

THE BOG HAUNTER

Volume I, Number 2

newsletter of the Friends of the Cedarburg Bog

July, 2006

Native Orchids

The list of plants recorded in the Cedarburg Bog includes 22 of the approximately 60 species of native orchids found in Wisconsin. These range in showiness from the hard-to-spot Adder's mouth (*Malaxis*), (often less than 4" tall, including a flowering stalk with tiny green flowers) to the spectacular Showy Lady's-slipper (*Cypripedium reginae*), which reaches a height of 3 1/2' and is topped with pink and white "slippers" the size of ping pong balls. Coral root, twayblade, ladies-tresses, fringed orchid and others are intermediate in size.

Eight of the Bog's orchid species are labeled as "of concern", "threatened" or "endangered" on state or federal lists. One, the Helleborine orchid, is an alien species from Europe that is considered an invasive weed in some parts of the country.



Although some species on the list are found far from trails and boardwalks and a few have not been seen in decades, a half-dozen species are easily found. First to flower, in late May, is the Small-flowered Yellow Lady's slipper, a shy jewel of the conifer swamps that ring the Bog. It also grows under cedars in clumps of horsetail (*Equisetum*) at the borders of the Bog. Showy Lady's-slippers begin to bloom in the open, wet

swamps as the Yellow Lady's-slippers are fading.

Bog Twayblade (*Liparis loeselii*) and two pink orchids, the Grass Pink (*Calopogon pulchellus*) and the Rose Pogonia (*Pogonia ophioglossoides*) flower beside the white spikes of Bog Candles (*Platanthera dilatata*) in the string bog at the start of summer, and Hooded Ladies-tresses (*Spiranthes cernua*) decorate the Bog edges in fall if the roadside grasses haven't been mowed too rigorously.



Orchids are an investment in the future. Their tiny seeds carry no nutrients to help the young plant get its start. A seed must land on a spot that has the right amount of sun and water, the proper acidity (pH), and certain species of soil fungus (mycorrhiza).

Germinated seeds attach to the soil fungus, which acts as a "middle man," allowing the orchid to absorb food from the soil. Young orchid plants usually grow underground with their fungus for several years before sprouting, and produce only leaves for two or three more years as they store enough energy to bloom. During this time, the habitat must remain within the species' "specifications" for water, sun and acidity.

The mystique of orchids attracts many wildflower watchers and photographers, and orchids are

often collected from the wild – even from nature preserves – by people who want to enjoy their beauty in a garden. Growing wild orchids from seed is very difficult, and although the transplanted orchids may reappear for a few years, they inevitably die off because their mycorrhizal connections have been lost.

Herpetology notes

Herpetology is the study of reptiles and amphibians, and the two groups, though not related, are often affectionately lumped under the name "herps".

Participants at a Herpetology Workshop held recently at the Field Station identified 14 species of herps. They found Common garter, and Butler's garter and Eastern milk snakes; Blanding's, Painted, and Common snapping turtles; the Central newt and Blue-spotted salamander; Northern leopard, Green, Wood, and Eastern gray tree frogs, Northern spring peeper, and Eastern American toad.

Butler's garter snake and Blanding's turtle are on the state list of threatened species. Tiger salamander, Chorus frog, Ring-necked and Red-bellied snakes are on the property list but were not found during the workshop.

For more information about herps, the Wisconsin Department of Natural Resources publishes three well-illustrated paperback booklets titled *Amphibians of Wisconsin*, *Snakes of Wisconsin*, and *Turtles and Lizards of Wisconsin*, available at bookstores, including the Riveredge bookstore, for under \$5.00.

White-tailed Deer

When my car and I finally “get our deer,” it will probably be on Cedar Sauk Rd, at the south end of the Bog. We’ve already come pretty close – inches – on some of the roads surrounding the Bog. Recent research done at the UW-M Field Station by graduate student Heather O’Brien suggests why.

She compared three census methods to find the one that was most accurate and least expensive. Her findings suggest that the deer herd in the Bog numbers around 28 animals per square mile of suitable habitat, compared to an ideal density of about one-third that number.

White-tailed deer are an “edge” species; they thrive where field meets forest. Three centuries of logging to build cities, industries, and farmsteads have left relatively small fragments – islands – of Wisconsin’s original forest and lots of deer habitat.



Deer enjoy a seasonally-changing smorgasbord of tree leaves, twigs, bark, fruit, acorns, garden plants, wildflowers (including orchids), hay and grasses. Astonishingly, some also eat nestling birds. When Ms. O’Brien fenced deer out of several small areas, she was able to map the recovery of two species of

plant inside these “exclosures.” Protected from the deer, plants not only became more numerous, they also became more vigorous.

When deer populations are at ideal levels, the long-term impact of their browsing is minimal, but excess deer seriously deplete the plants of the understory and damage trees in winter “deer yards”. This destruction has a domino effect on other plants, on other animals that depend on the vegetation for food or shelter, and on the diversity and equilibrium of the system – John Muir was right, everything is connected to everything else.

White-tails are superbly adapted for what they do. Their food travels through four stomachs, which enables them to process some pretty indigestible plants. With a nose 100 times more sensitive than a human’s, ears that swivel to pick up sound over 360 degrees, and side-mounted eyes that can see to the rear, white-tails survey their surroundings efficiently. Their slim legs can propel them to speeds of 40 mph, over a 9’ high fence or a 30’ wide stream. Deer are at home in swamps and marshes year round.

White-tail does generally drop their first fawns – twins if the range is good – in May or June of their second spring. While twins are the norm, singles and triplets also occur, and a doe will continue to breed for her whole life.

Deer have few predators. Some fawns are taken by coyotes, and car-deer collisions reduce the population a little more. Over-population in winter can result in deaths due to starvation, disease and parasites. Although hunting is not allowed on the University’s land, deer are hunted by gun and bow in the DNR portion of the Bog, the majority of the wetland.

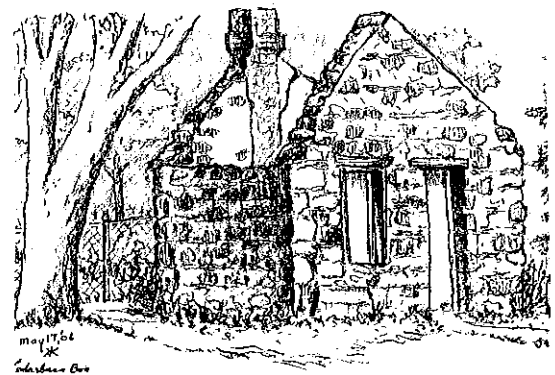
Stewardship Committee at Work

The Friends’ Stewardship Committee has outlined an ambitious slate of undertakings.

Osprey Nest Platform in Mud Lake: Osprey, also called fish hawks, were endangered in the 1970’s due to the effects of DDT, but they are making a comeback. A nest platform may encourage osprey to breed in Ozaukee County. Plans will be made this summer for a nest platform to be erected in winter with the help of We Energies and the American Transmission Company.

Purple loosestrife control at Mud Lake: The Field Station has controlled the invasive purple loosestrife on the State-owned land around Mud Lake for several years. A helicopter survey will be flown in early August, and using locations from the survey, volunteers will join UWM staff on the ground to control loosestrife by cutting flowering plants and treating them with herbicide.

Survey of Ephemeral Ponds: The Field Station is starting a long-term program to monitor vernal or ephemeral ponds. These are wetlands that hold water in spring and early summer and then dry up. The dry period typically keeps them free of fish, but allows for successful breeding of certain amphibians and invertebrates.



The Summer Kitchen: Renovations will start on the stone house at the

entrance to the Field Station on Blue Goose Road.

A Deer Exclosure in the Beech Woods: The large deer herd in the area has a dramatic effect on plants of the forest floor. A fenced-in area that keeps deer out will allow volunteers to monitor vegetation as it grows back.

Boardwalk improvement: A partly submerged 250' board walk connecting the Field Station with the Cedarburg Bog Beech Woods State Natural Area will be removed and a new walk will be designed this summer and rebuilt in fall.

VOLUNTEERS ARE NEEDED for all phases of these projects, from the planning and design through construction, survey, monitoring, and other stages. Contact Jim Reinartz at the UWM Field Station at the address on this newsletter or at jimr@uwm.edu for more information or to be put in touch with projects' crew chiefs.

A Rare Gem in Cedarburg Bog
Cedarburg Bog is known for its lush vegetation, pristine habitats, and a diversity of wildlife. Among the sedges and cedars of the bog lives a rare gem, the Hine's emerald dragonfly.

The Hine's emerald dragonfly, (*Somatochlora hineana*), is a federally endangered species. Current populations of the Hine's emerald dragonfly are found only in isolated areas within Wisconsin, Illinois, Michigan, and Missouri. In the past, populations were also found in Indiana and Ohio. It was first discovered at Cedarburg Bog during a dragonfly workshop in 1999.

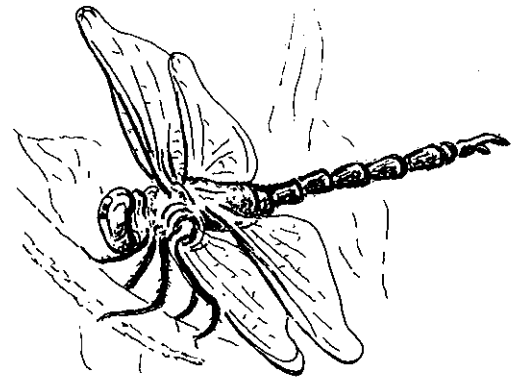
The life span of the Hine's emerald dragonfly is approximately four years, developing from egg, to larva, to adult. This dragonfly has

very specific habitat requirements, which are quite different than most habitats found within the bog. The larvae require a rare wetland environment characterized by dolomitic bedrock, groundwater seeps, marginal flows, shallow streamlet channels, and seasonal drying. The Hine's emerald has developed unique adaptations which allow it to survive where most other dragonfly species cannot. Its larvae are hairy (which allows them to retain water for a longer period of time) and mobile (which helps them to move to areas that contain water), and they utilize crayfish burrows, which contain water. There is, however, a danger associated with crayfish burrows, as crayfish will readily eat dragonfly larvae, including the Hine's emerald!

These dragonfly larvae emerge from the wetland as adults between mid-June and early July. When the larvae emerge they leave behind exuviae (cast larval skins). As an adult, this dragonfly is characterized by its brilliant green eyes, dark body, and by the yellow stripes located along its thorax. It has a slender body and clear wings, and it is a strong flier. Mature adults forage freely within open wetlands and meadows, feeding on flies and other small insects.

Adult Hine's emerald dragonflies have been regularly observed in limited numbers at Cedarburg Bog since their discovery in 1999. Dr. Gretchen Meyer, Staff Biologist at the University of Milwaukee Field Station, has been monitoring adult activity and has observed that the number of adults varies from year to year. The Hine's emerald dragonfly larvae and their habitat at the bog have remained elusive. Adults are able to cover a large area during flight, which can make locating larval habitat more difficult.

Researchers Lesley (Zuehls) Brotkowski of Cedarburg Science and Dr. Daniel A. Soluk of the University of South Dakota are currently surveying the bog in search of larval habitat. A similar study was conducted at Cedarburg Bog by this team in 2003, searching for exuviae within potential habitat areas, however, no Hine's emerald dragonfly exuviae were found. The presence of exuviae confirms that breeding not only takes place within a habitat, but also that the larvae were able to successfully complete their life cycle by emerging as adults. Locating breeding habitat is of critical importance for this endangered species; confirmed breeding habitat may receive full protection, helping to ensure the Hine's emerald dragonfly's survival at Cedarburg Bog.



If you catch a glimpse of the Hine's emerald dragonfly this summer, remember that under federal law, you may not capture or handle these creatures. As the old adage goes, "You may look but not touch!"

Article by Lesley Brotkowski

"The Swamp on Sections 29 & 32 & a part of Swamp on Sects 31, 28 & 33 is of a character little better than a mud lake it cannot be passed without some danger to life."

From surveyor William A. Burt's field notes, 1836.

Browsers beware

Its roots "smell edible," its white flowers look like Queen Anne's Lace, and its seeds resemble the seeds of its relatives, fennel, caraway, and anise. But this Bog plant may be the most poisonous plant in the northern hemisphere.

Water Hemlock grows to a height of 6 feet in partly-sunny wetlands, blooming from late June to mid-July. Touching it is harmless; eating it is fatal within a half hour.

The root is the most lethal – a walnut-sized piece of root can kill a cow – but children have died from using the stalk for a blowgun.

Water hemlock, a member of the Carrot family, is a great example of plant families containing some species that are very toxic and other species that are edible.

FOCB Calendar

Special events for members. Please pre-register for FOCB events with Cindy at 262-675-6844 so we can get a nose count.

Skywatching Night:

September 16th, 8:30 P.M. Join the Northern Cross Science Foundation at the Field Station to see what's up in the night sky.

Photography Workshop:

October 6th, 6:30 – 8:30 P.M. and 7th, all day. Learn the ins and outs of film cameras on the 6th, take and critique pictures on the 7th. For all skill levels; limit 10 people. Fee \$20.

Annual Meeting:

October 15, 3:00 – 6:00 P.M. Members are welcome to help us celebrate our first year, tour the Bog, and enjoy a potluck supper.

Other Area Events

Riveredge Speaks Out:

An ecology lecture series held at the Mequon City Hall on the third Tuesday of the month from 7:00 to 8:00 P.M.

Ozaukee Washington Land Trust

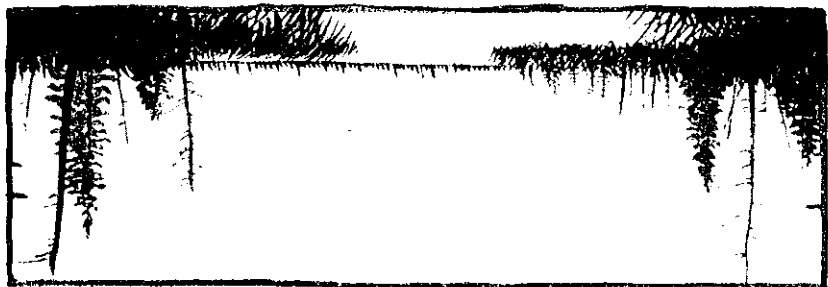
August 20, 4:00 – 7:30 P.M. Fish Boil and Silent Auction. Contact Sally at 262-338-1794.

This Old Barn

September 15, 6:00 – 9:00 P.M.: Big Cedar Bluegrass Band concert and brat fry at Lac Lawrann Conservancy, West Bend. Proceeds will help build a Nature Center at Lac Lawrann. Contact: Kate Peterman, 262-335-5085

Thanks

...to local artist Hank Klapproth for creating the art that illustrates this newsletter.



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