

M. Paul Sabatier.—On the reduction of molybdc anhydride by hydrogen, and on the preparation of pure molybdenum, by M. M. Guichard. The reduction may be completed at 500° C. if the reaction is sufficiently prolonged. The experiments afford no evidence of the existence of any oxides of molybdenum, but Mo.O₃ and Mo.O₂.—Action of benzoyl chloride upon the mono-substituted derivatives of the orthodiamines, by M. Fernand Muttelet. In the cold, and in presence of a solvent, a benzoyl derivative is obtained, but at 220°, in presence of an excess of benzoyl chloride, an internal anhydride is formed.—On the formation of mixed hydrates of acetylene and some other gases, by MM. de Forcrand and Sully Thomas. A description of a crystallised compound of acetylene, carbon tetrachloride and water.—Action of sulphuric acid upon lavortatory terebenthenes, by MM. G. Bouchardat and J. Lafont.—Development of aromatic principles by alcoholic fermentation in presence of certain leaves, by M. Georges Jacquemin.—On a new hydrolytic enzyme, caroubinase, by M. J. Effront.—The optical analysis of urine, by M. Frédéric Landolph.—Composition of haricots, lentils, and peas, by M. Balland.—Physiological action of the venom of the Japanese salamander (*Sieboldia maxima*). Attenuation by heat, and vaccination of the frog against the poison, by M. C. Phisalix.—Trophic troubles, resulting from the section of the cervical sympathetic, by MM. J. P. Morat and M. Doyon.—The centrifugal elements of the posterior medullary roots, by MM. J. P. Morat and C. Bonne.—Perforated muscle of the hand. Its appearance in the animal series, by M. A. Perrin.—On two new types of Crustaceæ (Isopods) belonging to the subterranean fauna of the Cévennes, by M. A. Dollfus.—Remarks on the sense organs of the *Sphaeromides Raymondi*, *Stenasellus vivrei*, and of some Ascellidæ, by M. Arm. Viré.—On the defence of vines against the attacks of *Cochylis*, by M. P. Cazeneuve.—Remark on the subject of the methods of destruction of *Cochylis* in the vine, by M. Émile Blanchard.—On the tubercles of Orchidaceæ, by M. Leclerc du Sablon.—On the replacement of the principal root by a radical in Dicotyledons, by M. Boirivant.

ST. LOUIS.

Academy of Science, June 7.—Mr. Robert Combs, of Ames, Iowa, presented a paper entitled "Plants collected in the District of Cienfuegos, Province of Santa Clara, Cuba, in 1895-96." The paper embraces the results of a collection extending from the commencement of the rainy season of one year until the close of the dry season the following spring, the territory covered by the collection lying between the entrance of the bay of Cienfuegos, on the south coast of Cuba, up the bay and the river Damuji to Rodas, and extending back from the river to Yaguaramos, and almost to the Cienega de Zapato, a region including nearly all kinds of soil and condition found upon the island, except those of the mountain regions and the mud swamps. A brief statement was made concerning the origin of the Cuban flora, and its affinities with that of continental Central America, rather than the geographically nearer Floridan region. The paper comprised a full catalogue of the collections made, which had been determined at the herbarium of Harvard University, and of which several sets had been distributed to the larger herbaria.—Prof. F. E. Nipher made some remarks on the difficulties yet involved in the theories of the ether.

NEW SOUTH WALES.

Royal Society, June 2.—The President, Mr. Henry Deane, in the chair.—A contribution to the study of oxygen at low pressures, by Prof. R. Threlfall and Florence Martin. There is known to be a pressure (about 0.7 mm. of mercury) at which oxygen becomes unstable in its volumes and pressure relations. This instability may plausibly be attributed to a change in the chemical nature of the gas, and during the period of change it is possible that ozone may be temporarily produced. An experiment was made with the object of investigating whether oxygen can form ozone simply by virtue of a reduction of pressure. A suitable indicator having been discovered, an experiment was satisfactorily carried out showing either that no ozone at all is formed when the pressure falls from 0.4 to 0.1 mm., or that, if such formation does occur, it is to an extent less than 0.005 per cent. of the volume of the gas employed.—Determination of the orbit elements of comet of 1896 (Perrine), by C. J. Merfield. The author explained that his deductions were based on observations made in various American and European observatories, and also on observations made by Mr. John

Tebbutt, of Windsor, New South Wales. The elements as determined by him agreed substantially with those determined by Dr. Knopf, and would not, in his opinion, be sensibly varied by further investigations.

GÖTTINGEN.

Royal Society of Sciences.—The *Nachrichten* (mathematico-physical section), Part I for 1897, contains the following memoirs presented to the Society.

January 9.—P. Stäckel: Extracts from the correspondence of Gauss with W. Bolyai. R. Müller: Approximately rectilinear motion by means of the jointed quadrilateral. W. Schur: The polar flattening of the planet Mars.

February 6.—W. Voigt: The kinetic theory of ideal fluids.

February 20.—D. Hilbert: Diophantine equations. A. Wirnau: The substitution-groups of eight things.

March 6.—D. Hilbert: On the development of a given analytical function of one variable as an infinite series of rational integral functions. A. Hurwitz: On the generation of invariants by integration.

The accompanying *Geschäftliche Mittheilungen* include a memoir of Karl Weierstrass by David Hilbert, of Ernst Curtius by F. Leo, and of August Kekulé by Otto Wallach.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—The Voyages made by the Sieur D. B. to the Islands Dauphine or Madagascar, &c.: translated and edited by Captain P. Oliver (Nutt).—Elemente der Geologie: Dr. H. Credner, Achte Auflage (Leipzig, Engelmann).—Fifteenth Annual Report of the Fishery Board for Scotland, Part 2 (Edinburgh).—Wild Flowers of Scotland: J. H. Crawford (Macqueen).—The Elementary Part of a Treatise on the Dynamics of a System of Rigid Bodies: Dr. E. J. Routh, 6th edition (Macmillan).—Introductory Course in Differential Equations: Dr. D. A. Murray (Longmans).—Modern Mythology: Andrew Lang (Longmans).—Our Coal Resources at the Close of the Nineteenth Century: Dr. E. Hull (Spon).—Ludwig Otto Hesse's Gasamelte Werke (München, K. Akademie).—The Ascent of Man: H. Drummond, new edition (Hodder).—Among British Birds in their Nesting Haunts: O. A. J. Lee, part v. (Edinburgh, Douglas).

PAMPHLETS.—Effects of the Weather upon Vegetation: J. Clayton (Bradford, Byles).—Nel Paese della Amazzoni: Dr. V. Grossi (Roma).

SERIALS.—Proceedings of the Physical Society of London, Vol. xv, Part 7 (Taylor).—Quarterly Review, July (Murray).—Terrestrial Magnetism, June (Wesley).—Engineering Magazine, July (Tucker).—Proceedings of the Royal Society of Queensland, Vol. xii. (Brisbane).—Journal and Proceedings of the Royal Society of New South Wales for 1896 (Sydney).

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