



CENTER LINE



A Publication of Waukesha County's Retzer Nature Center

Ask a Biologist!

Here are two questions that came my way earlier this year.

Native pollinators and increasing prairie plant diversity.

1. I planted a one acre prairie about ten years ago. The seed mix was not as diverse as I had hoped, but I have kept out most of the weeds. I burn occasionally to keep out the brush. My question is, is it too late to add more plant diversity? I have read of the serious decline in native bee populations, and my goal is to manage the prairie for maximum benefit for pollinators.

This is a great question. In fact, there is a growing interest nationwide in helping the native beneficial insect populations. Besides the importance of pollinators, you will also be helping the predatory beetles, assassin bugs, lacewings, and parasitoid wasps. These native insects help prevent outbreaks of pest insects, and keep agricultural pest insect populations in check. This is one of the benefits of "nature's services" that improve agricultural production for people as well as providing sustainable habitat for many other types of wildlife.

The goal is to achieve a continuous bloom of flowering forbs from spring through fall. Most seed and plant dealers can provide a list of blooming dates. The basic necessities include habitat for nest colony sites. Many species of native bees will make use of abandoned mammal burrows, brush piles, rock piles, and decaying logs. They also need a clean water source within one-quarter mile. Habitats should be away from areas of high mortality such as roadways, pesticide treated areas, and areas cut off from other suitable sites for dispersal and maintaining a healthy gene pool.



FALL 2015

In this issue

Ask the Naturalist

Page 1-3

Roger Tory Peterson

Page 4-5

The Last Prairie

Page 6-7

Special Events

Page 8

Upcoming Events:



- * Retzer Building Closed
November 26
- * Retzer Building Closed
December 25
- * JanBoree
January 17
- * Wild Winter Night
February 6

Check out the EE Activity Guide for classes and events offered through the year!

EE Activity Guide

Log on to

www.waukeshacountyparks.gov

for more information.



The quickest way to see results is to add native plants grown in pots. Your soil type and moisture holding ability will dictate which plant species will do best. You can either buy plants or you can start your own from seed. Yes, this means hundreds of plants, but you do not have to do it all in one year. To start your own seed use plastic or wooden trays with potting soil set out along the north side of a building. The seeds can be sown from November through January. I have success starting seeds through most of February. The trays must be covered with quarter-inch, or half-inch hardware cloth to keep mammals and birds from eating the seeds. After the seeds sprout and get their first true leaves they can be transplanted into progressively larger pots. By August, most species will be a respectable size. Planting out in the field should occur after the summer dry period. September and the first half of October is the ideal time. The fall rains and moderate temperatures allow the plants to get rooted quickly and build up reserves to survive the winter and have a healthy start in spring. A note of caution, I spoke with one person who purchased 100 prairie plants in two-inch pots and planted them in clay soil. A few days later there was a hard rain, and the plants were not yet rooted in. All the plants had been popped out of the ground by the heavy rain. I prefer air-pruning pots, these allow the plant to grow a very strong root system that has a minimum of transplant shock. In clay soils, it is always worth the effort to add compost or a mix of compost and torpedo (very coarse) sand. Never add sand to clay without compost.

If you need more information on native pollinators, a quick search on the internet will give you many sources of publications concerning the recovery efforts for our native pollinators.

Declining muskrat populations: Starvation, predation, disease, or what?

2. I have a five acre wetland on my land. It is bordered along one side by a small stream. Part of the wetland is a cattail marsh and had 20 muskrat lodges. Late last winter I saw an animal trail going from one muskrat house to another. Individual foot prints were not visible in the 12 inch snow, but the body was about 7 to 8 inches wide. All the houses were ripped open. What could have done this? Also, I did an internet search and learned that muskrat populations have strongly declined throughout most of their range in the U.S. and Canada. Why?

First, it was most likely an otter that had ripped open the muskrat houses. These houses are usually made of cattail leaves. If it was lucky, the otter may have a muskrat for a meal. Most (or all) of the muskrats escaped under water at the first sound of a, "predator at the door". The muskrats sometimes move to a new area or rebuild an older house, or if the marsh or stream has a raised bank, the muskrats will burrow (20 ft. or more) from below the water line back and up underground, to create a below-ground den above the water line.

Within the 48 contiguous States most wildlife biologists and trappers are concerned about a significant decline in muskrat populations. This decline has been going on in some states for at least the past 10 to 20 years. I recently attended an information meeting at the DNR Horicon education center. A graduate student presented her findings, which ruled out food shortages, disease, or lack of cat-tail marshlands. Predators can have a local impact on muskrat populations, but not across a multi-state area.

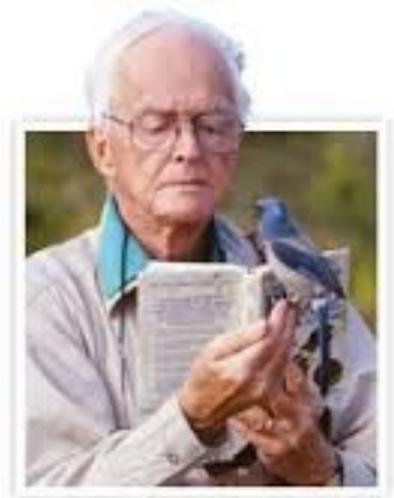
The wildlife managers are concerned because Horicon is the world's largest cat-tail marsh. Muskrats are the, "engineers" of the marsh. They feed on the cat-tail stems in spring and summer and the roots the rest of the year. This creates open water areas in the marsh for migration waterfowl and many other species. Without the muskrats, all cat-tail marshes will eventually close and be of little use to waterfowl. Muskrats will feed on a variety of aquatic plants, freshwater mussels, frogs, etc., and some do live in areas without cat-tails, but the overwhelming number of muskrat populations depend on cat-tails for food and lodge construction. A regulated trapping season on muskrats keeps population stable by preventing populations from going from boom to bust.

Researchers across the country continue to examine this problem. They may find different reasons in different states, but at Horicon they know that the marsh is getting shallower. It is the nature of marshes to catch and hold soil suspended in streams and rivers. These small particles of erosion come from rain water washing over roadways, urban areas, suburbs, farm land, and construction sites. When these particles settle in the marsh the water gets shallower. Muskrats want water deep enough to escape their house under the ice when an otter or coyote or mink tries to rip into it. If the water is too shallow, they simply leave the area. When this happens, and there are no good places to go, muskrat mortality can be very high, and recolonization will not happen.

R. Bautz

Roger Tory Peterson: (1908-1996)
Artist, Naturalist & Author of *A Field Guide To The Birds.*
10 INTERESTING THINGS HE DID AS A KID.

“A small book tucked away in innumerable backs-packs and car pockets, ever ready to hand for perhaps the majority of birders in the United States , is quite likely to be Roger Tory Peterson’s *A Field Guide to the birds*, first published in 1934, revised and reissued several times, and still a must-have for many birder-watchers, serious or otherwise.” (Now there are field guide apps for your smartphone too). In addition to birds, Peterson was enthusiastic for all the natural world. Retzer’s gift shop sells a variety of other Peterson guides besides bird books, with topics ranging from wildflowers, mammals, insects, astronomy and more.



I’ll share with you some interesting nature-influenced activities he did as a kid. I can relate to some of them in a way. Perhaps you can too!

He had freckles as a kid, tried to get rid of them with Stillman’s Freckle Crème in regular strength, then in double and triple. It did no good. He still had freckles as a man.

He loved exploring to be “as free as a bird “outside in the fields where he grew up in Jamestown, New York, where he was born in 1908.

When he was around 11, one of his teachers started a Junior Audubon Club which fueled his developing passion for everything from birds to butterflies, flowers and turtles. In this Junior Audubon Club, sponsored by the National Association of Audubon Societies, the members bought for ten cents, ten little leaflets about birds. Each one had four pages of text, with a colored picture by a reigning bird artist of that time- and a page for the student to color.

Sometimes he arrived at school with such things as snakes, toads or bird eggs in his pockets, sometimes smelling like a skunk after catching one in a butterfly net.

So he could take pictures of birds, he got a job as a newspaper delivery boy to pay for a camera. On his newspaper job route, Rodger would stop at his bird-feeding stations to put out some sunflower seeds. Sometimes he was late to school because of this.

Roger had no interest in pulling weeds or mowing the lawn. He said, “Why should we mow the lawn? Let the grass grow and song sparrows can nest in the shrubbery.” Later in life when he was grown-up, he admits that he “might easily have become the most notoriously bad boy in my home community had it not been for birds.”

Colors fascinated Roger. He painted birds as a part of assignments in school. In one class the teacher had them copy in watercolor some of the pictures from a book about birds of New York. Roger painted a blue-jay. He always liked them. He said, “Blue-jays have a lot of character. A blue-jay is just as I AM.”

At age thirteen, Roger won a drawing contest sponsored by a local newspaper. He used his father's \$5.00 gold fountain pen to draw a sketch of a banded purple butterfly. The fountain pen was ruined and Roger was punished. But he won the contest and \$2.00, and when the newspaper printed the sketch it said, "Roger Peterson, age thirteen, has sent us a very clever drawing."

Roger did well in mechanical drawing and liked English in school. He became enthusiastic about creative poetry and wrote many poems with nature based themes.

He read books and studied how artists painted birds. The book, *The Two Little Savages* by Ernest Thompson Seton, influenced Roger a lot. This classic story about the adventures of two little boys who lived as Indians and what they learned became his bible. Roger sympathized with Yan the main character in the story. Yan wanted to run away and be free, as did Roger. He also found inspiration in Seton's two hundred drawings in the book and his detail in bird identification. "In the introduction to his first field guide, *A Field Guide to the Birds*, Roger wrote: "Those of us who have read Earnest Thompson Seton's semi-autobiographical Story, '*Two Little Savages*', remember how the young hero, Yan, discovered some mounted ducks in a dusty showcase and how he painstakingly made sketches of their patterns. . . ."

Janet
Seasonal Park Biologist



References: The World of ROGER TORY PETERSON an authorized biography by John C. Devlin and Grace Naismith.
http://www.encyclopedia.com/topic/Roger_Tory_Peterson.aspx
<http://www.houghtonmifflinbooks.com/peterson>
<http://archive.audubonmagazine.org/features0807/tribute-webExclusives.html>

THE LAST PRAIRIE



Let Us Prey

There is a legend... a legend of a predator with an innocent posture... a legend of morphological piety combined with a lightning-fast attack... a legend of nature at its finest. When you encounter this legend, it looks like it's praying. Perhaps it's just comfortable that way, or maybe this is the best pose to grab a meal. Heavens, for all you know it might actually be praying. Then it moves, and fast! So fast that you missed it, but it didn't miss the poor Mosquito (many thanks) it is now consuming. You're fascinated, and move in to investigate. It's amazing, it's small, and... it's a fly?

Are they flies or are they mantids? Either way they pray and prey. A nature center visitor brought in what he thought was a tiny Praying Mantis. He pointed out the forelegs, which definitely looked like the tucked appendages of the iconic insect. It had an elongated neck, which extended to a triangular head with large, compound eyes. Most things seemed to fit... except the wings. It had one pair of transparent exposed wings, with no way to 'unexpose' them behind a mantid's protective forewings. It also looked fully developed and awfully small. Those and other observations meant our little visitor didn't fit into the Mantid family. So, where does that leave us?



Our patron's curious insect was a Mantidfly. The family Mantispididae is where Mantidflies reside. The full taxonomic branch is: Kingdom Animalia, Phylum Arthropoda, Subphylum Hexapoda, Class Insecta, Order Neuroptera (Antlions, Lacewings, and Allies), Suborder Hemerobiiformia, and Family Mantispididae. They are definitely flies (after a fashion – true flies are in the order Diptera) and definitely good at what they do, which is catching small insects. They're relatively small themselves, reaching only about an inch from head to wingtip. Getting this petite predator down to genus and species is a little more difficult. As I don't have the insect in front of me, our patron (who took it home for release) likely brought in *Dicromantispa sayi*, which only seems to have the common name "A Mantidfly". It was definitely not a Brown Mantidfly (*Climaciella brunnea*), which has dark markings along the entire outer edge of the wings, is a very good wasp mimic, and has the privilege of "Brown" to distinguish it.

Before any of the Mantispididae can be diminutive, yet impressive adults, they must be eggs and larvae first. Adults lay eggs in clusters on foliage, and a given line can produce one or even three generations in a year. The carnivorous larvae are predatory and/or parasitic, meaning they take prey until they find a larger food source. In our area, they are likely spider parasites, which drops them down a notch in this author's book (not really – nature is nature after all). They can attach to the spider's pedicel, and make their way into the arthropod itself, nourishing themselves on **haemolymph** (analogous to blood in vertebrates). This does not usually kill the spider, but growth is stunted. Mantidfly larvae can also switch hosts during fights, cannibalism, or mating if necessary.

Often, they enter a spider's egg sac during its creation, but they can also drill/chew into completed sacs. They may even take advantage of wasp's nests when available. Places like these are where they usually overwinter, waiting to the following year to pupate into the final adult form or **imago**.

The adults hit their stride from June through September, fooling humans everywhere into believing they saw tiny Praying Mantises. Like Praying Mantises, they have an elongated **prothorax** (the area right behind the head). They also have highly-modified forelegs for catching prey. Using ambush tactics, they fill their bellies with things that crawl, things that fly, and things that creep around on the ground. You could call these tactics lazy, unfair, and craven—or even smart, efficient, and precise depending on your point of view, but nature is as nature does.



You should know that there are at least two actual mantids in Waukesha County, but none are native. The European Praying Mantis (*Mantis religiosa*) and the Chinese Mantid (*Tenodera sinensis*) are both huge insects, and are now beginning to successfully overwinter in Wisconsin due to milder average temperatures during the dormant season. A quick digression: most of us say 'mantis', although they are more accurately called mantid—the only ones that are usually called 'mantis' is when it is their actual name, like the European Praying Mantis (not all mantids, even though they look like they are praying, are called praying mantis). Don't think too much on this; even the pros use both in the literature and guides. There is a native mantid in the Great Lakes Region more towards the south and east. The Carolina Mantid (*Stagmomantis carolina*) is close to us, making it into southern Illinois at the tip of its range.

So, it is still entirely possible to encounter an insect large enough to elicit screams; screams you swore sounded just like they came from young children, although there are no kids nearby.

Mike

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Upcoming Events



Friends of Retzer Nature Center
Photography Contest
Reception Sunday, November 1
1-3 pm
Deadline for photo submission is
October 28 by 4pm

Nature Explorers
Ages 5-7
Fee: \$4
November 9

"Should I Stay or Should I Go?"

Saturday Naturalist
Landscape Volunteers

November 7
November 14

9 am - Noon & 1 - 3 pm

Meet in front lobby of Environmental
Learning Center

Wee Wonders
Ages 2-4
November 10

"Turkey Lurky & Friends"

Family Adventure Hikes - Saturdays
Fee: \$4.00

October 10	10 - 11:30 am
November 14	8 - 10 am
November 21	8 - 10 am



**Just Hanging Out!
Our Snowshoes a Are Waiting For Winter.**

Winter is a great time to enjoy a fun family activity .
Retzer Nature Centers offer a variety of Snowshoe programs
and rental options for you & your family.

Winter Wildlife on Snowshoes

Most Saturdays in January and February
9-11 am & 1-3 pm
Fee: \$5.00 per person

Snowshoe Rental

Available daily from 8am- 4pm
1/2 day \$5.50
Full day \$9.00

Free use of snowshoes during
JanBoree January 17
Wild Winter Night February 6

Snowshoeing is dependent on snow cover.



RETZER NATURE CENTER

WAUKESHA COUNTY PARKS & LAND USE

S14W28167 MADISON STREET

WAUKESHA, WI 53188

Return Service Requested

Friends of Retzer Nature Center

The Friends of Retzer Nature Center is a registered, 501 (c)3, organization dedicated to encouraging, perpetuating, and promoting the work of conservation and natural resource education.

The organization seeks the involvement of the community in the form of financial and volunteer support to work toward the continued growth and improvement of Retzer Nature Center. If you would like to become a member or view some of our projects and activities, please visit our web site at <http://FriendsOfRetzer.org>.