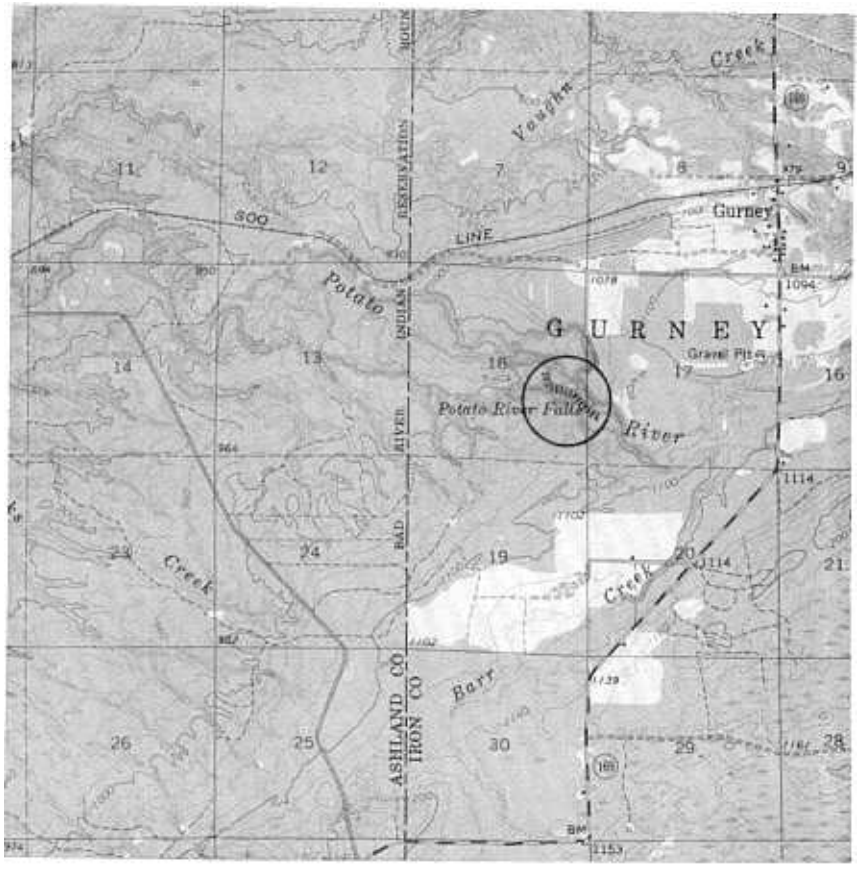
Title: Potato River

Location: Exposures in banks of Potato River at County Park 1.5 miles southwest of Gurney on secondary road and in the NE$\frac{1}{4}$, NE$\frac{1}{4}$, SE$\frac{1}{4}$, Sec. 18, T.46N., R.1W., Iron County (Mellen 15-minute topographic quadrangle, 1967).



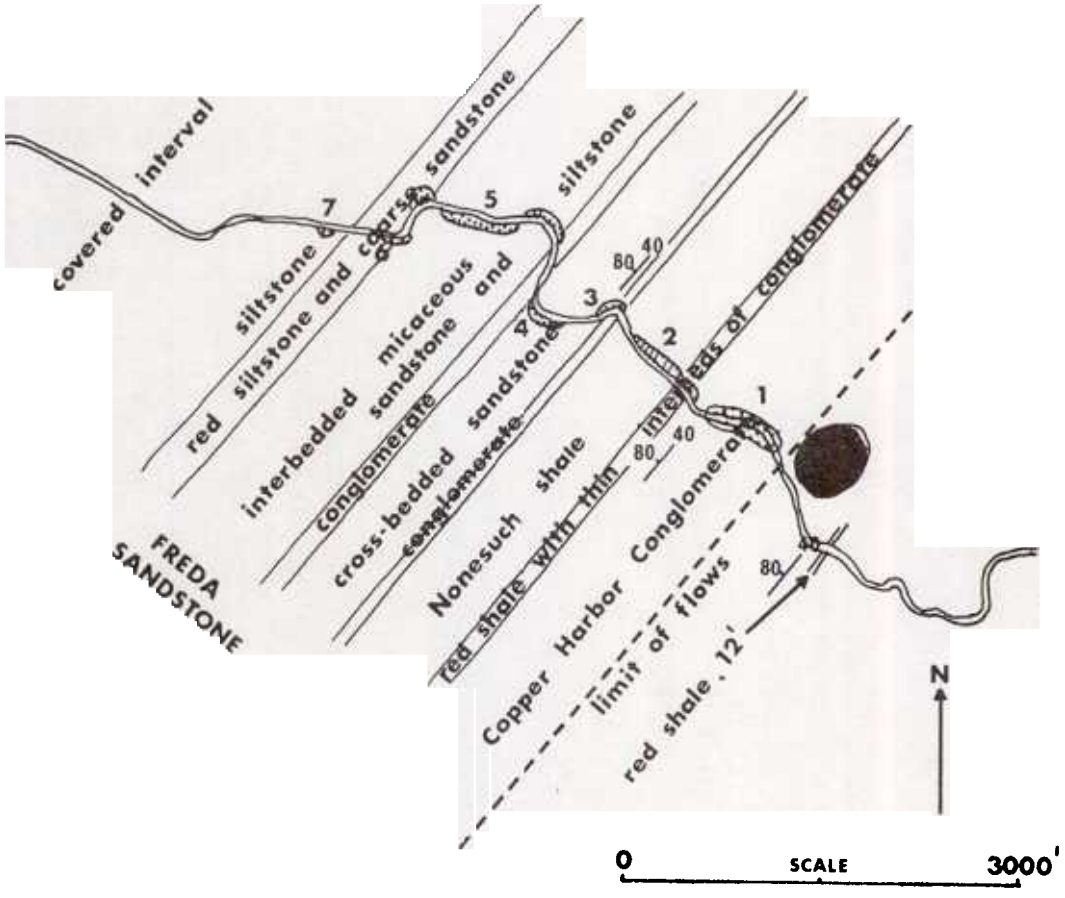
Author: M. E. Ostrom (modified from Myers, 1931)

Description: Thick section of Copper Harbor Conglomerate, Nonesuch Shale, and Freda Sandstone is exposed in the bed and banks of the Potato River in the County Park. The description from Myers (1971, pp. 222 & 223) is given on the attached illustrations.

Significance: Exposure affords opportunity to examine the three formations which comprise the Oronto Group of the Upper Keweenawan Series, i.e. the Copper Harbor Conglomerate, Nonesuch Shale, and Freda Sandstone and their lithologies, mineralogies, contact relationships, sedimentary structures, and other features.

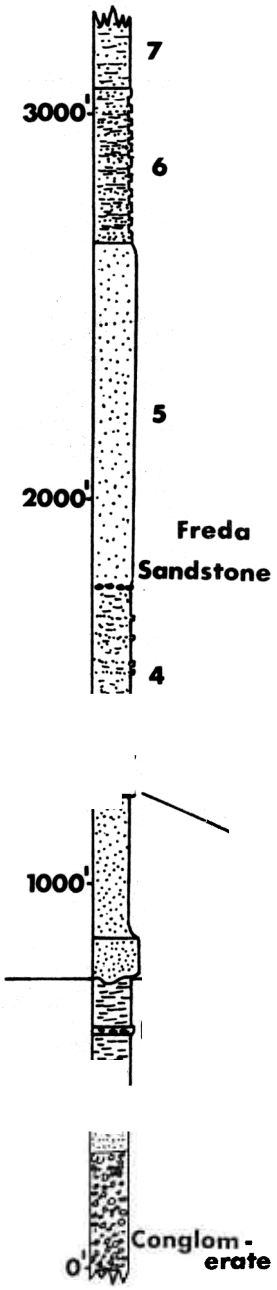
Recall the White River and South Fish Creek stops. From a regional and structural perspective, what do you interpret happened to these strata? Considering the mineralogy and lithologic composition of the formation, what was their origin? Was it the same? What direction was the source of the sediments? Was it the same for each formation? What was the environment of deposition for each formation? How were they related spacially?

References: Myers, 1971



Index map showing the location of exposures of Oronto Group rocks, Potato River, E½, Sec.18, T.46N, R.1W, Wisconsin. Outcrop numbers correspond to numbers on stratigraphic column.

STRATIGRAPHIC COLUMN OF EXPOSURES ON THE POTATO RIVER, E ½, SEC. 18, T. 46 N, R. 1W, WISCONSIN



Covered Interval. Thickness of covered interval estimated to be over 4000 feet.

Grayish red and grayish red purple siltstone with minor soft thin sandstone. Poorly exposed.

Interbedded grayish red fine- to medium-grained sandstone and siltstone. Beds typically 10' in thickness, but 50' zone of sandstone present at base. This sand is coarse, grayish red purple. Near top of this zone is 8' grayish brown siltstone. Cut-and fill; birdseye leaching.
Tectonic Attitude: Strike N40 E, Dip 80 NW

Very uniform, resistant sandstone; medium to coarse grained; grayish red purple and very micaceous. Cut and fill (1) present; occasional cross-bedding, current ripple marks. Isolated pebbles up to 1" in diameter (quartz). Increasingly conglomeratic toward base. Minor siltstone beds (1') scattered throughout section.

Soft grayish red purple micaceous siltstone with occasional layers of hard grayish red sandstone. One thin layer of conglomerate near top. Sandstone is medium grained; abundant clay shale pebbles randomly distributed. Birdseye leaching and leaching along bedding planes and joints.

Soft, grayish red purple sandstone; micaceous. Underlain by conglomerate with pebbles up to 6" Calcite cement prominent in hand specimen and under microscope.

Zone of interbedded sandstone and siltstone (minor). Siltstone units 3-6" thick; leaching and minor copper staining. Basal 20' consists of hard grayish red sandstone and siltstone. Some evidence of cut and fill; contact with Nonesuch may be minor diastem

Interbedded fine-grained sandstone, siltstone and silty shale. Sedimentary structures identified included parting lineation and cut-and-fill. In general, section is composed of thin-bedded (2-5"), well sorted, and highly indurated silty shale.

Conglomerate; clasts up to 8"; estimate 75-80% vol. R. F.; quartz + quartzite 20-25%. Some epidotized volcanic R. F.s. Pebbles rounded, rare percussion marks; faint suggestion of cross-bedding.