author suggests that a secondary movement in the opposite direction may perhaps occasionally be produced, which would serve to explain many phenomena difficult to account for on any one theory.—On the equivalent of the terbenes; explanatory note, by M. Lecoq de Boisbaudran.—On the employment of the azimuthal co-ordinates in geodetic surveys, by M. Hatt.—Communication on the approaching centenary of Arago, by M. Mouchez. It was announced, on behalf of the Committee, that the intended banquet in the Hôtel de Ville has been abandoned, and that it has been decided to erect a more lasting monument to the memory of the illustrious astronomer, to take the form of a colossal statue to be raised by national subscription on the Boulevard bearing his name.—Remarks on the *Year-book* of the Imperial Observatory of Rio de Janeiro, presented to the Academy on behalf of the Emperor of Brazil, by M. Faye.—Position of telescopic stars in the constellation of the Pleiades, by M. G. Rayet. A complete list is given of 143 stars observed with the 14-inch equatorial of the Bordeaux Observatory during the winters of the years 1884-85 and 1885-86.—Observations on Fabry's comet made at the Observatory of Algiers with the 0·50 m. telescope, by M. Ch. Trépied.—Orbit and ephemeris of the same comet, by M. Lebeuf. From the observations taken at Algiers, Hamburg, Nice, and Paris, the elements of the new orbit have been determined as under:—

T = 1886 April 5·9580 Paris Mean Time

$$\left.\begin{array}{rl} \omega = & 126^\circ\ 36'\ 6''\cdot7 \\ \Omega = & 36\ 22\ 32\cdot0 \\ i = & 82\ 36\ 34\cdot9 \end{array}\right\} \text{Equinox } 1886\cdot0.$$

$\log q$ = 9·807626

On the angle of the line of depression below the horizon at sea, by M. E. Perrin. The observations of depression here published were taken in 1884-85 on board the *Galissonnière* in the Chinese seas by means of a Lorieux reflection circle furnished with Daussy's additional small mirror. The mean value of apparent depression was determined at 5′ 31″·5. The corresponding geometric depression being 5′ 46″·8 for an altitude of 9 metres, about 1/23 was fixed for the coefficient of geodetic refraction at sea.—Calculation of mechanical regulators; the proper course to follow in practice in order to establish a regulating apparatus with indirect action, by M. H. Léauté.—Note on the articulated hyperboloid and the application of its properties to the demonstration of De Sparre's theorem, by M. A. Mannheim.—On Deprez d'Arsonval's aperiodic galvanometer employed as a ballistic galvanometer, by M. Ledeboer.—On the spectrum of erbine, by Prof. W. Crookes. The phosphorescent spectrum of this earth, of which a comparatively pure specimen has recently been obtained by the author, showed four green bands coinciding with none of those of the spectra of yttrium and samarium.—On the crystallisation of the paratartrate of soda and ammonia, by M. J. Joubert.—On the relations existing between the variations of terrestrial magnetism and the protuberances and other phenomena observed on the sun, by M. H. Wild. As far as the question has hitherto been studied the author considers it well-nigh established that the great movements of the solar atmosphere are revealed on the globe by corresponding disturbances of the magnetic needle.—Actinometric observations made at Montpellier during the year 1885, by M. A. Crova.—On the hygroscopic properties of tobacco, by M. Th. Schlœsing, jun.—On the isomeric states of the sesquichloride of chromium, green sesquichloride, by M. A. Recoura.—On some immediate principles of the peel of the bitter orange, by M. Tanret.—On the respiratory centres of the spinal marrow, by M. E. Wertheimer. Numerous experiments made on dogs show that in the spine there exist nervous centres, some determining inspiration, others expiration.—On the character of an anomalous rock in the Aspe Valley, Lower Pyrenees, by MM. E. Jacquot and A. Michel Lévy. This rock, by Charpentier called *compact feldspar*, is interstratified at the base of the Carboniferous formations, its age coinciding with the end of the granulite and beginning of the microgranulite eruptions. Although soft and oily to the touch, like the steatites, its dust scratches glass. Chief constituents: silica, 76·33 per cent.; alumina, 14·30; potassa, 3·33; lime, 0·90.—On the stratigraphic relations existing between the miliolite limestones and the *Micraster tercensis* formation in the department of the Haute-Garonne and the canton of Sainte-Croix (Ariège), by M. J. Roussel. The new facts determined by the author show that in the Pyrenees the relations of the Chalk and Tertiary formations are sometimes of an extremely complicated character. But in his remarks on this paper M. Hébert was unable to accept the view that the *Micraster tercensis* of the Pyrenees, essentially a Cretaceous rock, was contemporary with the Tertiary formations containing *Cerithium ladevezi*, *Ostrea uncifera*, and similar fossils.

STOCKHOLM

Royal Academy of Sciences, February 10.—On Binuclearia, a new genus of Confervacea, by Prof. V. B. Wittrock.—On the biology of some Arctic plants, by Prof. E. Warming.—Contributions to the anatomy of the cotyledons of the monocotyledonous plants, by Miss M. Lewin.—On the amount of the rainfall on bare and wooded ridges in the North of Halland, by Dr. H. Hamberg.—Insects collected in the Cameroon Mountain, by G. Waldau and H. Knutson: I. Coleoptera, Cetoniidæ, described by Prof. Chr. Aurivilius.

BOOKS AND PAMPHLETS RECEIVED

"Across the Jordan," by G. Schumacher (Bentley).—"Marvels of Animal Life," by C. F. Holder (Low).—"Japanese Homes," by E. S. Morse (Low).—"Highlands of Cantabria," by Ross and Cooper (Low).—"The Rain-Band," by J. R. Capron (Stanford).—"Lessons in Elementary Chemistry," new edition, by Sir H. E. Roscoe (Macmillan).—"Rotifera," part 2, by Hudson and Gosse (Longmans).—"Bees and Bee-keeping," part 7, by F. R. Cheshire (Gill).—"The Western Pacific and New Guinea," by H. H. Romilly (Murray).—"British Petrography," part 2, by J. J. H. Teall (Watson, Birmingham).—"Indian Meteorological Memoirs," vol. ii. part 5 (Calcutta).—"Report on the Administration of the Meteorological Department of the Government of India in 1884-85."—"The Monthly Weather Report," Oct. and Nov., 1885.—"Proceedings of the Linnean Society of New South Wales," vol. x. part 3 (Cunninghame, Sydney).—PAMPHLETS:—"La Sensibilité et la Motilité des Végétaux," by E. Morren (Hayez, Bruxelles).—"Une Expérience sur l'Ascension de la Sexe chez les Plantes," by L. Errera.—"Fremdländische Zierfische, mit Abbildungen," by B. Dürigen (P. Matte, Berlin).—"The Fixed Idea of Astronomical Theory," by A. Tischner (Fock, Leipzig).—"Report on the Action of the Sheffield Water on the Lead Communication Pipes," by S. White.

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