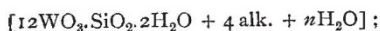


in ammonia; (3) the increase in the proportion of neutral sulphur, but not in the sulphur as sulphuric acid, thus explaining the non-increase of ammonia and corresponding with diminished elaboration of urea; (4) non-increase in the proportion of phosphorus as phosphates, indicating the absence of an increased decomposition of nuclein compounds; (5) no alteration in the proportion of potassium and sodium, such as has been described by Sachowski as occurring in fever in man; (6) decrease in the excretion of chlorine out of proportion to the decrease in the bases, raising the question of what acids take the place of hydrochloric acid in the urine.—Dr. Gregg Wilson, in a paper on the first foundation of the lung in *Ceratodus*, showed that the lung arises, as in amphibians and higher forms, in a mid-ventral gut in the pharynx, immediately posterior to the gill region. This expands into a considerable unpaired vesicle, which in later stages grows round the gut till it lies dorsally.—Dr. Gregg Wilson also read a paper on the embryonic excretory organs of *Ceratodus*, in which the pronephros was shown to be of amphibian type, having two nephrostomes opening directly into the anterior of the body cavity. Later there is a pronephric chamber formed, as in amphibia, by secondary fusion of the gut and body wall. Into this region of the coelom the glomerulus projects. The backward growth of the union of gut and body wall finally leads to the closing of the nephrostomes and the obliteration of the pronephric chamber.

PARIS.

Academy of Sciences, March 20.—M. van Tieghem in the chair.—The President announced to the Academy the death of M. Naudin, Member of the Botanical Section.—Action of hydrogen sulphide and alkaline sulphides upon the double cyanides, by M. Berthelot. This paper contains thermochemical data for the reactions between AgCN.KCN , $\text{Hg(CN)}_2\text{KCN}$, $\text{Zn(CN)}_2\text{KCN}$, and hydrogen or sodium sulphides.—Maximum quantity of chlorides contained in sea air, by M. Armand Gautier. The greatest amount found was 0.022 mgr. of common salt per litre of air.—Astronomical and magnetic observations made on the eastern coast of Madagascar, by M. R. P. Colin.—Observations of the Swift comet (1899 *a*), made at the Toulouse Observatory with the 23 cm. Brunner equatorial, by M. F. Rossard.—Observations of the Swift comet (1899 *a*), made at the Observatory of Besançon by M. P. Chofardet, by M. J. Gruy.—On the lines of curvature of certain surfaces, by M. E. Blutel.—On some applications of the law of parallelism to bundles and congruences, by M. C. Guichard.—On some arithmetical properties of analytical functions, by M. Paul Staedel.—On the unsymmetrical alternating current arc between metals and carbons, by M. A. Blondel. The oscillations are given in the form of curves, fifteen of which are reproduced in the paper.—On the increase of the mean intensity of the current by the introduction of the primary of the coil, in the case of the Wehnelt electrolytic interrupter, by M. H. Pellat. In a circuit at 110 volts, containing the Wehnelt commutator but not the primary of the coil, an ammeter showed four to five amperes. The introduction of the additional resistances of the primary of the coil increased the current to twenty-five amperes, the additional impedance thus considerably increasing the mean current strength. This paradoxical result is shown to be in accordance with the known laws of induction.—On an isomer of menthoxylic acid, by M. Georges Leser.—On the electro-negative character of certain unsaturated organic radicals, by M. Ernest Charon. The propylenic group, $\text{CH}_3\text{CH}=\text{CH}$ —has much more marked electro-negative properties than the vinyl group, $\text{CH}_2=\text{CH}$ —.—Action of formaldehyde upon albumenoid materials. Transformation of peptones and albumoses, by M. Charles Lepierre.—Silico-tungstic acid as a reagent for alkaloids, by M. Gabriel Bertrand. The reagent proposed is $12\text{WO}_3\text{.SiO}_2\text{.2H}_2\text{O}$, or its sodium salt, in 5 per cent. solution. It has the advantages of giving well-defined salts, absolutely stable, the analysis of which can be made with exactitude. Its high molecular weight is also advantageous. The precipitates formed have the composition



analyses are given of the salts with pyridine, morphine, and strychnine.—Researches on the physiological value of the pyloric tubes in certain Teleostia, by M. Th. Boudourg.—An old Russian legend relating to a fall of stones, by M. Stanislas Meunier.

GÖTTINGEN.

Royal Society of Sciences.—The *Nachrichten* (mathematico-physical section) part iv. for 1898, includes the following memoirs communicated to the Society:—

October 29, 1898.—W. Voigt: On the connection between the Zeeman and the Faraday effects.

November 26.—H. Ludendorff: On a remarkable property of certain equations in the theory of characteristic planets.—W. Voigt: Theory of the phenomena observed by Macaluso and Corbino. Double refraction of sodium vapour in the magnetic field at right angles to the lines of force.

DIARY OF SOCIETIES.

WEDNESDAY, APRIL 5.

ENTOMOLOGICAL SOCIETY, at 8.

THURSDAY, APRIL 6.

LINNEAN SOCIETY, at 8.—On *Carex Wahlenbergiana*: C. B. Clarke, F.R.S.—On the Discovery and Development of Rhabdites in Cephalodiscus: F. J. Cole.

FRIDAY, APRIL 7.

GEOLOGISTS' ASSOCIATION, at 8.—The Geology of Brittany, with Special Reference to the Whitsuntide Excursion: Dr. Charles Barrois.

BOOKS AND SERIALS RECEIVED.

BOOKS.—Die Optischen Instrumente: C. Leiss (Leipzig, Engelmann).—Kritik der Wissenschaftlichen Erkenntnis: Dr. H. v. Schoeler (Leipzig, Engelmann).—Light Railways at Home and Abroad: W. H. Cole (C. Griffin).—A Manual of Locomotive Engineering: W. F. Pettigrew and A. F. Ravenshear (C. Griffin).—Die Kontinuität der Atomverteilung: Dr. G. Hörmann (Jena, Fischer).—The New Science and Art of Arithmetic: A. Sonnenschein and H. A. Nesbitt (Sonnenschein).—Le Climat de la Belgique en 1897: A. Lancaster (Bruxelles, Hayez).—Life of Admiral Sir Wm. R. Mends: B. S. Mends (Murray).—True Tales of the Insects: L. N. Badenoch (Chapman).—Explorations in the Far North: F. Russell (Iowa).

SERIALS.—Economic Journal, March (Macmillan).—Journal of the Royal Horticultural Society, April (Victoria Street).—Journal of the Chemical Society, March (Gurney).—Physical Review, February (Macmillan).—Good Words, April (Isbister).—Sunday Magazine, April (Isbister).—Chambers's Journal, April (Chambers).—L'Anthropologie, tome x. No. 1 (Paris).—Humanitarian, April (Duckworth).—Bulletin of the American Mathematical Society, March (New York).—Science Gossip, April (Strand).—Century Magazine, April (Macmillan).

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