



The Chat

Lakeland Audubon Society

November 2019

lakelandaudubon.com

November 26 Program

North America's Oldest Winged Dinosaur: The Evolution of Avian Flight

By: David Lovelace - Assistant Scientist, UW Geology Museum

The turn of the century saw a new revolution in our understanding of dinosaur evolution and their relationship with modern birds. Hundreds of new specimens, mostly from Asia, have illuminated a surprisingly diverse array of winged (paravian) non-flying feathered dinosaurs. In 2004 an accidental discovery of a tiny meat eating theropod dinosaur started a 15 year project for three undergraduates from the University of Wyoming, two of whom moved to WI to pursue a their doctorate, bringing the project with them. This little dinosaur has been known as 'Lori' for many years, and as of July, 2019 was formally named *Hesperornithoides miessleri*.

miessleri is the oldest known paravian from North America. This study not only includes the description of this animal, but the analysis of its evolutionary relationship within the dinosaur family tree, and has led to novel observations that show the long drawn out history of avian flight evolution. A majority of evolutionary branches on the paravian limb, including the well known *Archaeopteryx*, *Troodon*, and *Velociraptor*; each belongs to a lineage that began with long armed, winged feathered dinosaurs without the ability to fly. Interestingly, each of these lineages, in parallel, later evolved some degree of aerial capability, if not outright flight. However, the true ancestors of birds are on yet another branch of the paravian limb. This drawn out history is unlike that seen in other flying vertebrates such as bats and pterosaurs, whose flight capabilities evolved much faster. This is a compelling story of how science works, and the evolution of our understanding of avian flight.

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Directions

The Lions Field House is located 0.4 miles north of Geneva Street in Williams Bay on Highway 67. Turn on Stark Road on the west side of Highway 67, across from Kishwauketo Nature Conservancy. Turn right at the next intersection to go to the parking lot.

Left: *Hesperornithoides* by Ugueto

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Dave Lovelace is a vertebrate paleontologist specializing in Triassic-aged rocks of the Rocky Mountain West (252-201 million years ago). He joined the UW Geology Museum team as a research scientist after completing his PhD at UW-Madison's Department of Geoscience in 2012. Dave combines the study of ancient bones, trackways, and soils to build a picture of what ecosystems looked like 230 million years ago — when the first mammals, turtles, crocodiles, lizards, dinosaurs, and birds evolved. Since becoming a member of the museum team, Dave had made several exciting discoveries including: the oldest known turtle tracks in the world, two mass-death-assemblages of Late Triassic amphibians, and the oldest dinosaur tracks in Wyoming.

This program is scheduled on November 26 at 7 pm at the Lions Field House in Williams Bay and is free and open to the public. Refreshments will be served before and after the meeting.

November Field Trip

Join Lakeland Audubon Society for a field trip to Valley of the Kings on Sunday, November 24. Meet at the Lions Field House in Williams Bay at 1:30 p.m. to carpool to the sanctuary, as parking is limited there. Valley of the Kings is a private, non-profit, tax-exempt charity that provides sanctuary for lions, tigers, leopards, cougars, bears, horses, cows, foxes, and other animals. For more information, see: votk.org.

Christmas Bird Count

The Lakeland Audubon Society will hold its annual Christmas Bird Count on Saturday, December 21. The Christmas Bird Count (CBC) is a long-standing program of the National Audubon Society, with over 100 years of community science involvement. It is an early-winter bird census, where thousands of volunteers across the U.S., Canada, and many countries in the Western Hemisphere go out over a 24-hour period on one calendar day to count birds. The data collected by observers provides vital information on the long-term health and status of bird populations across North America.

To participate, contact Lisa Granbur by Email: parula13@sbcglobal.net or by Phone: (312) 354-0199. Participants will be meeting at the Lion's Field house, in Williams Bay, at 5pm on the 21st to eat dinner and go over the day's sightings. More information is available at: audubon.org.

Project FeederWatch

Project FeederWatch turns your love of feeding birds into scientific discoveries. FeederWatch is a winter-long (November-April) survey of birds that visit feeders at backyards, nature centers, community areas, and other locales in North America. Participants periodically count the birds they see at their feeders and send their counts to Project FeederWatch. Your bird counts help you keep track of what is happening in your own backyard and help scientists track long-term trends in bird distribution and abundance. With FeederWatch, your observations become part of something bigger. More info can be found online at: feederwatch.org.

See?

By Wayne Rohde

It happened again this fall, while we were hiking in the Keweenaw Peninsula and the Porcupine Mountains of Michigan's Upper Peninsula: we heard the friendly, high-pitched "see" notes of _____.

How did/would you fill in the blank?

Actually, there's quite a few unrelated species with such high notes, from Cedar and Bohemian Waxwings ... to Brown Creepers ... to Golden- and Ruby-crowned Kinglets ... to Blue-gray Gnatcatchers.



Unless each species is singing its full song during the breeding season, these birds can be very difficult to distinguish because of their rather similar call notes.

Yet, if one listens closely, and also pays attention to the habitat and time of year, identifying these "high pitchers" by ear is certainly possible.

The Blue-gray Gnatcatcher, being a summer resident, has already migrated south. Resembling a mini mockingbird in appearance, the gnatcatcher gives itself away by its wheezy, nervous "Dear me! Dear me!" notes.

The Ruby-crowned Kinglet, which is surely one of our most hyperactive birds, is only found in southern Wisconsin during migration (March-May and September-November). It kicks off its longish and complex song with a series of clear "see" notes --a few extremely high notes, followed immediately by a few somewhat lower notes-- before bringing its spirited tune to completion with a rapid-paced, jumbled chant: "*Look at me, look at me, look at me!*"

If you're following the math, this leaves four species. And each of the four may be found in our area in the winter: the Cedar Waxwing (which is a permanent resident state-wide), plus the Bohemian Waxwing, Brown Creeper and Golden-crowned Kinglet (which visit southern Wisconsin during the winter months alone).

Waxwings, which utter a trilled whistle, sound noticeably different than creepers or kinglets (Cedars have higher-pitched notes Bohemians). And whereas creepers generally utter a single "see," kinglets usually group their notes in threes.

Birders can learn the songs of any of these species by reading their descriptions in good field guides. But a better (and easier!) approach, in my opinion, is hearing them in real time in the woods, and listening to actual recordings of their songs – such as those which are available online at The Cornell Laboratory of Ornithology website (check it out!).

Ah, yes ... that "U.P." bird which entertained us. Which one do you think it was?

The answer: a Golden-crowned Kinglet. Correction: Golden-crowned Kinglets (plural) – as in *scads* of them. Indeed, they seemed almost omnipresent along the many trails throughout the cathedral pine forests (such as the Estivant Pines area near Copper Harbor): "See, see, see ... see, see, see ... see, see, see..." What a delight to make our way through these colorful wooded tracts, along waterfall-lined rivers – all while being serenaded by these perky little songsters!

Yes, one of the best ways to appreciate and identify birds is by their songs. Even those high-pitched "see" songs of the waxwings, creepers, kinglets and gnatcatchers. Listen carefully. Can you hear them? See what I mean?

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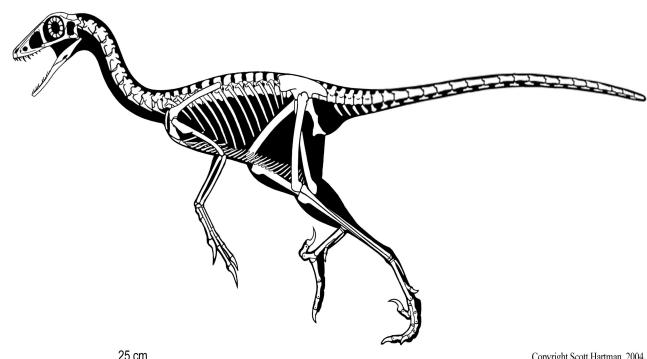
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Field Trips

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The skeletal reconstruction of the Lori specimen (Hesperornithoides).



An artist's rendition of Lori next to the foot of a giant sauropod dinosaur.

The Chat is the newsletter of the Lakeland Audubon Chapter of the National Audubon Society, P.O. Box 473, Elkhorn, WI 53121. Subscription is \$15 per year for printed copies sent by US mail.