Poulton in his paper on the subject in the Transactions of the Royal Society; and to effect this object different and additional influences had been brought to bear on these pupæ, so that an analogy might be drawn between the two sets of results. Mr. Poulton, Lord Walsingham, F.R.S., Mr. Jacoby, Dr. Sharp, and Mr. White took part in the discussion which ensued.

PARIS.

**Academy of Sciences**, March 12.—M. Janssen in the chair.—Remarks accompanying the presentation of the second edition of his "Traité de Physique Mathématique," by M. H. Resal. To this edition have been added sections on mathematical optics and thermodynamics, enlarging the work from one to two volumes.—On the combination of measures of the same magnitude, by M. J. Bertrand. An attempt is here made to estimate the consequences of rejecting measures assumed to be less accurate as departing furthest from the mean in the doctrine of probabilities.—New theory of M. Lœwy's equatorial *coudé* and equatorials in general, by MM. M. Lœwy and P. Puiseux. An improved method is described for more accurately determining the constants both of bent and straight equatorials, with the most rapid processes for mounting and rectifying these instruments.—On phosphorus and phosphoric acid in vegetation, by MM. Berthelot and G. André. As a general result of their experiments, made especially on *Amaranthus caudatus*, the authors find that, after the normal flowering, the employment of phosphorous, and even to some extent of nitrous, manures seems almost, if not altogether, useless, whereas potassic manures may still be advantageously continued as long as vegetation lasts.—Classification of the Gasteropods, based on the various dispositions of the nervous system, by M. H. de Lacaze-Duthiers. This is a purely synthetic treatise, summing up the long and numerous analytical studies on the nervous system of various mollusks, such as Gadinia, Aplysia, Tethys, and many others described in the *Comptes rendus* and elsewhere. The object is to ascertain what data may be supplied by these different types of nervous systems for a physiological classification of the secondary groups of Gasteropods. Two sub-classes with five orders are proposed for the whole class.—On a general theorem of convergence, by M. J. L. Jensen. The studies undertaken by the author with a view to a generalization of the theory of convergence of a series with positive terms have led to an unexpected simplification of the present theory. It is shown that the criteria of Cauchy, of Duhamel and Raabe, of Bertrand, and others, may henceforth be treated summarily as simple corollaries of one general theorem.—On the measurement of magnetic fields by diamagnetic bodies, by M. P. Joubin. The author's renewed attempts to utilize the magnetization of diamagnetic bodies for measuring the intensity of a magnetic field seem to demonstrate the existence of several states of magnetic equilibrium in diamagnetic bodies. This unexpected result is in accordance with theory according to Duhem's calculations, as well as with the general considerations recently set forth by M. Brillouin.—On the magnetization of diamagnetic bodies, by M. P. Duhem. The grounds are explained which render highly probable the existence of several states of magnetic equilibrium for diamagnetic bodies placed in a given position and subjected to the action of given magnets.—A new eolipyle, by M. Paquelin. The apparatus here described has the advantage of working in any position without the risk of explosion, and consumes not more than 90 grammes of fuel in the hour.—Determination in wave-lengths of the two red rays of potassium, by M. H. Deslandres. This determination, made at the request of M. Lecoq de Boisbaudran, yields for the stronger ray 766·30, for the weaker 769·63, giving a mean 767·965, compared with 588·89 of the $D_2$ sodium ray, which served for the calculation of the constant.—On the decreasing solubility of the sulphates, by M. A. Etard. The sulphates of iron, cadmium, magnesium, lithium, rubidium, and potassium, as well as anhydrous selenious acid, all present the same phenomenon of decreasing solubility. But that of iron, like the previously described sulphate of copper, changes direction twice, first increasing and remaining constant, then decreasing; the complete series of transformations being accomplished between $-2°$ and $+156°$ C.—Action of roasting on several oxides and salts of manganese, by M. Alex. Gorgeu. The anhydrous protoxides heated briskly leave a red oxide; slowly roasted, so as to avoid incandescence, and then kept at a dull red until the weight of the residuum ceases to change, they yield a sesquioxide; lastly, when heated from 200° to 430° C., the oxidation of the MnO obtained at a high temperature is very slow, and appears not to go beyond the manganite $MnO_24MnO$, even after forty or fifty hours. Several other details are given of these interesting experiments.—On the collection of star-fish brought to Europe by the French Scientific Mission to Cape Horn, by M. Edmond Perrier. This collection comprises no less than 553 specimens, referred to 38 distinct species, of which 23 are new. This gives to the southern waters of the American continent a total of 57 species of these organisms.—M. J. Kunstler describes a new Foraminifer from the Arcachon basin.

## BOOKS, PAMPHLETS, and SERIALS RECEIVED.

The Geological Evidences of Evolution: A. Heilprin (Philadelphia).—Age of Creation: W. J. Cassidy (Briggs, Toronto).—The Geological History of Plants: Sir J. W. Dawson (K. Paul).—A Treatise on Mine Surveying: B. H. Brough (Griffin).—Old and New Astronomy, Part 1: R. A. Proctor (Longmans).—Rainfall in the East Indian Archipelago, 1886: Dr. Van der Stok (Batavia).—Observations made at the Magnetical and Meteorological Observatory at Batavia, vol. ix. 1886: Dr. Van der Stok (Batavia).—Report on the Crops of the Year 1887 (Washington).—London Geological Field Class Reports, 1887 (Philip).—Morphologisches Jahrbuch, Eine Zeitschrift für Anatomie und Entwickelungsgeschichte, xiii. Band, 3 Heft (Leipzig).—Journal of the Chemical Society, March (Gurney and Jackson).—Journal of the Society of Telegraph-Engineers and Electricians, vol. xvii. No. 70 (Spon).—Notes from the Leyden Museum, October 1887 (Leyden).—Archives Italiennes de Biologie, Tome ix. Fasc. 2 (Turin).—Encyklopædia der Naturwissenschaften, Erste Abthg. 54 Lief., Zoologie, &c.; Zweite Abthg. 46 and 47 Lief., Chemie (Breslau).—Bulletin de l'Académie Royale des Sciences de Belgique, 1888, No. 1 (Bruxelles).

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