

PHILADELPHIA

Academy of Natural Sciences, March 4.—Mr. Vaux, vice-president, in the chair.—Mr. Thomas Meehan exhibited a flower of *Bletia Tankervillea* (*Phaius grandiflora* of some authors), in which the dorsal sepal (or, as some authors contend, petal), had united with the column, and had been much retarded in its development accordingly. He said that he had several dozen of flowers produced in this way this winter, all, however, confined to separate spikes from those which bore the perfect flowers. It was usual to pass over these appearances as “monstrosities,” but in truth the whole Orchid structure was little less than a monstrosity. He did not think as much had been made out of the changes of structure in orchids in the study of evolution, as might be, in consequence of the impression that these abnormal forms, as they were termed, were monstrosities, or the results of cultivation. There had been already on record accounts of changes in wild orchids more remarkable than many much dwelt on by many modern writers on development. He further remarked that, in examining closely the flowers of *Bletia Tankervillea* early in the morning, he found on the outside, at the base of the three exterior petals, a liquid exudation from a small gland. It was highly probable that these glands were rudimentary spurs, and that, if the course of nutrition which sustained the cohering power of an orchid could in any way be diverted before the final direction of form, each of these outer petals might take on some of the labelate character, with its attendant spur, which gave such a peculiar appearance to so many orchidaceous plants.

March 18.—The president, Dr. Ruschenberger, in the chair.—“On the Occurrence of an Extinct Hog in America.”—Prof. Leidy exhibited the fragment of a lower jaw of a pig which Prof. Hayden had picked up, together with many remains of extinct mammals, in the pliocene sands of the Niobrara River, Nebraska. The specimen he viewed as of recent character, and not as a true indigenous fossil. Prof. Leidy remarked that he had never seen any remains of the hog which he could confidently view as true American fossils.—Prof. Cope stated that Dr. Hayden handed to him for determination some bones on a fragment of the Green River shale of the Eocene of Wyoming. They indicated a species of Anourous Batrachian, but as the individuals were not fully developed, he was not prepared to identify the genus. They constituted the first indication of this order in time; those previously known from Europe and India being all of Miocene age.

PARIS

Academy of Sciences, June 9.—M. de Quatrefages, president, in the chair.—M. Dupuy de Lome presented to the Academy, in the name of the Minister of Marine, the first number of the “Memorial of Marine Artillery” and its appendix, “The Artillery Remembrancer.” These are published for the use of French naval officers, and contain an immense amount of information on the armament of foreign ships of war. Great space is devoted to English naval matters, and the Memorial is well worthy of the attention of our own naval authorities.—The following papers were read:—Researches on new propyl derivatives, No. 2, by M. A. Cahours. The glucinum, silicon, and boron compounds of propyl were described.—On normal and abnormal speech, by M. Bouillaud.—On the intervention of atmospheric nitrogen in the phenomena of vegetation, by M. P. P. Dehérain. The author described some experiments which showed that, in the presence of ammonia, glucose absorbs nitrogen from the air.—On the multiple causes which provoke the fall of lightning, by M. W. de Fonville.—On the theory of the spots and the dark nucleus of the sun, by M. E. Vicaire. The author replied to M. Faye’s recent answer to him; he thinks that Respighi’s observations quoted by M. Faye tend to support his views rather than those of that astronomer, *i.e.* that the absence of the chromosphere over the spots is due to a cessation of the emission of the gases of which it is composed, and not to their being swallowed up by a cyclone.—Researches in spectrum analysis in relation to the spectrum of the sun, by Mr. J. N. Lockyer. This was a letter to M. Dumas giving an account of the author’s late paper read before the Royal Society.—An answer to M. Raynaud’s late note on the resistance-maxima of magnetic coils, by M. Th. du Moncel.—On the relation between electric and capillary phenomena, by M. G. Lippmann.—On the boiling points and molecular volumes of the chlorinated isomers of the ethylic series, by M. G. Hinrichs.—On ethylacetylene formed by synthesis, and on its identity with

crotonylene, by M. L. Prunier. The author has synthesised this body by passing equal volumes of ethylene and acetylene through a porcelain tube heated to dull redness.—On the synthesis of phenyl-allyl, by M. Chojnacki. The author obtained this body by acting on a mixture of equal weights of benzene and iodide, or bromide of allyl, with $\frac{1}{4}$ of its weight of powdered zinc.—On the combinations of titanous chloride with the ethers, by M. Demarçay.—On phenyl-cyanine, by Mr. T. L. Phipson.—Note on M. Mène’s paper on the preparation of ammonio-sulphate from nitrogenous waste, by M. L’Hôte.—On the estimation of phosphoric acid in manures, coprolites, and fossil phosphates, by M. Ch. Mène.—Mineralogical note on the dibasic plumbic sulphate of l’Ariège, by M. E. Jannettaz.—On the affinities of *Etheostomata* (Agassiz), by M. L. Vaillant.—Magnetic observations, by M. Diamilla-Muller.—Spectroscopic researches on the fumerolles of the eruption of Vesuvius of April 1872, and on the actual state of that volcano, by M. L. Palmieri. This was a very short extract from a letter, the only points being that thallium and boric acid are found in the sublimates from these vents, and that since the eruption the mountain has exhibited a state of abnormal quietude.

DIARY

THURSDAY, JUNE 19.

- ROYAL SOCIETY, at 8.30.—On the Fossil Mammals of Australia, Part IX. Family Macropodidae: Prof. Owen, C.B.—On the Nature and Physiological Action of the Poison of Naja Tripudicans, and other Indian Venomous Snakes: Dr. Fayer and Dr. Brunton—Researches in Circular Solar Spectra Applied to Test Residuary Aberration in Microscopes and Telescopes: Dr. Royston-Pigott—On the Structure and Development of the Skull in the Pig (*sus scrofa*): W. K. Parker.—Results of the Comparisons of the Standards of Length of England, Austria, Spain, United States, Cape of Good Hope, &c.: Lieut.-Col. Clarke.—On Comparative Vegetable Chromatology: H. C. Sorby.
- SOCIETY OF ANTIQUARIES, at 8.30.—On Further Excavations at Silchester: Rev. J. G. Joyce.
- LINNEAN SOCIETY, at 8.
- CHEMICAL SOCIETY, at 8.—On the Influence of Pressure upon Fermentation. Part II.: Horace Brown.—Researches on the Action of the Copper-Zinc Couple on Organic Bodies, III., and on Normal and Iso-Propyl Iodides: Dr. J. H. Gladstone and A. Tribe.—On Cymenes from different sources optically considered: Dr. J. H. Gladstone.—On the Action of Bromine on Alizarine: W. H. Perkin.—On some Decompositions and Oxidation Products of Morphine and Codeine Derivatives: E. L. Mayer and Dr. C. R. A. Wright.—On the Decomposition of Tricalcic Phosphate by Water: R. Warrington.—On a new Tellurium Mineral, with Notes on a Systematic Mineralogical Nomenclature: J. B. Hannay.—Communications from the Laboratory of the London Institution, No. XII.—On New Derivatives of Cresol: Dr. H. E. Armstrong and C. L. Field.
- NUMISMATIC SOCIETY, at 7.—Anniversary.
- FRIDAY, JUNE 20.
- MEDICAL MICROSCOPICAL SOCIETY, at 8.—The Pathological Relations of Diphtheria and Croup: Jabez Hogg.
- MONDAY, JUNE 23.
- GEOGRAPHICAL SOCIETY, at 8.30.
- WEDNESDAY, JUNE 25.
- SOCIETY OF ARTS, at 4.—Anniversary.
- GEOLOGICAL SOCIETY, at 8.—On Six Lake-basins in Argyllshire: His Grace the Duke of Argyll, K.T., F.R.S., President.—Description of the Skull of a Dentigerous Bird (*Odontopteryx totiapicus*, Owen), from the London Clay of Sheppey: Prof. Richard Owen, F.R.S.—Contribution to the Anatomy of *Hypsilophodon Foxii*, Huxley: J. W. Hulke, F.R.S.—On the Glacial Phenomena of the Long Island, or Outer Hebrides: James Geikie.—On Fossil Corals from the Eocene Formation of the West Indies: Prof. P. Martin Duncan, F.R.S.—Note on the Lignite-deposit of Lal-Lal, Victoria, Australia: R. Etheridge, Jun.
- THURSDAY, JUNE 26.
- SOCIETY OF ANTIQUARIES, at 8.30.

CONTENTS

	PAGE
JEREMIAH HORROX, II.	137
JAGOR'S PHILIPPINE ISLANDS	138
MILLER'S ROMANCE OF ASTRONOMY	140
OUR BOOK SHELF	141
LETTERS TO THE EDITOR:—	
Dr. Bastian's Turnip-Cheese Experiments—Dr. BURDON SANDERSON, F.R.S. (<i>With Illustration</i>)	141
Fertilisation of the Pansy.—F. E. KITCHENER; A. W. BENNETT, F.L.S.	143
ON THE ORIGIN AND METAMORPHOSES OF INSECTS, VI. By Sir JOHN LUBBOCK, Bart. M.P., F.R.S.	143
AN IMPROVED FORM OF OZONE GENERATOR. By T. WILLS (<i>With Illustration</i>)	146
THE LAW OF STORMS DEVELOPED, II. By Prof. T. B. MAURY (<i>With Illustration</i>)	147
THE CORONAL ATMOSPHERE OF THE SUN, II. By M. JANSSEN.	149
CHRONOMETER TESTS	150
NOTES	151
SCIENTIFIC SERIALS	153
SOCIETIES AND ACADEMIES	153
DIARY	156