

glomerate was not sufficiently large to enable one to determine strike or dip.

Passing now a few paces south of the main limestone ledge, i. e., geologically upward, the actual contact between it and the upper slate-conglomerate is seen, although for no great distance. This contact is perfectly sharp. Upon one side of the line is the typical limestone; upon the other is the coarse conglomerate. The bedding of the latter is not sufficiently distinct to determine whether between the two formations there is a discordance. Above the contact occurs a good sized exposure of upper slate-conglomerate. This contains innumerable characteristic fragments of this formation, including besides various granitic fragments those of basic eruptives, of quartzite and of jasper. The distinctive feature of the exposure is, however, the presence of very numerous fragments of limestone, which sometimes reach a foot or more in diameter. These fragments have precisely the appearance of the strongly laminated underlying limestone. The bandings of the fragments lie in various directions, showing that this structure existed in the original rock at the time of the deposition of the conglomerate.

About 40 rods east, while the typical upper slate-conglomerate was not found, at the extreme southernmost part of the limestone bluff is a limestone-conglomerate or recomposed limestone, which is regarded at this point as the base of the upper slate-conglomerate.

A large exposure of lower slate-conglomerate some distance to the west of the locality above described shows the bedding to be vertical. It also has a cleavage in several directions so that large fragments under slight blows break into polygonal blocks. As compared with the upper slate-conglomerate it is much more crystalline. Its finer grained phases pass into a siliceous schist. The outcrop of lower slate-conglomerate adjacent to and north of the limestone has the same lithological character as the large bluff to the west.

It is concluded from the above observations that bearing in favor of a considerable break between the Upper and Lower Huronian are the following points:—There is (1) a difference in degree of metamorphism. The Lower Huronian has been so much altered as to have become semi-crystalline and to take on various cleavages, while the upper slate-conglomerate has no such characters. (2) Blocks of limestone in the upper slate-conglomerate are in exactly the same condition as in the original ledge. (3) Also the jasper fragments here contained were probably derived from the hematitic jaspery formation which is known to occur in the Lower Huronian. This sedimentary formation, like the limestone, belongs to one series, while the