



Courte Oreilles Lakes Association Short Ears, Long Tales

500 Million Years Ago At LCO

By Allison Slavick

"Creative work, in geology and anywhere else, is interaction and synthesis: half-baked ideas from a bar room, rocks in the field, chains of thought from lonely walks, numbers squeezed from rocks in a laboratory, numbers from a calculator riveted to a desk, fancy equipment usually malfunctioning on expensive ships, cheap equipment in the human cranium, arguments before a road cut."

— Stephen Jay Gould

One need only see the list of classes taught by Mike Heim, a professor at Lac Courte Oreilles University, to get a sense of the breadth of his knowledge about nature and science: earth science, environmental science, ethnobotany, plant science, horticulture, forestry, field methods in natural resources, and indigenous field-based learning. Those are the classes he could name off the top of his head.

Now, Heim's lifelong love of exploring and understanding the wonders of the universe (to use an apt cliché) has led to the discovery of large fossils in sandstone dating from the Paleozoic Era – about 500 million years ago – not too far from Lac Courte Oreilles.

First, a geology refresher. The geologic record tells us that northern Wisconsin was covered by a lobed glacier. The thick slab called the Laurentide Ice Sheet crept southward across the state, as far south as Baraboo or so, and into northern Illinois along the eastern side of the state. As the glacier moved, it left behind deposits of sand and gravel, which formed the terrain with which you're familiar: hilly ski trails, rocky outcrops, the 5,000-acre Lac Courte Oreilles and hundreds of other lakes, and shallow depressions that filled in with rich wetlands. Rivers formed under the glacier and resulted in long, narrow lakes like Lake Owen in Bayfield County and Lake Chetek south of Hayward. The glacier's work was completed in Wisconsin just 8500 years ago, and the cheap equipment in your cranium may think of it as ancient times. In the geologic world it is recent history.

Under that "glacial debris" is bedrock from the Cambrian period of the Paleozoic – roughly 500 million years ago. It is the northernmost exposed Cambrian sandstone in the state, stretching right up to the Hayward area. It is hard sandstone, so well-cemented that one can't easily rub off grains of sand. Think about the hardness of grindstones, which is what it was used for and for which nearby Grindstone Lake was named. It's called the Mt. Simon Sandstone formation.



The fossils formed about 500 million years ago, during the Paleozoic Era.

Mike loves taking people into the field to learn about geology first-hand. An annual field trip during the 19 years he taught freshman earth science at the LCO Ojibwe High School was to see the Mt. Simon Sandstone formation down an old nearby logging road where they could find small fossils. Over the years, the sandstone has been overgrown by lichens; now that he teaches at the University, he has sought out new areas. Last fall, a field trip with college students in his earth science class led them to explore an area where a road was recently widened, exposing the sandstone bedrock. There, they found what Mike at first thought were scrapes from heavy equipment and then came to realize were large trace fossils in the sandstone.



Large fossils in the Mt. Simon Sandstone formation discovered by Mike Heim, a professor at LCO Ojibwe University, during a class fieldtrip

"Five hundred million years ago, most of western Wisconsin was covered by a warm sea and this area was likely a sandy beach," he said. "Northern Wisconsin is and was a dome, so there's more of a gradient carrying material to the sea than in areas farther to the south. In the area where the fossils are, there are chunks of sandstone with quartz pebbles, so water was moving."

Through research of other large fossils in Wisconsin like the ones he found, Mike speculated that the fossil imprint was created by a mollusk-like or worm-like animal that crawled across the seafloor near the beach.

[Climactichnites](#) is one such animal, he learned, and fossils like Mike's discovery have been found in the Elk Mound group in central Wisconsin.

Mike's discovery has brought recognition. After Wisconsin Public Radio covered the [story](#) Mike was contacted by scientist [Kenneth Gass](#) at the Milwaukee Public Museum. They continued to correspond about the fossils and speculate about their identification.



Quartz pebbles embedded in sandstone are evidence of movement of water during prehistoric times.

Since the discovery of the fossil trackways, Mike has scoured the exposed sandstone in the area and photographed every possible fossil, including some which he at first thought were small jellyfish, but which Dr. Gass suspects are the shelly remains of arthropods. He is certain he has found several sea cucumber fossils, a kind of fossil he collected while growing up near Chicago. "You can see the alimentary canal of one" he said. He hopes to continue his research into the identification of these fossils.

Mike also guides field trips for LCO University's Extension Department. On June 28 he'll lead a [day-long trip](#) to Houghton Falls. Free registration (required) includes transportation and lunch. Participants will see a hemlock and cedar-draped sandstone gorge, several seasonal waterfalls, and Lake Superior. Who knows what you might discover, and no fancy equipment is needed. Just bring your cranium and your insect repellent. According to Mike, we've had bugs in northern Wisconsin "for a long time."



Allison Slavick watches birds in Chequamegon National Forest.

Contact Allison at allison.slavick@gmail.com

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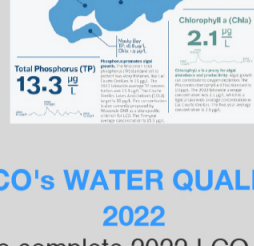
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MARK YOUR CALENDERS: ANNUAL COLA MEETING

Saturday, June 24th
8:30am - Coffee
9:00am- 10:30am- Meeting

St. Francis Solanus Mission
133885 Mission RD
Stone Lake, WI



LCO's WATER QUALITY 2022

The complete 2022 LCO water-quality assessment based upon [Wisconsin's Consolidated Assessment and Listing Methodology](#) (WisCALM) protocol will be available soon. A brief summary is provided [here](#).

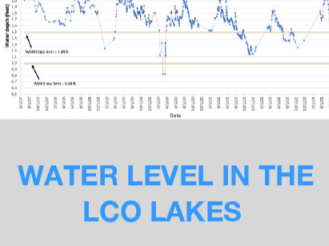


HOW TO DISTINGUISH NATIVE FROM INVASIVE WATERMILFOIL AND PONDWEED

Please help COLA map areas with invasive Eurasian watermilfoil and curly-leaf pondweed. These invasive species are often misidentified and confused with native species of milfoil and pondweed that are common in the LCO lakes, so please use [this guide](#) before contacting COLA. If you find invasive species and even remotely suspect that they are not recorded on [current COLA maps](#), then please report your observations by using COLA's [Observation Forms](#) or send COLA an [email](#).

Property owners are encouraged to manually remove AIS from areas close to their shore. But it is essential to distinguish native from invasive species and not remove the former.

Here's [more information on manual pulling](#). Also check [Section NR 109.06 of the Wisconsin Administrative Code](#).



WATER LEVEL IN THE LCO LAKES

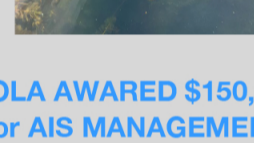
Heavy snowfall during the winter of 2022/23 may have countered the effects of the moderate drought over the last several years. The water level was quite high in late March/early May, but it has been falling rapidly. For a graph of the level at the Thoroughfare bridge, click [here](#).

2023 NATURAL HISTORY FIELD TRIPS

The Extension Program at the Lac Courte Oreilles Ojibwe University is once again sponsoring natural history field trips led by Mike Heim. The [upcoming June trips](#) are:

Wednesday June 28th:
Houghton Falls from 10:00 a.m. until approximately 5:00 p.m.

More information [here](#).



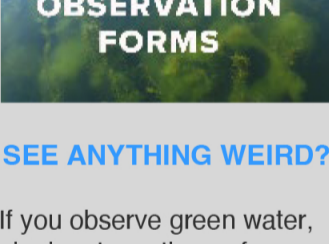
COLA AWARDED \$150,000 for AIS MANAGEMENT

The Wisconsin Department of Natural Resources awarded COLA a \$150,000 grant for management of aquatic invasive species in the LCO lakes for the years 2023 and 2024. Stay tuned for updates.



I-LIDS ON THE LOOKOUT

The Internet [Landing Installed Device Sensor \(I-LIDS\)](#) will be operational in 2023 at the DNR landing in Chicago Bay to monitor boats and trailers for aquatic invasive plants. The Clean Boat/Clean Water boat launch inspections are funded, in part, with a \$4,000 WDNR grant, along with a \$1,400 grant for video cameras.



SEE ANYTHING WEIRD?

If you observe green water, algal mats on the surface or floating or dying fish or anything out of the ordinary, please take pictures and report this using COLA's [observation forms](#) immediately! COLA will alert the WDNR, the LCO Tribe, collect water samples, etc.



TALES OF LAC COURTE OREILLES

This book, edited by Tom and Sue Burgess, together with COLA's history committee, provides a detailed history of Lac Courte Oreilles.

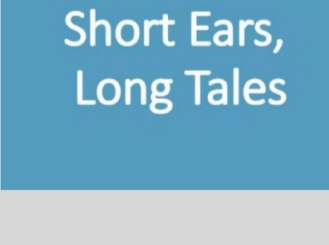
Copies are available at the St. Francis Solanus Mission in Reserve, or contact [COLA](#).

LCO NEEDS YOUR HELP



LCO NEEDS YOUR HELP

COLA is a **volunteer organization**. That means essential jobs don't get done unless someone steps up to help out. Contact communications@cola-wi.org if interested or you need more information.



ARCHIVED ISSUES OF SHORT EARS

Questions, comments or suggestions for future articles can be sent to communications@cola-wi.org

COLA NEEDS YOUR ONGOING SUPPORT

Please consider a tax-deductible donation today!



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COLA Mission: 1) to protect, preserve and enhance the quality of Lac Courte Oreilles and Little Lac Courte Oreilles, their shorelands and surrounding areas, while respecting the interests of property owners and the rights of the general public; and 2) to consider, study, survey and respond to issues deemed relevant by COLA's membership.

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