# Natural Heritage Quarterly

*Connecting people with information and resources to care for their land*

Photo by Thomas Meyer

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## Editor's note

"November is, for many reasons, the month for the axe," Aldo Leopold writes in "A Sand County Almanac," his classic book about seasonal changes on his Sauk County land and his land ethic.

With hardwood leaves down and the year's growth plainly visible, November is a time to decide which trees to fell, which to plant, and what other "strokes" to take. "A conservationist," Leopold wrote, "is one who is humbly aware that with each stroke he is writing his signature on the face of his land."

In this issue, we share advice on strokes you may want to take this fall or the next and share a Manitowoc County man's story of restoring wetlands. And we highlight fall wildlife activity, like the flock of geese Leopold watches battling the winds, "blown together, blown apart, but advancing...When the flock is a blur in the far sky I hear the last honk, sounding taps for summer."

- Lisa Gaumnitz
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## Prescribed fire in the fall can jumpstart spring work, boost habitat

Prescribed burning isn't just for spring – fall also can be a great time for landowners to apply fire to their land to restore or maintain prairie, savannas, wetlands and other natural communities.

"Probably a lot of people don't realize you can burn in the fall," says Nate Fayram, a Department of Natural Resources field ecologist who plans and runs prescribed burns on state natural areas in southwestern Wisconsin.

Prescribed burning is an increasingly popular management tool to help landowners manage natural communities that evolved with fire and need frequent fire to survive. Prescribed burning removes the dead plants in grasslands and leaf litter in forests, boosting wildflower germination and production. It can knock back invasive plants that crowd out native plants, as well as the native cedar and brush that can shade out native wildflowers and other plants, says Fayram, chair of the Wisconsin Prescribed Fire Council.

Prescribed burning also cycles nutrients back into the soil, boosts native plant growth and flowering, and can remove tough seed coatings, allowing some plants to germinate.

"Overall, the frequency at which you burn a site, or whether you burn or not, has more impact than which season you burn," Fayram says. "Generally it's good to mix up burn timing, vary the season and intensity, to maximize biodiversity."

*(continued on page 2)*

BOB MANWELL

Nate Fayram leads a prescribed burn.

*Prescribed fire... (continued from page 1)*

If you burn at the same time every spring you favor the same species with each burn. But if you mix it up, you can benefit different species.

## The benefits of fall burns

Fall burns can be very effective because the fuels – plants, logs, leaves, etc. – are drier and easier to burn. Plants are dying off and drying out, logs and other coarse woody debris are drier after the summer heat, and the leaf litter is fluffy and not compacted from winter snowpack, as often is the case when spring burns are conducted.

"In fall, oak leaf litter can be more flammable and you can get better burns in oak woodlands with marginal fuels, such as sites with a lot of buckthorn, honeysuckle, or maple. Fall can also be a good time to burn wetlands, which are often commonly flooded and too wet to burn in the spring," Fayram says.

He cites many other benefits including:

- Fall burns can extend and maximize the next year's growing season. Black soil warms early and greens up after snowmelt. Lengthening the growing season favors many native prairie/savanna forbs and grasses.
- Fall burns are good for removing thatch/duff to expose bare soil for planting prairie seed within a grass field or adding seed to an area that already has some native species.
- Fall burns can be a good option for sites with early blooming spring flowers, which can be impacted by later spring burns.
- Fall burns can make it easier to burn larger adjacent units in the spring; the burned area provides a firebreak.

BOB MANWELL

State natural areas crew conducting a prescribed fire at Cherokee Marsh SNA.

- Fall burns can be effective for controlling invasive cool season grasses and weeds, and brush such as honeysuckle and buckthorn. These plants can stay green or leafed out deep into the fall, so burns at this time can have more impact since the non-native plants have more energy aboveground. Fall burns are very effective for killing Japanese hedge parsley, for example.
- The timing of fall burns are better for sites with certain reptiles. Many reptiles head underground or underwater before the normal fall burn season. So fall burns are easier to conduct on sites where you are avoiding impacts on species such as ornate box turtles, Blanding's turtles and many snakes.

## Planning considerations

Prescribed burns, regardless of the season in which they occur, need a good burn plan that considers factors such as temperature, humidity, wind, moisture of the vegetation, and conditions for the dispersal of smoke.

DNR's fall burning season at state natural areas typically begins around Halloween. "We're usually waiting for a couple of frosts to make plants senesce and oak leaves fall," Fayram says.

**se•nesce**
[sə'nes]
*verb* BIOLOGY
(of a living organism) deteriorate with age.

Once state natural area crews get started, it's a race against the clock. Fall burns have a short "window" during the day in which they can occur due to the waning daylight hours.

Fuels tend to be wet in the morning with dew or frost, pushing back burning until later in the day when they've dried out and burning conditions are better. And shorter daylight hours means the burn needs to end earlier to keep the smoke from bothering nearby residents.

"Units need to be small enough that you can get them burned quickly before smoke settles when the sun goes down and humidity goes up," Fayram says. Humidity rises at night and fires go out or smolder instead of burning up and clearing smoke out.

More time should be allotted for mopping up after the burn, as well. "Heavy fuels/coarse woody debris is drier after summer and fall versus during spring burns following winter snow melt. That can be good if you want to burn all of those fuels up, but it can lead to more mop up and smoke after the burn," Fayram says.

## Resources to get started

The Wisconsin Prescribed Fire Council is a coalition of government agencies, organizations, contractors, and individuals working to make the use of prescribed fire in Wisconsin more safe, effective, and accepted for all practitioners. Membership in the council is free and the group's website has a rich listing of resources and a listserve people can sign up to join in on discussions about prescribed fire.

# Now's the time to tackle buckthorn and honeysuckle

Fall is a great time to control buckthorn and honeysuckle, two widespread invasive plants and the bane of many landowners' existence. These plants are easy to identify on your property in fall because they remain green while native plants are turning brown, although honeysuckle leaves turn yellow and start to drop as the season wears on.

Also, chemical treatments used in controlling these invasives are more effective now than during the spring growing season when sap flow pushes out the herbicide used in chemical treatments, says Kelly Kearns, NHC invasive plant expert.

"Any woody shrubs or woody vines are good to control in fall," Kearns says. "At this time of the year, you're using either cut-stump treatment or basal bark treatments so the herbicide is better taken down into the root system."

Cut-stump treatment involves cutting the stem close to the ground and spraying a systemic herbicide like glyphosate or triclopyr on it in late fall. Basal bark treatment involves applying a 6-inch band around the base of the buckthorn with triclopyr ester in late fall through the winter.

## Learn more

- DNR video: Rid your woods of honeysuckle
- DNR video: Rid your woods of buckthorn
- DNR common buckthorn webpage
- DNR glossy buckthorn webpage
- DNR honeysuckle webpage

BOB QUEEN

Bur oak.

# Prune oak trees in the fall

Late fall through winter is a good time to prune your oak trees to reduce the likelihood of spreading oak wilt and other tree diseases and to minimize stress on trees.

"The best time to prune trees in Wisconsin is during winter when a tree is dormant," says DNR Urban Forester Don Kissinger. "Insects and diseases that could attack an open wound on a pruned tree aren't active in winter. Also, without leaves on the trees it is easier to see and prune broken, cracked or hanging limbs."

Oak wilt is caused by a fungus, *Ceratocystis fagacearum*, that invades areas inside the tree where water moves. Balloon-like bumps called tyloses are formed and they plug up the water's path through the tree. As water movement inside the tree is slowed, the leaves wilt and drop off the tree.

While most oak wilt moves from diseased trees to healthy trees through roots that have become interconnected, oak wilt can also spread above ground by sap-feeding beetles, Kissinger says.

Oak wilt is common in the southern two-thirds of Wisconsin. In much of northern Wisconsin though, it is still a new and uncommon disease. Since 2010, oak wilt was confirmed for the first time in Lincoln, Oneida, Rusk, Sawyer and Vilas counties.

*(continued on page 4)*

*Oak pruning... (continued from page 3)*

The disease has not been confirmed in Ashland, Bayfield, Calumet, Door, Douglas, Forest, Iron, Kewaunee, Manitowoc, Price, Sheboygan, Taylor and Washburn counties.

Kissinger says that trees should be pruned throughout their entire life.

During the tree's first 10 years prune every other year to foster strong structural or "scaffold" limbs. Once proper structure is established, prune about every five years to maintain the structure and remove larger pieces of dead wood.

Find detailed, step-by-step tips for tree pruning in "Proper Tree Pruning," a DNR brochure.

Certified arborists who offer pruning and other tree care services can be found on the International Society of Arboriculture website.

# Order tree and shrub seedlings now for spring 2016 planting

Landowners can purchase seedlings from DNR state nurseries for a variety of conservation purposes, ranging from restoring native species habitat, to reforestation, to windbreak and erosion control purposes. Seedlings and shrubs are distributed in April and early May, with orders picked up at the nurseries located in Boscobel, Hayward or Wisconsin Rapids, or in many counties at a central location designated by the local DNR forester. Be aware that the minimum order is restricted to three options: 1) a packet of 300 seedlings of the landowner's choice of any combination of conifers, hardwoods or wildlife shrubs, in increments of 100 of each species; 2) 500 shrubs or 3) 1,000 trees.

Order now!

## Considerations for planting to benefit wildlife

Selecting the tree species you plant and the forest management practices you follow depend on both your location and the habitat preferences of the wildlife species you want to benefit. Some trees, such as oak, are a declining resource in Wisconsin and should be considered for planting where appropriate, as they benefit non-game and game species alike. Also, it may be important to consult with local biologists to learn if your property might be better suited for more open habitat types, such as grassland or savanna. In addition, large blocks of forest (250-300 acres) can benefit a unique and vulnerable suite of bird species called "forest interior birds," which includes species like the wood thrush, hooded warbler and scarlet tanager.

## Online resources

- DNR's "Wildlife and Your Land Series" offers a primer on considerations for managing woodland for wildlife. The chapter To Cut or Not to Cut covers necessary considerations when managing forests for wildlife while the chapter Critter Condos: Managing Deadwood for Wildlife talks about the importance of cavity trees for wildlife.
- "A Landowner's Guide to Woodland Wildlife Management," a publication of the University of Wisconsin Extension, is geared towards ruffed grouse habitat management but provides forest management recommendations for other species as well.
- DNR's "Woody Cover for Wildlife: A guide to planting your wildlife packet" is the guidance publication given buyers of the DNR nursery's seedling packets.
- "Improving Habitat for Scarlet Tanagers and Other Forest Interior Birds," produced by the Cornell Lab of Ornithology.
- "My Healthy Woods: A Handbook for Family Woodland Owners," produced by The Aldo Leopold Foundation in partnership with the American Forest Foundation's Center for Conservation Solutions. Contact The Aldo Leopold Foundation, 606-355-0279, for a free copy.

KIRSTEN HELD

WISCONSIN WETLANDS ASSOCIATION

# Quest for quality hunting "turns into so much more"

## Wetland restoration benefits wildlife, 7th generation landowner

"I can remember planting corn and beans here," says Paul Becker, standing at the edge of a wetland where dragonflies and birds now fly. These wetlands, part of Becker's family property in northeast Wisconsin, have been restored and, for the past 20 years, including this fall, have provided his family with great hunting and recreational opportunities. The wetlands have also improved water quality and provided important habitat for all kinds of Wisconsin wildlife.

Becker is the seventh generation to live on his family's property in Two Rivers, along Lake Michigan in Manitowoc County. His family had farmed their property for decades, growing crops and raising cattle and even running their own on-property slaughterhouse. In his own career, Becker expanded his family's agricultural tradition with his food service business, Riverside Foods.

**"The restoration started for the ducks. Then it became about the other birds: plovers, ibises, sandhill cranes, curlews, hawks and osprey."**

With his new business and his siblings' choices to pursue careers other than agriculture, Becker knew continuing the family farm wasn't in his future. In the 1990s, he started looking into other options for his family's property and heard about programs that supported wetland restoration and conservation.

"My folks were approaching retirement age, so when some of these programs came up, I went to the farmhouse and said, 'There's a way you can take the land out of production, get paid, and still live on it. Let's take a look at this,'" Becker said.

In 1996, after family conversations and deliberation, Becker and two co-landowners, Fred Giesler and William Albrecht, put 172 acres of land into the Wetland Reserve Easement program (WRE, formerly known as Wetland Reserve Program or WRP). Easements are legal agreements to preserve land that may include technical and financial support. Easements like Becker's are one of many options for private landowners seeking support for wetland restoration and management projects.

Though every wetland restoration project is unique, restoration of previously farmed land often means removing drainage tiles buried underground. Tiling, once heavily promoted throughout the Midwest, is an agricultural land management technique that drains wetlands to create farmland. Restoring the Beckers' wetlands meant removing five generations of tile, including hand-made clay tiles marked with fingerprints of previous Becker generations: their property was the first registered as tiled farmland in the county.

*(continued on page 6)*

*Quest for quality...(continued from page 5)*

Taking out these tiles was a reversal of family history, but a return to history for the landscape.

Not only did the Beckers' restoration project keep the land in their family, it also created excellent hunting habitat, an important goal for Becker, who is a long-time member and leader in his local Ducks Unlimited chapter and the Wisconsin Waterfowl Association. As Becker explains, "I thought, wouldn't it be great to have our own land to hunt?"

In the years Becker has been protecting his wetlands, his family has enjoyed the hunting benefits of having wetlands on their property. He and his family regularly reach duck harvest limits on the season's opening day.

Deer hunting has also been very successful. "This has turned into trophy deer hunting," Becker said.

Becker has seen benefits for other wildlife as well and for improved water quality, as the restored wetlands help filter runoff during heavy storms.

"The restoration started for the ducks. Then it became about the other birds: plovers, ibises, sandhill cranes, curlews, hawks and osprey. There's more wildlife in an acre of wetland than anything else in the world," Becker said.

"This started as a quest for quality hunting, but it's turned into so much more," Becker said. "This is an investment in the future."

*- Published and excerpted with permission from Wisconsin Wetlands Association*

- Wisconsin Wetlands Association
- View WWA's video: Caring for your wetlands: Paul Becker

## Restoration resources

DNR's Wetland Restoration and Management webpage contains information and links to organizations and agencies that can provide technical and financial help.

"My Healthy Wetland" handbook, produced by the Wisconsin Wetlands Association, describes what wetlands are, why they matter, and how to care for them. Order online or call (608) 250-9971.

## Tax change aids wetlands

Changes effective July 1, 2015, reduce the property tax burden previously faced by landowners who restored wetlands in agricultural landscapes. Learn more about this change and how it might affect you in this Wisconsin Wetlands Association article.

# Nature notes & nurture

November is last call for our avian migrants. Songbirds have already left the state as have many shorebirds. Look for hawks, Canada geese, mallards, loons and cedar waxwings overhead as they head south, and consider a trip to the Upper Mississippi River National Wildlife Refuge for views of majestic tundra swans.

Tundra swans are one of the last waterfowl to migrate and can sometimes be seen along the Mississippi River throughout the month. Thousands land to feed and loaf in the shallow backwaters of the river.

Help resident birds by backing off just a bit on the fall yard cleanup. Keep dead trees, standing or fallen, to give birds perching sites. Create a brush pile to provide shelter and leave at least some leaf litter for ground-feeding birds to dig through to find insects.

Deer are in the rut and snowshoe hares trade their drab brown coats for thick, white winter finery. Wild turkeys and gray squirrels fatten up on acorns. Black bears start to settle into their dens to hibernate, and Wisconsin's four cave bat species have for the most part headed to their winter hibernating sites in caves and mines.

Spring peepers, one of the first harbingers of spring, are hunkering down to survive Wisconsin's freezing winter temperatures. They bury themselves a few inches down in the soil and pack their cells with glycogen to keep their internal organ cells from freezing as the soil around them freezes.

NICK ANICH

Black bear.

NICK ANICH

Tundra swan.

RYAN BRADY

Snowy owl.

# What do you know?

Rural landowners and city dwellers alike are likely this fall and early winter to enjoy some of the best opportunities in years to see snowy owls.

These beautiful birds are arriving early in Wisconsin and are being reported across the state. More than 70 owls have now been documented statewide, most of which appear to be young owls hatched this past summer.

This marks the third straight year in which large numbers of snowy owls are being documented in Wisconsin; more typically, such "irruptions" occur every three to five years, according to Ryan Brady, a Wisconsin Department of Natural Resources research scientist who has been tracking the irruptions.

The reason for these periodic influxes into the state are not well known, Brady says. Traditional thought suggested that a temporary shortage of the owl's primary prey in the Canadian arctic, a mouse-like rodent known as a lemming, pushed owls southward. However, more recent evidence suggests nearly the opposite – that an abundance of lemmings may allow birds to raise large families and that the young owls disperse southward into the region by the hundreds.

For more information about snowy owls and viewing tips, visit DNR's new snowy owl webpage.

## Where and when to look for snowy owls

Increase your chances of seeing a snowy owl this season by looking for a landscape that mimics the tundra in terms of providing an open, barren or grassy space with a source of prey.

While snowy owls can be seen during the day, dawn and dusk periods often provide a better chance of success. Explore area roads and all potential perches carefully, including ground-level, haybales, fenceposts, telephone poles, breakwalls, silos and other buildings.

For the health of the bird, keep a safe distance. You are too close if the bird frequently looks at you, sits erect with open eyes peering in your direction, or flushes from its perch. Do not feed owls mice or other prey, as owls do not require it to survive and this may lead to unintended negative impacts, like habituation to people, higher likelihood of vehicle collision, and disease. And minimize the use of flash photography, especially after dark, as it can disrupt an owl's activity patterns.

Finally, please report any snowy owl sightings through the Wisconsin eBird website so bird experts can better understand how, where and why these birds are showing up.

## Find more phenology notes

If you like our nature notes, we invite you to peruse and/or sign up for free phenological updates from the sources consulted for these features.

- EEK!, DNR's website aimed at students in fourth through eighth grade, provides basic phenological information and links that all ages will enjoy. Sign up for the free Monthly Phenology updates.
- The Nature Conservancy's Wisconsin Nature Notes digs in deeper with monthly features on a handful of germane phenological topics. Sign up for the free updates.
- The 2016 Wisconsin Wildlife Phenology Calendar is available for sale from the UW-Extension The Learning Store. It features phenological events gathered from Aldo Leopold's observations in A Sand County Almanac, data gathered more recently by his daughter, the late Nina Leopold Bradley and data collected by other natural resource professionals. This year's theme is breeding birds and you'll find information on how your observations on your land can enrich the Wisconsin Breeding Bird Atlas, a five-year largely volunteer effort to document what birds breed in Wisconsin. Download and view past calendars for free online.