

Jahnke.—On the differential linear congruences, by M. Alf. Guldberg.—A new method of testing metals, by M. Ch. Frémont. The size of the test pieces employed is much reduced (20 mm. × 10 mm. × 8 mm.), and the resulting deformations enlarged ten times by photography. Methods are given for measuring the tenacity, ductibility, fragility, and homogeneity of the sample with sufficient accuracy for practical purposes.—Study of the normal variation of the earth's electric field with height, in the upper regions of the atmosphere, by M. G. Le Cadet. The results obtained show that the intensity of the electric field of the atmosphere diminishes when the height above the surface of the earth is increased.—On the fogging of the negative in radiography, by M. V. Chabaud.—On the solubility of liquids, by MM. A. Aignan and E. Dugas. A criticism of the work of Alexejew on the same subject.—Action of gravity on the growth of the lower fungi, by M. Julien Ray. The action of gravity is to retard the growth. The experiments were carried out upon cultures of *Sterigmatocystis alba*, some of which were at rest, and others moving uniformly in a vertical plane.

NEW SOUTH WALES.

Linnean Society, August 25.—Prof. J. T. Wilson, President, in the chair.—Descriptions of Australian Micro-Lepidoptera; Part xvii., *Elachistide*, by E. Meyrick. The number of species recorded in this paper was 254, referable to thirty-seven genera. Nearly the whole of the species are new to science.—Note on the occurrence of sponge remains in the Lower Silurian of New South Wales, by W. S. Dun. Until last year fossiliferous rocks of Ordovician age were not known to occur within the geographical boundaries of New South Wales. A species of *Protospongia*, associated with graptolites in a bluish slate, is recorded from Stockyard Creek, County of Wellesley, N.S.W. The specimens, which are pyritised and show no great amount of detail, were collected by Mr. J. E. Carne, of the Department of Mines. The Wellesley beds are probably of the same age as those of the Castlemaine and Bendigo districts of Victoria, certain fossils from which have been reported upon by Mr. T. S. Hall.—Descriptions of two new species of *Pullenaea*, by R. T. Baker. Mr. Baker exhibited, on behalf of Mr. C. E. Finckh, of the Technological Museum, a specimen of a comparatively rare fish, *Monocentris japonicus*, Houtt., caught by a fisherman at Newcastle. In regard to this fish, Mr. Ogilby pointed out the presence of luminous discs, which he believed were of use as traps; he also remarked that no articulation of the scales so as to form "a coat of mail" existed in Australian specimens, such as is attributed to *Monocentris japonicus*. The presence of two separate dorsal fins removes this genus from the *Berycidae*, and its nearest ally is the rare deep-sea *Anomalops*, with which it agrees also in the presence of luminous glands and of membranous interspaces between the bones of the cranium.—Mr. Brazier sent for exhibition six specimens of *Helix vermiculata*, Müller, obtained alive by him on July 13, 1897, on the buffalo-grass in the Waverley Cemetery. This is the first Australian record of this introduced European species, whose home is France, Spain, Italy, &c.—Mr. Hedley exhibited, by permission of the Curator of the Australian Museum, a specimen of *Cancellaria granosa*, Sowerby, taken from the stomach of a snapper hooked nine miles east of Wollongong, N.S.W., in 30-40 fathoms. An interest attached to this specimen is that though the species is well known in Tasmania, Victoria, and South Australia, it has not apparently been recorded previously from the coast of N.S.W. Mr. Hedley remarked that an exploration of the deep, cold-water current that lay off the coast would result in adding many other southern forms to our known fauna. A previous instance of such is the record [P.L.S.N.S.W. (2) iv. p. 749] of *Crassatella kingicola*, Lamk., a characteristically Tasmanian species trawled in 17 fathoms off Merimbula, N.S.W. If fishermen could be induced to search the stomachs of fishes, a mass of valuable data would soon accumulate.—Mr. Norman Hardy read a note on, and exhibited specimens of, feathered arrows from the island of Espiritu Santo, New Hebrides. It has long been held as an ethnological axiom that no arrow from any Pacific island was feathered. This rule is now shown to have its exception, and for the first time the locality whence these feathered arrows come is now published.

GÖTTINGEN.

Royal Society of Sciences.—The *Nachrichten* (mathematico-physical section) part 2, 1897, contains the following memoirs communicated to the Society:—

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May 15.—George Landsberg: The algebra of the Riemann-Roch theorem. O. Mügge: Translations and other related phenomena in crystals. J. R. Schütz: The principle of the absolute conservation of energy.

May 29.—J. Orth: Researches carried out in the Pathological Institute at Göttingen.

June 19.—A. Hurwitz: Linear forms with integral variables. L. Krüger: A theorem in the combination of observations.

July 3.—E. Ehlers: East African Polychæte worms. C. Fromme: On magnetic hysteresis. P. Gordan: Hermite's reciprocity-theorem.

July 17.—W. Voigt: Determination of relative thermal conductivity by the isothermal method.

July 31.—F. Klein: A new manuscript relating to Bernhard Riemann. A. Wiman: Note on the symmetrical and alternating interchange-groups of n things. H. Minkowski: General theorems on convex polyhedra.

BOOKS RECEIVED.

BOOKS.—Memory and its Cultivation: Dr. F. W. Edridge-Green (K. Paul).—Elements of Human Physiology: Dr. E. H. Starling, 3rd edition (Churchill).—Electricity in the Service of Man: Dr. R. Wormell, revised and enlarged by Dr. A. M. Walmsley (Cassell).—Botanical Observations on the Azores: W. Trelease.—Royal Gardens, Kew, Bulletin of Miscellaneous Information, 1896 (Eyre).—A Question of the Water and of the Land: Dante Alighieri, translated by C. H. Bromby (Nutt).—The Dwelling-House: Dr. G. V. Poore (Longmans).—Lumen: C. Flammarion, translated (Heinemann).—15 Lezioni Sperimentali su la Luce: A. Garbasso (Milano).—Year-Book of the U.S. Department of Agriculture, 1896 (Washington).—The Principles of Chemistry, 2 Vols.: D. Mendeléeff, translated by G. Kamensky, edited by T. A. Lawson (Longmans).—The Machinery of the Universe: Prof. A. E. Dolbear (S.P.C.K.).—Sleep: its Physiology, Pathology, Hygiene, and Psychology (Scott).—A Memoir of Wm. Pengelly, F.R.S.: edited by his daughter, Hester Pengelly (Murray).—Missouri Botanical Garden, 8th Annual Report (St. Louis, Mo.).—Œuvres Complètes de Christian Huygens, tome septième (La Haye, Nijhoff).—Elementary Manual of Magnetism and Electricity: Prof. A. Jamieson, 4th edition (Griffin).—The Principles of Alternate-Current Working: A. Hay (Biggs).—A Text-Book of Applied Mechanics: Prof. A. Jamieson, Vol. 2 (Griffin).—The Works of Archimedes: edited in modern notation, with introductory chapters, by Dr. T. L. Heath (Cambridge University Press).—Theory of Groups of Finite Order: Prof. W. Burnside (Cambridge University Press).—The Röntgen Rays in Medical Work: Dr. D. Walsh (Baillière).—Darwin and after Darwin: Dr. G. J. Romanes, III. (Longmans).—John Hunter: S. Paget (Unwin).—Les Fonds Electriques et leurs Applications: A. Minet (Paris. Gauthier-Villars).—Die Meteoriten in Sammlungen und ihre Literatur: Dr. E. A. Wülfing (Tübingen, Laupp).—Luce e Raggi Röntgen: Prof. R. Ferrini (Milano, Hoepli).

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