

slates in the vicinity of these belts are compact, of a greenish color, and traversed by different systems of joints, more distinct than the lines of bedding, cutting the mass into cuboidal blocks.

At Little Presqu'isle, another band of igneous rocks, of a highly crystalline character, projects into the lake. Distinct acicular crystals of hornblende are distributed in places through a paste of pure-white feldspar, while in others, these two minerals are disconnected, the latter forming beds of considerable thickness. Angular fragments of hornblende slate, chlorite slate; jasper and a green magnesian mineral, are seen enclosed in the mass near the water's edge, as represented in the preceding illustration, (Fig. 1,) which may be regarded as a volcanic breccia. These fragments seldom exceed a few inches in diameter.

Like most of the rocks of this region, its surface is smoothed and striated in a wonderful manner. Below the mouth of Dead river, a highly crystalline mass of this character emerges in the form of an island fifty or sixty feet in height.

The main Presqu'isle consists of a dark-green trappean rock, rising in overhanging cliffs to the height of a hundred feet. A description of this rock and the relations which it bears to the sandstone will be given when we come to treat of the Silurian system. Over this is deposited a volcanic tuff, imperfectly stratified, filling up the previous depressions, and attaining a thickness of twenty or thirty feet. It presents a complete net-work of veins, a few lines only in width, which penetrate but a short distance into the subjacent basalt. At one place, on the north-west side of the point, an irregular vein bearing north and south is seen for two hundred feet in a linear direction, in this obscurely stratified tuff, which yields the sulphurets of lead, copper and iron, but not in sufficient quantities to render its exploitation profitable. Asbestos is also sparingly distributed, and may be regarded as a metamorphic product resulting from the presence of lime. Traces of magnetic oxide of iron and black oxide of manganese are detected in some of the veins farther eastward.

Proceeding up the valley of Dead river, between sections 7 and 16, township 48, range 25, the stream is precipitated from a height of twenty feet over a ledge of schistose rocks, which exhibit distinct lines of bedding and abrupt convolutions of the strata.

In the next range west (27,) the trappean and schistose rocks are frequently exposed in the bed of the stream, consisting of alternations of talcose and chlorite slates, and hornblende and feldspar rocks. They stretch out in numerous parallel ridges, bearing north of east and south of west, and present, for the most part, southerly escarpments. On the north-west quarter of section 16, the river is precipitated in a series of rapids over the former class of rocks, affording fine exposures for observation. On the west boundary of section 6, in a high ledge which rises from the northern bank of the stream, the slates are again observed dipping to the south at an angle of 70°.

The stream here bears west-north-west, conforming to the direction of the strata. After flowing along the northern line of township 48, nearly through range 27, it divides into numerous branches whose sources lie to the north-west, in the region of the granite.

Proceeding southward from Teal lake, we first encounter a ridge of trappean rocks which skirt its southern shore and rise abruptly to the height of two hundred feet above the lake-level, succeeded by chlorite slates and vast

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