

are those of the Drift or Quaternary Period. Before turning our attention to these, we extract from the Report a few observations of much interest in reference to the geological relations of the groups already alluded to:—

“Many interesting considerations present themselves on a general review of the geology of the peninsula. From the Lake Superior Sandstone to the close of the Helderberg period, our state seems to have had a common history with Canada West, and the States on both sides of us. The same groups of rocks are traced uninterruptedly from New York across the peninsula of Canada to Michigan and even to the Mississippi river, preserving throughout that whole extent as great a degree of palæontological identity as could be expected of faunas stretching over so many degrees of the earth's surface. It is true, as has been long since shewn by Prof. Hall, that nearly every member of the Silurian and lower Devonian system, thins gradually in its westward prolongation, loses somewhat of its arenaceous or argillaceous character, and becomes at the west much more calcareous—changes which have generally been regarded as proving the origin of the materials of those groups to have been at the east. It is interesting to observe, however, notwithstanding this westward attenuation, how completely we are able to recognize all the essential features of the New York System in our own State.

“From the close of the Helderberg period, on the contrary, Michigan has had a history to some extent peculiar. The rocks of the Hamilton group can indeed be traced almost continuously from New York into our own State, but the palæontological characters are found materially changed, and the strata are more argillaceous. The Portage Group, of New York, supposing it to be represented by our Huron group, has received great accessions of argillaceous matter, and seems to have been deposited under circumstances more unfavourable to the existence of animal life. The Chemung Group, supposed to be represented by our Marsuall Group, has been traced uninterruptedly into Ohio, where it becomes almost non-fossiliferous. The Marshall Group is totally isolated from rocks of the same age anywhere beyond the limits of our peninsula; and though the sandstones bear some physical resemblance to those of the Chemung Group of Ohio and New York, our formation contains little or no argillaceous matter; its fauna is remarkably rich, and its species are nearly all peculiar. The Napoleon Group, if correctly separated from the Marshall Group, has no distinct equivalent in surrounding States; and its entire destitution of organic remains will cause its true geological relations to remain in doubt.

“If anything were wanting to show that the geological column in Michigan has been built up as a distinct and independent structure, the existence of the gypseous or Michigan Salt Group, supplies the deficiency. But even further than this, no obvious parallelism has yet been traced between the overlying carboniferous limestone, and the groups of this system further west. The indications already pointed out, however, lead to the conjecture that our limestone was accumulating during several of the epochs into which geologists have divided this