

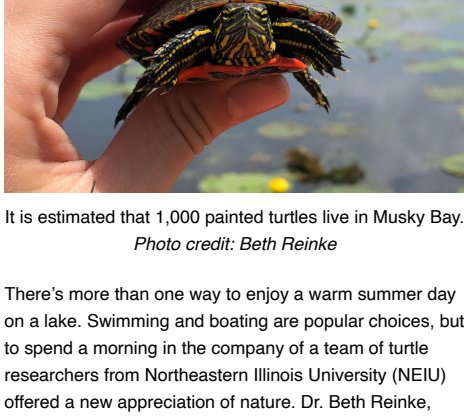


# Short Ears, Long Tales

Courte Oreilles Lakes Association

## Turtles, Turtles, Everywhere

By Allison Slavick

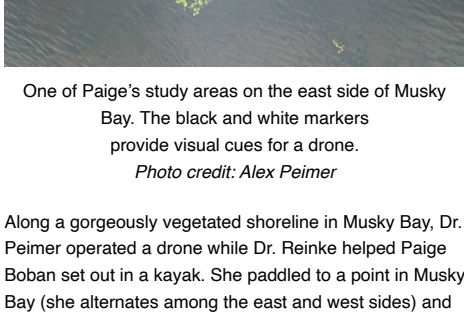


It is estimated that 1,000 painted turtles live in Musky Bay. Photo credit: Beth Reinke

There's more than one way to enjoy a warm summer day on a lake. Swimming and boating are popular choices, but to spend a morning in the company of a team of turtle researchers from Northeastern Illinois University (NEIU) offered a new appreciation of nature. Dr. Beth Reinke, whose research on longevity in turtles has received national attention, is an advisor and mentor to two undergraduates carrying out ecological and behavioral research on painted turtles on Lac Courte Oreilles in Musky Bay.

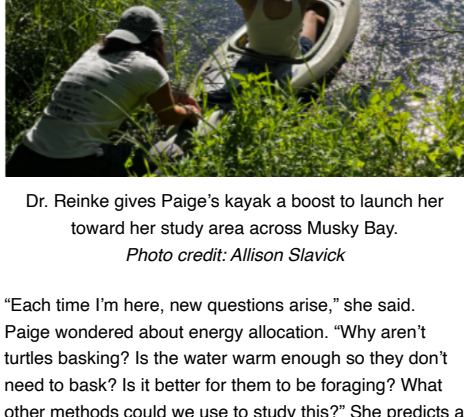
Paige Boban and Caroline Byrne's independent research projects will earn them academic credit, and their infectious enthusiasm, intelligence, and inquisitive minds will provide bright futures. With field assistance and tutelage (turtelage?) from Dr. Reinke, rounding out their team was Dr. Alex Peimer, Assistant Professor of Geography and Environmental Studies at NEIU. The group made their third foray to Musky Bay in early August.

Paige's study looks at the influence of aquatic plant communities on habitat use by painted turtles, and is grounded in the observation that both the distribution of plants and the location of turtle activity change over the summer; Paige has set out to discover if these two occurrences are related. She became interested in the correlation between turtles and vegetation in 2021, when she helped Dr. Reinke sort game-cam photos of turtles. "Early in the summer, there were piles of turtles basking on logs. Toward the end of the summer, the photos were empty," she said. So much so, that they began to wonder if the data were correct. "In May and June, a big fallen tree was covered with turtles. By August, there was so much emergent aquatic vegetation, we couldn't even see the tree."



One of Paige's study areas on the east side of Musky Bay. The black and white markers provide visual cues for a drone. Photo credit: Alex Peimer

Along a gorgeously vegetated shoreline in Musky Bay, Dr. Peimer operated a drone while Dr. Reinke helped Paige Boban set out in a kayak. She paddled to a point in Musky Bay (she alternates among the east and west sides) and used a rope and an anchor to navigate to her data collection sites, nine meters out into the lake. She was looking for and documenting the presence of turtles among vegetation, in semi-vegetated areas, and swimming in open water. This was her first trip of the day - with two more scheduled - and she did not see any turtles basking or swimming. She noted new vegetation growth, and she'll confirm this with drone photos, which allow her to calculate the square footage and percent of vegetation cover as it changes over time. Back at her desk, she'll apply a sophisticated statistical analysis to her data.

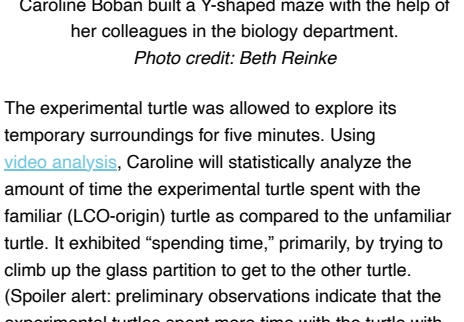


Dr. Reinke gives Paige's kayak a boost to launch her toward her study area across Musky Bay. Photo credit: Allison Slavick

"Each time I'm here, new questions arise," she said. Paige wondered about energy allocation. "Why aren't turtles basking? Is the water warm enough so they don't need to bask? Is it better for them to be foraging? What other methods could we use to study this?" She predicts a correlation between plant growth and turtle presence. "It may not be direct, as water temperature could also correlate with turtle activity." Paige presented preliminary results from her study at an Animal Behavior Society conference in San Jose, Costa Rica in July.

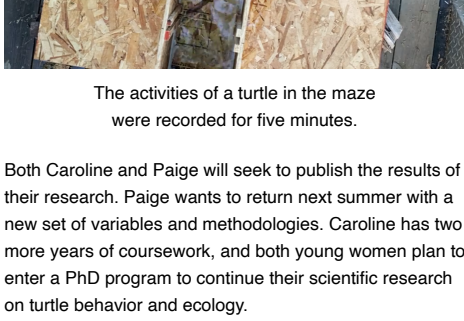
Caroline's field work comprises recognition among painted turtles, a component of their social behavior. "The sociality of mammals and birds is a common research area, but reptiles and amphibians are vastly understudied," she explained. In other words, do turtles form social groups? Are they cooperative?

To carry out her field study Caroline, with help from a few colleagues in the biology department, constructed a Y-shaped maze of particle board, with the two arms of the Y separated by panes of glass. An "unfamiliar" turtle from Grindstone Lake, and a "familiar" turtle from LCO were placed in each of the arms of the Y, and an "experimental" turtle from LCO in the trunk of the Y. Shallow well water in the maze allowed them to swim or walk. Her project design used all males or all females to eliminate a bias. The familiar and unfamiliar turtles remained the same, but a new experimental turtle was used each of the 18 times she carried out the test, which were all completed in one day.



Caroline Boban built a Y-shaped maze with the help of her colleagues in the biology department. Photo credit: Beth Reinke

The experimental turtle was allowed to explore its temporary surroundings for five minutes. Using video analysis, Caroline will statistically analyze the amount of time the experimental turtle spent with the familiar (LCO-origin) turtle as compared to the unfamiliar turtle. It exhibited "spending time," primarily, by trying to climb up the glass partition to get to the other turtle. (Spoiler alert: preliminary observations indicate that the experimental turtles spent more time with the turtle with which they were familiar.) According to Caroline, how and if turtles recognize each other in their natural habitat is important to conservation efforts, and research can contribute to our understanding of turtle evolution and survival. "With the high population group found here, there are numerous applications for my results, including climate change," she continued.



The activities of a turtle in the maze were recorded for five minutes.

Both Caroline and Paige will seek to publish the results of their research. Paige wants to return next summer with a new set of variables and methodologies. Caroline has two more years of coursework, and both young women plan to enter a PhD program to continue their scientific research on turtle behavior and ecology.

As for Dr. Reinke, she'll be back next year, with another cohort of student researchers with new study projects. "I've been coming to Lac Courte Oreilles since I was a child, and I am thrilled to return here to contribute to our understanding of the lake's ecology and wildlife," she said. "The pleasure of seeing a row of turtles basking on a log contributes to our desire to care for the lake and the creatures who share it."

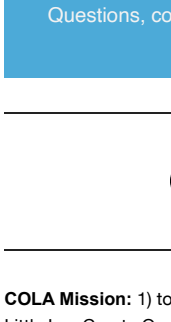


Caroline Byrne's research looks at the sociality of turtles. In other words, do turtles recognize each other? "The high population found here is ideal for my research," she said. Photo credit: Allison Slavick



Paige presented preliminary results from her study at an Animal Behavior Society conference in San Jose, Costa Rica in July.

[Dr. Reinke's Article in the journal Science](#)



Allison Slavick is a nature lover who bicycles, skis, and picks grapes near her home on Crystal Lake in southern Bayfield County.

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Questions, comments or suggestions for future articles maybe sent to [communications@cola-wi.org](mailto:communications@cola-wi.org)

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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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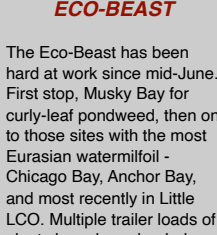
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### VOYAGES OF THE ECO-BEAST

The Eco-Beast has been hard at work since mid-June. First stop, Musky Bay for curly-leaf pondweed, then on to those sites with the most Eurasian watermilfoil - Chicago Bay, Anchor Bay, and most recently in Little LCO. Multiple trailer loads of plants have been hauled away from the lakes. Much remains to be done. [Maps of AIS](#) locations are being made and updated for treatment next year.

### LCO LAKES WATER LEVEL

The last several years of below-average precipitation have affected the LCO lakes. Recent decisions on lake levels by WDNR have lowered lake levels as well. For a graph, click [here](#). For a recent COLA eBlast on this topic, click [here](#).

### 2021 LCO WATER QUALITY

The 2021 LCO water-quality assessment based upon WDNR's WisCALM protocol is available [here](#).

### I-LIDS ON THE LOOKOUT

The Internet Landing Installed Device Sensor (I-LIDS) is now operational at the DNR landing in Chicago Bay. The I-LIDS system uses advanced sensors that tell it when a boater has entered the launch area and turns on video monitoring of the bottom of the boat to identify whether there are aquatics present on the trailer or boat. It also captures clean-off activity by the user. The video capture is performed through a wireless Internet Video Camera that transmits images to the cloud for later analysis.

### COLA WEBSITE UPDATE

COLA's website has been redesigned. It's simpler to navigate and more informative. Take a look.

### WAKE PROTECTION ORDINANCE FOR TOWN OF HAYWARD

Wake protection ordinance for Town of Hayward now extends 700 feet. The Town of Bass Lake instituted a similar ordinance in 2018.

[\(see article in Sawyer Co. Record\)](#)

### WATER HEMLOCK

Please be on the lookout for Water Hemlock (*Cicuta maculata*) - it's very poisonous. It has been spotted in several places around LCO. It has a similar appearance to Water Parsnip, Queen Anne's Lace and other members of the Parsley family. [More information](#)

### FOREST HEALTH TOUR

Join UW-Extension Forestry in Cable, WI to learn about forest health with your local DNR forest health specialist Paul Cigan and other natural resources professionals. There will be a bus tour through Cable, WI to look at wide scale forest health in local woodlands and some short hikes to learn about well-known tree killers such as Emerald Ash Borer and oak wilt, as well as emerging threats such as caliciopsis canker. [\(Brochure\)](#)

[\(more details\)](#)

### Cable Natural History Museum

The Cable Natural History Museum returns this fall with familiar favorites like Sounds of the Elk, Forest Lodge Tours, and Talon Talk Live Raptor Programs.

[\(details\)](#)

### 2022 NATURAL HISTORY FIELD TRIPS

Here are this year's natural history field trips sponsored by the Extension Program at the Lac Courte Oreilles Ojibwe College near Hayward, Wisconsin. For more information, contact Cali Quaderer-Cuddy, Extension Program Coordinator, at [cquaderer@lco.edu](mailto:cquaderer@lco.edu)

9/17 Hawk Ridge, Duluth, MN  
9/24 Blue Hills Felsenmeer

[\(more\)](#)

### LAKE OBSERVATION FORMS

[SEE ANYTHING WEIRD?](#)

If you observe green water, algal mats on the surface or floating or dying fish - 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.

### 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](mailto:communications@cola-wi.org) if interested or you need more information.

### Short Ears, Long Tales

[ARCHIVED ISSUES OF SHORT EARS](#)

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