

The Dunesletter

A Publication of Woodland Dunes Nature Center and Preserve



A note from a grandfather

Four of our grandkids—Naomi and Leon from Japan and Megan and Ben from Indiana—were accompanied by their dads, Dan Stuntz and Reg McBreairty, on a visit to Woodland Dunes for a session of Little Wings Playtime, which was held on Thursdays throughout the summer.

They were enthralled by the musical hammock in the play area and viewed a nearby prairie. Then they learned about collecting nectar and pollen and fanning queen bees. Next they were able to taste honey served by one of the dedicated WDNC volunteers. Many thanks for a special time!

Pete and Judie Stuntz

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From the Director

I hope you had a wonderful summer. I certainly did. Our summers seem so brief and winters so long that I feel it is especially important to get outside while we have the chance, and to appreciate the incredibly rich and complex ecosystems that envelop us. I was fortunate to be able to visit the Boundary Waters again for a week-long family retreat. While there, we paddled in about a half day's distance, with a couple of portages thrown in, until we stumbled upon the perfect campsite. We had a gravel beach for swimming, tent sites on top of a large Laurentian bedrock formation high above a large lake, and some blueberries and chokecherries for treats, plus sumac for making lemonade.

Large birds—ravens, turkey vultures, broad-winged hawks, ospreys, merlins, and bald eagles chased by peregrine falcons—soared overhead along our ridge. We found we could view them best from a sleeping pad laid on the rock, a practice which resulted in more than one afternoon snooze. Five or six loons at a time could be heard or seen on our and adjacent bays day and night. Our campsite was actually the home of a family of white-throated sparrows, who continued to forage beneath the bushes despite our rude homesteading. A ruffed grouse frequently worked the edges of the clearing. Our morning alarm was a red-breasted nuthatch, and migrating warblers and thrushes unobtrusively moved in the trees around us. Dragonflies of several species snatched mosquitoes and deerflies obligingly, although one was snatched itself by an immense orb-weaver spider.

On our trips, we don't seek to conquer nature, but to hear it by toning down the cacophony of our everyday lives. I am so grateful that my family enjoys these trips as much as I do. I value every minute spent paddling, birding, studying plants and animals, reading, and resting. One day we decided to take some time to identify as many of our fellow wood-citizens as we could, making a list that extended for four pages of two columns in the notebook. Perhaps because we had relatively few belongings along, we felt thoroughly immersed in nature, and happy that we were.

It's hard now to imagine the controversy that raged when the Boundary

Waters was set aside as wilderness, and later when air traffic over the wilderness was restricted. Or to imagine that someone like Sigurd Olson could be vilified for his wilderness advocacy. But the same response was heard when **Woodland Dunes** was proposed. It was seen by some



Members of the Chamber of Commerce gathered at Woodland Dunes and met staff and board members during an After Hours event in August.

Coming Events

The Wonder of It All Rotational Grazing

Wednesday, September 14 • 1:00 to 3:00 p.m.

Join us for a trip to *Proud Heritage Jerseys Farm* to visit with Ben and Amy Voss and learn about their agricultural and environmental practices. Meet at the Nature Center at 12:30 p.m. or call for directions to the Maribel farm. Sponsor: The Dominion Foundation.

The Wonder of It All Fungi

Wednesday, October 12 • 1:30 to 3:30 p.m.

Becky Abler, professor from UW-Manitowoc and fungus expert extraordinaire, will join us for some fungi fun. Build your knowledge with an indoor program, then stroll through the woods to see what we can find. Sponsor: The Dominion Foundation.

Five Buck Hootenanny

Saturday, October 22 • 7:00 to10:00 p.m. \$5.00 (\$2.00 under 12)

A double header! Listen to folk, gospel and more from Good News as they take you back to the Folk Revival. Fritz Schuler will play American traditional roots music from finger-picked country blues to Appalachian banjo tunes. Held at Woodland Dunes Nature Center. Doors open at 6:30 p.m.

Enchanted Forest

Saturday, October 29 • 5:00 to 8:00 p.m.

Members, \$3; Nonmembers, \$4

Children 2 and under free

Journey through a candlelit forest to meet some of Mother Nature's favorite (costumed) animals. The outdoor self-guided hike has surprises around every turn; indoor space and warm refreshments will be available. Visit the bone yard, try the pumpkin toss and join in other fun activities. This will be an educational evening, not a scary one. Please wear costumes and warm clothes. Please call or email to register for a tour time.



Members: Family, \$10 ; Individual, \$5

Non-members: Family, \$15 ; Individual, \$8

Celebrate the fall migration of the northern saw-whet owl. Owl banding and release demonstrations, children's activities, guided hikes and more. Featuring animal rescue organization Wildlife of Wisconsin (WOW) and their live birds.

Basic Broom Making

Monday, October 31 • noon to 4:00 p.m. Fee: Members, \$40; Nonmembers, \$45

Discover the craft of making brooms. Little John will teach you how to make a broom for decorative or functional use. Students will learn to make one round or one flat hearth broom (your choice). Handles of various woods have been gathered and cured for you to use; all materials are provided. Discussion about decorative options will be included. Wear closed-toed shoes and bring a sharp knife and scissors. Call 793-4007 or email kellye@woodlanddunes.org to register.

The Wonder of It All

Anaerobic Digesters

Wednesday, November 9

Check our online events calendar for more information. Sponsor: The Dominion Foundation.

Getaway with the Dunes: Key West

(See information next page.)

The Wonder of It All
Wisconsin Logging History

Wednesday, December 14 • 1:00 to 3:00 p.m.

Learn about Wisconsin logging and sawmill history with Bob Walkner. See tools that shaped our state and get a glimpse of our Wisconsin past. Sponsor: The Dominion Foundation.

Herbal Gift Making: Offerings from the Garden's Bounty

December 8 • 6:00 to 8:30pm Member \$30; NonMember \$35.

Join herbalist, Linda Conroy for this hands on, fun and inspriing class. We'll make handcrafted herbal products including an herbal lotion, infused oil, dream pillow, felted soap, body spray, potpourri and much more! Additional supplies will be available for sale if participants would like more than one of each item in class or at home. Herbal tea will be served at this festive class!

Save the Date

Spring has Sprung Herbal Series Shoots, Sprouts and Flowers

April 26, May 3, May 10 and May 17, 2012 Member \$115; Nonmember \$120

Did you know that young yellow dock leaves contain a substance that relieves the irritation from stinging nettle? Did you know that cooking, pulverizing and drying stinging nettle, takes away the sting and leaves one of the most nourishing plants on the planet. You'll learn all of this and more! Join herbalist and wild crafter Linda Conroy for this fun and inspiring herbal series. We will visit the early plants of spring and learn plant lore and applications for food and medicine passed down throughout history. Leave inspired with information, recipes and an herbal first aid kit, for the bites, stings and irritations of spring.

For information, call (920) 793-4007 or check our website at www.woodlanddunes.org.
Unless noted, all events are held at the Nature Center.

Coming Events

Getaway with the Dunes

Key West in Two Rivers

Saturday, November 12 • 5:00 to 9:00 p.m.
Admission: \$15 per person

Tropical Fun in Cool City! Don't pack away your beach shorts, tropical print dresses and flip flops just yet. Keep them handy for *Getaway with the Dunes*. You'll feel like you've escaped to sunny Key West when you join us in the Behringer Room of the J.E. Hamilton Community House in Two Rivers. Sip on thirst-quenching beverages at the cash bar, including our signature tropical drink. Nibble on scrumptious appetizers while you peruse the silent auction items and themed baskets. Be entertained by Jimmy Buffet sound-a-likes and play a few rounds of silly games. Take a chance on the 50/50 raffle. Laugh with friends and feel good knowing you are helping to raise critical funding that allows Woodland Dunes to be open to the public, protect the preserve, and provide environmental education. (*This event replaces our previous fundraiser, the Harvest Dinner*.)

Please show your support and commitment to our organization and join us for *Getaway with the Dunes*. Admission includes appetizers and an entry into a drawing for a fabulous prize. Drawing will be held at the end of the night; winner must be present to claim the prize. A live auction will offer exciting items like Packers vs. Raiders tickets for December 11 game, a Super Bowl football autographed by Packer John Kuhn and a framed autographed photo of Bo Ryan (UW-Madison basketball coach).

Space is limited; reservations are advised. Please call (920) 793-4007 or email Jessica at jessicaj@woodlanddunes.org for more information, or check our website soon. Tickets will also be sold at the door.



Volunteers from Grace Congregational Church work on a structure in the Little Wings Natural Play Area.

cont. from page 1

as restricting the potential for the economic growth of the city.

A member of a group I led out on the river remarked that he had thought our preserve was a bad idea at the time, but now he sees the need for preserving natural areas and their benefit to the community.

I worry that many people don't see their place in the natural world, or think about their impacts on it. There is a Native American saying "We are all medicine for each other," meaning that we all influence everyone and everything that we contact in either a good or bad way. I am gratified that Woodland Dunes is a place where wildlife is valued for more than its benefit for humans, and a place where nature can be objectively studied. For 37 years we have been doing that, and I think it is good medicine indeed.

This fall, we'll be busy as always, with school groups hiking into the beautiful forests and fields. Thanks to a generous donation of plants from Prairie Nursery, we are reintroducing prairie species into a sandy meadow on the Ice Age Trail. And help from the Wisconsin DNR will allow us to increase our persecution of exotic invasive plants (two grant projects), and also begin two new water resource education programs. A grant from the U.S. Fish and Wildlife Service will allow us to compile years of bird observation data from along Lake Michigan in our area to help them better understand the movement of birds here during migration. Our Board of Directors has affirmed their commitment to maintain our programs at least at current levels—but as always we will have to work hard to fund our efforts. We hope to see you at our Getaway fundraising event this fall. If you are willing to help or contribute toward the effort please let us know.

Wishing you a rich autumn in the great outdoors.

Jim Knickelbine, Director

Unexpected Gifts



For years I have been fighting invasive plants at Winghaven. I don't have buckthorn or barberry, two escaped woody ornamental shrubs that plague Woodland Dunes. And honeysuckle, the third of Woodland Dunes' triumvirate of evil, is only a minor problem here. What I do have in dizzying quantities is dame's rocket (*Hesperis matronalis*), a showy, short-lived Eurasian perennial often mistaken for garden phlox. It was probably introduced here years ago as part of a wildflower mix. Now the woods are full of it, and worse, since it has self-seeded prolifically, it is well-established in the forest seedbed. We pull it out all summer and poison it each autumn, as recommended, and each spring it's as thick as ever. No wonder I expect only disagreeable plants to appear on their own. But sometimes I'm wrong.

As I was weeding a small, kidney-shaped garden bed on the southwest side of the house, I came across a plant that didn't look like a common weed. Fortunately I wasn't in automatic removal mode, and stopped before I pulled it out and tossed it on the compost pile. It was close to two feet tall, with compound leaves and long clusters of small white flowers. After checking my favorite wildflower reference book, *Wildflowers of Door County*, I realized I had a native baneberry, and, once the berries showed up, I could further identify it as red baneberry (*Actaea rubra*). It differs from white baneberry in having red fruit and leaves that are downy on the underside rather than smooth. Both are desirable.

I felt like I had been given a gift out of the blue. Focused on laboriously reintroducing native plants to Winghaven, I had forgotten that native plants have reproduced on their own for millennia. I've seen several white baneberries around, but I don't know of other red baneberries nearby. But there must be some within a bird's flight. Yellow-bellied sapsuckers, American robins, and brown thrashers all like the berries and could have deposited seeds. Or maybe they were lurking in the soil, just waiting for a chance to grow.

I started to wonder what else was lurking beneath the soil's surface, waiting for the right conditions to sprout. I know some seeds require fire, which they're unlikely to get here, and others require more light than they're getting now. And then there's the soil. I worry that those dame's rocket plants are alleleopathic, and will prevent desirable plants from making an appearance, although I can't find evidence that this is the case.

Soon after, in the same garden bed, I found another bonus: three white-oak seedlings. Maybe they came in with a load of county mulch or maybe they were planted by blue-jays, but because I found them before the rabbits did, I was able to protect them in time.

Paper birch seedlings have started to appear in the birch garden, where I planted a dozen saplings around a mature specimen in front of the house. When I come across the seedlings, I carefully transplant them across the driveway to a new garden where I also want birch and give them the protection of tree tubes. Deer and rabbits are constant enemies of new trees, but I also have an animal that likes to dig up any newly planted specimen and see if the roots taste good. (The woodchuck is under suspicion, but has not been caught in the act.)

Just yesterday I discovered another gift. A purple-leaved redbud (*Cercis canadensis* var, 'Forest Pansy') died last year, and I regretfully cut it down to the ground. It's now gone, but the rootstock must have survived because yesterday three slim wands bearing the tell-tale heart-shaped leaves were waving at me. I'll miss the cultivar's deep purple leaves, but look forward to the deep pink blossoms of the species come spring.

Best of all, there are the graceful gifts that bring a smile to my face on the cloudiest day. Small wildflowers have appeared where I replaced lawn with mulch and allowed the autumn leaves to make a new forest floor. So far I have discovered spring beauty (*Claytonia virginica*), Dutchman's breeches (*Dicentra cucullaria*) and its relative, squirrel corn (*Dicentra Canadensis*), all appearing on their own. I don't know how they got here, or if they were here all along, just waiting for an opportunity, but they are wel-

comed with open arms.

Now that I realize the plants I want may be lurking in the soil, waiting for an opportunity to grow, I dream of finding an American beech seeding. My efforts to establish transplants have failed, and although the seed is difficult to find (birds and mammals love it), I continue to hope for an unexpected gift.

Susan Knorr, Editor



Notes from Nature



Autumn James
Flurry of red leaves
Two bucks banging new antlers
Chill winds referee

Galls on goldenrod Clacking in woodland hailstorms Fall ping pong frenzy

Lilac bush moonlit Saw-whet shuffling on a branch Starting block ready

Besting wide highways Wooly bear caterpillars Long-distance victors

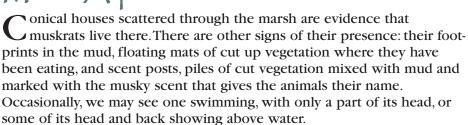
Quick daddy longlegs Scavenging fallen apples Post-game clean-up crew

Jean Biegun

The five poems above are in a form known as Haiku. It is both a poetic form and a type of poetry from the Japanese culture. It combines form, content, and language in a meaningful, yet compact form. Haiku poets write about everyday things. Nature is a common theme. Usually they use simple words and grammar. The most common form for Haiku is three short lines. The first line contains five syllables, the second line seven syllables, and the third line contains five syllables. Haiku doesn't rhyme. A Haiku must paint a mental image in the reader's mind. This is the challenge of Haiku—to put the poem's meaning and imagery in the reader's mind in ONLY 17 syllables over just three lines of poetry! Try it yourself it's an enjoyable challenge.

If you create a Haiku you'd like to share, please send or email it to Woodland Dunes.

Marsh Aquanaut



The muskrat (*Ondatra zibethica*) lives in marshes, or along rivers and lakes throughout most of the United States and Canada. It is absent in the far southeast, the southwest, and the frozen Arctic shores. It is a large rodent, with a head and body ten to fourteen inches long, and an eight to ten inch bare scaly tail that is flattened from side to side. Muskrats are lustrous dark brown on their heads and backs, and lighter in color on their under parts. Their hind feet are partly webbed, an adaptation for swimming. Like all rodents, they have large front teeth that grow continuously throughout their lives. They are able to close their mouths behind their front teeth, so they can chew under water.

Muskrats are excellent swimmers, propelling themselves with their hind feet and steering with their tails. They can remain submerged for about fifteen minutes and swim long distances under water. Except for a few clams, crayfish, frogs, and fish, they feed entirely on vegetation, such as cattails, sedges, rushes, and water-lilies. They are active all year, mostly from dusk to dawn.

Muskrat houses are built on a foundation of mud of the same plant material that they eat. The houses may be up to eight feet in diameter and five feet high. Along shores of rivers and lakes, muskrats make underground dens in muddy banks. Each house or den may have several entrance tunnels, all beginning under water. A nesting chamber is hollowed out in the center of each dwelling, above the water level. In these chambers the muskrats raise their young.

Four to seven young make up the usual muskrat litter, but there could be as many as eleven. They may have as many as five litters a year. The young begin to swim and dive when about two weeks old, after they acquire a full coat of fur. They are weaned when about a month old and are driven away soon after. They may travel up to several miles looking for a new home. They are mature when one year old.

Droughts and floods are the chief natural hazards for muskrats. Their main predators are mink, raccoons, and otters, though owls, hawks, and snapping turtles may take a few. The activities of man, such as draining marshes, introducing alien plants, and trapping, take the greatest toll. Nearly ten million muskrats are trapped each year to make coats from their dense waterproof fur. Despite all these dangers, muskrats have remained numerous because of their high reproductive rate.

John Woodcock, Board Member

Plants to the Rescue!

V7 hile we were walking along a street in in Denver, Peter Weber. a friend of mine since childhood. pointed out a tree of heaven. It reminded me of sumac because of its compound leaf structure, but was otherwise uninteresting. However, this tree provides more than shade from the hot Denver sun. Peter explained that in addition to surviving in poor quality air, the tree of heaven scrubs the atmosphere, removing sulfur dioxide and other toxic gasses. It even removes soluble mercury from soil. In fact, most deciduous trees and shrubs perform detoxification functions in the environment; the tree of heaven just has a more poetic name.

The tree of heaven (Ailanthus altissima) was brought here from China in the 1780s as an ornamental tree capable of growing in poor soils and contaminated air. Its claim to fame, however, came in 1943, when Betty Smith used it as the central metaphor in her book A Tree Grows in Brooklyn. She wrote in her introduction: "There's a tree that grows in Brooklyn. Some people call it the Tree of Heaven. No matter where its seed falls, it makes a tree which struggles to reach the sky. It grows in boarded up lots and out of neglected rubbish heaps ... It would be considered beautiful except that there are too many of it."

Today as then, the tree of heaven is commonly found in neglected urban areas. It is not always valued, referred to as ghetto palm, the tree from hell and stinky sumac. It is notorious for its ability to send out suckers over 150 feet, but it rarely lives more than 50 years, relatively short in the tree world. This may be a blessing given the tree's odoriferous qualities. (There are various descriptions of the aroma, none pleasant.) But, if it does live up to its reputation for "scrubbing" the atmosphere, many more communities will turn to it or similar plants for this useful quality.

Like the tree of heaven, all living things must deal with an assortment of compounds found in the environ-



The tree of heaven (Ailanthus altissima)

ment. Some of these are essential to life, some can kill or change the organism, but most are of little consequence. In response to this assortment of compounds, living systems establish preventive mechanisms for some compounds and selective transport systems for others. They even have devised tools to destroy some compounds, rendering them harmless to living systems. A 1991 study conducted in the Chicago area found that in the City of Chicago e, the value of pollution removal (carbon monoxide, sulphur dioxide, nitrogen dioxide, ozone and particulate matter) by trees was about \$1 million.

In addition to the simple compounds mentioned above, man-made products release oVOCs (oxygenated volatile organic compounds), which can have long term environmental effects. They can evolve into aerosols, influencing cloud formation and respiratory health. Studies have shown that trees remove up to 97% of the oVOCs in the atmosphere by increasing the synthesis of plant enzymes that detoxify these volatiles.

From the very beginning of their existence, plants have profoundly changed the atmosphere, removing carbon dioxide and releasing water and oxygen. In fact, all of the oxygen in our atmosphere is the result of plant activity. Yet only now are we becoming aware that plants also clean up messes we make in the environment. Perhaps they call on a biological memory of primeval hostile atmospheric conditions that permits them to deal with current atmospher-

ic contaminants.

Water also can be a source of trouble. It is estimated that 5,000 people die everyday worldwide due to contaminated water. Often, the contaminants are bacterial or other microorganisms, but water borne contaminants such as mercury, lead, cadmium and PCBs are also serious long-term health concerns.

Because of these concerns, new approaches, such as ecological engineering systems, are being designed to treat water by mimicking natural wetlands. These systems use an assortment of plants, microbes, algae and animals to clean water.

In some communities, natural wetlands are used in the treatment of wastewater. In Arcata, California, a wetland was engineered on the edge of Humboldt Bay to act as the primary, secondary, tertiary and quaternary water treatment facility. It is augmented with digesters and water flow regulators to move the waste directionally through the various treatment areas, mimicking a traditional wastewater treatment facility. On the other side of the country, Disney World Complex in Florida has used a mixed hardwood swamp in its water waste treatment since 1977.

John Todd, of Living Machine Technologies has spent his life working on topics of ecological design. He was one of the co-founders of the New Alchemy Institute, formed to design biological systems to solve problems in the environment. An early project of Todd's was An ARK for P.E.I., a self-contained living unit with plants used for food and for processing the wastewater. The ARK established the principles that ultimately gave rise to the Living Machine technologies that Todd and his colleagues developed. They are now being used in many communities. These living machines are self-contained treatment systems that accelerate the natural purification process of streams, ponds and marshes. Plants, animals and microorganisms restore contaminated or polluted water so it can safely be

returned to the environment.

Several important players in Living Machines include bacterial and aquatic plants like cattails. Bacteria are complex single cell organisms that live in almost every know environment, including the depths of the oceans where SO² belching vents are found. To survive in harsh environments, bacteria have evolved many strategies for survival and are thus useful in cleaning up environmental messes. With their xenobiotic metabolism, bacteria can dine upon oil, organic compounds, pharmaceuticals and even radioactive compounds.

Recently, the Deepwater Horizon blowout released large volumes of crude oil, threatening the gulf ecosystem. A native bacteria, *Alcanivorax borkumensis*, was found to be eating the oil, helping to detoxify the oil waste. As it turned out, these naturally occurring bacteria were doing a better job at consuming the oil than the bioengineered bacteria designed to do the same thing.

Other players in the Living Machine clean up system are the common cattail (*Typha latifolia*) and the narrow-leaved cattail (*Typha angustifolia*). In a process called phytomediation, the microorganisms asso-

ciated with the roots of the cattails trap arsenic, nitrates, pharmaceuticals and even the ingredients used to make explosives. Cattails living in polluted wetlands are genetically different than those living in less polluted areas, suggesting that selective evolutionary mechanisms are in operation.

Plant and animal cells have the ability to select what can and cannot get through the cell membrane—but there are limits. Some heavy metals present problems because they look like other elements or are able to attack the cell directly, rendering the cell nonfunctional. This causes the death of the cell or inappropriate cell function, usually causing the death of the organism. Examples of this include mercury, cadmium and lead. (Lead is a particular problem because it comes to us in the air we breathe, food we eat and water we drink.)

If the isotope is radioactive, the cell's DNA could be damaged, causing a mutation in the gene, cancer, or death of the cell. (In most cases, there is no effect at all.) In a recent case, the nuclear reactors in Fukushima, Japan were damaged by an earth-quake and the ensuing tsunami. Radioactive isotopes, including iodine 131, were released. Another isotope,

strontium 90, a heavy cousin of calcium, can be released if a nuclear reactor malfunctions. Like other look-alike minerals, strontium 90 is metabolized as calcium when the isotope is taken up by plants. The plants in turn may be eaten by cattle and therefor the strontium 90 could be incorporated in the milk. Testing the milk for strontium and discarding contaminated milk is a simple solution to this problem. A better solution would be for the bioengineers to develop plants and other organisms to mop up toxic heavy metals and radioactive isotopes, enabling us to remove these hazards from the environment. These plants, and following crops, would have to be harvested and stored until their radioactive material decays.

Plants have always played significant roles in our lives. We are just beginning to understand how they and other organisms can provide specific functions in environmental clean- up projects. These are challenging tasks, but necessary if we are to survive in this rapidly changing world. Perhaps the bumper sticker that declares "Plant a Tree/Save the Planet" should be reissued.

Chuck Sontag
Professor Emeritus, UW-Manitowoc

Although we do not know of any local examples of wetlands constructed to treat wastewater, Woodland Dunes marsh receives and filters stormwater from the Columbus St. area in the city, and from Hwy. 310. The City of Two Rivers has added a detention pond across the road, but it discharges to the marsh. Before any of this water reaches the West Twin River, it is filtered by cattails, sedges and grasses.

Next Gen Living Machine's for Water Reuse - Ithin Chart Grant Control of the Con

The Living Machine technology, developed by John Todd to be a biological, self-contained waste water treatment plant.

An unwelcome visitor

Ailanthus altissima is listed as an invasive plant in Wisconsin and many other states. It has not been reported in Manitowoc County; if you know of a specimen here, you should notify the WDNR. Instructions for doing so are at http://dnr.wi.gov/invasives/report.htm#plants.

Nature Notes

redtailed bawk

Banding of Rehabilitated Birds

Ever wonder if you are doing a good job at your work? We at Wildlife of Wisconsin wonder that too. Banding of rehabilitated birds not only tells us where they are going

or where they have been, but it also tells us if our techniques on our surrogate birds have done a good job. A friend and neighbor of ours has banded a number of our birds to help us determine just what kind of job we are doing. Below are a few examples of that:

1. Band #0788-53496: Nestling great horned owl
On 03/23/2007 two owlets were dropped to the ground when the tree that contained their nest was cut down in Manitowoc. They were flown in a 100' flight cage and fed live rodents. Both were banded and released on September 2, 2007. One was killed by an automobile on July 30, 2011 in Mishicot. It survived for four years.



2. Band 1387-96715: Immature red-tailed hawk This bird, which came in from the Appleton area, was admitted August 29, 2000. At the time it was paralyzed. The bird was here for two months killing and flying. This bird was transferred to a different area some 55 miles away for release on private property. It was found dead on November 15, 2009 on the same highway where it was originally found. It had survived for nine years.

Unfortunately not all of our releases go as well. Three nestling Coopers hawks received a few years ago were banded before release. One bird was found dead a few days later. It was very underweight. It appears this bird was not able to hunt and survive on his own, which meant we needed to change our techniques in training immature hawks that eat primarily birds. What a valuable lesson! Without this information, we may not have changed our techniques and future birds may have suffered the same fate.

Sue Theys, WOW

Injured birds and animals or bats

If you find an injured or abandoned animal, please DO NOT bring it to Woodland Dunes. Instead, call WOW's pager number, 323-5609, and leave your name, telephone number and address. They will return your call, most likely within 15 minutes, and either come to pick the animal up,or instruct you what to do. Woodland Dunes cannot legally accept wildlife as we do not have a license to do so.

Nature Myths Debunked

Humans have enjoyed telling and listening to stories since the beginning of our existence. Our ability in this day and age to spread information quickly and to all corners of the world has kept many myths about the natural world alive and well. In my capacity as education coordinator at Woodland Dunes I run into quite a few of them. Here are some of my favorites of those I have heard—and the truth behind the myth.

Seasons are caused by our changing distance from the sun

Logic tells us that in summer we are closer to the sun and in winter we are farther away, after all it is the sun that influences the temperature of our planet. The truth: it is not the distance but the tilt of the earth that is the main influence on our temperatures.

When it is summer here in the northern hemisphere our half of the earth is tilted toward the sun, giving us more direct sunlight and longer days; in winter, we are tilted away from the sun, which has the opposite effect. The combination of more sunlight and more concentrated energy is what gives us warm weather, not proximity. Given the earth's elliptical orbit, we are actually closest to the sun in early January and farthest away in early July—go figure!

If you touch a baby bird its mother will reject it

The truth is birds have very little to no sense of smell and will not reject their young if handled by a human. This myth as well as the next one I discuss were likely put in place to prevent animals from being injured by handling. The best thing to do if you find a young bird is to call a local rehabilitator; in our area we have a wonderful organization called Wildlife of Wisconsin, (920) 323-5609.

If you rub the powder off a butterfly's wing, it will not be able to fly

The powder on a butterfly's wings is composed of thousands of dust-sized, loosely attached scales which are shed throughout the butterfly's life. These scales, actually modified hairs, create the color patterns butterflies use to fool and avoid predators, find a mate, and gather heat so they can fly. The scales are arranged like shingles on a roof. They are believed to streamline airflow, making it easier for the

butterfly to fly, but are not necessary for flight..

The fact the scales are shed easily might help them avoid spider webs or other sticky situations. Without any scales the butterfly can still fly, but would be up against a host of other problems.

Owls can turn their heads in a 360 degree circle



Our Woodland Dunes mascot does indeed have a wide range of neck motion due to its 14 vertebrae, compared to our seven—but cannot quite make it all the way around in a circle. We can still be amazed that most owls can turn their heads 270 degrees, giving them the ability to look directly behind them and over their next shoulder.

Many scientists believe this ability might be related to the fact that owls cannot move their eyes like we can, therefore relying on their necks to do the work.

Moss grows on the north side of trees and can be used for a compass

Many times while I've been working with school groups, someone has tried to teach me that moss is a reliable compass. In their defense they are partially correct, moss does grow on the north side of trees. The problem is it also grows on the east, west and south side as well.

Mosses are bryophytes, plants that lack water-conducting roots and a vascular system to transport water and nutrients to their tissues; therefore they rely on capillary action and absorb water the way a sponge does. Given their limited ability at getting water, many mosses do need moist environments to thrive, so it makes sense in the northern hemisphere, where the southern sides of things like trees and buildings get more sun, that moss would grow more often on the north side.

Unfortunately, people who depend on this myth forget that the world is more complex than that, especially in a forest. Nearby trees and other vegetation or a rainy climate might keep the other sides of the trunk as moist as the

north, therefore moss growth will occur up, down, and all around the tree.

My advice is take the precautions necessary to not get lost in the first place.

Kelly E. Vorron, Education Coordinator



Manitowoc County Parks

utumn is a great time of the year for taking a walk in the woods or along the lake.While Woodland Dunes offers an interesting variety of trails, if you are looking for an excursion farther afield, you might want to try one of Manitowoc County's parks. Take your camera; the colors of



autumn leaves and the bright blue skies are irresistible.

The 75 acre **Cherney Maribel Caves Park** (above) offers a peaceful walk along the West Twin River. Photogenic limestone cliffs harbor small caves that add an air of mystery. The largest of them, Maribel New Hope cave, is open for tours by appointment. Within the park is a State Natural Area, with rare plants like walking ferns.

Fischer Creek Conservation Area offers trails and a mile of Lake Michigan shoreline. The 160 acre site is bisected by Fischer Creek. The landscape on both sides of the creek slopes to the creekbed and to Lake Michigan. It consists of abandoned agricultural fields, grassy meadows, low-land forest and Native American mounds.

Lower Cato Falls is an 84 acre scenic park divided into a developed upland area and a natural lower area along the river. Wooded hills, rock outcroppings and a wide variety of trees and plants make it an attractive place to hike. The Manitowoc River, the northern boundary, flows through a narrow gorge that has unique rock formations and a waterfall.

Walla Hi in southwestern Manitowoc County has several trails winding through a kettle moraine landscape. As you travel through the park, you pass though a wide variety of landscapes from heavily wooded areas to large open expanses. The park also contains several small springs flowing into crystal clear streams.

Point Creek Conservation Area consists of 39 acres of woodlands, meadows, estuary, wetlands and high coastal bluffs along Lake Michigan. Point Creek is the southern boundary of the park.

All have hiking trails. With the exception of Point Creek Conservation area, they also have picnic tables and toilets. So pack a lunch, lace on your hiking boots and take a short drive to explore our local landscapes.

Susan Knorr, Editor

Birds

Summer Bird Survey

Canada Goose 185 Wood Duck 2 White-breasted Nuthatch 2 White-breasted Nuthatch 3 Brown Creeper 3 Blue-winged Teal 9 House Wren 60 Ring-necked Pheasant 1 Winter Wren 60 Ruffed Grouse 1 Sedge Wren 1 Winter Wren 1 Ruffed Grouse 1 Sedge Wren 1 Winter Wren 1 Sedge Wren 1 Winter Wren 1 Sedge Wren 1 Sedge Wren 1 Sedge Wren 1 Winter Wren 1 Sedge Wren 1 Sedge Wren 1 Winter Wren 1 Sedge Wren Mren 2 Sedge Wr			
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Summer Bird Survey Surprises

The total number of individual birds counted this summer was lower than our average. We attribute this to our unusual spring weather.

There were two surprises this summer. Early one morning, in the parking lot on Goodwin Road, a mockingbird was seen standing on a fence post about thirty feet away. Later a mockingbird was seen by one of the Woodland Dunes volunteers on a nearby property—probably the same bird.

The other surprise was a prothonotary warbler (above). This is a southern bird (like the mockingbird). It was heard repeatedly. About a week before, a U.S. Fish and Wildlife biologist was counting/surveying birds at Woodland Dunes and saw a prothonotary warbler in the same area.

The summer bird survey at Woodland Dunes Nature Center and Preserve is not a survey of breeding birds. We record birds that are seen and heard but may not be nesting, such as the two species named above.

Bernie Brouchoud, Environmental Educator

Aegolius Bird Club

The Aegolius Bird Club meets at Woodland Dunes the second Tuesday of each month from September through May at 7:00 p.m. Field trips on Saturdays are taken to places rich in bird life. Membership is open to anyone interested in birds, but you need not be a member to enjoy meetings or field trips. For more information and field trip details, call John or Julie Woodcock at (920) 683-3878.



Kidland Dunes

A Dunesletter page for kids and kids-at-heart! By Belinda and Teresa Zoller

Mystery of the Nightshade

You may have heard of these spooky plants in ghost stories and witch myths, but this poisonous potion ingredient is actually a real plant. In fact, if you've got a farm or even a fence, you might have nightshade growing in your backyard.

Nightshade is both the name of a large plant family (Solanaceae), ranging from weeds to potatoes, and a specific plant, bittersweet nightshade (*Solanum dulcamara*). But don't worry, the potatoes you eat aren't poisonous—the potato is only the root, and is safe to eat. Nightshade plants, however, are poisonous and can cause extreme discomfort if consumed. Watch out for bright red berries, too. They may look like small cherries, but they are extremely bitter and can be harmful to your body!

Nightshade plants have heartshaped leaves and small purple or blue flowers, or clumps of berries that turn red in fall. Although pretty, in many places it is considered a noxious weed.

Leaves Are Falling Down

(Sing to the tune of "London Bridge." Make up some fun actions to go along with the words!)



Leaves are falling all around, All around, all around, Leaves are falling all around, Down to the ground.

Take the rake and scoop them up, Scoop them up, scoop them up, Take the rake and scoop them up, Jump in the pile!

Hornets: Friend or Foe?

While most of us don't mind seeing cute little bumblebees flying around the garden flowers, we instantly recoil at the sight of hornets, members of the wasp family whose reputation for aggression precedes their arrival. Are we right to worry?

Turns out, unless there's food left out, hornets are actually not as menacing as their reputation suggests. Furthermore, they do some pretty cool things! Don't get them mixed up with their relatives, the yellow jackets and the paper wasps, with whom we tend to experience our most negative wasp encounters.

So what makes hornets cool?

~While some wasps are black, and yellow jackets are (obviously) yellow, hornets can have white-striped coats as well.



- ~ In some places around the world, like Germany, hornets are actually protected by law because of their role in the ecosystem! They like to eat flies and other insects.
- ~ Female hornets construct their papery nests by chewing wood down to pulp and assembling it like a sculpture.
- ~ If a wasp is attacked near its nest, it can emit a pheromone (scent chemical) that alerts the rest of its home hive to attack. However, they never attack unless they feel threatened.







Pumpkin Muffins ... Try Them!

While we love eating these warm, we also store the extras in the freezer for instant, microwaveable breakfasts on school mornings.

2 cups whole wheat flour

2 tsp. baking powder

1 tsp. baking soda

4 tsp. pumpkin pie spice or cinnamon

2 eggs, beaten

1 tsp. vanilla

1 cup pumpkin puree 1/4 cup white sugar

2 cups unsweetened applesauce

2 Tbsp. vegetable oil

1 1/2 tsp. almond extract

Preheat oven to 350° F. In a medium bowl, mix flour, baking powder, baking soda, and spices. In a large bowl, combine eggs, pumpkin, sugar, applesauce, vegetable oil, almond, and vanilla. Slowly add the flour mixture to the large bowl until just blended. Do not overbeat. Pour the batter into 18 nonstick muffin cups. Bake for 25 to 30 minutes. You can also use a bread pan and keep an eye on the clock for a longer time, about an hour, to make a pumpkin loaf.

The Living Classroom



"We have wings just like butterflies and moths!"

Butterfly and Garden Festival

Young and old alike enjoyed the Butterfly and Garden Festival this year. Programs on common butterflies and the plants that attract them as well as a monarch-tagging program kept the adults and older children busy while the younger ones enjoyed a garden critter search, learning about caterpillars and butterflies through art projects, making fairy gardens and creating art for their own gardens at home. It was a fun-filled day for the entire family.

Thank you, Butterfly and Garden Festival Volunteers

Mary Ellen Beebe Ed Brey Lee Brey Judy Bull Donna Drexler Lou Ann Gray Joanna Gregorski Emma Knickelbine Sue Knickelbine Barb Koch Ellen Lewellen Connor Madison Marshall Madison Mary Madison Don Massey Helen Massey Ann Shebesta Louise Trickel Victoria Tyman Barb Vorron Birch Vorron Carol Westphal Pat Wiegert



Kelly Hayes, our summer intern, works with children at Butterfly Fest

Kelly Hayes, Summer Intern

Kelly Hayes joined us for the summer through the Wisconsin for Independent Colleges and Universities (WAICU) internship program. Because Woodland Dunes was accepted into the program this year, all expenses for Kelly were paid by WAICU.

Thanks to the generosity of Bob and Kathryn Gahl, Kelly's housing expenses were covered as well.

During her time here, Kelly worked on a plan for updating displays and worked with kids at educational programs and events. Kelly also helped the office run smoothly during this busy time of year, answering phones, greeting visitors and assisting with day to day operations.

We loved having another set of hands working toward our mission. We hope to have another intern next summer.



Throughout the summer, pontoon boat trips gave visitors an opportunity to see wildlife along the river and the marsh.



The official ribbon cutting at Little Wings Natural Play Area.

aLittle Wings Ribbon Cutting

This summer Woodland Dunes held the official opening of the Little Wings Natural Play Area to celebrate the completion of the major elements and landscaping. This new feature of Woodland Dunes honors Helen Dicke-Krivcek. Members of her family joined the celebration along with other major donors, including Dominion and NextEra Energy.

Special thanks went to Grace Congregational Church. Their volunteers, provided the expertise and labor to construct a playhouse, a treehouse and a deck and stairs.

Professor Sam Dennis came to see and record the project; he and his landscape architecture students from UW-Madison provided ideas and expertise for the design of the pla area.

Thanks to everyone who participated.



The Little Wings program gave children the opportunity to learn about the creatures and plants of our wetlands.

Volunteers



Kelly E. Vorron congratulates Volunteer of the Year Lou Ann Gray

Volunteer Teacher Naturalists Needed

As the days get shorter and morning temperatures grow cooler we are reminded that autumn is just around the corner. Migrating birds and insects are already on the move and here at Woodland Dunes we are getting ready for another field trip season.

Since 1976, when Woodland Dunes education programs began, over 100,000 small feet have walked the trails. What a wonderful introduction to the world of nature for children! If you are interested in learning more about the natural world and working with students, contact Kelly to learn more about our Teacher Naturalist volunteer opportunities. No experience is necessary and training is provided. Kelly can be reached at (920) 793-4007 or kellye@woodlanddunes.org.



Volunteers enjoy the lunch prepared for them by Woodland Dunes staff at the annual Volunteers' Picnic.



Volunteers work with children learning about art in nature.

Thank you Summer Teacher Naturalists

Geri Berkovitz Lou Ann Gray Cayla Matte Jeannie Miller Susie Polk

Thank you Garden Stone Crew

Barb Kaufman
Betsy Kocourek
Joanne Kohlbeck
Connor Madison
Marshall Madison
Mary Madison
Bonnie O'Leske
Susie Polk
Erich Trickel
Louise Trickel
Tom Trickel
Victoria Tyman



Volunteers create concrete markers to identify plants in the butterfly garden and around the Nature Center.



Butterfly garden volunteers install a garden ornament donated by Mary Star.

Butterfly Garden Volunteers

Thanks to the Butterfly Gardeners for keeping the garden beautiful . Colleen Anderson Judy Bull Donna Drexler Joanna Gregorski Joan Hanson Doris Magyar Helen Massey Carol Westphal Pat Wiegert

We are always looking for volunteers to help maintain the butterfly garden and the gardens surrounding Woodland Dunes. Whether you are an avid gardener or new to gardening, we can use your help. If you are willing to lend a hand, call or email the Nature Center.

Special Event Volunteers

Woodland Dunes will need volunteers to make *Getaway with the Dunes* a success. There are several volunteer opportunities on Saturday, November 12 throughout the day including helping pass food around, setting up, cleaning up and preparing food. Please contact Jessica at jessicaj@woodlanddunes.org or (920) 793-4007 for details and to volunteer. Thank you!

Thank You

The following reflect gifts, donations and memberships received through August 25, 2010.

Grants

Dominion Foundation \$5,000 for The Wonder of It All Series James E. Dutton Foundation, Inc. \$10,000 for education programs

Matching Funds

Dominion Foundation IRM Wisconsin Public Service

Monetary Donations

John W. and Laurel J. Alyea (general) Authur Stangel Fund Inc. (general) Gregory Scheuer/Merrie Star (butterfly garden) The Massy Family (butterfly garden)

Donations

Benchwarmer's Sports Bar in Fox Hills hosting/organizing Celebrity Bartender Bob and Kathryn Gahl drinks for Business After Hours Tom and Betsy Kocourek drinks for Business After Hours Manitowoc County Recycling Center truck load of wood chips Al Seidl treated lumber June Scharenbroch Airplanes in the Garden book Super 8 Hotel/Manitowoc hotel room for Stan Temple Prairie Nurserv hundreds of prairie plants

Memorials

In memory of Edwin Boettger Garv and Anna Allie Don and Helen Bleser Diane and Ron Budnik Joann Budnik Steve and Melanie Kirchman Helen and Don Massey Dr. Erich and Olive Press Mr. and Mrs. Roland Schmeicher Wayne Schulte Florence Shekoski Garv Stueck Thomas Vanderbusch Chris and Jeannette Weber In memory of Mel Knutson Geri Berkovitz In memory of Judy Richmond Carol Martin In celebration of Dean Watrud's 80th Birthday Paul and June Marguardt In memory of Paul Karrmann

Mary Kay Dodson In memory of Jean Scheuer Carole Weld In memory of Juan Ott Jay Ott and Charlotte Ott In memory of Helen Dicke-Krivicek Nancy Nye Hunt In memory of Steve Lawrence Karen Shaw and Trish Cummings In memory of Bob Peppard Don and Helen Bleser

New Members

Larry and Judy Corrado Anné Denfeld Heather James Jov C. Kreicarek Barbara and Paul Kussman Diane Lupke Jerry Meister Clara and Steve Mikkelsen Lori Popple Bonnie Zipperer Vance and Karen Yelmene

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Schenck, SC Twin River Turf Wisconsin Webwriter, LLC Thanks to everyone who contributed to our annual fund drive to date. If you haven't yet donated, please see page 15 for information on how to donate—and reasons you should do so.

Amvets Post 99 Elma Anderson Tom and Lindy Backus Judith Badura Herman Balaban John J. and Jennifer A. Balma Ron and Mary Balzan Scott A. Barner Tom and Audrey Bean Harold and Frances Beckman Helen and Don Bleser John R. Bleser Gary and Christine Blimel Grace D. Boeder Amy T. Brady Virginia C. Brandt Dale and Judith Brasser Reggie and Kim Brault Col. and Mrs. William Brennan, Ret. Ed and Lee Brev

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Getaway Sponsors

Please help us make this event a financial success by sponsoring part of the evening. You will receive recognition at the event, in the Dunesletter and on the Dunes' website, plus additional rewards for higher levels of support. We are looking for tax-deductible donations in the following areas.

Decorations: \$25 - \$99 Music: \$100 - \$199 Prizes: \$300 - \$499 Beverages: \$200 - \$299

Food: \$500 and up

To become a sponsor, please contact Jessica at (920) 793-4007

or email iessicai@woodlanddunes.ora.

Helping the Dunes

Auction Donations Needed

We need donations of new items, large and small, along with "intangibles" for the silent and live auctions at our November 12 fundraiser (see page 3). We'll put some smaller items into themed baskets, so we'll also need baskets or containers.

Or you could donate a themed basket yourself. The sky is the limit, so use your creativity. Here are some new ideas:

Baskets

Fisherman's Treat: a map book or CD on Wisconsin fishing spots along with an assortment of lures and a fishing cap

Brewers' Delight: a kit of beginner's beer-making supplies

Party Time: kit of cake decorating materials, and a certificate for a class at Hobby Lobby South of the Border: margarita glasses, chip & dip set, Mexican party decoration, paper goods On the Links: sleeve of golf balls, cap, gift certificate to an area golf course

In the Dirt: gardening tools, gloves, and a basic how-

Family Game Night: a couple of classic board games, mugs and cocoa

Snowed In: gift certificate for local movie rental along with microwave popcorn and a big bowl Grandparents' Joy: some nice toys (the kind grandparents buy) for a specific age

Top it Off: hand spun yarn, knitting needles and a pattern for a winter hat.

As for those "intangibles," please share your talents with us.

Intangibles

Bake with Me: a lesson for baking bread or your renown specialty

Advice from an Expert: a certificate for a consultation on garden design or home decoration A Cook on Tap: a certificate for a fancy dessert or tasty main dish

Craft Time: knitting or fly-tying instructions

Be sure to invite your friends—it's an evening they won't want to miss. If you have any questions or would like to make a donation, please contact Jessica at (920) 793-4007 or email jessicaj@woodlanddunes.org.



Available in the Nature Shop

Looking for a gift for a child or grandchild? Come in and check out our new nature books for children. You're sure to find something to appeal.

Rent a Naturalist

Please call the Nature Center for details.

Go Green

Receive the *Dunesletter* electronically instead of through regular mail. Email jessicaj@woodlanddunes.org with your name and email address.

We Care Donation Program

Sign up for the "We Care" program at Pick 'n Save at the Customer Service Desk at the Two Rivers Pick 'n Save store. Each time you use your Advantage Plus Savers Club card, Woodland Dunes receives a donation.

Remember Woodland Dunes

Consider leaving a legacy for Woodland Dunes. It's easy to do, and it will make you feel good to know you will be helping the Dunes.

Memorial Bricks and Boulders

Celebrate the life of someone dear to you while providing support for Woodland Dunes by purchasing a brick or boulder. Your message will be engraved and highlighted. Choose a brick paver (\$75) or a boulder (\$200). Contact Jessica at 793-4007 or jessicaj@woodlanddunes.org or download a form from our website, woodlanddunes.org

Annual Fund Drive

Writing the Next Chapter

You and I know that Woodland Dunes is an important part of what makes Manitowoc County a vibrant place to live. You and I know the verdant preserve provides a spiritual sanctuary and nourishes us with cleaner air and water. You and I know the value in the story of Woodland Dunes. Help us ensure that future generations know this story.

While no value can be placed on the experiences that have created our stories, we ask you to consider making a donation to ensure our story continues to be told.

Thank you for your generous support and for being a part of our story. To contribute, you can donate online at www.woodlanddunes.org, or use the form below.

Enclosed is my tax deductible Annual Fund donation to:

- O \$35 to provide food needed for the amphibians we use for education for one month
- O \$100 to buy 20 native plants for habitat restoration
- \$225 to battle plant invasive species for one day
- o \$1,000 to reconnect children to the natural world
- O \$__ for general support
- O My employer has a matching gift program.
 - O The form is enclosed
- O Please contact me

Total Enclosed \$_____

Make checks payable to Woodland
Dunes Nature Center and send to
Woodland Dunes
P.O. Box 486

Two Rivers, WI 54241

Woodland Dunes

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O	\$250	Conservator	
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0	\$1,000	Steward	
0	\$5,000	Guardian	

Please send this form and your taxdeductible donation to Woodland Dunes today.

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Hours

Monday - Friday: 9 a.m. to 4 p.m. Saturday:

Summer • 9 a.m. to noon Winter • by appt. or for events Hiking trails open year round

Phone (920) 793-4007

nature@woodlanddunes.org www.woodlanddunes.org

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