Use of the critical temperature of liquids for the recognition of their purity, by M. Raoul Pictet. A convenient method of determining the critical points of liquids is described. Any impurity causes a difference in the critical temperatures in the same sense as the difference produced in the boiling points, but in the former case the difference is of far greater magnitude than in the latter.—On the qualitative separation of nickel and cobalt, by M. A. Villiers. The author avails himself of the property of sodium tartrate in preventing the precipitation of nickel sulphide while allowing the complete precipitation of cobalt sulphide. Tartaric acid is added to the clear solution of the two metals, then soda (not potash) in large excess and hydrogen sulphide is passed. The nickel passes into the filtrate as a nearly black solution, mere traces give a brown tinge. The method is not quantitative.—Some points in the spermatogenesis of the Selacians, by M. Armand Sabatier.—On the genesis of intestinal epithelium, by M. Étienne de Rouville. Observations confirm the author's views that: (1) The conjunctive tissue continues more or less, during life, to be the matrix giving rise to the elements of other tissues; it is a post-embryonic blastoderm. (2) Epithelial tissues are only, in most cases, the forms limiting the free surfaces of conjunctive tissue.—Physiological researches on the Lamellibranchs (*Tapes decussata*, &c.), by M. Piéri.—On some lakes in the Alps and Pyrenees, by M. A. Delebecque. The depths and altitudes of most of the important mountain lakes are given.

BERLIN.

Physical Society, November 30, 1894.—Prof. von Bezold, President, in the chair.—Dr. Aschkinass described his experiments on the influence of electric waves on the galvanic resistance of metallic conductors. Gratings made of tinfoil when placed near a Hertz exciter showed a diminished resistance which was quite independent of the action of light due to the primary sparks, and was persistent after the cessation of the electric oscillations, but could then be restored to its original value by mere mechanical percussion. A series of experiments proved that it is really the electric waves which altered the resistance of the grating, and the results were extended to other metallic conductors. The speaker drew attention to analogous observations made by English and Swiss physicists who had found that filings of iron and other metals enclosed in glass tubes had their resistances altered by electric sparks discharged in their neighbourhood. In their case, also, the original resistance was restored by mechanical vibration.—Dr. Gross spoke on the electrolysis of a solution of mixed nitrate and sulphate of silver to which a little nitric acid had been added. Silver was deposited on the kathode, and a black substance on the anode; the latter he had not as yet obtained free from silver, but it did not contain any sulphur, although 60 per cent. of sulphuric acid had disappeared from the solution.

Physiological Society, December 7.—Prof. du Bois Reymond, President, in the chair.—Prof. L. Lewin gave an account of some experiments made with an alkaloid obtained from a North Mexican cactus called "Peyotl." It is well known that this plant has an intoxicating action, and in larger doses produces sleep and a state of nervous excitation accompanied by a so-called "power of prophesying," similarly attributed to the sulphurous exhalations of the temple at Delphi. Small doses of the alkaloid when given to frogs produced tetanic cramps and a greatly increased reflex irritability, analogous to strychnine; but with this difference, that by carefully apportioning the dose the effects were permanent for several days. Similar results were obtained with rabbits, and Prof. Lewin regarded the new alkaloid as specially adapted to further the study of the nature of tetanus. In rabbits it was noticed that during each paroxysm of cramps, the blood-vessels of the ears were widely distended. The speaker had also found alkaloids with powerful actions in many species of Cactus hitherto regarded as harmless by botanists, notably one closely resembling curare.—Dr. G. Joachim had investigated sphygmographically the effect of suspension by the head on the circulation, and in the case of a number of invalids, of whom some were suffering from heart-disease, had observed only a slightly increased frequency of pulse, which is probably merely attributable to psychic excitation.—Prof. Gad communicated the results of an investigation, made by a new method by Mr. Seeler, of Cleveland, on the terminations of motor nerves in muscles, which had shown that in addition to the motor fibre a non-medullated fibre leaves the sheath of Henle, and is distributed to the capillaries of the muscle-fibre, whereas the medullated motor-fibres spread out o the muscle itself.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—Logic: Dr. C. Sigwart, translated by H. Dendy, 2 Vols., 2nd edition (Sonnenschein).—Les Abimes: E. A. Martel (Paris, Delagrave).—Essays on Rural Hygiene: Dr. G. V. Poore, 2nd edition (Longmans).—Annuaire de l'Académie Royale des Sciences, &c., de Belgique, 1895 (Bruxelles).—Astronomische Chronologie: Dr. W. F. Wislicenus (Leipzig, Teubner).—Handbuch der Theorie der Linearen Differentialgleichungen: Dr. L. Schlesinger, Erster Band (Leipzig, Teubner).—Laboratory Exercises in Botany: Prof. E. S. Bastin (Philadelphia, Saunders).—Smithsonian Report, 1893 (Washington).—Geological Survey, Alabama, Report on the Geology of the Coastal Plain of Alabama (Montgomery, Alabama).—Tables and Directions for the Qualitative Chemical Analysis of Moderately Complex Mixtures of Salts: M. M. P. Muir (Longmans).

PAMPHLETS.—Eighth Annual Report of the Liverpool Marine Biology Committee and their Biological Station at Port Erin: Prof. Herdman (Liverpool, Dobb).—On the Search for Coal in the South-East of England: W. J. Harrison (Birmingham).—Eine Discussion der Kräft der Chemischen Dynamik: Dr. L. Stettinheimer (Frankfurt a.M., Bechhold).—The Varieties of the Human Species: Prof. G. Sergi (Washington).—Royal Horticultural Society Report for 1894-5 (Victoria Street).—Ditto, Arrangements for 1895 (Victoria Street).

SERIALS.—Geographical Journal, January (Stanford).—American Journal of Science, January (New Haven).—Gazetta Chimica Italiana, Anno xxiv. 1894. Fasc. vi. (Roma).—Proceedings of the Physical Society of London, January (Taylor).—Journal of the Chemical Society. January (Gurney).—Ditto, Supplementary Number (Gurney).—Record of Technical and Secondary Education, January (Macmillan).—Beiträge zur Petrographie der Östlichen Centralalpen speciell des Gross-Venedigerstockes: Dr. E. Weinschenk, I. and II. (München).—Morphologisches Jahrbuch, 22 Band, 2 Heft (Leipzig, Engelmann).—Journal of the Franklin Institute, January (Pilhadelphia).—Journal of the Royal Horticultural Society, January (Victoria Street).—Engineering Magazine, January (Tucker).

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