

o'clock, but this time it coincided with a thunderstorm. The irregularity of the atmospheric pressure on May 3 acquires an especial significance, on account of the telegraphic news of the serious eruptions which took place in Mexico and California on the same day, although the time of the eruption is not yet definitely fixed. As a matter of fact, the barographic curve of May 3 shows a great resemblance to that observed at the time of the outbreak of Krakatō on August 27, 1883; the speaker produced the latter curve for comparison. It is not altogether impossible that the variation of atmospheric pressure on May 3, and possibly that of May 4, may have been in some way connected with the eruptions in America at the same time.

**Physiological Society, May 13.**—Prof. Du Bois-Reymond, President, in the chair.—Dr. Joseph communicated the results of his anatomical researches on the physiology of the spinal ganglia. According to Waller's older experiments, section of the nerves between the spinal cord and ganglion produces a degeneration of the central part of the nerve, whereas section of the nerve on the other side of the ganglion leads to a degeneration of all the sensory nerve-fibres up to the section. In 1883, however, a pupil of Gudden raised an objection to these experiments, since he found that, by removal of the connecting portion (between the cord and ganglion), not only the central but also the peripheral part of the nerve degenerated. Dr. Joseph has repeated these experiments on cats, and has arrived at the following results, which agree with those which Krause has recently communicated to the Society (see NATURE, May 12, p. 48). Thus (1) There are a number of nerve-fibres which simply pass through the ganglion without being connected with its cells. (2) The ganglion is the trophic centre for the larger number of sensory nerves. (3) The ganglion-cells are bipolar.—Dr. Lewin has examined a series of specimens of urine which contained blood, and were obtained from widely different cases, and found that most of them contained methæmoglobin, as shown by its characteristic spectrum. When these specimens of urine were reduced by means of sulphide of ammonium, he did not obtain the well-known spectrum of reduced hæmoglobin which is always obtained when blood which contains methæmoglobin is reduced; but in many cases he observed the no less well characterized spectrum of reduced hæmatin. It seems to follow from this that the urine of certain patients may contain hæmatin.—Prof. Zuntz gave an introductory explanation of an experiment which was subsequently carried out by Prof. Wolff, to show, namely, that anyone can diminish his weight by taking a deep inspiration. This experiment is most striking when the subject stands on a decimal balance which is so arranged that it can only give a kick upwards; in this case the pan with the weights in it sinks when a deep inspiration is taken. The speaker explained this phenomenon as being the result of the sudden straightening of the spinal column and elevation of the head which occurs when the deep inspiration is taken; owing to its momentum, the head carries the lower part of the body slightly with it, so that the latter presses less forcibly on its support.

#### STOCKHOLM.

**Royal Academy of Sciences, April 13.**—On the Lias of the province of Scania, in the south of Sweden, by Dr. J. C. Moberg.—A theory of unipolar induction, by Prof. E. Edlund.—Report on a visit to the United States and Canada for the purpose of studying the fisheries of those countries, by Dr. F. Trybom.—On the structure of the pericarp in the Boragineæ, by Miss A. Olbers.—On the development of the secondary fibrovascular bundles in *Dracæna* and *Yucca*, by Miss H. Lovén.—A suggestion respecting the theory of the constant electric currents, by Dr. A. Rosén.—A crystallographic study of two new hydro-carbons, by Herr M. Bäckström.—Observations on natural phenomena of corrosion, and new faces of crystals in Adular from Swarzenstein, by Dr. A. Hamberg.—On tetrahedrism in tourmaline, by Dr. W. Ramsay.

May 11.—Contributions to a monograph of the amphipoda Hyperideæ, by Dr. C. Bovallius; part I, the families Tyronidæ, Lancelidæ, and Vibiliidæ.—On the recent Astrographic Congress in Paris, by Prof. Hugo Gylden.—On a group of differential equations, the solution of which is combined with so-called small divisors, by Dr. C. Bohlin.—On the results of the determinations of the longitude between Stockholm, Gothenburg, and Lund, undertaken during 1885 and 1886, by Prof. Rosen.—On the levellings conducted during 1886, by the same.—On the interior friction of dilute

aqueous solutions, by Dr. S. Arrhenius.—Contributions to the knowledge of the changes of steel in physical respects when it is softened, by Herr C. F. Rydberg.—On the diffusion of radiating heat from spherical surfaces, by Dr. K. Ångström.—On the electric resistance against conductivity in crystals, by Herr H. Bäckström.—On a collection of Coleoptera and Lepidoptera from the Congo, made by Lieut. Juhlin-Dannfelt, and described by Prof. C. Aurivillius.—The following papers by Prof. Nilsson and Dr. G. Krüss, of Munich, were presented:—On the equivalent and atomic weights of thorium.—On the earths and the niobic acid in fergusonite.—On the product of the reduction of niobfluorkalium with sodium.—On the German fluoride of kalium.—Studies on *Taphrina*, by Dr. C. J. Johansson.—On the species of Echinoidea, described by Linnæus in his work "Museum Ludovicæ Ulricæ," by Prof. Sven Lovén.—On some definite integrals, by Dr. Lindman.—On organic sulphamido-combinations, by Prof. Cleve.—On naphthoxy acids, by Dr. A. G. Ekstrand.—On the crystals of some combinations of zirconium, by Dr. M. Weibull.—*Lagopus bonasioides*, a hybrid between *Lagopus subalpina* and *Tetrao bonasia*, by Herr G. Kolthoff, Conservator of the Zoological Museum of Upsala.

#### BOOKS, PAMPHLETS, and SERIALS RECEIVED.

Cartilla de Zoologia Evolucionista: M. R. Mexia (Jacobsen, Buenos Aires).—The Health of Nations, 2 vols.: B. W. Richardson (Longmans).—Proceedings of the Bath Natural History and Antiquarian Field Club, vol. vi. No. 2 (Bath).—La Matière et l'Énergie: E. Ferrière (Alcan, Paris).—Life of Charles Darwin: G. T. Bettany (Scott).—Report of the Commissioner of Education for 1884-85 (Washington).—Illustrations of the British Flora: Fitch and Smith (Reeve).—Essays and Addresses: Rev. J. M. Wilson (Macmillan).—Climatic Treatment of Consumption: Dr. J. A. Lindsay (Macmillan).—Elementary Practical Histology: W. Fearnley (Macmillan).—Alcyonida: D. C. Danielssen (Grondhal and Son).—A New Basis for Chemistry: T. Skerry Hunt (Trübner).—Sketches of Life in Japan: Major H. Knollys (Chapman and Hall).—Cosmogonie: C. Braun (Münster).—Beiträge zur Kenntnis der Nesean-führenden Auswurflinge des Laacher Sees (Holder, Wien).—Annalen der Physik und Chemie, No. 6, 1887 (Leipzig).

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