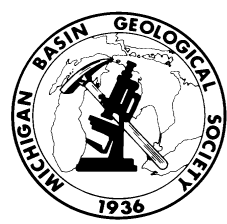


ON THE ROCKS

A Newsletter of the Michigan Basin Geological Society



2022-2023 Edition 4

www.mbgs.org

December 2022

ANNOUNCEMENTS

MBGS “Family Night” Dinner Meeting, December 15th, 2022: The Michigan Basin Geologic Society meeting will be hosted at Coral Gables Restaurant in East Lansing, Michigan. Members are welcome to bring guests, as this is a family-friendly event. Dr. Michael Velbel, Michigan State University, will present “**Recent Meteorite Recoveries in Michigan**”. Meeting starts at 5:30PM, dinner will be served at 6:00 PM, and presentation will be after dinner. \$40/plate. Cash bar will be available.

RSVP to Jennifer Trout jennifer.l.trout@wmich.edu by December 12th, 2022.

Opportunity for Presenters: MBGS is seeking volunteers to present topics related to Michigan geology for our 2022-2023 membership meetings. If interested, please contact Andrea Muñoz-Hernandez at munozhernandeza@michigan.gov or at (517) 599-7525.

OTHER NEWS

MBGS E.Z. MANOS MEMORIAL SCHOLARSHIP AVAILABLE

Michigan Basin Geologic Society is proud to again offer two scholarships of up to \$500 to students conducting graduate or undergraduate research in geology related to Michigan. Candidates should complete the scholarship application form and submit it to John Yellich (john.a.yellich@wmich.edu) by December 20, 2022. The subject line of the email to Mr. Yellich should include “MBGS Scholarship Application”. The application form and more information can be found at www.mbgs.org.

MBGS MEMBERSHIP DUES

MBGS continues to strive to provide a platform for geologist and environmental professionals to connect and offer learning and field trip opportunities. For the 2022–2023-year, membership fees will be \$35. Invoices are included in the newsletter or you can pay online with a credit card through PayPal on our website. Student memberships are **FREE** with registration from the MBGS webpage www.mbgs.org. All membership dues must be submitted by December 31, 2022, for members to remain active.



<https://www.mbgs.org>

Michigan Basin Geological Society December 2022 Meeting



MENU

Caesar style salad
Dinner rolls
Roasted sliced
breast of Turkey with
Gravy and Dressing
Broiled filet of
Atlantic Salmon
Whipped Potatoes
Broccoli
Apple Crisp

MBGS DECEMBER DINNER MEETING

December 15th at 6:00 PM

Coral Gables
East Lansing

Please bring your family and join us for our December Dinner Meeting! Dr. Mike Velbel will be speaking about meteorites and we'll have raffle prizes! Cocktails begin at 5:30 PM, dinner at 6:00 and presentation at 7:00. RSVP to Jen Trout at Jennifer.L.Trout@wmich.edu by December 12th.

\$40 per person, cash bar

Recent Meteorite Recoveries in Michigan Returned samples of solar-system materials are of the highest scientific value because they are known to come from bodies for which other kinds of information are available to complement studies of the samples in terrestrial laboratories. However, only a few solar-system bodies other than Earth have been sampled by human or robotic missions. Lunar rocks returned by Apollo and Luna missions, comet dust returned from comet 81P/Wild 2 by NASA's Stardust mission, and mineral grains from the regoliths of asteroids 25143 Itokawa, and 162173 Ryugu, returned by the Hayabusa and Hayabusa2 missions, respectively, sample only a few specific solar-system bodies – the Moon, one comet, and two primitive (undifferentiated) asteroids. Future samples to be brought to Earth by spacecraft returning from more and more diverse solar system bodies – for example, OSIRIS-REx returning from asteroid 101955 Bennu in September 2023 – will add more to solar system science, but for many varieties of solar system bodies, meteorites will remain the best available samples for some time to come.

Meteorites are naturally delivered samples that are our only direct samples from a large a variety of parent bodies throughout the solar system. In their chemical compositions, minerals, and textures they preserve direct evidence of the processes by which our solar system's planets and small bodies originated, were modified, and evolved to their present state. The natural delivery process of meteorites involves ejection of a meteoroid from its parent body, interplanetary transit, dramatic passage through Earth's atmosphere, and usually somewhat less dramatic arrival at Earth's surface as a meteorite. Freshly fallen meteorites, recovered promptly after their witnessed fall, are referred to as 'falls.' Most meteorites available for scientific study are referred to as 'finds,' recovered after unwitnessed arrival and some exposure to the terrestrial surface environment, often over millennial or longer timescales.

At the broadest level of compositional classification, meteorites include objects that consist mainly of metal (irons), predominantly of silicate minerals (stones or stony meteorites), and subequal abundances of metal and silicates (stony irons). Michigan's meteorites are typical of meteorites recovered around the world. Irons are the most easily recognized among finds; all Michigan finds are irons. Stony meteorites are best recognized when their fall is witnessed; all Michigan stony meteorites are falls. All documented Michigan stony meteorites are ordinary chondrites, the most common variety among falls. Studies of Michigan's ordinary chondrites have contributed to scientific understanding of the formation of chondrules and the pre-atmospheric sizes of meteoroids. Future falls may provide more opportunities for Michigan's meteorites to contribute to advancing solar system science.

Biographical Sketch MICHAEL ANTHONY VELBEL (Ph.D., Yale University, 1984) is Professor of Geological Sciences at Michigan State University, East Lansing, MI and Research Associate, Division of Meteorites, Department of Mineral Sciences, National Museum of Natural History, Smithsonian Institution. He studies regolith geoscience, and the rates and mechanisms of mineral-water interactions during rock and mineral weathering in natural systems. His research investigates the geological, mineralogical, geochemical, and geomorphic factors that control mineral alterations at the Earth's surface and the migration of chemical elements through the landscape, emphasizing small-watershed geochemistry. More recent related areas of research include terrestrial weathering of Antarctic and non-Antarctic meteorites; rock-, mineral-, and chemical-weathering on Mars and in Martian meteorites; enhancing understanding of Mars surface mission imagery (esp. Phoenix, Curiosity, and Perseverance) and compositional data through microscopic and mineralogical studies of terrestrial weathered-rock analogs and regolith (soil) simulants; recognition of pre-terrestrial aqueous alteration on other meteorite (mainly primitive) parent bodies from mineralogical investigations of meteorites (especially C2 carbonaceous chondrites); and preservation of sample science integrity for past (e.g., Stardust, Hayabusa), ongoing (Hayabusa2, OSIRIS-REx), and future sample-return missions (e.g., Mars Sample Return Campaign). In addition to MSU, Prof. Velbel has held visiting appointments at the University of Cincinnati (1990-1991), the Faculté des Sciences-St Jérôme of the Université Paul Cézanne (Université d'Aix-Marseilles III) (1992), the Australian National University and the (Australian) Cooperative Research Centre for Landscape Evolution and Mineral Exploration (CRC-LEME) (1998). He held NASA/ASEE Summer Faculty Fellowships at the NASA Johnson Space Center (1987, 1999). He was a Smithsonian Senior Fellow (2012-2013) and a Research Associate (2013-2022) at the Division of Meteorites, Department of Mineral Sciences, National Museum of Natural History, Smithsonian Institution. He was President of The Clay Minerals Society (2013-2014) and (Acting) Editor in Chief of its journal, Clays and Clay Minerals (July 2014 to January 2016). He was a member of the Michigan Space Grant Consortium Executive Board (2011-2020). He was selected for the year-long (mid-2020 to mid-2021) joint NASA/ESA Mars Sample Return (MSR) Science Planning Group phase 2 (MSPG2) that established the scientific basis for planning of the receiving, curation, and management of the samples after their arrival at Earth in the early 2030s, and the MSR Temperature-Time Tiger Team (T4) Jan-Feb 2022. He is one of 16 Selected Scientists for the four (4)-year-long (mid-2022 to mid-2026) joint NASA/ESA Mars Sample Return (MSR) Campaign Science Group phase (MCSG). The 16 researchers function as a science resource for the campaign's project teams as well as for related Earth-based ground projects, such as sample recovery and curation. "These 16 individuals will be the standard-bearers for Mars Sample Return science," said Michael Meyer, Mars Exploration Program lead scientist at NASA Headquarters in Washington. "They will build the roadmap by which science for this historic endeavor is accomplished – including establishing the processes for sample-related decision-making and designing the procedures that will allow the worldwide scientific community to become involved with these first samples from another world."

FROM THE PRESIDENT'S DESK

A Note from Jen

The field trip on November 5th to the Jackson County Historic Coal District, conducted by Dave Westjohn and Bennie See, was a huge success! The guidebooks were wonderful and full of useful information. The weather held out and didn't rain on us much, but the drive home was a bit windy. Everyone had a good time with discussing and looking at rocks at the stops. We concluded the trip with a late lunch/early dinner at the Grand River Brewery in Jackson. The food and beverages were very tasty! We had a room reserved just for us and we filled the tables! We made some new friends and enjoyed the fellowship of everyone. For those who could not join us, you truly missed out on a wonderful geologizing time!

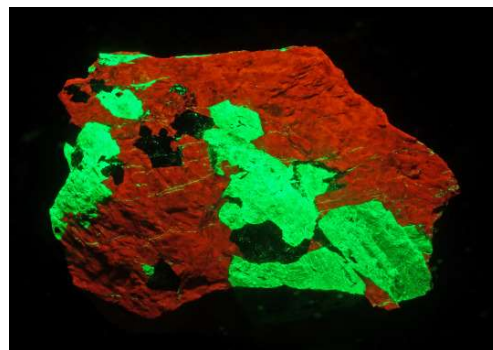
At the suggestion of Bennie See, we are pursuing getting a Michigan Historical Marker placed in the vicinity of the first coal mine in Michigan (1835), the Hayden and Reynolds Slope Mine, which was one of our field trip stops. We hope to be able to place the marker at the Kate Palmer Bird Sanctuary which is located a mere 560 feet from the first discovery of coal in Michigan at Sandstone Creek while digging the foundation for a grist mill. We'll keep you updated on our progress.

Less than a week after our field trip, we held our November monthly meeting at MSU in room 204 of the Natural Science Building and enjoyed hearing from Dr. Howard Reeves (USGS) about his work with ground-water flow modeling.

I am very excited about our December meeting which is to be held at Coral Gables in East Lansing. We will have cocktails at 5:30, dinner at 6:00 and a presentation starting at 7:00. Dr. Mike Velbel will be discussing meteorites! I'll have door prizes to give away, too. People really enjoyed the last December dinner that we were able to host. I can't wait to see everyone again on the 15th! Please RSVP to me (Jennifer.L.Trout@wmich.edu) to make your reservation. All are welcome, so bring your family!

What is it?

Last month's mystery "rock" was a conglomerate/puddingstone. This month we have a very special "Christmas Ore" for our mystery rock. The first picture is in plain light. The second picture is viewed using a short-wave ultraviolet light. What are the red and green minerals?



Here's a clue: <https://carnegiemnh.org/a-perfect-mineral-for-the-christmas-season/>

Michigan Basin Geological Society Annual Field Trip, November 5, 2022
Jackson Michigan Coal Basin, Mississippian and Pennsylvanian Stratigraphy and Geological History
David Westjohn and Bennie See Field Trip Leaders

On Saturday November 5, 2022 members of the Michigan Basin Geological Society renewed a long-standing tradition of an annual Field trip of geological interest to its membership. This year the trip was to the area in and around Jackson, Michigan, to learn about the geological and cultural history of coal mining from Pennsylvanian strata. The trip also explored the complex stratigraphy of the local strata, especially focusing on the Mississippian and Pennsylvanian units. The presence of the major interregional sequence boundary, the Absaroka Unconformity, has complicated the deciphering of the local stratigraphy for over a century.



Dr. David Westjohn and Bennie See lead the trip that was the culmination of research Westjohn and others have been conducting for several years. This research included the detailed mapping of four U.S.G.S quadrangles in Jackson County completed for the Michigan Geological Survey's Statemap project in 2020.

Nineteen participants began the trip Saturday morning with a stop at the former Universal Vise and Tool Company site just east of Parma, Michigan where they viewed a portion of a shallow bedrock core taken at the site that represented the subsurface stratigraphy of limestone, shale and sandstone units in the area. Two other cores from additional locations within the area of interest for the field trip showed the variability in lithologic units that occur throughout the subsurface. Particular focus was placed on identifying the major unconformity with the Mississippian Bayport Limestone below the unconformity and the Pennsylvanian sandstone, shale and coal units above the unconformity.

The second stop visited the site of Michigan's first commercial coal mine, the Hayden Coal Mine, that was developed as a result of early discovery of a natural coal outcrop in Sandstone Creek. The old mine site and tailings piles are found in the woods of the Kate Palmer Sanctuary (Audubon Society) in Spring Arbor Township west of Jackson.

Next the group visited the Hard Rock stone quarry north of Jackson to view the Bayport Limestone. The Quarry is only periodically active and the flooded pit and limited quarry wall exposure provided only limited opportunity to view the formation. There was, however lots of pieces of Bayport Limestone to be collected around the quarry margin.

We next assembled on the south side of I-94 at a business just off Cooper street and made a short hike to an overlook next to the interstate highway. It was possible to view the well-known sandstone roadcut on the north side of the highway. That exposure has often been called the "Parma Sandstone". Discussion at the stop suggested that it is likely a Pennsylvanian unit due to its relationship to several large coal mines that were adjacent to the south. In the woods next to the highway several large piles of rubble were observed that showed considerable evidence of exposure to high heat. Perhaps mine rubble from some processing or natural underground fires?



Stop #5 was at the south wall of the old State Prison along Cooper Street. It was built from local sandstone blocks that were quarried nearby. The lithology seems to match that of the I-94 roadcut and is also likely to be Pennsylvanian. Numerous interesting sedimentary structures were observed in the wall. The final stop on the trip was just a little north and west of the prison along the railroad. In the woods on the east side was the remnant wall of the old quarry for the prison stones. Trip participants were able to examine the rock up close at this stop and even collect a sample or two for later study.



After the trip the group adjourned to the Grand River Brew Pub for lunch and a chance to debate the observations of the day.

EVENTS

We are providing links for your reference. Please visit these sites to learn more about specific events and happenings. If you have an event to share, let us know!



American Institute of Professional Geologist – Michigan Section – <http://mi.aipg.org/newsletters.htm>
Central Michigan Lapidary and Mineral Society - <http://www.michrocks.org/>
Eastern Section AAPG - <https://www.esaapg.org/>
EGLE Calendar of Events - [Calendar \(michigan.gov\)](Calendar (michigan.gov))
Flint Rock and Gem - <https://flintrockandgem.org/events>
Michigan Association of Environmental Professionals - <https://www.maep.org/>
Michigan Basin Geological Society – www.mbgs.org
Michigan Clean Water Corps - <https://micorps.net/about/>
Michigan Mineralogical Society - <https://www.michmin.org/>
Midwest Mineralogical and Lapidary Society - <http://www.mmls.us/>
Rock Clubs in USA - [All Mineral, Rock, Gem Shows, GeoSites, Rock Clubs in USA \(rockandmineralshows.com\)](http://www.rockandmineralshows.com)
Society of Petroleum Engineers - <https://www.spe.org/events/calendar/>

EVENTS

December 8, 2022: Michigan Section AIPG Annual Meeting, Ann Arbor, [AIPG Michigan Section 2022 Annual Meeting Tickets, Thu, Dec 8, 2022 at 5:30 PM | Eventbrite](#)

December 20, 2022: MBGS Scholarship Applications Due. Mail applications to John Yellich (john.a.yellich@wmich.edu) and title email RE: MBGS Scholarship Application. Applications are available on the website at www.mbgs.org

ONLINE RESOURCES

- **American Geoscience Institute – Interactive Michigan Geology Maps:** [Interactive map of the geology of Michigan | American Geosciences Institute](#)
- **Digital Geology Library Overview:** https://www.michigan.gov/documents/deq/GIMDL-Catalog-2010-01-20_307979_7.pdf
- **GeoWebFace:** [GeoWebFace \(michigan.gov\)](http://www.michigan.gov)
- **Digital Geology Library Mining Overview:** https://www.michigan.gov/documents/deq/GIMDL-Catalog-2013_06_22_mining_425595_7.pdf
- **Michigan Geological Survey:** [Michigan Geological Survey | Western Michigan University \(wmich.edu\)](http://www.michigan.gov)
- **USGS Michigan Geological Map Data:** [Michigan geologic map data \(usgs.gov\)](http://www.usgs.gov)
- **CMU, Clarke Historical Library, Michigan Geology:**
https://www.cmich.edu/library/clarke/ResearchResources/Michigan_Material_Statewide/Michigan_Oil_and_Gas_Industry/History_of_Michigan_Oil_and_Gas/Pages/Michigan-Geology.aspx

MICHIGAN BASIN GEOLOGICAL SOCIETY OFFICERS
2022-2023

PRESIDENT: JENNIFER TROUT, Staff Geologist
Michigan Geological Repository for Research and Education
1903 W. Michigan Ave., Kalamazoo, MI 49008-5241
W (269) 387-8633 C (269) 290-4048, jennifer.l.trout@wmich.edu

VICE PRESIDENT: ANDREA MUNOZ-HERNANDEZ, Ph.D., District Supervisor
Michigan Department of Environment, Great Lakes, and Energy
Remediation and Redevelopment Division / Jackson District Office
W (517) 599-7525, munozhernandez@michigan.gov

SECRETARY: JOHN A. YELlich, Director
Michigan Geological Survey, Western Michigan University
1903 West Michigan Ave, Kalamazoo, MI 49008-5241
W (269) 387-8649 C (303) 901-2886; john.a.yellich@wmich.edu

TREASURER: PETE ROSE, Geologist
Minerals Management, Michigan Department of Natural Resources
W (517) 284-5901, RoseP1@michigan.gov

BUSINESS MANAGER: PETER ROSE, Geologist
Minerals Management, Michigan Department of Natural Resources
W (517) 284-5901, RoseP1@michigan.gov

PAST – PRESIDENT: CHRIS CHRISTENSEN, Geologist
Michigan Department of Environment, Great Lakes and Energy Remediation and
Redevelopment Division
350 Ottawa NW, Grand Rapids, MI 49503
(616) 446-7582 christensenc@michigan.gov

NEWSLETTER EDITOR: ARLENE ANDERSON-VINCENT, Natural Resource Manager
BlueTriton Brands
19275 Eight Mile Road, Stanwood MI 49346
W (231) 823-8451 arlene.anderson-vincent@bluetriton.com

PUBLICATIONS: [Open](#)

ELECTRONIC PUBLICATIONS: Please contact an officer for information

WEBMASTER: JOHN ESCH, eschj@michigan.gov

MBGS PUBLICATIONS

<http://www.mbgs.org/publications.html>

Historical publications now available on USB Flash Drives". Each USB Flash Drive is 8GB

Prices include postage, handling and any applicable sales tax.
Orders for publications should be prepaid in U.S. Funds and addressed to:

MBGS — Publications
P.O. Box 14044
Lansing, MI 48901-4044

Historical CD #1: Nine out-of-print publications from 1949 through 1965 and 1998, 2000, \$15

- The Stratigraphy of Manitoulin Island, Ontario, Canada, June 19-20, 1954
- The Devonian and Silurian Rocks of Parts of Ontario, Canada and Western New York, June 22-23, 1951
- The Traverse Group of the Northern Part of the Southern Peninsula of Michigan, June 16-17, 1949
- The Devonian Strata of the London-Sarnia Area, Southwestern Ontario, Compiled by Erwin C. Stumm, Lewis B. Kellum and Jean Davies Wright, June 9-10, 1956
- The Ordovician Rocks of the Escanaba-Stonington Area, Led by R. C. Hussey, June 2-3, 1950
- The Niagara Escarpment of Peninsular Ontario, Canada, June 18-19, 1955
- Lower Paleozoic and Pleistocene Stratigraphy Across Central Wisconsin, Compiled by C. E. Prouty, Led by L. M. Cline, J. L. Hough and R. F. Black, 1960
- Classic Silurian Reefs of the Chicago Area, by Donald G. Mikulic and Joanne Kluessendorf, June 27, 1998
- Geology of Central Ontario, Canada, 1965

Historical CD #2: Four out-of-print publications from 1947, 1959, 1983 and 1991, 2001, \$15

- Copper Country Field Trip, Michigan, June 20-22, 1947
- Geology of Mackinac Island and Lower and Middle Devonian, South of the Straits of Mackinac, June 12-14, 1959
- Tectonics, Structure and Karst in Northern Lower Michigan, August 1983
- Geology of the Pictured Rocks, Upper Peninsula, Michigan, July 11-13, 1991

Historical CD #3: Six out-of-print publications from 1948, 1952, 1990 - 1995, 2001, \$15

- Pleistocene and Early Paleozoic of the Eastern Part of the Northern Peninsula of Michigan, June 18-21, 1948
- Stratigraphy and Structure of the Devonian Rocks in Southeastern MI and Northwestern OH, June 20-21, 1952
- Lower Ordovician and Upper Cambrian of Wisconsin, May 10-12, 1990
- Guidebook to the Precambrian Geology and Metallogeny of the Central Upper Peninsula of Michigan September 12-13, 1991

Historical CD #4: Six out-of-print publications from 1957, 1958, 1961, 1967, 1968 and 1970, 2004, \$15

- Silurian Rocks of the Northern Peninsula of Michigan, 1957
- Cambrian Geology of Parts of Dickinson and Iron Counties, Michigan, June 1958
- Geologic Features of Parts of Houghton, Keweenaw, Baraga and Ontonagon Counties, Michigan, May 19-21, 1961
- Correlation Problems of the Cambrian and Ordovician Outcrops Areas, Northern Peninsula of Michigan 1967
- The Geology of Manitoulin Island, June 1968
- Devonian Strata of Alpena and Presque Isle Counties, Michigan 1970

Historical CD #5: Five out-of-print publications from 1971, 1989, 2001, and Oil & Gas Fields Vol. 1 & 2, 1969 & 1992, 2006, \$50

- Oil & Gas Fields Symposium, Volume 1, April 1969, 200 pp., maps, illus., second printing with updates
- Oil & Gas Fields Manual of the Michigan Basin, Volume 2, 1992, 520 pp., maps, illus.
- Glacial Geology of Southwestern Michigan, 1989, 53 pp. by A. Kehew, L. J. Schmaltz, and W. T. Straw
- Geology of the Lake Erie Islands and Adjacent Shores, 1971, 65pp., maps, illus. by Jane L. Forsyth
- Glacial Geology of Southwestern Michigan, Landforms of the Lake Michigan Lobe, Southwestern Michigan, 2001, AAPG Eastern Section Meeting Field Trip, 32 pp., maps, illus. by A Kehew and A. Kozlowski

Historical CD #6: Six out-of-print publications from 1946, 1953, 1963, 1966, 1978 & 1987 plus the Richfield Challenge, 1952 & Tom Knapp's MS Thesis, 2007 \$15.

- Guidebook for Ordovician Stratigraphy of the Cincinnati, Ohio and Richmond, Indiana Areas, June 12, 13, 1953 by W. H. Shideler and B. T. Sandefur
- Guidebook for Ontario Geological Excursion to Kettle Point – Owen Sound- Waubauskene, June 21, 22, 23 1946 by W. A. Roliff, C.S. Evans and J.F. Caley
- Guidebook for the Stratigraphy of the Silurian Rocks in Western Ohio, May 31- June 2, 1963 by C. H. Summerson, Jane L. Forsyth, Karl V. Hoover and J. R. Ulteig
- Guidebook for Cambrian Stratigraphy in Western Wisconsin, May 21, 22, 1966 by Merideth E. Ostrom
- Geology of the Manitoulin Area, Special Papers #3, September 29, 30 and October 1, 1978 by J. T. Sanford and R. E. Mosher
- Middle Devonian Cratonic Carbonates and Shales in Southwestern Ontario, November 14, 1987 by Bruce Wilkinson
- The Richfield Challenge, A Review of the Richfield Developments in Michigan, 1952 by Gordon H. Hautan
- A Theory of Rogers City and Dundee Relationships in Central Michigan, Masters Thesis, 1947 by Tom Knapp

Historical CD #7: Field Guidebooks from 1962, 1969, 1977, 1980, 1985 & 1988, \$15

- Silurian Rocks of the Southern Lake Michigan Area, 1962, James H. Fisher, Chairman, MBGS Annual Field Conference
- Studies of the Precambrian of the Michigan Basin, by Harold B. Stonehouse, 1969
- The Geology of the Marquette District: a Field Guide By F. W. Cambray, 1977
- Ordovician and Silurian Geology of the N. Peninsula of Michigan, 1980, R.B. Votaw, 40 pp., illus., maps
- Special Paper #4: Ordovician and Silurian Rocks of the Michigan Basin and its Margins, 1985 K.R. Cercone and J.M. Budai (eds.), 96 pp., illus.
- Upper Keweenawan Rift-Fill Sequence, Mid-Continent Rift System, Michigan, 1988, P.A. Daniels and R.D. Elmore, M.S. Wollensak, ed., 150 pp., illus., maps

OTHER SPECIAL OFFERS

- **Historical CD Set - # 1 – 7 (detailed above) for a special purchase price of \$95**
- **NE Lower Peninsula Geological Field Conf., 2004, T. Black, M. Wollensak, On CD \$10**
- **Stratigraphic Lexicon for Michigan, 2001, prepared by MBGS and published by DEQ, \$4**
- **Robert E. Mosher Geological Studies** A lifetime of geological research on Silurian Rocks with John T. Sanford. The disks are organized chronologically and include field work in North America and Europe. 2007, 2 CDs \$35.

The 2023 Friends of the Pleistocene Field Conference – Midwest cell

Roscommon, Michigan

May 19-21, 2023



Trip Leader: Randy Schaetzl, Department of Geography, Environment, and Spatial Sciences, Michigan State University soils@msu.edu (517) 648-0207

Trip co-leaders (alphabetical): Alan Arbogast, Chris Baish, Brandon Curry, Kevin Kincare, Ken Lepper, Tom Lowell, Catherine Yansa

The 2023 FOP conference will be held at the Ralph A. MacMullen (RAM) Conference Center, 104 Conservation Drive, Roscommon, Michigan. (MacMullenCenter@Michigan.gov) All registrants must lodge at the RAM Center, on the shore of beautiful Higgins Lake (exceptions can be requested – contact Randy Schaetzl). Registration fees cover lodging, all meals except Friday dinner, refreshments, and busing. Early registrants will be afforded single-occupancy rooms at the RAM Center. Later registrants risk being placed in double-occupancy rooms. Conference participation is limited to 64 persons.

Tentative schedule:

Friday, May 19

4:00 pm. Arrival and check-in.

5:30 pm: Ice-breaker begins. (Dinner is on your own; we will provide a list of restaurants in nearby cities (Roscommon, Houghton Lake, Grayling.) Expect good conversation around the RAM Center's fire pits, right on the Higgins Lake shore.

Saturday, May 20

7:00 am: breakfast.

8:15 am: "Trip overview" presentation in the RAM Center theater. Bus departs at 8:45 sharp.

6:00 pm: arrival back at the RAM Center, and refreshments.

7:30 pm: banquet.

Sunday, May 21

7:15 am: breakfast. Bus and car caravan depart at 8:30 sharp.

2:00 pm: expected return to the RAM Center, and final departure.

IMPORTANT DATES

Feb 1 – Registration opens. Registration fees are due at the time of registration.

April 15 – Last day to withdraw for full refund. (Later withdrawals receive half of their fees back.)

Please contact Randy Schaetzl with questions soils@msu.edu (517) 648-0207



Invitation to Submit an Article for

The Professional Geologist (TPG) Student Edition

**February 1st submittal deadline
AIPG Second Quarter Publication (April/May/June)**

As the AIPG National Editor, I'd like you to submit an article for publication in [The Professional Geologist](#). Your contributions will enrich the content of [The Professional Geologist](#). We are not only looking for content for this edition, but for all future editions as well.

We are accepting articles for the Student Edition (April/May/June 2023). We want articles from students, faculty, and members alike. Student research projects, student life, and field camp are all great topics of interest to readers. Share your perspective! Faculty members, this is a great opportunity for publishing technical articles with students, as well as providing commentary on geoscience education, or other relevant topics. We are a diverse group of geoscientists, and we are looking for technical articles in your area of expertise, career experiences, advice to students, the state of the science, and other topics you feel would be of interest to our readers. We accept writings from non-members and encourage you to share this call for articles with your colleagues and the value of being an AIPG member.

Information on article requirements may be found at: <https://aipg.org/page/TPGArticleSubmittal>, but here are some points to keep in mind:

- please submit the article in MS Word format
- submit any graphics (figures, tables, photos, etc.) as a minimum 300 dpi image – do not imbed them into the document
- Please verify that you have permission to publish it if the graphic is not your own
- Please indicate if you are submitting the article for peer-review
- Please include a statement that the article has not been submitted to other journals for publication

The TPG editorial staff is supportive of new authors and experienced authors, and we are here to offer guidance and constructive reviews with the goal of helping you publish your best articles. Our mission is to advocate for the geosciences profession. We want to highlight the science and work done every day by the individuals, teams, and organizations who are part of our community.

The deadlines for the 2023 editions of *TPG* are as follows; however, please note that some articles may be reserved for future editions. Below are the deadlines; however, we encourage submissions at any time.

Issue Submission

Submittal Deadline

- | | |
|-----------------------------|--------------|
| • January/February/March | November 1st |
| • April/May/June | February 1st |
| • July/August/September | May 1st |
| • October/November/December | August 1st |

Please forward this email to anyone you think may be interested in submitting an article. Feel free to contact me if you have any questions; I'd be happy to discuss article possibilities with you. Thanks!

Adam W. Heft, CPG
2023-24 AIPG National Editor
Phone: 517-886-7400
Email: adam.heft@wsp.com

MICHIGAN BASIN GEOLOGICAL SOCIETY

INVOICE

P.O. Box 14044
Lansing, Michigan 48901

ACTIVE MEMBER ANNUAL DUES FEE:

INVOICE NUMBER	MBGS 2022-2023 Dues
INVOICE DATE	October 2022
OUR ORDER NO.	
YOUR ORDER NO.	
TERMS	30 Days
SALES REP	
SHIPPED VIA	USPS or EMAIL

QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	ACTIVE MEMBER MBGS 2022-2023 Annual Dues	\$ 35.00	\$ 35.00
We now have an option to pay electronically using PayPal. If you prefer to submit your annual membership dues payment electronically, please visit the MBGS website at www.mbgs.org		SUBTOTAL	\$ 35.00
		TAX	
		FREIGHT	
			\$ 35.00

DIRECT ALL INQUIRIES TO:
Peter Rose
RoseP1@michigan.gov

MAKE ALL CHECKS PAYABLE TO:
Michigan Basin Geological Society
Attn: Treasurer - 2022-2023 Annual Dues
P.O. Box 14044
Lansing, Michigan 48901

\$ 35.00
PAY THIS
AMOUNT

THANK YOU FOR YOUR CONTINUED SUPPORT!

Return this copy
with payment