

in his papers in the *Canadian Naturalist*, and in the Journal of the Geological Society. With Messrs. G. T. Kennedy and G. W. Dawson as assistants, he explored the whole of the north side and the greater part of the south side of Gaspé Bay, and has obtained very large and interesting collections of fossil plants. Among these are two large trunks of *Protaxites Logani*, a new and beautiful species of *Psilophyton*, and a species of *Cyclostigma*, a genus hitherto found only in the Devonian rocks of Ireland. Several interesting animal remains were also found, including numerous species of large fishes (*Mechæracanthus*); and Mr. Kennedy was so fortunate as to find a *Cephalaspis*, the first representative of the genus as yet found in America. The animal fossils have been placed in the hands of Mr. Billings and Dr. Newberry for comparison, and the plant will probably be described in detail in the course of the coming winter. Specimens of some of the more interesting fossils above referred to, were exhibited to the society.—Mr. Ritchie read a paper on the small cabbage-butterfly (*Pieris rapæ*), the caterpillars of which have recently been extremely destructive in Canadian gardens. This insect is not indigenous to America, and was first noticed in Canada some years ago by Mr. W. Couper. Mr. Whiteaves made an interesting verbal communication on dredging in Gaspé, and exhibited a large series of marine invertebrates.

PARIS

Academy of Sciences, November 8.—M. Pasteur presented a note in reply to that of M. Thenard on the preservation of wines by heat. A memoir was read by M. H. Marès on the transformations undergone by powder of sulphur (flour of sulphur and powdered sulphur) when it is spread upon the soil, in which the author states that the sulphur which has been abundantly employed in the vineyards of France of late years becomes converted into sulphuric acid which combines with the lime of the soil to form sulphate of lime. The author has not ascertained whether the sulphuric acid is produced by direct oxidation of the sulphur, or by that of sulphuretted hydrogen formed by it in contact with manure, but he states that no odour of sulphuretted hydrogen is perceptible where the sulphur is used. The employment of sulphur appears to be effectual in preserving the vines from disease.—A note by M. J. Personne on the transformation of hydrate of chloral into chloroform in the animal economy was read. The author remarked that whilst M. Liebruch maintains that hydrate of chloral is converted into chloroform by contact with the alkali of the blood, the French observers have generally held an opposite opinion. In his experiments he found that where hydrate of chloral is added to blood, or administered to a dog, no production of chloroform is perceptible, but he obtained chloroform by the distillation of the blood. To avoid the objection that the heat employed in distillation might produce the conversion, he operated at a temperature of 40°–45° C. = 104°–113° F., conveying the vapour by a current of air through a red-hot porcelain tube into a solution of nitrate of silver. The reaction produced demonstrated the presence of chloroform in the vapour, no reaction being caused by vapour of hydrate of chloral conveyed and decomposed in the same way. Unlike M. Bouchet, the author detected no chloroform in the urine of animals to which hydrate of chloral had been administered.—M. J. V. Laborde communicated a note on the ill effects attending the administration of chloral.—In a note on chloride of gold, M. H. Debray remarked that although sesquichloride of gold is decomposed by exposure to a temperature of about 200° C. = 392° F., into proto- and per-chloride, it may, nevertheless, be volatilised by a heat of 303° C. = 572° F., in an atmosphere of chlorine. It then crystallises in long reddish needles.—M. A. Riche communicated a note on the bronze of sonorous instruments, relating chiefly to the production of gongs and cymbals similar to those made in China. Chinese metal contains about twenty per cent. of tin. Alloys made with these proportions of metal are very brittle when cold, but the author found that at a dull red heat they may be forged with ease, and produces very sonorous plates.—M. A. Landrin announced that yellow coralline is not poisonous, so that it may be employed for industrial purposes.—M. Petrequin presented a note on the chemical composition and comparative physiology of the cerumen of the mammalia. Its base is potash in man and the ox, lime in the dog, and magnesia in the horse.—M. A. Petit stated that in the melon the rind contains only glucose, as also the flesh whilst still green. During ripening cane-sugar is gradually developed in the latter, its formation commencing in the most acid part of the pulp surrounding the seeds.

DIARY

THURSDAY, NOVEMBER 18.

ROYAL SOCIETY, at 8.30.—Preliminary Report of the Scientific Exploration of the Deep Sea in H.M. surveying vessel *Porcupine*, during the summer of 1869, conducted by Dr. Carpenter, V.P.R.S., Mr. J. Gwyn Jeffreys, F.R.S., and Prof. Wyville Thomson, LL.D., F.R.S. And other papers. SOCIETY OF ANTIQUARIES, at 8.30.—Ancient British Barrows (Round): Dr. Thurman. LINNEAN SOCIETY, at 8.—Review of the genus *Hydrolea*, with descriptions of three new species: Mr. A. W. Bennett, F.L.S. NUMISMATIC SOCIETY, at 7. LONDON INSTITUTION, at 7.30.—Architecture, or the Fine Art of Building: Prof. Robert Kerr. CHEMICAL SOCIETY, at 8.—On Namaqualite and Chemical Researches on new and rare Cornish Minerals—No. 6. A new Ferric Silicate: Prof. Church. On Chloranil and Bromanil—No. 2: Dr. Stenhouse.

FRIDAY, NOVEMBER 19.

PHILOLOGICAL SOCIETY, at 8.30.

MONDAY, NOVEMBER 22.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30. LONDON INSTITUTION, at 4.—Elementary Physics: Prof. Guthrie.

TUESDAY, NOVEMBER 23.

ETHNOLOGICAL SOCIETY, at 8.—On some Quartzite Implements of Palæolithic Type from the Drift of the Cape of Good Hope: Sir George Grey, Bart. On the Races and Languages of Dardistan hitherto undescribed: Dr. Leitner.

WEDNESDAY, NOVEMBER 24.

GEOLOGICAL SOCIETY, at 8.—On the Dinosauria of the Trias, with observations on the Classification of the Dinosauria: Prof. Huxley, F.R.S., President. The Physical Geography of Western Europe during the Mesozoic and Cænozoic periods, elucidated by their Coral-faunas: Dr. P. Martin Duncan, F.R.S., Sec. G.S.

THURSDAY, NOVEMBER 25.

ROYAL SOCIETY, 8.30. LONDON INSTITUTION, at 7.30.—Architecture: Prof. R. Kerr. LONDON MATHEMATICAL SOCIETY, at 8. ZOOLOGICAL SOCIETY, at 8.30.—Notes on some Spiders and Scorpions from St. Helena, with descriptions of new Species: Rev. O. P. Cambridge. On a small collection of Birds from the Tonga Islands: Dr. O. Finsch and Dr. G. Hartlaub.

BOOKS RECEIVED

ENGLISH.—Transactions of the International Congress of Prehistoric Archaeology (Longmans).—The Universe; or the Infinitely Great and the Infinitely Little: F. A. Pouchet (Blackie and Sons).—Physical Atlas (A. K. Johnston).—Darwinism tested by the Science of Language: Professor A. Schleichler, translated by Dr. A. V. W. Bickers (Hotten).—The Midnight Sky: Donkin (Religious Tract Society). Æsop's Fables, illustrated by Ernest Griset (Cassell).

FOREIGN.—Die Befruchtung bei den Coniferen: Dr. E. Strasburger.—Die Maschinenfabrication: H. V. Reiche.—Berichte über die Versammlung der Deutschen Ornithologen-Gesellschaft. (Through Williams and Norgate.)

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