roots and other wooden objects found at Oberan, Tessen, and Okrylla, by Dr. H. Conwentz.—On the silicified woods from the diluvium of Kamenz, Saxony, by Dr. E. Geinitz.—On the general conception of space and its applicability in natural research, by Dr. A. Harnack.—On the electrometric appliances of the present day, by Dr. Töpler.

Journal de Physique, July.—On the optical figures of polychroic crystals, by M. Bertin.—On the figures presented by crystals having one optical axis, by M. Bertrand.—Noës' thermo-electric piles, by M. Niaudet.—Colours, the chromometer, and photography of colours, by M. Cros.

Gazetta Chimica Italiana., fasc. iv. and v.—On nicotine, by S. Andreoni.

SOCIETIES AND ACADEMIES

GENEVA

Society of Physics and Natural History, February 6.—M. L. Lossier explained a special method which he has introduced for assays of gold.—M. Albert Rilliet gave an account of a research made by him and M. E. Ador on the hydrocarbons obtained by the action of the chloride of methyl on benzine in presence of chloride of aluminium.

February 20.—M. H. de Saussure described an apterous insect of Gaboon, whose mode of life is unknown, and which has been described under the name of *Hemimerus*. It has the remarkable characteristic of possessing a second lower lip provided with palpi, and several other characteristics make it an insect of an altogether special nature, difficult to classify in any of the known orders.

March 6.—M. Casimir de Candolle has studied the anatomy of the leaves of some cotyledons, and particularly the internal conformation of their petiole, or the principal nervure. This petiole shows in its centre a woody bundle presenting very varied forms—sometimes that of an arc, sometimes that of a complete ring. Besides this complete ring, there are frequently observed woody bundles placed outside the ring, and which M. de Candolle calls cortical; at other times bundles inside the ring, and which M. de Candolle calls intra-medullary.—M. Ph. Plantamour observed during the cyclone of February 20 a notable depression of level of the Lake of Geneva. The wind produced this effect of depression notwithstanding the diminution of atmospheric pressure indicated by the barometer, and which would tend to raise the level of the water. When the wind assumes the form of a whirlwind, it produces an aspiration instead of a depression. The rate of the cyclone referred to appears to have reached at least 24 metres per second.

March 20.—Prof. E. Plantamour presented a quarto volume entitled "Telegraphic delimitation of the difference of longitude between Geneva and Strasburg," published by himself and M. M. Löw. This operation, executed in 1876, resulted in a difference of 6m. 27·934s.—M. D. Colladon, on the occasion of very remarkable cases of *verglas* observed in Paris on January 20 and 23, recalled former cases described by him and others (see *Comptes Rendus*, t. lxxx. viii., March 31, 1879).

April 3.—M. Raoul Pictet communicated the continuation of his researches on the theory of heat. He admits that the amplitude of the oscillations of molecules around their position of equilibrium may be taken as a measure of heat, or as corresponding to the temperature. He explains by this definition the properties of fusibility of metals and the anomalies of Mariotte's law.—Prof. Brun described a curious case of poisoning in a child of two years, resulting from eating a combination of cabbage and figs. The cabbage must have produced a great abundance of lactic acid, which in presence of the glucose of the figs had produced buteric acid in sufficient abundance to cause the death of the child.

April 17.—Prof. Alph. Favre has found iron in the state of particles attractable by the magnet in all the earths and rocks of the country around Geneva which he has examined. This iron, in grains, not being soluble, cannot be considered in the analysis of arable soils, as profitable to vegetation. Hence erroneous conclusions resulting from these analyses, which suppose more iron than there is possible for vegetation. The origin of this iron is attributed in part to the *débris* of meteorites.

PARIS

Academy of Sciences, July 28.—M. Daubrée in the chair.—The following papers were read:—Researches on the refraction of obscure heat (continuation), by M. Desains.—Note on the hydrate of chloral, by M. Wurtz.—Observations on the memoir of MM. Noble and Abel on explosive substances, by M. Berthelot.—On the theory of hail, according to MM. Oltramare and Colladon, by M. Faye. M. Boussingault also made some observations on the subject.—On the effect of electrical excitations applied to the muscular tissue of the heart, by M. Marey.—Memoir on the temperature of the air at the surface of the ground and of the earth to 36 m. depth, as also on the temperature of two soils, one exposed, the other covered with grass, during the year 1878, by MM. Ed. and H. Becquerel.—Researches on samarium, radicle of a new earth extracted from samarskite, by M. Lecoq de Boisbaudran.—MM. Georges Pouchet and S. Jourdain were then nominated candidates for the chair of Comparative Anatomy at the Natural History Museum, vacant through the death of M. Paul Gervais.—M. Daubrée then reported on the experimental researches of M. Stanislas Meunier, relating to the meteoric nickel-iron and native carburetted iron of Greenland.—Two memoirs were presented to the Academy, one by M. David, on the development of algebraic functions, the other by M. Poincaré, on the effect produced by the inhalation of nitrobenzole vapour.—On some observations of planets (198) and (200), made at the Marseilles Observatory, by M. Stephan.—On an application of rational mechanics to the theory of equations, by M. F. Lucas.—On the action of light on electric piles, by M. H. Pellat.—On the refrigerating action of air at high pressure, by M. A. Witz.—On the distillation of a heterogeneous liquid, by L. Troost.—On the quantities of organic matter in mineral waters, by G. Lechartier.—Thermo-chemical researches on the soluble alcaline sulphides, by M. Sabatier.—On the decomposition of sulphide of ammonium, by MM. R. Engel and A. Moitessier.—On the calcination of turnip-molasses, by M. C. Vincent.—On the influence of sugar injected into veins upon the secretion of urine, by MM. Ch. Richet and R. Moutard-Martin.—On the irritability of a muscle during the different periods of its contraction, by M. Richet.—On the discovery of medicaments and poisons in saliva, by M. Gabriel Pouchet.—Comparison of the influence of intravenous injections of chloral, chloroform, and ether, by M. Arloing.—On the lympho-glandular organs and the pancreas of vertebrates, by M. Renaut.—On some multinuclear animal and vegetable proto-organisms, by E. Maupas.—On the two great phases of the annual circulation of the atmosphere, by L. Brauet.—Experiments on milk-production, by M. Lami.—On the formations of the so-called "Dombes," by M. Nivet.—On the palm-wine of Laghouat, by M. Balland.

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