pended. The values of g_0 are corrected to sea-level by means of the densities of subjacent formations taken from the most recent work.

	g_0.		g_1.
Paris	9·81013	...	9·81030
Valence	9·80640	...	9·80682
Grenoble...	9·80603	...	9·80705
La Bérarde	9·80530	...	9·80682
Marseilles	9·80539	...	9·80536

The variation of the observed from the calculated value at La Bérarde becomes less when a correction is made for the influence of the mass of the surrounding mountains, g_0 is then 9·80575.—On the infinitesimal transformations of the trajectories of systems, by M. Paul Painlevé.—On the reduction of the structure of a group to its canonic form, by M. E. Cartan.—Experimental researches on the congelation of sulphuric acid of different degrees of concentration, by M. Raoul Pictet. Four extensive series of experiments carried out on large volumes of the acid, in different ways and with all the precautions indicated by the study of the laws of crystallisation at low temperatures, yield concurrent curves which include the cases between pure H_2O and pure H_2SO_4. This curve crosses the line of zero temperature five times (including origin with pure H_2O). On descending parts of the curve the liquid contains a larger proportion of acid than the solid, on ascending parts the inverse is the case; at the summits of the curve the titre of the liquid is the same as that of the solid. The maxima and minima do not, in general, correspond to definite hydrates.—Application of Trouton's law to the saturated alcohols of the fatty series, by M. W. Longuinine. The author finds that Trouton's constant is constant only for groups of similarly constituted substances, and varies from group to group. If M be the molecular weight, r the latent heat of vaporisation, T the absolute temperature of the boiling point, $\frac{M r}{T} = 26{\cdot}34$ for fatty saturated alcohols. Water gives the value 25·86, ethers 21, hydrocarbons about 20. Formic and acetic acids appear to be exceptions giving the values 12·82 and 13·03. Acetic acid, however, gives 25·9 if the heat required to bring the vapour to the normal condition of $C_2H_4O_2$ be added to the latent heat. Probably formic acid is a similar case.—Action of chloride of sulphur on the copper derivatives of acetylacetone and benzoylacetone, by M. Victor Vaillant.—On estimations of glucose by cupro-alkaline liquids, by M. Fernand Gand.—On pine tar, by M. Adolphe Renard. A new hydrocarbon $C_{11}H_{22}$ is characterised; it is probably a member of the aromatic series.—Action of the sands and waters of the Sahara on cements and hydraulic limes, by M. Jules Perret.—On the homarian origin of crabs, by M. E. L. Bouvier.—On a disease of Ailanthus in the parks and promenades of Paris, by M. Louis Mangin. This disease is characterised as fungoidal, but the species of fungus causing it has not yet been determined.

New South Wales.

Linnean Society, August 29.—Prof. David, President, in the chair.—On the Kuditcha shoes of Central Australia, by R. Etheridge, jun. The remarkable slippers described are in vogue among certain tribes toward the centre of the continent. They are made of human hair, interlaced with emu feathers, with a cementing medium of human blood in the sole. Their variously described functions—their use by the rain-maker, by the authorised agents in obtaining blood-revenge, and to disguise tracks when wife-hunting—were summarised and discussed; and it was pointed out that it is not improbable that their use was not so much to conceal tracks as to disguise the direction in which the wearer was travelling, the heel and toe being alike.—A list of exotic trees and shrubs which have become hosts for certain Australian parasitical plants, by Fred Turner. Indigenous members of the N.O. *Loranthaceæ*, more particularly *Loranthus celastroiaes*, Sieb., *L. pendulus*, Sieb., and *Viscum articulatum*, Burm., were shown to have taken very kindly to certain exotic plants. Twenty-seven species, belonging to a dozen natural orders, serving as hosts, had come under the author's notice in New South Wales, the *Rosaceæ*, as compared with other orders, supplying the largest number.—On the formation of a "Mackerel Sky," by A. H. S. Lucas. A description of the remarkable sky of this nature seen over Sydney on April 20, 1894, was given from the notes of Mr. Russell, the Government Astronomer. The author then proceeded to compare the arrangement of the clouds with that of the ridges of sand in ripple-mark, and showed how they are formed similarly, as a result of the wave-motion of layers of the air. He considered the condensation to be produced by rarefaction of the air in the ridges of the waves with consequent fall of temperature. The condensation into cloud thus rendered manifest the position of the wave-crests. He then referred to Prof. von Bezold's paper in the February number of "Himmel und Erde," which advances somewhat similar views as to the origin and importance of wave-clouds. He concluded by suggesting that the wave-cloud, or *Undulus*, should take its place in the classification of clouds by the side of the other elemental forms, *Cirrus*, *Cumulus* and *Stratus*.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.

Books.—Dissections Illustrated: C. G Brodie. Part 3 (Whittaker).—Lectures on Biology: Dr. R. W. Shufeldt (Chicago).—Chemical Handicraft (J. J. Griffin).—From the Greeks to Darwin: Dr. H. F. Osborn (Macmillan).—On Preservation of Health in India: Sir J. Fayrer (Macmillan).—Manual of Physico-Chemical Measurements: Prof. W. Ostwald, translated by Dr. J. Walker (Macmillan).—Text-Book of the Diseases of Trees: Prof. R. Hartig, translated by Dr. W. Somerville (Macmillan).—University College, Nottingham, Calendar 1894-95 (Nottingham, Sands).—Reprint of the North American Zoology: George Ord, Appendix by S. N. Rhoads (the Editor, Haddonfield, N.J.).—Peru, 2 Vols: E. W. Middendorf (Berlin, Oppenheim).—A Manual of Exotic Ferns and Selaginella: E. Sandford; cheaper edition (Stock).—University College of North Wales, Calendar 1894-95 (Manchester, Cornish).—Leçons de Chemie: H. Gautier and G. Charpy; deux edition (Paris, Gauthier-Villars).—The Great Ice-Age: Dr. James Geikie, 3rd edit. (Stanford).—Electric Light and Power: A. F. Guy (Bigas).

Pamphlets.—A Laboratory Guide and Analytical Tables: J. Grant (Manchester, Smith and Wood).—A Discourse on Roses and the Odour of Rose: J. C. Sawer (Brighton, Smith).—Report on Meteorological Observations in British East Africa for 1893: E. G. Ravenstein (Philip).—Brief Notes on the Physical and Chemical Properties of Soils: R. Warington (Chapman).—On the Whirling and Vibration of Shafts (Philosophical Transactions of the Royal Society of London, Vol. 185 (1894) A, pp. 279–360: S. Dunkerley (K. Paul).—On Derived Crystals in the Basaltic Andesite of Glasdrumman Port, co. Down (Scientific Transactions of the Royal Dublin Society, Vol. v. series 2: Prof. G. A. J. Cole (Williams and Norgate).—Twelfth Annual Report of the Fishery Board for Scotland for the Year 1893, Part 2.—Report on Salmon Fisheries (Edinburgh).—The Slide Rule: C. N. Pickworth (Emmott).—Geschichte der Bibliothek und Naturaliensammlung der Kaiserlichen Leopoldinisch-Carolinischen Deutschen Akademie der Naturforscher: Dr. O. Grulich (Halle).

Serials.—Encyklopædie der Naturwissenschaften, Dritte Abthg., 22 and 23 Lief^{s}, Zweite Abthg., 83–85 Lief^{s}, (Breslau, Trewendt).—Engineering Magazine, October (Tucker).—American Journal of Science, October (New Haven).—Record of Technical and Secondary Education, October (Macmillan).—American Meteorological Journal, October (Ginn).—Proceedings of Bristol Naturalists' Society, 1893–94 (Bristol).—American Historical Register, No. 2 (Philadelphia).—Palestine Exploration Fund, Quarterly Statement, October (London).—Quarterly Review, October (Murray).

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