

notes of some further "Researches on Conchospirals." He pointed out the geometrical properties of the logarithmic spirals of Mollusca, the special form of spiral in Ammonites, and the methods of deducing the individual specific parameters from (α) tangential measurements, (β) horizontal sections, and (γ) vertical sections.—The Chairman exhibited a human skull from Swan River, Australia, encrusted with shells and much acted on by water.

PARIS

Academy of Sciences, February 5.—M. Serret presented a note by M. A. Mannheim, containing generalisations of Meunier's theorem.—M. H. Resal presented a memoir on the mechanical effects of the American hammer.—A memoir was read by M. E. Duclaux on the laws of the flow of liquids in capillary spaces.—Mr. P. Blaserna presented a note on the solar atmosphere, in which he claims to have arrived at the same conclusions with M. Janssen, from his observations during the eclipse of December 22, 1870.—M. Renou replied to the observations made by M. Delaunay with regard to the Meteorological Annual of the Paris Observatory at the last meeting of the Society, and M. Le Verrier suggested the appointment of a committee to revise the meteorological observations presented to the Academy during the last century, and to bring out an authentic edition of them.—Communications, descriptive of the aurora observed in France and elsewhere on the evening of February 4, from MM. Frou, Salicis, Laussedat, and Chapelas, were read, as also an extract from a letter from M. Cornu to M. Fizeau upon the spectrum of the same aurora. The most important result obtained by the last-mentioned author was the determination of the existence of a yellowish-green band coinciding with that previously observed by Angström in 1867-68.—M. Prazmowski also presented a note on the spectral investigation of the aurora of Feb. 4. He described a green band about E of Fraunhofer (seemingly identical with that observed by M. Cornu), a red band near C, and two more very faint bands in the blue and violet, near F and G.—M. Bobierre communicated some chemical investigations on the Landes of Brittany, in which he noticed especially the constituents of the ashes of plants grown on those soils. They are chiefly remarkable for the great quantity of silica contained in them and their poverty in alkaline salts.—M. Cahours presented a note by M. G. Chancel, on the contraction of solutions of cane sugar at the moment of inversion, and on a new saccharimetric process. The author described the method employed by him, and stated that a solution of cane sugar, after inversion, has undergone an appreciable diminution of volume, which increases in proportion to the amount of sugar in solution. Upon this property he proposes to found a new method of saccharimetry.—M. Sacc presented an analysis of the linseed oil referred to in a recent memoir read to the Academy.—M. Dupuy de Lome read two long and exceedingly interesting papers upon the construction of a screw aerostat invented by him, and on the results of a trial trip made with it. The machine consists of an oblong balloon, with a boat-shaped car; the author describes it as presenting great stability. The propeller worked by eight men moved the balloon through the air with a velocity of 2.82 metres per second, or 10.4 kilometres (about 6½ miles) per hour, so that a certain amount of power over the movements of the machine was obtained.—The warm discussion upon heterogeny and the nature of fermentation was continued at this meeting by a second communication on the latter subject by M. Fremy, who denies that the experiments of M. Pasteur have anything to do with fermentation. He also declared that his theory has nothing in common with that of Liebig, with which it was identified by M. Wurtz. The paper contained accounts of experiments made with malt, yeast, milk, and grape-wort, and upon the decomposition of organic bodies by the action of moulds.—MM. Dumas and Balard made some remarks on this communication, and M. V. Meunier presented a note in which he stated that organic bodies do frequently make their appearance in solutions treated after M. Pasteur's method, so that, he thought, the results obtained by that gentleman are not conclusive.—M. de Quatrefages presented a note by M. E. T. Hamy describing the occurrence of brachycephalous negroes among the Cammas on the shores of the Fernand-Vaz River in Western Africa.—M. Milne-Edwards described a self-regulating gas-heating apparatus in use in the zoological laboratory of the Museum; and M. Sichel *filis* forwarded the description of a new ophthalmoscope for simultaneous observations by two persons.

BOOKS RECEIVED

ENGLISH.—A Treatise on Attractions, Laplace's Functions, and the Figure of the Earth, 4th edition: J. H. Pratt (Macmillan and Co.)—Science and Humanity: Noah Potter (Hodder and Stoughton).—Solid Geometry and Conic Sections: J. M. Wilson (Macmillan and Co.)—Report by the Committee on Intemperance, for the Lower House of Convocation: (Jas. Clarke and Co.)—Our National Resources and how they are reached: W. Hoyle (Simpkin and Marshall).—Consumption, and the Breath re-breathed; Dr. H. M' Cormac (Longmans).
FOREIGN.—Bulletin de la Société Imperiale des Naturalistes de Moscou, 1871, Nos. 1 and 2.

DIARY

THURSDAY, FEBRUARY 15.

ROYAL SOCIETY, at 8.30.—On the Induction of Electric Currents in an Infinite Plane Conducting Sheet: Prof. Clerk Maxwell, F.R.S.—On some Derivatives of Uramido-benzoic Acid: J. P. Griess, F.R.S.
SOCIETY OF ANTIQUARIES, at 8.30.
LINNEAN SOCIETY, at 8.—On a Chinese Artichoke Gall: A. Müller, F.L.S.—On the Habits, Structure, &c., of the Three-banded Armadillo: Dr. J. Murie, F.L.S.—Comparative Geographical Distribution of Butterflies and Birds: W. F. Kirby.
CHEMICAL SOCIETY, at 8.

FRIDAY, FEBRUARY 16.

ROYAL INSTITUTION, at 3.—On the Crystallisation of Silver and other Metals; Dr. Gladstone, F.R.S.
GEOLOGICAL SOCIETY, at 1.—Anniversary Meeting.

SATURDAY, FEBRUARY 17.

ROYAL INSTITUTION, at 3.—On the Theatre in Shakespeare's Time: Wm. B. Donne.

SUNDAY, FEBRUARY 18.

SUNDAY LECTURE SOCIETY, at 4.—On the Human Hand, as Illustrating the Scheme of Creation: Lawson Tait.

MONDAY, FEBRUARY 19.

ENTOMOLOGICAL SOCIETY, at 7.
ANTHROPOLOGICAL INSTITUTE, at 8.—Strictures on Darwinism: H. H. Howorth.—Race-Characteristics as related to Civilisation: J. Gould Avery.
LONDON INSTITUTION, at 4.—Elementary Chemistry: Prof. Odling, F.R.S.

TUESDAY, FEBRUARY 20.

ROYAL INSTITUTION, at 3.—On the Circulatory and Nervous Systems: Dr. Rutherford.
ZOOLOGICAL SOCIETY, at 9.—Notes upon the Anatomy of the young Hippopotamus, as observed in the specimen which died in the Society's Gardens on the 10th January, 1872: J. W. Clark.—Contributions to a General History of the Spongiadæ. Part II: Dr. J. S. Bowerbank.—On the Spiders of Palestine and Syria; containing a general list with descriptions of numerous new species and characters of two new genera: Rev. O. P. Cambridge.
STATISTICAL SOCIETY, at 7.45.—On Prison Discipline and Statistics in Lower Bengal: Dr. Mouat.

WEDNESDAY, FEBRUARY 21.

GEOLOGICAL SOCIETY, at 8.—Migrations of the Graptolites: Prof. H. Alleyne Nicholson, F.G.S.—How the Parallel Roads of Glen Roy were Formed: Prof. James Nicol, F.G.S.—Notes on Atolls or Lagoon-islands: S. J. Whittell.
SOCIETY OF ARTS, at 8.—On Prison Labour, as an Instrument of Punishment, Profit, and Reformation: F. J. Mouat.
ROYAL SOCIETY OF LITERATURE, at 8.30.—On Results of recent Excavations in Rome: Mr. Vaux.
METEOROLOGICAL SOCIETY, at 7.

THURSDAY, FEBRUARY 22.

ROYAL SOCIETY, at 8.30.
ROYAL INSTITUTION, at 3.—On the Chemistry of Alkalies and Alkali Manufacture; Prof. Odling, F.R.S.
SOCIETY OF ANTIQUARIES, 8.30.

CONTENTS

	PAGE
THE POSITION OF THE CENTRE OF GRAVITY IN INSECTS. By FELIX PLATEAU	297
ON THE COLOURING-MATTERS FOUND IN FUNGI. H. C. SOREY, F.R.S.	298
SCHMIDT'S COMPARATIVE ANATOMY. By Dr. P. H. PYE SMITH	298
OUR BOOK SELF	299
LETTERS TO THE EDITOR:—	
The Total Eclipse, as seen at Ootacamund.—J. BOESINGER	300
Natural Science at Oxford.—Prof. THISELTON DYER	301
Auroral Statistics.—Prof. C. PIAZZI SMYTH, F.R.S.	301
The Aurora of February 4.—Rev. H. C. KEY (<i>With Diagram</i>): J. J. HALL; T. FAWCETT; Rev. T. W. WEBB, F.R.A.S.; J. R. CAPRON; Rev. S. J. PERRY, F.R.A.S.; Sir D. WEDDERBURN, Bart, M.P.; J. J. MURPHY, F.G.S.	302
The Great Comet of 1861.—A. C. RANVARD, F.R.A.S.	304
ON LUMINOUS MATTER IN THE ATMOSPHERE. By HENRY WALDNER	304
THE MONGOOSE AND THE COBRA. J. W. EDMONDS	305
BARTWIG'S SUBTERRANEAN WORLD. (<i>With Illustrations</i>)	305
RECENT DISCOVERY OF PIT DWELLINGS. By J. STEVENS	308
INAUGURATION OF THE OBSERVATORY AT CORDOBA	309
NOTES	310
PHYSIC'S Preliminary Catalogue of the Bright Lines in the Spectrum of the Chromosphere. By Prof. C. A. YOUNG	312
SCIENTIFIC SERIALS	313
SOCIETIES AND ACADEMIES	314
BOOKS RECEIVED	314
DIARY	316