

at about 125°-130° C., are brittle, of a resinous nature, and do not give the green coloration with ferric chloride.

VICTORIA.

Royal Society, July 12.—Prof. W. A. Osborne, president, in the chair.—J. H. Gatliff and C. J. Gabriel: Additions to, and alterations in, the catalogue of the marine shells of Victoria. *Ischnochiton proteus*, Reeve, *I. atkinsoni*, Iredale and May, and *I. (Stenochiton) pallens*, Ashby, were recorded as Victorian species. Figures of *Dosinea grata*, Desh., from specimens compared with the British Museum type are given.—F. Chapman: New or little-known Victorian fossils in the National Museum. Part xxi.: Some Tertiary Cetacean remains. A fine example of the cranial rostrum of the ziphoid, *Mesoplodon compressus*, Huxley, sp., is described, together with another less perfect, both tending to prove the specific identity of the two examples described by Huxley and Owen respectively. A new species of Scaldicetus (*S. lodgei*) is described, which, as a Balcombian or Oligocene form, is the oldest recorded example of the genus. A well-preserved tooth referred to *Stenochiton (S. cudmorei)* is apparently the first discovery of this genus in the fossil state, from the Kalimnan, or Lower Pliocene, of Port Phillip.—H. J. Grayson: Description of a new engine for ruling diffraction gratings. The ruling engine differs from other machines in respect to the following:—The screw and ways of the ruling carriage lie in one axial plane. The screw thrust occupies a central position upon the machine bed, and the screw is free from any stress other than that due to a direct axial pull upon the nut which is connected with the ruling carriage by means of two steel rods lying parallel with the screw axis. All the bearing surfaces or ways of the machine are ground circular bars of steel or glass, the latter forming the ways of the diamond carriage. They are semi-polished and require no lubrication; the frictional resistance is therefore uniform and constant. The teeth of the ratchet wheels are ground and finished with diamond-charged cutters, by which means a high degree of accuracy is obtained and compensating devices are dispensed with. Gratings submitted to the Mount Wilson Observatory have been pronounced practically free from periodicity and diffused light. (This research was awarded the 1917 Syme prize for the most important work published in Australia during the preceding biennium.)

BOOKS RECEIVED.

Municipal Engineering Practice. By A. P. Folwell. Pp. xi+422. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd.) 16s. 6d. net.

The Industrial and Artistic Technology of Paint and Varnish. By A. H. Sabin. Second edition. Pp. x+473. (New York: J. Wiley and Sons, Inc.; London: Chapman and Hall, Ltd.) 16s. 6d. net.

Elementary Mathematical Analysis. By Prof. J. W. Young and F. M. Morgan. Pp. xii+548. (New York: The Macmillan Co.; London: Macmillan and Co., Ltd.) 11s. net.

Mathematical Papers for Admission into the Royal Military Academy and the Royal Military College, February-July, 1917. Edited by R. M. Milne. Pp. 30. (London: Macmillan and Co., Ltd.) 1s. 3d. net.

Memoirs of the Geological Survey, Scotland. The Economic Geology of the Central Coalfield of Scotland. Description of Area II. By L. W. Hinxman and others. Pp. iv+92. (Edinburgh: H.M.S.O.; London: E. Stanford, Ltd., and others.) 4s. 6d. net.

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The Quest for Truth (Swarthmore Lecture). By S. P. Thompson. Pp. 128. (London: Headley Bros., Ltd.) 1s.

Heat Drop Tables: H.P. Gauge Pressures. L.P. Absolute Pressures. Calculated by H. Moss from the Formulæ and Steam Tables of Prof. H. L. Callendar. Pp. 63. (London: E. Arnold.) 5s. net.

Education: Scientific and Humane. Edited by F. G. Kenyon. Pp. 32. (London: J. Murray.) 6d. net.

Amusements in Mathematics. By H. E. Dudeney. Pp. viii+258. (London: T. Nelson and Sons, Ltd.) 3s. 6d. net.

Letters concerning the War between an American and a Relative in Germany. March-June, 1915. Pp. 82. (New York: Privately printed.)

Greenhouses: Their Construction and Equipment. By W. J. Wright. Pp. xvi+269. (New York: Orange Judd Co.) 1.60 dollars.

DIARY OF SOCIETIES.

FRIDAY, OCTOBER 19.

INSTITUTION OF MECHANICAL ENGINEERS, at 6.—A Comparison of the Working Costs of the Principal Prime Movers: O. Wans.

TUESDAY, OCTOBER 23.

ZOOLOGICAL SOCIETY, at 5.30.—Present Knowledge of the Life-history of the Common Eel: C. Tate Regan.—A Hermaphrodite Dogfish: Miss Ruth C. Bamber.—Ant-like Spiders from Malaya: H. D. Baddock.

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