

Two mgr. of cocoa are sufficient for showing both alkaloids. Among alkaloids that are not volatile, quinine may be cited, treated with success by the author six months ago. As another example, strychnine and brucine may be taken. For tracing strychnine the limit was found by de Vry and van der Burg at 0.001 mgr. With the aid of microchemical methods, well-defined crystals of strychnine can be obtained down to 0.0002 mgr. in the presence of as much brucine; afterwards the latter is made to crystallise as chloroplatinate. The actual limit is found at a fourth of this quantity. A detailed paper will be published next year.—Mr. Bakhuis Roozeboom discussed the graphical representation of heterogeneous equilibrium in systems of one to four substances. For systems of one substance we have only  $\beta$ ,  $t$  lines which encounter each other in triple points. Systems of two substances may be represented in space between two parallel planes, by points which indicate  $\beta$ ,  $t$  and the composition. For systems of three components the composition may be expressed in an equilateral triangle, and in a direction perpendicular to this plan, either  $\beta$ , or  $t$ . For systems of four substances the composition only can be expressed for one single temperature and pressure by points in a tetrahedron. The author discussed the conditions for a right selection of the components, and demonstrated that, in systems which admit single or double substitution, the number of components is one inferior to that of the apparent components.—Prof. J. A. C. Oudemans presented a note on the geographical position of the Astronomical Observatory at Utrecht, revised by him on a request from the editor of the British Nautical Almanac. The latitude =  $52^{\circ} 5' 9''$ . Using Leiden-Greenwich, as newly found by telegraph, and Utrecht-Leiden, geodetically determined, he deduced 20m. 31s. '00, practically the same result as given by the old observations of Hennert, van Utenhove, Wagner, van Beeck, Calcoen, and Keyzer, from 1778 to 1820.—Prof. C. A. J. A. Oudemans exhibited two new fungi, viz. *Septoria dictyota*, found on *Dictyola obtusangula*, a submerged *Rhodophyceae*, detected by Miss Weber in the neighbourhood of Malacca, and *Ustilago Vuyekii*, discovered by Mr. Vuyck, in Leiden, in the ovary of *Luzula campestris*.—Prof. Kamerlingh Onnes commented on (1) the coefficients of viscosity of fluids in corresponding states, calculated by Mr. de Haas. They generally agree with the formula deduced from his theorem that the moving molecular systems in corresponding states are mechanically similar. Great deviations are shown by the fatty acids, and especially the alcohols. (2) The further experiments made by Dr. Kuenen, in the Leiden Laboratory, on the abnormal phenomena observed by Galitzine near the critical point. Dr. Kuenen proved that they are to be ascribed to impurities, and in particular to air. Gas can be originated at one side of the tube by heating a part of it, just as during the process of sealing. The gas being transferred to the opposite side of the tube, the density at this side changes in accordance. By admitting air at one side, anomalies such as were observed by Galitzine are obtained.—Mr. Jan de Vries presented an article on triple equations. He showed that the roots of such equations of degrees 7 and 9 cannot satisfy a symmetrical trilinear relation. This property is also verified for two distinct sorts of triple equations of degree 13; it has not yet been decided whether these are the only possible systems of this degree.

NETHERLANDS.

Entomological Society, June 9.—Mr. A. van den Brandt in the chair.—Mr. Everts exhibited a fine collection of specimens illustrating the biology of the honey-bee; Mr. Leesberg, specimens of the rare *Dorcatoma chrysomelina*, new for the Dutch fauna; Mr. Snellen, both sexes of *Euplaea martinii* de Nicéville, and a bread specimen of *Meliana flammae*, Curt.; Mr. J. C. H. de Meyere, several rare and interesting indigenous Diptera; Mr. F. J. M. Heylaerts, specimens of *Coleophora* and *Psychidæ*; Mr. H. A. de Vos tot Nederveen Cappel, *Agrotis dahlia*, *Boarmia abietaria*, and a very curious variety of *Tanio-campa incerta*; Mr. A. J. F. Fokker, specimens of two rare indigenous Hemiptera, *Eurygaster maura* and *hottentotta*. The latter stated that the name of *Podops horvathi*, a species which was not long ago described by him in the Dutch *Tijdschrift*, had been previously given by Distant to a Japanese species, and was therefore changed by Dr. Bergroth into *P. subalpina*.—Mr. H. J. Veth described the liquids emitted by the coxæ of several Coleoptera (Coccinellidæ and others), and which, ac-

ording to Leydig, was a secretion of blood. A renewed chemical inquiry into its nature, however, seems to be desirable.—Mr. A. J. van Rossum gave a further account of his breedings of *Cimbex fagi* and *saliceti*.—Mr. J. Th. Oudemans exhibited an apparatus for setting Lepidoptera, and adapted to be used during long journeys.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS.—Observations and Researches made at the Hongkong Observatory in 1893: W. Doberck (Hongkong).—Twelfth Annual Report of the Fishery Board for Scotland; Part 1, General Report (Edinburgh).—Total Eclipses of the Sun: M. L. Todd (Low).—The First Technical College: Prof. A. H. Sexton (Chapman).—Agricultural Zoology: Dr. J. R. Bos, translated by Prof. J. R. A. Davis (Chapman).—Royal Natural History, Part 9 (Warne).—Primary Geography: A. E. Frye (Boston, Ginn).—Arithmetic for Schools: Rev. J. B. Lock, new edition (Macmillan).—A Laboratory Manual of Physics and Applied Electricity, 2 Vols.; Vol. 1, Junior Course in General Physics: E. Merritt and F. J. Rogers (Macmillan).—Organic Chemistry, Part 1: Prof. Perken and Dr. Kipping (Chambers).—Histoire du Monde son Évolution et sa Civilisation: É. Guyard (Paris, L'Auteur).—Knowledge through the Eye: A. P. Wire and G. Day (Philip).

PAMPHLETS.—Researches in the Nervous System of Myxine Glutinosa: R. Sanders (Williams and Norgate).—Ueber die Geometrischen Eigenschaften homogener starrer Structuren und ihre Anwendung auf Krystalle: W. Barlow (Leipzig, Engelmann).—The Growth of St. Louis Children: W. T. Porter (St. Louis).

SERIALS.—Engineering Magazine, July (New York).—Journal of the Institution of Electrical Engineers, No. 115, Vol. xxiii. (Spou).—Annals of Scottish Natural History, July (Porter).—Actes de la Société Helvétique des Sciences Naturelles, 76<sup>e</sup> Session (Lausanne, Corbaz).—Compte Rendu des Travaux de la Société Helvétique des Sciences Naturelles, Soixante-seizième Session (Lausanne, Corbaz).—Mittheilungen der Naturforschenden Gesellschaft in Bern aus dem Jahre 1893, No. 1205-1234 (Bern).—Morphologisches Jahrbuch, 21 Band, 3 Heft (Leipzig, Engelmann).—Botanische Jahrbücher für Systematik, Pflanzen-geschichte und Pflanzengeographie, Achtzehnter Band, 4 Heft (Leipzig, Engelmann).—Quarterly Review, July (Murray).—Palestine Exploration Fund Quarterly Statement, July (Watt).—Séances de la Société Française de Physique, 1894, 1<sup>er</sup> Fasc. (Paris).—Journal of the Franklin Institute, July (Philadelphia).—Records of the Geological Survey of India, Vol. xxvii. Part 2 (Calcutta).—Jahrbuch der K. K. Geologischen Reichsanstalt, Jahrg. 1891, xli. Band, 4 Heft; Jahrg. 1894, xlv. Band, 1 Heft (Wien, Holder).—Abstract of Proceedings of the South London Entomological and Natural History Society, 1892-93 (London).—American Naturalist, July (Philadelphia).—17th Annual Report of the Connecticut Agricultural Experiment Station, 1893 (New Haven).—Proceedings of the Royal Society of Edinburgh, Vol. xx. pp. 161-240 (Edinburgh).

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