

drainage lines in the north part of the Mississippi basin, in the hope that such facts may lead to inferences concerning the preglacial altitude of the region, differential crust movements, the effect of glaciation in enlarging and deepening valleys and other questions relating to glacial influence.

The Classification of the Upper Paleozoic Rocks of Central Kansas: By CHAS. S. PROSSER. This is the concluding portion of the paper begun in the last number of the *Journal*. It gives a detailed study of the paleozoic series from the Waubensee beds of the author in the U. Coal Measures to the Marion beds in the Permian. The paper is a valuable contribution to the stratigraphy of Kansas and its value is enhanced by the table of formations accompanying.

The Volcanics of the Michigamme District of Michigan: By J. MORGAN CLEMENTS. These rocks are Huronian in age and lie to the west of the Archean core between Bone Lake on the north and Crystal Falls on the south. They have a thickness of about 4,000 feet and vary in character from melaphyre and porphyrite to quartz-porphyry and devitrified rhyolites called aporhyolites. As a result of his study of this series, the author confirms the conclusions of many late investigators regarding the identity of these older volcanics with modern lavas and proposes to name them accordingly.

The Influence of Debris on the Flow of Glaciers: By ISRAEL C. RUSSELL. The principle maintained is that the flow of a glacier under given conditions will depend on the percentage of debris mingled with it and will be least when that percentage is greatest. This principle is applied in explaining the irregularities of glacial erosion and deposition, such as subglacial gravel deposits, the formation of complex terminal moraines and the difficult subject, the origin of drumlins. He sees no good reason why we may not have drumlins of sand, loess or gravel, as well as till.

Glacial Studies in Greenland No. VIII: By T. C. CHAMBERLIN. This is mainly a description of the krakokta glacier which descends northerly from the Redcliff peninsula. The relations of this glacier to its moraine are followed with some detail. Where it meets the Tuktoo glacier moving southward, a joint moraine is produced,

which perhaps is medial in position, but terminal in nature. At some places the ice lies well within its moraine, and at others the moraine is completely overridden by recent advances of the ice. The photographs illustrate these points as well as the regular and beautiful stratification of the glacier and its freedom from debris, except in the lower portion.

The Editorial: By R. D. SALISBURY gives a condensed account of the Peary Relief Expedition of the present summer, and of the results, geological and otherwise, of Mr. Peary's work during two seasons in Greenland.

Reviews are contributed by J. P. Iddings, T. W. Stanton, S. Weller and T. C. Hopkins.

NEW BOOKS.

Die Artbildung und Verwandtschaft bei den Schmetterlingen (Part 2). DR. G. H. THEODOR EIMER. Jena, Gustav Fischer. 1895. Pp. 153.

A Handbook of British Lepidoptera. EDWARD MEYRICK. London and New York, Macmillan & Co. Pp. vi. + 843. \$325.

Notes on the Nebular Theory. WILLIAM FORD STANLEY, London, Kegan Paul, Trench, Trübner & Co., Ltd. 1895. Pp. xv. + 259.

Problems in Differential Calculus. W. E. BYERLY. Boston and London, Ginn & Co. 1895. Pp. vii + 71.

The Production of Iron Ores in Various Parts of the World. JOHN BIRKENBINE. Washington. 1895. Pp. 204.

A Handbook of Industrial Organic Chemistry. SAMUEL P. SADTLER. Second Edition. Philadelphia and London, J. B. Lippincott & Co. 1895. Pp. xvii + 537.

The Structure and Development of Mosses and Ferns. DOUGLAS HOUGHTON CAMPBELL. London and New York, Macmillan & Co. 1895. Pp. viii + 554. \$4.50.

Laboratory Manual of Inorganic Preparations. By H. T. VULTÉ and GEO. M. S. NEUSTADT. New York, Geo. Gottsberger Peck. 1895. Pp. ii + 180 + iii. \$2.

Indianische Sagen von der Nord-Pacifischen Küste Amerikas. FRANZ BOAS. Berlin, A. Asker & Co. 1895. Pp. vi + 363.