

NATURAL HERITAGE HARMONIES



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Vermont Fish & Wildlife Department
Agency of Natural Resources

Conserving Vermont's fish, wildlife, and plants and their habitats for the people of Vermont

Habitat in the Rough

by Julie Moore, Secretary, Agency of Natural Resources

Habitat for wildlife comes in many sizes, whether in backyards or large chunks of forest land. Recognizing the opportunities that exist at each scale is vital. You don't have to be a large landowner to create habitat, and in fact, can create habitat islands in places others neglect. The choices you make should be guided by what you love.

A couple of years ago, at my children's school, Rumney Memorial School in Middlesex, an effort was made to restore a nondescript, roadside ditch intended to quickly carry away stormwater running from the school's roof and nearby roads. Passersby routinely ignored the weedy area the stormwater had created, and those who did look closer considered it an eyesore.

In spring 2014, the school found a partner in the Winooski Natural Resources Conservation District. Through a grant from ANR's Ecosystem Restoration Program, they began an effort to improve this area—creating opportunities to slow the stormwater, build habitat and transform the weedy area into a functioning wetland.

Habitat rarely happen by accident. It requires a deliberate and engaged process. What started as an overgrown wet zone choked by sediment became, within a year, an inviting and healthy raingarden with appropriately graded slopes, a meandering stream, and carefully chosen plants.

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Thinking Small

Vermont Fish & Wildlife Department staff care about wildlife, which is what inspired many of them to pursue a career in conservation. While conservation efforts are generally focused on species and their habitats, occasionally staff can make a difference just by working to save a few individual animals.

Biologist Steve Parren works on the conservation of Vermont's turtles. But his efforts to save wildlife don't stop when he punches out at the end of the day. On rainy April nights, Steve can be found volunteering to help frogs and salamanders safely cross the road during their spring migration. He also cares for reptiles and amphibians in his home until they can be released, including threatened spiny softshell turtles, helping this species slowly recover in Vermont.

"I currently have a map turtle from St. Albans, two snapping turtles from Barre, and a spring peeper frog from Brookfield," said Parren. "The peeper chirps all night and prevents sleeping on the couch!"

Biologist Alyssa Bennett works with Vermonters to safely remove bats from their homes. "Many of Vermont's bat species have recently become so rare that saving even a few colonies can make a big difference to their long-term persistence," said Bennett. "I also work with a licensed bat rehabilitator, delivering sick or injured bats to him so the animals can recover and be released back to the wild."

Department staff also work to save injured birds. Biologist David Sausville has rescued multiple barred owls after they were struck by vehicles, including one that was still stuck in the grill of the truck when he arrived. And wardens regularly scoop up sick or injured raptors, from red-tailed hawks, to a bald eagle that was released back to the wild last fall.

The effort to conserve Vermont's wildlife is a huge endeavor. Department staff are tasked with conserving more than 20,000 species in Vermont and maintaining large, healthy blocks of connected habitat. But once in a while, effective conservation can mean thinking small.

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cover image: Cedar Waxwing (*Bombycilla cedrorum*)
Photo courtesy of Tim Lenz



Steve Parren with a young turtle



Alyssa Bennett examines a bat

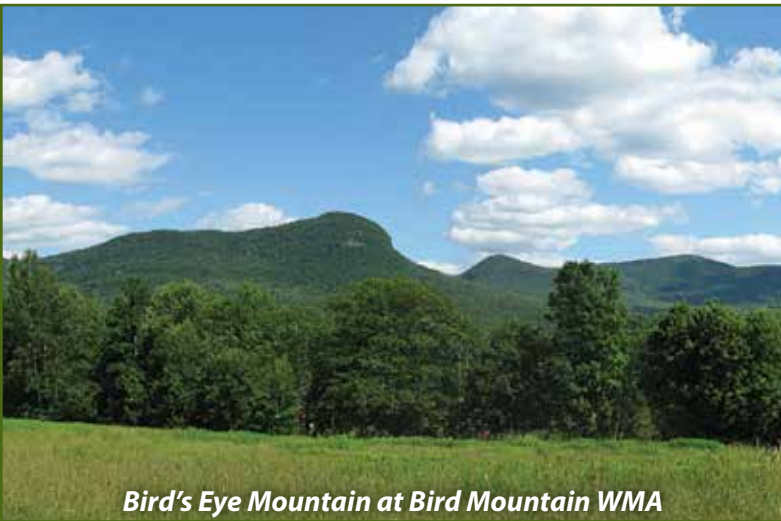


Game Warden Kelly Price with a rescued hawk

Saving Vermont's Best Places

Why do people love Vermont? The state's brand is centered around nature—the working landscaped dotted with dairy cows and sugar shacks, hillsides ablaze in fall foliage, maple trees and moose. From Lake Champlain to the Green Mountains, the land is the heart of Vermont.

The Fish & Wildlife Department is working to keep Vermont's forests and waters healthy and connected. And 2016 was a banner year in that effort.



Bird's Eye Mountain at Bird Mountain WMA

The department completed the largest land purchase in 15 years, adding nearly 3,000 acres to Bird Mountain Wildlife Management Area in Ira and Poultney. The wildlife management area includes the iconic Bird's Eye Mountain—a well-known nesting site for peregrine falcons—as well as the surrounding land.

The public will now be able to enjoy more than 3,600 acres just six miles east of downtown Rutland. The site is popular with hunters, hikers, and birdwatchers. These lands are part of a larger block of conserved lands, which are essential for wildlife such as bears, songbirds, bobcats, and brook trout.

Another large block of land in southern Vermont was just augmented, with Gale Meadows Wildlife Management Area growing by nearly 200 acres. The forested land has gentle, rolling terrain, an extensive wetland, and is accessible from the road. It contains uncommon types of wetlands, and black-backed woodpeckers, a bird rarely seen in

Vermont outside the Northeast Kingdom, has been observed at the site.

These lands were conserved with numerous partners including The Conservation Fund, Vermont Housing and Conservation Board, and Vermont Land Trust, along with many others. With their help and your continued support, these cherished lands will remain a vibrant part of the Vermont landscape, now and forever.

Habitat in the Rough

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Stormwater is captured here but so is the imagination of the students, particularly the “Green Team” of students who helped contribute to the project's design and upkeep. Their choices guided the berry bushes and other bird-friendly edibles, mostly native plants, that were used.

By engaging your neighbors or even the children at your local school, you enlarge the circle of discussion, and all can become engaged in the process. The sixth-grade students at Rumney all have jobs; one student uses a rain gauge to daily track the stormwater falling on the school and being captured and treated in the restored wetland. At year's end, we will calculate together how many million gallons of stormwater were taken in.

Stormwater runoff happens everywhere in the state. We can work together to reduce the problems of runoff from our roofs and roads, and simultaneously create habitat for bees, for frogs, and for all of us to enjoy and to protect, long after school is out.



Raingarden at Rumney Memorial School in Middlesex

Vermont's Nongame Wildlife Fund – Supporting Vermont's Nature

Contributions to the Nongame Wildlife Fund helps secure the future of wild animals and wild places in Vermont by conserving and protecting. Your donations with additional federal funds, one dollar to the Nongame Wildlife Fund can yield an additional two to three dollars for



Conserve Rare Plants

We monitor for rare, threatened, or endangered plants such as arethusa, or the dragon's mouth orchid. Our botanists work with landowners to protect these plants from being damaged or destroyed, ensuring the future of the colorful and diverse array of Vermont's flora.



Support Nesting Birds

Donations to the Nongame Wildlife Fund support our work and the work of our partners to monitor and protect rare, threatened, and endangered birds. Thanks to your support, loons, peregrine falcons, and bald eagles all smashed previous records for nesting success in 2016.



Conserve Biodiversity

Our biologists are working to devise strategies on how best to conserve the state's biodiversity through the Vermont Conservation Design project, ensuring that the natural heritage we all hold dear can persist and adapt in a changing landscape and climate.



Natural Heritage Conservation

Protecting Vermont's diverse natural heritage—from the tiny tiger beetle to the elusive lynx. By matching your gift with a conservation project, you can make a difference. Thank you to all who donate year after year! Here are a few of the projects your gift supports.



Dominic Sherony - Creative Commons



Monitor Whip-Poor-Wills

Department staff work with partners at Vermont Center for Ecostudies to monitor whip-poor-wills in the Connecticut and Champlain Valleys. We hope to ensure that this bird's unique and unmistakable call continues to ring out in the dark of a summer night in Vermont.

Track Lynx

A photo was captured on a camera trap in 2016 of a lynx traveling under a southern Vermont road using an underpass that was created to allow wildlife to travel safely between habitat blocks. We monitor for lynx throughout Vermont to determine the presence of this rare and elusive species.



Lynx captured on a trail camera.



Tom Rogers

Protect Turtle Nesting Beaches

Vulnerable turtle species such as spiny softshells turtles have lost much of their nesting habitat in Vermont to development. We work to protect the important nesting beaches from human impacts, and to put up fencing to keep marauding raccoons and skunks from eating the eggs.

Survey Sturgeon

We've placed acoustic tags in these ancient dinosaur fish so we can track their movements. The acoustic tags help us understand where lake sturgeon go throughout the year and how many may currently be living in Lake Champlain and its tributaries.



Fisheries biologist Chet Mackenzie samples a lake sturgeon.

VFWD staff

Create Laid Back Gardens for Wildlife Using Native Plants

While some gardeners strive for the landscaped glories of a formal garden, planting for wildlife allows for a humbler—and more laid back—approach. Wildlife, particularly birds and pollinators of all stripes, often prefer native wild plants to their cultivated cousins.

For pollinators, Aaron Marcus, assistant botanist, recommends letting some of your lawn grow back to wildflowers. He also notes that a native wildflower meadow only needs to be mowed or weeded once a year.

“Wild bergamot (*Monarda fistulosa*) is particularly good for pollinators,” Marcus notes. “It is easy to grow, forms nice robust clumps that require little maintenance, and has showy, long-lasting purple flowers. Plus, it’s a sight to behold a summer meadow of wild bergamot, thin-leaved sunflower (*Helianthus decapetalus*), and green-headed coneflower (*Rudbeckia laciniata*). Bergamot, sunflowers and coneflowers need part to full sun, and they produce seeds that birds enjoy.”

For monarch butterfly lovers with wetter soils, Marcus recommends native swamp milkweed (*Asclepias incarnata*) one of the most striking, but lesser known, milkweeds.

For bird lovers, native shadbush or serviceberry (*Amelanchier*) offers opportunities to create horizontal layers in the garden and its berries are delicious both for birds, such as cedar waxwings, and for people. Shadbush also have striking maple-bright foliage in the fall, and a tapestry of white flowers in the spring. “They grow in a large variety of sizes from small shrubs to small trees, so it is not difficult to find a variety that fits the size of your garden” says Marcus.

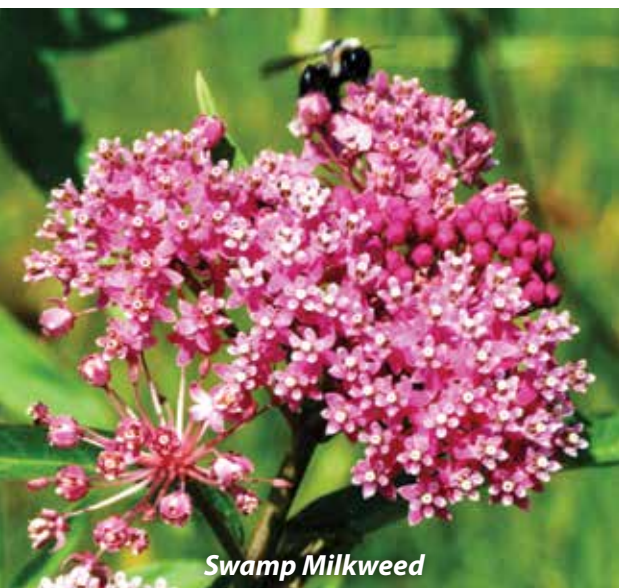
Sources for native plants can be found by Googling them and Vermont or look at the department’s website, www.vtfishandwildlife.com.



Wild Bergamot

R.W. Smith, Lady Bird Johnson Wildflower Center.

Wildlife, particularly birds and pollinators of all stripes, often prefer native wild plants to their cultivated cousins.



Swamp Milkweed

Jennifer Anderson - USDA-NRCS PLANTS Database



Green-headed Coneflower

Julie Makin, Lady Bird Johnson Wildflower Center



Shadbush

Aaron Masrcus

Bats: Loyal Residents

Many of Vermont's nine bat species have high site-fidelity, meaning that they return to the same winter or summer roosts each year through out their long lives. Little brown bats have been documented at up to 32 years of age but only have one young per year. That colony of bats you see roosting in your barn each summer likely contains the same female bats and their progeny, year after year. Males roost singly or in small bachelor colonies.

Depending on the species, bat roosts include caves, mines, and basements, in the winter, and trees, rocky cliffs, attics, barns, and bat houses in the summer. Bats that prefer to roost in buildings are the big brown bat and the state-endangered little brown bat. These bats lose roosts every year, even when safely evicted by homeowners. Putting bat houses up in your neighborhood can create a timely home for displaced individuals, or possibly a whole colony!

For more information on bat houses or safely evicting bats from your home please contact Alyssa Bennett at 802-786-0098 or email: alyssa.bennett@vermont.gov.



VFWD staff

BUILD A BETTER BAT HOUSE

- Overall size: at least 24 inches high and 14 inches wide.
- Width of the roosting chambers: 3/4 inch.
- Scored wood or screening for bats to climb up and hang on inside the chambers.
- A landing zone of 3-6 inches.
- Dark color to absorb heat.

LOCATION, LOCATION, LOCATION

- Height off the ground: 12 feet or more.
- Mount on a building or pole (*NOT as successful on trees*).
- Orient to receive at least 8-10 hours of sunlight during the summer.
- Place roosts near vegetative buffers or buildings where bats have a better chance of escaping predators, like owls.

Together We Saved the Loon. Let's Not Stop Now!

Help Vermont's endangered wildlife by donating to the Nongame Wildlife Fund.

Look for the loon on line 29d of your Vermont income tax form or donate directly online at www.vtfishandwildlife.com





Wildlife Diversity Program

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Your Support Makes a Difference!

Please donate to the Nongame Wildlife Fund on your Vermont income tax form. Look for the loon icon.



Volunteer Spotlight - Caitlin Drasher

UVM senior Caitlin Drasher first got involved with the Fish & Wildlife Department by helping to radiocollar bears in southern Vermont. She quickly expanded her volunteer activities, helping with deer check stations and monitoring spiny softshell turtle nesting beaches. As president of the Wildlife and Fisheries Society at UVM, she leads student volunteers at the annual ice fishing festival and the turtle beach cleanup day. Caitlin turned her interest in bears into a senior thesis project, partnering with department staff to study bear habitat needs and how roads may block their movement. She was recognized by UVM for her efforts, receiving the 2016 Engaged Student Award.



On volunteering with Vermont Fish & Wildlife:

“Volunteering with the department has provided me with so many opportunities to gain hands-on experience in wildlife biology. These experiences have helped me realize my passion for wildlife, and my desire to continue working toward the protection of wildlife and their habitats.”

On why she donates to the Nongame Wildlife Fund:

“I purchase a conservation license plate because I believe it’s important to help sponsor the wide variety of species the department is working to conserve, from mussels to lynx. As a volunteer on the turtle project, I’ve spent time and effort working to save these vulnerable species, so I feel compelled to contribute financially to their conservation as well.”

Tom Rogers