

suggestion which has so often been made, that the Hospital schools would do well to cease the attempt to teach purely scientific subjects, and should recognise the Faculty of Science of University College as the common preliminary scientific school for all London hospitals. The students themselves, it is obvious, already take this view. Of the 52 successful candidates belonging to the Faculty of Science of University College only 12 have entered the Faculty of Medicine of that institution. The remaining 40 have selected their hospitals without prejudice. Several have obtained entrance scholarships at the large London hospitals.

### SCIENTIFIC SERIALS

*Bulletin de l'Académie Royale de Belgique*, July.—Observations on the planets Jupiter and Venus, made at the Astronomic Institute of Ongrée, by M. L. de Ball.—On the eurites, or older rhyolitic formations of Grand-Manil, by M. Ch. de la Vallée Poussin.—On the pretended bacterian origin of diastase, by M. Emile Laurent.—On the organic structure and growth of *Phycomyces nitens*, by the same author.—On the Devonian limestones of coral origin and their distribution throughout the palæozoic formations of Belgium, by M. E. Dupont.—Theory of elliptic functions: Hermite's equation, by M. J. A. Martius da Silva.—The philosophic system of the Bhagavadgīta, by M. Le Roy.—An unpublished Latin inscription referring to T. Desticius Severus, Procurator of Gallia Belgica, by M. Bartolini.—Origin of the Flemish inhabitants of Belgium, with preliminary remarks on the Suevi of Flanders, by M. Alph. Wauters.

August.—Fresh researches on the apparent enlargement of the sun, moon, and stars at the horizon, by M. Paul Stroobant.—Reaction of the sulphate of barium and the carbonate of sodium under the influence of pressure, by M. W. Spring.—Note on the lower Devonian rocks of Belgium: the pudding system of Weris and its transformation, by M. E. Dupont.—Experimental researches on the sense of sight in insects: Do insects distinguish the outlines of objects? by M. F. Plateau.—Determination of an empirical relation connecting the tension of vapour with the coefficient of internal friction in fluids, by M. P. De Heen.—The eurites of Grand-Manil (continued), by M. Ch. de la Vallée Poussin.—Biographical notices of Mathieu de Morgues and Philippe Chifflet, by M. Auguste Castan.—On the old Persian, Hindu, and Chinese literatures, by M. Ch. de Harlez.—Note on the domain of the Aduaticæ, and on some other questions of ancient Belgian geography, by M. L. Vanderkindere.

*Schriften der Physikalisch-Ökonomischen Gesellschaft zu Königsberg i. Pr.*, 25th year (1884).—1st and 2nd parts.—Memorial address on Oswald Heer (with list of works) by A. Jentzsch.—On the development of the oil-vessels in the fruits of Umbelliferae, by J. Lange.—Festival address on the centenary of Bessel's birth, by I. Franz.—Correction of Sanio's memoir on the numerical relations of the flora of Prussia, by J. Abromeit.—Reports on local botany, museum collections, &c.

### SOCIETIES AND ACADEMIES

#### LONDON

**Mineralogical Society**, October 20.—The Rev. Prof. Bonney, President, in the chair.—Messrs. F. R. W. Daw, John Daw, Jun., G. F. Kung, and C. C. Ross, M.P., were elected members. The following were elected officers and Council for the ensuing year:—President: L. Fletcher, F.G.S.; Vice-Presidents: Rev. S. Haughton, F.R.S., Rev. Prof. T. G. Bonney, F.R.S.; Council: C. A. Burghardt, LL.D., A. Geikie, F.R.S., Rev. H. Gurney, M.A., Hugo Müller, F.R.S., Rev. W. W. Peyton; Treasurer: R. P. Greg, F.G.S.; General Secretary: R. H. Scott, F.R.S.; Foreign Secretary: T. Davies, F.G.S.; Auditors: B. Kitto, F.G.S., F. W. Rudler, F.G.S. The Secretary read the following Report of Council:—The balance-sheet for the year 1884, which appeared in No. 28 of the *Journal*, showed that the finances of the Society were in a healthy condition, the excess of assets over liabilities amounting to 21*5*l. 12*s.* 4*d.* The number of Members and Associates elected during the year has been seven, and the number of resignations five, while the names of four Members and one Associate have been removed from the list for non-pay-

ment of subscriptions for three years. The Council regret that they have to report also the death of Alexander Murray, C.M.G., of St. John's, Newfoundland. Three meetings have taken place since the last anniversary: those in December and March were held in the Museum of Economic Geology, by kind permission of the Director-General of the Survey; the third was held in Glasgow in the month of June, in the rooms of the Philosophical Society. This, the second Scottish meeting, was, like its predecessor in 1884, a decided success. Three parts of the *Journal* have been issued during the year. Among their contents the Council would especially draw attention to Mr. Miers' contributions, including his careful index to the mineralogical literature of the year. Herr Sjögren's paper on graphite also deserves notice; it is a translation from the Swedish, as it originally appeared in the *Forhandlingar* of the Stockholm Academy. In conclusion the Council would only remind the members that it is very desirable that they should co-operate actively in the working of the Society by the contribution of papers to be read at its meetings and published in its *Journal*. It is by such co-operation alone that the Society can be maintained in a state of vigorous activity. The President then delivered his address, which will appear in the *Journal*. Prof. Bonney then vacated the chair, which was taken by the newly-elected President, Mr. Fletcher, and the following papers were read:—H. A. Miers, on a crystal of orthoclase.—R. H. Solly, notes from the Mineralogical Laboratory, Cambridge, being an account of the following minerals:—garnet, axinite, asbestos, and semipal from the Mid-Devon Copper Mine, apatite or Francolite from the Levant Mine, and Fluor Spar from Holmbush.—Dr. Max Schuster, results of the crystallographic study of danburite.—W. E. Dawson, analysis of a supposed new chromate of lead from the Transvaal.—Prof. Lewis exhibited a fine crystal of colemanite; and Mr. Fletcher exhibited some Roman coins found near Chester and presenting crystals of cuprite.

#### SYDNEY

**Linnean Society of New South Wales**, August 26.—Prof. W. J. Stephens, M.A., F.G.S., President, in the chair.—The following papers were read:—List of plants in use by the natives of the Maclay Coast, New Guinea, by N. de Miklouho-Maclay, with botanical remarks by Baron Ferd. von Müller, K.C.M.G., &c. Baron Maclay in this paper gives (1) a list of the plants used as food, dividing them into those cultivated and those growing wild; (2) those cultivated as stimulants or for medicine; (3) those useful in various ways for household purposes; and (4) those introduced since 1871. An Appendix by Baron Müller gives an account of some of the plants mentioned by Baron Maclay and gives a description of a new species named *Bassia maclayana*.—Catalogue of the Coleoptera of Australia, by George Masters. This is the first of a series of papers intended by Mr. Masters to make a complete and perfect list of all the known species of Coleoptera in Australia. The present part comprises the Cicindelidæ and Carabidæ, and numbers 950 species.—Descriptions of three new Port Jackson fishes, by J. Douglas-Ogilby, Assistant Zoologist, Australian Museum. The three species here described are *Scyllium anale*, *Heliasetus im-maculatus*, and *Pempheris lineatus*.—Mr. Macleay exhibited a section of a branch of an orange tree completely perforated by the larva of a longicorn beetle. Also three specimens of a beetle found in the perforated wood. The exhibit had been sent by Mr. M. de Meyrick, a member of the Society, who stated that many orange trees had suffered in the same way in the neighbourhood of Penrith. Mr. Macleay said the injury was caused by the larva of *Monohammus fistulator*, a grub destructive to all kinds of fruit trees, but, as far as his experience went, its ravages were confined to old or decaying trees, and it would be interesting to know if in any instance it had been found to attack young and vigorous plants. The accompanying beetles were heteromorous insects of the genus *Amarygmus*, and were not in any way the cause of the injury to the tree.—Mr. A. Sidney Olliff exhibited specimens and sketches of *Cryptommatius jansoni*, Matt., a curious beetle which was found under the fur of the common rat in Tasmania, and said that he believed new and interesting species with similar habits might be found in Australia if the smaller mammals were examined when freshly killed. Two allied species were known from Peru, one of which was found in the fur, and also in the nests, of mice. The specimens exhibited were captured by Mr. A. Simson and had been obtained from Mr. Morton, of the Hobart Museum.



## PARIS

**Academy of Sciences, October 26.**—M. Bouley, President, in the chair.—A means of preventing rabies from the bite of a mad dog, by M. L. Pasteur. After almost endless experiments the author announces that he has at last succeeded in obtaining a practical and prompt prophylactic remedy, which has already proved sufficiently efficacious in the case of dogs, to justify the belief in its general efficacy when applied to all animals, including man himself. A full account of the process will be found at p. 1 of this week's NATURE.—Direct fixation of free atmospheric nitrogen in plants through the agency of certain argillaceous clays, by M. Berthelot. Some years ago the author found that to atmospheric electricity was largely due the attraction of free nitrogen to the immediate elements of vegetable organisms. After fresh experiments conducted for two years at the Meudon station for vegetable chemistry, he has now discovered a new and perhaps a more general cause of this arrestation in the silent but incessant action of argillaceous clays and of the microscopic organisms contained in them. In this memoir he gives the results of over 500 analyses of four different clays constituting five distinct but simultaneous series of experiments in a closed chamber, in a field under shelter, on top of a tower 28 metres high without shelter, in hermetically sealed flasks, and lastly in soil artificially sterilised.—Note on the *Cynthiadae* of the French seaboard, by MM. H. de Lacaze-Duthiers and Yyes Delages. In the present paper the authors restrict their remarks to the typical *Cynthia morus*, a characteristic group of simple ascidians occurring in the English Channel, in the Atlantic, and in the Mediterranean. The several varieties are determined and the anatomy of the whole group described in detail.—Note respecting some recent communications on waterspouts, by M. Faye. The author's remarks refer to the report issued by the United States Army Signal Service on the thirteen tornadoes of May 29–30, 1879, the most complete and elaborate account of these phenomena hitherto published.—Experiments on the transmission of force by electricity between Paris and Creil, by M. Marcel Deprez. These costly experiments, begun on October 17, 1884, and carried out with the aid of MM. Rothschild, have so far proved very satisfactory. In a future communication complete tables are promised of all the electric and mechanical data of the experiments hitherto made both by the author and by M. Collignon.—On the propagation of motion in bodies, and especially in perfect gases, by M. Hugoniot.—Note on a new process for making hydrogen gas, by MM. Felix Hembert and Henry. By this simple and economic process hydrogen gas available for numerous combinations applicable to the arts and industries may be produced at the rate of 0.015 franc the cubic metre.—Discovery of a new planet (No. 252, of 13th magnitude) at the Observatory of Nice, by M. Perrotin.—Remarks on the new star in the nebula of Andromeda, one illustration, by M. E. L. Trouvelot. This new star A, as well as the already discovered B, would appear to form part not of the nebula itself, but of the Milky Way.—Application of M. Lœwy's new methods for determining the absolute co-ordinates of the circumpolar stars, without the necessity of ascertaining the instrumental constants (polar distances), by M. Henri Renan.—Questions relating to a bundle of plane cubic figures (continued), by M. P. H. Shoute.—On birational plane geometrical transformations, by Mr. G. B. Guccia.—General differential equations reducible to quadratures, by M. Wladimir Maximowitch.—Note on a new absorption spectroscopy, by M. Maurice de Thierry. This apparatus enables the observer to study fluids under a thickness of 3 to 10 metres, and to detect the presence of oxyhemoglobine in a liquid containing not more than 1-5,000,000th of that substance. It is an instrument of extreme precision, capable of rendering great services to forensic medicine, physics, and biological chemistry, by facilitating the study of the absorption spectra of fluids examined under a great thickness.—Note on a new neutral carbonate of magnesia, by M. R. Engel. This is an anhydrous carbonate absolutely different both from the natural neutral carbonate (CO<sub>3</sub>Mg) and from the crystallised and anhydrous neutral carbonate artificially obtained by M. de Senarmont.—On the volatile property of the mixed organic compounds, by M. Louis Henry.—Note on the zymotic properties of four kinds of virus: those of the spleen, of puerperal septicemia, of gangrenous septicemia, and of the symptomatic charbon of the ox, by M. S. Arloing.—On the existence of two kinds of sensibility to light—the sense of colour and of form, by M. H. Parniaud.—On the physiological action of the sodic

sulpho-conjugate of rocellic acid, by MM. P. Cazeneuve and R. Lepine.—On the circulation of the blood in the nerve-cells of the intervertebral ganglia, by M. A. Adamkiewicz.—On the method of distribution of certain sympathetic intra-cranial chord, and on the existence of a sympathetic root of the ciliary ganglion in the goose, by M. F. Rochas.—On the development of the nematodes (second note), by M. Paul Hallez.—Fresh researches on the influence of shocks on the egg-germ of the hen during the period between laying and hatching, by M. Dareste. Theoretical researches on the distribution of heat on the surface of the globe, by M. Alfred Angot.—On the varying dates of the vintage season in France since the year 1236, by M. Alfred Angot.—Application of thermo-chemistry to the explanation of geological phenomena: carbonate of zinc, by M. Dieulafait.—On the green luminous ray observed at sunset in the Indian Ocean, by M. Treve.—Remarks on M. G. Arth's recent note regarding the action of the nitrate of anhydrous ammoniacal ammonia on some metals, by M. Ed. Divers.

## STOCKHOLM

**Academy of Sciences, October 14.**—The following papers were presented for insertion in the Society's *Journal*:—A monographic revision and synopsis of the Microceridae and Protomantiniidae, by Prof. Aurivillius.—Lois de l'équilibre chimique dans l'état dilué, gazeux ou dissous, by M. T. H. vant Hoff.—On the distribution of the sexes in *Acer platanoides*, L., and in some other species of Acer, by Prof. V. Wittrock.—*Codiolum polyrhizum*, n.sp., a contribution to the knowledge of *Codiolum* A. Braun, by Herr G. Lagerheim.—Contributions to the knowledge of the specific warmth of some minerals, by Dr. W. Öberg.—On Petrus de Dacia, by Dr. G. Eneström.—The osteology and exterior conformation of Sowerby's whale (*Micropteron bidens*, Sow.), by Dr. Carl Aurivillius.—Researches on remains of the limbs in the Ophidians, by Miss Albertina Carlsson.—Investigations into some sources of error in measuring the amount of the rainfall, by Dr. S. A. Hjeltström.

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