



The Dunesletter

A Publication of Woodland Dunes Nature Center and Preserve



Little Wings

Late this autumn, the water feature for Little Wings natural playground was installed and tested. The reservoir allows water to be drained at night and in the winter. The playground, built in honor of Helen Dicke Krivacek, was funded by donations in her honor and substantial grants from Next Era Energy-Point Beach, and the Dominion Foundation. Next spring more features will be added, but children are already enjoying the building and climbing opportunities.

Winter 2009

Volume 138

Coming Events	2
At the Dunes, A Green Christmas	3
The Ice Age Trail, WOW	4
Poetry, Ermine Encounter	5
Bambi and Me	6
Volunteers, Library	8
Kidland Dunes	9
Education	10
Birds	11
Murder in the Garden	12
2009 Members	13
Thank You	14
Guarantors, Fund Drive	15

From the Director

On November 18, 1974, a group of people who cared about nature, led by Bernie Brouchoud, came together for a meeting that resulted in the formation of Woodland Dunes Nature Center. Spurred by Bernie's insight as to the importance of the large, swampy woods between Manitowoc and Two Rivers as wildlife habitat, the group resolved to define and preserve that natural area, and teach other people about nature as well. Among the people who helped to found and nurture the fledgling organization were Helen and Fred Dicke, Winnie Smith, Bob and Kay Levin, Bob Niquette, Gordon Bubolz, Arlene Turgasen, Herb Vander Bloemen, and others with a special appreciation for what the natural area had to offer.

With support from Natural Areas Preservation, Inc. and Secura Insurance, the West Foundation, the Wisconsin Department of Natural Resources and many generous citizens, land was purchased parcel by parcel as landowners wished to sell. A small staff was employed to manage the preserve and provide meaningful nature education for the public. The first naturalist was John Woodcock, who is still a member of the Woodland Dunes Board of Directors and chairman of the organization's property committee. Schools were invited to visit for field trips, orchestrated by the staff and trained volunteers.

Thirty-five years have passed since that founding, and Woodland Dunes now protects nearly 1,200 acres of land, managed for the benefit of both wildlife and people in our community. Discoveries in recent years have reinforced the foresight of the founders in recognizing that Woodland Dunes is special—the ridge and swale habitat is now known to be critically rare and considered to be of global ecological importance. The abundance and diversity of wildlife have been well documented, with more than 400 species of plants and 260 species of birds and 39 mammals identified at Woodland Dunes. Along with that, there have been special recognitions: State Natural Area, Important Bird Area, and most recently, inclusion as one of 100 of Wisconsin's Wetland Gems. The education program has excelled; more than 75,000 school children have visited for field trips to learn about nature.

Thanks to the work of many dedicated people, Woodland Dunes remains true to its original goals. Current chairman Bob Weinert, longtime Board members Charles Sontag, Helen Bleser, Beverly Vareka, Lyn Brouchoud, and a number of more recent faces continue the tradition of caring for this precious resource, and teaching others how to know and live with nature. The staff is still a small one, but more than 100 priceless volunteers and many members and supporters further the mission. Our 35th birthday is a happy one indeed.

**Jim Knickelbine,
Director**



Jim Knickelbine receives the Izaak Walton League's Rabr Diamond Award in honor of his work in conservation. (left to right), Tom Ward, Jim, and Sue Knickelbine.

Coming Events

To confirm events and register for classes, please call Woodland Dunes, (920) 793-4007 or email kellye@woodlanddunes.com

The Snow Ball

Saturday, January 23 • 4:00 to 7:00 p.m.

Members: family, \$8; individual, \$4

Non-members: family, \$10; individual, \$5

Join us for an evening of winter fun! Meet The Door County Sled Dogs between 4:30 and 6:30 p.m. We'll go on illuminated snowshoe hikes (we'll teach you how), tell stories in the tipi and warm up around the campfire. If it's a clear night, we'll watch the stars; they're never brighter than on a winter evening. Chili and hot chocolate will be available at a nominal charge. Held at the Field Station on Goodwin Road. Please call or email to register.

Family Snowshoe Adventure

Saturday, February 6 • 10:00 a.m. to noon • FREE!

Come along for an adventure along Conifer Trail and learn how the forest changes each season. Make this a family adventure; enjoy the crisp wintery air and glistening snow beneath your feet. Reserve our snowshoes or bring your own. Meet at the Nature Center: call or email to register and to reserve a pair of snowshoes.

Rain Barrel Workshop*

Saturday, March 6 • 9:30 to 11:00 a.m.

Learn how to make a rain barrel, and receive all the parts, including the barrel, to make your own at home. When you collect and store rainwater, you can irrigate while cutting your water use. Reservations: Janet at (920) 686-6910 or jsnosnosky@manitowoc.org.

Maple Moon and Timberdoodle Hike

Friday, April 2 • 7:00 to 9:00 p.m.

Members: family, \$5; individual, \$3

Non-members: family, \$8; individual, \$4

Learn how maple sugar is made by tapping trees and boiling sap. Try some maple syrup treats. Our naturalists will lead you on a search for timberdoodles; a campfire will keep you warm. Bring a flashlight or headlamps. Held at the Nature Center. Please call or email to register.

Silver Creek Nature Hike*

Saturday, April 24 • 10:00 to 11:30 a.m.

Explore Silver Creek Park and learn about the little known critters living there, and the importance of the creek to the life of the park. Reservations: Kelly at (920) 793-4007 or kellye@woodland-dunes.org



Bird Breakfast

Saturday, May 15 • 8:00 a.m. to noon

Adults, \$4.50; children, \$3.50; under six, free

Ham and pancakes make a great start to a day of fun and learning about the birds that are migrating back into our area. Enjoy this traditional salute to spring with bird games, guided hikes along our trails, kids' activities and fun for all members of the family.

Collins Marsh Paddle*

Saturday, May 22 • 9:00 to 11:00 a.m.

Explore the land and water of one of the largest remaining wetlands in the Manitowoc River watershed on this naturalist-led journey. Some canoes are available, or bring your own. Reservations: Wendy at (920) 684-0218 or wltzke@wisconsinmaritime.org

Maritime Rendezvous*

Saturday, June 26 • 10:30 a.m. to 1:30 p.m.

Paddle your own canoe or kayak, or reserve a spot in a 20 foot voyageur canoe. You'll travel past natural and historical points along the Manitowoc River. Reservations: Wendy at (920) 684-0218 or wltzke@wisconsinmaritime.org

West Twin River Paddle*

Saturday, July 10 • 10:30 a.m. to 1:00 p.m.

Paddle the Lower West Twin River through scenic country into the heart of Two Rivers. Stop for lunch at Woodland Dunes and explore the surrounding wetland habitat. Reservations: Kelly at (920) 793-4007 or kellye@woodland-dunes.org

* Explore and Restore Your Local Rivers

Woodland Dunes, the Wisconsin Maritime Museum and the City of Manitowoc are working together to educate residents about the importance of protecting our local waterways. The programs (listed above and indicated with *) are open to the public free of charge, but you must make reservations to attend. Please contact the person listed after the class description for more information and to reserve a place.

Snowshoe Rental

Why not try out snowshoeing at Woodland Dunes? We have children's and adult sizes available for use along our trails. Rental fees are \$5/pair. They may be borrowed during regular office hours (8:00 a.m. to 4:00 p.m. weekdays). If you have a large group, please call in advance.

Bird Seed in the Shop

Woodland Dunes has teamed up with Country Visions Cooperative to offer several types of bird seed for sale. We will carry large bags of black oil sunflower seed and also a basic millet mix, and niger (thistle seed). Help your feathered friends stay warm and close to home this winter!

Adopt an Owl

For \$25 you can adopt a saw-whet owl caught and banded at Woodland Dunes. You will receive a certificate of adoption with the band number of your owl, a photo of a saw-whet owl, and a form for recording recaptures. Funds raised from this program will support the mission of Woodland Dunes. Please call for details.



Erratum

The owl species pictured in the last issue of the Dunesletter on page three was a short-eared owl, not a long-eared owl.

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



Annual Tree and Shrub Sale

Woodland Dunes is again offering native, disease-resistant species, grown by reputable nurseries in our climate, and dug immediately before pick-up, for planting in spring 2010. These reasonably-priced plants are useful for landscaping, wildlife food and cover, windbreaks, timber production, and environmental screens.

Our staff will provide advice on planning, planting and managing your trees and shrubs.

Limited numbers of trees and shrubs are available; please order early. We're also offering specially-priced packages of trees and shrubs for landowners with smaller plots.

To receive an order form, email sknorr@woodlanddunes.com or call Woodland Dunes at (920) 793-4007. This year we have posted a downloadable order form on our website, www.woodlanddunes.com.

Orders may be placed anytime up to April 1, but must be accompanied by prepayment. Although we will make every attempt to fill your order, supplies are limited, so order early.

Plants will be available for pick-up the end of April. You will receive a postcard with pick-up information; the exact date will depend on the weather.

New Website

We've updated our website and changed our web address. It's now www.woodlanddunes.org. You'll find events listings, information about Woodland Dunes and downloadable versions of our trail map, a membership form, and a color version of the *Dunesletter*.

Part-Time Staff Position

Woodland Dunes is seeking an individual to initiate and pursue development and marketing strategies, to assist the director and to coordinate fund-raising. Events planning and grant writing are important aspects of this position.

Experience with non-profit organizations and computer skills are necessary. This is a part-time position. Evening and weekend work are occasionally required. Woodland Dunes is an Equal Opportunity Employer. No phone calls please. Send resume and cover letter to Woodland Dunes, P.O. Box 486, Two Rivers, WI 54241.

Invasive Monitoring Help Needed

Woodland Dunes has been awarded a Citizen Monitoring Grant by the Wis. DNR. The project, coordinated by our staff and Tom Ward, will result in the production of a map of selected terrestrial invasive plant species for the county, so that their effects on native wildlife and possible future actions to control them can be assessed. We will train volunteers to identify ten invasive species and record their location using GPS receivers. Please contact us if you can help in this very important wildlife management project.

Save some Green this Christmas! Check out these four easy ways to lower your holiday consumption.

Buy Less

Services instead of Goods Gifts of service like massage, music lessons, childcare, car washing, dog-walking, cooking, and gardening don't use natural resources, and can be more personal and memorable: **Experiences** The gift of an experience gives memories that are valued for years. Tickets to a concert, sports events, local attractions or museums are always fun. **Antiques** Antiques have the added appeal of history and sentimental value and have no impact on the environment. **Found Objects** Pass on your treasures from nature (e.g., shells, crystal, wood burl, arrowhead, or a shark's tooth) and they'll impart their reminder of nature's wonder anew. **Edibles** Your time and culinary creativity will be appreciated by the recipient and more enjoyable for you than gift-hunting. Or give a membership in a local CSA (Community Supported Agriculture) that provides a weekly delivery of organic, mineral-rich, farm-fresh food. Try Lynne at WAV in Two Rivers (Lynne.a.prucha@gmail.com or 973-0320) **"Used" Gifts** Giving a used gift was once considered tacky, but they are the kindest of all to the environment. Include a note on the gift card: "We know how you love nature. This gift comes to you at no cost to the environment." **Make a donation or purchase a gift membership** Make sure your money is going to a good cause by checking www.guidestar.org.

Alternatives to Wrapping Paper

Half of the paper America consumes each year is used to wrap and decorate consumer products; gift wrap alone produces trash of over four million tons. **Alternative gift wrap** Choose cost-free, attractive options: gift bags made from fabric scraps, and wrapping made from comic strips, old calendars, maps, posters and more. **Avoid metallic paper** It's difficult to recycle. **Reuse** Large wrapped presents usually have unrecycled sections usable for small gifts.

Lower the impact of holiday lighting

The cost of electricity goes way beyond the utility bill. Electricity drains natural resources. **Reduce outdoor displays** A smaller display is still attractive and more appropriate. **Use LED lights** LED (Light Emitting Diode) holiday lights use as little as 5% of the energy traditional holiday bulbs do, and last up to 100,000 hours when used indoors. **Turn them off** Turn tree lights and outdoor house decorative lighting off at bedtime.

Choose a live tree

The sustainable choice Plastic trees are made of petroleum products that last forever. Research shows that they are discarded and sent to landfills when repeated use makes them less attractive. **A renewable resource** Live trees contribute to air quality while growing and 90% are recycled into mulch. They are usually locally grown and sold, saving transportation costs and decreasing air pollution.

compiled by Kelly Eskew, Education Coordinator

The Ice Age Trail

You could not step twice into the same river; for other waters are ever flowing on to you. Heraclitus

Nor can you walk the same trail twice. We first hiked the Woodland Dunes segment of the Ice Age Trail two weeks after its official opening. It was already late in the season, but damp, warm and so still we could hear leaves dropping on the forest floor. That day fungus clamored for our attention: small brown mushrooms, bright cream brackets on a crooked stump, streaks of turquoise fungus on a rotten log, all evidence of the recycling that goes on year around, keeping the forest alive.

We started on Columbus Street, passing through somber hemlocks and an old field edged by shimmering amber tamaracks. An abandoned car, now an antique, reminded us that this was far from a forest primeval; instead the land had been logged, farmed, abandoned and returned to nature for rejuvenation. We walked through an open hardwood forest, dismayed to see the brilliant red berries and paler red leaves of the attractive but invasive Japanese barberry. Here and there the unique ridges and swales that give Woodland Dunes its name were apparent. A pine plantation was marked for thinning, part of the land management plan. There were more signs of human habitation, an old barn, slated for demolition, the foundations of a house, and a chicken coop, long abandoned. The last leg took us over a small creek and through a swamp before reaching Woodland Drive. That day we chose to walk through the Aurora Hospital grounds, crossing Memorial Drive at the light, then north along Lake Michigan to Columbus Street and back to our car.

Two weeks later, we started from Woodland Drive. The trees along the trail provided welcome shelter from the brisk wind. Bright sunshine highlighted the contrast between the bleached grass in the open fields and the dark purplish greens of the conifers. Young beech trees still held their gleaming golden leaves, but most trees were stark black outlines against the bright blue sky. Ferns were pale yellow from frost with moss providing the only green in the landscape. Woodpecker holes were evident in dead trees all along the trail. On the ground, the rotting remains of trees provided a nurturing medium for seedlings. In the spring or summer, we may not have noticed the subtle reminders of death and rebirth, but in late autumn, they were spread before us. Although only a few weeks had passed since our first hike, we had a completely different experience on the same trail.

Soon the trail will be covered by snow, transforming it again, and enticing visitors on skis and snowshoes. Why not explore it yourself and see the many changes that take place throughout the year?

The Woodland Dunes segment of the Ice Age Trail is 2.25 miles long. It is fairly level, well-marked, and easy to hike.

Susan Knorr, Editor

Cryptococcus in a Common Loon

An adult male common loon was observed struggling in the waves

of the Great Lakes during fall migration. After the bird was captured and stabilized, it was taken to a veterinary practice where it later died. The bird was then shipped overnight to Tufts University Cummings School of Veterinary Medicine where it was weighed, radiographed, and necropsied. It was determined the bird died from *Cryptococcus*, which has been documented to cause disease in humans and a wide variety of animals. Mark Pokras, Director of the Wildlife Clinic at Tufts University, says that to the best of his knowledge, this is the first reported clinical case of *Cryptococcus* in an aquatic bird from the wild.

Global environmental changes including climate, habitat destruction, and the spread of exotic species, drug residues, and other pollutants threaten much of Earth's wildlife. Such environmental problems contribute significantly to the arrival of new animal and human diseases. Wildlife rehabilitators can play a significant role in the early detection and prevention of disease spread, but must be careful to protect their own health at the same time.

Because we at Wildlife Of Wisconsin never know when we may encounter a serious human pathogen, nor do we have the appropriate equipment and ventilation to protect ourselves, we have chosen to work with local veterinarians and their staff when we anticipate a problem. Dr. Christopher Katz of Two Rivers Veterinarian Hospital and Dr. Joseph Sutton of Memorial Drive Veterinary Clinic help us with all these issues.

Together we can make a difference!

Sue Theys, WOW



Injured Birds and Animals

If you find an injured or abandoned animal, please DO NOT bring it to Woodland Dunes. We are not licensed to keep any wild animals and CAN NOT accept them.

Instead, please 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 as to the best action to take.

WOW (920) 323-5609

Notes from Nature

Winter Hunt

Some days the poem
stays in the tree
I spot along the trail,
stays in the red purple scaly bark
muted with grays and tans,
cool and smooth to my touch.

Or it flits by too quickly
in a butter-colored ring
never noticed before
around the eyes
of an ordinary squirrel,
a sudden eruption of buttery cream
too fresh for sonnets or odes.

A silly verse giggles
at my grandson and me
in January sun
as we crack off six icicles
to cram in our mouths
and stomp like T-Rex
through the snow.

I listen to wind songs
but do not find
stronger rhythmic lines
than the slooshing pound
of winter-hard waves
rushing the high ice-wall shore.

A crisp smell of musk
in a stand of old forest stirs
the ancient hunter in my pulse,
but the poem for it leaps
wide, white tail high,
and leaves me again
in a quiet wild place,
in a peace that has no words.

Jean Biegun



Ermine Encounter



Ermines have long symbolized purity as in Leonardo da Vinci's Lady with an Ermine

On a memorable January day, I saw an ermine (*Mustela erminea*) emerge from a hole in the snow between the bird feeders at our cottage. It was clearly visible because its creamy-white fur did not quite blend in with the bluish-white snow.

The fur of the ermine, or short-tailed weasel, changes in late fall to all white except for the black tip of its tail. It remains white through the winter until it grows its brown, white, and black summer coat in early spring. Ermines have long been trapped for their fur. The white winter fur was traditionally used for trim on royal robes.

Ermines have short and slim bodies, seven to thirteen inches long, including a two to four inch tail. Females are about four-fifths the size of males and have proportionally shorter tails. They usually travel by bounding, with their legs moving together in pairs, and their hind feet landing in the tracks of their front feet. Their tracks then appear as pairs of prints from twelve to forty inches apart. The track pattern is about two and one-half inches wide.

Wisconsin is near the southern range limit of ermines. They occur from the Great Lakes states and eastern and western mountain states north to the limit of trees in Canada and Alaska. They can be found in nearly all land habitats within this range, but usually occur in wooded areas, where they make dens under logs, stumps, or rock piles, or in abandoned burrows of other small mammals.

The ermine is the second smallest flesh-eating mammal found in North America. They hunt mostly on the ground, but they can climb trees to a height of about fifteen feet. They may be abroad at any hour, but they are primarily nocturnal. About three-fourths of their food is mice, but they take birds and other small mammals as well. They are able to kill animals as large as themselves. They have a reputation for killing more prey than they need, but some of that food may be stored for future use.

The ermine I saw looked small, so it was probably a female. I thought she would attack the birds or squirrels that patronized our feeders, but she apparently had something else in mind. From her shelter in the snow tunnel she dashed to the pipe that supported the suet feeder, and shinnied up the pipe as far as her momentum would take her. She could not get a grip on the metal pipe, so she was never able to reach the top, where a mesh bag full of suet was hung. Once her upward motion was stopped, she slid back down the pipe like a fireman sliding down a pole. She retreated to the tunnel, but soon tried once more. Again and again she made the dash and scurried as high as she could, only to slide back down again. Eventually she gave up and returned to the tunnel, probably to search for more conventional food.

John Woodcock

Bambi and Me



Franz Salix's 1927 *Bambi*

The endearing *Bambi: A Life in the Woods* by Felix Salten was read to me as a child and filled my impressionable mind with sympathy for baby deer. Walt Disney did one better, filling in the voids of my imagination with color and action. The theme, however, remained the same: wildlife, especially deer, should fear humans.

By making man the villain, Salten substituted humans for the traditional predator of deer, the wolf. The role of predator was not directly addressed in the story, in fact, the fact that all wildlife lives at the edge of survival because of predators, limited food supplies, and limited habitat was missing from the story. But, in all fairness, how easily are those concepts incorporated into a children's book? Even today, few children's stories or cartoons teach fundamental biological principles. Most children's stories are just fanciful presentations in which characters defy gravity, reason, and the laws of physics. Salten, writing in 1923, was ahead of his time. Did he foresee a time when humans would assume the role of ultimate predator, deciding who shall live and who shall die?

Felix Salten is the pen name of Siegmund Salzman. A Hungarian-born writer, he lived in Vienna, Austria, but moved to Zurich, Switzerland, when Adolf Hitler's policies put the lives of Jews in jeopardy. Although Salten was not a naturalist (he was an art and theater critic for the *Vienna Press*), he often wrote about animals, personifying them as he did with *Bambi*, which made them more appealing to children.

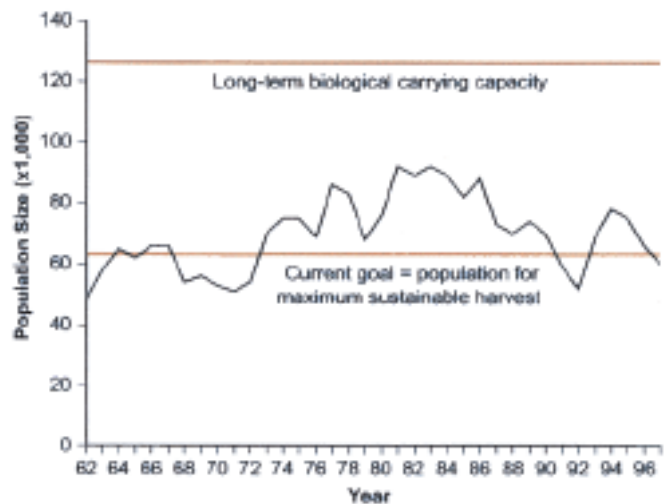
The name *Bambi* is from the Italian bambino or baby. Salten wrote the story after visiting the Alps and observing wildlife in its natural setting. In 1928, *Bambi, ein Leben im Walde* was translated from German into English and became an immediate Book-of-the-Month Club hit. Hitler, however, banned the book. Just before the Disney film was released, the American Rifleman's Association expressed its displeasure over the film's portrayal of humans as merciless killers. In response, Disney added a disclaimer to the beginning of the film, suggesting it was not a true reflection of hunters.

Although *Bambi* was a European red deer, *Cervus elaphus*, this article is about the white-tailed deer, *Odocoileus virginianus*. Both species are even-toed, hoofed mammals (Family Artiodactyla), present since the Oligocene Epoch (24 to 37 million years ago) and have been part of the landscape much longer than we.

The white-tailed deer's exploration into urban environments is rewriting their biological rule book. The usual predator-prey relationship, an important regulatory mechanism of deer populations, was eliminated with the extirpa-

tion of wolves and other large predators. The resulting population explosion pushed deer into new habitats, where these highly adaptable animals took full advantage of the situation. Being large mammals with appetites to match, deer have the potential to destroy their habitats—and ours.

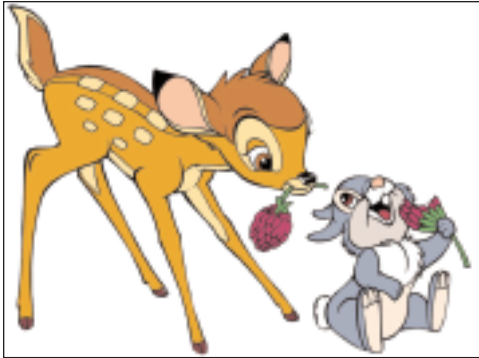
Furthermore, compact populations are more prone to disease, and some organisms can infect humans. For example, deer carry the tick that harbors Lyme disease (caused by the bacteria *Borrelia burgdorferi*). Since this disease has serious consequences for us and our pets, deer populations must be carefully managed in urban spaces. Nothing, however, has captured the attention of wildlife biologists and state officials like the appearance of chronic wasting disease (CWD), the prion disease first reported in Wisconsin's wild deer population in 2001. Biologists, farmers, politicians, and the public united to keep this previously little-known disease from spreading. It could have had devastating effects on domestic cattle, taking an economic toll on the dairy industry. As with many diseases where the agent is poorly understood, the problem had to be studied from the ground up. And again, the white-tailed deer population is at the heart of the issue.



The study of populations of organisms is an important part of ecology. The dynamics of populations are complex; it is easier to understand them by graphing the relationships. One such relationship is pictured in the diagram above representing the deer population in Wisconsin's central forest region from 1962 to 1997.

The horizontal line, or K-value, represents the long-term biological carrying capacity (the environment's ability to support the deer population). Included in this measure is everything that supports or inhibits the life of the deer population: food resources, shelter, predators, winter conditions, and disease. Humans have affected the K-value by exterminating predators and limiting hunting, allowing more deer to survive and reproduce.

The second line on the graph, the S-value or social capacity (called the current goal on the diagram) represents the maximum number of deer wildlife biologists feel can



Disney illustration for the 1942 *Bambi*

live successfully in this modified habitat and satisfy both hunters and nature lovers.

Since there is little chance that an ecologically balanced population of deer and predators will be part of our landscapes anytime soon, we must man-

age levels around the lower limits. One way to do this would be for humans to assume the predatory role of wolf packs. However, unlike wolves, which kill the weakest members of a herd, human hunters often select trophy animals, those with the largest racks or bodies. The biological advantage then goes to those individuals that don't attract human hunters. Removing the fittest breeding stock is contrary to natural selection, and results in a less fit population of white-tailed deer.

However, we can do more than just control the size and location of deer populations through selective hunting and changes in hunting regulations. We can erect barriers to prevent the deer's free access to sensitive areas, install motion sensors in our backyards, gardens, and orchards that set off water, sound, or light displays, or simply use chemical deterrents that are readily available.

In writing *Bambi*, Felix Salten described man as a specialized predator. As we rearrange or reconfigure our landscapes, our predatory role becomes more important and, by its very nature, more controversial. However, deer populations must be creatively managed if humans and deer are going to live in biological harmony. That being said, the question is if we should give Felix Salten credit or blame for putting humans in the role of the wolf, a theme that seems to be central to the whole story.



Mirko Hanák's illustration for the 1967 *Bambi*

**Chuck Sontag, Professor Emeritus,
UW-Manitowoc**

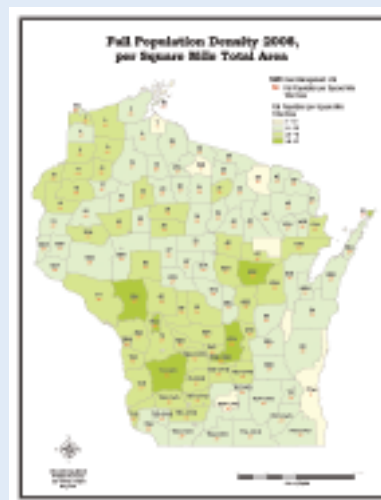
I am grateful to Scottie Dayton for her help with this article. Any errors in fact or expression, however, are mine.

Chronic Wasting Disease

In response to the chronic wasting disease (CWD) scare in Wisconsin's white-tailed deer population, wildlife biologists used every tool in their disposal to understand the dynamics of this disease. Winter counts, age-sex ratios from deer hunts, and powerful statistical programs provided information that defined the status of the disease, and established critical deer management populations in the state. Biologists established K- and S-values (see previous page) for various management zones. Not surprisingly, the more northern and more rural zones had a higher K-value than the southern urban zones.

To establish deer population limits and control the spread of CWD, biologists and members of the Department of Natural Resources (DNR) used the sex-age kill formulation. The result was the DNR's Earn-A-Buck program, requiring hunters to shoot a doe before a buck. Woodland Dunes was ahead of the curve in managing its deer population, instituting its own Earn-A-Buck program before it was used by the state. While Aldo Leopold established that culling females is an effective way to manage wildlife, the formulation the DNR used worked better in some zones than in others because of the scale of the project. Consequently, some populations were better managed than others. Also, Wisconsin has no known or confirmed CWD human infections, so concern has subsided. Because of this, the DNR approved a change in the formulation and Earn-A-Buck program.

This April the Natural Resources Board adopted the DNR's recommended fall season structure for the



2009 deer hunt, which included no Earn-a-Buck units outside of the CWD management zone and 40 fewer deer management units with the October antlerless hunt. In February 2010, DNR biologists will compare unit-level harvest numbers against overwinter population estimates and will adjust the recommended season

structure for 2010 to address any significant trends. To read more about the Wis. DNR study, visit one of the following websites:

<http://dnr.wi.gov/org/land/wildlife/hunt/deer/Deerbook.pdf>
<http://dnr.wi.gov/org/land/wildlife/HUNT/DEER/maps.htm>

Woodland Dunes has a staff of two full-time people, three part-time people and, fortunately, more than 100 volunteers. Our most familiar volunteers are our teacher-naturalists (TNs), who make our education programs possible, but there are many other opportunities. With the help of volunteer Elma Anderson, we have put together a list of the various jobs volunteers can fill. If you are interested, please fill out this form and return it to Woodland Dunes.

General

- Gardening/Weeding (Butterfly Garden and surrounding garden beds)
- Teacher Naturalist - School field trips (teaching school programs)
- Teacher Naturalist - Out of school trips e.g., Boy and Girl scout groups
- Maintenance (building projects, mowing, trail maintenance)
- Saturday morning (9 a.m. to noon: greet visitors/watch shop/answer phone)
- Night Gang (help with saw-whet owl program at night)
- Office help (stamping, folding, stuffing, photocopying, etc.)
- Sewing/Craft Projects (create costumes, props for events and school programs)
- Invasive species control
- Program set-up and take-down for school field trips

Events

- General event help (set-up, admission, parking, clean-up)
 - needed for most events**
 - Baking
 - Poster and flyer distribution (Manitowoc and Two Rivers)
 - Face painting (Painting children and adult faces/arms at events)
 - Folk Concerts (selling snacks)
 - Fish Fries (waiting tables, cooking under supervision of a certified cook)
 - Harvest Dinner (waiting tables)
 - Silent Auction (gathering materials)
 - Help with kids' activities at events
 - Tipi overnight (Would involve sleeping at Woodland Dunes and assisting group with educational programming)

Name _____
 Address _____
 Address _____
 Phone _____
 Email _____
 times available _____

Scheduled events for 2010 are listed on our website. If you have questions about specific events or volunteer opportunities, please email kellye@woodlanddunes.com or call (920) 793-4007.

The library has added two of the field guides from the North Woods series, *Dragonflies of the North Woods* and *Moths and Caterpillars of the North Woods*. "North Woods" is defined by the publisher as Wisconsin, Michigan, and Minnesota. Each book includes hundreds of color photos, and side-bars that show the insect's actual body length. The inclusion of photos of the caterpillars is a plus, since they are not pictured in many of the butterfly and moth field guides.

(Unfortunately, the butterfly guide in this series does not include the caterpillars.) These handy guides are available in the gift shop as well as the library, and the shop also has additional titles from the series, including guides on butterflies, damselflies, spiders, lichens, insects, dragonflies and amphibians. A book on orchids is promised for spring 2010.



Two books on the alien vs. native plant issue have also been added to the collection recently. *Invasive Plants of the Upper Midwest* includes more than 250 color photos to help anyone identify problem plants that are endangering native habitats in this area. In addition to identification, the book offers advice on control techniques, information on herbicides, and suggestions for ecological restoration and education efforts. Information in the book has been checked for accuracy by the DNR Bureau of Endangered Resources. *Bringing Nature Home* was written by an entomologist, who looks at native plants from a different angle: as food for insects, most of which can not adapt to alien plants. Reduction in numbers of native plants due to continued development and the use of alien ornamentals leads to the disappearance of insect species, which eliminates needed food for birds, and so on up the food chain. Although lists by region include various types of plants, much of the book concentrates on native trees and shrubs, and includes many colored photos of the native plants and insects that feed on them. The author emphasizes that native plants can be substituted for similar non-natives, without creating messy gardens which alienate the neighbors. However, in keeping with his aim to invite more insects into the garden, he does warn that you might want to "stand just beyond arm's reach when you muster the courage to tell your neighbor that if they follow your advice they too can have more insects in their yard next year!"

Those of you who still have a video player may be interested in a number of videos which were recently donated to the library, including Audubon Society's *Butterflies for Beginners*, *The Backyard Wild: Attracting and Feeding Wild Birds*, and *Wild and Forever Free: The Story of Wisconsin Wildlife Management*.

Darlene Waterstreet, Volunteer Librarian



Cranberry Thanksgiving

By the time you read this, the most popular Thursday of the year will be long gone, but you'll no doubt remember watching the football games, the city parade, and, of course, eating all that good food. One of my favorites is cranberry bread, so let's talk about cranberries—specifically, the highbush cranberry.

Most often turned into jam and sauce, the berries do not fully ripen until they have been frozen and thawed multiple times; and the plant itself won't produce fruit until it is at least five years old. If you pick a berry and find it very bitter, it is probably a very similar European cousin, which is poisonous. Can you guess what it is?

Despite its bright cherry-tomato hue, this fruit is actually a member of the honeysuckle family. (Okay, I admit I cheated—but now you know the secret!)

Wintry Word Search

s d n y b r h s t e i c y p i
f a r m c w h y k b h z r y g
o t m g x o d a d u x v r y u
y p y t v a l t r c b f e c q
r w s e s f z f i b x g b x r
b r l x w i u x f a h w n g j
i u b o r g r j t s k c a r t
l c n z m s x h s y m w r a i
t s j t a y c v c e a o c r h
v v a f i t k r h m r v g p k
k i j n c n l q x m z g s k l
l u p p p k g s x k d d w a e
t b n r j c w n r b r f i z r
s t u r g e o n g j r e h z x
s d d p h n y o l i z d v e y

brr shovel
bunting snowflake
christmas sturgeon
cranberry tracks
drifts

What A Catch!

Anyone who has gone fishing or pursues fishing actively in Wisconsin has probably heard of the Lake Sturgeon. They tend to be very large, and they look almost as fierce as a shark. But despite their looks and size, they don't even have any teeth, and are therefore harmless (as long as they're not ramming into you).

The sturgeon can be found almost anywhere in the northern hemisphere. In Russia, the sturgeons are very large, and can be about 28 feet long! But don't worry, they are much smaller here in Wisconsin.

Here are some amazing facts about the lake sturgeon that you can find in our area:

—Every year during fishing season, fishermen stand above their ice holes with spears in their hands, which they use to attack the sturgeons as they pass by; anything less powerful than a sturdy spear and you risk losing your catch!

—During the early 1900s, sturgeons nearly became extinct because of their popularity on the dinner menu.

—One of the largest sturgeons ever caught was 168 pounds! It was also seven feet long, and estimated to be about 82 years old!



Making Ice Sculptures...Try It!

1. Collect natural objects like acorns, leaves, and clovers.
2. Fill a plastic jar or container with water and drop your findings in. Remember that as water freezes, it expands, so keep that in mind when filling your container. If your objects are small enough, you can put them in an ice cube tray.
3. Put your container(s) on a flat surface in the freezer and wait a few hours. This is equivalent to the time it takes to bake three to five batches of homemade cookies and read the *Dunesletter* cover to cover.
4. Pull out the container(s) and admire your beautiful frozen creations while you eat your cookies. If you used an ice cube tray, you can pop out the little cubes and stack them, drop them in your water, bury them in the snow outside, or watch them shimmer and melt.



What our school programs do . . . with your help.

As another year comes to an end, I can't help but look back over the last twelve months and see what—with your generous contributions—we have accomplished. Our education programs are in part supported by your Woodland Dunes membership fees and your generous donations to the fund drive.

Thanks to you. . . .

808 kids

know what it is like to explore a forest, hide in a brushpile and make friends with a tree.

553 kids

have learned what lives in a pond and understand the importance of wetlands.

307 kids

have learned about the importance of water as a natural resource and understand how they are connected to and influence aquatic systems.

242 kids

have learned about the insects that live at Woodland Dunes, caught tadpoles in the pond and used their noses to discover the natural world.

208 kids

understand the flow of energy through natural systems and their part in that system.

156 kids

have explored Woodland Dunes wintry landscape like the early pioneers.

95 kids

understand how a forest functions and why forest ecosystems are important.

Thanks to you,

2,369 kids

have a better understanding and appreciation of the natural world.

more than 4,500 people

have enjoyed a Woodland Dunes program this year!



learning about insects at Butterfly Fest



Learning about nature goes on year around at Woodland Dunes.

Be part of the program. . . .

Join us for our upcoming education programs. We are always looking for new people to teach and to assist the teachers during programs. You will receive free training for the programs you're interested in, have the opportunity to take part in special training on natural history topics offered throughout the year and, after 40 hours of volunteering your time to the Woodland Dunes education program, you will receive a teacher naturalist jacket. This is a great way to give back to our community and have fun while doing it!

Winter World

Snowshoe through the forest, explore a Native American style tipi, become trackers and identification experts, then, with some tips from our furry and feathered friends, learn the secrets of how to enjoy the frosty weather. Your students will be so caught up in the wonders of winter they'll be amazed when it's time to leave! Weather permitting, we will snowshoe part of the way.

Training Dates: January 12, 19, 26

Maple Syrup

Explore Woodland Dunes' Brouchoud Field Station and learn who is waking up from their long wintry sleep. This time of year the sap starts running and the animals start to stir. Learn how the pioneers and Native Americans survived Wisconsin's long winter season by learning from the woodland animals. During the program, the students will learn about the history of maple syrup, help us tap trees, boil syrup, snowshoe, explore a tipi and taste-test some maple syrup!

Training Dates: February 16, 23, and March 2

Amphibmeander

Where is the best place to learn about wetlands? At a nature center that has six out of the seven types of wetland habitats, of course! Explore the marsh and the swamp, meet some critters that make their home at Woodland Dunes, and learn about the importance of wetlands and wetland preservation.

Training Dates: April 13, 20, 27

Water Wonders

Clean water is one of our most valuable resources. Learn about the importance of water and how we can help keep waterways healthy. Through water testing, comparing data and learning about water quality from the animals that live here, the students will become the scientists. This is a great hands on program.

Training Dates: April 16, 23, 30

If you are interested in helping with any of these programs, please contact Kelly at 793-4007 or kellye@woodland-dunes.com.

Kelly Eskew, Education Coordinator



recording observations on Cattail Trail

Aegolius Bird Club

The Aegolius Bird Club meets at Woodland Dunes the second Tuesday each month at 7:00 p.m. The club also makes field trips each month on Saturdays to places around our area that are rich in bird life. Membership is open to anyone interested in birds, but you need not be a member to attend meetings or to participate in field trips. For more information, call John or Julie Woodcock at (920) 683-3878.

Field Trips 2010

January 23

Volunteer Work Day at Woodland Dunes (Snow Ball)

February 13

Meet at the Nature Center at 1:00 p.m. to look for waterfowl and gulls at the Manitowoc/Two Rivers lakefront

March 27

Meet at the Hwy 42, JJ, and I-43 Park and Ride at 8:00 a.m. to look for waterfowl, cranes, snipe at Collins and Killsnake marshes

April

No field trip due to crane count on April 17

May 15

Meet at the Nature Center at 11:00 a.m. to look for woodland songbird migrants at Neshota Park and Picnic Hill (Two Rivers)(Bring a bag lunch)

June 12

Meet at Knollwood Mausoleum Parking Lot at 7:00 a.m. to look for summer resident birds at Heidmann County Park (Kewaunee Co.)

July 17

Meet at the Hwy 151 and I-43 Park and Ride at 8:00 a.m. to look for summer resident birds at Ledgeview Nature Center (Chilton)

August 14

Meet at the Nature Center at 8:00 a.m. to look for early fall migrants at Point Beach State Forest

September 18

Meet at the wayside on Hwy 42 at 8:00 a.m. to look for fall migrants along the Ice Age Trail in Woodland Dunes

October

No field trip due to Owlfest

November 13

Meet at UW Manitowoc B Parking Lot at 1:00 p.m. to look for loons and waterfowl at Fischer Creek, Kingfisher Farm, and Cleveland

December

No field trip due to winter bird counts

2009 Bird Banding Season

Bird banding as an activity fits well with Woodland Dunes' educational program. Our fall bird banding began in September at the same time the Cottonwood Trail first grade program began. Naturalist training sessions started in mid-August, when birds were netted to allow the volunteers to become familiar with handling the many species that would be released by the first graders.

Throughout September, October and early November, live birds were used for educational purposes. Over 800 first graders heard the story of bird banding and migration, and many of them held and released the banded birds back into the wilds. The 2009 season ended on November 19: 442 birds of 38 species were banded, including 144 saw-whet owls.

Of the 38 species of birds banded during 2009, 44 were warblers (of 14 species) and 107 were thrushes (of 5 species). The warblers and thrushes are always of interest because they are night migrants and are heard in the early morning as they descend into Woodland Dunes from the nighttime sky. Other birds banded were sparrows, chickadees, flycatchers, vireos, kinglets, grosbeaks and even one woodcock. As the Cottonwood Trail Program came to an end, the Saw-whet Owl migration began. During the last week of the first grade program, several groups were also introduced to the tiny owls. Then, on the third Saturday morning of October, hundreds of Owl Fest visitors participated in the up-close saw-whet experience.

Bernie Brouchoud, Environmental Educator

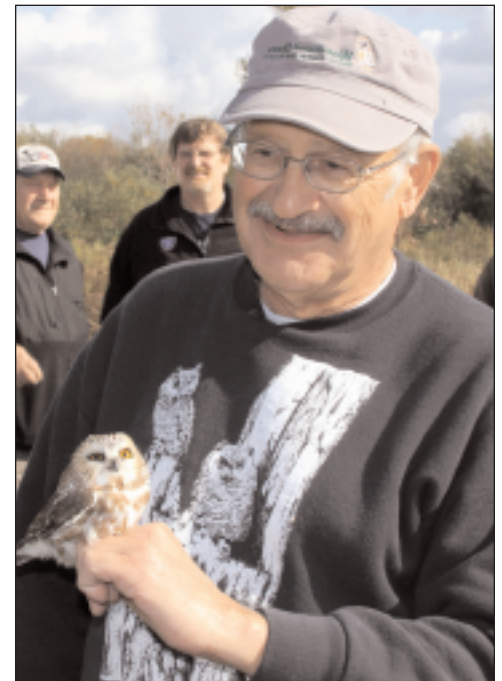
Owl Banding 2009

The Saw-whet Owl banding program at Woodland Dunes began during the first week in October and ended on November 19. The first bird banded this year was captured on October 5. The nets were closed (in October) seven nights because of unfavorable weather. There were 144 saw-whet owls banded plus 32 that were repeats, returns or recoveries (someone else banded them). On the four best nights this year, we netted 27, 16, 15 and 14 birds for a total of 72.

Last year we banded 101 owls and netted an additional 11 birds. The first bird caught in 2008 was on October 10. The nets were closed only three nights last year during the same period. The four best nights last year were 12, 11, 9 and 9 for a total of 41. Given these statistics, we would have expected to have captured more owls last year than this.

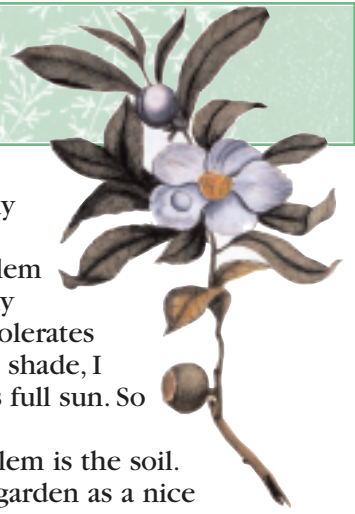
We always ask ourselves what explains the difference in numbers. A possible explanation is that the aging nets we used last year were less able to retain an owl after capture. We replaced over 50% of the nets this year, possibly increasing the bottom line. There are many other variables that occur during migration. Our continuing analysis makes the project more interesting, so we continue to be data collectors.

Bernie Brouchoud, Environmental Educator



Bernie Brouchoud with a saw-whet owl

Murder in the Garden



As I assess the losses in my garden after the growing season, I realize it's a good thing there aren't laws about killing plants like there are about killing people. Given my record, I can imagine a prosecution lawyer accusing me of criminally negligent plant-slaughter: "Defendant did knowingly install the deceased in a location where life could not be sustained."

While killing garden thugs can be considered self-defense, the loss of carefully chosen plants makes me feel like a murderer. Did I somehow miss a critical need of the plant? Since the hang-tags and catalog descriptions for just about every plant demand "moist, well-drained soil in full to partial sun" (the plant equivalent of "dry-clean only"), I do my own research. This may be where I go wrong. Years ago it was hard to find information on plant culture, but today the problem is that there's too much out there, and it's hard to tell good from bad.

The plant that's come closest to sending me to the penitentiary is *Franklinia alatamaha*, a beautiful small tree related to camellias and the loblolly bay. I first saw it growing in the Arnold Arboretum in Boston, the pure white blossoms stunning against its red-gold autumn leaves. If the tree itself weren't enough to attract me, its story is totally enticing. A beautiful native plant that is extinct in the wild—who could resist? Duty called! No matter what conditions it wanted, surely I could find some way of providing them.

So having done my research, and carefully matched a location to the plant's requirements, you'd think I would have a lovely *Franklinia* to admire. You'd be wrong. I'm now on my third specimen, this last one a good-sized plant that looked terrific when I bought it.

I should say that *Franklinia* has a notorious reputation for being finicky to establish. Even the nurseryman who sold me my specimen said he had tried several seemingly similar locations before succeeding. It is sensitive to wet soil and, due to its limited gene pool—all plants descend from one that was planted in Bartrams' garden in Philadelphia—it is not a particularly vigorous plant. It

requires enriched, well-drained, acidic soil with ample watering during dry periods. It tolerates cold, even sub-zero temperatures, fairly well. I thought this time I had gotten everything right, but the plant doesn't seem to agree. It's gotten smaller every year, so next spring, if it's still alive, I'm moving it.



Franklinia alatamaha, named after Ben Franklin, blooms in the autumn.

But where? *Franklinia's* only reported pest is a root rot that attacks cotton, not a likely problem this far north. Although the many sources I've consulted agree it tolerates anything from full sun to partial shade, I wonder if this far north it needs full sun. So I'll try a location with full sun.

Then again, maybe the problem is the soil. Although I tend to think of my garden as a nice big container of soil, I am starting to realize that my soil is far from homogeneous. Living on the edge of Lake Michigan means that I have areas of sand, clay and some lovely sandy loam that often change abruptly from one to the other. So I may think I have the perfect location for a plant, but once I start digging, I find heavy, sticky, lumpy clay that is most often alkaline. Or, unfairly, there may be a "lens," a shallow bowl effect created by a layer of clay under perfectly good soil. That can drown any plant.

It could be that there is something even more malevolent going on below ground. Roots from plants near and far could be up to no good, sending out deadly chemicals or sucking up all available water. Mammals and insects burrow about, some chewing on roots. Even a giant mycelium from a fungus could be the culprit. All I can do is remove any competing roots and hope the chewers stay away.

Soil pH is the final problem that confronts me. Although there are acidic areas, my soil is primarily alkaline. I need to do a soil test in the new site to ensure that I'm not dooming my *Franklinia* with an insurmountable obstacle.

If I ever succeed in growing this choice plant, I'm sure you'd think I should be content to rest on my laurels. But then I remember my first sight of the handkerchief tree, *Davidia involucrate*, with its six-inch white bracts that astonished even hardened plant explorers. It is considered zone 6, but perhaps I could find a sheltered place that would work . . .

Susan Knorr, Editor

The Romantic Story of *Franklinia alatamaha*

In 1765, botanists John and Will Bartram (father and son) found a small stand of an unfamiliar but beautiful tree growing on the banks of the Alatamaha River in coastal Georgia, which they first identified as loblolly bay. When they realized it was a new species, they returned to gather seeds in 1773; the next time they returned, the remaining trees had disappeared. Their demise has been attributed to fire, flood, overcollection by plant collectors, or fungal disease introduced with the cultivation of cotton plants. Whatever the cause, it was never again found in the wild. Fortunately, the Bartrams managed to grow one tree in their now famous garden back in Philadelphia; all existing trees are believed to have descended from this single source, a true genetic bottleneck.

With such a rare plant, theories abound to explain its loss in the wild. The most common is that it had survived only at the far southern edge of its range after the last ice age and was unable to recolonize to the north. Now it lives on as a treasured plant in gardens where its finicky nature can be satisfied.

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 Mary Jo and John Stangel
 Christopher Stanzel
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 Mrs. Gordon Zoerb
 Joseph Zoller Family

Thank You



The following reflect gifts, donations and memberships received through November 30, 2009.



Lonnie Erdman presents Woodland Dunes director Jim Knickelbine with a check for \$1,000 from the S. Manitowoc Chapter of Thrivent Financial for Lutherans in support of the folk concert series presented in conjunction with Golden Ring Music and Folklore Center.

Grants

NextEra Energy Point Beach LLC
\$5,000 Little Wings Playground
Dominion Foundation
\$5,600 Little Wings Playground
Jane and Arthur Stangel Fund, Inc
\$500 Education Program
Thrivent Financial for Lutherans
\$1,000 for concert series

Memorials

Connie Randolph
in memory of Glen DeBaker
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in memory of Betty Dennis
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in memory of Julie Marie Peterson
Betty Schneider
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in memory of Helen and Doc Krivacek
Kenneth and Catherine Daum
in memory of Atty Richard Garrow
William and Pam Krieger
in memory of "Grandpa Doc"
Krivacek

Honorarium

Dr. William and JoAnne Thompson
in honor of Armond Kueter's 90th
birthday
Sidney, Virginia and Claudia Levy
in honor of Lucy Zeldenrust's
birthday

Owlfest Volunteers

Mary Ellen Beebe	Sue Marquardt
Helen Blazer	Helen Massey
Fran Brinkman	Mona Moen
Lyn Brouchoud	Norb Pritzel
Don DeBruyn	Chuck Sontag
Donna Drexler	Cody Steinhauer
Jim Dufek	Gloria Wallace
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Jim Knorr	Barb Vorrn
Barb Koch	Casey Vorrn
Betsy Koucourek	Nick Vorrn
Tom Kocourek	Lucy Zeldenrust
Amanda Langman	John Woodcock
Donna Langman	Julie Woodcock
Wanda LeClair	

Enchanted Forest Volunteers

Geri Berkovitz	Betsy Blitz Kocourek
Ben Birr	Tom Kocourek
Fran Brinkman	Susie Polk
Lou Ann Gray	Darcy Verona
Joan Hanson	Pat Wiegert
Jim Knorr	Wildlife Of Wisconsin
Al Kluczinski	

Education Volunteers

Thanks to everyone who helped with our autumn education programs: Cottonwood Trail, Owling 101 and Forest Around Us!

Jennifer Balma	Barb Koch
Geri Berkovitz	Jim Knorr
Fran Brinkman	Ellen Lewellen
Donna Drexler	Jeannie Miller
Lou Ann Gray	Mary Ozarowicz
Joan Hanson	Susie Polk
Jim Hess	Mary Savage
Jess Johnsrud	Vicki Wahl
Peg Juchniewich	

Donations

Robert and JoAnn Weinert
Owlfest, Harvest Dinner speakers
Bank First National
Harvest Dinner speaker
Gregory Scheuer and Merrie Star
support for the Dorothy Star Garden
Don and Ellen Lewellen
wrist bands for fund raising

Harvest Dinner Volunteers

Special thanks to everyone who helped make the evening a success: Pastor Meredith Anderson and volunteers from the Youth Group and their parents, who helped with set-up, serving and clean-up; Lucy Zeldenrust solicited and collected items for the Silent Auction and helped with clean-up; Donna and Kent Langman donated the owl mirror for the raffle; Tom and Betsey Koucourek donated the kayak and solicited and collected items for the Silent Auction; Jim Knorr, Florence Shekoski and Geri Berkovitz helped set-up; Kelly Eskew and Don DeBruyn helped with clean-up; The Courthouse Pub donated the desserts; Ruth Kloss donated the centerpieces; and Mary Ozarowicz provided music during the auction and dinner.

Adopt an Owl

Jim Dufek
Jane Harker
Judith Sanders
George Kunta
Susan Nugent
Linda Racinowski
Janet Washburn

New Members

Collene Anderson
Jerrod and Anna Beatty
Matt and Wendy Campbell
Ann Fons and Kevin Smith
Kathryn Green
Amy Stockhausen
Jerry Thiede

Errata

Thanks to Dave and Renée Evans for their generous contribution to the Annual Fund Drive.

Rent a Naturalist

Looking for a special excursion for your group or family? You can rent one of our naturalists for \$25/hour to lead you along one of Woodland Dunes' trails. Explore prairie, marsh, woodland or forest with someone who can tell you fascinating stories about the things you see. Call the Nature Center at 793-4007 to set a date.

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Guarantors provide on-going support of Woodland Dunes with donations of \$250 and more each year.

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Woodland Dunes Nature Center and Preserve: A Habitat of Global Significance

The Forested Ridge and Swale habitat at the heart of Woodland Dunes was recently designated a site of Global Ecological Significance by the Wisconsin DNR. Only a few similar habitats exist in the world. As part of the 1,200 hard-working acres that comprise Woodland Dunes, this habitat cleans our air and water, prevents flooding by absorbing excess rainfall, provides homes to thousands of plants and animals (some threatened or endangered), and offers a setting for environmental education for the future guardians of our natural environment. These fragile habitats of Woodland Dunes Preserve depend on your support for their continued existence. Woodland Dunes is not a government agency; its operation is made possible solely by membership fees, grants and gifts from people who care. The annual fund drive provides a significant part of our income. Just as every habitat at Woodland Dunes is important, so is every donation. Thank you for your consideration and support. **Please invest in your future by supporting Woodland Dunes.**



biking along the Ice Age Trail

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We apologize for any errors or omissions in this issue. Please let us know, and we will print a correction in the next issue of The Dunesletter.

Woodland Dunes

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Hwy. 310 west of Two Rivers

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

woodlanddunes@lakefield.net

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Administrative Assistant: Geri Berkovitz

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The Dunesletter is published quarterly by Woodland Dunes Nature Center and Preserve, Inc. ISBN 1933-8961

Susan Knorr, Editor

Nonprofit
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 U.S. Postage
 PAID
 Manitowoc, WI
 54220
 Permit No. 448

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