

plants of interest exhibited. He called attention to specimens of *Cytisus Adami*, believed to be a graft-hybrid, which bears upon the same branches, besides its own proper intermediate flowers, the dissociated very distinct flowers of its parents.—*Tillandsia ionantha* and a large flowering specimen of *Cycas revoluta* were also alluded to.

Scientific Committee.—Dr. J. D. Hooker, F.R.S., C.B., in the chair.—Mr. Anderson-Henry sent cuttings from black currant bushes, the buds of which were swollen to an unusual size, but abortive. This was due to the presence of a four-legged acaroid, similar to those on lime and hazel. In gardens near Greenock it was seriously affecting the cultivation of the fruit; it is believed there to have been imported with plants obtained from the Low Countries.—A letter from Mr. Andrew Murray to Mr. Berkeley was read, dated Salt Lake City. He sent an *Oscillatoria*, which he had found in a hot sulphuretted spring; also specimens of a *Nostoc*, with very large-celled chains, which blackened the stones in the brooks.—Dr. Masters called attention to a mode of propagating the vine described by M. Rivière. Cuttings were planted vertically in the ground in the spring, the uppermost bud being completely covered with 3 to 4 inches of soil.

EDINBURGH

Royal Society, May 19.—Memoir on the placentation of the sloths, by Prof. Turner. After referring to the absence of any definite information on this subject in anatomical literature, the author described his dissection of the gravid uterus of a specimen of that species of two-toed sloth, which Peters has named *Choloepus Hoffmanni*. His specimen was perfectly fresh when it came into his possession, and he had succeeded in obtaining satisfactory injections both of the foetal and maternal systems of blood-vessels. His dissections have led to the following conclusions:—The placenta of the sloth is not cotyledonary, in the sense in which the term is employed to express the non-deciduate placenta sub-divided into distinct and scattered masses, as in the ruminants. In the fullest sense of the word it is a deciduate placenta. If the inference which has been drawn from Sharpey's observations on the placenta in *Manis*, viz. that it is non-deciduate, be correct, then it is clear, if any value is to be attached to the placental system of classification, that the scaly ant-eaters can no long be regrouped along with the sloths in the order Edentata, which order must therefore be broken up. The memoir concluded with some remarks on the affinities, as regards their placental form and structure, of the sloths to the other deciduate mammals.

PARIS

Academy of Sciences, May 19.—M. de Quatrefages, president, in the chair.—The following papers were read.—A note on solar cyclones, with an answer, by S. Respighi to M. Vicaire and Father Secchi, by M. Faye. M. Vicaire in his late critique on M. Faye's solar spot theory had asked how that author could compare the barometric depressions in terrestrial cyclones which only amount to a few millimetres of mercury with the enormous lowerings of the chromosphere which ought to take place on the solar spots but which are inadmissible. M. Faye now replied that these depressions are *facts* long and carefully observed by Respighi, and quoted a letter from him on the subject. With regard to Secchi's assertion that Respighi had been deceived by the small size of his telescope ($4\frac{1}{2}$ inches aperture) he pronounced the objection utterly invalid, for, whatever might be the shortcomings of the telescope as regards minute details, it could never make the chromosphere appear very low where it was in reality very high.—Note on the mechanical properties of different bronzes, by M. Tresca.—Hydrologic studies of the Seine Part II., Agricultural applications, by M. Belgrand.—On the part played by the substratum in the distribution of rock lichens, by M. Weddell.—New observations on metallic deposits on zinc, &c., and a new heliographic process, by M. C. Gourdon.—On an electro-diapason of continuous movement, by M. E. Mercadier.—On an electro-dynamic experiment, by MM. G. Planté and Alf. Niaudet-Breguet.—On the action of dry ammonia gas on ammonic nitrate, by M. F. M. Raoult. The author found that the liquid produced by the action varies in composition with the temperature. At -10°C , 100 grammes of the nitrate absorb 42.50 grammes of the gas; this gradually diminishes as the temperature rises until at $+29^{\circ}\text{C}$ only 9 gm. only are retained and the product is solid, at 79° only 0.5 gm. of NH_3 remain.—On certain peculiarities observed in spectrum researches, by M. Lecoq de Boisbaudran.—On the

preparation and properties of oxymallic acid, by M. E. Bourgoin.—On the acid derivatives of naphthylamine, by M. D. Tommasi.—On the different propylenic chlorides. A classification of the absorption-bands of chlorophyll; accidental bands, by M. J. Chautard. The author so calls the bands produced by the action of acids, alkalies, or other re-agents upon normal chlorophyll.—Observations on the regulation of the magnetic compass, by M. Caspari.—Experimental Researches on the influence of barometric changes on life, tenth note, by M. P. Bert.—Mineralogical determinations of the true meteoric irons (Holosidères) in the Museum, by M. Stan. Meunier. During the meeting an election to the vacant seat of the late M. le Comte Jaubert (Académiegen libre) took place. M. de la Gournerie obtained 44; M. Bréguet, 9; M. Sedillot, 5; M. Jacquin, 2; and M. du Moncel, 1 vote. M. de la Gournerie was accordingly declared elected.

DIARY

THURSDAY, MAY 29.

ROYAL SOCIETY, at 8.30.—Croonian Lecture on Muscular Irritability after Systematic Death: Dr. B. W. Richardson
SOCIETY OF ANTIQUARIES, at 8.30.—Ballot for election of Fellows.
ROYAL INSTITUTION, at 3.—Light: Prof. Tyndall.

FRIDAY, MAY 30.

ROYAL INSTITUTION, at 9.—On the Radiation of Heat from the Moon: The Earl of Rosse.
HORTICULTURAL SOCIETY, at 3.—Lecture.

SATURDAY, MAY 31.

ROYAL INSTITUTION, at 3.—The Historical Method: John Morley.
GEOLOGISTS' ASSOCIATION.—Excursion to Finchley.

MONDAY, JUNE 2.

ENTOMOLOGICAL SOCIETY, at 7.
ROYAL INSTITUTION, at 2.—General Monthly Meeting.

TUESDAY, JUNE 3.

ANTHROPOLOGICAL INSTITUTE, at 8.—On a ready method of measuring the Cubic Capacity of Skulls: Prof. Bask, F.R.S.—Flat Implements from St. Vincent's: Prof. Rolleston, F.R.S.—Copy of a Mural Inscription in large Samaritan Characters from Gaza: Rev. D. I. Heath.—Strictures on Darwinism, Part II.: the Substitution of Types: H. H. Howarth.
ZOOLOGICAL SOCIETY, at 8.30.—The Antelopes of the genus *Gazella* and their Distribution: Sir Victor Brooke, Bart.—The Birds of the Philippine Islands: Viscount Walden.
ROYAL INSTITUTION, at 3.—Roman Archaeology: J. H. Parker.

WEDNESDAY, JUNE 4.

MICROSCOPICAL SOCIETY, at 8.
THURSDAY, JUNE 5.
CHEMICAL SOCIETY, at 8.—On the Dioxides of Calcium and Strontium: Sir John Courcy, Bart.—On Iodine Monochloride: J. B. Hannay.—A new Ozone Generator will be exhibited by Mr. T. Wills.
LINNEAN SOCIETY, at 8.
ROYAL INSTITUTION, at 3.—Light: Prof. Tyndall.

BOOKS RECEIVED

ENGLISH.—The Art of Grafting and Budding: C. Baltet (W. Robinson).—Elementary Crystallography: J. B. Jordan (F. Murby).—The Noaic Deluge: S. Lucas (Hodder and Stoughton).—British Rainfall, 1872: G. J. Symons (E. Stanford).—On Coal at home and abroad: J. R. Leitch (Longmans).—The Olive and its Products: L. A. Bernays (J. C. Beal, Brisbane).—The Philosophy of Evolution (an Actonian Prize Essay): B. T. Lowrie (Van Voorst).

CONTENTS

	PAGE
THE ZOOLOGICAL STATION AT NAPLES. By Dr. ANTON DOHRN . . .	81
GAUDIN'S "WORLD OF ATOMS"	81
OUR BOOK SHELF	82
LETTERS TO THE EDITOR:—	
Science at Cambridge.—Rev. T. G. BONNEY, F.G.S.	83
Arctic Exploration.—CLEMENS R. MARKHAM, C.B.	83
Forbes and Tyndall.—Principal J. C. SHARP	84
Clerk-Maxwell's Kinetic Theory of Gases.—Prof. J. CLERK-MAXWELL	85
Additional Remarks on Abiogenesis.—Prof. HUIZINGA	85
Flight of Birds.—J. GUTHRIE	86
THERMO-ELECTRICITY: REDE LECTURE AT CAMBRIDGE. By Prof. P. G. TAIT	86
ON THE SPECTROSCOPE AND ITS APPLICATIONS, IX. By J. NORMAN LOCKYER, F.R.S. (With Illustrations)	89
MIND IN THE LOWER ANIMALS. By Dr. J. LAUDER LINDSAY	91
NOTES	92
SCIENTIFIC SERIALS	95
SOCIETIES AND ACADEMIES	95
DIARY	96
BOOKS RECEIVED	96

ERRATA.—P. 64, col. 1, line 13 from bottom, for "drift" read "draft." Col. 2, line 14 from top, for "unnecessary" read "necessary."