

needed. In general, solar or diffused light, not containing all the visible coloured radiations, is incapable always of showing us the true colour of bodies; further, the light given by incandescent bodies containing all the visible radiations is insufficient to disclose this true colour, which can be discovered only by means of a complete continuous spectrum without absorption bands or rays, or by simple radiations from incandescent gases. In such lights the true colour is that which is diffused or transmitted with greatest intensity, or else the blend of those so diffused or transmitted. This is somewhat analogous to the dichroism or polychroism of certain substances, as, for instance, the alcoholic solution of chlorophyll, which may seem green, brown, or red, according to its degree of concentration or its thickness on the path of the white light traversing it.—On the observations of stars by reflection, and on the measurement of the flexion of Gambeys circle, by M. Périgaud. The experiments here described with the modified form of Villarceau's mercury bath, lately submitted to the Academy, have enabled the author, as he anticipated, to obtain good images of reflected stars. Thus have been easily obtained within a period of five or six weeks about three direct and six reflected observations of about a hundred stars of all altitudes from  $25^\circ$  above the southern to  $25^\circ$  above the northern horizon. A calculation of the flexion of Gambeys circle yields a value practically identical with that given by Villarceau.—On the luminous ligament in the transits and occultations of Jupiter's satellites, by M. Ch. André. In a recent communication (*Comptes rendus*, cvii. p. 216) the author showed that one of the chief causes of uncertainty in these observations was due to the formation in the focal plane of the telescope, and, within a certain distance of the geometrical contact, to a luminous connection or "ligament" between the images of the satellite and the planet. A method is here explained by means of which the possible errors due to this phenomenon may be avoided.—Observations of Brewster's neutral point, by MM. J. L. Soret and Ch. Soret. The neutral point of atmospheric polarization situated below the sun has rarely been observed since its existence was first determined by Brewster. The authors have now been able accurately to observe it on the summit of Rigi (1800 metres) on the mornings of September 23 and 24, the height of the sun above the horizon being from  $20^\circ$  to  $35^\circ$ . They were able at the same time to determine the distance of the neutral point above the sun (Babinet's neutral point).—On some double phosphates of yttria and of potassa or soda, by M. A. Dubois. These phosphates have been obtained by causing the amorphous phosphate of yttria to react, by the dry process, on the sulphate of potassa (H. Debray's process, extended by Grandeau to the chief groups of metallic oxides); and also by making the pure yttria react at a high temperature on the metaphosphates and pyrophosphates of potassa and soda.—On the alkaloids of cod liver oil (continued), by MM. Arm. Gautier and L. Morgues. Having already determined the volatile alkaloids, butylamine, amylamine, hexylamine, and hydrodimethylpyridine, the authors here describe the two fixed bases accompanying them. These are named *aselline*, from *Asellus major*, the large cod; and *morrhaine*, from *Gadus morrhua*, the common cod; the latter being especially remarkable for its physiological properties. The respective formulas are,  $C_{25}H_{32}N_4$  and  $C_{19}H_{27}N_3$ .—On propylphycite, by M. Ad. Fauconnier. Under this name, Carius described, in 1865, a body with the formula  $C_3H_8O_4$ , which Claus afterwards declared to be the glyceric aldehyde, unknown in a pure state. From the author's further researches it now appears that propylphycite is nothing but glycerine itself.

## STOCKHOLM.

Royal Academy of Sciences, October 10.—Species *Sargassorum Australiæ* descriptæ et dispositæ a Prof. T. G. Agardh.—On persulphocyanacid and dithiocyanacid, by Dr. Klason.—On a scientific tour in Russia, Germany, and Holland, by Dr. S. Arrhenius.—On a magnetic field balance, by Dr. Ångström.—Baron Nordenskiöld exhibited an edition, from 1560, of Mercator's large map of the world, lately discovered by himself.—On a new arseniate mineral from Mossgrufvan, in Nordmark, by Hr. Sjögren.—On the anatomical structure of *Desmarestia aculeata*, Lam., by Miss E. Söderström.—On a class of transcendents, which originate through iterated integration of rational functions, by M. A. Jonquière, of Bern.—On aceto-propyl-benzol and aceto-kumul and their derivatives, by Prof. Widman.—The electrical and thermic conductivity of specular iron, by Hr. H. Bäckström.—Contributions to the

knowledge of the thermo-electricity of crystals, by the same.—Determination of the magnetic inclination in Stockholm, Sundsvall, and Östersund, by Hr. P. A. Siljeström.

## AMSTERDAM.

Royal Academy of Sciences, September 29.—M. de Vries read a paper on sterile plants of maize or Indian corn.—M. Van Bemmelen discussed the contents of a paper of M. Bakhuis Rozeboom, on the combinations of calcium chloride with water in solid and fluid condition.—M. J. A. C. Oudemans read a paper on levels becoming unfit for use by the diminished mobility of the bubble, in consequence of the precipitation of granular corpuscles against the interior surface of the glass. He demonstrated that this evil could be obviated by (1) constructing the levels of kali-glass, and not of natron-glass; (2) taking care that no water should be able to penetrate into the interior of the instrument; and (3) employing, instead of sulphuric ether, petroleum ether for the filling.

## BOOKS, PAMPHLETS, and SERIALS RECEIVED.

The Fatal Illness of Frederick the Noble: Sir M. Mackenzie (Sampson Low).—The Senses, Instincts, and Intelligence of Animals: Sir John Lubbock (Kegan Paul).—Lectures on the Ikosahedron and the Solution of Equations of the Fifth Degree: F. Klein, translated by G. G. Morrice (Trübner).—Text-book of Practical Logarithms and Trigonometry: J. H. Palmer (Macmillan).—Experimental Mechanics, 2nd edition: Sir R. S. Ball (Macmillan).—Examples for Practice in the use of Seven-figure Logarithms: J. Wolstenholme (Macmillan).—The History of Australian Exploration, 1788–1888: E. Favenc (Turner and Henderson, Sydney).—A Manual of the Vertebrate Animals of the Northern United States, 5th edition: D. S. Jordan (McClurg, Chicago).—Outlines of Natural Philosophy, enlarged edition: J. D. Everett (Blackie).—The British Moss Flora, Part xi.: R. Braithwaite (published by author).—The Theory and Practice of Absolute Measurements in Electricity and Magnetism, vol. 1.: A. Gray (Macmillan).—Mathematical Examples: J. M. Dyer and P. Provde-Smith (Bell).—The Student's Pestalozzi: J. Russell (Sonnenschein).—Journal of the Royal Microscopical Society, October (Williams and Norgate).—Journal of the Royal Statistical Society, September (Stanford).—Annalen der Physik und Chemie, 1888, No. 10; Beiblätter zu den Annalen der Physik und Chemie, 1888, No. 9 (Barth, Leipzig).—Bulletin of the American Geographical Society, vol. xx. No. 3 (New York).—Bulletins de la Société d'Anthropologie de Paris, Tome xi. (Série) Fasc. 1 and 2 (Masson, Paris).

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