

1947, and a list of publications on industrial research in East Africa. A departmental report on ceramics details the work carried out on bricks and roofing tiles, domestic pottery, refractories, building materials, glazed wall-tiles and drain-pipes, while a fairly full account is given of work on the extraction of undried pyrethrum flowers, which has given results comparing favourably with existing methods of extracting dried flowers and appears to merit large-scale trials. Work on silicophosphate is also described in detail, including the results of rotary kiln firings, laboratory-scale firings, and of investigations on the fractions of the linker soluble in water and in citric acid. Investigations on the treatment of effluents from the processing of sisal and coffee have continued, and biological filtration gave promising results for the former. The Tanganyika Industrial Committee reports on the production of totaquina, the final target of 10,000 lb. for which was met early in November, 1947. Other investigations under the Committee related to the assay and manufacture of papain, and the assay and cultivation of pyrethrum flowers. The Board itself at its three meetings during the year focused its attention on negotiations for the early establishment of a permanent East African Scientific and Industrial Research Organisation, and a memorandum was submitted to the East African Governments and to the Colonial Office advocating the establishment of such an Organisation on the lines of other existing inter-territorial research organisations. Stress was laid on the vital need of such work if the large sums of money for the development of the East African territories are to be used to the best advantage.

#### Parliamentary and Scientific Committee

THE annual report for 1948 of the Parliamentary and Scientific Committee records the visit of a deputation from the Committee to discuss with the Minister of Education the position in Britain of colleges of technology. The Minister said that the report of the Committee agreed closely with the policy of the Ministry; but he thought that a National Council of Technology would be too cumbersome. He agreed that the status of technical colleges should be raised, and promised to increase the number of technical State Scholarships immediately the demand and capacity to take advantage of such scholarships existed. Members of the Committee took a very active part in debates on the Development of Inventions Bill, and a critical discussion of the Bill was arranged on May 11. Early in the year a detailed memorandum on current difficulties in the import of scientific books and periodicals was submitted to the Board of Trade, and information collected from scientific bodies about the shortage of paper and facilities for producing scientific books and periodicals was incorporated in a memorandum forwarded to the Lord President of the Council in July. A reply from the Lord President in September stated that the paper allocation for the production of books was practically equal to that used in 1939 and that about double the number of books were being produced. A further memorandum, which, among other recommendations, urged that the criteria to be applied should be whether the output was meeting the greatly increased requirements in Great Britain and overseas for up-to-date scientific and technical information, and not pre-war figures, was submitted to the Lord President in November. A memorandum on steel utilization has also been prepared by the Committee; technical education, the salaries of teaching and

research staff in medical schools and universities, and the Veterinary Surgeons Bill have also been considered.

#### Superconducting Bolometers

51

DURING the past few years a sensitive form of bolometer has been developed, at the Johns Hopkins Cryogenic Laboratory, under the direction of Dr. D. H. Andrews, which makes use of the high variation of electrical resistance with temperature that occurs in the region between the normal- and zero-resistance states of a superconducting material. Tantalum (*Rev. Sci. Instr.*, 13, 281; 1942) has been used successfully, but it requires to be cooled to liquid helium temperatures. Columbium nitride, with a transition temperature at about 15° K., just above the triple point of hydrogen, presents a much less difficult temperature-control problem, and bolometers of very high sensitivity have been made. These should prove useful for the examination of the as yet unexplored region of emission spectra of sources at room temperature, with considerable application in biological research. Recently, a careful study of the infra-red sensitivity of a number of columbium nitride superconducting bolometers has been made by N. Fuson (*J. Opt. Soc. Amer.*, 38, 845; 1948), and the sensitivities have been compared with those of other infra-red detectors. Details of the construction of the bolometers, of the infra-red source, modulator, cryostat, wide-band amplifier, and other auxiliary equipment, together with the experimental procedure, are given. Time constants of 0.7 to 17.0 milliseconds were observed. For the purposes of comparison, a factor of merit, based on the reference conditions suggested by R. C. Jones (*J. Opt. Soc. Amer.*, 37, 888; 1947) and R. Havens (*J. Opt. Soc. Amer.*, 36, 355 A; 1946), is defined. The nine most sensitive of the twenty-five superconducting bolometers examined had factors of merit between 1.3 and 14.0.

#### Functional Embryology

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THE New York Academy of Sciences has issued a publication entitled "Recent Studies in the Mechanisms of Embryonic Development" (*Ann. New York Acad. Sci.*, 49; 1948) the title of which is self-explanatory. It contains nine contributions by separate authors each dealing with one aspect of the general subject, and each article is well illustrated and provided with a brief summary of the relevant work and a bibliography. The subjects dealt with include: the early organisation and differentiation of prospective areas in the developing eggs of *Nereis*, the amphibians *Triton* and *Ambystoma*, and the chick; biochemical differentiation; the role of nerves in amphibian limb regeneration; and locomotor responses and retinal development in normal and transplanted retinae. Incidentally the name '*Amblystoma*' is used in two of the papers instead of the correct form *Ambystoma*. It is difficult to pick out for special notice any one paper; but that by S. R. Detwiler on "Quantitative Studies on Locomotor Responses in *Amblystoma* Larvae following Surgical Alterations in the Nervous System" with its reconstructions is of particular interest in view of the recently published book by C. Judson Herrick on the brain of *Ambystoma*.

#### National Tsing Hua University: Science Reports

316

THE three series of the *Science Reports of the National Tsing Hua University* (Series A: mathematics, physics and engineering; Series B: biology

and psychology; Series C: geology, geography and meteorology), published for several years before 1937, were suspended during 1937-45, with the exception of one issue of Series A printed in September 1940. With the return of the University to Peiping, publication of the three series has been resumed, and, so far, two issues of Series A (4, Nos. 4, 5 and 6; 1947, and 5, No. 1; 1948) have been received. The papers appearing in the 1947 issue were originally intended for publication in 1941 to commemorate the thirtieth anniversary of the University (1911-41); but, although the University was then at its wartime home at Kunning, the *Reports* were being printed in Shanghai, which was overrun by the Japanese military forces, and therefore they could not be published. The *Reports*, which are in English or French, indicate clearly how, in spite of extremely trying conditions, research work of a high standard continued to be carried out in the University.

### Melbourne Seismological Station

THE Council of the University of Melbourne recently approved an arrangement whereby the seismograph of the former Melbourne Observatory, which the University accepted from the Government of Victoria when the Observatory was disbanded in 1941, will in future be in the care of the Department of Geology of the University. A member of staff of the Geology School (Mr. A. J. Gaskin) has been nominated seismologist, and a technical assistant provided for him. It is hoped that the issuing of seismological bulletins will be commenced in June 1949, and that the issue will thereafter be at regular intervals, probably quarterly. Instrumentation remains unchanged for the present. All records later than those listed in the last leaflet issued for the Observatory (July 2, 1940) have been inspected, and information regarding them may be obtained on application. Correspondence (including requests for the receipt of bulletins) should now be addressed to the Seismologist, Department of Geology, University of Melbourne, Carlton, N.3, Victoria, Australia.

### Sir D'Arcy Thompson: Commemoration Fund

SOME of the many friends and pupils of the late Sir D'Arcy Thompson have issued an appeal for contributions to a commemoration fund which will be used for the following purposes: (1) presentation of a bronze head to the University of St. Andrews; (2) presentation of a portrait in oils to University College, Dundee; (3) memorial prizes in the Departments of Natural History at St. Andrews and Dundee. The printed announcement of the fund contains excellent reproductions of the portrait and of the clay model of the head. It has not been possible to communicate personally with all of Sir D'Arcy Thompson's friends, but copies of the announcement may be obtained from the Secretary of the Fund, D. R. R. Burt, Department of Natural History, the University of St. Andrews.

### Colonial Service: Recent Appointments

THE following appointments in the Colonial Service have been announced: D. Leuchars, assistant conservator of forests, Uganda; E. Q. O'B. Smith, assistant conservator of forests, Northern Rhodesia; D. A. Aitkenhead, geologist, Gold Coast; C. Facer, surveyor, Uganda; K. T. Pugh, surveyor, Tanganyika; A. H. Ward, surveyor, Northern Rhodesia; S. E. Brinkman, meteorological assistant, East African High Commission; F. J. Cornish, meteorological

assistant, East African High Commission; A. P. Johnson, assistant meteorologist, Nigeria; E. B. Powell, assistant controller (radio), Federation of Malaya; C. J. M. Simpson, entomologist, East African High Commission; S. D. Ross (principal agricultural officer, Nigeria), assistant director of agriculture, Nigeria; F. W. Roe (geologist, Federation of Malaya), chief geologist, Borneo; H. R. Binns (deputy director of veterinary services, Palestine), scientific officer, East African Veterinary Research Organisation; R. M. Gambles (veterinary officer, Cyprus), senior veterinary research officer, Nigeria; R. E. Gould (senior poultry and bee-keeping officer, Palestine), fisheries officer, Tanganyika; W. D. Silvera (medical officer, Jamaica), senior lecturer in pathology, University College, Ibadan, Nigeria.

### Announcements

THE following appointments have been made in the University of London: Mr. F. Wormald, to the University chair of palaeography tenable at King's College as from January 1, 1950. Dr. G. L. Brown, of the National Institute for Medical Research, to the Jodrell chair of physiology tenable at University College as from October 1, 1949. The title of professor of logic and scientific method in the University has been conferred on Dr. K. R. Popper in respect of the post held by him at the London School of Economics.

THE Brewster Gold Medal of the American Ornithologists' Union has been awarded to David Lack, director of the Edward Grey Institute of Field Ornithology at Oxford, for his book "Darwin's Pinches", published in 1947 by the Cambridge University Press. The Medal is awarded for the most important work relating to the birds of the western hemisphere published during the preceding six years.

IN co-operation with the University of Edinburgh and the East of Scotland College of Agriculture, the Association of Agriculture is arranging a Conference, intended primarily for teachers, on "Applied Biology, Geography and Education" at the College of Agriculture, 13 George Square, Edinburgh, during April 12-14, 1949. The registration fee is 2s. 6d., which includes the inaugural dinner, and tickets and further details may be had on application to Alexander Hay, General Secretary, Association of Agriculture, 238-240 Abbey House, 2 Victoria Street, London, S.W.1.

APPLICATIONS are invited for Lady Tata Memorial Fund grants and scholarships to scientific workers of any nationality for research in diseases of the blood, with special reference to leukaemia, in the year beginning October 1, 1949. Grants are made for research expenses, and scholarships are awarded as personal remuneration, their normal value being £400 per annum for whole-time research, or less for part-time work. Applications must be submitted before March 31, 1949, and the awards will be announced in June. Further particulars and forms of application may be obtained from the Secretary of the Scientific Advisory Committee, c/o Medical Research Council, 38 Old Queen Street, Westminster, London, S.W.1.

ERRATUM.—Referring to his communication entitled "*Trypanosoma heptatretæ* sp.n., a Blood Parasite of the Hagfish" (*Nature*, 161, 440; 1948), Mr. Marshall Laird has written proposing amending the name to *T. heptatreti* in accordance with the International Rules of Zoological Nomenclature.

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