

The report is an example of the value of the methodical collection of data. Whether the destruction or control of *Glossina*, which seemed at first sight an almost hopeless quest, can be achieved by this method we shall no doubt soon learn.

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Dante and Trepidation.

IN a note entitled "La trepidazione in Dante?" (Atti della R. Accad. di Torino, vol. lii., p. 353) Signor O. Z. Bianco discusses the novel interpretation given by Duhem ("Le Système du monde," t. iv., chap. x.) of a well-known passage in the "Paradiso" (xxvii., 142-48):

But ere that January pass to spring
 Though that small hundredth men neglect below,
 These higher spheres shall with loud bellowings ring;
 The tempest fierce, that seemed to move so slow,
 Shall whirl the poops where now the prows we see,
 So that the fleet shall on its right course go;
 And following on the flower, the true fruit be.
 (Plampin's translation.)

The first two lines clearly allude to the difference between the Julian year and the true value of the tropical year, which Dante assumed equal to 1/100 day, the neglect of which was gradually making the spring equinox occur earlier, and would (if the error were not corrected) eventually make the spring begin in January. Duhem suggested that the second half of the passage alludes to the so-called trepidation of the equinoxes. According to the theory formulated by Tâbit ben Korra in the ninth century, the equinoxes do not move uniformly from east to west, but alternately advance and recede in a period of more than four thousand years. This imaginary phenomenon is not alluded to by Al Fargani, from whose text-book Dante seems to have derived his astronomical knowledge. Signor Bianco rejects Duhem's suggestion, which is at variance with what Dante says elsewhere ("Convito," ii., 6; "Purgat.," xi., 108) about the slow motion of 1° in a hundred years. It is surely much more natural to suppose that the poet simply meant that long before the spring equinox after some thousands of years had moved back into January, great upheavals would take place in Italy.

Japanese Botanical Work.

THE Journal of the College of Science of the Imperial University of Tokyo, vol. xliii., contains (article 1) an admirably illustrated monograph (in English) of the genus of brown seaweeds, *Alaria*, by Prof. K. Yendo. The author has studied the various species on the west coast of Vancouver Island, along the coast of the Kurile Islands and of Kamtschatka as well as in Japan, and also the material in some of the important European herbaria. The descriptive portion is preceded by a general account of the morphology, structure, and development. The vexed question of the cryptostomata in the brown seaweeds is discussed at some length, and the author concludes that these tufts of hairs, at any rate in the *Laminarias*, may be regarded as absorptive organs. A *résumé* is also given of the differing views held as to the life-history, especially as to evidence on the manner of renewal of the blades, of *Alaria*, which, the author considers, "may be either gradual or sudden, according to the conditions of the place where the plant grows." As regards the economic uses of *Alaria*, though *A. esculenta* was extensively used for food in earlier times in North-West Europe, and this and other species are still eaten in various sub-Arctic

areas, the author concludes that the genus has very little value as human food or for kelp-ash. For manure it may be used equally well with other brown seaweeds. The species inhabit the colder northern seas, the greatest number being found within a range from about 42° N. up to the Arctic Circle. Fifteen species are recognised. Of these full descriptions are given, variations in form and synonymy are discussed, and a list of localities is cited. The form and structure of the species are illustrated in nineteen excellent double-page plates.

The same volume contains a short paper (article 2) by T. Matsushima describing investigations on the transpiration of cut branches, and an ecological study (article 3) by Y. Yoshii of the Ota dunes—both in German.

In the "Icones Plantarum Formosanarum," vol. viii., Bunzo Hayata continues his descriptive work on the flora of the Island of Formosa, based on the study of the collections of the Botanical Survey of the Government of Formosa. The present volume contains descriptions of species and varieties of flowering plants in various families, and of ferns; 111 new species and 17 varieties are included. The total number of species of the flora is brought up to 3458, contained in 1174 genera representing 169 families. The genus *Citrus* (orange, lemon, etc.) is treated at some length, as also are the figs, *Ficus*, of which the author recognises 29 species in Formosa. In addition to eighty-eight text-figures, the species are illustrated by fifteen excellent full-page plates showing habit and floral dissections.

Researches on Egyptian Cotton.

THE newly appointed Cotton Research Board for Egypt has issued a Preliminary Report, in which a sketch is given of the general significance of the Egyptian cotton crop and the formation and proposed operations of the new Board are described. Plans of the buildings under construction are shown, and a few illuminating figures serve to bring home to the reader the immense volume of detailed information required in the modern study of crops. An outline of the field of work to be undertaken by a staff of eleven non-Egyptian scientific workers and twenty Egyptians is given for the botanical, entomological, chemical, and physical sides, though the Board is rightly careful not to bind itself to a definite programme.

Those interested in cotton or in Egypt cannot fail to be very glad that this Board has at last come into existence, but the matter is of wider interest in that a move has here been made towards the separation of administration from research. Both functions have been hampered in the past history of many agricultural services by mutual confusion, and we anticipate that the step taken by Egypt in this matter will be generally adopted.

The only criticism we would offer on this report is upon the reason given for the establishment of the Board, to wit: "Past experience of . . . the disadvantages attaching to the investigation of cotton problems from the point of view of any one branch of science." We would rather have judged that Egyptian cotton had been singularly fortunate in the informal and voluntary co-operation of every branch of science, the schools of medicine and engineering, and the departments of survey and geology, as well as the agricultural organisations, having given invaluable help in all directions. We would suggest that past experience showed rather the need for a body (such as this Cotton Research Board) which would

cut across departmental boundaries, and give official status and help to the scientific co-operation already in existence. It is to be hoped that the Board may ultimately see its way so to extend its ranks as to effect *liaison* with bodies outside the official Egyptian Service.

W. LAWRENCE BALLS.

University and Educational Intelligence.

CAMBRIDGE.—Applications are invited for the George Henry Lewes studentship in physiology, value 245*l.* Candidates must send their applications, with particulars of their qualifications and the subject of their proposed research, by July 31 to Prof. Langley at the Physiology School.

A further gift of 600*l.* has been received from Mr. and Mrs. P. A. Molteno to meet the increased cost of labour and material in the building of the Molteno Institute of Parasitology. This avoids the need to reduce the accommodation originally proposed.

Mr. R. H. Vernon, Gonville and Caius College, has been appointed assistant to the professor of chemistry.

Honorary degrees are being conferred on the Spanish Ambassador, the President of Harvard University, Prof. H. Cushing, and Prof. J. J. Abel.

GLASGOW.—The following were among the degrees conferred on July 19:—*Doctor of Medicine (M.D.)*: (i) With Commendation: James Gordon Wilson—thesis, "A History of Influenza and its Variations." (ii) Ordinary Degrees: Albert Barnes Hughes—thesis, "Puerperal Eclampsia"; Donald MacKenzie MacRae—thesis, "The Bechuanaland Protectorate: Its People and Prevalent Diseases, with a special consideration of the effects of tropical residence and food in relation to health and disease"; and John Young—thesis, "Bacillary Dysentery."

LONDON.—Mr. Fisher, President of the Board of Education, has stated, in reply to a question asked in the House of Commons relating to the offer of the Bloomsbury site to the University of London, that when the time comes for King's College to move from the Strand to Bloomsbury, the Government is prepared to seek authority to purchase, at a fair valuation, the buildings at present occupied by King's College in the Strand, and the price so paid will be available towards the cost of the new buildings to be erected for King's College on the new site.

SHEFFIELD.—Dr. R. B. Wheeler has been appointed to the recently established chair in fuel technology, and Mr. Douglas Knoop to that of economics.

SIR JESSE BOOT has made a gift of 50,000*l.* to University College, Nottingham, in aid of the development of the scheme for a University of Nottingham. 30,000*l.* is for the building fund and 20,000*l.* for the foundation of a chair of chemistry.

THE council of University College, Swansea, has made the following appointments to headships of departments, viz.:—*Professor of Metallurgy*: Prof. C. A. Edwards. *Professor of Chemistry*: Dr. J. E. Coates. *Professor of Physics*: Dr. E. A. Evans. *Professor of Mathematics*: Lt.-Col. A. R. Richardson. *Lecturer in Geology*: Dr. A. E. Trueman. *Lecturer in History*: Mr. E. Ernest Hughes.

THE Trustees of the Beit Fellowships for Scientific Research, which were founded and endowed in 1913 by Sir Otto Beit to promote the advancement of

science by means of research, have recently elected Mr. M. A. Hogan to a fellowship. Mr. Hogan was educated at the Catholic University School, Dublin, 1907-15, and has been a student at the University College, Dublin (National University of Ireland), from 1915 to date. Mr. Hogan will carry out his research at the Imperial College at South Kensington.

THE Industrial Fellowship System for the promotion of industrial research, originated by Prof. Robert Kennedy Duncan, has been in successful operation in the University of Pittsburgh since September, 1911. Full particulars of the system are given in a pamphlet by Mr. T. Ll. Humberstone published by the Board of Education. The seventh annual report of the Mellon Institute, founded in the University in 1913, states that the total funds contributed by industrial firms for the nine years ending March 1, 1920, was 1,213,425 dollars, and that in the year 1919-20 the number of fellowships was 47 and the number of fellows 83, the fellowships being 35 for individuals and 12 for groups of workers. A list of fellowships in operation at March 1, 1920, is published, which shows the great diversity of subjects of industrial research to which the scheme has been applied. The fact that the resources of the institute are fully used, and that applications exceed the available accommodation, is convincing evidence of the soundness of the principles on which the system is based. The institute is administered by the director, Dr. Raymond F. Bacon, assisted by an associate director and three assistant directors, who prepare schemes of research work, select the fellows, and supervise their investigations.

THE foundation-stone of the new buildings of the University College of Swansea was laid by his Majesty the King on Monday, July 19. A magnificent site of forty-five acres in Singleton Park, on the shores of Swansea Bay, has been presented to the college by the Corporation of Swansea, which has also granted the temporary use of Singleton Abbey for the housing of the faculty of arts and the administrative offices of the college. It should be a matter of encouragement to the council of the college that the main features of its policy received marked approval and support in the terms of the King's reply to the address of welcome on Saturday last. It is the natural ambition of Swansea to build up a strong School of Applied Science, including a department of metallurgy of the first rank. At the same time the educational ideals of the Welsh people demand for the great population of this industrial district the fullest provision for the study of the humanities and for the advancement of learning in the widest sense. The authorities of the college are fully alive to the magnitude of their opportunities and the greatness of their trust. Unmistakable proofs have already been given by representatives of all classes of deep interest in the work of the college and a determination to secure practical assistance. The wide publicity afforded by the Royal visit and the statesmanlike terms of the King's address cannot but serve to widen and strengthen both enthusiasm and practical support. The concluding terms of the King's reply to the address of welcome were as follows:—"Efficiency is much, but it is not all. We must never forget that education is a preparation for life, and that its true aim is the enlargement of the human spirit. It will be the task of your college to send out into the world men and women fully equipped for the material work which awaits them, and with minds attuned to high ideals, opened to the rich and varied interests of modern life, and steadfastly set towards the service of their fellows."