



# TIPPE-TOPICS

NEWSLETTER OF THE TIPPECANOE AUDUBON SOCIETY

Cass, Fulton, Kosciusko, Marshall, Miami, Noble, Wabash, Whitley Counties, Indiana

Volume XXXVII, Number 6

December 2011 & January 2012

## COMING EVENTS

### TAS Annual Dinner & Special Program

#### The Pipe Creek Sinkhole - Indiana's World Famous Paleontological Site

Join us December 13<sup>th</sup> at 6:00 p.m. in the Manchester College Student Union for the Tippecanoe Audubon Society's Annual Dinner and Special Program, or just come for the program.

This year's program will feature Dr. James Farlow, Professor of Geology at Indiana University - Purdue University, Fort Wayne (IPFW). In 1996, employees of the Pipe Creek Jr. quarry near Swayzee, IN made a startling discovery. They had uncovered a diverse array of fossils from the Pliocene era, dating back five million years. Fossils of plants and animals had accumulated in sediments of an ancient pond. The fossil assemblage includes numerous small vertebrates as well as cats, canids, bears, peccaries, camels, and rhinoceroses. IPFW, in collaboration with the Indiana State Museum, began research on this fabulous discovery in 1998. Dr. Farlow is one of the two researchers that has spearheaded research at the site.

The menu includes your choice of Chicken Piccata or Herb Roasted Eye-of-round, Roasted sweet potatoes, Green beans with tomatoes and onions and New York style cheesecake. Cost is \$18 per person. To make a **reservation**, contact Dave Hicks at [djhicks@manchester.edu](mailto:djhicks@manchester.edu) or 260-982-2471 **before December 9<sup>th</sup>**.

Dr. Farlow's talk will begin after dinner and is free and open to the public.

**When:** Tuesday,  
December 13, 6:00 pm.

**Where:** Manchester College Student Union, Hoff Room, North Manchester, IN

### Christmas Bird Count

This is our 36th year participating in the National Audubon Society's Christmas Bird Count. Teams of 2 or 3 people will be assigned to designated areas in our count circle (a 15 mile diameter circle centered on Oswego, IN). Birders of all skill levels participate and are welcome. Bring binoculars and dress warmly.

We will meet at 7:00 am at the Bob Evans Restaurant in Warsaw where participants will receive information packages with maps and data forms. Count teams will then head to their areas and counting may continue until sunset (5:30 pm). However, counting until dusk is not required. If you live in the count circle you may choose to count birds at your home feeder. Participants are required to pay a \$5 fee to help publish the results.

The count will conclude with a compiling party and dinner, starting at 6 pm, at the home of Dave Hicks and Deb Hustin, 721 Wayne St., North Manchester, IN. Bring a dish to share if you'd like.

To join the count, contact Dave Hicks at 260-982-2471 or -5309 or by e-mail to [djhicks@manchester.edu](mailto:djhicks@manchester.edu).

**When:** Saturday, December 31. Pre-count breakfast at 7:00 am.

**Where:** Meet at Bob Evans, NW corner of US 30 and Center St., Warsaw, IN

### Regular Tippecanoe Audubon Society Events:

#### PROGRAMS -

Held on the 4th Tuesday of February, April, September and at the annual dinner in early December. Begins at 7:30 p.m., usually at the Student Union on the Manchester College Campus, North Manchester, IN. ALL ARE WELCOME.

#### MONTHLY FIELD TRIPS -

Time and place announced in the bi-monthly newsletter. ALL ARE WELCOME.

#### TAS BOARD MEETINGS -

Monthly on the 2nd Tuesday of the month at 6:30 p.m., except in December. Held at North Manchester Public Library Conference Room, 405 N. Market St., North Manchester, IN. All TAS members are welcome.

### Contact Info.

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Website:

[www.tippeaudubon.org](http://www.tippeaudubon.org)

## Project FeederWatch

Don't forget Project FeederWatch! If you are unable to be a part of the Christmas Bird Count, or you just like to watch birds at your feeders, you can still play an important role in this bird census by becoming a part of Project FeederWatch. It is a winter-long survey of birds that visit feeders at backyards, nature centers, community areas, and other locales in North America. FeederWatch-

ers periodically count the birds they see at their feeders from November through early April and send their counts to Project FeederWatch. This data helps scientists track broadscale movements of winter bird populations and long-term trends in bird distribution and abundance.

These citizen science projects provide information critical to understand-

ing the status of birds throughout the Americas. They also help define conservation goals, and provide the scientific basis for conservation action. This year's Project FeederWatch began on November 12, but it runs through April 6, and there's still time to join in the action. Learn more and sign up at: [www.birds.cornell.edu/pfw/](http://www.birds.cornell.edu/pfw/)

### President's Corner •• (from page 3)

ground them to powder, or scattered them.

The Pipe Creek sinkhole is the ONLY known example of Pliocene fossil layers in the eastern half of the continent. Come find out more about the incredible

animals that once inhabited Indiana! Just as cool as dinosaurs!

#### References:

Camp, M.J., & G.T. Richardson. Roadside Geology of Indiana. 1999. Mountain Press Publishing Co, Missoula, MT.

Eyles, N. Ontario Rocks: Three Billion Years of Environmental Change. 2002. University of Toronto.

### Bird of the Month •• (from page 4)

sunlight and the male's hormones. They drum at or before dawn, during day-break, and at dusk. This is also their main feeding time. While firmly perched on a log, with tail braced, the male spreads his wings and rotates his wings forward, then quickly backward. This creates a sudden compression and release of air pressure, which produces the drumlike sound. Males apparently drum to advertise their presence to females and other males and to define territories.

Their diet is mostly vegetarian, but some insects are eaten as well. Important winter foods are tree buds and twigs. Catkins are a favorite spring food, while leaves, berries, and acorns are important in summer and fall. Winter birds can live for 5 to 6 months on Aspen buds alone.

Grouse eat quickly, store the food in their crop, and digest later as their gizzard grinds the food. In the winter, they will leave their roosts for only an hour or less to feed, both early and late in the day.

Grouse are a fairly short lived species. Females may nest for up to 6 years. They may lay up to 11 eggs in a 17 day period. The weight of the eggs may equal half of a hen's weight! Nearly 40% of all nests fail, most of which is caused by predators. On average, about 60% of eggs hatch. A hen will leave the nest only for a short while to feed, often in

the afternoon. After copulation, the male has nothing more to do with reproduction; the female raises the young alone. While the females nest and raise the young, leading them first to insects and later to berries, the male stays at the drumming site until mid-summer. Males return to the drumming site to claim it again in fall.

Grouse can withstand extremely cold temperatures. Even their nostrils and toes are feathered. In winter, they may even dive into snow to spend the night. They can't walk on fluffy snow, so during severe weather, they spend most of their time in a snow roost or in a coniferous tree, both of which provide good insulation.

So, if you are in the woods and a chicken-like bird explodes from the ground into flight, it may be a grouse. Make sure to look for the little crest on their head, the black ruff on the neck and a fantail, if you are close enough to get a good look at one. The drumming of the male with its wing on a log is a completely unique noise and is unmistakable.

While released birds previously provided our region with a few resident birds to observe, suitable habitats to the north of Indiana or areas of higher elevation would be prime areas to find and observe the Ruffed Grouse. With numbers so low in Indiana, it seems quite odd to me that hunting is permitted in our state.



## President's Corner - Beth Deimling

We have some exciting events lined up for the end of 2011. I invite all of you to come join us for our annual dinner on December 13, and the concurrent talk by Dr. James Farlow on one of Indiana's outstanding geological finds – the Pipe Creek Sinkhole. Indeed this feature is a unique fossil find in the eastern U.S., and is located near us, in Swayzee, in Grant county. I also invite all of you to come to the “Christmas” Bird Count (CBC) on New Year's Eve day. You do not need to be an experienced birder, nor do you need to commit for an entire day. All that's needed is a pair of sharp eyes. Inexperienced birders can join those cars with more experienced birders. And though all should dress warmly, most of the CBC is done from inside the warmth of a car! The CBC is an important citizen science project, begun in 1900, which has provided significant data to scientists and policymakers over the many years it has run. Also keep in mind Project Feederwatch. It has begun its new season, which runs through April 6, 2012. For those of you who maintain backyard bird feeders, this is an interesting and important piece of citizen science run by the Cornell Lab of Ornithology. It's easy to do, and is a good way to learn more about common and uncommon feeder birds, simply due to the fact that you're required to pay attention! For more information, see their website at [www.feederwatch.org](http://www.feederwatch.org)

The new year will bring some changes to the Tippecanoe Audubon Society. We will be cutting the number of programs to 4 per year: the fourth Tuesdays in February, April, and September, as well as at the annual dinner in December. The reduced number of programs more accurately reflects the membership's level of interest. And the Board of Directors has been discussing reducing the number of newsletters from 6 per year to 4, starting in the summer of 2012, mostly due to the limited number of contributors (writers of articles or notes of interest). If you would like to see the number of newsletters maintained at 6

per year, this would be the time to let us know (my contact info. is on the front cover).

### What is so special about the Pipe Creek Sinkhole?

I have always had a difficult time getting my mind around geological time scales. Billions - or indeed millions - of anything, let alone years, is a difficult thing for the human mind to grasp. Yet, it is vast scales of time that allow rock to form from sediment, and allow fossils to form from bones and shells. And in vast scales of time, the earth's crust and climate have changed enough to explain the existence of sea floor sediments in Indiana. “The essence of geology is time, an almost unbelievable amount of time” (Camp & Richardson, 1999).

Earth's vast plates move the earth's continents, and over hundreds of millions of years, small annual movements add up to completely reshape and relocate the continents. Changes in climate over millions of years also caused sea levels to rise or fall by many feet. Geologists tell us that Indiana's bedrock began its formation 570 million years ago, when much of inland North America was under a shallow sea. That sea remained over Indiana, with fluctuations in its level, for several hundred million years. During the Silurian Period, over 400 million years ago, ‘Silurian Reefs’ formed in Indiana. The landmass that later became North America, as well as being partially under water, was at this time much closer to the equator, and within this shallow sea, numerous small reefs formed, made of coral animals, as in today's reefs, but also made of a host of other organisms, most of which utilized calcium carbonate to make their protective shells. Calcium carbonate is the same stuff used by today's corals, mussels, and snails to make their shells, and is the same substance as limestone.

For another 200 million years (the Mesozoic Era), no new rock deposits were formed in Indiana because Indiana was above sea level, and eroding. So for

this entire period there are no rock deposits in Indiana. Limestone is subject to erosion from moving water. Rainfall is slightly acidic, limestone is basic. If you drip acidic vinegar onto limestone, it fizzes slightly, indicating a chemical reaction that is eroding away the limestone. While you cannot see rainwater fizz on limestone, it is in essence doing the same thing as that vinegar, but at a much slower pace. Over time, caves form in limestone from moving ground or rain water; over time a cave formed in the Silurian reef formation that is now the Pipe Creek Sinkhole, and at some point, its roof caved in. Zip ahead to the Pliocene Epoch, which occurred from 5 million to 1.6 million years ago. Earth's climate continued on a trajectory of change, as it had done for the previous 40 million years, from relatively warm and tropical (the Eocene Epoch) to cooler, dryer, and seasonal, similar to our modern climate. Forests were declining, grasslands and savannahs were increasing. The Pliocene was part of the “Age of Mammals” following the extinction of the dinosaurs and many other species. The animal life must have been spectacular. Ground sloths, giant beavers and camels were found in North America. This is when the Pipe Creek Sinkhole, then an ancient wetland, trapped the fossilized remains of many animals living in this area at the time.

Zip ahead again, to the Pleistocene Epoch, the epoch of the ice ages. Pleistocene ice sheets formed and subsided from 2 million years ago, until about 11,000 years ago, when the last, the Wisconsinan ice sheet, retreated. These ice sheets eroded landscapes, and carried and deposited sediments from thousands of miles distant. Most of Northern Indiana is buried under massive quantities of glacially-born debris. It was only the fortuitous protection of this sinkhole that protected these fossilized remains. Had they been closer to the surface, the force of the massive ice sheets would have

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### MISSION STATEMENT

The Tippecanoe Audubon Society supports conservation and environmental education to promote appreciation, understanding, and preservation of birds, other wildlife, and diverse ecosystems for present and future generations.

Tippecanoe Audubon Society, Inc.  
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## Bird of the Month – Ruffed Grouse

by Bruce Ruisard

The Ruffed Grouse (*Bonasa umbellus*) can be found from across Canada to Alaska, in the Pacific Northwest, parts of the Rocky Mountains, in the upper Midwest, down the Appalachian Mountains, and even in parts of Georgia. Some have also been found in Iowa and Missouri. What a wide range they inhabit! In Indiana they were once more widespread. Except for a brief period when they survived in northern Indiana, they have mainly been found in southern Indiana. They are now found only in four or five counties in south-central Indiana. They do not migrate and are permanent residents throughout their range. They are considered important game birds and are hunted in most of their range.

In northern Indiana they were previously found at or near the Jasper-Pulaski Fish and Wildlife Area near Medaryville. Wild trapped birds were released in northern Indiana from 1961

to 1982. There in 1985 I observed a female with three young and also heard two drumming males. I also flushed a single bird in 1989. Park manager Jim Bergins, in a phone conversation, reported no reports of grouse for the last two years, and said they went into decline around the year 2000. He also stated that due to limited habitat, no future releases of live wild birds are planned.

Ruffed Grouse are fairly large, chicken-like birds. Their plumage is mottled gray and brown and functions exceedingly well as camouflage. They have a prominent dark band near the tip of the tail and a tuft of feathers on the sides of the neck that can be erected into a “ruff”.

Ruffed Grouse have specialized habitat needs. Most live in northern habitats where certain species of poplars are common. Mid-sized Aspen trees, touched by fire, are the best habitat for these unique birds. South of Can-

ada, young stands of Oak and Hickory are the best habitat. Indiana birds are at the far end of their range: other southerly populations live at higher elevations of over 2000 feet. They prefer scattered pines for safe winter roosting. They are believed to be a “transitional species during natural succession from grassland to mature forest, and to a limited extent, a permanent but minor part of the temperate forest community”. Male Ruffed Grouse need a habitat that includes secluded areas that offer both cover and visibility, and a dead log for drumming. Habitat must also include shrubs that produce food such as berries and seeds. Males inhabit, and never leave, about 5 acres of woods, while females may range territories of up to 25 acres which would include the territories of several males.

The drumming behavior of the male is a truly unique behavior, triggered in the spring by increasing

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