

CELEBRATING ASH TREES

Wisconsin's first recorded emerald ash borers (EAB) were seen in the summer of 2008 about three miles from the Cedarburg Bog. A beetle was spotted in the Bog in 2013, but the condition of ash trees in the Bog and Beechwoods confirms that they have been in the Bog for a while.



Emerald Ash Borer (EAB)

The larvae of EABs feed just below the bark, excavating tunnels called galleries that intersect the tree's "plumbing" and stop the flow of nutrients between roots and crown. As the crown dies, an afflicted tree puts out new shoots along its trunk (*epicormic sprouting*) in an effort to stay alive. Another sign of a beetle infestation is increased attention by woodpeckers, which flake off the top layer of bark to locate the larvae beneath.

About 13% percent of the trees in the Cedarburg Bog's wetlands are various species of ash, and white ash makes up close to 10% of its upland trees. Mortality rates among ash trees due to EAB is projected to be about 99%. The Wisconsin DNR estimates that there are more than 700 million ash trees in Wisconsin forests, and about 5 million more in our towns and cities.

Ash are in the olive family Oleaceae. The names of the Bog species sound like a crayon box – white ash, black, red, and green. They are identified by their "opposite branching" - the leaves, twigs and branches are arranged opposite each other. There's an acronym for that – MAD-Cap Horse. While many kinds of

woody plants have alternate branching, Maple, Ash, most Dogwood, the Caprifoliacae (honeysuckles and viburnum) and Horse chestnut are opposite.

Ash have compound leaves; instead of a single leaf like a maple, each petiole (leaf stem) bears five to eleven leaflets. Ash are dioecious male and female flowers are found on separate trees, and they produce paddle-shaped fruits called samaras. The bark may be textured, often in a diamond pattern. Ash trees are generally sun-lovers, and they grow in the open or in the early stages of a woodland or swamp. With their straight, single trunks, they've been a popular landscaping tree despite the fact that they leaf out late in spring and drop their leaves early.

Ash trees were very important to Wisconsin's early Native Americans and then to its settlers. Indians used ash medicinally to treat rheumatism, fevers, itchy scalp, head lice, and mosquito bites, and as a tonic to stimulate appetite. Many cultures in both the Old World and the New believed in the power of ash to repel snakes and to treat snakebite. Ash sap made a drinkable beverage; the tips of the twigs were a tobacco substitute; and the inner bark made a red or blue dye. An oil that is made from the tree has been used to treat stomach ailments.

The strong and flexible wood was prized on the frontier for snowshoes, cradleboards, bows, arrows, tool handles, paddles, sleds, boats, as frames for dwellings, and for fuel. Today we use it for baseball bats, cabinets, flooring, pallets, and furniture. Ash's resonance and good looks make it desirable for guitars.

Common names tell us about people's everyday experiences with a plant or animal, and some alternate names for the black ash (*Fraxinus nigra*) are basket ash, hoop ash, swamp ash and water ash. Because of the way its wood splits (it's the

only wood whose growth rings are not connected by fibers), Indians historically used black ash for basket-making, and they wove baskets from ash bark, too.

Deer and many small mammals feed on the leaves and twigs. Songbirds and game birds enjoy its seeds, rabbits eat new seedlings, and beavers drop ash trees for food. The list of insects that depend on ash is a long one, and it includes the tiger swallowtail butterfly and Polyphemus moth. Cavities that are left when the tall, spindly ash trunks break off attract squirrels, woodpeckers, owls and wood ducks.



White Ash

White ash seedlings (Fraxinus americana) can start out in shady woodlands, but they become more shade intolerant as they mature. A tall white ash in the Beechwoods is a sign that surrounding canopy trees fell, letting in the sunlight that it needed. Of all the species, white ash prefers the driest soils, sometimes growing in the open and sometimes in the company of beech, oak, and sugar maple. Black, green and red ash typically grow at the edges of wetlands, in old fields, and in damper soils in white cedar swamps with tamarack, red maple, willow, alder, and poison sumac.

Red and green ash (*Fraxinus* pennsylvanica) were once separated into two species but are now considered a single species. The

subspecies can be hard to tell apart. Shoots, petioles, and the undersides of the leaflets of "red ash" (sometimes called "downy ash") tend to be "hairier" than green ash.

Ash trees light up the fall with leaves that glow yellow, red, orange, bronze and even purple. The landscape will be poorer when they're gone.

Your 2015 Board of Directors

Bruce Ross - President Tim Vargo - Vice President Pam Resnick Ross - Secretary Bill Taylor - Treasurer Sharon Fandel (DNR Site Manager) Chris Ford Carrie Hiestand Andy Holschbach Mark Murphy John O'Donnell Jennifer ("Jeff") Rothstein Jim Reinartz (UWM Representative) Sue Schumacher Andrew Struck boafriends.org/about-us/who-we-gre

WEATHER LOGGER 2.0!

Sometimes we purchase or make things with the hope that they will last a lifetime – a good canoe, a wooden spoon, a warm, knit blanket. And other times there are things that we know we will eventually need to replace – like hiking boots, or a laptop, or a container of milk.

In 1989, the UWM Field Station purchased and installed a digital weather datalogger, with funds from the National Science Foundation. This tool allowed for the creation of an incredibly rich long-term dataset of meteorological parameters, including temperature, humidity, precipitation, solar radiation, wind speed and barometric pressure. With time, the value of this equipment as an investment increased, in a sense, as a 5-year dataset became a 10-year dataset which today is now an incredibly important 25-year dataset that shows long-term climate trends.

The *datalogger* became an essential source of data for much of the cutting edge research to come out of the bog. Dr. Peter Dunn and Dr. Linda Whittingham were among the

first researchers to identify the effects of climate change on birds. Dr. Weon Shik Han is determining the effects of climate change on groundwater in the bog, which affects all other plants and wildlife, and Dr. Mark Schwartz, a global leader in phenology (the study of cyclic and seasonal natural phenomena), has been able to turn the Field Station into a phenology "super site" because of the extensive phenological observations, supplemented in 2013 by a phenology (pheno)-camera.

Over time, however, as the weather station was recording 24 hours a day, every day, the technology behind weather stations advanced until the digital *datalogger* became obsolete; it was still recording, but it could no longer be repaired or serviced. A hardware failure would have almost certainly resulted in loss of data, a growing gap in the dataset and a loss on the investment.

Today, thanks to your support, that fear is no longer looming. The Friends of Cedarburg Bog, along with along with four UWM researchers, the UWM Office of Research, and the Besadny Grant program provided funding for a new digital *datalogger*, along with an electronic rain gauge to replace the bucket rain gauge. These new systems allow for more data-collection power and less upkeep and maintenance. For example, in the old system, the rain gauge needed to be checked weekly and the data manually entered.

Of course the day will come when this equipment will need to be replaced, but hopefully by then we will be sitting on a 50-year dataset, but more importantly we will have been applying the information from this data set to help better understand the bog's systems and the impacts of climate change, and to apply this information to goals of conservation and sustainability.

Tim Vargo, Friends Vice-President

RED SQUIRRELS IN THE BOG

Red squirrels, a noisy flash of rust on the landscape, often provide the sound track for walks in the Bog's conifer swamp and shrub carr. They are the smallest, and ounce-forounce, the most fearless of the three species of tree squirrels on the Bog's mammal list. Red squirrels are larger than chipmunks but are about half the size of a fox squirrel and

two-thirds the size of the gray. They average about a foot long, including the tail, and weigh between a quarter and a half-pound, and they're easily identified by their cinnamon colored coat (which is drabber in winter), light underparts, and white eye ring. Males and females are similar.



Red Squirrel

In the northern part of their range, red squirrels (*Tamiasciurus hudsonicus*) are usually associated with conifer forests, but they're extending their range (there have probably always been a few in southern Wisconsin) and are equally at home in our deciduous woods. Red squirrels are omnivores. In the north, seeds and cones of various conifers make up a large part of their diet, supplemented by mushrooms (which they collect and cache in trees until the mushrooms are dry) and fruit and small animals.

Beechnuts, hickory nuts and acorns are eaten in deciduous woodlands, supplemented by grains from surrounding agricultural fields and bird feeders, buds, berries, flowers, and a variety of insects, bird eggs, and nestling birds. They love tree sap, and are said to chew on bark in spring to get a sap flow started. Though they spend their lives gnawing, their four front teeth grow constantly and never wear down.

Gray squirrels are inadvertent treeplanters, famous for stashing acorns around the landscape, intending to retrieve them for a winter meal. Red squirrels store food, too, spending a tremendous amount of energy from late summer through fall finding and caching food, but they use one or two central storehouses that are easier to defend. The conifer cones that they store while green will not open in the dark, damp cache in a tunnel or under tree roots. They feed in winter near their caches, leaving discarded nut shells and cone scales in piles called middens.



Nut chewed by red squirrel/middens

Unlike their larger cousins, red squirrels are strongly territorial. Territorial defense is more common in the north; in the south, food is more abundant but may be more perishable (corn and grains), so red squirrels here do not create as many food caches and are less territorial.

Like the gray and the fox, red squirrels are mainly active during the day, although in summer their day may start at sunrise and end after sunset. They may tuck themselves into a well-insulated nest in a tunnel, old wall, fallen log, or building for a few days during a winter storm, but they are active all year, and in winter, they tunnel under the snow in search of food. Predators in the Bog include foxes, coyotes, crows, weasels, hawks, and owls.

Red squirrels make an amazing variety of chirps, buzzes, growls and screeches. Repetitious chattering is part of territorial defense. A high-pitched call warns of predators from the air, and predators on the ground elicit a barking call. Their senses of touch, sight, hearing, and smell are acute, and they advertise their presence with scent marks.

They live solitary lives. A female red squirrel only allows males into her territory very briefly when she is receptive, and males don't help to rear the young. Her young are born in late spring and are weaned at nine or ten weeks when she puts them in a nest at the edge of her territory and stops visiting them. They must establish their own turf and create a cache of food if they are to survive

Friends of the Cedarburg Bog: Supporting stewardship and appreciation of the Cedarburg Bog through land management, preservation, research and education. the coming winter, though an old female may bequeath her cache to her young. Mortality is high – less than a quarter of the young survive their first year. Most live for two or three years, and an eight-year-old red squirrel is elderly.

DID YOU KNOW

...that despite their coldbloodedness, some insects make an appearance in winter? A few species of midges and winter crane flies can be seen in late fall and very early spring and during January thaws, and springtails (snow fleas) decorate the punky snow in March. Some spiders emerge to walk on the snow.

THANKS FOR BEING A FRIEND!

Winter can be a time for reflection-the natural world around us enjoys a winter rest and we have the luxury to ponder the last year. The Directors of the Friends of the Cedarburg Bog thank for your being a *Friend* and renewing your membership with our organization. Our existence depends on our members' support, enabling our learning from--and preservation of-this Wetland Gem.... the Bog.



Cedar Swamp

What are our plans for the coming year? We want to connect with surrounding landowners of the Bog to find shared interests—what are their interests in the Bog and where do they overlap with the Friends' interests? We'd like to be seen as a valued resource in benefiting from being a Bog neighbor. We're seeking to establish funding for scientific study of the natural processes of the Bog—understanding these processes will help us protect the bog while adding to the body of wetlands knowledge.

Finally, we are working with the DNR as they finalize the "master plan" for the state-owned portion of the Bog. This plan may include a modest expansion of the State Natural Area's

project boundaries and construction of a boardwalk into Mud Lake. These recommendations could allow greater access to the Bog, while preserving its unique nature.

We are waiting for final word on a substantial invasive mitigation grant that will, if we are awarded, allow quantum improvements in the control of invasive plants in the Bog. Even if we don't receive this grant, we have received some smaller grants that will allow us to conduct invasive removal this winter.

This year we will continue to host a variety of educational and fun events at the Bog, including the Treasures of Oz in June, to build important local support for preserving this remarkable wetland and fostering a community land ethic.

If you are not a member of the Friends of the Cedarburg Bog or you haven't renewed yet, please consider coming to an event, becoming a Friend, sharing this information with a friend, making a donation, or volunteering with our organization. Your efforts can really make a difference in the natural world around you.

Please join us for the

Annual Winter Walk and Chili Potluck

at the UWM Field Station January 25, 2015 1 PM hike 4:30 PM eats

We supply chili and beverages

You don't have to get chilly to eat chili.

Join us for the walk or the potluck or both.

If your last name Starts with A to M please bring a dessert to share

If your last name starts with N to Z, please bring a side dish to share.

Please – no dogs.

Please RSVP: at the Friends of the Cedarburg Bog website (<u>bogfriends.org</u>). Click on the events tab, or you may call 262-675-6844 or email <u>fieldstn@uwm.edu</u>.



UWM Field Station 3095 Blue Goose Road Saukville, WI 53080

ADDRESS CORRECTION REQUESTED

Volume 10, Number 1 WINTER 2015

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 <u>bogfriends.org</u> (click on Events). Walks are free and open to the public; a \$5 donation is appreciated. Questions? Contact 262-675-6844 or <u>fieldstn@uwm.edu</u>. *Please, No Pets.*

Friends of the Cedarburg Bog Quarterly Board Meeting

January 15, 7 PM to 9 PM Members welcome.

Annual Winter Walk and Chili Potluck

January 25, 1 PM to 6:30 PM Details elsewhere in this newsletter.

Building for Wildlife

February 19, 6:30 PM to 8:30 PM Tips on the design, installation, and care of predatorproof wildlife roosting and nesting boxes for bluebirds, kestrels, owls, wood ducks, and more.

Winter Owl Prowl

March 13, 7 PM to 8:30 PM Join the "Owl Meisters" and search for owls. Bundle up and bring binoculars.

Bluebird on nest box

CALENDAR

Noel J. Cutright Bird Club

First Tuesdays 7 PM, except December.
Free and open to the public. At: Riveredge
Nature Center (RNC) BARN, 4458 Hawthorne
Dr, Saukville, 53080, riveredge.us
Jan 6 - Hummingbirds: Their Life Cycle,
Behaviors & How to Attract Them to Your Yard
Feb 3 - Global Warming: What should we do?
Mar 3 - "From Billions to None" an awardwinning film about the Passenger Pigeon, and
the club's 29th anniversary.

Science for Everyone

Public programs on Natural History.
7 PM to 8:15 PM
Third Tuesday at RNC; fourth Tuesday at Lac

Lawrann Conservancy, 300 Schmidt Road, West Bend, WI 53090, laclawrann.org. For info or driving directions, call RNC at 800-287-8098 or riveredge.us. Event is free, \$5 donations appreciated.

Jan 20 - The Milwaukee River and How Ozaukee Co. has Changed It for the Better.

Winterfest!

Jan 24 - Noon to 4 PM Winter in Wisconsin is a special time. Join us as we celebrate with some family winter fun! Enjoy: a sled dog demonstration, ice skating, sledding, snowshoeing, cross country skiing, ice fishing and more! Warm up with food and beverages, compliments of Neighborhoods United for Washington Park & Community Pie. At: **Urban Ecology Center Washington Park**, 1859 N. 40th St. Milwaukee, urbanecologycenter.org

and... Winterfest for Afternoon Nappers Jan 24 - 10:30 AM to Noon

A festival for the lil' ones! Children can enjoy a morning of fun including a craft, hike, puppet show and still get home in time for their afternoon nap. Space is limited - registration of all attending family members is required.

For children ages 5 and younger with adult.

Event is free, donations appreciated.

At: Urban Ecology Center Washington Park, 1859 N. 40th St. Milwaukee urbanecologycenter.org

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

Third Annual Winter Frolic

Feb 7, 11 AM to 4 PM
Fun, family-friendly, indoor/outdoor events.
More info at mequonnaturepreserve.org or contact center@mequonnaturepreserve.org 262-242-8055 x101. Free, open to the public.
At: Mequon Nature Preserve, 8200 W County Line Rd, Mequon, WI 53097

Riveredge Maple Sugarin' Programs

Feb 28 - Tapping the Sugar Bush Mar 21 - Maple Sugarin' Open House Mar 29 - Maple Sugarin' Pancake Breakfast What better sign of spring than the maple sugarin' season? For more information, click Events at <u>riveredge.us</u> or call 800-287-8098. Some programs have fees. At: **RNC**

BIRDS OF A FEATHER...FLOCK TO LAC LAWRANN GALA

Feb 21 - A unique art show and fundraising event to benefit Lac Lawrann Conservancy. Create and donate bird-themed art (artists must be 14+ years old). These works of art and other items, will be auctioned off. Art must be delivered on Jan 15. For schedule and details see Laclawrann.org/gala-event. At: West Bend Mutual Insurance Prairie

Center, 1900 S. 18th Avenue, West Bend