

plication, and often founded on the lithological, instead of the zöological characters of the rocks. Unfortunately, few of these surveys were carried to completion, so that the geologists in charge were unable to adopt a national nomenclature.

The New York geologists have divided the Silurian system, as developed in that state, into eleven groups, while some of the Western geologists recognize, in its western extension, but five. Between the two systems of classification there is no community of names.

The geographical position of our district is such as to form a connecting link between the East and the West. While, on the one hand, the New York and Canadian geologists have traced the Silurian groups up to the eastern borders of our district; on the other hand, the geologists of Michigan, Iowa, Wisconsin and other states, have traced the same groups, though under different names, along their southern and western prolongation, without having attempted to identify them with their eastern equivalents, or to subdivide them according to the palæontological evidence.

Under these circumstances, we have endeavored to connect the two sets of observations and blend them into one harmonious whole. As the New York survey is the only instance in which the matured results have been communicated to the public, and as the volumes on the palæontology—a monument of the research and perseverance of the author, Mr. Hall—will form the standard of reference for the whole country, in determining the succession of the Silurian groups, we have deemed it advisable to adopt that nomenclature, so far as the same groups described by the New York geologists could be recognized in our district.

The designation of groups of strata by names derived from their geographical position, or from the locality in which the rocks are first investigated and their relative position clearly defined, seems to be of all the methods of nomenclature that which, for the present at least, is liable to the least objection. Names given solely with reference to lithological character, or to the presumed predominance at any particular point of a certain genus or class of organic remains, seem much more likely to lead to misunderstanding and confusion; and, however desirable it may be that a universal system of nomenclature and arrangement should be introduced, it seems quite impossible to hope for any such thing in the present state of geological science, a science which is so rapidly developing, and liable to such constant changes. The names introduced by the New York geologists, are in most instances derived from the locality where the group designated is particularly well developed, and the fact that those groups have, in their continuation through Canada, been described by Mr. Logan, the Provincial Geologist, under the names recognized by the New York survey, seems an additional reason for their adoption, as far as possible, by us.

It will be seen from the details incorporated in a subsequent part of this report, that many members of the Silurian series, particularly the grits and conglomerates, which are clearly defined in New York, have but a limited range, and disappear altogether before reaching the limits of our district. These are conditions which we ought to expect would exist in deposits made along a shelving ocean-shore; but so far as these are persistent, it seems desirable that they should bear the same names throughout their whole extent.

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