

and second best systems of electric lighting, both incandescent and arc.

— We learn from *Symons' meteorological magazine* for August, that the government has granted Professor Lemström a sum of 37,000 marks for the continuation of his auroral experiments in Finnish Lapland. These investigations will include the electrical current which produces the aurora, terrestrial currents, and magnetic perturbations.

— Professor Henry F. Osborn of Princeton has published in the July number of the *Quarterly journal of microscopical science*, in a more extended form and with the accompaniment of a lithographic plate, the results of his researches on the foetal envelopes of marsupials. The interest and importance of these investigations are already known, at least to the embryologists among our readers, for Professor Osborn's conclusions were first published in *SCIENCE*.

— The thirty-eighth volume of the *Mémoires du dépôt de la guerre*, recently printed by the Russian general staff under the editorship of Rylke, and of which only one hundred and fifty copies are issued, contains, among other things, an account of the astronomical and trigonometrical work in eastern Siberia, by Bolsheff, Polianoffski, and Kramereff; a memoir of Kulberg on the Russian geodetic operations in Armenia; a report by Lebedeff on triangulation, topographic and astronomical work in Bulgaria; a list of astronomical stations in the Khirgiz steppes by Bondorf; and Stebnitzki's report on the results of his experiments with a reversible pendulum. Of this important work, absolutely necessary for those seriously interested in the study of the geography of Russia and adjacent countries, there is probably not a copy in America.

— Mr. Miles Rock, assistant astronomer at the U. S. naval observatory, has accepted the appointment of chief astronomer and engineer commissioner on the international boundary commission of Guatemala, to locate the boundary between that country and Mexico. He will sail from New York Oct. 1, and expects to be absent about a year.

— Professor H. M. Paul, late of the Imperial university of Tokio, has returned to this country, and accepted a position in Washington under the Transit of Venus commission.

— The *Comptes rendus* of Aug. 13 gives some extracts from a letter of M. A. Richard to M. de Lesseps, on the cultivation of date-palms. M. Richard states that these palms grow best on a soil saturated with salt, as has been proved at Alicante and elsewhere. The land around Elche, in Valencia, is irrigated from the Vinalopo, which is extremely salt, rising, as it does, in Mount Pinoso, the rocks of which contain much salt and sulphate of lime. This water, having been used for centuries for watering the palm-plantations, has at last formed a crust, which has to be broken with a pick-axe to admit the water below. The town of Alicante has planted its beautiful boulevard along the shore with date-palms, and, as fresh water is very precious there, the trees are regularly watered with sea-water. All the plantations recently made along the shore from Huertas to Rio Monegro

have their roots literally in the sea-water, being planted at but a few feet from the sea.

RECENT BOOKS AND PAMPHLETS.

Baillon, H. Traité de botanique médicale phanérogamique fasc. i. Paris, *Hachette*. (To be completed in two fascicules.) 2,301 fig. 8°.

Belfield, W. T. On the relations of micro-organisms to disease. Chicago, 1883. 12°.

Bergstedt, N. H. Bornholms flora. del i. Phanerogamae. Nexoe, 1883. 8°.

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Bert, P. Histoire naturelle. Anatomie et physiologie animales. Paris, *Masson*, 1883. 8+382 p., 270 fig. 18°.

Black, William George. Folk-medicine; a chapter in the history of culture. London, *Stock*, 1883. (Publ. Folk-lore soc. 12.) (10)+228 p. 8°.

Borzi, A. Studi algologici. Saggio di ricerche sulla biologia delle alghe. fasc. i. Chlorophyceae. Messina, 1883. 119 p., illustr. 4°.

Buffalo microscopical club. Eighth annual meeting. Secretary's annual report; president's annual address; list of officers and members. Buffalo, *Baker, Jones, & Co., pr.*, 1883. 2+17 p. 8°.

Chabaud, N. Des accidents observés dans les appareils à air comprimé employés aux travaux sous-marins et particulièrement de ceux dus à une décompression trop brusque. Paris, *impr., Davy*, 1883. 55 p. 8°.

Chalon, J. Résumé de cosmographie. Verviers, *impr. Gilon*, 1883. 128 p., illustr. 12°.

Cocconi, G. Flora della provincia di Bologna. Bologna, 1883. 602 p. 16°.

Coleopterorum novitates, recueil spécialement consacré à l'étude des coléoptères. tome I, livr. I. Rennes, *impr. Oberthur*, 1883. 32 p. 8°.

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Derosne, C. La photographie pour tous, traité élémentaire des nouveaux procédés. Paris, *Gauthiers-Villars*, 1883. 106 p. 8°.

Devos, A. De quelques moyens pratiques pour reconnaître les plantes pendant les herborisations. Dinant, *Delplice-Lemoine*, 1883. 38 p. 8°.

D'Ovidio, C. Le proprietà fondamentali delle superficie di 2. ordine, studiate sulla equazione generale di 2. grado, in coordinate cartesiane. Torino, 1883. 182 p. 8°.

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Duincke, O. Beiträge zur kenntniss des bernsteinöls. Inaug. diss. Königsberg, *Gräfe & Unzer*, 1883. 31 p. 8°.

Edinburgh, Duke of. Notes on the sea-fisheries and fishing population of the United Kingdom, arising from information gained during three years' command of the naval reserves. London, 1883. 64 p. 8°.

Engel, T. Geognostischer wegweiser durch Württemberg. Anleitung zum erkennen der schichten und zum sammeln der petrefakten. Stuttgart, 1883. 16+326 p., illustr. 8°.

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Forsyth, A. R. Memoir on the theta-functions, particularly those of two variables. London, 1883. 80 p. 4°.

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Gegenbaur, C. Lehrbuch der anatomie des menschen. Leipzig, 1883. 558 fig. 8°.

Goode, G. Brown. The fishery industries of the United States. (Great intern. fish. exhib. — Papers of the conferences.) London, *Clowes*, 1883. 84 p., 2 tab. 8°.

Gottsche, C. Die sedimentär-geschichte des provinz Schleswig-Holstein. Als manuscript gedruckt. Yokohama, *Dr. Lévy u. Salabelle*, 1883. 6+66 p., 2 maps. 8°.

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