

solubility of the calcium salts of the three acids in alcohol of varying concentration.—F. L. Navarro: The non-existence of the Cretaceous in the island of Hierro (Canaries). The author, after visits to the island of Hierro in 1911 and 1917, has definitely proved the absence of Cretaceous deposits. The fossil, *Discoidea pulvinata*, described by J. Cottreau and P. Lemoine in 1910, was probably brought to the island by a ship as ballast.—F. Georgévitch: The evolutive cycle of *Myxidium gadii*.—A. Lécaillon: Aptitude for natural parthenogenesis considered in various races or varieties of the silkworm.—L. Boutan: The rôle of the fins in teleostean fishes with swimming bladder.—W. Kopaczewski: The mechanism of the toxic action of the serum of the muræna.

CAPE TOWN.

Royal Society of South Africa, October 17, 1917.—Dr. A. Jasper Anderson, vice-president, in the chair.—J. Moir: Spectrum phenomena in the chromium compounds, being part iv. of the spectrum of the ruby and emerald. It has been found that although aqueous solutions of the chromium salts do not show any narrow characteristic bands in the spectrum, yet when anhydrous (or nearly anhydrous) solutions are used the spectrum is crossed by narrow bands in the red similar to what are seen in the ruby or emerald spectrum. The solutions of chromium oxide in concentrated sulphuric and in fused metaphosphoric acid have been investigated, and the bands measured; they are very similar to those seen in the emerald, but not absolutely identical; while the bands of the ruby, although similar in arrangement, are displaced into a region of lower frequency. Both gem colours are due to chromium, but the vibrations are differently loaded (silica and beryllia against alumina).—J. Moir: Colour and chemical constitution Part iii.: Derivatives of the unknown ortho-para-phenolphthalein. Phthaleins in which one of the hydroxyl groups is ortho- and the other para- to the central carbon have been prepared from para-substituted phenols with oxybenzoylbenzoic acid. They are like the common phthaleins, but their absorption bands are broad, although in much the same position.

BOOKS RECEIVED.

The University of Sheffield. Calendar for the Session 1917-18. Pp. 767. (Sheffield: The University.)
 Medicinsk—Historiske Smaaskrifter. 18. Om Lægekunst Hos Perserne. By A. Christensen. (København: Vilhelm Trydes Forlag.)
 The Education of Engineers. By H. G. Taylor. Pp. vii+64. (London: G. Bell and Sons, Ltd.) 2s. net.
 Chemistry for Beginners. By C. T. Kingzett. Second edition. Pp. viii+150. (London: Baillière, Tindall, and Cox.) 2s. 6d. net.
 Les Universités et la Vie Scientifique aux Etats-Unis. By Prof. M. Caullery. (Paris: A. Colin.) 3.50 francs.

DIARY OF SOCIETIES.

THURSDAY, JANUARY 3.
 ROYAL INSTITUTION, at 3.—Electricity as an Illuminator and Doctor: Prof. J. A. Fleming.
 CHILD STUDY ASSOCIATION, at 5.30.—Discussion: The Education of the Clever Child: Openers: G. F. Daniell and Miss M. Berryman.
 ASSOCIATION OF SCIENCE TEACHERS (University College, Gower Street), at 11.30.—Some Applications of Physics: Prof. Dovidge.—At 2.30.—Discussion: The Teaching of Physics in Girls' Schools: Opener: Prof. F. Womack.
 SATURDAY, JANUARY 5.
 ROYAL INSTITUTION, at 3.—Electric Dynamos, Motors, Transformers, and Railways: Prof. J. A. Fleming.
 GEOGRAPHICAL ASSOCIATION, at 11.30.—The Crafts of Britain, Past and Future: H. Wilson.—At 3.—Map Study in Geography and Military Education: W. E. Whitehouse.

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MONDAY, JANUARY 7.

SOCIETY OF CHEMICAL INDUSTRY, at 8.—The Toxicity of Methyl Alcohol in Relation to its Industrial Uses. A Review of the Published Data: T. D. Morson.—The Rapid Estimation of Pyridine in Ammonia: T. F. Harvey and C. F. Sparks.—(1) Corrosion of Lead Roofing; (2) The Action of Rainwater on a Portland Stone: Prof. J. S. S. Brame.
 GEOGRAPHICAL ASSOCIATION (London Day Training College), at 10.30.—Discussion: Geography in Advanced Courses: Openers: Miss Odell, L. Brooks, and W. H. Barker.—At 5 (King's College).—Presidential address: The Great Goddess Mother Earth: Sir W. M. Ramsay.
 ARISTOTELIAN SOCIETY, at 8.—Is there a Mathematics of Intensity?: Prof. J. A. Smith.
 ROYAL GEOGRAPHICAL SOCIETY (Kensington Town Hall), at 3.30.—The Yukon since the Trail of '98: Mrs. George Black.

TUESDAY, JANUARY 8.

ASSOCIATION OF PUBLIC SCHOOL SCIENCE MASTERS (City of London School), at 12.15.—President's address: The Needs of our Education at the Present Day, with Special Reference to Science Teaching.—At 3.—Discussion: Compulsory Science in University Entrance Examinations: Opener: O. H. Latter.—At 3.45.—Discussion: Examination or Inspection as a Test of Science Teaching: Opener: G. F. Daniell.—At 5.15.—Discussion: Subsidiary Subjects in University Scholarship Examinations: Opener: H. de Havilland.
 ROYAL INSTITUTION, at 3.—Electric Telegraphs and Telephones: Prof. J. A. Fleming.
 INSTITUTION OF CIVIL ENGINEERS, at 5.30.—A Statement in Commemoration of the Founding of the Institution on January 2, 1818.—Rail-Creep: F. Reeves.—Creep of Rails: H. P. Miles.

WEDNESDAY, JANUARY 9.

ASSOCIATION OF PUBLIC SCHOOL SCIENCE MASTERS (City of London School), at 11.—Discussion: "Descriptive Astronomy" in the "Science for All" Course: Openers: Rev. A. L. Cortie, S.J., E. O. Tancock.—At 12.—Discussion: "Map Work" in Schools.
 MATHEMATICAL ASSOCIATION (London Day Training College), at 5.30.—The Graphical Treatment of Power Series: Dr. W. P. Milne.
 GEOLOGICAL SOCIETY, at 5.30.—The Highest Silurian Rocks of the Clun Forest District (Shropshire): L. D. Stamp.

THURSDAY, JANUARY 10.

INSTITUTION OF ELECTRICAL ENGINEERS, at 6.—Electrical Signalling and Control on Railways: C. M. Jacobs.
 MATHEMATICAL ASSOCIATION (London Day Training College), at 11.—The Uses and Functions of a School Mathematical Library: Dr. W. P. Milne.—Nomography: Dr. S. Brodetsky.—Some Suggestions for a Presentation of Mathematics in Closer Touch with Reality: G. Goodwill.—At 2.30.—President's address: Mathematics and Individuality: Prof. T. P. Nunn.—Discussion: The Position of Mathematics in the New Scheme of the Board of Education for Secondary Schools: Openers: W. D. Eggar, P. Abbott, Miss J. Dow.

FRIDAY, JANUARY 11.

ROYAL GEOGRAPHICAL SOCIETY (Kensington Town Hall), at 3.30.—The Old Life in Egypt: Miss Mary Brodriek.
 ROYAL ASTRONOMICAL SOCIETY, at 5.

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