

other questions which may have only an indirect relation to particular industries or trades. The Fuel Research Board affords an example of the kind of work which may be undertaken with the aid of Government funds, and is now in active operation in connection with the South Metropolitan Gasworks. The inquiry is too costly and altogether beyond the means of such agencies as a British Association Committee or the private persons by whom the research was initiated.

But with regard to special scientific studies undertaken by individuals help is still urgently wanted, and the question arises whether such help can always be obtained from the Department so long as one of the conditions of a grant is that details of the research contemplated must be communicated to so large a number of persons as form an advisory council or board. Aids to research must be given in other ways. There seems to be some difference of opinion whether this would be best accomplished by increasing substantially the present grant of 4000*l.* per annum to the Royal Society, or by augmenting the annual grant to universities and other teaching institutions where teachers and students may co-operate in the work. The scientific worker is often shy of exposing his ideas in their early crude form to external criticism, and tentative preliminary inquiry should be provided for before the researcher is called on to expose the whole of his plan.

The whole scheme foreshadowed in this report shows and acknowledges in more than one passage the need for men. It has often been claimed for the Oxford classical system of education that it does select and equip with the necessary knowledge the young Englishmen whose destiny it is to become administrators. The Oxford of the future will doubtless furnish at least some of them with science and scientific ideas. But in the meantime there exists throughout the universities of the country a body of some hundreds of able men of science in the form of professors and lecturers to which recourse might, one would suppose, be had when occasion arises.

The report discusses at some length the momentous question as to the employment of women in the Civil Service. All the world has now profited by the experience derived from the war, and much prejudice on this subject has been cleared away. But while many women have distinguished themselves by patriotic fervour, physical energy, and administrative ability, the education of women has in general been more defective than that of men, and it will be necessary to wait for another generation before the question can be determined on satisfactory grounds whether sex will not always stand in the way of substituting women for men in many of the professions and callings necessary to the world.

Since the issue of the report—viz. on February 12, 1919—a lecture has been given to the Royal Society of Arts by Sir Frank Heath, Chief Secretary of the Department of Scientific and Industrial Research, on the work of that Department. The lecture is lucid and interesting, and shows that

some definite results have already been attained. Lord Crewe, who was in the chair, remarked that this was "the only country in which a Government Department of Research existed." Such a statement can be accepted only with some reservations. Research stations in connection with agriculture have been instituted and supported by the State in many European countries during the last half century, and the United States Department of Agriculture at Washington maintains a scientific staff and issues a very valuable illustrated annual report. Moreover, the assistance given to the universities from national funds has always been in European countries far more liberal than has ever been the case in the United Kingdom, even at the present day, when the Government grants have been so considerably augmented.

THE FAUNA OF THE INLE LAKE.¹

THE Inlé Lake, lying at a height of 3000 ft. in the great limestone zone of the Shan plateau, is of peculiar bionomical interest, since, although it belongs to the Salween river-basin, it has become sequestered, or at least obstructed in its biological commerce, by the behaviour both of its principal feeders and of its only effluent, which in considerable parts of their course flow deep underground. Another point of interest in a biological view is that it appears to be a relic of a former lake, or system of lakes, of great depth and extent. Two other remarkable features of the Inlé Lake are the extraordinary limpidity of its waters, through which its animal population can be watched as in an aquarium, and its girdle of floating marshland. This curious terraqueous fringe is capable of exuberant cultivation: the local genius cuts from it an island plot, tows it off where he lists, there turns it upside down and anchors it with stakes, then dredges and adds more clotted vegetable ooze to its surface, until it becomes solid enough for tillage, and perhaps firm enough to carry a sty for his pig, or a hut for himself. Such an islander, as he turns from spearing and trapping fish to tend with incessant care the homely market-garden trade, or strictly meditate the vocal pig, might well avouch the philosophy of Thales.

In this fine report, which includes twenty-eight first-class plates, and more than 200 large pages close packed with information both descriptive and ratiocinative, the fauna of the lake (exclusive of the plankton) is fully disclosed. Dr. Annandale, the editor, contributes an introduction mainly physiographical, a summary comprehensively biological, compendious treatises on the fishes and the aquatic mollusca, and minor papers on the sponges, hydrozoa, polyzoa, and amphibia. Among other contributions may be mentioned that by Mr. S. W. Kemp on the Decapod Crustacea, that by Mr. C. A. Paiva on the Aquatic Hymenoptera, and those by Mr. Bains Prashad on the Marsupium and Glochidium of

¹ Records of the Indian Museum, vol. xiv. (Calcutta, 1918).

Physunio, and on the anatomy of a Chironomid larva of the genus *Polypedilum*.

The most peculiar elements of the fauna are the fishes and mollusca. Of fishes there have been found thirty-one species, representing seventeen genera and seven families; among the many new forms is an extraordinary eel-like creature which Dr. Annandale regards as a type of a distinct family of Apodes. Common features of the fishes are a large eye and small development of tactile appendages—features thought perhaps to be directly correlated with the remarkable transparency of the water. Of aquatic mollusca thirty-seven species are mentioned—a large proportion being new—representing twelve genera and eight families; they are said to display extraordinary variability, and their evolutionary plasticity is discussed with much learning and an equal wealth of illustration.

Altogether, this investigation of the fauna of the Inlé Lake is a refined piece of work, reflecting high credit on the new zoological survey of India and its versatile director. Moreover, although the report shows an intelligent appreciation of the economic perspective, as is seen in the full and critical description of the fisheries of the lake and all their apparatus, it is free from any taint of that meretricious stuff which so commonly in ponderous administrative circles of the British Empire lives and spreads aloft under the pseudonym of science.

NOTES.

THE first number of NATURE appeared on November 4, 1869, so that the jubilee of the journal will be attained next week. In celebration of this event the issue of November 6 will be devoted to articles upon scientific progress and developments of the past fifty years, contributed by eminent workers in different fields. Through the active co-operation of these authorities it has been possible to secure a comprehensive collection of articles of great interest, which we believe will be accepted as a worthy epitome of outstanding advances in the half-century during which NATURE has been published.

A MEETING of the International Electrotechnical Commission was held in London on October 20 and the three following days, under the presidency of M. Maurice Leblanc. Representatives of twenty nations were present, and the reports of the various committees were considered. Signor Semenza stated that national agreement had been obtained in Italy on the subject of symbols, both in those used in textbooks and in those used in engineering drawings. He pointed out the many advantages that would ensue if international agreement could be obtained. The British list of symbols, which is finished and will shortly be published, is very similar to the Italian list, and complete agreement could be easily obtained. Nearly all the committees on nomenclature have published lists of definitions, etc., and the next step to take is to compare them all closely and then to issue a standard list. The committee on the rating of electrical machinery has been very busy, and has held many meetings. This subject, however, proves to be very difficult, as trade considerations have to be taken into account. The commission has definitely taken up the question of preparing a specification for aluminium on the same lines that it adopted for

specifying pure copper. The copper specification was most useful, and has been adopted by every country in the world. A special committee was appointed to consider the question of screw-lamp caps and holders. This country is almost the only one which retains bayonet-holders for electric lamps, although many electrical engineers think that the screw-lamp caps are the best. Sir Richard Glazebrook presided at the banquet, and the Right Hon. A. J. Balfour made a thoughtful speech on standardisation which was much appreciated by all the engineers present. He pointed out that if it did not entirely prevent waste, it at least diminished it.

At the annual statutory meeting of the Royal Society of Edinburgh, held on October 27, the following office-bearers and members of council were elected:—*President*: Prof. F. O. Bower. *Vice-Presidents*: Prof. G. A. Gibson, Dr. R. Kidston, Prof. D. Noël Paton, Prof. A. Robinson, Sir George A. Berry, and Prof. W. Peddie. *General Secretary*: Dr. C. G. Knott. *Secretaries to Ordinary Meetings*: Prof. E. T. Whittaker and Dr. J. H. Ashworth. *Treasurer*: Dr. J. Currie. *Curator of Library and Museum*: Dr. A. Crichton Mitchell. *Councillors*: Prof. P. T. Herring, Prof. T. J. Jehu, Dr. A. Lauder, the Hon. Lord Guthrie, Prof. R. A. Sampson, Prof. J. Lorrain Smith, Dr. W. A. Tait, Surg.-Gen. W. B. Bannerman, Mr. H. M. Cadell, Prof. A. R. Cushny, Sir J. A. Ewing, and Mr. G. J. Lidstone.

MR. BRUCE FREDERIC CUMMINGS, who died on October 22, will probably be known to a wider public as "W. N. P. Barbellion," author of "The Journal of a Disappointed Man," noticed by us on July 10 last, but his few scientific papers will ensure for him a no less enduring, if a more limited, reputation. Born at Barnstaple in August, 1889, in spite of meagre circumstances and increasing ill-health he taught himself zoology to such good purpose as to gain an assistantship in the entomological department of the British Museum, which he entered in January, 1912. He had previously contributed notes on local natural history to the *Zoologist*, and had been offered in the Marine Biological Laboratory at Plymouth a post which the illness of his father prevented him from taking up. In his "Journal" he affected scorn for the entomological work to which he was set, but his studies of lice soon gave rise to important papers published by the Zoological Society and in the *Annals of Natural History*. Another paper of much interest was on a scent-organ in the caddis-fly, *Sericostoma personatum*. Failing health caused him to resign his appointment in July, 1917. Mr. Cummings might never "have revolutionised systematic zoology," but he gave something more than the promise of distinguished work.

IN a Memorandum by the Chancellor of the Exchequer on the future Exchequer balance-sheet (Cd. 376) an attempt is made to arrive at very tentative revised estimates of the national revenue and expenditure in a "normal" year. The estimated normal yearly expenditure is 808,000,000*l.*, and includes the following items:—Education, 45,900,000*l.*; upkeep of museums and galleries, 600,000*l.*; and scientific investigation and research, 400,000*l.* The year 1919-20 will not be a normal year, but as regards the above items of expenditure the only difference in the estimate is that the education is down for 41,000,000*l.* instead of 45,900,000*l.*

DR. K. E. LAMAN, leader of the Congo mission of the Swedish Missionary Union, has lately returned to Stockholm with a large collection of ethnographical material drawn from the Bakongo, Bateke, and Bakuta people, as well as from five races of Ngunu.