



The Dunesletter

A Publication of Woodland Dunes Nature Center and Preserve



Champion of Champions

Kelly Eskew Vorrón, Woodland Dunes' Assistant Director and Education Coordinator, was named as the 2011 Lakeshore Champion of Conservation in Environmental Education by The Lakeshore Natural Resource Partnership and Dominion Energy Kewaunee, Inc. She was also named the Champion of Champions, receiving \$2,000 for the nonprofit organization of her choice. The awards are sponsored by LNRP and Dominion to promote innovative environmental efforts and enhance the quality of life in the Lakeshore Basin.

From the Director

A biologist from out of the area recently asked me if spring ever comes here. Sometimes it's a little hard to tell, but cool temperatures and stiff easterly winds certainly build character. "It's character-building!" is what my dad said whenever I complained about anything.

As usual, spring is an exciting time for our organization. Our first run/walk, Dash at the Dunes, was a success, our tree sale program received more orders than the previous year, and our two spring programs kept our educators busy. We completed an early spring salamander survey and are now compiling the data for analysis. Our second season of monitoring bird and bat encounters at the Orion Energy Systems wind turbines is underway. Our Bird Breakfast and Migration Celebration has to be considered a success in terms of the quality of the food and camaraderie, especially when one considers the frightful weather we encountered that day. Topping off the season was Kelly's selection as the Environmental Education Champion of Conservation by the Lakeshore Natural Resource Partnership, and then as the Champion of Champions.

Once again spring populated our forests, wetlands, and prairie with remarkable birds. And although the abundant moisture begat soggy trails, that moisture will ensure that amphibians will have water available long enough to complete their transformation to adulthood, as will the insects that feed our birds.

The summer promises to be remarkably productive. We are pleased to welcome Kelly Hayes to our staff as a summer intern. Her position is funded by the Wisconsin Foundation for Independent Colleges. A Studio Arts major from Beloit College, Kelly will assist us as an educator and an exhibit designer, helping us develop a master plan for our displays. A grant from the DNR will enable us to hire a contractor or intern to remove 30 acres of non-native invasive shrubs in our preserve. We will share this person with Point Beach State Forest for a similar program there. Through another DNR grant, we will remove invasive phragmites from in and around our marsh and along the nearby lakeshore, part of a multi-year project.

The exceptional volunteers from the Grace Church Appalachian Service Project will again be helping us improve our Little Wings natural play area, to which another music component and a beautifully carved entrance sign have been added (thank you, Tom Tittl!). The Grand Opening for the play area will take place in late June; you are invited to help us celebrate. That same week, we will be honoring our volunteers, who make everything we do possible, with a picnic.



Boys play in the Little Wings stream during a program designed by our Champion of Environmental Education, Kelly Vorrón.

Summer 2011

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Coming Events

Pontoon Tours of the West Twin River

Choose a Friday: June 3, July 1, July 15, August 5 or August 19

10:00 to 11:30 a.m. • Fee: \$10 per person

See the West Twin River from a new point of view on a guided pontoon tour. Sit back and relax as you learn about the animals and plants that make the West Twin River and the marsh their home. Space is limited! To register call 793-4007.

Frog Hike

Saturday, June 4 • 8:00 to 9:30 p.m.

Admission: \$3.00

Learn about the frogs that make their home at Woodland Dunes, then walk to the frog pond to listen and look for our new friends. Meet at the Nature Center on Hwy. 310.

Natural Arbor Building Workshop

Thursday, June 16 and Friday, June 17 • 10 a.m. to 2:00 p.m.

Fee: Members, \$15; Nonmembers, \$20

Learn how to create beautiful, functional garden structures with artist Gail Elsholz. Bring your own cedar, willow, grape vine or other natural materials to make a charming landscape feature for your home, or use our material and hone your skills as you help Woodland Dunes build an arbor for the Nature Center. Registration required. Call 793-4007 or email kellye@woodlanddunes.org for information and to register.

Green Fire Screening

Thursday, June 16 • 7:00 to 8:30 p.m. • Free

UW-Manitowoc Theater, 705 Viebahn Street, Manitowoc

See the first full-length, high-definition documentary film ever made about legendary conservationist Aldo Leopold. *Green Fire* explains how he shaped conservation and the modern environmental movement. It also highlights current projects reflecting Leopold's land ethic. For information, please contact Jim Kettler at (920)304-1919 or jim@lnrp.org

Aldo Leopold, Phenology and Climate Change

Friday, June 17 • 1:00 to 3:00 p.m. • Free

Stan Temple, Senior Leopold Fellow and former faculty member at UW Madison, will present an analysis of Aldo Leopold's seasonal observations in the 1930s and '40s, compare them with recent data, and discuss the role of climate change.

Herbal First Aid Class

Thursday, June 23 • 6:00 to 8:30 p.m.

Fee: Members: \$30; Nonmembers: \$35

Join herbalist Linda Conroy for this informative and experiential class. As we take a walk through the preserve, we will learn about plants that help heal simple cuts and scrapes as well as bug bites, poison ivy and much more. Following the walk, we will make a healing salve and first aid spray that participants will take home to begin their own first aid kit.

For information, call (920) 793-4007 or check our website at www.woodlanddunes.org.

Unless noted, all events are held at the Nature Center.



Despite cool, wet weather, this year's Dash at the Dunes was a great success. Watch for details of the 2012 event.

Volunteer Appreciation Picnic

Tuesday, June 28 • noon

Volunteers wanted—not to work, to be appreciated! Join us for our annual volunteer appreciation picnic. The staff will provide a cookout lunch and the 2010 Volunteer of the Year, Lou Ann Gray, will receive her plaque. Please call or email kellye@woodlanddunes.org to let us know if you will attend. All volunteers are welcome.

Little Wings Play Area

Celebration and Dedication

Thursday, June 30 • 10:00 a.m.

Bring your little ones to Woodland Dunes for a morning of fun exploring our natural play area. From 10:00 to 11:00 a.m. we'll introduce them (and you) to some enjoyable nature activities. At 11:00 a.m., we'll share the concepts that inspired the play area. A dedication ceremony will follow. Bring a picnic lunch and blanket, and enjoy the play area following the ceremony.

Little Wings Play Time

Thursdays, July through August • Nature activity: 10:00 a.m., play time to follow

Fee: \$2 donation per child appreciated

Calling all parents with little ones! Spend some quality time with your kids this summer in our Little Wings natural play area. Nature activities are best suited for ages 3 to 7, but all ages are welcome.

Adult Education Series

Woodland Sketching

Wednesday, July 13 • 9:00 to 11:00 a.m.

Create a small sketchbook in class. Then take a leisurely hike and stop to sketch the natural treasures you come across along the way. Art teacher and former Rahr-West Art Museum director Barb Bundy-Jost will be your guide.

Coming Events

Celebrity Bartenders

Thursday, July 14 • 5:00 to 7:00 p.m.

Benchwarmers Sports Bar at Fox Hills Resort

Join Celebrity Bartenders Jim Knickelbine, Kelly Vorrone, and Tom Kocourek at Benchwarmers Sports Bar in Fox Hills Resort. Stop in for a drink, snacks or dinner, a 50/50 raffle and fun with other Woodland Dunes supporters. A percentage of the price of all drinks sold, all the tips and half of the raffle will be donated to Woodland Dunes. Bring your friends and spread the word! *Fox Hills Resort, in partnership with the Chamber of Commerce of Manitowoc County, sponsors Celebrity Bartenders to raise funds for local nonprofits.*

Little Wings Nature Camp

July 18 through 22 • 9:30 a.m. to noon • Fee: Members, \$50; Nonmembers, \$60

Drop off your little one for some summer fun. Nature exploration, crafts and play time in our Little Wings natural play area will introduce your camper to the natural world. Study after study have shown the importance of children's contact with and time spent in the natural world. This is a perfect opportunity to give your little one an introduction to the wonder and fun of nature. Camp is best suited for ages 4 through 6 years. Registration required by July 1.

Prairie Hike

Saturday, July 30 • 10:00 a.m. • Fee: \$3.00 per person

Take a guided hike through a demonstration prairie and learn about the adaptations of the plants that live there. Call (920) 793-4007 or email nature@woodlanddunes.org to register.

Adult Education Series

Wildflower Identification

Wednesday, August 10 • 9:30 to 11:30 a.m.

Learn some basic botany and wildflower identification tricks, then hone your identification skills during a hike on one of Woodland Dunes' trails.

Butterfly Garden Festival

Saturday, August 20 • 9:00 a.m. to 1:00 p.m.

Fee: Members: Family, \$10; Individual, \$5 • Nonmembers: Family, \$15; Individual, \$8

Learn about butterflies and the plants that attract them at this family event. Butterfly and caterpillar demonstrations, butterfly art projects, garden talks and wildflower and butterfly hikes. Join us for catching, tagging and releasing monarchs to help track population and migration. Refreshments sold.

Mark your Calendar Today!

Owlfest

Saturday, October 15 • 8:00 a.m. to 1:00 p.m.

Enchanted Forest

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

Getaway with the Dunes: Key West in Two Rivers

Saturday, November 12 • 5:00 to 9:00 p.m.



Getaway with the Dunes

Key West in Two Rivers

Saturday, November 12 • 5:00 to 9:00 p.m.

Admission: \$15 per person

Sunny Key West is a long way from Cool City (Two Rivers), but when you join us at the Behringer Room in the Two Rivers Senior Center, you can have all of the pleasure of visiting that tropical paradise without any of the hassles of travel. Your night of tropical fun will include games, raffles, a cash bar, silent auction and a live auction with our own Bob Gahl, food and drinks, all to the music of Jimmy Buffet sound-alikes, the Schmidts of Denmark.

More details will be announced in the next issue of the Dunesletter, but make sure to set the date aside now. And ask your friends to join you. You can support Woodland Dunes and all its community services while having a great time doing it.

If you have any questions, contact Jessica at (920) 793-4007 or jessicaj@woodlanddunes.org.

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The Dorothy Star garden began the summer more colorfully than ever, with tulips, daffodils, and forsythia blooming profusely. A monarch even showed up on May 13, much earlier than usual. I'm sure it was attracted by all the color. As the season warms, there will be more and more going on in the garden, and the work of our dedicated volunteer gardeners ensures that the garden attracts both butterflies and visitors.

A pond overlook just off the Ice Age Trail is now open to the public. From this elevated platform you can see waterfowl and other birds on Plover Pond. The Ice Age Trail will be extended across the railroad tracks to connect with trails at the Aurora Medical Center and their beautiful healing garden, and from there to Mariner's Trail. Soon we will be installing educational signs along Coneflower Trail in the prairie planting next to Goodwin Road.

As you can see, we have ambitious plans for the summer. Our biggest challenge is always how to fund our programs and projects. Our autumn fundraiser, "Get Away with the Dunes" is an important part of our funding plans. Please see the "Get Away" event article above, and support Woodland Dunes by attending this enjoyable event and making donations to its success (see page 15). Your help will allow us to maintain our momentum and improve upon the wonderful sanctuary we and nature enjoy.

Thank you all for your help and interest! Wishing you a summer full of wonder, and at least a little warmth,

Jim Knickelbine, Executive Director

A Mixed Blessing

When we first moved to Winghaven, almost 14 years ago, Lake Michigan water levels were alarmingly high. Waves lapped against the high clay cliffs that line the shore. On calm days we could scurry between the water's edge and the base of the cliffs, but when the northeast wind went on a rampage, we could only watch as waves tore away at the soft clay. Sometimes we would come down to the shore and find huge chunks of land had fallen away, occasionally exposing the remnants of a buried forest.

The buried forest is Two Creeks' claim to geological fame. It is a preserved (not petrified) boreal forest that grew near Lake Michigan just before the Valdres glacier. The glacier flattened the forest, leaving a layer of logs and debris embedded in clay. Radiocarbon testing dates the unearthed wood to almost 12,000 years ago. Wave action and erosion occasionally expose this record of a long-past forest, but during times of low water, vegetation soon covers the cliffs, and the buried forest is hidden from view.

We still saw a preserved tree trunk now and then the following year, but the water was decidedly lower, low enough that we could walk along the water's edge dry-shod. Often we had to clamber over newly fallen trees, but at least we could get through. Each subsequent year the water has been a little lower; each year the old-timers say, "Just you wait." But until water levels rise again, we have a broad path of soft sand between lake and land.

As I walk along this quiet beach, I watch for little wave-delivered treasures. Beach glass, colorful stones and fossils, oddly-shaped driftwood: some I pick up, others I leave for another time. Some days the water is low, exposing banks of gravel and piles of mussel shells; other days it laps against the dry sand, taking back its gifts.

Besides bringing treasure, the waves smooth the sand, leaving a blank page to record daily events. The wading bird tracks are dainty embroidery stitches in the sand. Goose tracks are heavy and solid, just like their calls; gull tracks cluster just like the gulls; and duck tracks are as cautious as the ducks themselves, making a shallow loop along the shore and then back in the water. Even with my minimal tracking skills, I can see where a fox loped along, two deer drank briefly and darted off, and a raccoon dined on a dead fish washed up in the night.



Beach glass is easiest to find on a sunny day.



Students on an Albion College field trip uncovered a preserved log at the Buried Forest.

Along with the lake's treasures, we receive its trash. Each spring and autumn we collect garbage bags full of other peoples' watery discards. Beer cans ranging from full six-packs in their plastic harnesses to tatters of rusty rims pile up under colonizing bushes. Ribbon-festooned balloons drift in, the celebration over, only the detritus remaining. Shoes and boots—only singles, never pairs—jackets, pants, underwear and socks: so many come our way that we wonder if there are boatfuls of naked, one-shoed, fishermen out on the lake. Those same careless fishermen must fling their unproductive gear overboard; each year we find enough to outfit a fleet, from artificial bait to fiberglass poles, and once, a fully loaded tackle box.

The most troubling artifacts are shotgun shells, fire-cracker casings and the remains of campfires, especially worrisome when the fire alert is high. And then there are the human problems. The most dramatic was a complete duck blind that had been constructed while we were away for a weekend. Campers and picnickers also seem to think all beaches are public, with the high water mark indicating the boundary between public and private property, but since September of 2001, the law is "keep your feet wet."

There are times when ignorance or disregard for private property creates interesting situations. The most amusing (for us) occurred last autumn. While visiting with friends on our deck, we idly watched a couple walking along the beach, dodging the roaring waves, and obviously unaware of our presence. Apparently she decided she couldn't wait to get to the toilet in the nearby park, and, after looking up and down the beach—but not towards us—slipped into the bushes in front of us. By the critical moment, we were shaking with suppressed laughter, unable to speak. Finally, my nephew gasped, "No!" I can only imagine her alarm, but I can report she set a world record for running in a compromised position.

Susan Knorr, Editor

We are fortunate to have many public beaches in our area where you can explore for treasures of your own—and help clean up the trash others have left.

Two Creeks Buried Forest is a DNR owned State Natural Area, It can be reached from the small parking area east of the intersection of BB and Hwy 42.



Crane Days

Like winds and sunsets, wild things were taken for granted until progress began to do away with them.

— Aldo Leopold
Sand County Almanac

Some days I just want
to take County B
and see open fields,

leave behind the city's center,
get on patched asphalt,
drive by a fallen-down barn.

The heart needs
leaping at tall tree lines,
swooning with blowing dune grass.

The eyes hold to wide horizons,
the thickly-lived forest,
and rambling riverways.

A flock of crane rattles skyward:
one would wait in a wild place
for dusk forever
before turning back home.

Jean Biegun

Injured birds, animals or bats with white-nose syndrome

If you find an injured or abandoned animal, or a live or dead bat with white-nose syndrome, 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.

A Little Known Abundant Bird

The red-eyed vireo (*Vireo olivaceus*) is one of the most abundant birds in eastern North America. Yet most people, aside from those who seek out birds, don't know it exists. It is a sparrow-sized bird, olive green above and white below, with a gray crown and a white eyebrow stripe. The eyes of adults have a bright red iris. It lives in the canopy of deciduous and mixed forests across southern Canada and the northern United States, and southward through the southeastern states. It forages, slowly and deliberately, for insects and other invertebrates, on branches and leaves of trees and shrubs.

Vireos have never received an English common name. The scientific name *Vireo*, meaning "to be green" in Latin, serves as a common name for most of the species in the family. There are about thirty-eight species of vireos in forests and brushy areas of North and South America. Twelve of them occur in the United States, occupying nearly all parts of the country. They are similar to some of the warblers, but vireos are slightly larger than warblers and have a stouter bill with a small hook at its tip. All North American vireos build cup-shaped nests that are suspended by their rims from a forked horizontal branch.

Breeding Bird Survey data indicates that the red-eyed vireo is the most common bird in the forests of northern Wisconsin. It is less numerous in the more developed southern part of the state, where forests are less extensive. Late April to early June is the arrival time for red-eyed vireos in Wisconsin, but the greatest numbers occur about the third week of May. They usually build their nests from five to ten feet above the ground. Nests are made of plant fibers, bits of bark, lichens, and spider silk. Four white eggs, lightly speckled with black or brown, are usually laid. Vireo nests are frequently parasitized by brown-headed cowbirds.

The female does all the nest building and most of the incubation and feeding of young. Eggs hatch in eleven to fourteen days; nestlings fledge in ten to twelve additional days. Young may still be fed by adults up to the time of migration. Red-eyed vireos spend the winter in the Amazon basin of South America. Fall departure may occur from late August to early October. In fall and winter their diet changes to mostly fruit.

The song of the red-eyed vireo consists of thin robin-like whistled phrases, separated by short pauses. Each phrase is usually made up of three or four notes. Red-eyed vireos sing at all times of day, even in the hottest days of summer. One naturalist counted 22,197 song phrases from one bird in a ten-hour day. The call note of the red-eyed vireo is a nasal down-slurred "ceyah."

The red-eyed vireo's habit of moving slowly among the leaves in the upper parts of trees makes it inconspicuous, but its frequently heard song reveals that it is an abundant part of the life of our forests.



John Woodcock

Tilting at Windmills: Birds, Bats, and Don Quixote



Nostalgic images of windmills haunt our memories. Think of those sentinels of yesteryear that towered over Don Quixote on his horse. The windmill, both past and present, is a metaphor for unrealistic attempts to rescue the oppressed, and right the wrongs of the world. Windmills won't right all the wrongs of our world, but we need to take a step back from all the hyperbole to see how they fit with our attempts to use less oil and commit to renewable energy sources, and to investigate the influence they have on our wildlife.

The life of most animals is fraught with danger. Predators, weather, disease and population pressures beyond our imagination threaten their lives. For those that migrate, life's perils are magnified by extreme weather, varying landscapes—and the possibility of crashing into obstacles. That possibility increases with urban development and the accompanying communication structures. It worsens when we add wind generators. Each structure may be a life-threatening obstacle to wildlife as they move about during times of low visibility.

Natural selection must occur if a species is to survive in the changed landscape. One adaptation to the increasingly complex urban landscape is an increase in brain size. (See box below)

Wind Generators

Because of our ever-increasing need for energy, particularly renewable energy, the wind generator has become a focus of interest. As wind

generators are added to the landscape, the effect they have upon migrating birds and bats is attracting interest as well, especially when they are close to natural areas or migratory corridors.

When Orion Energy Systems added an office complex to its facilities on Woodland Drive, Mike Potts, now president and COO of the company, told Woodland Dunes director Jim Knickelbine that they planned to install a wind generator. Knowing that many birds and bats use this area as a corridor for migration, Jim saw an opportunity to collect important information. After a series of discussions, he was given permission to conduct a study on the effect of this generator on animals that migrate along the lakeshore and Woodland Dunes. Although the study is in its early phase, there are some interesting findings worth reporting.

A preliminary survey was conducted from April to August 2010. During this time, the site was visited nine times between 7:30 and 10:00 a.m. All birds seen or heard during a five-minute interval were recorded. A bird banding station less than a mile from the Orion site was active throughout the study period, and provided information as to which birds were present at that time. During the resident bird (point-count) survey 242 birds of 42 species were found.

Research Parameters

The size of each study area was determined by the height of the wind generator multiplied by a factor of 1.8. The first generator, a 20 kw model, is 115 feet in height. The study area is

206 feet on each side, with the tower in the center of the study area. This generator, installed in August 2010, was the focus of the study conducted in September and October. The search area around this unit was a grass-covered berm, and an asphalt driveway and parking lot. A second generator, a 50 kw model, was installed in September. It is 167 feet high. The study area around this unit is 300 feet on a side, with the generator in the center. Because the surrounding landscape includes a large wetland, pond and a woodlot, the area that could be reasonably searched was reduced on the north side of this unit. Because it came on line after the start of the study, its impact was not fully established in this initial study.

The survey was carried out following established protocol. The five researchers (all familiar with area birds) include two federally licensed bird banders. They carefully searched each area using north/south transects at five-meter intervals. Each carcass was dated, and identified, and its location relative to the structure that caused its death was noted. For purposes of comparison, the east and south sides of the office building were also searched, and the carcasses found were recorded as described above. Participants searched as early in the day as possible to reduce the possibility of scavenger removal.

Two factors influence how many birds are found: the efficiency of the people searching for them, and the rate at which scavengers remove carcasses from the site.

Bird Brain Size

A recent study by biologists in Sweden and Spain found that urban birds had, on average, a larger brain than their rural cousins. The study looked at 82 species of birds in 22 families in 12 cities in France and Switzerland. It suggested that increased brain size was an adaptation to the urban environment. They also found that some of the small-brained individuals living in urban habitats had found niches approximating a country landscape, and were, in reality, country dwellers. This suggests that the complexities of urban living in birds are addressed biologically by increasing the neural processing potential of the nervous system with added nervous system mass.

Searcher efficiency

Searcher efficiency was assessed by placing five carcasses in the search area in locations unknown to the searchers. They were able to find 60% of the placed birds. This surprised us, as we thought the area very easy to search—mostly lawn and parking lot. Nevertheless, birds, especially in their fall plumage, were harder to locate than we expected.

Although we have done just a few trials at this point, our results for efficiency and scavenger removal are very similar to those found in another study of a large wind turbine site. Although not finding carcasses doesn't mean that no birds are hitting the turbines, we are confident that we are indeed finding most of the birds that are killed on the site, and statistical formulas allow us to adjust for efficiency and scavenger effects.

Scavenger effects

Scavenger effects were studied by placing five bird carcasses in the area of the small generator and near the windows of the office complex. In the first trial, all five carcasses remained as placed for five days. On the sixth day, two of the carcasses were missing. The remaining three birds were present throughout the rest of the study period, more than a month. In a second trial, five carcasses were placed around the small generator. All five remained after 24 hours, although we wondered if the previously frozen carcasses used in that trial were less palatable to scavengers. All of the carcasses were of birds that were found by the windows.

Bats

No bats were found at the wind generators or office complex. A variable that was noted, but had not been predicted, was the lack of wind during the nighttime hours. It was assumed that during the nights with little wind activity, the wind generators were not in operation, and their influence was only that of a free standing structure similar to a farm silo. Wind generators seem to have their greatest effect on migrating bats when in operation. It is possible that during the operation of a generator, ultrasonic frequencies are generated that confuse or attract the bats, which are then drawn into the vacuum caused by the rotating blades and killed. This explanation was offered when bats that were recovered around generators were found to have lung injuries that resulted in pulmonary hemorrhage. Because the generators at Orion Energy Systems were often silent at night, the effect of the generators on bat migration can not be assessed from this study. (Birds do not seem to be influenced by the ultrasonic noise, but are more likely to be attracted to the flashing red lights that are used on the towers in excess of 200 feet.)

Results

We found 15 bird carcasses at the windows, one at each turbine, and no bats. The results we obtained were similar to other studies. It is clear that the windows of the office complex were far more lethal to birds than the wind generators.

In addition to the bird carcasses found at the windows, three carcasses had been on site from before the study period. The bird carcasses were not the same species as the resident birds, and it appeared that migrants were more susceptible to colliding with either the windows or turbines than the residents, which may tie in to the research about bird brain size.

Conclusions

The spring and summer resident bird surveys conducted by Woodland Dunes indicate that the area in and around the Orion Energy sites is frequented by many birds in various families. None of these resident species were among the birds recov-

ered at the windows or wind generator. A simple interpretation of this finding is that migrating birds are at greatest risk. Since the area is unfamiliar to the migrating birds and bats, they do not have the adaptations found in the urban or local birds to provide the protection needed to survive these hazards.

The number of birds that appeared to have collided with the wind generators was low in comparison to the numbers which appeared to have collided with the windows in the office complex.

Although the nostalgic windmills of yesterday, complete with Don Quixote, are but a hazy image in our minds, a new generation of windmills is fast becoming part of our landscape. Perhaps a new Don Quixote will emerge as part of this image.

Charles Sontag and Jim Knickelbine

This wind generator study was intended to examine wildlife interactions at a specific site and time period. It is limited in scope and preliminary in nature. Only a single migration period has been monitored so far. Additional monitoring is recommended, since a larger data set will increase our confidence in the results gathered. Orion Energy Systems has given us permission to continue this study in the spring of 2011 (underway at this time).

Thank to Orion Energy Systems for their generous cooperation and assistance in this project. Also, we thank various staff members at WDNR, and Dr Robert Howe of UWGB for their invaluable advice and encouragement.

Mortality source	Annual mortality estimate	Percent composition
Buildings ¹	550 million	58.2 percent
Power lines ²	130 million	13.7 percent
Cats ³	100 million	10.6 percent
Automobiles ⁴	80 million	8.5 percent
Pesticides ⁵	67 million	7.1 percent
Communications towers ⁶	4.5 million	0.5 percent
Wind turbines ⁷	28.5 thousand	<0.01 percent
Airplanes	25 thousand	<0.01 percent
Other sources (oil spills, oil seeps, fishing by-catch, etc.)	not calculated	not calculated

¹Mid-range of fatality estimates reported from Klem (1990), 1 – 10 bird fatalities per house, extrapolated to 100 million residences.

²Based primarily on a study in the Netherlands (Koops 1987), extrapolated to 590,000 miles of bulk transmission line in U.S.

³One study in Wisconsin estimated 40 million (Coleman and Temple 1996), there are 60 million cats claimed as pets in the U.S.

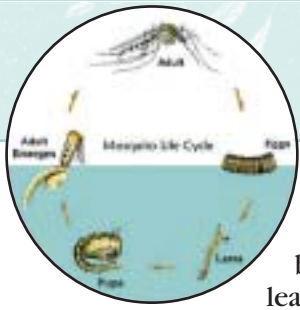
⁴Based primarily on one study in England (Hudson 1985, Banks 1979) that estimated 15.1 fatalities/mile of road each year, no searcher efficiency or bias adjustments in that study, updated based on increase in vehicle registrations

⁵Conservative estimate using low range of empirical fatality rate (0.1 to 3.6 birds/acre), studies typically adjusted from searcher efficiency and scavenging

⁶Estimates from models derived by Masville and Evans (M. Masville, pers. comm.).

⁷Mid-range of per turbine and per MW estimates derived from empirical data collected at several wind projects (table 7).

Mosquitoes: Good for nothing?



Kill it! is an unfortunate mantra often heard at the beginning of field trips. Whether learned or instinctive, we humans like to step on, smash and kill any living creature with the potential *or perceived potential* to bite, sting or cause bodily harm. My mantra is “Stop!—watch it, enjoy it, learn about it,” which works for all of the animals at Woodland Dunes but one, the mosquito. As carriers of deadly diseases, mosquitoes have earned the title of the deadliest insect on Earth. Each year, millions of people and other animals die after being bitten by disease-carrying mosquitoes.

As with many things in our life we would rather do without—cleaning bathrooms, automobile repairs, dental check-ups—mosquitoes are a necessary evil. They are an integral part of the environments they inhabit, so I hope you’ll be less bothered by the buzzing after learning about their value.

The Value of Mosquitoes

Food Source ~ Mosquitoes play an essential role in the aquatic food chain, laying their eggs in standing water. The larva that hatch are filter feeders, straining tiny organic particles from the water and becoming nutrient-packed snacks for aquatic animals like fish and amphibians. Adult mosquitoes serve as nutritious meals for birds, bats and spiders. If you enjoy the songs of frogs and birds or lazy afternoons at a fishing hole, try to remember some of these critters were brought to you through the help of mosquito.

The problem for us arises when mosquitoes lay eggs in standing water that does not support other animal populations, like swimming pools and old tires. A healthy functioning wetland will NOT be overrun with mosquitoes.

Pollination ~ Mosquitoes are not primary pollinators, but since they rely on nectar for nutrition, they also spread pollen from one plant to another.

Protection of ecologically sensitive areas ~ Mosquitoes protect wilderness areas by keeping out humans. The tsetse fly, which causes livestock disease as well as sleeping sickness in humans, has kept people away from some wildlife refuges and has been called “Africa’s best conservationist.” During high summer, when mosquitoes seem like the most abundant species at Woodland Dunes, it is nice to think that when we choose to stay inside, animals can go about their lives without human disturbance.

Part of the ecosystem ~ The mosquito’s role as a vector for disease has made it one of our most feared insects. However, from an ecological viewpoint, bacteria and viruses are also living creatures, and part of the ecosystem. Without mosquitoes, many of these organisms would die out. These diseases also cull weaker animals, playing a part in natural selection.

Potential ~ We may learn that mosquitoes can be useful. There are 2700 different kinds of mosquitoes on the planet, 176 in the United States. Medicines have been derived from

some insects; mosquitoes may prove to be beneficial in the end. For example, mosquito saliva is being studied for use in the development of vaccines to combat mosquito-transmitted pathogens, including malaria.

Inevitability ~ We can’t do anything about them. Mosquitoes have been on this planet over 200 million years. Mosquito fossils date as far back as the Triassic Period. Their ability to adapt to changing environments makes them all but impossible to eradicate, particularly if we don’t want to kill everything else. Even if we eliminated mosquitoes from the Earth, other species would fill their niche. Who knows, they might be even worse.

How to Avoid Mosquitoes

Be invisible ~ Hold your breathe, stand still and stay cool: Mosquitoes find hosts by observing movement, by detecting infra-red radiation emitted by warm bodies, and by sensing chemicals such as carbon dioxide and lactic acid at distances up to 100 feet.

Choose big friends ~ Hang out with someone bigger than yourself: bigger people are often more attractive to mosquitoes because they are larger targets and they produce more of the chemicals mosquitoes like.

Encourage activity in others ~ Give sugary snacks to other people in your party; active or fidgety people produce more CO2 and lactic acid. Movement increased mosquito bites up to 50% in some studies.

Girl friends rule! ~ Bring women on your next hike: women are more attractive to mosquitoes because they produce more hormones. Maybe it’s a girl thing—only female mosquitoes bite.

Dark but comely ~ Dye your hair: blondes tend to be more attractive to mosquitoes than brunettes.

Wash your feet ~ Smelly feet are very attractive to mosquitoes—as is Limburger cheese.

Forget fashion ~ Wear white no matter what fashion mavens advise: dark clothing attracts mosquitoes.

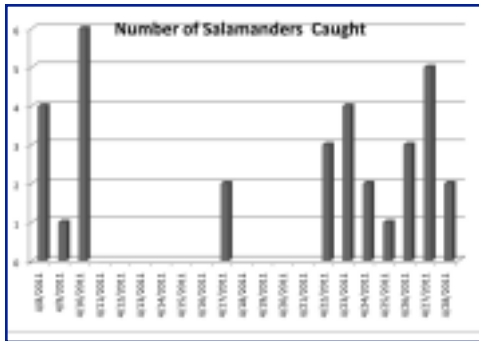
Beware werewolves ~ Stay inside during full moons: a full moon increased mosquito activity 500% in one study. This will also reduce your likelihood of being bitten by werewolves.

Kelly Eskew,
Education Coordinator

Did you know only female mosquitoes bite us?



Citizen-Scientists

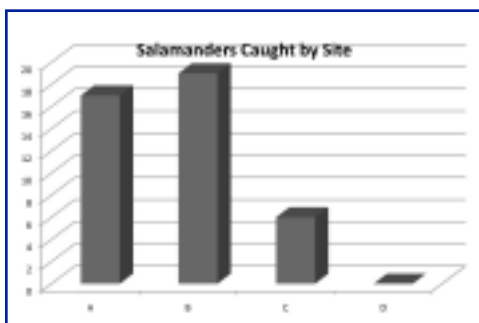


Salamanders Research

The first warm rains of spring bring thousands of amphibians across Goodwin Road into our swales for their early spring breeding season.

A few years ago, Jody Henseler placed some traps in one of our swales, and caught many blue-spotted salamanders just after that migration. This year, volunteers helped us monitor traps in four locations: two of our swales, a man-made pond in the forest, and a detention pond next to our headquarters which drains by stream into our marsh and the West Twin River. These traps, similar to minnow traps, were placed on April 6 and taken out on April 29. Volunteers and staff checked the traps daily to ensure that animals caught in them wouldn't drown. In addition, pitfall traps (pails dug into the ground) were installed on land next to the swales and ponds to catch salamanders travelling to and from the water.

Forty-two salamanders, about two per day, were caught during the sampling period. All were blue-spotted salamanders, a common species in Wisconsin. We caught quite a few

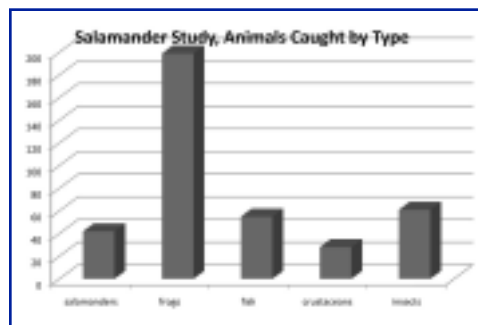


Sites A, B, and C are in the forest associated with our swales; site D is at a man-made pond.

wood frogs, and a surprising number of fish, mostly central mud-minnows. We caught crayfish, insects and other animals, even some shrews.

This kind of survey helps us understand the abundant life in and around our wetlands. We will continue to sample during the summer for other salamander species that don't lay eggs in water. We will continue sampling yearly to create a larger database of wildlife information.

Thanks to Dave Wanek, Charles Sontag, Jody Henseler, Sandy and Tracy Folz, Betsy and Tom Kocourek, Katrina and Michael Marr, and Bonnie Zipperer for helping with this project. John Meyer and Sandy and Tracy Folz sampled at other locations in Manitowoc County. One day John found 45 blue-spotted salamanders in a single aquatic trap in the Menchalville Swamp.



Invasive Species Monitors

Woodland Dunes, along with the Manitowoc County Lakes Association, has trained 60 volunteers to visit area lakes monthly to look for nonnative invasive species. Specifically, the monitors record observations of Eurasian milfoil, curly-leaved pondweed, purple loosestrife, common reed (phragmites), zebra mussels, spiny waterfleas, rusty crayfish, Chinese and banded mystery snails, and freshwater jellyfish. If you are interested in participating, please join us for the final training session in July.

We are also working on a map of invasive terrestrial species for the county. It will help county officials and volunteers plan how best to deal with them. If you would like to help



Jim Welnetz deals with the invasive plant species, phragmites.

with this project, we will train you and lend you a GPS unit for locating the invasives—please call us! Our map is located at the invasive species display in the Nature Center.

Monarch Butterfly Tagging

Since 1992, more than 15,000 monarchs have been tagged, released and recovered through the Monarch Watch program. The tagging data gives scientists a better understanding of monarch migration routes, the influence of factors like weather on migration and the survival rate of monarchs traveling to and from overwintering sites. A better understanding of these butterflies and their migration routes helps to ensure that important monarch habitat is preserved.

If you are interested in taking part in this study please call the Nature Center at 793-4007 or email kellye@woodlanddunes.org. Once you are registered, we will contact you with a tagging date during the peak of monarch migration, usually in early September. Join us at the Butterfly Festival on August 20 from 9:00 a.m. to noon to learn about and practice catching and tagging monarchs.



Birds

Birds Banded at Woodland Dunes 2010

American woodcock	2
Northern saw-whet owl	304
Yellow-bellied sapsucker	1
Downy woodpecker	1
Least flycatcher	3
Trail's flycatcher	4
Philadelphia vireo	3
Red-eyed vireo	18
Blue jay	1
Black-capped chickadee	12
Brown creeper	1
Winter wren	1
Golden-crowned kinglet	4
Blue-gray gnatcatcher	1
Veery	2
Gray-cheeked thrush	28
Swainson's thrush	69
Hermit thrush	44
Wood thrush	1
American robin	1
Gray catbird	15
Brown thrasher	1
Cedar waxwing	2
Blue-winged warbler	2
Tennessee warbler	6
Orange-crowned warbler	6
Nashville warbler	9
Yellow warbler	1
Magnolia warbler	21
Cape May warbler	1
Yellow-rumped warbler	2
Black-throated Green warbler	2
Palm warbler	2
Bay-breasted warbler	1
Blackpoll warbler	18
American redstart	37
Ovenbird	9
Northern waterthrush	5
Common yellowthroat	10
American tree sparrow	9
Savannah sparrow	2
Fox sparrow	14
Song sparrow	11
Lincoln's sparrow	2
Swamp sparrow	2
White-throated sparrow	53
White-crowned sparrow	5
Dark-eyed junco	8
Northern cardinal	3
Rose-breasted grosbeak	2
American goldfinch	4

Winners!

Kari Hagenow, along with her husband Tyler and mother Cherie, won the 2011 Bird Pledge-a-thon at Bird Breakfast. Together, they documented 48 species of birds on Woodland Dunes property. Congratulations, Kari, Tyler and Cherie. They received Woodland Dunes lapel pins ... and lots of glory.

Adopt an Owl

For \$25 you can adopt a saw-whet owl caught and banded at Woodland Dunes. Funds raised from this program support the mission of Woodland Dunes. Call the Nature Center for details.

Recent Owl Adoption: Sarah Mark



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.



Christmas Bird Count 2010

Species	SW	SE	NW	NE	Total
Canada goose	1146			64	1210
Trumpeter swan	1				1
American Black Duck	13				13
Mallard	446		3	21	470
Long-tailed Duck	4				4
Bufflehead	6				6
Common goldeneye	340			139	479
Common merganser	53			7	60
Red-breasted merganser	53			1	54
Ruddy duck	1				1
Ring-necked pheasant	5			1	6
Wild turkey	32	76	63	182	353
Bald eagle	1	2	3		6
Northern harrier				1	1
Sharp-shinned hawk	1	1	1	1	3
Cooper's hawk	1	1	1	4	6
Red-tailed hawk	4	10	13	21	48
Rough-legged hawk	2	4	2	8	16
American kestrel	2	1		4	7
Peregrine falcon	1				1
Ring-billed gull	3				3
Herring gull	161	25	251		437
Glaucous gull	1			1	2
Rock pigeon	194	245	96	315	850
Mourning dove	85	189	41	85	400
Eastern screech owl	1				1
Great horned owl	1	2		2	5
Belted kingfisher			1	1	2
Red-headed woodpecker	1				1
Red-bellied woodpecker	3	15	7	10	35
Downy woodpecker	7	28	15	39	89
Hairy woodpecker	3	5	6	18	32
Northern flicker		1		1	2
Pileated woodpecker		2		1	3
Northern shrike				2	2
Blue jay	8	43	19	52	122
American crow	31	195	273	445	944
Common raven			1		1
Horned lark	40	102	40	2	184
Black-capped chickadee	21	202	39	272	534
Red-breasted nuthatch		13	2	9	24
White-breasted Nuthatch	3	26	13	32	74
Brown creeper				1	1
Golden-crowned kinglet		1			1
Eastern bluebird			3		3
European starling	32	508	208	195	943
Cedar waxwing		138			138
American tree sparrow	20	92	53	10	175
Song sparrow		4			4
Swamp sparrow		2			2
Dark-eyed junco	43	210	149	253	655
Lapland longspur		30	1		31
Snow bunting	160	89	32		281
Northern cardinal	16	58	36	81	191
Meadowlark		2			2
Common grackle	1				1
Brown-headed cowbird				1	1
Purple finch			3		3
House finch	3	98		36	137
Pine siskin	50		68	25	143
American goldfinch	62	124	139	97	422
House sparrow	124	290	51	377	842
Totals	952	5,041	1,407	3,068	10,468
Species	28	50	32	41	62

Kidland Dunes

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



Plonk. Plonk. Plonk.

Green frogs contradict everything you ever thought you knew about frogs.

If you're standing near a pond in the evening, you can probably hear the male green frog's call—*plonk-plonk*—a steady, almost musical rhythm that announces the full arrival of summer. It's nothing like the typical *ribbit ribbit* that you read in storybooks.

Although pictures of green frogs usually put them in ponds in the summer, these critters can be found in woodlands and meadows, and they can even survive buried in wintertime.

Finally, despite their name, they're not always green—they can be brown or yellowish too, and a very few of them are blue.

Nature's Hardest Pest

It's finally summer, the air is fresh and warm, and you've decided to take advantage of the weather and take a walk outside, when suddenly you become aware of a sharp pinching sensation on your arm. You look down just in time to see a small black insect buzzing away, leaving you with an irritating, swollen bump on your skin.

Even if you haven't seen a mosquito up close very often, no doubt you've felt the painful and itchy after-effect of their bite. Mosquitoes feed on the blood of other animals, including, unfortunately, us humans. And because you're probably not very excited about learning about these creatures up close, you can sit inside and read these fun facts instead!

Fact One:

Did you know that male mosquitoes are harmless? It's true! Their diet consists strictly of nectar.

Fact Two:

When mosquitoes suck blood, they inject their victims with saliva that helps keep the blood from clotting. It's the saliva that makes that painful little bump after a mosquito bite.

Fact Three:

There are more than three thousand distinct species of mosquito in the world, and they can even live in arctic regions.



Guide the frog back to his lily pad!



Park Days... Try It

Summer's the best season of the year to do nature study, when plants and animals are most active, but it's also when most of us just want to play and run around in the nice weather. That's when Park Days come in—when the authors were a little younger, we got together every week with our friends to play and do nature study together. Here are some tips for successful Park Days:

- Explore. Manitowoc and Two Rivers have a variety of parks each with their own unique habitats. Have you touched the lovely streams of Silver Creek Park, or climbed up the mossy stone castle in Neshotah Park?
- Go early in the day, when the air is cooler and there aren't as many people.
- Nature notebooks, field identification guides, sunscreen, bug spray, and water bottles are a must.

Sources: *Animal Diversity Web (University of Michigan Museum of Zoology)*; *Wild Wisconsin Notebook* by James Buchholz

The Living Classroom



Girl Scouts learn about adaptations to cold weather.

Winter World Program

This year 241 students enjoyed a winter adventure at Woodland Dunes, exploring the preserve on snowshoes and becoming feeding platforms for black-capped chickadees. Learning about the adaptations birds and other animals use to survive our Wisconsin winters gives students a deeper respect and appreciation for wildlife.

Here are some of the comments teachers made about Winter World: "This is our first time for this trip. It was awesome. What a great experience for the kids to snowshoe; it might be the only time they have the chance. I loved having the birds feed on our heads." "We are currently studying adaptations right now in science. It couldn't have been more perfect timing. It fit with our text book."



Girl Scouts use the full extent of their arms to measure a cottonwood tree.



Students check the size of a maple tree to make sure it is big enough to tap.

Maple Syrup Program

As the animals and plants start to thaw out and emerge, our Maple Syrup program gets underway. Early spring is one of the most exciting times of year to be outside; every day new plants and animals are discovered. On the March 16 field trip a young girl yelled, "SNAKE!" Sure enough, a slow moving garter snake was slithering across the snow, probably wishing it had stayed underground a little longer.

Here are some of the teachers' comments about the Maple Syrup field trip. "This is one of the best field trips I've ever taken my students on in 32 years of teaching." "The program is excellent!" "The teacher-naturalist was awesome! She was GREAT with the kids. We had a wonderful day!"



Dick Luchsinger with a group of students learning about maple syrup.

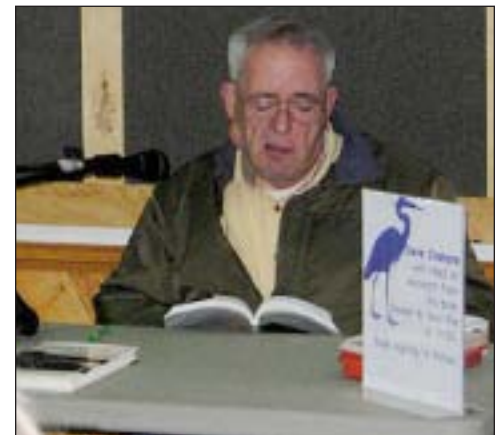


Young visitors at Bird Breakfast learn about how herons catch their food.

Bird Breakfast Program

This year at Bird Breakfast kids enjoyed the "What do birds eat for breakfast challenge."

Using tools similar to bird beaks they dug in the soil like a snipe looking for worms, filtered weeds and insects from the water like dabbling ducks, searched for insects (pasta) inside the woodpecker log, caught gummi fish and frogs using a long beak like a blue heron's and tried catching flying insects (marshmallows) in the air with their tongues like swallows. Kids learned how bird beaks are adapted for the type of food they eat, and how hard it is to eat and find food without hands. Everyone agreed it's not always easy being a bird but it was fun to try it out.



Dave Crebore reads from his book at Bird Breakfast

Volunteers

A sincere thank you to our all wonderful, hard-working volunteers.

School Program Volunteers

Winter World

Bill Hoeltke, Ellen Lewellen, Geri Berkovitz, Jeannie Miller, Jess Johnsrud, Lou Ann Gray, Mary Ozarowicz, Rachel Welch

Maple Syrup

Geri Berkovitz, Lou Ann Gray, Jim Knorr, Ellen Lewellen, Dick Luchsinger, Jeannie Miller, Mary Ozarowicz, Mary Savage

Bird Breakfast Volunteers

Mary Ellen Beebe, Fran Brinkman, Lyn Brouchoud, Donna Drexler, Lou Ann Gray, Chris Jagedinski, Susan Knorr, Donna Langman, Amanda Langman, Kent Langman, Ellen Lewellen, Moe Massaro, Susie Polk, Norb Pritzel, Barb Vorrone, Rachel Welch, John Woodcock, Julie Woodcock

Dash at the Dunes Volunteers

Fran Brinkman, Sue Crowley, Don DeBruyn, Tom Finnegan, Dan, Patty and Sarah Gray, Jody, Alek and Andrew Henseler, Chris Jagodzinsky, Jacob Johnsrud, Emma Knickelbine, Betsy and Tom Kocourek, Susan Knorr, Don and Ellen Lewellen, Dave Nickels and his finish line crew, Susie Polk, Dan Scharnhorst

Volunteer Appreciation Picnic

Tuesday, June 28 • noon

Please join us for the annual volunteer appreciation picnic. The staff will provide a cookout lunch. Please call or email kellye@woodlanddunes.org to let us know if you will attend. All volunteers are welcome.



Volunteers who help in all areas enjoy the 2010 Volunteer Appreciation Lunch.

2009 Volunteers of the Year

Each year Woodland Dunes honors a volunteer for exceptional service to our organization. Somehow, to our embarrassment, we failed to announce the name of our Volunteer of the Year for 2009. And while our staff does its best, in that year, we found it impossible to settle on one person from among all who are so helpful, so we selected two people to be our 2009 Volunteers of the Year, Dick Luchsinger and Jim Welnetz.

Dick and Jim have a lot in common. They both love the outdoors, both enjoy working with young people, they are both retired from the Weyerhaeuser Corp. in Manitowoc, and both devote several days per week helping with countless projects at the Nature Center.

Jim had helped Bernie Brouchoud, the former director of Woodland Dunes, band birds many years ago before Woodland Dunes was formed, and although he was not active in that for years he remembered Bernie and contacted us after he retired. He immediately pitched in and began



Dick Luchsinger shows a group of eager children some deer antlers.



Jim Welnetz is a little camera shy, but is eager to help wherever needed.

helping with maintenance work, trail improvements, invasive species management, tree planting, and anything else with which we need help.

Dick became involved in Woodland Dunes as part of our deer management program, serves on our Property Committee, and, upon his retirement, began helping with our education program as a Teacher-Naturalist. Soon he started helping prepare for education programs (setting up trails etc.). He has continued to help with many other projects.

Jim and Dick often work together on projects several days per week, and, like all our volunteers, help our staff accomplish so much more than could be done without them. Although this recognition of their continued contributions is belated, we sincerely offer them our ongoing thanks and recognition.

Thank You



The following reflect gifts, donations and memberships received through May 15, 2010.

Special Donation

Kelly Eskew Vorrone donated her \$2,000 Champion of Champions award from LNRP to Woodland Dunes.

Donations

Judith Badura
Sharon Kennedy
Service League of Manitowoc County, Inc.
In honor of Earth Day
Scout Pack 3932, Jackson Elementary School
Robert Vinton

In-Kind Donations

4Imprint 250 silicone bracelets
Ann Bents book for the library
Don & Helen Bleser bird monitors, calculator
Jean Biegun hand soap
Josh Campion bird feeders
Marty Gregory hand lenses
Betsy & Tom Kocourek ongoing use of pontoon boat for river trips, first aid supplies, entry rugs, Dash at the Dunes groceries, white board, aerial map display and Woodland Dunes display
Gary Kurtz bat house
Tessa Kubsch Meissner corkscrew willow branches
Bonnie O'Leske coffee maker, Tiki torches, two tables, book
Tom Tittl carved wooden Little Wings sign

Memorials

In honor of Cooper James Beaupre
Carol Martin
For Memorial Garden
Aegolius Bird Club
In honor of Scott Schuette's birthday
Joselyn Bourgeois
In honor of Dan Taddy
Hank & LuAnn Gray
In honor of Bev Vereka's retirement
Jeffrey & Janet Kohn

New Members

David Bourgeois
Mike Cavanaugh
Lucy DeWein
Mary Haupt
Lee and Kim Kassner
Sheila Nysse
Peter and Susan Popp
Debbie Roemer
Debbie Samz
Kayla Samz
Tony Scherer
Conrad Swiggum
Haley Wagner



Dash at the Dunes Winners

Pictured above, left to right: Lori Potter, Nic Lyons, Gary Budysz, Julie Berres, Brian Backhaus, Mary Kopidlansky, Jeff Kopidlansky, Mike Cavanaugh, Kathy Hughes, Emma Jelinek, Alex Strouf, Claire Johnsrud (held by Nicole Johnsrud) Not pictured: Julia Colantonio, John Peroutka, Sharon Schuette

Dash at the Dunes

Sponsors

Gold: Orion Energy Systems
Silver: Browns of Two Rivers, Lakeside Foods, Road ID
Bronze: Aurora Health Care Manitowoc County, Brandt Buses, Fricke Printing Services
Friend: David Kuester and Cam Williams, Festival Foods Manitowoc, Don and Ellen Lewellen, Subway of Two Rivers

Earth Day Run

Woodland Dunes memberships were awarded to the first place winners of the Earth Day Run at Silver Lake College, Mike Cavanaugh and Sheila Nysse.

Bird Breakfast

Sponsors

Browns of Two Rivers
Shopko Foundation

Bird Pledge-a-thon Participants

Bernie and Lyn Brouchoud
Tyler and Kari Hagenow
Cherie Petrashek

Fund Drive

Aegolius Bird Club

Matching Funds

IBM

Grant

Dominion Energy, Kewaunee, Inc. (support for The Wonder of It All program)

Corporate Members

Explorer Level (\$500-\$999)

Bank First National
Browns of Two Rivers
Fricke Printing Service

Ecologist Level (\$300-\$499)

Conservator Level (\$151-299)

Foster Needle Co., Inc
Investor's Community Bank
Lakeshore Express, Inc
Lakeside Foods, Inc
Red Arrow Products Company, LLC
The Manitowoc Company, Inc
Vinton Construction

Defender Level (\$50-\$150)

Associated Bank of Manitowoc
Carron Net Company, Inc
Cawley Company
Green Construction, LLC
Hamann Construction Co.
Heresite Protective Coatings
Ihlenfeld, Skatrud and Anderson, Inc
Jagemann Stamping Company
M.D. Remodeling, LLC
Northern Labs, Inc
Schaus Roofing and Mechanical
Schenck, SC
Twin River Turf
Wisconsin Webwriter, LLC



Woodland Dunes has earned Travel Green Wisconsin (TGW) certification. TGW certified businesses work hard to do their part in protecting our environment for today and future generations. TGW certified businesses support local farmers, businesses and artists. Investing in them means investing in a sustainable future. Certified businesses also offer an opportunity to learn about sustainable practices that you can also apply in your own home.

Unexpected Pleasures

It was the first Saturday of May when we joined the initial bird walk of the year with Woodland Dunes's Bernie Brouchoud. My wife and I eagerly anticipated what we might see and hear—a great way to greet the day. The sun finally came out and the winds calmed as we hit the trail with eight other bird lovers. Not 50 yards into the walk, my wife, out of the corner of her eye, caught a glimpse of a red fox running to hide in the cedar trees.

To our delight, Bernie informed us that there would be another surprise as we continued along the trail. And there it was: three little red fox kits lay in the sun, digesting their breakfast. Because the wind was in our favor that day, they did not notice us at first. When they did, the scramble to hide was on. We stayed for a bit to see if they might get curious and come back out for a look. Sure enough, two of them did, popping their heads up to get a view of us and decide if we were friend or foe. One even came out to give us a glimpse of just how brave he really was. What a find we had that day!

This kind of experience makes you realize the importance of Woodland Dunes and the nature nestled within its protected areas to Manitowoc County. I urge everyone to join Woodland Dunes and participate in its programs. It is nature at its best.

Bill Hoeltke



Available in the Nature Shop

We are now carrying eco-sensitive clothing! Environmentally friendly and a sustainable option, it is made out of organic cotton, bamboo or recycled fibers. Eco-sensitive hats will be coming soon.

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

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 ideas:

- Garden Lovers: garden gloves, watering can, seeds, markers, garden book
- Beach Bum: beach towel, escape novel, sunscreen, flip flops, sunglasses
- Ladies Night: martini guide, ingredients, martini glasses, chick flick.
- Grill Master: grilling cookbook, man apron, tasty BBQ sauces, sturdy utensils.

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

Here are some examples.

- Dance Instructions: a two-hour dance lesson for up to three couples.
- Lawn care service: four hours of weeding or lawn care.
- Musician: entertainment for a special evening.

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.

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

Beverages: \$200 - \$299

Prizes: \$300 - \$499

Food: \$500

To become a sponsor, please contact Jessica at (920) 793-4007 or email jessicaj@woodlanddunes.org.

Woodland Dunes

Become a member!

Name _____
Address _____
City _____
State _____ Zip _____
Phone _____
Email _____

- \$25 Individual
- \$35 Family
- \$50 Patron
- \$100 Contributor

Guarantors

- \$250 Conservator
- \$500 Benefactor
- \$1,000 Steward
- \$5,000 Guardian

Please send this form and your tax-deductible donation to Woodland Dunes today.

Board of Directors

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Saturday:

Summer • 9 a.m. to noon

Winter • by appt. or for events

Hiking trails open year round

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