

# The BogHaunter

the newsletter of the Friends of the Cedarburg Bog

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## HACKMATACK

Swamps are wetlands that are dominated by trees; alternatively, they are forests with wet soils. The swamp forest that rings the Cedarburg Bog owes its northern flavor to its dominant conifers – white cedar and tamarack. Cedars love calcium-rich soils. Tamarack (*Larix laricina*) is tolerant of a variety of growing conditions, and it's a sun-lover that is a pioneer tree in wetlands. But unless it can grow up into the over-story, shade from neighboring cedars will keep tamaracks from dominating the conifer swamp.



*Tamarack cones*

Tamarack is primarily a northern tree, found across Canada and the northern United States and, at higher elevations, as far south as the mountains of northern West Virginia. It has the ability to survive to temperatures as low as minus 85 degrees F, with the caveat that there must be an insulating blanket of snow on the ground to keep its roots from freezing. About ten years ago a bitterly cold and totally snowless December and January resulted in the death of almost 20% of the Bog's tamaracks.

Although they often grow in damp conditions, high water levels can kill tamaracks, and since they have very shallow root systems, they're easily blown down by high winds. They also have some serious insect pests; the most damaging is the larch sawfly, whose larvae feed on the needles. An old tree may be 150 to 200 years old and 50 to 75 feet tall. A Dodge County

tamarack that's listed on the DNR's Wisconsin Champion Trees website measures 78 feet tall with a diameter over 31", but no tamaracks in the Bog approach that size.

The tamarack adds its special blend of color to the Bog. Its bark is gray-to-reddish and rough. Pale green needles erupt from woody spurs on its branches in spring, branches that are soon adorned with small crimson cones. Tamaracks are "moneocious" - each plant makes both male and female flowers. They are deciduous conifers, shedding their needles in fall after the needles have turned a brilliant gold.

William A. Burt, who surveyed the area in 1836, wrote in his field notes that "The Swamp on sections 29 and 32 & a part of Swamp on Sect 31, 28 & 33 is of a character little better than a mud lake...it cannot be passed without some danger to life," an astonishing remark from a man who spent his days alone in the wilderness.

Early settlers ignored his advice, at least in winter, when they logged the Bog's big tamaracks (90' tall and more) to build their homes and out-buildings. The weir nets that were used in Port Washington's fishing industry were supported by tamarack trunks, and lengths of cut logs, split horizontally, hollowed out, and strapped back together made water pipes that lasted a long time if they remained buried. Tamarack logs were placed side-by-side on the ground to make corduroy roads.

American larch, Eastern larch, red larch, talmahak, and hackmatack are other names for the tree. In the Algonquin language hackmatack or akemantak means "wood used for snowshoes", and its Ojibwe name, "muckigwatig," means "swamp tree." Tamarack has a long history of use by Native Americans as medicine and food for both people and horses; its rootlets were used to weave bags and sew birch bark canoes together.



*Tamarack brightens the Bog in fall*

Once common in wetlands in southeastern Wisconsin, tamaracks now occupy less than 15% of their pre-settlement area. Research is being carried on in the Bog to identify the conditions needed for optimum tamarack propagation.

## A YEAR IN THE LIFE OF THE FIELD STATION

As we have observed before, the title is a bit on the dry side and doesn't change much with each issue – this year it's titled "2012 Field Station Annual Report" – but the contents are an annual reminder of just how much amazing stuff is going on each year at the University of Wisconsin-Milwaukee property in the Town of Saukville. And it's a reminder for the Friends of the Cedarburg Bog of the important role we play in supporting the Field Station. The Friends' mission: to help preserve and study the Bog and to make the public more aware of its uniqueness.

The Field Station and adjacent Bog is a 2,000 acre outdoor laboratory for researchers in plant and animal ecology, evolutionary biology, ethology, taxonomy, geology, hydrology and climatology. UWM owns approximately 320 acres, most donated by The Nature Conservancy in 1965. Research at the Station has produced 317 scientific publications and 142 theses since 1970.

In 2012 the Friends sponsored 16 educational events for the general public. Volunteers from the Friends contributed many person-days of labor, including natural area and trail management, publishing a newsletter, raising funds, and sponsoring and providing staff for events. In 2012 the Friends also continued a study – led by Joanne Kline – to identify the surrounding areas that contribute groundwater supply to the Cedarburg Bog. The Friends also continued large grant-funded invasive control projects in 2012.



Here's what the report lists as the highlights for 2012:

- The new Researcher House used for longer stays by individuals and groups was set up and put into use.
- Major progress managing woody plant invasion of the Benedict Prairie in Kenosha County.
- Extensive Friends of Cedarburg Bog projects to manage invasive glossy buckthorn in the Cedarburg Bog.
- Management of the Habitat Protection Area at UWM's new Innovation Park campus in Wauwatosa made major progress on control of invasive species.
- Use of Downer Woods on campus for education and research remains strong, with major progress on controlling common buckthorn, honeysuckle and garlic mustard.
- 41 active research projects were conducted at the Field Station, including: 7 M.S. theses, 3 Ph.D. and 19 studies by researchers from outside the university.
- 8 papers were published; several others are in press.
- Over 10,000 student hours of instruction and group use.
- Ten workshops on topics in natural history.

This year's annual report particularly emphasized the Station's database de-

velopment. The collection of a variety of long-term data is an important part of the Field Station's research program. Examples of its databases include:

- Vascular plant flora of the Field Station area and an excellent herbarium.
- A complete stem map and diameter measurements of all trees in 5.5 acres (2.25 hectares) of the beech-maple woods first censused in 1987.
- Repeated surveys of the entire beech-maple forest at the permanent grid locations.
- A complete, quantitative survey of the vegetation of the Cedarburg Bog, first conducted in 1991 and repeated in 2006.
- Phenological observations on leaf-out and flowering of standard genotypes of 6 species in a phenological garden, and 26 naturally occurring species at the Station since 2001.
- Long-term weather records from a standard U.S. Weather Service weather station and a Bowen-Ratio energy flux monitoring system.
- Continuous monitoring of bat activity levels at the Neda Mine Bat Hibernaculum since 2000 and of temperatures in the mine since 1997.
- The Charles Weise 30-year study of Dark-eyed Juncos.
- The Charles Weise 27-year intensive study of the Black-capped Chickadee.
- The Charles Weise 26-year breeding bird survey of the Cedarburg Bog & upland woods from 1971 to 1996, repeated in 2006, 2007, 2008, and 2011.
- The Charles Weise 30-year bird-netting and banding program conducted in fall.
- The Field Station is a major site for long-term studies of avian vocalizations, including their organization and function.
- Geographic Information System developed for the Field Station area.

by Carl Schwartz

### **BE ON THE LOOKOUT FOR.....**

.....an invitation from the Friends' Membership Committee to renew your "Friendship" with the organization. And since there's no better advertisement than a satisfied customer – please recommend the Friends to a friend and help us grow our organization.

### **BLUE JAY**

It's a bird that evokes strong feelings in its admirers and detractors. In winter, its beautiful blue, black and white colors perk up the Bog's otherwise drab

landscape. In summer, the variety and intonation of its odd calls in the upland woods can mystify even an experienced birder. Its reputation as a nest-robbler (mostly undeserved) and its feistiness at the feeder make it unwelcome in some backyards, but its antics endear it to many feeder-watchers, who secretly confess, "I know it's a troublemaker, but I love watching it." Its role as the neighborhood watchdog benefits other songbirds. And, it plants trees.

Ravens, crows, and Blue Jays (*Cyanocitta cristata*) are members of the Crow family and are considered to be very intelligent birds. As proof, scientists point to the richness of their vocabulary and the tightness of their family bonds.



*Blue Jay*  
photo by Freda Van den Broek

Blue Jay vocalizations are complex, and along with their loud "Jay, Jay" and "pump handle" sounds, they have a number of softer, more "conversational" call notes. They can imitate the calls of several species of hawks, though scientists aren't sure whether the jay is checking to see if hawks are around, psyching out other songbirds, or just having fun. If it encounters a bird of prey, a Blue Jay's excited "mobbing calls" attract other birds to harass the predator.

A glance at its expressive crest can tell you if a bird is scared (a bristling crest), aggressive (an erect crest), or peaceful (a flat crest).

Males and females collaborate to build a cup-shaped nest, preferably in an evergreen, in which the female lays an average of four or five eggs. Totally helpless when they hatch, young Blue Jays continue to be incubated for a week or two, and they stay with their parents for two months. Both parents care for them.

Their migratory habits are quirky. There are notable migrations along the

Great Lakes and Atlantic shores, and young birds are more likely to migrate than older ones, but a bird may migrate one year and not the next. Blue Jays are never totally absent in winter from the territory they inhabit in summer.

Blue Jays measure nine to twelve inches – a little bigger than a robin – and males and females look alike. Their blue color is caused by physics, not by pigments, and their feathers are actually a dull brown. It's called a "structural color," and it's the result of the light bouncing off of feather barbs and being scattered by tiny air pockets in the feather's "skeleton."

They are omnivores, but only about one-quarter of their diet consists of animals - insects, spiders, snails, small frogs, mice or salamanders. Fruit, seeds, and nuts make up the rest, and most of what they eat is wild, not cultivated. They may cache food, hiding it for later use, although in 1895, one observer noted that jays do not cache food unless they are permanent (rather than summer) residents of an area. According to the Cornell University Lab of Ornithology's *All About Birds* site, "Their fondness for acorns is credited with helping spread oak trees after the last glacial period."

Blue Jays are preyed on by hawks, and their eggs and nestlings are eaten by squirrels, cats, hawks, owls, crows and raccoons. Although the record for a wild bird is seventeen years, a seven-year-old Blue Jay is an old Blue Jay. Both jays and crows have been hit hard by West Nile Virus.

Blue Jays are conspicuous in the air over the Bog in fall, harvesting acorns from the Beech woods and carrying them out to the islands or into the Bog to stash. This has probably been going on for a long time. Lake sediments (gytta) underlie the peat that serves as the growing medium for plants in the Bog. An acorn cap that was found in a sample of lake sediments may have been dropped by an ancient blue jay 5,000 years ago.



## WATCH US GROW

The Acorn Fund planted last year by the Friends of the Cedarburg Bog has grown into a full-fledged endowment under the management of the Natural Resources Foundation of Wisconsin, providing a perpetual source of funding to preserve and nurture the Bog.

Recent gifts and earnings have allowed the Cedarburg Bog Stewardship Fund to grow to \$10,658 as of June 30, crossing the endowed fund threshold and becoming one of 58 funds that currently comprise the Wisconsin Conservation Endowment with total assets under management of \$3 million.

Not only is the Bog fund professionally managed, donors have the security of knowing their gift will be protected in a true endowment with the principal preserved in perpetuity to generate support for the work of the University of Wisconsin-Milwaukee Field Station and the Department of Natural Resources, both of whose efforts in the Bog are supported by the Friends of the Cedarburg Bog.

As part of the Wisconsin Conservation Endowment, the Bog's fund also gains regional and statewide visibility through the NRF's publications, website, newsletter articles and media releases. Groups such as the Ozaukee Washington Land Trust, Cedar Grove Ornithological Research Station, Friends of Kohler-Andréa, Friends of Wyalusing and Friends of Pike Lake have created similar endowed funds with the NRF.

Contributions are tax-deductible and can be made by sending a check to the Natural Resources Foundation of Wisconsin, Attn: Cedarburg Bog Stewardship Fund, P.O. Box 2317, Madison, WI 53701 or by donating online at <https://donatenow.networkforgood.org/Wisconservation>.

Friends of the Bog who wish to help support and protect it for future generations are urged to consider leaving a legacy gift by including the Cedarburg Bog Stewardship Fund in their estate planning. To make such a bequest, simply incorporate the following language in your plans:

"I give [describe the gift] to the Natural Resources Foundation of Wisconsin [federal tax id # 39-1572034], a non-profit corporation organized and existing under the laws of Wisconsin and with a principal mailing address of P.O. Box 2317, Madison, WI 53701. This gift shall be designated to the Cedarburg Bog Stewardship Fund."

For more information, call the Natural Resources Foundation toll free at (866)

264-4096, email [info@wisconservation.org](mailto:info@wisconservation.org) or visit [www.wisconservation.org](http://www.wisconservation.org).

by Carl Schwartz

## CAUTION - TURTLES HATCHING

Participants in an evening Bog walk in mid-June returned to the lab at sunset to find a snapping turtle digging a hole in the middle of the lawn on the west side of the building (she was covered by small mosquitoes that were so full of blood that they could hardly fly!). She probably came from the wetland that is downhill on the east side of the building.

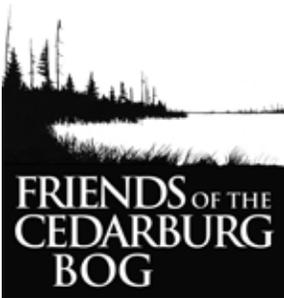
Midland painted turtles and snapping turtles, Bog's most common turtle species, lay their leathery eggs in nests that they excavate in soft soil, sometimes a considerable distance from water. The lawn was a perfect spot for the snapper's "incubator," getting full sunlight for most of the day. The holes that turtles dig with their hind feet are shallow – usually less than six inches deep. Eggs laid, a female covers the hole and walks away, her part in the drama finished.

Depending on the weather, turtle eggs that are laid in June and July incubate in the warm soil for two to three months, if they're lucky. The vast majority of turtle nests – some studies say 90% - get raided by dogs, raccoons, and skunks. The inch-long hatchling turtles that emerge from the egg successfully and are able to dig their way out of the nest face that same array of predators plus birds, snakes, and, when they get in the water, fish and snapping turtles.



Painted turtle hatchlings

Turtle hatchlings break out of their shells in late August, September or even later. Just as the weather affects hatching dates – a cool summer makes for a cool "incubator" – it can also determine whether young turtles can dig out of their nest easily. Drought hardens the soil. The farther north they live, the more likely it is that snapping and painted turtle hatchlings will aestivate (stay in a state of suspended



UWM Field Station  
3095 Blue Goose Road  
Saukville, WI 53080

ADDRESS CORRECTION REQUESTED

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animation) underground through the winter. An antifreeze-like substance in their blood helps them resist freezing, but many do succumb to the cold. The one inch turtle that you find in May might have survived its first winter under water, but it's more likely that it has just emerged from the ground.

The gender of a snapping or painted turtle is determined by the temperature of its nest. Not all areas of the nest are created equal, and a sibling on the top of a mass of eggs may be warmer than ones underneath. In general, painted turtle eggs incubated at higher temperatures produce females, while males emerge from eggs that stay cooler. Female snappers hatch from the higher and lower temperature ranges and males from temperatures in the middle.

**DID YOU KNOW....**

That meadowhawk dragonflies often survive the first frosts and are active on sunny fall days?



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

**CALENDAR**

For a list of events offered by our partner organizations, check [Treasuresofoz.org](http://Treasuresofoz.org) and click on the calendar page.

**Science For Everyone**

7 to 8:15 PM

Third Tuesday of the month at Riveredge Nature Center (RNC), Newburg; fourth Tuesday at Lac Lawrann Conservancy (LLC), West Bend. For information, topics, or directions, call Riveredge at 800-287-8098 or check the website [Riveredge.us](http://Riveredge.us).

Fee: Free (\$5 Donation Appreciated)

October 15 Riveredge

“What Would You Do With All That Poo?” For every pound of milk produced, a dairy cow can produce one pound of manure. Learn about current research focused on educating producers about new manure disposal methods.

October 22, (LLC)

“Deer: Too many or too few? Deer dynamics in Wisconsin.” How can we get researchers, hunters, and the DNR on the same page in deer management?

**Big Sit**

October 12 All day

Come for part or all of the day and count migratory birds heard or seen from the Bill Cowart Memorial Raptor Watch platform at Forest Beach Migratory Preserve. For information, contact Bill Mueller, Western Great Lakes Bird and Bat Observatory, [wpmueller1947@gmail.com](mailto:wpmueller1947@gmail.com). At: Forest Beach Migratory Preserve, Highway P north of Port Washington.

**Halloween Hike at Harrington Beach State Park**

October 19, 6 to 9:00 PM

Call the Park for more information (262) 285-3015  
Please no dogs for this event

**Friends of the Cedarburg Bog Quarterly Board Meeting**

November 7, 7 to 9 PM.

Members welcome  
UWM Field Station

**FRIENDS-SPONSORED EVENTS**

All Friends-sponsored walks will meet at the UWM Field Station on Blue Goose Rd. Walks are open to the public.

Space is limited and pre-registration is requested. For directions or to register, contact us at [www.bogfriends.org](http://www.bogfriends.org) (click on the Events tab) or 262-675-6844 or [fieldstn@uwm.edu](mailto:fieldstn@uwm.edu).

Free: a \$5 donation is appreciated.

**PLEASE - NO PETS ALLOWED**

**A Walk in the Beech Woods**

October 13, 12:30 - 3 PM

Take a walk in the Field Station Beech Woods State Natural Area at the height of fall colors.

**Owl Prowl**

November 15, 7 to 9 PM

Learn about local owls and then see which ones are calling around the Field Station. Dress for the weather and bring a flashlight.

**The Friends of the Cedarburg Bog**

Support stewardship and appreciation of the Cedarburg Bog through land management, preservation, research and education