the BogHaunter

the newsletter of the Friends of the Cedarburg Bog

Volume 10, Number 2 Spring 2015

THE BIG THAW

The thawing of earth and water in the Bog and its uplands issues a powerful summons.

Spring comes slowly to the Bog, and in order to understand it, we have *to* appreciate what happens in winter. The pole of the earth is tilted away from the sun, which means that its rays deliver less heat, for fewer hours, from a lower angle. Snow reflects a lot of it. Much of the warmth that accumulates during those short days leaks back into the sky during the long nights. The energy balance – the amount of heat delivered during the day *vs* the amount lost at night – favors cold. The coldest time of winter is not on the Solstice, but about a month later. In the words of an old weather adage, "*The days lengthen, the cold strengthens*."

Winter plants are dormant, their leaves discarded or snow-covered (some plants *can* photosynthesize, a little, even during winter), and with their water supply frozen in the soil, they are temporarily plunged into desert conditions.

Warm-blooded animals, depending on their metabolism, migrate, hibernate, sleep through the worst days, or prowl the Bog for food. With a few exceptions, cold-blooded animals, the so-called "*children of the atmosphere*," have only two options - a suspension of animation called aestivation, or death. Most insects die in fall, leaving the next generation behind in the form of eggs or pupae. Animals come out of the winter hungry, stressed and at their lowest populations for the year.

Temperatures moderate as we approach March 20, the start of spring, the Vernal Equinox (meaning "*equal night*") when the hours of daylight and dark are roughly the same. The sun crosses the equator to ride a higher arc through the sky, its rays striking the northern hemisphere more directly. If we're lucky, the snow stops, and the air, earth and water begin to warm. Within a month after the equinox, the energy balance changes again as the ground is able to store more heat at night.

Meteorologists say it starts on March 1st, when spring-like weather patterns appear. Swedes mark it when the average daytime temperature is above freezing for seven days in a row. In other countries, the season runs from six weeks before March 20 until six weeks after it. Some ecologists celebrate six seasons, recognizing early spring and late fall as distinct entities.

Hepatica

Whatever calendar date we assign, it's the *phenology* of spring that we notice. The *order* of the frog chorus, or of returning birds, or of emerging flowers is nearly the same each year (we all have our favorite "*indicator species*"); it's the start date that differs, determined by climate and weather. The spring of 2012 barreled in, bringing many record "first" sightings, but in 2014, frozen peat underlay the open water until May.

In the uplands, with no leaves to block the sun, the earth thaws, its progress slowed by cold nights and frosts. Thawing allows gases and water to enter and move through the soil again, along with the soil animals that have tunneled deep enough to avoid the frost line.

Plants need fairly constant temperatures at and above 50 degrees F in order to get started, and once that happens, they leaf out and bloom in response to specific day lengths (photoperiod). Along with spring ephemeral wildflowers, the mosses, ferns and lichens take advantage of the sunlight before the trees leaf out.

Winter conditions can become dire for animals below the ice; in a very cold winter, ice may reach dangerously close to the bottom of the wetland. The decay of aquatic plants and the respiration of aquatic animals produces carbon dioxide, so the spring thaw brings a welcome infusion of oxygen, and nutrients circulate through the water column.

Spring landscapes are raucous, and the return of open water brings the noisemakers. Sandhill Cranes, the Voice of the Bog, start to arrive in mid-March, as the edges of the ice melt, and they're followed by Red-winged Blackbirds and waterfowl and the sounds of territorial advertising.

Frogs that live on land during the summer hibernate on land as well; the others spend winter under the ice. Regardless, their resurrection in spring is nothing short of miraculous. Thanks to a naturally occurring antifreeze in their blood, frogs can freeze solid without lethal ice crystals forming in their cells. Even more impressive is the fact that while they

Blue-spotted salamander

are frozen, they are clinically dead, with zero heart, brain, or respiratory activity and no metabolism. When

warm air or water finally reaches them, they thaw slowly, with the cells becoming active first, then the heart, then the frog gulps and restarts its breathing, and soon it's ready to hop away.

Spring brings amphibians to the water to breed, some, like the blue-spotted salamander, while ice lingers at the wetland's edge. For salamanders, reproduction is a hushed affair, but frogs and toads tell the world. Wood frogs, spring peepers and chorus frogs sing first; leopard frogs, American toads, and tree frogs are next, and green and bullfrogs are the last to add their voices to the frog chorus. Join us for spring events at the Field Station and take in the sights and sounds of the Bog.

LEATHERLEAF

Finding the flowers of leatherleaf (*Chamaedaphne calyculata*) is one of the delights of spring in the string bog. It's a low shrub and not a showy one, but its wands of delicate, white bell-like flowers in May signal the spring as surely as the returning warblers and the calls of frogs.

Leatherleaf

Its flowers are typical of the Heath family (Ericaceae), which includes Bog Rosemary, cranberry, and several species of blueberry that also grow in the strings. Another heath, Labrador tea, is on the Bog's plant list, but only a few plants have ever been found. As its name suggests, leatherleaf's leaves are tough and waxy, an important adaptation for a plant growing where sunlight is plentiful and water may be hard to pick up. The leaves persist on the plant for up to two years, turning brownish-purple in late summer.

Leatherleaf grows in the majority of Wisconsin counties, throughout the northeastern US, and across Canada into Alaska. It's a plant of wet meadows, marshes, bogs and wetland shores, and its presence often signals a particular "type" of wetland, a sphagnum-leatherleaf bog. It's a survivor – able to tolerate acid soils with a pH of less than 5 (the pH of acid rain or black coffee), fluctuating water levels, and nutrient-poor soils. The Cedarburg Bog is actually a fen whose pH hovers around seven, or "neutral."

A heavy snow cover results in lots of flowers in spring. It takes a specialist to pollinate those almost-closed flowers, and bumblebees are the most effective. But leatherleaf doesn't depend on seeds; its main method of spreading is vegetative – sprouting from buds low on the trunk and from its ever-enlarging system of roots. Not surprisingly, it can aid in the recovery of a damaged wetland, and it can be the dominant shrub in acidic wetlands.

The rhizome (underground stem with roots growing off of it) can grow a foot deep in the soil, though the rhizomes of leatherleaf in the string bog are probably shallower due to the low levels of oxygen. Leatherleaf survives because of its partnership with underground fungal strands called mycelia, in what one writer calls a barter system. More and more of these fungus–plant partnerships are being discovered. The fungus, with its wider "reach," absorbs water and nutrients from the soil and conveys them to the leatherleaf roots. In exchange the fungus is able to use some of the sugars produced by the leatherleaf.

Leatherleaf is not an important wildlife food, and although it is eaten by some insects, the leaves of many members of the heath family are toxic.

TREASURES OF OZ ECOTOUR

Hit the road on June 20 on the *Treasures of Oz Ecotour*. Once again, the public area at the north end of the Bog, off of Highway 33, will be a *Treasure*s destination. From 9:00 AM until 3:00 PM, volunteers will be waiting to tell you about the Bog. A bird walk is scheduled at 9 AM, and several guided nature walks are planned throughout the day.

Visit parks, preserves, waterfowl areas and recent additions to Ozaukee's internationally acclaimed program to restore and reconnect its waterways. End your day of adventures at the Celebration at Forest Beach Migratory Preserve, north of Port Washington, where good food, music, wildlife programs, exhibits, and an exciting silent auction await you from noon to 6 PM.

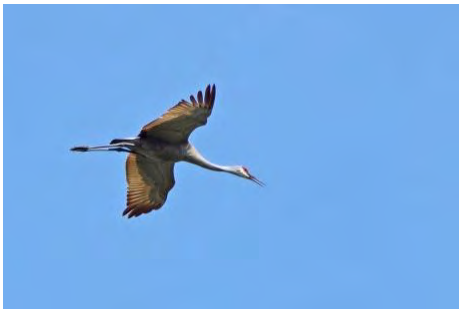
Marsh bluet damselflies

Print a passport on line, get it stamped as you go, and then trade it in for free raffle tickets at the trail's end at Forrest Beach.

For complete information visit www.treasuresofoz.org. Passports and event information will be available after May 1st.

MIDWEST CRANE COUNT

Forty years ago, people who wanted to see a Sandhill Crane in southeastern Wisconsin drove out to the UWM Field Station, because the Cedarburg Bog was one of the few breeding spots for the birds in the area. Despite its wide open spaces, the Bog typically supported only a single pair of cranes.



Sandhill Crane

The *Annual Wisconsin Sandhill Crane Count* started in Columbia County in 1976 and grew, encompassing five central counties in 1978 and 34 in 1981. The next year, 2,824 cranes were spotted by 1,617 volunteers in 43 counties.

In 1994, the project expanded outside state borders and was renamed the *Annual Midwest Sandhill Crane Count*, and in 2005, with the reintroduction of Whooping Cranes, it became the *Annual Midwest Crane Count*. Almost 13,000 Sandhills and 13 Whooping

Cranes were counted in sixty-two Wisconsin counties in 2014.

This year's count is scheduled for April 18th from 5:30 to 7:30 AM, CDT. In order to participate, you must contact your County Coordinator beforehand. More information is available at https://www.savingcranes.org/annual-midwest-crane-count.html.

Meanwhile, if you want to see a Sandhill Crane in southeastern Wisconsin, the Bog is still a great place to look. They can be seen and heard daily along the roads that border the Field Station property. The wetlands at the south end of the Bog now support multiple pairs of cranes, which, as their populations have increased, seem to have become more tolerant of crowding.

FRIENDS AWARDED $200K TO CONTROL BUCKTHORN

The FOCB was recently granted nearly $200,000 by the Environmental Protection Agency to control buckthorn in the Cedarburg Bog. This grant size is an order of magnitude larger than any previous Friends' grant and will fund the removal of fruiting-sized buckthorn from over 600 acres of the Bog. Funding is also being provided by the Friends and its invasives control partners—the University of Wisconsin-Milwaukee, the Department of Natural Resources and the Natural Resources Foundation of Wisconsin—the total budget is nearly a quarter of a million dollars.

This federal grant resulted from the planning efforts of FOCB Board members Dr. James Reinartz and Bruce Ross, who donated scores of hours to put together a grant proposal the EPA found competitive among nearly 40 other applicants. The EPA program falls under the federal government's Great Lakes Restoration Initiative (GLRI).

Our project will entail hiring a two-year project manager to coordinate the buckthorn removal efforts and the other aspects of the grant. Additional staff will be hired to cut and treat the buckthorn in the interior of the Bog in the next two autumns and winters, when it's more accessible. The project will also include a landowner outreach program and public seminars on the importance of wetlands (like the Bog) to water quality in the Great Lakes and practical methods to control invasives on your property.

Glossy buckthorn

Only one-third of the nearly 2,200 acres of the Bog will be addressed with this funding because of practical limits in what can be accomplished in the two years of this project, and the fact that control in these areas will need to be sustained in the future in order to be effective. The areas selected for control efforts include examples of all the communities within the Bog. An important part of the project is the development of an invasives control plan that will help guide future control efforts within the bog.

Receiving the grant is a really big deal—for both the landscape of the Bog and your Friends' organization. There are lots of ways you can be a part of this effort, from on-the-ground invasive control work, to administrative support, and of course, financial support. Send an email to bogfriends@gmail.com to explore ways to be a part of this exciting project. And if you're interested in the project manager position, see the job description the bogfriends.org.

Bruce Ross, Board President

BREEDING BIRD ATLAS II

The first Wisconsin Breeding Bird Atlas was the result of years of field work carried out by more than 1,600, mostly volunteer, observers, and still more years of collating data and writing. Planning started in 1994, field work was carried out between 1995 and 2000, and the book was finally published by the Wisconsin Society for Ornithology in 2006. The Cedarburg Bog was a priority area in the first atlas census, and 127 species of birds were identified in the Newburg/Bog quadrant. In all, the project found evidence of breeding for 237 species of birds in the state.

Fifteen years have passed since those data were collected, and it's time for WBBA II! The organizational steps have been taken, and thousands of birders are poised to head out into the field, with the first nesting Common Ravens and Great Horned Owls already being logged but with most of the work beginning this summer.

Just as they were in the first atlas, the public is invited not only to take part in the field work but also to help fund the project by making a contribution or by sponsoring a species. The Friends of the Cedarburg Bog have committed $100 per year over a five year period by sponsoring the Wood Duck, a species whose presence we have been encouraging by putting up Wood Duck nest boxes in the Bog.

Cardinal nest

The late Noel Cutright, Friends member and Bog neighbor, served on the steering committee and co-authored the first Atlas book and was a member of the steering committee for WBBA II until his death in November of 2013. The WBBA II Steering Committee is honoring Noel for his role with the atlas and for his lifelong contribution to bird conservation. All contributions and species sponsorships made in Noel's memory will be placed in the *Noel J. Cutright Atlas Legacy Fund* and applied directly to atlas field work. For more information about the Atlas or about sponsoring a species, see http://wsobirds.org/sponsor-a-species.

Friends of the Cedarburg Bog: Supporting stewardship and appreciation of the Cedarburg Bog through land management, preservation, research and education.

Volume 10, Number 2 Spring 2015

ADDRESS SERVICE REQUESTED

UWM Field Station
3095 Blue Goose Road
Saukville, WI 53080

BUILDING FOR WILDLIFE

Ten participants attended the Friends' *Building for Wildlife* event on February 20th. Speakers discussed bats and a variety of cavity-nesting birds and the types of nest boxes that will attract them. Different styles of nest boxes were on display. Stay tuned – this program may be offered again in fall.

Building for Wildlife event, 2/20/15

NOT MOSQUITOES

The first mosquito-shaped-object seen in the Bog is usually not a mosquito but a midge, in the Family Chironomidae. Some species of midges are remarkably tolerant of cold weather, dancing up and down in little groups in early spring and into late fall (their rapid wing-beats raise their body temperature). How to tell them apart? Midges hold their wings out to the side a bit when at rest, and mosquitoes tuck theirs over their backs. Either may rest with only four feet on the ground, but mosquitoes raise their back pair of feet and midges tend to lift the front pair.

Chironomids may give us an uneasy moment when we see a bunch of them, but they don't bite – in fact, they don't eat as adults. The "dancers" are almost all males, hoping to attract females. The males' feathery antennae are tuned to the high-pitched sound of the females' wing beats, and he can hear her above the noise of the crowd.

Their larvae/maggots may live for up to three years in habitats that range from damp edges to depths of many feet, where they prey on mini plants and animals and scavenge on organic debris. Many larvae can build tubular retreats by gluing together small particles using globs of mucous, a pretty neat trick, underwater. Red hemoglobin found in some species gives them the nickname "bloodworms;" the extra hemoglobin lets them pick up oxygen more efficiently in habitats like the Bog where there isn't much of it.

Midge larva - bloodworm

Check out the chapter on Midges in the excellent A Guide to Observing Insect Lives by Donald W. Stokes for information about masses of midges and about the tendency of some species to orient over a "swarm marker" and stay within a midge-eyesight of it.

FRIENDS COMMITTEES

The adoption of our strategic plan has put a spotlight on the goals of the organization as they apply to committees and on how committees can work together to achieve those goals. As a result, the committee structure has been tweaked a bit. The two largest changes are combining the Events and Education committees, whose projects often overlapped, and forming a Communications committee that will unify our message by overseeing the press releases, social media, and newsletter.

Committee chairs for 2015 are:
- Fundraising, Bill Taylor
- Stewardship, Mark Murphy
- Events/Education, Carrie Hiestand
- Membership, Pam Resnick Ross
- Newsletter Editor, Kate Redmond

If you are interested in pitching in with any of these areas, let us know.

BOG BIRDS AND BUGS

If you're hiking in the Bog and want to know what just flew past you, reach for our updated lists of "*Birds of the Cedarburg Bog*," and "*Butterflies, Dragonflies and Damselflies of the Cedarburg Bog*." They're available at the north end of the Bog in the brochure box near the trailhead, and as down-loadable PDFs in the Plants and Animals section of the bogfriends.org website.

CALENDAR

For more outdoor events, please visit www.treasuresofoz.org.

Noel J. Cutright Bird Club
First Tuesdays 6 PM walk, 7 PM meeting
Free and open to the public. At: **RNC BARN**, riveredge.us

Science for Everyone
Public programs on Natural History.
7 PM to 8:15 PM
Third Tuesday at **RNC**; fourth Tuesday at **LLC.** For program topics or driving directions, call RNC at 800-287-8098 or riveredge.us. Event is free, $5 donations appreciated.

Earth Day of Service
April 25, 9 PM to 1:30 PM
Come celebrate the Earth by giving back. Bring your friends and spend a morning of volunteer activities in our park followed by a community lunch. Meet new people and have fun helping the Earth! Family hikes and "mini" service projects also available at 9:30 AM and 11 AM. For everyone. Free - donations appreciated
***UEC** - all three branches*

Observing Nature's Clockwork
April 27, 9:30 PM to 2:30 PM
This unique event highlighting the study of Nature's calendar – phenology – starts at the Mequon Nature Preserve, moves to the Schlitz Audubon Center, and ends at Riveredge Nature Center. Registration is required. For more details or to register, contact Mandie Zopp at 262-375-2715 or mzopp@riveredge.us.

RNC – Riveredge Nature Center
4458 Hawthorne Dr, Newburg
riveredge.us

LLC – Lac Lawrann Conservancy
300 Schmidt Rd, West Bend
laclawrann.org

MNP – Mequon Nature Preserve
8200 W. County Line Rd, Mequon.
mequonnaturepreserve.org

UEC – urbanecologycenter.org
Riverside Park 414-964-8505
Washington Park 414-344-5460
Menomonee Valley 414-431-2940

Water Quality Training
May 2, 9 AM to 3 PM
Learn to assess water quality of a stream or river. Volunteers learn to ID aquatic invertebrates and do 5 water tests. Monitors conduct monthly tests in summer and submit their data on a statewide website. To register, contact Mary Holleback at 262-416-1224. **RNC**

Birdathon-Bandathon
May 9, 6 AM to 4 PM
Join the Noel J. Cutright Bird Club as they see how many species of birds can be found at Riveredge on a May morning, or watch the bird banding. Collect pledges for species seen or banded. **RNC**

Spring Wildflower Sale
May 9, 9 AM to 1 PM
Stock up on wildflowers for wetland, prairie and woodland gardens, garden perennials, herbs, trees, shrubs, and trellises. **LLC**

Tracking the Arrival of Spring: Phenological Monitoring at the UWM Field Station
May 16, 1 PM to 4 PM
Phenology is the study of the timing of events in the life cycles of plants and animals. We'll walk in the woods, talk about phenological monitoring at **the Field Station**, and tell you how to get involved. Sponsored by the Wisconsin Phenological Society. Registration required at fieldstn@uwm.edu or 262-675-6844.

International Migratory Bird Day
May 16, 6 AM to 1 PM
Celebrate Migratory Bird Day at the only bird preserve in the Great Lakes Region dedicated to the migratory birds. Guided tours, bird talks, displays, silent auction, luncheon, and our 2nd ANNUAL BIRDHOUSE BUILDING CONTEST. For more info or to enter the birdhouse contest, contact Marilyn at 262-338-1794 or mschlotfeldt@owlt.org.
At: **Forest Beach Migratory Preserve**, 4970 Country Club Rd, north of Port Washington.

Butterfly Bonanza
June 27, 9:30 AM to 3 PM
Learn to identify butterflies as you participate in the annual butterfly count. Come for part or all of the day; wear comfy walking shoes, bring a lunch if you're staying all day. For adults and children 12 and up accompanied by an adult. Free ($5 donation appreciated). **RNC**

The Cedarburg Bog: designated an Important Bird Area and a Wetland Gem

FRIENDS EVENTS

Unless otherwise noted, walks will meet at the UWM Field Station on Blue Goose Rd. Space is limited, so please register. For directions or to register, visit bogfriends.org (click on Events). Walks are free and open to the public; a $5 donation is appreciated. Questions? Contact 262-675-6844 or fieldstn@uwm.edu.

Please, No Pets.

Friends of the Cedarburg Bog Quarterly Board Meeting – April 9, 7 PM to 9 PM. Members welcome. UWM Field Station.

Woodcocks and Frogs – April 23, 7:30 PM to 9:30 PM. The early spring frog chorus can be a religious experience. Bring a flashlight.

Frogs (and maybe Woodcocks) – May 7, 7:30 PM to 9:30 PM. Join us as we hunt for these and other wetland noisemakers. Bring a flashlight.

At the North End of the Bog – May 10, 9 AM to Noon. Explore the plant life at the north end of the Bog. ***Trip will meet at the Hwy 33 parking lot; no bathrooms.***

Marsh Marigold Walk – May 17, 9 AM to Noon. Walk the boardwalk surrounded by the brilliant yellow of the marsh marigolds and see what else is in bloom as the Bog wakes up.

Spring Bird Walk – May 25, 6:30 AM to 8:30 AM. Search for migrants and breeding birds. Bring binoculars.

Summer Solstice Walk – June 21, 6 PM to 8:30 PM. Experience the sights and sounds of the Bog as evening falls on the sun's longest day.

A Walk in the Bog – July 5, 9 AM to Noon. Find out what's blooming, singing, hopping and flying in the Bog in the early weeks of summer.

Green frog