Short Ears, Long Tales

Courte Oreilles Lakes Association

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The Painted Turtle: Now we know

By Kathy Hanson
Contributing Writer

When Beth Reinke was a little girl she visited her grandparents—the Murphys—on Lac Courte Oreilles where they have a cabin in Victory Heights. There she caught painted turtles for fun.

The fun never stopped for Beth. Today she is a biologist and she still catches painted turtles, her understanding and study of them as a PhD researcher, bedazzling any of the general population.

In 1992 Beth visited her grandparents at their cabin on LCO. Photo submitted .

"I've always been an animal person and have always planned to be a biologist. It is my calling, I guess you could say. In college, I had to design a research proposal for a grant. My mentor suggested I choose a system I know and since I've been catching turtles in Musky Bay for fun my whole life, I designed a project around that," Beth said.

Beth said she grew up in Indianapolis, got her PhD from Dartmouth College last year and is now a postdoctoral researcher at Penn State, working on modeling aging in wild animal populations.

Now a young woman, last year Beth collected measurements from painted turtles before releasing them, again at her grandparent's cabin on LCO. Photo submitted.

Knowing the painted turtle

Beth said you will often see painted turtles basking in groups on logs in northern Wisconsin. They are freshwater turtles, north-ranging in North America and extend from Canada down to Texas, out east to the New England coast, with isolated populations out west. They are called painted turtles, she said, because of the colorful stripes on their body and the bright colors on their ventral shell. Even their heads and limb stripes may be yellow, red or orange; however, the bright orange ventral shell is only present in populations in Wisconsin and out west, according to Beth.

Their mating season begins sometimes before the ice is out all the way, with males courting females by vibrating the long claws of their forelimbs in front of the female's face. The females grow large and come up to land to nest in May. They like to lay eggs in the sandy banks on the side of roads, which is why we need to be cautious while driving. The eggs hatch in late summer but some hatchlings will stay in the nest to wait out the winter, freezing solid until the ground thaws in the spring at which time they see the sunlight and emerge to eat for the first time in six months after hatching!

A painted turtle rests on the shoreline of Lac Courte Oreilles. Photo submitted.

Relevance of the painted turtle to LCO

Beth said, "Painted turtles are opportunistic omnivores, which means they'll eat pretty much anything that comes their way. Partially because of that, they can live in almost any body of water within their range. However, their growth rates, population structure and phenotype (appearance) can still be impacted by their environment. This makes studying them on LCO especially interesting because I can compare these traits to other populations in the U.S. and I can assess how these traits change through time as the lake and climate change."

Beth said she has studied them in LCO for nine years this summer—in Musky Bay and Stuckey Bay—and she plans to continue studying them every June for as long as she can—estimating that to be another 30 years.
"My undergraduate thesis compared the immune function, population structure and growth rates of Musky Bay and Stuckey Bay turtles to populations of turtles in other areas of the LCO watershed—Billy Boy Flowage, Grindstone Lake, Little Stone Lake," she said. Her current work takes a more long-term approach and compares LCO turtles to a population in Illinois that has been studied for over 30 years, finding that in both populations, both males and females age at about the same rate—in contrast to mammals and many other animals, Beth said. (Her paper on this is due out in the next several months.)

Findings and what that means for the future

"Because turtles are so long-lived, studying painted turtles gives us the chance to monitor how individuals and populations are affected by gradual environmental change. Painted turtles are also one of the few vertebrates that are freeze-tolerant. Not all hatchlings emerge from their nest in the summer; some stay underground until spring where they tolerate freezing temperatures by freezing solid themselves," Beth explained.

She then said this is unique to painted turtles in northern U.S. and has made them the subject of study by many labs and government agencies.

With Beth's background in physiology she is positioned to monitor the coloration of the turtles to determine what role the pigments play in their freeze tolerance.

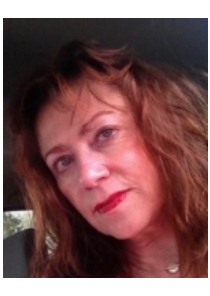
Her study is set up as a mark-recapture study, which means that she can collect data on the same individuals through time, using microchips and photo ID software. She said she can then study how fast they grow, how their shell shape and color change as they age, and what injuries they suffer, as well as how the structure of the population changes, including male/female ratio.

As to the future of painted turtles, Beth said freshwater turtles are declining worldwide at a faster rate than sea turtles, and even though the painted turtle is extremely hardy, loss of habitat and over-harvesting threaten their population in some areas.

The ventral shell (plastron) of a painted turtle shows the bright coloration and unique pattern used to identify the individuals. Photo submitted.

2018 anecdotal information about LCO

Beth shared this in her annual report to COLA: "This year I saw fewer nesting females than usual. I'm not sure if this was because they were nesting late or early, but I also saw no signs of depredated nests (which would suggest they are late nesting), when I usually see multiple near Musky Bay. Most females I captured were not gravid, which was extremely surprising. It will be interesting to see in the next few years if the population has stalled. This was the first year I saw frog eggs in Stuckey Bay during the field season. I saw several softshell turtles in Musky Bay again, as I have in past years."



Kathy Hanson is a free-lance writer for various local and regional newspapers and Duluth magazines. She is the Sawyer County field editor for Our Wisconsin magazine, copy editor for the Bayfield County Journal, and feature writer for the Sawyer County Gazette. She was previously a staff reporter, business writer, columnist and copy editor for the Sawyer County Record.

UPDATE ON BOAT WAKE ORDINANCE

The Town of Bass Lake will likely be considering a boat wake ordinance at its October 8, 2018 meeting at the Bass Lake Town Hall, although the agenda for the meeting had not been posted by the time this issue of Short Ears, Long Tales was distributed.

The draft ordinance is similar to that recently considered by Sawyer County, which, upon the advice of its legal council and Wisconsin State, determined that it lacked standing to pass the ordinance. The essential elements of Bass Lakes ordinance are stated in Section 6:

"No person shall operate a motorboat, as defined in s. 30.50(6), Wis. Stats. on the waters within the Town of Bass Lake, Sawyer County in a manner to enhance an elevated wake for over 50 feet in length closer than 700 feet from any shoreline, dock, pier, raft or other restricted area(s) within the Town of Bass Lake, Sawyer County. An elevated wake is a trail of disturbed water left by the passage of a watercraft in excess of 24 inches. Such prohibited operation shall apply to wake enhancement watercraft by the use of ballast, mechanical hydrofoil(s), uneven loading or operation at transition speed. Transition speed means the speed at which the boat is operating at greater than slow-no-wake speed, but not fast enough so the boat is planning."

COLA will be sending out more information about the ordinance in the near future.

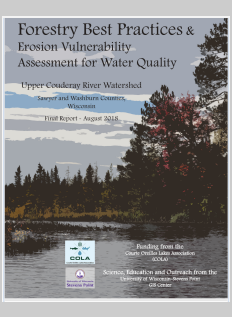
COLA FEELS OTHERWISE

COLA's president, Kevin Horrocks, responded to the report on the state of Wisconsin's water resources provided by Daniel Meyer, Secretary of WDNR in the August 23 issue of the Sawyer County Record. Kevin's comments appeared in the Sept. 6 issue of the Sawyer County Record under the headline "Sacrificing Wisconsin's water resources."

THE MORE THINGS CHANGE ...

50 years ago in the Sawyer County Record (Aug. 22, 1968):

"Plans to reactivate the Court Oreilles Chain of Lakes Protective Association were launched at a meeting attended by nearly 100 area property owners at Musky Bay, Sunday, Augst 25th. The organization established several years ago to work against all kinds of water pollution has been inactive until recently. Action initiated on Sunday's meeting is for a greatly enlarged membership to obtain funds to engage competent research specialists to analyze water samples at strategic points in a five or six lake area and to conduct a continuing study of pollution. Great concern was expressed by property owners and sportsmen present for what they said is an increasing volume of algae, weed growth, muck, dead fish, and other evidence of growing pollution in Lac Courte Oreilles and connecting waters. Paul Dolan of Victory Heights presided at the meeting. Working with Mr. Dolan on the steering committee will be Mrs. Mary Austin, Mrs. Daphne Jolivette, John Felzner, E.M. Johnson, Neilsen LaVake, and Mr. B. Borouski."



UW-STEVENS POINT HELPS COLA ASSESS TIMBER MANAGEMENT SENSITIVITY

At the ESRI International User Conference in San Diego, CA, UWSP scientist Joseph LaViolette reviewed his timber management sensitivity study of the Upper Couderay River Watershed. The conference was attended by almost 18,000 participants from over 130 countries. COLA is working with Joseph and Douglas Miskowiak at UWSP to better understand how timber management affects water quality in LCO and neighboring water bodies.

UPDATE ON AUGUST FISH KILL WARNING

We dodged a bullet in late August/early September. Just when the east end of big LCO was down to less than 1 foot of water at 66 degrees F and with little more than 6.0 parts per million dissolved oxygen, on September 4th the first of two-fast moving cold fronts produced heavy rainfall in the area along with moderate winds.

The infusion of the 3 inches of oxygen rich rainfall over the entire watershed, together with wind-driven wave action and lower air temperatures over 7-10 days was just enough to drop the lake water temperature 5-6 degrees and mix more available oxygen into the lake's top 25 feet. As a result no dead cisco or lake whitefish were reported.

Thanks to all who kept an eye out.

HOW MUCH IS CLEAN WATER WORTH?

From the September 28 Eau Claire's Leader-Telegram:

About $20,000 to $30,000 in added property value for the average home on a murky lake that clears up so you can see at least a meter down, according to a UW-Eau Claire professor's research.

Thomas Kemp, chairman of the university's Economics Department, has done two studies that have shown the effect that improving a lake's clarity has on the sale prices of homes around it.

"It doesn't just matter from a tree-hugger perspective. It's straight up economics," he said. "People will pay for clearer water, period."

THE LAC COURTE OREILLES LEGACY FUND

Many families have enjoyed LCO's pristine beauty for generations. Your generous donations over the past eight years have helped preserve the lake and remain the essential funding for current activities. But now we have another opportunity to protect the lake far into the future by putting the Lac Courte Oreilles Foundation into your estate plans.

The LCO Foundation teamed up with the Eau Claire Community Foundation to create the Lac Courte Oreilles Legacy Fund. Endowment gifts include: planned gifts such as a bequest in a will, charitable remainder trust, or outright gifts, such as of cash, or stock.

SPREAD THE GOOD NEWS

If you have friends or family on nearby lakes who would enjoy Short Ears, Long Tales, let us know.

Help COLA by sharing this newsletter with friends.

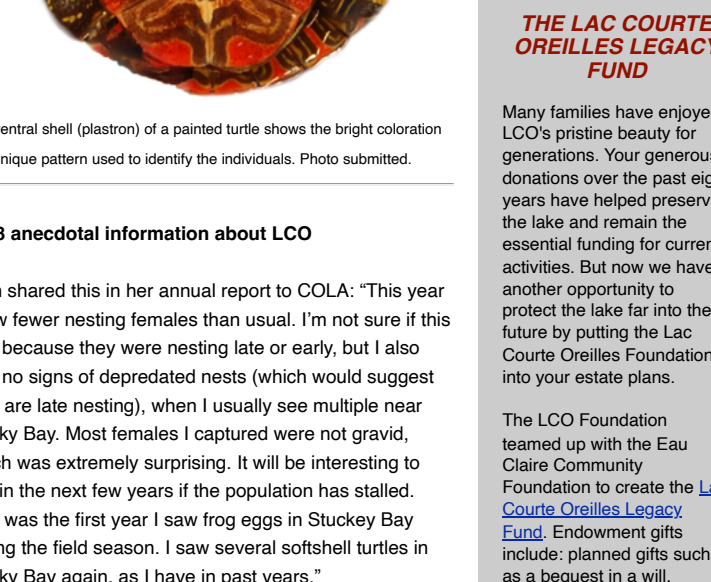
PLEASE RENEW YOUR COLA MEMBERSHIP FOR 2018-2019

COLA membership is a pretty good deal. For only 25$/year, you help COLA protect LCO, and you get a picnic in return!

Renew your membership today in one of Wisconsin's most active and respected lake associations.

Are your neighbors and extended family members of COLA? If not, please ask them to join.

ARCHIVED ISSUES OF SHORT EARS, LONG TALES



The first point on the chart, June 27, 2017, was when the gauge was first installed. Periodic readings are recorded as accurately as reasonable. The water itself is in perpetual motion, not only flowing downstream but rising and falling due to waves, the current in the channel, the wind which can actually push water and "stack" it toward one end of the lake or the other and the seiche effect caused by the gravitational pull of the moon and sun.

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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