

THE BOG HAUNTER

the newsletter of the Friends of the Cedarburg Bog
Volume 5, Number 4 Fall 2010

WHITE CEDAR

One of the Bog's dominant trees, the white cedar (*Thuja occidentalis*) is a *calciphile*, a lover of calcium. As such, it certainly is "at home" in the Cedarburg Bog. Bedrock in this part of Wisconsin is dolomite, which is comprised of calcium magnesium carbonate. The small springs that rise from below the Bog's clay liner flow first over dolomitic rock and then up into the wetland, their chemistry keeping the sluggish water from developing acidic conditions.

White cedar is at home on dry uplands, dunes, and limestone cliffs as well as in swamps and nutrient-rich fens and along stream edges. It is present in the conifer swamp that forms a border around the Bog and it grows in the challenging conditions of the string bog in the Cedarburg Bog's center. Soil acidity seems more important than the amount of available water, as long as the water supply is constant and not excessive.

In ideal conditions, cedar forms dense forests. It may colonize following a fire, but its thin bark does not allow it to survive one. Cedar is shade-tolerant – seedlings germinate in the shade produced by their parents – but it doesn't like deep shade. Because of this, it can form stable swamp forests that last until, inevitably, a wetland gets dryer.

Even with a dependable supply of water and nutrients, it is a slow-grower, taking 10 to 20 years for a sapling's trunk to gain the girth of a man's thumb. Despite their leisurely start, cedars are in it for the long haul. Two hundred-year-old trees are common, and some of the weathered cedars in the string bog have grown there for almost two centuries. According to Curtis in [The Vegetation of Wisconsin](#), there were islands in the Bog where cedar trunks measuring four feet across still stood.

The oldest living white cedar anywhere is a stunted, 1,150 year old specimen on a limestone cliff in Ontario, and the record cedar (from the same area) was 1,650 years old. The fact that limestone cliffs are relatively fireproof is no coincidence.

Though fingers of its range dip south into the Appalachians, white cedar is primarily a tree of northeastern North America. If you look at the range of white cedar in Wisconsin, the boundary of its distribution is roughly the same as that of the tension zone; it is a northern tree that grows in southern Wisconsin in the cooler climate that is found along the shore of Lake Michigan.



Known as swamp cedar, canoe wood, and arborvitae, white cedar is in the Cypress family along with bald cypress, sequoia, and juniper. It is evergreen (unlike its Bog partner, the tamarack) and cone-bearing. Cedar bark is brownish and fibrous, forming long, vertical strips. Its leaves are small, flat, overlapping green scales on fan-shaped branches that look like they have spent some time in a plant press. The tea-colored waters of a northern swamp are due to the tannin that leaches out of cedar roots. Cedar roots are unusual in that they lack an assist from mycorrhizal fungi in the soil.

Cedars make cones in late spring and early summer. They are *monoecious* - there are male and female cones on the same tree. The cones shed their tiny, winged seeds at the end of summer, and the

seedlings start to grow in the warm weather of the following year. Although they may start producing cones by the time they are a dozen years old, the production of cones increases in their third decade and peaks after a tree is 75 years old. Curtis states that while the seeds may *start* to grow on a wide variety of moist substrates, seedlings get established only on a much more limited range of surfaces.

Cedar also spreads vegetatively; the limbs of fallen trees can become trees in their own right. Mother Nature doesn't plant seeds in straight lines, and a row of cedars most likely originated as branches that grew from the tipped trunk of a now-buried tree. The branches of leaning trees that settle onto and then into the ground may develop their own roots and produce sprouts that develop into trees.

The main "cedar-eaters" in the Bog are its largest mammal and a small insect. White-tailed deer are major browsers on cedar foliage; cedars at the Field Station show a distinct "browse line" where they have been "pruned" to a height that deer can comfortably reach. Deer take shelter in dense, thermally insulated cedar thickets during the worst of winter.



Carpenter ants chew their tunnels through rotting cedar trunks. Where carpenter ants go, the Bog's Pileated Woodpeckers follow, chiseling oblong holes in the tree trunks in search of the ants to eat. Red squirrels and birds eat cedar seeds; strips of bark line the nests of red squirrels and a few bird species. A variety of leaf

miners, wasps, mites, sawflies, beetles, and other arthropods call white cedar home.

Arborvitae means "tree of life." On his second trip to French Canada, in 1536, Jacques Cartier and his men suffered horribly from the debilitating and often fatal disease of scurvy. After local Native Americans told him to drink a (horrible-tasting) tea made of the leaves of white cedar, he and his crew recovered quickly, and white cedar became the first North American tree to be carried to the Old World.

American Indians had many uses for cedar – food, medicine, antiseptic, charcoal for tattoos, construction, ribs in birch bark canoes, cords, roofs, and more. It is sacred to the Ojibwa. The settlers took advantage of the toughness of its wood for log cabins, fence posts, shingles, wooden dishes, lumber, and later, railroad ties, particle board, and telephone poles.

BIOBLITZ

The Natural Resources Foundation of Wisconsin held three citizen-science events called "BioBlitzes" this summer, and the Friends of the Cedarburg Bog was lucky enough to land one for the Bog's State Natural Area. Designed as part educational event, part scientific endeavor and part festival, the BioBlitzes brought together more than 90 scientists and partners and more than 200 citizen volunteers to count more than 900 species in day-long biological surveys in Ozaukee, Door and Douglas counties.



While a few BioBlitzes have been held in Wisconsin before, none had previously been held at any of Wisconsin's 600-plus State Natural Areas. These specially designated areas are considered "the best of the best" remnants of original Wisconsin landscapes. Short, guided data collection hikes throughout the day focused on birds, native and invasive plants, bats and other small mammals, spiders, butterflies, dragonflies and other insects, aquatic invertebrates, trees, frogs, toads,

snakes, and salamanders. Jim Reinartz, director of the University of Wisconsin-Milwaukee Field Station at the Bog, said the Field Station profited greatly from the BioBlitz, which was hosted by and held at the Field Station from 6 a.m. to 6 p.m. on Saturday July 17.

"The interest, enthusiasm, and energy that developed among all who participated in the event – staff, scientists, and public -- were truly inspiring," Reinartz said.

"This was one of the most exciting public events held at the Field Station in my 30 years here. It would not have happened had it not been for the work and organization of the Friends of Cedarburg Bog. The Field Station is truly grateful to the Friends for bringing this event to our facility."

Jeffrey Potter, then special projects coordinator for the NRF, offered this summary of the event: "The weather was clear, but hot and buggy (if you can call "buggy" a weather condition!). The shade of our tents and a gentle breeze at Base Camp provided tremendous relief for our 35+ scientists and partners from UWM, Wisconsin Lutheran College, the Department of Natural Resources, the Milwaukee Public Museum, the Urban Ecology Center, the Friends of Cedarburg Bog, and several other non-profit and private conservation groups. More than 85 citizen-participants joined the effort to inventory the biodiversity of Wisconsin's State Natural Area No. 2, so designated in 1952.

"While it may be several months before we can officially announce the number of species documented at Cedarburg Bog, initial estimates suggest more than 380 species were counted during the day, including nearly 240 of the 300 known plants, 60 bird species, more than 15 butterfly and dragonfly species, lichen, algae, and 3 species of fish at Watts Lake, the first survey of that water."

The event also celebrated the adoption of the Cedarburg Bog State Natural Area by We Energies. Noel J. Cutright, emeritus scientist for We Energies and a neighbor of the Bog, was joined by Gail Epping Overholt, president of the Bog Friends group,

to unveil a sign marking the adoption under which the Wisconsin Energy Corporation Foundation will, through the NRF, donate \$10,000 a year for 3 years. The Friends group will use most of the money to help in the control of invasive species at the Bog.

The day's activities included special talks by Jean Lord, executive director of Pine View Wildlife Rehabilitation Center; a bog talk and walk with Reinartz; and a live mammal talk with the DNR's Loren Ayers. The event also featured a kids activity area with the Milwaukee Public Museum and a special "Bats of Cedarburg Bog" field trip the evening before that was led by Jennifer Callaghan, Wisconsin Bat Monitoring Program volunteer and trainer from the Urban Ecology Center, using sonogram and acoustic devices for identification and monitoring.



Callaghan offered this summary of the event: "We had a wonderful group of people join us for the evening bat walk. The group ranged from school teachers to software engineers, from retirement age to college students. The anticipation of each bat pass grew as we stood beneath the moonlight on the bog's rolling planks. The fireflies announced their presence with a soft glow and the high frequency of each bat buzz punctuated the bellowing frogs. The bats may have numbered fewer than average that night, but the peaceful ambience and inquisitive group helped to make it memorable.

Hikes on Saturday left from both the Field Station base camp and from the DNR parking lot on the south side of Highway 33 just east of Birchwood Rd. The day's earliest trips were led by volunteers who conduct spring and fall bird migration point counts. Among them was Marilyn Bontly, who offered this summary: "A very hot day and lots of mosquitoes. But the early morning bird walk along the boardwalk into the bog produced some really nice birds... among them

a Veery and a Black-and-White Warbler, both of which nest in the bog. It was great to see a good turnout of visitors for the event."

Naturalist Kate Redmond, who regularly leads a variety of field trips for the Bog Friends, said she was "blown away by the energy I felt" at the event. "A crowd of people turned out to tally plants and animals on a very warm day. I went out with three groups of scientists and citizen scientists and crossed paths with other groups in the field. People were cheerfully "on-task" all day. There was a 6-year-old future scientist there who was taking it all in - holding toads, netting insects, and looking at plants. Kudos to the people who did the pre-event planning and preparation because everything ran smoothly. I'll be interested in seeing the data."

The NRF also conducted BioBlitz events on June 26 at Europe Bay Woods State Natural Area, Newport State Park in Door County, and on July 24 at Dwight's Point State Natural Area in Douglas County. For an online report and lots of photos about the Cedarburg Bog BioBlitz, go to <http://wisconservation.org/index.php?page=cedarburg-results>

by Carl Schwartz

TRAIL SIGNS

Work at the north end of the Bog is finished. A handicapped-accessible trail now leads from the parking lot off Highway 33 to the fishing pier at Watt's lake. New vegetation is softening the bare banks left by the graders.

This summer, 13 interpretive signs were installed along the trail, informing hikers about the natural history of the area. The signs were funded through grants from the Friends of Wisconsin State Parks "Affinity Card Naturalist Grant Program" and the Milwaukee River Basin Partnership/Southeastern Wisconsin Watershed Trust mini-grant program. The trail is open to the public year 'round. Since hunting is also allowed in the area, fall hikers are advised to wear bright colors and make a little noise.

RED-BACKED VOLE

The Cedarburg Bog is home to a number of plants and breeding birds that are typically found in northern Wisconsin and Canada. A rodent called the southern red-backed vole (*Clethrionomys gapperi*), common in forests and wetlands in northern Wisconsin, also lives at the southern edge of its Wisconsin range in the Bog.

Southern red-backed voles are found across the northern tier of states and in southern Canada, and they occur farther south in the Appalachians and the Rockies where there is suitable habitat. The term "southern" is relative - the northern red-backed vole (*C. rutilus*) lives in a wide band of open country, shrub, and boreal forest between Hudson Bay and Alaska.

Like those birds and plants, the red-backed vole lives in the Cedarburg Bog because of the "northern flavor" of the habitat. It likes swamp edges, bogs, and moist, cool forests (conifer or mixed), with plenty of roots, stumps, logs and water. The meadow vole (*Microtus pennsylvanicus*), common at the Field Station and statewide, is an upland rodent.

Red-backed voles hide their nests of moss, lichens and shredded grass or leaves in the shelter of roots, logs or brush, and they may claim nests abandoned by other rodents. Their winter nests and tunnels are under the snow.

As expected, the red-backed vole has a rusty red back. Its belly is grayish, its nose pointed, its tail short and its ears more prominent than those of the meadow vole. Males measure just over five inches, and females are a little larger.



It is a very vocal rodent, announcing its alarm with a variety of barks and chatters or by gnashing or clicking its teeth. It is also aggressive - not only to fellow red-backed voles but

also to other rodents that cross its path. Often solitary during the summer, voles become more communal in winter. In normal years, there are about four voles per acre, but with abundant food at a peak in its population cycle that number could jump to 26.

The tracks of red-backed voles tell us that they get from here to there by hopping, walking or running. They are able jumpers, climbers (they'll eat tree leaves) and swimmers. They are not avid burrowers, except in snow, but they will use the ground tunnels of other animals. Voles can be seen at any time of day, but they are more active in daylight during the winter and at night in summer.

A vole's menu changes through the year. During the growing season, it may eat fruit (voles probably account for much of the blueberry and cranberry crops in the string bog), leaves, fungi, grasses, lichens, roots, nuts and seeds, supplemented by snails, insects and, sometimes, mouse carcasses. It caches seeds, nuts and roots for winter use and raids the caches of other animals. In winter it gnaws bark from trees and shrubs under the cover of the snow. Voles get water from the plants they eat, and red-backed voles also depend on standing water.

In turn, it is preyed on by hawks, owls, weasels, foxes, shrews, and coyotes. And, according to early zoologist C. Hart Merriam, "The flesh of the red-backed mouse is tender and well flavored."

Red-backed voles are very sensitive to habitat disturbance; when trees disappear, so do the voles. A large study done in Michigan suggests that ranges of a number of common mammals of southern affiliation like opossums, eastern chipmunks and southern flying squirrels have expanded in the past 30 years. At the same time, ranges of several northern species, including the southern red-backed vole, have retreated north - this despite the increase in forests. Climate change is the suspected culprit. It is not known what effect this "species switch" will have on the plants and animals that are "ecologically associated" with the shifting species.

Please join us for the
Friends of the Cedarburg Bog
Annual Meeting
& Potluck

Our 5th Anniversary Picnic!

at the UWM Field Station
October 10, 3PM
3:00 - hikes
5:30 - eats
6:00 - campfire & very, very short
meeting

We supply brats, buns and beverage.

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.

No dogs, please

Please RSVP at 262-675-6844 or
fieldstn@uwm.edu

CALENDAR

Riveredge Speaks Out
Public programs on Natural History.
Second Wednesdays and third
Tuesdays of the month
7 to 8:30PM.

October 13 Special film presentation
at the West Bend Public Agency
Center: The Ghost Bird. A story of

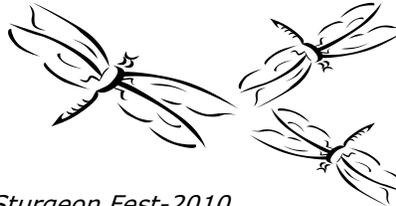
the search for the Ivory-billed
Woodpecker.
For locations and topics, contact
800-287-8098 or www.riveredge.us.
A \$5 donation is suggested.

Riveredge Bird Club

First Tuesdays of the month except
December.

Program - 7PM

November 2 - Banding Geese the
Canadian and the Wisconsin Way.
Riveredge Nature Center Barn.
Free. The public is welcome.



Sturgeon Fest-2010

October 2, 10AM to 2PM
10AM - Registration/Check In
11 - 11:15AM - Welcome.
11:15 - Potawatomi drumming
ceremony to bless the fish and river.
11:30AM - 2PM - Sturgeon release
Join in this annual release of home-
grown sturgeon. A Family-friendly
event with kids' activities.
Fee of \$5 to release a fish; register
early - fish are limited. For more
information or to register to release
a sturgeon, call 800-287-8098, or go
to <http://riveredge.us>, or pick up
materials at Riveredge, or call/email
(riveredge@riveredge.us) and ask
them to send a registration blank.

Lunch available for purchase on site.
At: Thiensville Village Park, 299 Elm
Street, Thiensville.

Photography at the Bog

October 2, 9AM to Noon
(see article in insert)
UWM Field Station

Friends Annual Meeting & Potluck

October 10, 3PM
(see invitation left)

Friends of the Cedarburg Bog

Quarterly meeting
October 14, 7-9PM
Members welcome
UWM Field Station

Luminary Walk,

October 23, 7-9PM
Enjoy a family walk in the woods or
couples' night out. A walk lit by the
moon and candles makes a perfect
fall evening. Event is Free.
At: Lac Lawrann Conservancy, 300
Schmidt Road, West Bend.

Owl Prowl

November 3 at 7PM
(Rain date - November 4)
Search for owls at the UWM Field
Station in the dark of the moon.
Bring a flashlight. Please pre-
register by contacting
fieldstn@uwm.edu or 262-675-6844.
A \$3 donation is suggested

ADDRESS SERVICE REQUESTED

UWM Field Station
3095 Blue Goose Road
Saukville, WI 53080



Volume 5, #4, Fall 2010

Nonprofit Organization
U.S. POSTAGE
PAID
SAUKVILLE, WI
PERMIT NO. 21

ON BOARD

This year's annual meeting, which will mark the fifth anniversary for the Friends of the Cedarburg Bog, is expected to see just a single change in the group's overall board of directors, but a 75% turnover in the organization's officers is anticipated at the October 14 board meeting.

Retiring from the board after serving as its founding treasurer, is Jack Isselman, born in and a lifetime resident of nearby Newburg. Jack, 81, is president of the Newburg State Bank, where he has worked since 1949. An Isselman has run the bank since 1926, and Jack was honored last year for his 60 years in the industry.

He is being succeeded on the board and as treasurer by William Taylor. Bill retired from UWM's School of Business as a professor emeritus but continues his consulting practice and textbook writing. He has served as president of both the Riveredge Nature Center and the Ozaukee-Washington Land Trust and is a board member of several other not-for-profits.

The Friends board also is expected to elect a new president and vice president. Gail Epping Overholt is stepping down as president but was nominated to a second three-year term on the board. Carl Schwartz, a member of the board since 2007 and currently vice president, has been nominated to succeed her as president. He in turn would be succeeded as vice president by board member Kate Redmond, who would return as an officer after serving as secretary for the Friends' first four years. She also is the editor of the Friends' quarterly newsletter, *The BogHaunter*. The current secretary, Joan Sommer, has agreed to serve another year in that post.

Also standing for re-election to the board at the annual meeting are Mark Murphy, who chairs the board's Stewardship Committee; Susan Schumacher, senior ecologist for We Energies; and Bill Niehaus, past president of the Ozaukee Washington Land Trust and currently an Ozaukee County supervisor.

The Friends' new president also is coordinator of Bird City Wisconsin

and vice president of the Wisconsin Society for Ornithology. Carl is a member of the Ozaukee Washington Land Trust and was senior editor for national and world news at the Milwaukee Journal Sentinel until his retirement in 2009.

Kate grew up near Brown Deer Park and presently lives between Riveredge and the Cedarburg Bog. She holds a master's degree in "Nature Study and Conservation Education" from Cornell University, has worked as a teacher-naturalist for a number of nature centers, presents nature programs at area schools and nature centers, and volunteers at the Bog and at Lac Lawrann Conservancy in West Bend.

Joan, a native of Wisconsin, has lived in Ozaukee County for 20 years. Joining the Riveredge Nature Center (and its bird club) was the spur for further involvement in birding and conservation organizations. She also is a member of the Ozaukee Washington Land Trust, the Wisconsin Society for Ornithology and the Bluebird Restoration Association of Wisconsin. She just completed her 12th season with the Monitoring Avian Productivity and Survivorship (MAPS) banding project at Riveredge. She joined the Bog Friends board in 2008 and was elected secretary in 2009. She is a librarian at Marquette University.

by Carl Schwartz

PHOTOGRAPHY AT THE BOG

Author Jim Kiesow (*Tales of a Peshtigo Putzer*) will host a three-hour class for Beginner-level Digital Photographers on October 2 from 9 AM to noon. Jim will help you unravel the mysteries of your digital point-and-shoot or SLR camera. The class will include information about the basics of photography, camera vocabulary, lots of Q & A, and time to take and critique pictures. Bring your camera manual. To pre-register, please contact 262-675-6844 or fieldstn@uwm.edu. A \$3 donation is suggested.

MEET MATT GROPPI

On July 21 the DNR announced that Matt Groppi is the new conservation warden for Ozaukee County. He fills a vacancy left by former warden Rick Wolf. The Cedarburg Bog is the largest of the beautiful natural areas

in Ozaukee County. The job of the conservation warden and the goals of the Friends of the Cedarburg Bog match: to preserve the natural resources for the generations to come.



The responsibilities of the conservation warden are to protect the natural resources and the public safety. Residents taking hunting, boating, snowmobiling and all terrain vehicle (ATV) safety classes will meet Matt when he teaches students the laws dealing with each sport. In the Port Washington harbor is a 26' DNR boat that Matt uses to monitor fishing in Lake Michigan.

A large chunk of public land like the Cedarburg Bog gives concern that there could be an area used for growing marijuana. Recently, DNR staff have come across marijuana growing operations in Wisconsin forests. Some people question whether the DNR should be concerned about this. Matt explains: "I don't think the Friends of the Cedarburg Bog would like it if people came onto the property, cut down trees, removed native vegetation, fertilized areas that should not be fertilized and then left litter behind. This is not the intended use of State Natural Areas. The land is set aside to protect particular plant communities and unique landscapes. The state does not set aside areas for growing marijuana. The State leases land for agriculture but growing marijuana is not legal."

With the opening of the various hunting seasons, fall will be a busy time but Matt has the education and experience to handle the workload.

He received a Bachelor of Science degree from UW-Stevens Point where he majored in Resource Management and minored in Environmental Law Enforcement.

Warden Groppi was hired by the DNR in January 2008 and was completing the year-long training process when he was called to active military duty. He served in the U.S. Army Reserves in Afghanistan and Iraq with a Military Police Unit out of Sheboygan.

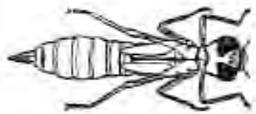
Matt Groppi is eager to answer questions and will investigate complaints. He can be reached at (262) 618-4919 or by e-mail at Matthew.Groppi@Wisconsin.gov.

by Cindy Boettcher

DRAGONFLY DELUGE

It has been a remarkable year for dragonflies in southeastern Wisconsin. They irrupted in August in huge swarms, hailed as saviors as the flood plain mosquitoes emerged in cosmic numbers. Their later, fall migration flights along the shores of Lake Michigan have been beautiful to watch. These mega-flights don't occur every year – the ecological “planets” were aligned just right, and that may not happen again for years.

Of the three species of dragonflies featured in an article about early dragonflies in the Spring 2009 issue of *the Bog Haunter*, only one species is still on the scene. Green darners are powerful, hummingbird-sized dragonflies that patrol the air for insects and never seem to land. Some of our green darners migrate here, ushering in the dragonfly season in the early days of spring. These migrants, nearing the end of their journey, lay eggs in the warming waters and then die.



Their eggs hatch into aquatic young called naiads. Naiads spend the summer under water, preying on their fellow aquatic invertebrates, including quantities of equally aquatic mosquito larvae. These naiads emerge as adults in late summer and migrate south in fall; their offspring will make the journey to Wisconsin the following spring.

Another population of green darners is home grown, and their clocks are not synchronized with those of the migrants. Naiads of the resident green darners spend the winter under the ice, feeding in slow motion

on small critters in the frigid water. They emerge in early summer, replacing the dying adults of the migrating population, and lay their eggs by mid summer.

Dragonflies hunt for mosquitoes on the wing, and they eat moths, beetles, flies and wasps, too – 100 or more per day. Dragonflies can fly as fast as 30 mph, and because they can work each wing independently of the rest, they are remarkably maneuverable.

Unusually large summer dragonfly swarms were reported from Iowa to Vermont to Florida, with green darners a major player and with local experts offering a variety of explanations. In general, the weather gets the credit. An early, deep, insulating snowfall fell on the Bog before its water froze, which was favorable for the naiads and their prey. Spring came early. It got warm and it stayed warm, favoring abundant food for growing naiads. July was hot and wet, and the adult dragonflies emerged a bit early, simultaneously with an explosion of mosquitoes.

So, what were all those dragonflies doing up there? An aquatic entomologist who blogs under the name of “*Dragonfly Woman*” is collecting reports of dragonfly swarms (she invites observers to send reports to her website at <http://dragonflywoman.wordpress.com>). She writes that where last year she was getting 30 hits per week on her swarm pages, this year she is getting 500 hits. *Dragonfly Woman* divides swarming behavior into *static* (feeding) and *migratory* swarms.

Static swarms tend to be localized groups of several species of dragonflies circling or flying in figure-eights, no higher than about 20 feet of the ground. Look closely and you might see the small insects they are preying on just above the grass-tops. Lots of small static swarms may be part of larger super-swarms.

Migratory swarms are fast-moving, high-flying “rivers of hundreds of thousands of dragonflies all flying in a single direction and covering large distances.” Small numbers of black saddlebags dragonflies often accompany green darners here.

Only about 3% of the 400 or so dragonfly species in North America migrate, but the species that form migratory swarms are the same species that form static swarms.



Scientists who study dragonfly migration find that dragonflies and birds are on the same page. Tiny tracking devices glued to green darners' abdomens allowed the dragonflies to be tracked by air. It was discovered that dragonflies, like birds, use weather fronts to initiate migration and will take advantage of a tail wind associated with a cold front (but both avoid really windy days). Both will alternate flying and resting days, and both follow visual landmarks. The Lake Michigan shoreline on a warm, calm fall day is a grand place to sit and watch the dragonflies go by.

Hawk watchers report that migration of America's smallest falcon, the kestrel, coincides with green darter movements. Kestrels catch and eat the dragonflies to get energy for their trip south.

ARE YOU A MEMBER?

Want to direct more money and volunteer time toward the Bog -- and less to paperwork? Check the mailing label for your membership expiration date. If you renew your membership for 2011 now, we won't need to send you a paper letter during our Fall Membership Drive.

You can use the enclosed membership form and return it with your contribution. It takes us a few weeks to prepare the paper mailing, so we need to receive your renewal by the end of October to avoid sending you a letter.

Help us keep our records current. Fill in your contact info and how you want to receive *The Bog Haunter*.

Questions about your membership? E-mail info@bogfriends.org, or call the Field Station, 262-675-6844, and let us know how to reach you. Not a member yet? The best way to support the Cedarburg Bog is to join the Friends. Consider joining us now.