

have obtained the associateship of the institute, and spent at least five years in actual practice, and by original and valuable research work or otherwise have contributed to the advancement of the industry in which they are engaged.

RECENTLY the faculty of medicine of the University of Giessen conferred the honorary degree of doctor of medicine upon Ernst Leitz, Junior, the junior partner of the celebrated optical firm, E. Leitz, of Wetzlar, and 18 Bloomsbury Square, London. It is only a little more than a year since the University of Marburg honoured the senior partner of the same firm by conferring upon him the degree of doctor of philosophy. It must be gratifying to the firm that its services towards science are so highly appreciated and recognised.

A JOINT conference on the Montessori system of education, arranged by the Child Study Society (London) and the Montessori Society of the United Kingdom, will be held at the Royal Sanitary Institute, Buckingham Palace Road, S.W., on Saturday, November 16. The chair will be taken at 3 p.m. by the Hon. Sir John A. Cockburn, K.C.M.G. The conference will be preceded on Friday, November 15, at 7.30 p.m., by a lecture by Madame Pujol-Segalas (of Paris) on "Maria Montessori's Method and Self-education." Mr. R. Blair, education officer of the London County Council, will preside.

THE following lectures for advanced students of the University and others interested in the subjects are announced in *The London University Gazette*. A course of six lectures on "Methods of Illumination as applied to Microscopy," at Charing Cross Hospital Medical School, Chandos Street, W.C., by Mr. J. E. Barnard, at 5 p.m. on Thursdays, beginning on November 14; and a course of three lectures, on "Recent Work in Experimental Embryology," in the Zoological Lecture Room of University College, by Dr. J. W. Jenkinson, on Fridays, November 29, December 6 and 13, 1912, at 5 p.m. Admission to the lectures is free, without ticket.

MR. A. G. WARREN has been appointed a lecturer in the engineering faculty of the University of Hong Kong. He was a lecturer in the East London College, and has been head of the engineering department of the Aston Manor Technical School, Birmingham, for the last eighteen months. In July last Prof. C. A. M. Smith (of the East London College) was appointed to the Tai Koo chair of engineering in that University, and immediately proceeded to the Far East to take up his new duties. The Hong Kong University opened its doors to students in October, 1912, and, although the equipment of the engineering department had not then been commenced, there were thirty-five engineering students who passed the entrance examination, and who now form the first-year engineers of the latest British university. It is interesting to record the fact that these Chinese engineering students have come from many different parts, and include some from Straits Settlements, Canton, and Foochow.

VARIOUS changes are proposed in the regulations for the examinations for certain junior appointments in the Civil Service. The age limits for the appointments being eighteen to nineteen and a half years, they are as a rule competed for by candidates from secondary schools. Certain subjects in the examination are compulsory; while the optional subjects are divided into two classes, the papers in one being of a lower standard than those in the other, and consequently receiving only half the marks of the higher papers. At present, papers of lower standard are set

in mathematics, French, German, Latin, Greek, English history, chemistry, and physics; and higher papers are set in mathematics, French, German, Latin, Greek, English and European history, chemistry, and physics. It is proposed in 1914 to set a lower paper in European history in addition to the subjects named above, and no longer to set higher papers in history, chemistry, and physics. It is clear that the proposed change will operate unfavourably against schools where two classical languages are not taught, and against candidates whose abilities are scientific rather than linguistic. We are glad to notice that the Education Committee of the London County Council has passed a resolution to this effect, which is being sent to the Civil Service Commissioners for their consideration.

## SOCIETIES AND ACADEMIES.

### LONDON.

**Royal Anthropological Institute**, November 12.—Dr. A. P. Maudslay, president, in the chair.—R. W. Williamson: The Mekeo people of New Guinea. Mr. Williamson gave an account of the Mekeo modes of courtship and ceremony of marriage. For the former, love charms and philtres are extensively used, and the rising sun is appealed to for help. The negotiations for the marriage involve substantial gifts by the boy's family to that of the girl, including ornaments, &c., which are presented at the time of the negotiations, and pigs, which the girl's relatives afterwards secure by means of a mock hostile raid upon the boy's clan. The author also described some of their ceremonial dances, which he believed to have an origin in an imitation of the dancing movements during the courting season of the goura pigeon, and elaborate ceremonial performances, at which much coveted decorations are bestowed upon warriors who have slain an enemy in battle; also their funeral and mourning ceremonies, the former of which includes a comic feast and a game of "bob-apple"—the apple being the leg of a pig or kangaroo.

### PARIS.

**Academy of Sciences**, November 4. M. Lippmann in the chair.—G. Bigourdan: The International Time Conference. The first meeting was held at Paris on October 15, and was attended by the representatives of fifteen Governments. The work was subdivided amongst four subcommittees, and a detailed account is given of their conclusions and suggestions.—Paul Appell: The theorem of the last Jacobi multiplier connected with the formula of Ostrogradsky or Green.—L. Maquenne and E. Demoussy: The determination of respiratory coefficients. A discussion of the relations between the apparent and true respiratory coefficients when determined in a fixed volume of air.—W. Kilian and Ch. Pussenot: The age of the shining schists of the Franco-Italian Alps. There is a break in these strata, a portion being Mesozoic and another part Tertiary. These two portions are probably stratigraphically discordant.—Kr. Birkeland: The origin of planets and their satellites. From experimental considerations the author has been led to the view that in solar systems in course of evolution there exist forces of electromagnetic origin of the same order of magnitude as that of gravitation. The retrograde revolution of the recently discovered moons of Jupiter and Saturn is in accordance with this view.—MM. Fayet and Schaumasse: The elliptic elements of the 1912b comet (Schaumasse comet): its identity with the Tuttle comet.—P. Idrac: Spectroscopic observations of the Gale comet (1912) made at the Meudon Observa-



tory. The photographs showed the usual comet spectrum, with hydrocarbon and cyanogen lines.—**M. Borrelly**: The discovery and observation of the comet 1912c, made at the Observatory of Marseilles. The comet is of 9.5 magnitude, 2' in extent, round, with a nucleus and without a tail. Its positions are given for two observations on November 2.—**Michel Plancherel**: The problems of Cantor and of Dubois-Reymond in the Legendre theory of series of polynomials.—**G. Ribaud**: The spectrum of magnetic rotation of bromine. The Righi effect has been studied with more powerful magnetic fields, up to 24,000 Gauss. The re-establishment of the light observed longitudinally in the magnetic field cannot be attributed to a Zeeman effect; all the absorption lines of bromine show the phenomenon of magnetic rotatory polarisation, on condition that for any given line a suitable vapour pressure is chosen. The appearance of the magnetic rotatory spectrum changes completely when the pressure is altered.—**Léon and Eugène Bloch**: The ionisation of gases by the Schumann rays. Ordinary sources of ultra-violet light placed in air emit a considerable proportion of rays sufficiently refrangible to be partially absorbed by quartz, and brass is very sensitive to the photoelectric effect of these rays.—**Georges Meslin**: Thermo-electric couples.—**A. Leduc**: A new method for determining the ratio of the two specific heats of a gas. This is a modification of the Laplace method, and has the advantage of requiring no other instrument than a good balance and thermometer. A large globe of not less than three litres capacity is filled with the gas at 0° C., and accurately weighed. It is then placed in a bath at a known temperature, the tap momentarily opened, and the mass of gas remaining in the globe determined by weighing. The theory and limits of accuracy of the method are worked out in the paper.—**Henri Stassano**: The opposed actions of the magnetic field on the electrical conductivity of rarefied gases as a function of the value of the field and the degree of vacuum.—**M. Lelarge**: A cause of explosion of tubes containing a compressed mixture of air and hydrogen. While measuring the pressure and density of some compressed hydrogen, an explosion occurred in which two workmen were killed. The author has investigated the conditions under which such an explosion may take place, and draws some practical conclusions from his experiments with a view to avoid such explosions in future.—**J. Couyat**: A meteorite from Hedjaz, Arabia. A full chemical and mineralogical analysis of the meteorite is given.—**Paul Vuillemin**: Periodic variation in specific characters. Studies of the flowers of *Phlox subulata*.—**A. Petit**: The non-fixation of phosphoric acid by an acid forest soil.—**L. Lindet**: The conditions of combination of calcium and phosphorus in the casein of milk. About one-half of the phosphorus contained in casein precipitated from milk by rennet is in the condition of calcium phosphate, but the other half is in organic combination as a phosphate. Only three-fifths of the calcium is combined with phosphoric acid, the remainder saturating the free acidity of the casein.—**Marcel Mirande**: The existence of cyanogenetic principles in *Centaurea crocodylium* and *Tinantia fugax*.—**A. Desmoulière**: The antigen in the Wassermann reaction. A new method of preparation of the antigen is given possessing greater delicacy than the original Wassermann preparation.—**Louis Boutan**: Observations relating to the vocal manifestations of an anthropoid ape, *Hylabates leucogenys*. The sounds emitted by this ape are classified. They differ from a language, properly so-called, in that they are not produced by education, and hence represent nothing conventional, and are simply spontaneous sounds.

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## BOOKS RECEIVED.

- The Botany of Iceland. Edited by Dr. L. K. Rosenvinge and Dr. E. Warming. Part i., The Marine Algal Vegetation. By Dr. H. Jónsson. Pp. vi+186. (Copenhagen: J. Frimodt; London: J. Wheldon and Co.)
- Handwörterbuch der Naturwissenschaften. Edited by E. Korschelt and others. Lief. 19-22. (Jena: G. Fischer.) Each 2.50 marks.
- The Cochin Tribes and Castes. By L. K. A. Krishna Iyer. Vol. ii. Pp. xxiii+504. (Madras: Higginbotham and Co.; London: Luzac and Co.)
- Through Shên-Kan. The Account of the Clark Expedition in North China, 1908-9. By R. S. Clark and A. de C. Sowerby. Edited by Major C. H. Chepmell. Pp. iii+247. (London: T. Fisher Unwin.) 25s. net.
- The Origin of Civilisation and the Primitive Condition of Man. By the Right Hon. Lord Avebury. Seventh edition. Pp. xxviii+454. (London: Longmans and Co.) 7s. 6d. net.
- The "Newest" Navigation Altitude and Azimuth Tables. By Lieut. R. de Aquino. Second edition. Pp. xlix+176+New Altitude Tables pp. v\*+36\*. (London: J. D. Potter.) 10s. 6d. net.
- Lehrbuch der Grundwasser- und Quellenkunde. By K. Keilhack. Pp. xi+545. (Berlin: Gebrüder Borntraeger.) 20 marks.
- Matematica Dilettevole e Curiosa. By I. Ghersi. Pp. viii+730. (Milano: U. Hoepli.) 9.50 lire.
- Trattato di Chimico-Fisica. By Prof. H. C. Jones. Translated by Dr. M. Giua. Pp. xx+611. (Milano: U. Hoepli.) 12 lire.
- Geology of New Zealand. By Prof. P. Marshall. Pp. viii+218+map. (Wellington: J. Mackay.)
- The Spiritual Interpretation of Nature. By Prof. J. Y. Simpson. Pp. xv+383. (London: Hodder and Stoughton.) 6s. net.
- The Feet of the Furtive. By C. G. D. Roberts. Pp. 277. (London: Ward, Lock and Co., Ltd.) 6s.
- Michigan Bird Life. By Prof. W. B. Barrows. Pp. xiv+822+70 plates. (East Lansing, Mich.: Michigan Agricultural College.)
- The Childhood of Animals. By Dr. P. C. Mitchell. Pp. xiv+269. (London: W. Heinemann.) 10s. net.
- Herpetologia Europæa. By Dr. E. Schreiber. Zweite Auflage. Pp. x+960. (Jena: G. Fischer.) 30 marks.
- General Report on the Operations of the Survey of India during the Survey Year 1910-11. Prepared under the direction of Col. S. G. Burrard. Pp. vi+29+12 plates. (Calcutta: Surveyor-General of India.)
- Fatty Foods: their Practical Examination. By E. R. Bolton and C. Revis. Pp. x+371. (London: J. and A. Churchill.) 10s. 6d. net.
- Key to Hall's School Algebra. Part i. By L. W. Grenville. Pp. 317. (London: Macmillan and Co., Ltd.) 6s.
- Die Mutationen in der Erblichkeitslehre. By Prof. H. de Vries. Pp. 42. (Berlin: Gebrüder Borntraeger.) 1.60 marks.
- Sleeping Sickness. By Dr. F. M. Sandwith. Pp. v+56. (London: Macmillan and Co., Ltd.) 4d.
- Questions of the Day in Philosophy and Psychology. By Dr. H. L. Stewart. Pp. x+284. (London: E. Arnold.) 10s. 6d. net.
- Les Aciers au Nickel et leurs Applications à l'Horlogerie. By C. E. Guillaume. Pp. 54. (Paris: Gauthier-Villars.) 2 francs.
- Canada Department of Mines. Mines Branch. Report on the Utilization of Peat Fuel for the Production of Power. By B. F. Haanel. Pp. xiii+145. (Ottawa: Government Printing Bureau.)