



Woodlands *for* Wildlife

Volume 24 Summer 2010

A newsletter of Vermont Coverts: Woodlands for Wildlife, Inc.

Maintaining Bee Habitat

by Leif Richardson, Land Ecologist
Vermont Department of Fish and Wildlife

What is wildlife habitat made of? If you answered this question, chances are you mentioned the importance of plants, either as structure or as food for animals. And it's true: plant life is the foundation of much wildlife habitat, whether the animals in question are songbirds, salamanders, moose or bobcats.

While this is not news to most landowners, when managing plant life for the benefit of wildlife, we often overlook a critical aspect of plant ecology: pollination.

Simply put, this is the transfer of pollen from the male parts of one flower to the female structures of another, and it's necessary for plants to make seeds and the fruit that often encloses them.

And more often than not, a flower-feeding animal pollinator is responsible for this transfer. Animal mediated pollination is essential for some two thirds of northeastern plants, including such important wildlife foods as blueberries, raspberries, apples and grapes.



Around the world, bats, birds, flies, butterflies and even reptiles pollinate plants, but the single most important group of pollinators is bees. Honey

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Celebrating Our 25th

by Lisa Sausville, executive director

Vermont Coverts is celebrating 25 years – 25 years of educating landowners about wildlife and forests. We will mark this occasion by a series of special events on September 25 at Riverledge Farm in Grafton.

Many Vermont acres have been nurtured and many friendships born during our quarter-century history.

Vermont Coverts invites Cooperators and friends to join in a day of celebration at Riverledge Farm. We'll take time out from a full and interesting program for a brief Annual Meeting, where we

will elect officers. See the insert to this newsletter for a proxy which we hope all Cooperators will take time to fill out.

Sydney Craven, owner of Riverledge and a Coverts Cooperator, has created a unique and beautiful setting for the pursuit of his determined land ethic and search for knowledge about the natural environment. From newly created stone walls fit for a museum on this art, to a magnificent barn structure available for use by a wide range of environmentally oriented groups, to miles

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Best Management Practices for Invasive Species

by John Evans, class of 2002

A three-year effort by the Wisconsin Council of Forestry, backed by funding from the U.S. Forest Service and staff support from the state's Department of Natural Resources, has created the first set of comprehensive management practices to protect forests from invasive plants and insects. The 56-page Field Manual, *Best Management Practices for Invasive Species*, was issued in 2009.

The Field Manual recognizes that forestry practices can contribute to the spread of invasives threatening forests, wildlife habitat and area economies. Any activity that brings equipment or people into the forest holds the potential to accidentally introduce new inva-

sive species to the site or increase populations of existing species.

For example, ground disturbance exposing the soil can create a seedbed and favorable conditions for invasive plants. Opening the forest canopy will increase sunlight and may encourage the growth of non-native invasives. Mud and vegetation on vehicle tires and tracks can introduce invasives and spread them across travel corridors.

Landowners, consulting foresters and loggers all have important roles to play in applying the Best Management Practices (BMPs), and making decisions from among the forest stewardship options available.

As containment and control efforts will

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Best Management Practices *continued from page 1*

probably require expenditure, the Field Manual suggests that the price of implementing a specific practice is also measured against the cost of not doing it.

Specific Threats

In defining the threats of non-native species, three invasive plants common in Vermont are used as examples of dangers to forestry generation, tree growth and longevity. Researchers have documented a reduction in the abundance, density and richness of tree seedlings in areas infested with non-native honeysuckles. Garlic mustard appears to suppress regeneration by disrupting beneficial associations between seedling roots and mycorrhizal fungi. Common buckthorn alter the chemistry of soils and impact tree regeneration and growth.

The overall invasive management strategy is based on prevention, early detection and rapid response, control and containment efforts for target species, monitoring treated infestation sites and all travel corridors, and returning the land to desirable vegetation by restoration efforts.

As the issues surrounding invasive species are complex, all decisions need to be evaluated within the context of a specific forest and existing conditions.

A good example is wildlife habitat management. Landowners know that increasing the diversity of wildlife habitat will increase the diversity of animals, birds and other species on the site. However, the process of creating new habitat also introduces the potential to increase invasive species populations.

A separate section in the Field Manual on Wildlife Habitat Management includes a condensed set of BMPs addressing forest stewardship practices undertaken to enhance wildlife habitat within forests that also are being managed for timber production.

Some habitats, especially those containing large amounts of edge or where

intensive maintenance activities are required, are inherently more susceptible to invasive species than others.

The Field Manual notes: “Sunny forest edges favor germination of invasive plants, providing a pathway for them to spread to the interior of a stand. Intensive maintenance activities, such as mowing wildlife openings, present another potential risk for invasive species to be introduced on machinery.”

Landowners are reminded to “carefully consider the risks of invasive species, along with the benefits to wildlife, and develop long-term management strategies accordingly.”

Wildlife Habitat BMPs

The Wildlife Habitat Management BMPs include considerations such as:

BMP 7.5. Prior to moving equipment onto and off of a management unit, scrape or brush soil and debris from exterior surfaces, to the extent practical, to minimize the risk of transporting propagules (plant parts that can grow independently of the parent source.)

BMP 7.6. Take steps to minimize the movement of invasive plants, insects and disease to non-infested areas during habitat maintenance activities. (Considerations include minimizing the risk by working on frozen ground, during snow cover, and when seed and propagules are absent.)

BMP 7.7. Consider the likely response of invasive species or target species when prescribing activities that result in soil disturbance or increased sunlight.

In an accompanying section on canopy manipulation, possible action steps include conducting control treatments for invasives in advance of opening the canopy, deferring canopy openings altogether in a heavily infested or vulnerable area, and prompt regeneration efforts after an opening is created to rapidly close the time window during which conditions are favorable for invasive plant establishment.

For all forestry practices, the Field Manual establishes a sequence of steps, each associated with a general process and specific BMPs. The processes begin with Management Planning, divided into sections on Property Planning and Activity Planning.

Property Planning involves landowners establishing long-term goals, the potential for the land to support different forest types and wildlife species, and current and future threats and options for sustainable management.

Activity Planning initially involves scouting and identifying existing invasive species infestations, evaluating the species threat, and understanding how activities can be modified. Scouting will identify likely avenues for invasive seeds, eggs and plants, such as access points, log landings, skid and recreational trails, and disturbed areas which may serve as seedbeds.

Evaluating need for action

A threat assessment is the next step in planning, along with options for managing invasive species. Five considerations are used to evaluate the need for action, to include: the degree of invasiveness, severity of infestation, amount of additional habitat or hosts (such as infected or stressed trees) at risk for invasion, impact of invasive species on forest stewardship objectives, and the feasibility of control steps. Some invasive species may have relatively low impact in a forest setting, while others will have severe economic and ecological consequences.

The BMP process then shifts to planning management activities to limit potential for the introduction and spread of invasive species. Planning includes:

- Timing of control efforts, either before, after, or concurrent with the management practice, and the season it takes place to minimize risk of introducing or spreading invasive species.
- Cleaning of clothing, footwear and

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Best Management Practices

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logging equipment, and considering risks different types of equipment may pose to introducing/spreading invasive species.

- Setting activity boundaries, if appropriate, to exclude areas infested with invasive species.
- Scheduling the sequence of operations where, if feasible, areas infested with invasive species are entered last.
- Avoiding or minimizing ground disturbance, one of the best prevention methods.
- Considering the impact of changes in forest structure, to include canopy openings and silvicultural prescriptions that increase tree vigor, change stand composition, or are proven to be an effective strategy against invasive species.
- Limiting transport travel through infested areas.

The final step under Activity Planning is post-activity management of highly damaging invasive species. Consideration is given to monitoring, ongoing control efforts, and reforestation, revegetation and/or restoration, depending on site conditions.

A separate section of the Field Manual focuses on Forest Stewardship. Prima-

ry considerations involve the timing of control treatments, and the response of invasive species to activities resulting in soil disturbance or increased sunlight.

It is emphasized that coordination between landowners, forests and loggers is especially important in applying BMPs associated with the potential to move invasive species into non-infested areas of a forest. Reasonable steps are encouraged to avoid traveling through, or working in, small, isolated populations of invasives.

Construction and use of log landings and interior roadways providing access into the landscape is addressed in a chapter on Forest Access. The advice is to use existing roads, where possible, to reduce soil disturbance.

New roads should be built in areas free of invasive species. Other suggestions are to survey potential routes for new access roads during the growing season, and limit the number, width and length of roads, skid trails and landings.

The Field Manual and associated BMP voluntary guidelines were developed by a 14-member Forest Advisory Committee, with staff support from the Wisconsin Department of Natural Resources.

A copy can be downloaded at <http://council.wisconsinforestry.org/invasives>.

Join us on September 25th to connect with other Cooperators and refresh your thoughts and feelings about your own woods. Your invitation and registration are in the mail and can be accessed on the Coverts website, www.vtcoverts.org.

You may wish to take a look at the Riverledge website, www.riverledgefarm.com. The farm is a piece of Vermont history brought to life. You will see that a visit to this farm and its numerous restored buildings promises to be a memorable one.

Bee Habitat

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bees perform this function in many agricultural situations, but this Old World import is plagued with a variety of diseases, and is not well adapted to pollinating many of the wild plants found in the northeast.

Luckily, we have nearly 300 species of native bees here in Vermont to take up the slack left by a faltering beekeeping industry. These range from large, furry, social bumblebees to tiny, ground-nesting solitary sweat bees.

There is a broad range of behaviors and life histories, but all of our bees have one thing in common: they use plant pollen as the protein source for their developing offspring. This makes bees a keystone animal in our attempts to manage habitat for wildlife—but it also means they are sensitive to habitat alterations.

Keys to improving bee habitat

So, what can landowners do to improve habitat for bees?

First, consider the life history needs of bees. They need flowering plants, and many species can be encouraged by growing plants rich in nectar and pollen. Even non-native plants can be a great choice for bee forage — providing they are not invasive.

Beyond plantings, a great way to provide these resources is to leave areas of your property in an unmanaged state. If you have fields, consider altering your haying schedule so that some areas of field are left ‘fallow’ throughout the growing season.

About a quarter of the bees found here are specialists, meaning they collect the pollen of plants in one plant family, genus, or even species. To encourage these bees (who may collect nectar from a variety of other plants), maintain such plants as dogwoods, willows, blueberries, legumes, goldenrods, and asters.

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Annual Meeting program insert*

25th Anniversary

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of trails, this is the perfect venue for our 25th anniversary.

You won't want to miss the premiere of “Landowners Connect,” a Coverts movie conceived and produced by Cooperator Bob Lloyd.

Morning and afternoon workshops will be punctuated by a delicious lunch spiced by keynote speaker, author and Cooperator John Elder.

This is an event you don't want to miss!



Woodlands
for Wildlife

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Calendar of Upcoming Events

For additional calendar information visit www.vtcoverts.org

VT Coverts 25th Anniversary Celebration

Saturday, September 25th, 9:30 a.m. to 4:30 p.m. Riverledge Farm, Grafton Vermont
Come join in a day of learning and celebration. See the premiere of the Coverts Movie. Listen to guest speaker John Elder. Take advantage of a morning or an afternoon workshop. Silent auction. Save the date.

Late Summer Wild Edibles

Wednesday, Aug. 25 10:00 a.m. to 2:00 p.m., Northwoods Stewardship Center, E. Charleston, VT.
Bring something new to the palate and to your understanding of the Vermont woods with this walk with veteran wild edible hunter, Pete Rodin. Contact maria@northwoodscenter.org to register, \$15, and for directions

Invasive Plants and Insects: Identification, Monitoring, and Control

Saturday, August 28, 9:00 a.m. to – 3:30 p.m., Scott Farm, Dummerston, VT.
Forestry workshop to Learn about control of the ominous invaders trying to take over our native ecosystems. Presenters include County Foresters Sam Schneski and Bill Guenther; Forestry Specialist Jim Esden, VTFFPR; Peter Smallidge, NYS Extension Forester and Director Arnot Teaching & Research Forest at Cornell University. Afternoon visits to field sites where control practices have been implemented, including an infestation of hemlock woolly adelgid. Workshop is part of the Vermont Woodlands Association's Forestry School Series and is cosponsored by the Woodland Owners Association. Pre-registration required. Cost is \$50, including lunch. Registration form can be downloaded at <http://www.vermontwoodlands.org/documents/August28InvasivesWorkshopFinal.pdf>.