

the shower indicates a corresponding increase in the density of the meteorite swarm. The principal radiant was near η Persei, about R.A. 44°, Decl. + 55°. The steady annual displacement of the Perseid radiant and the unusual brilliancy of the swarm makes an interesting subject for future observation.—Circles or spheres “derived” from an envelope, plane or solid, of any class, by M. Paul Serret.—On the periodical maxima of spectra, by M. Aymonnet. It may be assumed that luminous waves comprising an exact number of molecular ranges are propagated with less friction than waves producing nodes in the molecules themselves. If, between two given limits, the incident radiation is sufficiently complex and intense, and the solid transmits all the maximum waves possible, these will, in the normal spectrum, differ in wave-length by twice the product of the index of refraction into the sum of the molecular diameter at absolute zero, its expansion at the given temperature, and its lengthening or shortening in the direction of propagation under the influence of the wave.—On the development of the pancreas in Ophidia, by M. G. Saint-Remy. The earliest stage observed in the snake, corresponding, as far as the pancreas is concerned, to the fifth day in the development of the chicken, shows distinctly the three markings, one dorsal and two ventral, observed in some other vertebrates. The ventral markings are completely isolated from the intestine, and detach themselves from the hepatic canal, forming two clusters of acini on the two sides. The dorsal marking, which is very voluminous, lies to the right of the duodenum, with which it communicates by a broad canal. It was this that was previously observed. The close connection between the hepatic canal and the pancreas is easily understood by observing the development of the latter from the three markings referred to.—On the coccidia of birds, by M. Aiphonse Labbé. In the course of researches on parasites of the blood of birds, conducted at Roscoff, the presence of an intestinal coccidium, probably unknown hitherto, was verified in a large number of aquatic birds. It is a very small tetraspore coccidium with exogenous development. The pyriform capsule is not larger than 16 or 18 μ by 14 or 16 μ . An interesting characteristic is the frequent presence of two bright granules at the micropylar extremity. The presence or absence of polar granules in *Coccidium Roscoffiense* appears to be determined by the culture in which the cysts were developed.—Vegetable anatomy of *Ataccia Cristata*, Kunth, by M. C. Queva.

SYDNEY.

Royal Society of New South Wales, June 7.—Prof. T. P. Anderson Stuart, President, in the chair.—The following papers were read:—Flying machine motors and cellular kites, by Lawrence Hargrave.—Notes and analysis of a metallic meteorite from Moonbi, near Tamworth, N.S.W., by John C. H. Mingay.—Plants with their habitats, discovered to be indigneous to this colony since the publication of the “Handbook of the Flora of New South Wales,” by Charles Moore.—On the whipworm of the rat’s liver, by T. L. Bancroft.—Small whirlwinds, by H. C. Kiddle.

July 5.—Prof. T. P. Anderson Stuart, President, in the chair.—The following papers were read:—On the languages of the New Hebrides, by Sidney H. Ray.—On an approximate method of finding the forces acting in magnetic circuits, by Prof. Threlfall.—Unrecorded genera of the older tertiary fauna of Australia, including diagnoses of some new genera and species, by Prof. Ralph Tate.

DIARY OF SOCIETIES.

LONDON.

WEDNESDAY, OCTOBER 4.

ENTOMOLOGICAL SOCIETY, at 7.—On the Cost and Value of Insect Collections: Dr. D. Sharp, F.R.S.—On the Ants of the Island of St. Vincent: Prof. Auguste Förel.—Description of a New and Remarkable Sub-family of the Scolytidae: Walter F. H. Blandford.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—University College, Bristol, Calendar for the Session 1893-94 (Bristol).—The Miner’s Handbook: Prof. J. Milne (Lockwood).—Elementary Lessons, with Numerical Examples in Practical Mechanics and Machine Design, new edition: R. G. Blaine (Cassell).—The Orchid Seekers: A. Russan and F. Boyle (Chapman and Hall).—On Sewage Treatment and Disposal: T. Wardle (J. Heywood).—The Cholera Epidemic of 1892 in the Russian Empire: Dr. F. Clemow (Longmans).—Proceedings and Transactions of the Royal Society of Canada, 1892 (Ottawa,

Durie).—A B C Five-Figure Logarithms for General Use: C. U. Woodward (Spon).—Our Household Insects: E. A. Butler (Longmans).—The Essentials of Chemical Physiology: Dr. W. D. Halliburton (Longmans).—The Art of Projection and Complete Magic-Lantern Manual: An Expert (Beckett).—Songs in Springtime, 2nd edition: J. C. Grant (E. W. Allen).—Notes on Some of the More Common Diseases in Queensland in Relation to Atmospheric Conditions, 1887-91: Dr. D. Hardie (Brisbane, Beal).—Charts for ditto (Brisbane, Beal).—Manual of the New Zealand Coleoptera, Parts 5, 6, 7: Captain T. Broun (N.Z., Wellington, Costall).—An Examination of Weismannism: Dr. G. J. Romanes (Longmans).—The Science of Mechanics: Dr. E. Mach, translated by T. J. McCormack (Watts).—A Course of Practical Chemistry or Qualitative Chemical Analysis, 8th edition: W. J. Valentin, edited and revised by W. R. Hodgkinson (Churchill).—Drum Armatures and Commutators: F. M. Weymouth (*Electrician Company*).—Handbuch der Paläontologie, I. Abthg., Paläontologie, iv. Band, 2 Lief: K. A. Zittel (Williams and Norgate).—Traité des Gîtes Minéraux et Métallifères, 2 vols.: E. Fuchs and L. de Launay (Paris, Baudry).—Abnormal Man, being Essays on Education and Crime and Related Subjects: A. MacDonald (Washington).—British Commerce and Colonies: H. de B. Gibbins (Methuen).—The Chemistry of Fire: M. M. P. Muir (Methuen).—A Manual of Electrical Science: G. J. Burch (Methuen).—A Treatise on the Kinetic Theory of Gases, 2nd edition: Dr. H. W. Watson (Oxford, Clarendon Press).—A Handbook of the Destructive Insects of Victoria, Part 2: C. French (Melbourne, Brain).—Glasgow and West of Scotland Technical College Calendar for Session 1893-94 (Glasgow).—Sécheresse, 1893, ses Causes, Principes Généraux de Météorologie, l’Abbé A. Fortin (Paris, Vic et Amat).—Blackie’s Junior School Shakespeare: King Henry V.: W. Barry (Blackie).—Blackie’s Science Readers, No. VI.: Rev. T. Wood (Blackie).—Hand und Hilfsbuch zur Ausführung Physiko-Chemischer Messungen: Prof. W. Ostwald (Williams and Norgate).—Text-book of Biology: Part 2, Invertebrates and Plants: H. G. Wells (Clive).—Certain Climatic Features of the Two Dakotas: J. P. Finley (Washington).—The Industries of Animals: F. Houssay (W. Scott).—Utility of Quaternions in Physics: A. McAulay (Macmillan).—Pubblicazioni della Specola Vaticana, fasc. 1 and 2 (Roma).

PAMPHLETS.—A Guide to Stereochemistry: A. Eiloart (N.Y., Wilson).—The Caradoc Record of Bare Facts, 1892 (Shrewsbury).—Cremation and Cholera: Sir S. Wells (London).—The Prevention of Preventible Disease: Sir S. Wells (Glasgow).—Abstract of the Proceedings of the Linnaean Society of New York for the Year ending March 1, 1893 (New York).—On the so-called Bugonia of the Ancients, and its Relation to Eristalis Tenax, a Two-winged Insect: C. R. Osten-Sacken (Firenze, Ricci).—Catalogue of the Minerals of Tasmania, with Notes on their Distribution: W. F. Petter (Hobart, Grahame).—The Glacier Epoch of Australasia: R. M. Johnston.—Abhandlungen zur Landeskunde der Provinz Westpreussen, Heft 5, Die Tucheler Haide, &c.: R. Schütte (Danzig, Bertling).—Notes on Marine Laboratories of Europe: B. Dean.

SERIALS.—Engineering Magazine, September (New York).—Insect Life, Vol. v. No. 5 (Washington).—The American Naturalist, August (Philadelphia).—Verhandlungen des Deutschen Wissenschaftlichen Vereines zu Santiago, Chile, ii. Band, 5 and 6 Heft (Berlin, Friedländer).—American Journal of Science, September (New Haven).—Journal of the Franklin Institute, September (Philadelphia).—Quarterly Journal of Microscopical Science, September (Churchill).—Economic Journal, September (Macmillan).—Timehri, June (Stanford).—Proceedings of the Liverpool Geological Society, Session 34, Part 1, Vol. vii. (Liverpool).—Transactions of the Academy of Science, St. Louis, Vol. vi. Nos. 2 to 8 (St. Louis).

CONTENTS.

PAGE

The Physiological Papers of Prof. Sachs. By D. H. S.	513
Our Book Shelf:—	
Emerson: “On English Lagoons.”—J. S.	515
Tarn: “The Mechanics of Architecture.”—G.	515
Letters to the Editor:—	
Telegony.—Dr. George J. Romanes, F.R.S.	515
Quaternions and Vectors.—Prof. C. G. Knott	516
Grassmann’s “Ausdehnungslehre.”—Prof. R. W. Genese	517
Astronomical Photography.—H. F. Newall	517
Hering’s Theory of Colour-Vision.—Christine Ladell Franklin	517
“Megamicros.”—S. Tolver Preston	517
Early Asterisms. II. By J. Norman Lockyer, F.R.S.	518
British Association. By Prof. Frank Clowes	520
Notes	522
Our Astronomical Column:—	
Nova (T) Aurigæ Spectrum	524
The Fireball of January 13, 1893	524
Nitro-Metals, a New Series of Compounds of Metals with Nitrogen Peroxide. By A. [E. Tutton	524
Physics at the British Association	525
Chemistry at the British Association	529
Geology at the British Association	531
Evolution and Classification. By Prof. C. E. Bessey	534
Scientific Serials	535
Societies and Academies	535
Diary of Societies	536
Books, Pamphlets, and Serials Received	536