

MICHIGAN LOCALITIES OF GEOLOGICAL INTEREST*

Area I - Pre-Cambrian Region, Western Northern Peninsula

Baraga County:

1. Old silver mines. Namely two, one approximately 4.5 miles east of L'Anse, SW 6, 50N-32W; and the other about 7 miles east and 5 miles south of Skanee, SW NW 23, 51N-30W.
2. Old abandoned slate quarries about 10 miles east northeast of L'Anse SW 28, 51N-31W.
3. Highest point in Michigan, Mt. Curwood, at an elevation of 1980 feet above sea level, or 1378 feet above Lake Superior.

Dickinson County:

1. Surface caving over abandoned Pewabic Iron Mine, located about one mile east of Iron Mountain, NW 32, 40N-30W.
2. Road side exposure of Randville Dolomite that features algae structures, a sign of ancient life in the Pre-Cambrian period, located on the south side of Lake Antoine approximately 2 miles northeast of Iron Mountain, SE NE 29, 40N-30W.
3. Iron Mountain Mine located on the north side of US 2 about 9 miles east of Iron Mountain. Commercialized, open to tourist. Fee charged.
4. Cornish mine pump at Iron Mountain. Has been fenced in and is quite an attraction for tourist.

Gogebic County

1. Falls on the Black River:
 - a. Rainbow Falls SE NW 10, 49N-46W
 - b. Sandstone Falls SE SW 10, 49N-46W
 - c. Polawatoni & Gorge Falls W½ 15, 49N-46W
 - d. Great Conglomerate Falls NE 21, 49N-46W
 - e. Algonquin Falls SE NE 29, 49N-46W
 - f. Chippewa Falls SW NE 32, 49N-46W
2. Falls on the Presque Isle River:
 - a. Lepisto Falls NE NW 9, 49N-45W
 - b. Abinodji Falls SW 15, 49N-45W
 - c. Ogima Falls NE 21, 49N-45W
 - d. Nokomis Falls NE 15, 49N-45W
 - e. Nimikon Falls C N½ 36, 49N-44W
3. Numerous old abandoned iron mines headframes, etc. in the Gogebic Iron Range District of Ironwood-Wakefield area.
4. Granite hills (Presque Isle Granites) near Marenisco:
 - a. Copps Mine Tower (USFS) located about 7 miles north-northeast of Marenisco. SE NW 14, 47N-43W. Elevation of 1810 feet above sea level.

- b. Wolf Mountain, located about 6 miles northwest of Marenisco. C 26, 47N-44W. Elevation of 1826 feet above sea level.

5. Steeply tilted Freda Sandstone bluffs, showing ripple marks of all varieties, along Lake Superior shore west from Little Girls Point. 32, 49N-48W. (Need boat)

Houghton County

1. Numerous old abandoned copper mine headframe, etc. from Painesdale to beyond Calumet.
2. Natural Wall Ravine, approximately 2 miles east of Laurium. NE NW 20, 56N-32W.
3. Houghton Falls on Hammell Creek, located about 3 miles south-southeast of Laurium. Near east one quarter post of Sec. 36, 56N-33W.
4. Arcadian Copper Mine. Located about one mile east of Hancock. Commercialized. Fee charged.
5. Freda Sandstone bluffs (known as the Castles) along Lake Superior north of the town of Freda. T55N, R35W. (Need boat)

Iron County

1. Old abandoned Slate Quarry, located about 6 miles south of Kenton, SW2, 46N-37W. (Slate Quarry Camp Ground)
2. Numerous old abandoned iron mines headframes, etc. in and about the towns of Iron River and Crystal Falls.

Keweenaw County

1. Numerous old abandoned copper mine waste dump piles from Allouez to Copper Harbor.
2. Mt. Brockway along Brockway Mountain Drive. Public lookout station at SE 34, 59N-29W.
3. Mt. Bohemia. Located near the end of Keweenaw Point in Sec. 29, 58N-29W. Geographically, it is one of the largest and most impressive mountain mass in this part of the State. It rises with steep slopes from lake level of Lac La Belle to an elevation of 869 feet (1469 feet above sea level).
4. Mt. Houghton. Located about 3 miles east-northeast of Mt. Bohemia in Sections 23 and 24, 58N-29W. Named after Douglas Houghton, first State Geologist. Rises to 864 feet above level of Lake Superior (1466 feet above sea level).
5. Hogbacks on the shore of Lake Superior about 4 miles east of Copper Harbor, north part of Sec. 36, 59N-28W. Features algae structures that represents indication of early life.

Marquette County

1. Numerous old abandoned iron ore mines headframes and dumps of the Marquette Iron Range District.
2. Jackson Iron Mine Pit at Negaunee. Was the site of the first iron ore discovery in the Lake Superior region in 1844.
3. Presque Isle Park, approximately 3 miles north of Marquette. Sec. 1, 48N-25W. Picturesque wave-cut bluffs exposing Archean rock unconformably overlain by Lake Superior sandstones.
4. Sugarloaf Mountain, located about 6 miles northwest of Marquette on the road to Big Bay. NW NE 32, 49N-25W. Scenic view from an elevation of 1060 feet above sea level overlooking island out in Lake Superior.
5. Republic Open-Pit iron mine, located at Republic. Public observation tower overlooking pit and mining operations.
6. Jasper Knob located on the south side of Division Street between Negaunee and Ishpeming, SW NW 11, 47N-27W.

Ontonagon County

1. Several old abandoned copper mines headframes and dump pits in the Rockland and Mass areas.
2. Ancient Indian copper working over a stretch of around 14 miles from Vitoria to about 3 miles beyond Mass.
3. Minnewawa Falls on the Presque Isle River located about 8 miles north and 4 miles east of Wakefield in SE 31, 49N-44W.
4. Bonanza Falls on the Big Iron River, located about 5 miles north of White Pine in the SE NE 13, 51N-42W.
5. Water falls on the Ontonagon River and tributaries:
 - a. Grand Rapids near N¼ post 2, 50N-40W
 - b. Irish Rapids near E¼ post 12, 50N-40W
 - c. Vitoria Dam NE 36, 50N-39W
 - d. Sandstone Rapids SW 2, 49N-40W
 - e. Flannigan Rapids SW 27, 49N-40W
 - f. O Kun De Kun Falls NW 14, 49N-39W
 - g. Three Rapids SW 19, 49N-38W
 - h. Bond Falls (Bond Falls Park) approx. 2½ miles east northeast of Paulding SW 1, 46N-39W
 - e. Agate Falls SW 8, 47N-38W

6. Porcupine Mountains. Contains among other things the second highest point in the State. Government Peak 1890 feet above sea level. SE NW SE 26, 51N-43W.

7. Columnar Basalt. Exposed in roadside quarry along northside of M-28 on eastern outskirts of town of Bergland.

Area II - Eastern half of Northern Peninsula

Alger County

1. "Pictured Rocks". Wave-cut bluffs, sea-caves, arches, etc. along Lake Superior shore for some 20 miles northeastward from Munising. (National Park)
2. Water Falls:
 - a. Whitefish Falls, approx. 4 miles northwest of Trenary. SW 10, 44N-22W.
 - b. Au Train Falls, approx. 4 miles east-southeast of Chatham. SE 31, 46N-20W.
 - c. Wagner Falls, approx. 2 miles south of Munising. C N½ 14, 46N-19W.
 - d. Tannery Falls, approx. 1 mile east of Munising. NE SW 1, 46N-19W.
 - e. Rock River Falls, approx. 4 miles north of Eben. SW NE6, 48N-21W.
 - f. Laughing Whitefish Falls, approx. 3 miles north of Sundell. C W½ 16, 46N-22W.
 - g. Scott Falls, approx. 8 miles west of Munising on south side of M-28. SW SW 28, 47N-20W. (State Roadside Park)
 - h. Miners Falls, approx. 8 miles northeast of Munising in "Pictured Rocks" National Park.
 - i. Chapel Falls, approx. 13 miles north of Shingleton. SW NW 28, 48N-17W.
 - j. Sable Falls, about 2 miles west of Grand Marais. C SE 2, 49N-14W.
3. Grand Sable Dunes, approx. 4 miles stretch of dune country along south shore of Lake Superior. 2 miles west of Grand Marais.

Chippewa County

1. High hill with circular ridge on top and which might be of archaeological interest upon investigation. Located on Drummond Island in S½ Section 5, 41N-5E.
2. Trout Lake Fire Tower escarpment. One of the better north-facing bluffs of the Niagaran Escarpment in the Northern Peninsula, located about 4 miles east of Trout Lake on the south side of M-28, NE NE 29, 44N-5W.
3. Lower falls on the Tahquamenon River, about 9 miles west of Paradise. C N½ 32, 49N-7W.

Delta County

1. Bluffs along the east coast of Little Bay de Noc on the Stonington Peninsula for a distance of 4 to 5 miles from the community of Stonington (Limestone and shales loaded with Ordovician-age fossil shells)
2. Bluffs along east coast by Big Bay de Noc down the west side of the Garden Peninsula. About 3 miles southwest of Fayette bluffs rise directly above bay to height of 235 feet. A second location where bluff rises only half as high is at Fayette which is now Fayette State Park. Lower bluffs are at the entrance of Garden Bay about 4 miles north of Fayette. Indian paintings are reported in ledges along shore in Sec. 24, 38N-20W.

Luce County

1. Upper Falls on the Tahquamenon River, about 18 miles northeast of Newberry, N.W 12, 48N-8W. (Tahquamenon Falls State Park)

Mackinac County

1. Sea stacks in the vicinity of St. Ignace:
 - a. Castle Rock, located about 3 miles north of St. Ignace on the west side of 1-75, NW NE 36, 41N-4W. Commercialized. Fee charged.
 - b. Antoney's Rock, located behind Homestead Cafe in city of St. Ignace.
 - c. Stack in near shore bluff at Gros Cap on south side of US 2 about 5 miles west of St. Ignace. Sec. 6, 40N-4W. (State Road Side Park)
2. Maple Hill Fire Tower locality. One of the more prominent bluffs of the Niagaran Escarpment in the Northern Peninsula located about 12 miles east south east of Trout Lake, NE 3, 43N-4W.

Menominee County

1. Glacial Drumlins. Drumlins hills are numerous in the county, but one of the more perfectly symmetrical ones is in the SW corner of Sec. 17, 38N-25W, extending southwestward into Section 19.
2. Glacial Eskers. One of several esker ridges in the county is a bouldery one that crosses M-90 in the NW 28, 39N-24W, one and one-half miles southeast of Shaffer. It is about three-fourths of a mile long and consists for a good part of large, flat slabs of limestone (Trenton Limestone) that measures 3 and more feet in diameter.
3. Glacial Kames. Two reported kames are located, one in center of Sec. 11 and the other in the south line of Sec. 29, 38N-26W.

Schoolcraft County

1. Hogbacks. Hogbacks of Engadine Dolostone are along the shore of Lake Michigan just west of Seul Choix Point in Sec. 27, 41N-13W.

2. Big Spring. At Big Spring, water wells up under great pressure from the underlying bedrock to form a crystal clear, emerald green pool 175 by 300 feet across and 40 feet deep, from which a large stream flows eastward to Indian Lake. NW SW 25, 42N-17W.

Area III - North half of the Southern Peninsula

Alpena County

1. Sunken holes. In Alpena, Presque Isle, and Otsego Counties, the action of underground waters have desolved and weakened the rock strata in some places that caveins have resulted and great "Sunken Holes" have been formed. Some are several hundreds of feet across and from 100 to 200 feet in depth. Many have vertical walls of limestone. The more impressive ones are in the vicinity of Long Rapids, and Leer, Alpena County; Shoepac Lake and between Long Lake and Lake Huron shore, Presque Isle County; and in the Mackinaw State Forest, Pigeon River Country Forest Area, largely in Otsego County.
2. Glacial Esker. A rather prominent esker ridge that extends for at least three miles in a northeast-southwest direction is located about 12 miles west-southwest of Alpena in Secs. 2 and 11, 30N and Secs. 26 and 35, 31N-6E.
3. Glacial Kames. A very prominent Kame is situated on the south side of M-32 about 14 miles west of Alpena. It covers an area of about three-fourths of a square mile and has a relief of 200 feet over the surrounding country. Secs. 28 and 29, 31N-6E.

Antrim County

1. Glacial Drumlins. Northwest-southeast trending drumlins hills are numerous in the northwestern portion of Antrim County and the southwestern portion of Charlevoix County. US 31 between Torch Lake and Charlevoix runs along the length of the first one and then another of these elongated hills.
2. Shore Bluff. Black shale with pyrite and anthraconite concretions in cliff along Lake Michigan about one mile south of Norwood.

Kalkaska County

- Glacial Valley Trains. The valley extending from Mancelona, Antrim County to Kalkaska and beyond is a good example of a valley train.

Leelanau County

- Dunes. "Sleeping Bear" dune is located in Sleeping Bear Dunes National Lakeshore on Lake Michigan four miles north of Empire. It is probably the most known dune and is unique as being on a glacial moraine platform at an elevation of 450 feet above the water of Lake Michigan.

Osceola County

Highest spot in Michigan's Southern Peninsula is on a hill in glacial moraine in north part of Osceola County, 7½ miles south and 3 miles east of Cadillac. Near the west quarter post of Sec. 12, 20N-9W. (Elevation 1713 ft. above sea level)

Presque Isle County

1. Sunken Holes. (See Alpena County)
2. Rainy River Falls. A very picturesque falls located approx. 2 miles east and 2 miles north of Onaway in Rainy River. NE NW 35, 35N-2E.
3. Ocqueoc Falls. Located approx. 4½ miles north of Millersburg on the Ocqueoc River. SW SE 22, 35N-3E. (Ocqueoc Falls Forest Campgrounds)
4. Calsite Quarry. Known as the world's largest limestone quarry is that of U. S. Steel crushed limestone operation at Rogers City. Quarry has a ten mile working face and covers about four square miles areawise. Public lookout stations at quarry and at harbor.

Area IV - Southern Half of the Lower Peninsula

Berrien County

Dunes. One of the highest dunes in southwestern Michigan is Tower Hill in Warren Dunes State Park about 15 miles south of Benton Harbor.

Eaton County

Sandstone ledges along the Grand River at Grand Ledge. NW 2, 4N-4W. (This is the site of a city park.)

Huron County

1. Wave cut bluffs or cliffs of the Coldwater Formation at Point Aux Barques is one of the more beautiful spots in the Southern Peninsula. Sea caves, arches, chimneys of rocks, and other forms have resulted from undercutting of the sandstone ledges which constitute the "Thumb Nail" of Michigan.
2. Grindstone quarries. Numerous long abandoned sandstone quarries in and about the community of Grindstone City were for many years operated by Cleveland Quarries Company for making of grindstones.

Ingham County

Glacial Eskers. There are many esker ridges in the County. Most have been exploited for the gravel they contain leaving only remnants where too sandy for holding homes or farm building sites. The longest esker in the State has its north end at DeWitt and passes southward through Lansing, Holt and Mason for a distance of about 20 miles. Other less prominent eskers in the County are located near Williamston and Webberville.

Jackson County

Glacial Eskers. As in Ingham County, there are several esker ridges in Jackson County. The most prominent one is about 5 miles long in a northeast-southwest direction and is known as the "Blue Ridge Esker". It crosses highway route 127 about 5 miles south of Jackson (SW 6, 4S-1E). A second esker of lesser extent is crossed by US 1-94 just east of a rest stop, 2.5 miles east of the Race Road (No. 147) exit between Chelsea and Jackson. SE 17, 2S-2E.

Lenawee County

Glacial Moraine and Kames. The "Irish Hills" in northwestern part of the County, including adjacent parts of Jackson, Hillsdale and Washtenaw Counties lies in a morainic belt that was formed by the Huron-Erie ice lobe Kames and also forms part of the Scenic hilly topography.

Ottawa County

Dunes. Dunes are common along the Lake Michigan shore line as it extends along the western side of Ottawa County. Dunes make up the land forms of three State Parks along the shore of the County, namely: Holland State Park, Hoffman State Park, and Grand Haven State Park.

Sanilac County

Indian Carving (petroglyphs). One of the most interesting features in the County are Indian carvings in sandstone rock exposed on the north side of the South Fork of the Cass River in northwestern corner of the County. SE NE 11, 14N-12E. (The property has been purchased and deeded to the State.

Washtenaw County

Outwash Plain. The University of Michigan is located on an outwash plain.

* Harry O. Sorensen, Geologist-in-Charge, Mining and Economic Geology Unit, Michigan Geological Survey Division, Lansing, Michigan.