

Stockbridge Audubon

Representing Northeast Indiana
46864

P.O. Box 13131, Fort Wayne, Indiana

Peter Hurley to Address Spring Meeting: The Ecology of North and South Manitou Islands

Date: Sunday, April 24, 2005
Time: 2:00 PM
Location: Achatz Hall
University of St. Francis
2701 Spring St., Fort Wayne

The presentation at the general meeting on April 24th will focus on the effects of intensive over browsing by deer on vegetation and some of the trickle down effects of this phenomenon on birds and other animals.

Ecologists have long known that excess browsing changes ecosystems in unfavorable ways, but rarely do they get a chance to study **two virtually identical ecosystems, one with deer and one without**, as is the case with North and South Manitou Islands in Lake Michigan.

For the past three years Peter Hurley, a doctoral candidate, has been the architect and chief researcher of a study on these two islands. North Island was at one time severely over browsed by deer, the population rising to more than **10 times its carrying capacity**.

South Island, on the other hand, while only a few miles away, never had any deer.

A few years ago the National Park Service included these Islands in the Sleeping Bear Dunes National Lake Shore, and now the deer population on North Island has been reduced to carrying capacity levels while South Island has been kept deer free.

Peter's work, funded by a

National Park Service grant, is designed to reveal the effects of over browsing by deer on the biota of North Island, comparing it to South Island which has never been browsed. Peter's presentation will be an interesting and important talk.

Since Peter is also an expert birder, probably he will comment on the birds of the Manitou Islands, also.

Hope to see you on the 24th.

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President's Remarks By Julie Henricks

As this is written there are a few stray days of winter left, but despite temperatures in the teens this morning, spring most certainly is in the air. A lone song sparrow has been singing his heart out from my trees for the past several days, even during a weekend snowfall. The horned larks' calls are becoming more melodious. Regiments of red-winged blackbirds have posted sentries all along my drive to work. My Nebraska friend reports that the sandhill cranes have arrived on the Platte. No matter the lingering cold: all of these birds sense that warmer days are inevitable, and they act on that instinct. In so doing, they tell us that there is hope. This reassurance is for me the most sublime conclusion to a dark, dreary season.

WEBSITE NEWS From Roger McNett

Our new website is being developed to inform others of who we are, what we are about, and so that you can be better informed and kept of what might be helpful for you. You can see it at <http://members.aol.com/StockbridgeAS/>. It would be very helpful if you will tell us what information we should have on the website that would be useful to you. Please send all your suggestions to Roger McNett at 749-4987 or to mcnett04@att.net.

Big May Day Bird Count

On the second Saturday in May each year, Indiana Audubon

Society sponsors the Big May Day Bird Count. Birders all over the state survey their respective counties and report the numbers of each species of bird they see that day. This year the count is held on May 14.

This day is chosen because it is normally close to the peak of spring migration; for example, there is a reasonable expectation that 30 species of warblers will be seen in Allen County that day. This is an excellent time to be out and learn more about our birds.

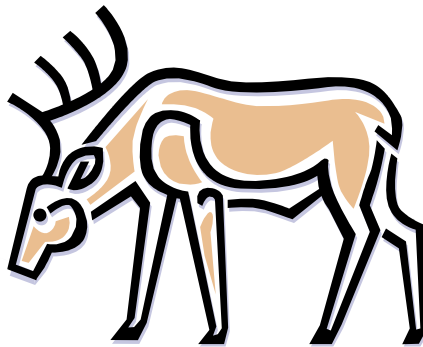
The count is conducted by a number of parties, each made up of two to four observers, at least one of them an experienced birder.

Even if you can't tell a hawk from a heron, you can make a significant contribution, because the more eyes there are, the more birds will be seen. The more experienced birders will be on hand to help with identification.

For more information, or to volunteer for the count, contact the compiler listed below.

Allen County: Ed Powers 638-4291 zzedpowers@aol.com

Noble County:
Ted Heemstra 484-4385



Predators as Keystone Species

By Dick Hurley

In a series of classic experiments during the 1960s, Robert Paine, examining the food web diversity in tidal zone communities, demonstrated

that the removal of the top predator (a starfish) decreased the species diversity of the communities. When the predator was experimentally removed, the species diversity fell from 15 to 8. Reintroduction of the predator restored the number of species to the original 15. Based on his studies of these spatially limited communities, Paine proposed that the feeding activities of a few species may have inordinate influence on community structure in spite of their relatively small biomass, and he suggested that these species be called **keystone species**. This concept proved to be an extremely robust theory and its application to a variety of different communities, regardless of size, has become widespread.

On a more homely note, we are all familiar with some aspects of this principle in Indiana, since we know that when deer exceed their carrying capacity their feeding activities can bring about a marked decrease in species of wildflowers and woodland shrubs, and alter forest succession in communities recovering from logging, fire and wind damage.

During pre-settlement times, the deer population was maintained well below its carrying capacity by a variety of predators including wolves, bears, cougars and the indigenous people of the area. **During the 19th century the predators were systematically extirpated and the deer were over hunted to such an extent that by 1914 they too were gone.**

Shortly after the deer had disappeared from the state, the DNR re-introduced them from the neighboring states of Wisconsin and Pennsylvania. Initially, they were protected but after the Indiana herd began to build up to pre-settlement levels, a limited hunting season was established. In the 1960s, deer were still a relatively rare sight in an Indiana woodlot. By the 1980s, deer were common and during the 1990s the herd had exceeded the carrying capacity of many areas to such an extent that deer were being blamed for altering the structure of state parks and forests.

How did this happen? A moment of reflection and many of us can supply the answer. A large herbivore

was re-introduced into the state and the predators which were largely responsible for maintaining the population at or below carrying capacity were left out of the equation.

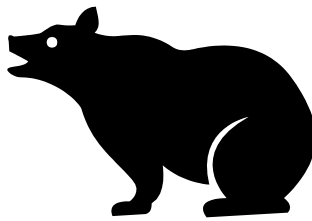
Humans were the only predators left, and their hunting activities were drastically curtailed by game laws. Under these conditions the deer population grew exponentially and it began to reduce the productivity as well as the diversity of the ecological systems upon which it was dependent.

Forest diversity began to decline as wildflower species disappeared along with the lower woody strata of shrubs and trees upon which the deer fed. Thus, the effect of removing the predators has led to an ecological catastrophe of sorts, and as in the starfish community studied by Paine, food web diversity declined. Now, it is no good to argue that we should introduce large natural predators back into the state. That is not going to happen. But the situation should force us to ask what we want our remaining "natural areas" to become? Nature untrammelled by man wasn't a reality even during pre-settlement times. In today's Indiana it is a fantasy! Humans are a part of the equation.

As we begin to understand the effects of our actions we must ask what we want our natural areas to become and then manage them accordingly. The alternative, of "letting nature take her course" to return these systems to a state resembling "pristine" pre-settlement condition, is not realistic since we have removed the keystone predators that might have made this possible. Realistic management is the only alternative if we wish to see spring wildflowers and birds persist in our natural areas for the long term.

Good studies of the effect of deer over browse on floristic diversity, ecological succession and success of breeding birds are relatively rare and much of what we say we know about these phenomena is inferential and not empirical. Good ecological field studies often depend on the

environment creating what is in effect a rare "natural experiment;" conditions under which nature manipulates the variables rather than an experimental scientist in a lab. One such area is the Sleeping Bear Dunes National Lakeshore and its two offshore Islands, North and South Manitou Island in Lake Michigan. Peter Hurley is beginning his fourth year of study on these Islands and will present some of his findings to us during our general meeting on April 24th. Plan on being there!



SPEAKING OF PREDATORS...

John Castrale, DNR biologist, has just confirmed the existence of a **new eagle nest in Wabash Co., near the town of Lagro**. This nest was first noticed by Lynnanne Fager, a member of the Mississinewa Audubon Chapter. To get there, take US 24 west from Huntington to Lagro. **Take your scope!** Cross the bridge going south over the Wabash River (look for eagles perched near the bridge), take the first right, then another right on Durnbaugh Road. This road goes up a hill and gives a good view of the broad Wabash River flood plain. In the tree line, you will see a big nest. **Maybe an eagle will be perched there!** (Historians: check out the old canal locks in Lagro while you're there.)

MORE GOOD NEWS:

At this writing, Fort Wayne's famous falcon pair, Freedom and Roosevelt, has started nesting in their box atop One Summit Square. You can see inside their box by going to the Stockbridge website, link to Soarin' Hawk, and use the drop-down menu to choose FalconCam. The picture is refreshed

every 30 sec. during daylight hours. **The eggs have started coming already!**

MAYBE WE CAN'T SAVE ANWR, BUT WE CAN SAVE THE LITTLE RIVER

WETLANDS. Paul McAfee, past president of Stockbridge, and now Executive Director of Little River Wetlands Project, has asked us to enclose a letter telling us that they plan to protect a large area of the old glacial sluiceway north of Fox Island, including the Engle Road ponds where an eagle was sighted last year. Even non-birders have commented on the many Great Egrets seen there. Stockbridge board members feel this is a worthy project and have approved the inclusion of Paul's letter in our newsletter. **Please help if you can!**

FIRST FIELD TRIP OF THE SPRING by Ed Powers

Ten birders gathered at Michigan City Harbor on Saturday, March 19, led by Jeff McCoy and Ed Powers. We didn't find some of the recently-seen birds we had hoped for, but we nevertheless had a good day birding.

There were Red-throated Loons at the harbor, and we saw one of the first Tree Swallows of the year. The reliable Peregrine Falcon was perched on the power plant smoke stack. On Beverly Drive, a Virginia Rail responded to a recording of its call. A Northern Saw-whet Owl was in its accustomed place in Tremont.

The highlight of the day was a colony of Monk Parakeets, recently established in Hammond. For most this was a new state bird!

The trip ended at the Hammond Marina, with a Surf Scoter in a raft of Greater Scaup.