

Sprung took part.—Dr. Wagner announced that arrangements had been made for endeavouring to take simultaneous photographs of flashes of lightning at widely separated stations during the approaching summer. It was hoped that by this means, if successful, it would be possible to obtain some idea of the spacial and dimensional relations of the flash.

Physical Society, May 16.—Prof. du Bois-Reymond, President, in the chair.—Dr. Köpsel exhibited and described an apparatus for the calibration of the torsion-galvanometer of Siemens and Halske. The magnet which is used in that form of the galvanometer which is employed for technical purposes, frequently changes its magnetism in presence of other powerful magnets or currents, hence the instrument requires constant calibration and adjustment. Dr. Köpsel explained his method of effecting this with the help of a Clarke element. He further described a new form of resistance to be used in the measurement of very powerful electric currents. The older form, consisting of a brass tube filled with water, in communication with a reservoir of water, had proved useless in practice. The new resistances consist of nickel wires, surrounded by an insulating layer, inserted into a tube of lead and immersed in water. These wires were not rendered incandescent by currents of 80 to 90 amperes, and have been proved to be practically useful.

Physiological Society, May 23.—Prof. du Bois-Reymond, President, in the chair.—Prof. Falk gave an account of a case of a man who was found dead, and who must have died suddenly. A *post-mortem* examination showed that all the tissues and organs were in a normal state with the exception of the pancreas, which was infiltrated with blood. This he regarded as the cause of death, although it is as yet impossible to suggest how the lesion leads to death. Rupture of a blood-vessel in the pancreas is of rare occurrence.—Dr. Heymans had recently tested Engelmann's statement that the ureters contain ganglia at their upper and lower ends, but no nerves, employing the ureters of mice. Using gold chloride he observed, with low powers of the microscope, nerve-fibres accompanying the blood-vessels which surround the ureters. After removing the peritoneum and spreading out the excised ureters, he also found fine fibres between the muscle-cells, some of which appeared, under high magnification, to be attached directly to the muscle-cells. He was not able to make out that a nerve-fibril supplies each muscle-cell.—Dr. Bruhns gave an account of his researches on adenin and hypoxanthin, with a view to determining their chemical constitution; in this he has not as yet been more than partially successful. During his researches he came across a compound of adenin and hypoxanthin, whose properties explain many opposing statements of the less recent authors. The silver salts, with picric acid of the above bases, are the ones most suited for discriminating between them. Their salts with mercury are also extremely interesting from a chemical point of view, owing to their close resemblance to the amido-compounds of mercury.—Prof. Zuntz described a modified form of intestinal fistula which he and Dr. Rosenberg had recently applied.

BRUSSELS.

Royal Academy of Sciences, April 3.—M. Stas in the chair.—The following communications were made:—Researches on the volatility of carbon compounds, by M. Louis Henry.—On monocarbon derivatives, by the same author.—Reply to a note by General Liagre relative to M. Ronkar's work "On the Mutual Impulse between the Crust and Interior of the Earth on account of Internal Friction," by M. Folie. The criticism referred to appeared in *Bulletin* No. 3 of this year, and in reply to it M. Folie adduces proofs of diurnal nutation.—On the extent of the curative action of hypnotism: hypnotism applied to alterations of the visual organ, by M. J. Delboeuf, with the collaboration of M. J. P. Null and Dr. Leplat. An extended account is given of the treatment of a patient suffering from an eye-disease which was completely cured by hypnotism.—A new Nematoid of a Galago from the coast of Guinea, by M. P. J. Van Beneden.—Note on the law existing between unit of variation of vapour tension and absolute temperature, by M. P. De Heer.—On the structure of the equatorial bands of Jupiter, by M. F. Terby.—On the thickness of the earth's crust deduced from diurnal nutation, by M. E. Ronkar. From an extended investigation it is concluded that the thickness of the earth's crust does not exceed $\frac{1}{10}$ of the radius.—On the mutual impulse between the crust and interior of the earth on account of internal friction

(second note), by the same author.—Experimental methods for determining whether polarized light, of which the plane of polarization is in vibration, exercises any influence on a magnetic field, by M. H. Schoentjens.—Experiments on the absence of bacteria in the ducts of plants, by M. Emile Laurent.

STOCKHOLM.

Royal Academy of Sciences, May 14.—On the discovery of Tertiary volcanic rocks near Lake Dellen in Helsingland and Lake Mien in Smaland, Sweden, by Dr. N. O. Holst and Dr. F. N. Svenonius. Specimens exhibited and commented upon by Baron A. E. Nordenskiöld.—Report on an entomological tour in Norrland and Jemtland, chiefly for the study of the Poduridæ of these countries, by H. Schött.—Some observations on the distribution of the sexes in the galls of *Andricus ramuli*, by Prof. C. Aurivillius.—On the Graptolithidæ of the island of Gotland, by Dr. G. Holm.—On the employment of indefinite determinants within the theory of linear differential equations, by H. von Koch.—Invariant expressions for the generalized substitution of Poincaré, by F. de Brun.—On a generalization of the functions of Klein of the third family, by G. Cassel.—The form of the integrals in linear differential equations, by A. M. Johanson.—Contributions to the knowledge of the Chlorophycæ of Sweden, by O. F. Andersson.—Helminthological researches from the west coast of Norway, Part I., Cestoda, by Dr. E. Lönnberg.—Some Muriceidæ of the genera *Acanthogorgia*, *Paramuricea*, and *Echinomuricea* in the Zoological Museum of Upsala, by T. Hedlund.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

A Synonymic Catalogue of the Recent Marine Bryozoa: E. C. Jelly (Dulau).—The Colours of Animals: E. B. Poulton (K. Paul).—Rambles and Reveries of a Naturalist: Rev. W. Spiers (C. H. Kelly).—Pond Life: Algæ and Allied Forms: T. S. Smithson (Sonnenschein).—Faune des Vertébrés de la Suisse: Vol. v., Histoire Naturelle des Poissons, 2me. Partie: Dr. V. Fatio (Genève, H. Georg).—Gesammelte Mathematische Abhandlungen, 2 vols: H. A. Schwarz (Berlin, J. Springer).—Hints on Reflecting and Refracting Telescopes, &c., 5th edition: W. H. Thorntwaite (Horne).

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