



Michigan Basin Geological Society

Membership Meeting

Tuesday May 6, 2025



WHEN **Tuesday May 6, 2025**

Social -Snacks - 6:30 PM

Presentation - 7:00 PM

WHERE **East Lansing Public Library**

950 Abbot Rd

East Lansing, MI 48823

Large Meeting Room

WHO **Randall Schaetzl**

University Distinguished Professor of Geography

Department of Geography, Environment, and Spatial Sciences

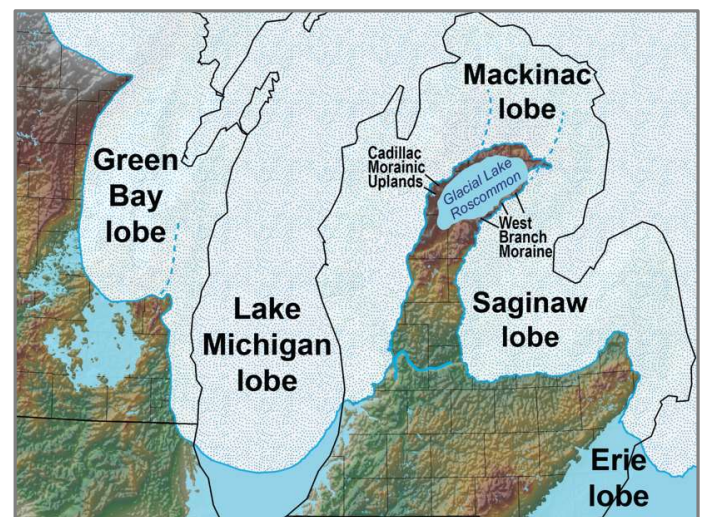
Michigan State University

COST **FREE**



Introducing the Mackinac Lobe of the Laurentide Ice Sheet – a Major Player in the Glaciation of Central Lower Michigan

ABSTRACT: This presentation will focus on the geomorphology, sedimentology, and chronology of the Mackinac Lobe, and its interactions with the Saginaw and Lake Michigan Lobes of the Laurentide Ice Sheet in northern Lower Michigan. The Mackinac Lobe entered the preexisting Houghton Lake Basin at ca. 40 ka, building a sandy-gravelly, ice-marginal ridge. As the ice continued to periodically advance over the next 22 ka, i.e., well past the Last Glacial Maximum, it produced six additional, ice-marginal ridges. The ice overrode each ridge in turn, partially modifying them and forming a highly palimpsest landscape. For much of the time, the margin of the Mackinac Lobe was grounded in Glacial Lake Roscommon, a large proglacial lake. Thus, many of the ice-marginal ridges resemble “delta moraines”, with well-formed kame deltas on their distal margins, which both confirm the lake's presence/absence and help identify its various elevations. Many of the 37 OSL samples we have amassed to constrain the activity of the Mackinac Lobe were recovered from well-sorted deltaic or outwash sands. We also document a previously undocumented advance of the Lake Michigan Lobe into the Houghton Lake Basin. By closing off the lake’s outlet, the Falmouth Advance helped reestablish Glacial Lake Roscommon during the waning phases of the Mackinac Lobe event.



BIOGRAPHY

Randy Schaetzl is a University Distinguished Professor of Geography at Michigan State University. His research has focused on geomorphology and soils, with particular emphasis on glacial systems and loess. He is the lead author of the Michigan Physiographic Map project: <https://www.esrs.wmich.edu/mgs/physiographicMap/>

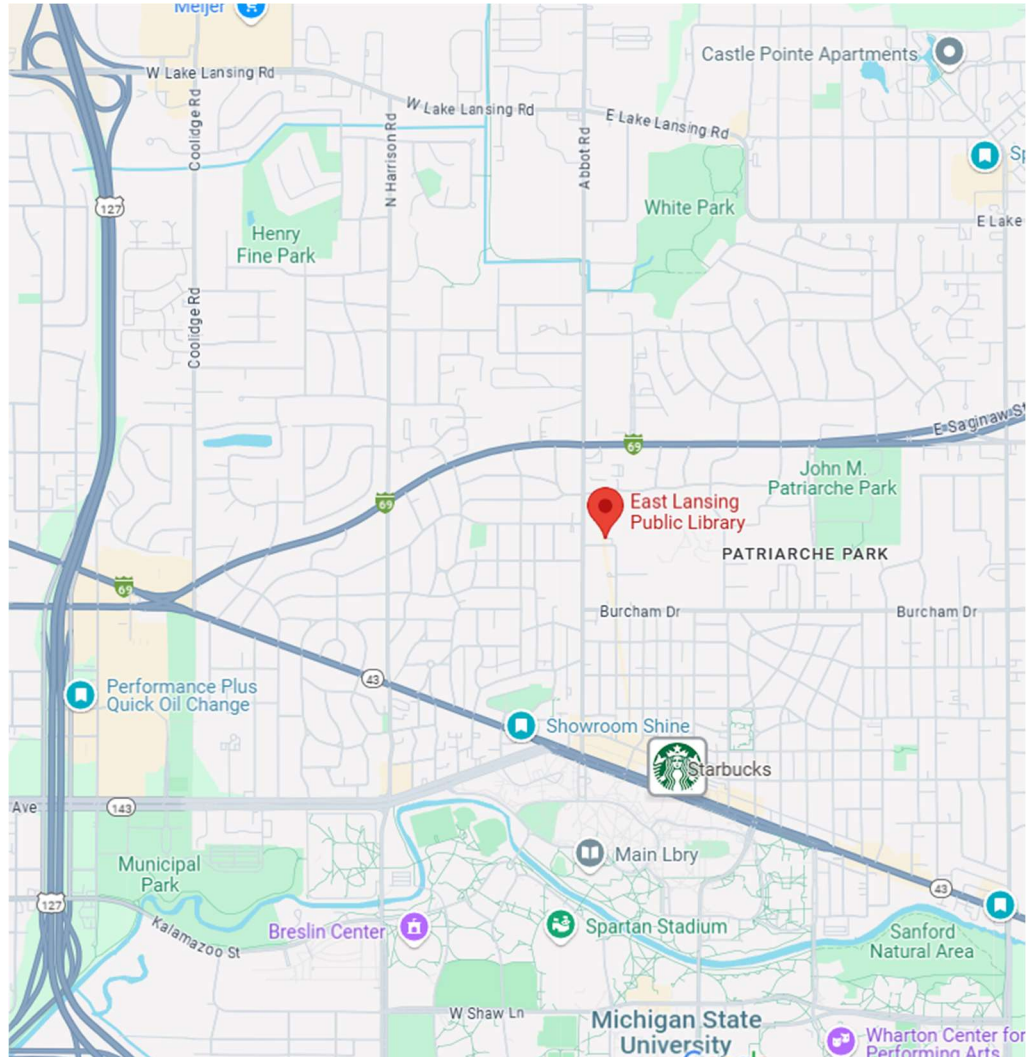


Michigan Basin Geological Society

2025 Membership Meeting

Tuesday May 6, 2025

7:00PM



East Lansing Public Library
950 Abbot Rd
East Lansing, MI 48823
Large Meeting Room

East Lansing Public Library is located on the corner of Abbot Road and Library Lane. Parking is available in front of the library, along Library Lane and other side streets.