

MELBOURNE.

Royal Society of Victoria December 28, 1910.—Prof. E. W. Skeats in the chair.—Bertha Rees: The structure of the seed coats of hard seeds, and their longevity. The paper deals mainly with the investigation into the nature of the impermeable layer of hard seeds. The cuticularised layer may consist either of cuticle alone or may extend to a varying depth in the wall of the superficial palisade cells. The cuticle is usually deposited on a basis of hemicellulose, but in *Acacia melanoxylon* the basis is pectose.—Janet W. Raff: Protozoa parasitic in the large intestine of Australian frogs, part i. *Hyla aurea*, *H. ewingii*, *H. peronii*, *Limnodynastes dorsalis*, and *L. tasmaniensis* were examined. The forms found most commonly were *Nyctotheus cordiformis*, *Opalina intestinalis*, two new species of *Opalina*, *Copromonas subtilis*, *Trichomonas batrachorum*, and *Trichomastix batrachorum*.—J. T. Jutson: The structure and general geology of the Warrandyte gold-field and adjacent country.—J. T. Jutson: A contribution to the physiography of the Yarra River and Dandenong Creek basins, Victoria. The Yarra Flats area and its extension south through Croydon and Port Phillip Bay is a Senkungsfeld. The Nillumbik peneplain was uplifted so gradually that the Yarra kept its old course to Templestowe, and is antecedent to the present topography.—A. C. Stone: The aborigines of Lake Boga, Victoria. The paper consists principally of vocabularies and folklore.—F. Chapman: Some supposed pyritised sponges from Queensland. Two melon-shaped masses are compared externally with Lithistid sponges. They are probably of Desert Sandstone (Upper Cretaceous age).—F. Chapman: A revision of the species of Limopsis in the Tertiary beds of southern Australia. Five species are recognised (*L. morningtonensis*, Pritchard; *L. maccoyi*, n.sp.=*L. belcheri*, McCoy non Adams and Reeve; *L. multiradiata*, Tate; *L. beaumariensis*, n.sp.=? *L. forsskali*, Tate non Adams; and *L. insolita*, G. Sow). The latter also occurs in the Santa Cruz beds of Patagonia.—K. A. Mickle: The flotation of minerals. The metallurgical method of separation by flotation is due to an adherent gas film on the granules of ore. An account of a large series of experiments is given.

DIARY OF SOCIETIES.

THURSDAY, JANUARY 26.

ROYAL SOCIETY, at 4.30.—Memoir on the Theory of the Partitions of Numbers. Part V.—Partitions in Two-dimensionals Space: Major P. A. MacMahon, F.R.S.—(1) The Origin of Magnetic Storms; (2) On the Periodicity of Sun-spots: Dr. A. Schuster, F.R.S.—Atmospheric Electricity over the Ocean: Dr. G. C. Simpson and C. S. Wright.—On the Fourier Constants of a Function: Dr. W. H. Young, F.R.S.—On the Energy and Distribution of Scattered Röntgen Radiation: J. A. Crowther.—On some new Facts connected with the Motion of Oscillating Water: Mrs. H. Ayrton.

ROYAL INSTITUTION, at 3.—Recent Progress in Astronomy: F. W. Dyson, F.R.S., Astronomer Royal.

INSTITUTE OF ELECTRICAL ENGINEERS, at 8.—Long Distance Transmission of Electrical Energy: W. T. Taylor.—Extra High Pressure Transmission Lines: R. Borlase Matthews and C. T. Wilkinson.

FRIDAY, JANUARY 27.

ROYAL INSTITUTION, at 9.—Radioactivity as a Kinetic Theory of a Fourth State of Matter: Prof. W. H. Bragg, F.R.S.

PHYSICAL SOCIETY, at 5 (at University College).—A Demonstration of Phase Difference between the Primary and Secondary Currents of a Transformer by means of a Simple Apparatus: Prof. F. T. Trouton, F.R.S.—A Note on the Experimental Measurement of the High Frequency Resistance of Wires: Prof. J. A. Fleming, F.R.S.—(1) The Measurement of Energy Losses in Condensers traversed by High Frequency Oscillations; (2) Some Resonance Curves taken with Impact and Spark Discharges: Prof. J. A. Fleming, F.R.S., and G. B. Dyke.—Council Meeting at 4.30 p.m.

SATURDAY, JANUARY 28.

ESSEX FIELD CLUB, at 6 (at Essex Museum of Natural History, Stratford).—Exhibition of Coloured Photographs of Alpine Flowering Plants: Somerville Hastings.—Note on the Occurrence of Stony Beds underlying Harwich Harbour: Percy Thompson.—On a Pre-historic Interment found near Walton-on-Naze: Hazledeine Warren.

MONDAY, JANUARY 30.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Recent Explorations in Dutch New Guinea: Dr. H. A. Lorentz.

INSTITUTE OF ACTUARIES, at 5.—On Staff Pension Funds: The Progress of the Accumulation of the Funds; The Identity of a Valuation with the Future Progress of a Fund; The Manner of Dealing with Funds which are Insolvent; and Sundry Observations: H. W. Manly.

TUESDAY, JANUARY 31.

ROYAL INSTITUTION, at 3.—Hereditry: Prof. F. W. Mott, F.R.S.

ROYAL SOCIETY OF ARTS, at 4.30.—The Tin Resources of the Empire: F. Douglas Osborne.

ILLUMINATING ENGINEERING SOCIETY, at 8.—Discussion on Library Lighting opened by J. Duff Brown and S. L. Jast.

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INSTITUTION OF CIVIL ENGINEERS, at 8.—Further discussion: Sand movements at Newcastle Entrance, N.S.W.: C. W. King.—Fremantle Harbour-works, Western Australia: C. S. R. Palmer.—The Bar Harbours of New South Wales: G. H. Halligan.

WEDNESDAY, FEBRUARY 1.

ROYAL SOCIETY OF ARTS, at 8.—Examinations and their Bearing on National Efficiency: P. J. Hartog.

SOCIETY OF PUBLIC ANALYSTS, at 8.—President's Annual Address.—Note on the Detection and Estimation of Small Quantities of Antimony: Dr. P. Schidrowitz and H. A. Goldsbrough.—The Analytical and Microscopical Examination of Compound Liquorice Powder: G. E. Scott-Smith and John Evans.—Commercial Analysis and Arithmetic: C. A. Seyler.

ENTOMOLOGICAL SOCIETY, at 8.

THURSDAY, FEBRUARY 2.

ROYAL SOCIETY, at 4.30.—Probable Papers: (1) Experiments to investigate the Infectivity of *Glossina palpalis* Fed on Sleeping Sickness Patients under Treatment: (2) Experiments to Ascertain if *Trypanosoma gambiense* during its Development within *Glossina palpalis* is infective: Col. Sir D. Bruce, F.R.S., and others.—Further Experimental Researches on the Etiology of Endemic Goitre: Captain R. McCarrison.—On the Leaves of Calamites (*Calamocladus* Section): H. H. Thomas.—Complete Deviation in Mouse Carcinoma: Dr. J. O. W. Barratt.

ROYAL INSTITUTION, at 3.—Recent Progress in Astronomy: F. W. Dyson, F.R.S., Astronomer Royal.

LINNEAN SOCIETY, at 8.

RÖNTGEN SOCIETY, at 8.15.—The Work of Action of an Induction Coil: Prof. Salomonson.

FRIDAY, FEBRUARY 3.

ROYAL INSTITUTION, at 9.—Grouse Disease: A. E. Shipley, F.R.S.

GEOLOGISTS' ASSOCIATION, at 7.30.—Annual General Meeting.—President's Address: Flint and Chart: W. Hill.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Rivers and Estuaries: W. H. Hunter, M.Inst.C.E.

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