

establishment of an administrative examination of appropriate standard for passing from the general grade of clerical officers to the higher grades.

OTHER recommendations relate to the adoption of uniform grading systems and salary scales, the wide notification of vacancies, the establishment of a minimum age limit of sixteen years, coupled with the possession of a school certificate for entry to the service. A certain proportion of junior clerical officers should be recruited at eighteen or nineteen years of age, apart from the systematic recruitment of university graduates and of professional and technical officers from all available sources. A thorough investigation of technical qualifications is required, and coupled with greater precautions against personal influence in making appointments, greater mobility of officers between local authorities, the assignment by each local authority to one establishment committee of all questions affecting the recruitment, qualification, training and promotion of officers; these suggestions should assist in the development of a local government service able to meet the increasingly onerous demands made upon it.

New Cheshire Nature Reserves

THE two Nature reserves in memory of the late T. A. Coward, the well-known naturalist and author of "The Birds of Cheshire" and "The Vertebrate Fauna of Cheshire", of the Manchester Museum, who died on January 29, 1933, have been completed in Cheshire. They have been formed by a committee of naturalists and admirers, the T. A. Coward Memorial Fund, under the chairmanship of the Right Hon. the Earl of Stamford; though as yet some £200 of the purchase money is required. It is proposed to hand the reserves over to the care of some national body like the National Trust. The two sites chosen were Marbury Mere in mid-Cheshire, and Cotterrill's Clough, a 'hanging' wood on the banks of the River Bollin within sight of Coward's home at Bowdon (NATURE, 132, 437, Sept. 16, 1933). Each locality is rich in bird life. At the latter, Coward recorded the grasshopper-warbler, and used it for the recording of the arrival of migrant species, while the former, which includes a large lake and 1½ acres of woodland, and large reed beds which bring the extent up to 8 acres, is where the black tern, bittern, night-heron, whooper swan, Bowick's swan, and great crested grebe have been recorded. Some recent Marbury records include the white wagtail, a drake and two duck wigeon in July, scaup duck, goosander, cormorant, great northern diver, and ringed plover (Nineteenth Annual Report, Lancashire and Cheshire Fauna Committee). The honorary secretary of the Coward Memorial Fund is Mr. J. F. Hodkinson, 50 Selby Street, Manchester, 11.

Roman Scotland

SIR GEORGE MACDONALD'S reconstruction of the history of the Roman wall from Forth to Clyde, and of the strategic position in Roman Scotland in the second century A.D. from the evidence of his excavations, which appeared in the *Times* of April 7,

justifies his citation of the dictum of the late Prof. Haverfield that the spade would prove mightier than the pen, but at the same time will suggest to his readers the qualification that its superiority depends upon the skill of the excavator, and his constructive powers in the interpretation of his finds. Sir George's ability in this respect enables him to piece together the data he has obtained from the thirty-seven miles of wall between Bridgeness on the Forth to Old Kilpatrick on the Clyde, with its forts, ditch and flanking road for supply purposes, and to supply from it a conclusive solution for the more puzzling problems of a political and military situation which required the building of the forward line of defence and yet at the same time did not relieve the garrison of Hadrian's wall to the south. The key to the situation, which he now supplies, is the vulnerability of the intra-mural area from the inroads of the Dalriada Scots of Ireland through Galloway. Further, he suggests, the country north of York, being occupied in a military sense only, even though the outer wall provided an efficient barrier against attack by the northern tribes, it was necessary to have a garrison on the southern wall to shut off the partially subdued tribes on the southern side of the wall from those in the occupied Scottish area, in order to prevent any junction of disaffected tribesmen. Sir George's suggestion that shortage of man power and a miscalculation of the pressure which could be brought to bear by Irish inroads is a logical, but none the less brilliant, reading of the situation when about 185 A.D. the outer line of defence was abandoned.

An Expedition to Hainan

ALTHOUGH the flowering plants of Hainan have been extensively collected by Prof. Woon-Young Chun and his associates of the Botanical Institute, National Sun-Yatsen University, Canton, the animals of the island, although previously collected by a few naturalists, are still incompletely known to the scientific world. The Fan Memorial Institute of Biology, the Biological Laboratory of the Science Society of China, the Metropolitan Museum of Natural History of the Academia Sinica, the National Tsing Hua University, the National University of Peking, the National Shantung University and Nankai University have recently organised a joint expedition to Hainan. The purpose of this is to collect zoological specimens as extensively as possible. Cryptogams, orchids and wood samples will also be collected. The Fan Memorial Institute of Biology will be represented by C. Ho, entomologist, and S. K. Tang, taxidermist; the Biological Laboratory of the Science Society of China by Dr. C. C. Wang, invertebrate zoologist, and Mr. K. F. Wang, ichthyologist; the Metropolitan Museum of Natural History by Dr. H. W. Wu, ichthyologist; the National Shantung University by Mr. C. L. Tso, botanist, and Mr. Chungsi H. Liu, anthropologist; and Nankai University by Dr. T. S. Hsiung, invertebrate zoologist. Mr. C. L. Tso, who has had previous experience in the island and is familiar with the natives, will lead the expedition. The members of the expedition were to leave Shanghai about January 15. One party

is going to the famous Wu-tchi-shan or Five Fingers Mountain. As the mountain attains the height of more than 2,000 metres, zoological specimens, especially land vertebrates, will be thoroughly collected in order to study the problem of vertical distribution. Another party will make a coastal survey and pay more attention to the sea fauna.

Research and Industry in New Zealand

NEW ZEALAND'S position in relation to world commerce was reviewed by the Governor-General, Lord Bledisloe, on September 29 in an address to the Canterbury Chamber of Commerce at Christchurch. In the course of the address he referred to the resentment often expressed in regard to excessive mechanisation and other social and economic ills entailed by the progress of scientific research and the application to industrial processes of the resulting discoveries. The remedy is to be sought, he suggested, not in arresting the march of science, especially in a country which has so much to gain from agricultural and other scientific research, but rather in redoubling research in those fields of economics, psychology, sociology and education in which are to be sought solutions of those problems, which have hitherto baffled mankind, of the distribution of the wealth which the applications of other branches of science have already made abundantly accessible. From the enunciation of this doctrine of the socio-centrality of present-day science, he passed on to consider the limits within and conditions on which State guidance and organisation are likely to produce better results than unshackled individual enterprise.

"Discovery" Report on Foraminifera of South Georgia

A CORRESPONDENT, Mr. M. E. Challen, has directed our attention to the fact that in Mr. A. Earland's report on the Foraminifera of South Georgia (Discovery Reports, 7, 27-138; 1933), a new species (No. 158) *Bigenerina minutissima* is recorded from two stations, WS 199, WS 472, not included in the chart. Mr. Earland informs us that the species in question was not found in the South Georgia area, and that its inclusion was an error observed too late for correction in proof. The two stations, WS 199, WS 472, are in the deep water of the Scotia Sea, within the area covered by his forthcoming report on Antarctic Foraminifera. References to them have also crept into the South Georgia report under *Ammobaculites agglutinans* (No. 116), *Ammomarginulina ensis* (No. 122) and *Clavulina communis* (No. 165), but are of less importance as these species were found elsewhere in the South Georgia area. Protozoologists may be glad to rectify these errors in their copies of the report.

Prof. S. H. Vines, F.R.S.

OUR Oxford correspondent writes: "The tenure of the Sherardian professorship of botany by the late Sydney Howard Vines, F.R.S., which lasted from 1888 until 1919, was marked by a notable development in the activity and usefulness of the botanical

department of the University. The studies of this department, associated in former years with the names of Morison, Sherard, Dillenius, Sibthorp and Daubeny, to which a quickening stimulus had already been applied by the vigorous personality of Sir Isaac Bayley Balfour, were by Prof. Vines advanced to a high degree of efficiency; and the results of the energy which he brought to bear on the duties of his office are still apparent in the flourishing condition of the department of which Prof. A. G. Tansley, F.R.S., is the present head. The memory of Vines will live in Oxford as that of one whose outstanding ability and social charm made a deep and enduring impression on all his contemporaries."

Aberdeen Public Library

ARRANGEMENTS in connexion with the meetings of the British Association in Aberdeen in September are in an advanced state. It happens that the jubilee of Aberdeen Public Library—established 1884—occurs this year, and the Library Committee proposed to celebrate the anniversary by offering the hospitality of the Library to representative members of the British Association, mainly in the form of an evening reception in the Central Library. It happens, however, that no evening is available in the Association's programme. Accordingly, the celebration is to take the form of a luncheon in the Reference Department of the Central Library on Friday, September 7.

New Committee for Research in Mental Disorders

THE Medical Research Council, in consultation with the Board of Control, has appointed a new committee to advise and assist in the promotion of research into mental disorders. The reconstituted committee will include representatives not only of psychiatry, medical psychology, and the study of mental deficiency, but also of neurology, physiology, biochemistry, pathology, and genetics. The chairman of the Committee will be Prof. E. D. Adrian, of the Medical Research Council, and the following will also serve: Sir C. Hubert Bond, Board of Control; Dr. Bernard Hart, University College Hospital, London; Prof. D. K. Henderson, Royal Edinburgh Hospital for Mental and Nervous Disorders; Dr. T. A. Ross, Cassel Hospital, Penshurst; Dr. E. O. Lewis, Board of Control; Dr. C. P. Symonds, Guy's Hospital, London; Dr. J. H. Quastel, Cardiff City Mental Hospital; Dr. J. G. Greenfield, National Hospital for Nervous Diseases, London; F. L. Golla, Maudsley Hospital, London; and Dr. L. S. Penrose, Royal Eastern Counties' Institution, Colchester. Sir David Munro, of the Council's staff, will act as secretary.

Research Conference on Spectroscopy and its Applications

ON account of the enthusiastic response to the Spectroscopy Conference held at the Massachusetts Institute of Technology last summer, which was attended by more than a hundred workers from America and abroad, it has been decided by the Institute to hold a second conference this year. A