

Dr. Norwood's geological work was done between the years 1845 and 1855. He was associated with Dr. D. D. Owen in the Geological Survey of Wisconsin, Iowa and Minnesota, and was later State Geologist of Illinois. From 1860 to the time of his death (May 6, 1895) Dr. Norwood held a professorship in the University of Missouri, but on account of ill health his active work with that institution ceased in 1880. The paper is accompanied by a portrait and a list of publications.

The Keweenawan According to the Wisconsin Geologists. By N. H. WINCHELL.

This is the sixth in a series of papers entitled 'Crucial Points in the Geology of the Lake Superior Region.' With the conclusions of the Wisconsin Geological Survey concerning the Laurentian and Huronian the author does not essentially disagree, but he criticises the conclusions regarding the Keweenawan and the Upper Cambrian sandstones. It is stated that the Keweenawan was introduced by a period of subsidence and the deposition of conglomerates and sandstones, and that the great igneous activity of this age was later than these basal clastic rocks; the opposite view was held by the Wisconsin geologists. The author also brings forward evidence to show that there was not necessarily a long erosion interval (and a consequent unconformity) between the Keweenawan and the Upper Cambrian sandstones, as was held by the Wisconsin Geological Survey.

Superior Mississippian in Western Missouri and Arkansas. By CHARLES ROLLIN KEYES.

Recent work has shown that the upper Mississippian rocks in western Missouri, which have been regarded as not presenting a series easily parallelized with the typical rocks of this age in the Mississippi valley, are present in both their superior and inferior portions. The Burlington limestone is practically the same as at the typical

locality, and a typical Kaskaskia fauna is present in the uppermost member of the Mississippian.

Glacial Notes From the Planet Mars. By E. W. CLAYPOLE.

A summary of knowledge concerning the polar caps of Mars, which are believed to be composed of snow and ice, is presented. It is shown that Mars affords no evidence in support of the eccentricity theory of glacial cold, though his conditions are at present such as to favor a state of intense glaciation in his southern hemisphere.

Correlations of Stages of the Ice Age in North America and Europe. By WARREN UPHAM.

The series of stages of fluctuating growth and decline of the ice sheets on both sides of the North Atlantic are shown to be nearly alike and probably contemporaneous, so that the names proposed by Chamberlin for the principal American stages are applied also to the European, these names being here given on maps of the glacial drift of each continent. The marginal moraines of each are referred to the Champlain epoch, which was the short closing part of the Glacial period.

Besides the foregoing articles, this number contains departments of editorial comment, reviews of recent geological literature, lists of recent publications in geology, and personal and scientific news.

NEW BOOKS.

The Principles of Physics. ALFRED P. GAGE. Boston and London, Ginn & Co. 1895. Pp. ix + 634.

An Introduction to Chemical Crystallography. ANDREAS FOCK. Translated and edited by WILLIAM J. POPE. Oxford, The Clarendon Press. 1895.

Petrology for Students. ALFRED HARKER. Cambridge, University Press. 1895. Pp. viii + 306. \$2.00.