

The dean and these professors are members of the University Senate. The University courses provided by the school lead to the degrees of Bachelor and Master of Technical Science. These courses are controlled by the Senate of the University, through the board of the faculty of technology, which is composed of the heads of departments in the School of Technology together with certain other professors and lecturers in the University. A new characteristic of the present issue of the prospectus is the excellent summary running to some ten pages of approved courses which students proceeding to degrees in technical science, or certificates in technology, are recommended to follow. The account of the equipment of the laboratories, for which the school is justly renowned, gives particulars which serve as an index of the lavish and judicious expenditure incurred to make the college thoroughly complete and modern.

SOME of our universities have already taken steps to deal justly with the many young men who have broken their academic work by joining the Army. The subject is dealt with at length in *Engineering* for August 6. But few of these young men will be able again to take up the threads of their studies when peace is proclaimed. They will have been face to face with actualities of most serious import, and will never again be able to resume the docile and attentive attitude which befits the student. It is most earnestly to be hoped that before peace is declared the whole of the academic and professional bodies of this country will come to some definite decision as to what is to be their attitude to the young men who are faced with the possibility of their careers being broken irretrievably. The matter is not simple, as the claims both of the public and of the young men have to be considered; the former expect that diplomas shall not be given to men lacking in the necessary attainments; it would be outrageous to the latter if the future prizes in life were allotted to those who stayed at home. *Engineering* suggests that the kind of knowledge which might be expected reasonably from candidates who have served in the Army is that which an ordinary candidate has retained three years after taking his diploma. In that time all tricks for examination purposes have disappeared, leaving only that knowledge which the man felt was really necessary for his profession. We should like to add to the case which is presented very ably by our contemporary, that it is extremely desirable that all our universities and colleges come to a common understanding, so that there shall be equality of treatment for all the candidates on retiring from the Army.

SOCIETIES AND ACADEMIES.

EDINBURGH.

Royal Society, July 5.—Sir E. A. Schäfer, vice-president, in the chair.—Sir William Turner: A contribution to the craniology of the people of Scotland: Part ii., prehistoric, descriptive, and ethnographical. Judging from the size and general plan of the skull of the prehistoric inhabitants of Scotland, he found nothing to show that these very remote ancestors were not people of great brain-power.—W. Evans: Mallophaga and Ixodidae, Ectoparasites of birds from the Scotia collections (Scottish National Antarctic Expedition). Interesting examples were recorded of the same species of parasite infesting closely allied species of birds.—Dr. J. R. Milne: Mathematical theory of the harmonic synthesiser: part ii. Nine years ago the author described an instrument for drawing the curve

which is the sum of a number of simple harmonic curves. The apparatus makes use of Kelvin's summation wire and an approximate method of obtaining harmonic motions which was rejected by him as insufficiently accurate. It was shown, however, in the previous paper that if the various parts be properly proportioned, the error can be made very small. The more complete mathematical discussion in the present paper shows how it may be reduced to negligible dimensions.—Prof. C. R. Marshall and Miss Elizabeth Gilchrist: The interaction of methylene iodide and silver nitrate.—James W. Munro: The structure and life-history of *Bracon hylobii*, a study in parasitism. The *Hylobius abietis* was the most dangerous insect enemy to forestry in Scotland. One way of fighting it was by the breeding and setting free of a parasitic enemy. Such a parasite is *Bracon hylobii*.—Miss Augusta Lamont: The lateral sense organs of Elasmobranchs; the ampullary canals of the genus *Raia*.

NEW SOUTH WALES.

Linnean Society, May 26.—Mr. A. G. Hamilton, president, in the chair.—W. N. Benson: The geology and petrology of the great serpentine-belt of New South Wales. Part iv.—The dolerites, spilites, and keratophyres of the Nundle district. This paper is a detailed account of the Middle Devonian igneous rocks, which were briefly discussed in earlier parts of this series. It is shown that the rocks are intrusive, whenever clear evidence of their *mise-en-place* is obtainable, even though pillow-structure is well developed, a feature usually characteristic of flows. A remarkable series of magnetite-albite rocks have been discovered among the keratophyres. They find their closest analogy among the igneous rocks accompanying the iron-ores of Lapland.—Dr. A. J. Turner: Further notes on the Lepidoptera of Ebor Scrub, N.S.W. Two later visits in February, 1915, resulted in the acquisition of specimens of thirty-one species, of which only seven were obtained in 1914. Thirteen of the twenty-four additional species are known from other localities; nine are described as new; and two remain undetermined. Two species, previously undetermined, are described as new from more complete material.—F. H. Taylor: Contributions to a knowledge of Australian Culicidae. No. II. Five species referable to the genera *Stegomyia*, *Neomacleaya*, *Culicada*, and *Culex* (two) are described as new. The males of two species, previously unknown, are also described.—Dr. R. Greig-Smith: A new gum-levan-forming Bacterium. The hitherto described bacteria capable of forming gum-levan from saccharose, are two in number. A third has been isolated from the tissues of a seedling of *Eucalyptus hemiphloia*. It differs from *Bac. levani-formans* in forming no spores; and from *Bac. eucalypti* in its power of fermenting dextrose, saccharose, and lactose, with production of acid and gas.—E. A. Briggs: Hydroids from New South Wales. *Sertularella longitheca*, Bale, var. *robusta*, Ritchie (fam. Sertularidae), described from sterile specimens dredged off the coast of New South Wales, is now shown, from the examination of colonies bearing gonangia, not to be a variety of *S. longitheca*, but to be entitled to specific rank.—Dr. Th. Mortensen: Preliminary note on the remarkable, shortened development of an Australian sea-urchin (*Toxocidaris erythrogrammus*). The ova are large, opaque, and full of yolk, and float on the surface of the water. Cleavage is total and regular at first. The gastrula is free-swimming, the aboral end being turned upwards, and containing most of the yolk. The postoral processes are represented only by a rudimentary swelling, and there is no sign of a Pluteus-stage; nor, appar-

ently, is there any trace of a larval skeleton. The whole animal is ciliated, but the cilia are not collected into bands. The young sea-urchin develops on one side of the embryo, near the mouth. The aboral part serves as a food-reservoir, and becomes finally quite overgrown and enclosed within the urchin's body. The young animal may sink to the bottom or remain swimming at the surface.

BOOKS RECEIVED.

Revision Papers in Algebra. By W. G. Borchardt. Pp. vi+152+xxxix. (London: Rivingtons.) 2s.

Stories of Exploration and Discovery. By A. B. Archer. Pp. viii+198. (Cambridge: At the University Press.) 2s. 6d. net.

The North-West and North-East Passages, 1576-1611. Edited by P. F. Alexander. Pp. xix+211. (Cambridge: At the University Press.) 2s. 6d. net.

Post-Mortem Methods. By Prof. J. M. Beattie. Pp. viii+231. (Cambridge: At the University Press.) 10s. 6d. net.

The Study of Plants. By Dr. T. W. Woodhead. Pp. 440. (Oxford: At the Clarendon Press.) 5s. 6d.

Publications of West Hendon House Observatory, Sunderland. No. iv., Meteorological Observations chiefly at Sunderland. By T. W. Backhouse. Pp. v+188. (Sunderland: Hills and Co.)

The Sacred Chank of India. By J. Hornell. Pp. viii+181+18 plates. (Madras: Government Press.)

Experimental Harmonic Motion. By Dr. G. F. C. Searle. Pp. x+92. (Cambridge: At the University Press.) 4s. 6d. net.

Annals of the Cape Observatory. Vol. xii., part 1: Determination of the Mass of Jupiter and Elements of the Orbits of its Satellites, from Observations made with the Cape Heliometer. By Sir D. Gill and W. H. Finlay; reduced and discussed by Prof. W. de Sitter. Pp. 173. (Edinburgh: H.M.S.O.; London: Wyman and Sons, Ltd.) 6s.

Cape Astrographic Zones. Vol. ii.: Catalogue of Rectangular Co-ordinates and Diameters of Star Images, derived from Photographs taken at the Royal Observatory, Cape of Good Hope. Commenced under the direction of Sir D. Gill. Completed and prepared for press under the supervision of S. S. Hough. Zone—42°. Pp. xxxviii+499. (Edinburgh: H.M.S.O.; London: Wyman and Sons, Ltd.) 20s.

Results of Meridian Observations of Stars made at the Royal Observatory, Cape of Good Hope, in the years 1905 to 1908, under the direction of Sir D. Gill and S. S. Hough. Pp. 255+127. (Edinburgh: H.M.S.O.; London: Wyman and Sons, Ltd.) 30s.

Papers from the Department of Marine Biology of the Carnegie Institution of Washington. Vol. vii, pp. 128; Contributions to Embryology, Vol. i., No. 1, pp. 103 and 11 plates; Vol. ii., Nos. 2, 3, 4, 5, 6, pp. 5-108; The Permo-Carboniferous Red Beds of North America and their Vertebrate Fauna. By Prof. E. C. Case. Pp. iii+176+24 plates. (Washington: Carnegie Institution.)

Wireless Time Signals. Issued by the Paris Bureau of Longitudes. Authorised translation. Pp. vii+133. (London: E. and F. N. Spon, Ltd.) 3s. 6d. net.

Light and Colour Theories and their Relation to Light and Colour Standardisation. By J. W. Lovibond. Pp. xii+90+plates. London: E. and F. N. Spon, Ltd.) 6s. net.

Mineral Resources of Minas Geraes (Brazil). By A. F. Calvert. Pp. 100+127 plates. (London: E. and F. N. Spon, Ltd.) 6s. net.

The World's Supply of Potash. Pp. 47. (London: The Imperial Institute.) 1s.

Prof. Edward Forbes' Centenary, 1915. Pp. 45. (London: The Manx Society.) 1s.

The Callendar Steam Tables. By Prof. H. L. Callendar. Pp. 40, with Steam Diagram in Pocket. (London: E. Arnold.) 3s. net.

The War and After. By Sir Oliver Lodge. Pp. xiii+235. (London: Methuen and Co., Ltd.) 1s. net.

A School Flora for the Use of Elementary Botanical Classes. By Dr. W. M. Watts. New edition. Pp. viii+208. (London: Longmans and Co.) 3s. 6d.

Health in the Camp. By Prof. H. R. Kenwood. Pp. 58. (London: H. K. Lewis and Co., Ltd.) 3d. net.

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