



Woodlands for Wildlife

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



Source: Animal Diversity Web

White-footed mouse is cute, but a primary carrier of Lyme disease infected "deer" ticks in Vermont woodlands.

Forest Fragmentation Link to Lyme Disease

by Lynn Peterson, Class of 2004

New research is showing how fragmenting the forest can adversely affect human health. When habitats are lost or fragmented, biodiversity is diminished and the risk of humans being infected by certain bacteria or viruses is increased.

These findings are important for organizations like Vermont Coverts in its efforts to maintain contiguous tracts of forest lands in Vermont.

One of the most interesting and relevant findings concerns Lyme disease, a growing concern in the northeast U.S. For humans to get Lyme disease they need to be bitten by the blacklegged "deer" tick carrying the bacteria causing the disease.

The bacteria needs a host species to replicate and survive. While many small mammals and some birds can serve as hosts, the primary host and source of Lyme disease infected ticks is the com-

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Council Planning Exercise Focuses on the Future

by Lisa Sausville, Executive Director

Where are we going and how do we get there? These questions were posed to the Coverts Council at a March 31st Planning Retreat held in Randolph, Vermont.

Council members spent a day in a planning exercise focused on the organization's mission, goals, strategies and action planning. This effort is expected to result in an updated strategic plan.

The retreat was facilitated by Barry Lawson, a trained facilitator and Coverts Cooperator (Class of 2000). Barryvery effectively walked the council through a number of exercises to provide clarity as we looked to the future.

Initial discussion focused on the strengths and weaknesses of Coverts programs and moved to stake holders, issues, opportunities for collaboration and measures of success. The final and most comprehensive exercise split the group in two and tasked each team to develop a program plan.

Longer Range Planning

Two time periods were identified: one to two years and three to five years. Although the groups were looking at different time frames, a number of the basic program ideas were similar.

The results presented here are not exhaustive and are not meant as finished products but represent descriptions and summaries of the brainstorming activities. Hopefully these ideas can serve as catalysts to the development of the strategic plan. This is a work in prog-

ress and we welcome feedback from all Cooperators.

Coverts remains grounded in its roots: to enlist woodland owners, who were potential leaders in their communities, to learn more about forests and wildlife and how to improve habitats during the course of timber management; to show them how to effect changes in their communities; and to extract a commitment from Cooperators to serve to influence thinking about forests in their communities

In addition, Coverts works successfully in the education of other individuals, organizations and the public about woodlands management for wildlife.

Training Program Is Priority

First and foremost, it was noted that the primary Coverts activity is the high quality three-day training program which has graduated more than 400 Cooperators. Improving the involvement of Cooperators after completing the program is another priority. An action plan is to revive and enhance the Local Contact Cooperator Program.

Other priorities include creating a marketing plan updating the Coverts web site to post program and workshop dates, newsletters and other information and associated links.

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Coverts and Partners
Receive Wildlife Grant



Fragmentation Link to Lyme Disease

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mon white-footed mouse.

While most adult “deer” ticks attach themselves to white-tailed deer, it is the much smaller nymph form (prior to molting to an adult) that is the usual source of Lyme infection in humans.

Ecologists and entomologists are finding that when a forest is fragmented (especially in tracts smaller than 15 acres) the number of white-footed mice increases; populations of other small mammals, which can feed ticks but do not carry the pathogen for Lyme disease, decrease.

Biodiversity reduces health risk

Biodiversity creates what scientists call the “Dilution effect”: greater biodiversity dilutes the concentration of white-footed mice and therefore reduces the risk of human infection.

These research findings raise two important questions. First, are the findings in Lyme disease relevant to other infections? Data on the spread of West Nile Virus, the second most common vector-borne disease in the U.S., suggest the same sequence — fragmentation reduces diversity of bird species (birds are hosts for West Nile virus) and increases the risk of human infection. In this case the house sparrow is the most effective host.

Findings in Europe suggest that the risk of viral encephalitis caused by a tick whose host is a yellow-necked mouse correlate with fragmentation and increased numbers of these mice.

Lyme incidence low in Vermont

Second, the potential relevance to Vermont is interesting. Vermont, on a statewide basis, has a markedly lower incidence of Lyme disease than neighboring northeastern states. There were only 62 reported cases of Lyme in 2006. The actual number of cases may be significantly higher as Lyme disease in Vermont, and other states, is underre-

ported.

Two southern tier counties, Bennington and Windham, accounted for 70 percent of statewide infections — reporting a doubling of the incidence of infection in 2006 as compared to 2005.

Trish Hanson, an entomologist with the Forest Biology Lab of the Vermont Department of Forests, Parks and Recreation, notes:

“Many host and habitat factors play a role in tick abundance and Lyme disease. For example, increased suburbanization improves habitat for ticks as fragmentation and disturbance result in an ideal habitat — deciduous forest with shrubs. Milder winters make it possible for ticks to thrive, and their hosts (deer, mice and chipmunks) do exceptionally well. Suburbanization also brings people in closer contact with forests and infected ticks.”

For Vermonters living in the central northern tiers there is good news. Where winters are harsher, forest is more conifer and litter depth is shallow, offering less protection against environmental extremes, habitat is much less hospitable to tick survival.

However, all Vermonters should be concerned with forest fragmentation and its impact on biodiversity. The findings on Lyme disease and the impact of fragmentation on human health adds another reason for concern and action. Keeping contiguous forest intact is far easier than trying to put it back together once it's fragmented.

Link to exotic invasive plants

Research at the Maine Medical Research Institute also points to a role for invasive plants in promoting tick populations. The number of ticks doubled when shrub species included Japanese barberry and Eurasian honeysuckle. These species create dense thickets that supply shelter and food for small mammals and birds, which are hosts to Lyme infected ticks.

Fund Raising Success

The 2007 Fund Drive of Vermont Coverts resulted in contributions from 170 donors. The total of all donations, including a matching grant of \$4,000, is \$27,143.00.

The following list is of those donors who indicated a willingness that we acknowledge their gifts publicly.

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Council Planning

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Council members agreed there is much to celebrate and much to promote to increase Coverts name recognition and the training program applicant pool.

A plan that promotes Coverts will also enhance the organizations ability to reach the right people (interested land-owners) and to increase our ability to raise funds to support programs.

Cooperator Help Requested

Other action items include identifying Cooperators with experience and interest in helping Coverts to market and promote the organization, to re-establish and enhance the Local Contact Cooperator program, identify needed changes to the website and focus strategies to update, and prepare a long range plan.

The Council is excited about where Coverts can go in the future. We still need input and expertise from our Cooperator base. If you would like to be involved in this process or have marketing or web site design expertise please contact Hugo Liepmann or Lisa

Coverts and Partners Receive Wildlife Grant

Vermont Coverts partnered with Audubon Vermont, Vermont Natural Resources Council, and the Northern Forest Alliance to secure a \$72,000 Wildlife Action Opportunity Grant to help support the implementation of Vermont's Wildlife Action Plan (WAP).

The nationally competitive grant is funded by the Doris Duke Charitable Foundation and offered by the Wildlife Conservation Society.

Coverts will use its portion of the funding dollars to offer a number of technical assistance workshops and develop associated outreach materials that will explain habitat management strategies, wildlife monitoring, estate planning, and available federal and state technical assistance programs.

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President's Message:

Opportunities for Vigilant Woodland Supporters

by Hugo Liepmann, President

A recent collaborative work, of over one hundred Vermonters, identified opportunities for Coverts Cooperators, and others who value woodlands, to safeguard Vermont's woodlands and native wildlife habitat.

The collaborative effort came in a series of day long deliberations at a roundtable on Parcelization and Forest Fragmentation (PAFF), which the Vermont Natural Resources Council conducted in recent months. Visit the VNRC web site at www.vnrc.org to see a copy of the report, scheduled for release this spring.

Let's first define two key terms. Parcelization refers to the subdivision of property into parcels that have different owners. Forest fragmentation refers to the disruption of forestland due to development. It typically involves clearing trees and other native vegetation, disturbing surface waters and soil, and building roads and utility corridors.

Effects on land and animals

Parcelization and forest fragmentation can impact soils and water resources, as well as trees. PAFF can disrupt animal habitats for feeding and for breeding, which typically leads to decreased animal populations and even to extirpation of species. PAFF can be detrimental to the vitality and regeneration of trees and other native plants. PAFF can damage the quality of surface waters and the recharge of groundwater resources. PAFF can surreptitiously encourage invasive plants and diseases. Among the causes of PAFF are: (1) pop-

Angler's Friend; Foe to Forest?

Scientists are paying more attention to a wriggling exotic invasive, the earthworms imported from Europe and elsewhere. By eating leaf litter, maple and ash leaves are a favorite, earthworms

ulation growth and increasing demand for land ownership; (2) financial profit and tax burdens; (3) misinformation or ignorance of the benefits of native ecosystems, and (4) public policy, that is, inadequate or faulty stewardship due to inadequate or flawed laws and regulations and their administration.

The benefits of native ecosystems may perhaps be the least understood of these subjects.

Yet native ecosystems provide processes essential to survival on the planet, including water filtration and purification, climate regulation, nutrient recycling, pollination, pest control, disease regulation, and flood control.

Sharing knowledge is important

One opportunity for action by Coverts Cooperators, to safeguard against PAFF, is to share your knowledge with others. This practice is a cornerstone of the Coverts program. In particular, share information about the values of native forests, in terms of economic and social and ecological benefits. The recent best seller "Collapse" traces the collapse of every failed society to abuse and destruction of its forests.

Other opportunities for action are to stay informed about tax and other fiscal legislation and about public policy regarding natural resources. Communicate with your legislators. Make sure they know you want public policy that recognizes and enhances the value of native habitat to all segments of the human community.

deplete biomass in the forest floor and add extra nitrogen to the soil. Scientists in recent years have been studying how northern forest systems are being altered by earthworms and the effect on plants and soil organisms.



Woodlands for Wildlife

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Calendar of Upcoming Events

- | | |
|-----------------|---|
| June 2 | The Nature Museum at Grafton, in cooperation with Vermont Coverts, will hold a Beaver Workshop from 10:00 a.m. to 2 p.m.. Wildlife ecologist Skip Lisle will lead a field trip to beaver wetlands. BYO lunch. For details, call the Nature Museum at 802-843-2111 or visit www.nature-museum.org. |
| Sept 7-9 | Fall Training Workshop, Camp Kehoe, Fair Haven, Vermont |
| Sept 9 | Coverts Annual Meeting, Camp Kehoe |

Wildlife Grant *continued from page 3*

The Vermont collaborative partnership will work with the Vermont Department of Fish and Wildlife to create synergies that will provide direct technical assistance to private forest landowners; create and promote town level planning and land use decision tools; and utilize town-owned forests as demonstration sites for wildlife habitat enhancement and education.

The Wildlife Action Plan identifies threats to wildlife and provides a blueprint for maintaining and restoring Vermont's wildlife populations. The For-

est, Wildlife and Communities (FWC) project, designed by the partnership and funded by the grant, will address the fragmentation of forest habitat by providing community planning tools, individual landowner technical assistance and promoting the creation and monitoring of Town Forests.

Participation in the partnership also will provide Coverts with opportunities to target more landowners and to provide information on topics that will help to reduce fragmentation and parcelization.