Exhibition Road, South Kensington, but also those of the observatories and of the branches in Scotland, Malta, Egypt and Iraq.

#### Co-operation between Aeronautics and Meteorology

AN interesting case of co-operation between scientific workers to their mutual advantage is revealed in the annual report of the Meteorological Office. The Royal Air Force has established a meteorological flight at Duxford Aerodrome, Cambridge, which consists of two aeroplanes with the necessary pilots and ground staff. Their particular duty is to collect information regarding the upper air, and flights are made daily to heights of 25,000-30,000 feet. These flights often involve penetrating cloud layers several thousands of feet thick, and such is the keenness of the station personnel that more than 90 per cent of the scheduled flights have been completed during the past year. Information developed from this is prepared specially for civil flying and distributed from such centres as Croydon. The report states "The rapid growth of flying in and above clouds on the Continental air routes, and the practice of following a direct compass course between the terminal aerodromes, have necessitated the forecasting of much more critical conditions than formerly. Consequently the work at Croydon has become highly specialised and necessitates forecasters of considerable experience of the peculiarities of these air routes, which—in the opinion of pilots of wide experience—are the most difficult from a meteorological point of view of any in the world". 336 gale warnings were issued during the year, of which 81 per cent were justified. It has also been established that there is a fair measure of agreement between the frequency of thunderstorms and the occurrence of sunspots in high northern and tropical latitudes, though not so marked in the temperate zones.

#### Biological Field Station near Sydney

THE Sydney University Biological Society has recently opened a field research station at Narrabeen, the erection and fitting of which was accomplished at a very modest cost by members of the Society and of the Sydney University Rover Scouts; the building

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