PLEISTOCENE GEOLOGY OF MARATHON COUNTY, WISCONSIN

Information Circular 65
Pleistocene Geology of Marathon County, Wisconsin
Plate 1: Geologic map (Map 89-1)

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M.E. Ostrom, Director and State Geologist

Cartography by D.L. Patterson

Base from U.S. Geological Survey County Map Series (Topographic), 1986.

Scale 1:100,000

KILOMETRES 1 0 1 2 3 4 5 6 7 8 9 10

MILES 1 0 1 2 3 4 5

Explanation

WETLAND SEDIMENT

p **Peat and muck.** Sediment deposited in bogs, swamps, and marshes; typically less than 2 m thick.

STREAM SEDIMENT

sh **Meltwater-stream sediment of the Horicon Formation.** Dolomitic sand, gravelly sand, and sandy gravel deposited by meltwater streams from the Green Bay Lobe during the last part of the Wisconsin Glaciation; typically leached of carbonate to a depth of 5 to 10 m. Unit **sh** is shown where the original depositional surface is preserved; unit **shc** is shown where the original depositional surface has been destroyed by collapse due to melting of buried ice.

sc **Meltwater-stream sediment of the Copper Falls Formation.** Noncalcareous sand, gravelly sand, and sandy gravel deposited by meltwater streams from the Langlade, Wisconsin Valley, and Chippewa Lobes during the last part of the Wisconsin Glaciation.

sl **Meltwater-stream sediment of the Horicon and Copper Falls Formations, undifferentiated.** Sand, gravelly sand, and sandy gravel deposited by meltwater streams from the Green Bay, Langlade, Wisconsin Valley, and Chippewa Lobes during the last part of the Wisconsin Glaciation.

su **Stream sediment, undifferentiated.** Noncalcareous silty sand and slightly gravelly sand; may contain early Wisconsin and older meltwater-stream sediment as well as nonglacial stream sediment.

sn **Nonglacial stream sediment.** Noncalcareous silty sand, sand, and gravelly sand deposited on the floodplains of modern streams; typically overlies thick meltwater-stream deposits adjacent to the Wisconsin, Rib, and Eau Claire Rivers.

GLACIAL SEDIMENT

gt **Till of the Mapleview Member of the Horicon Formation.** Brown, gravelly to slightly gravelly, clayey, silty sand deposited by the Green Bay Lobe during the last part of the Wisconsin Glaciation; dolomite clasts are abundant below a depth of several metres; typically 10 m or more thick; occurs at the surface in ice-marginal deposits, broad areas of hummocky topography, and in drumlins. Unit **gh** is shown in areas of gently rolling topography; unit **ghh** is shown in areas of hummocky topography.

gm **Till of the Merrill Member of the Lincoln Formation.** Noncalcareous, reddish brown, slightly gravelly, clayey, silty sand occurring in an area of subdued glacial topography in the northern part of the county; typically less than 5 m thick and patchy near its southern limit.

gb **Till of the Bakerville Member of the Lincoln Formation.** Noncalcareous, reddish brown, slightly gravelly, clayey, silty sand occurring in a broad ridge in the southwestern part of the county; typically 3 to 5 m thick; underlain by gravelly sand and sandy gravel and till of the Edgar Member.

ge **Till of the Edgar Member of the Marathon Formation.** Brown, calcitic, slightly gravelly, sandy, clayey silt underlying broad, nearly flat upland areas in the western part of the county; typically 5 to 20 m thick; includes small patches of till of the Bakerville Member in the western part of the area.

gu **Marathon Formation, undifferentiated.** Patchy, gravelly, clayey, sandy silt, most deposited by hillslope processes; derived from residuum from Paleozoic and Precambrian rock and younger stream and glacial sediment, including till of the Wausau and Edgar Members of the Marathon Formation; most surface stones are of the same lithology as the underlying Cambrian or Precambrian rock; may include patches of the Wausau Member throughout the area and patches of till of the Edgar Member in the western part of the area; typically less than 2 m thick or absent but in places up to 15 m thick.

LAKE SEDIMENT

lh **Offshore lake sediment of the Horicon Formation.** Fine sand and silty fine sand, some slightly gravelly, in ice-walled-lake plains.

PRE-PLEISTOCENE ROCK

PC-C Large areas of outcrop of Precambrian (PC) or Cambrian (C) rock where Pleistocene sediment has been nearly completely eroded.

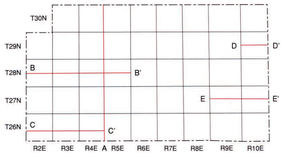
Symbols

- Geologic contact. Solid line where position shown on map is judged to be within 0.1 km of true contact in most places; dashed line where position shown on map is judged to be more than 0.1 km from true contact in many places.
- Drumlin
- Ice-marginal ridge
- Stream-cut bank
- 1157 Test hole location and WGNHS Geologic Log number
- Flow direction on fluvial surface

GEOLOGIC CROSS SECTIONS

Sections A-A' through E-E' show the generalized vertical relationships between geologic units. They are based on the surface distribution of materials, logs of holes drilled as a part of this study, and logs of other drillholes that are on file at the Wisconsin Geological and Natural History Survey in Madison. The unit designations are the same as those used on the map with the following additions: unit **gd**, till of the Medford Member of the Marathon Formation, a unit that does not occur at the surface in Marathon County, and unit **st**, undifferentiated meltwater and nonglacial-stream sediment of various ages. The contacts between units are judged to be within 3 m of the true contact in most places. The vertical exaggeration is about 84 times.

CROSS-SECTION LOCATIONS



HORIZONTAL SCALE

KILOMETRES 1 0 1 2 3 4 5

MILES 1 0 1 2 3 4 5