Notes from 1/18/19 Testimony to House Natural Resources, Fish & Wildlife Committee

Introduction:

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Also. Currently chair of the Vermont Endangered Species Committee. However I am not testifying on behalf of the Committee, nor does my testimony represent the position of the committee.

- Wildlife is an important part of Vermont. 72% of Vermonters participate in wildlife watching.[1]
- Wildlife-related expenditures contribute $744 million each year to Vermont's economy[2]

Slide 2: Wildlife is reacting to climate change.

11 miles and 30 feet per decade. Species ranges are moving on average 11 miles northward and/or 30 feet in elevation every 10 years in response to climate change.[3] This slide was developed by TNC scientists and it show the modeled projected movement of species over time. Key to this movement is having a network of resilient and connect lands that can accommodate the change. [4]

Slide 3: Status of Wildlife

Change in conditions make for a varied wildlife story.

Bald Eagle is one success story. Once extirpated from Vermont due to loss of habitat and DDT poisoning. Its population has rebounded and despite being the last state in the nation to have a recovered breeding population we now have 27 nesting pairs.[5] The Vermont Endangered Species Committee has recommended it be down-listed to threatened in the state. We have seen similar successes in Common Loons and Osprey.

Slide 4: Birds are continuing to see concerning declines

This Spruce Grouse is endangered in Vermont. Recent efforts to introduce SPGR to Victory basin have not been successful.

Nationally 22% of the temperate forest birds are on the national watch list.[6]

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[1] See: https://www.census.gov/prod/2013pubs/fhw11-vt.pdf

[2] Ibid.

[3] See: Chen et al 2011. Full Citations is Chen, I. C., Hill, J. K., Ohlemüller, R., Roy, D. B., & Thomas, C. D. (2011). Rapid range shifts of species associated with high levels of climate warming. Science, 333(6045), 1024-1026.

[4] http://maps.tnc.org/migrations-in-motion/#4/19.00/-78.00

[5] Personal communication with Mark LaBarr, chair Bird Scientific Advisory Group for the Endangered Species Committee.

[6] See: State of the Birds Report 2016: http://www.stateofthebirds.org/2016/overview/results-summary/

The Eastern Meadowlark has seen a 72% decline in its population.[7] The Vermont Endangered Species Committee has recommended that the Eastern Meadowlark be listed as threatened in Vermont.

Vermont Center for Ecostudies's Forest Bird Monitoring report documents that forest birds abundance is down by 14% over the past 25 years.[8]

Slide 5: Reptiles and Amphibians

Reptiles and Amphibians have declined worldwide. 49.9% of salamanders worldwide are threatened or extinct.

8 of 40 (20%) of Vermont Herptiles are listed as threatened or endangered and 19 of 40 (48%) are considered species of greatest conservation need (SGCN).
Boreal Chorus Frog has not been seen or heard in Vermont since 1999.
Fowler's Toad has not been seen or heard in Vermont since 2007.
North American Racer has not been seen in Vermont since 2014,
Spotted Turtle is now only found in one healthy population
Timber Rattlesnakes have disappeared from all but two of their denning areas and recently they are showing signs of snake fungal disease. We are also very concerned that Batrachochytrium salamandrivorans (Bs) a deadly salamander fungus, could arrive in the United States from Europe at any time.[9] TNC preserves have protected the last two remaining known Eastern Timber Rattlesnake dens in Vermont.

Slide 6: Mammals

Vermont has 58 mammal species. 55 are native to Vermont. 8 are listed as Threatened or Endangered. Several bat species have been listed recently due to white-nose syndrome. 62% of the native mammals in Vermont are considered Species of Greatest Conservation Need in the Vermont Wildlife Action Plan.[10]

The Moose as example of population stressed by climate change. Warming temperatures and winter ticks are stressing the population. We are seeing first year mortality of greater than 70% due to tick infestations.[11]

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[7] See; National Audubon Society's Common Birds in Decline. https://www.audubon.org/sites/default/files/documents/sotb_cbid_magazine.pdf

[8] See: https://vtecostudies.org/projects/forests/vermont-forest-bird-monitoring-program/results/

[9] Personal communication with Dr. Jim Andrews.

[10] https://vtfishandwildlife.com/about-us/budget-and-planning/revising-vermonts-wildlife-action-plan/draft-2015-wildlife-action-plan-for-public-review

[11] See: University of New Hampshire. "Winter ticks killing moose at alarming rate." ScienceDaily. ScienceDaily, 17 October 2018. <www.sciencedaily.com/releases/2018/10/181017080814.htm>

Slide 7: Importance of Regional and Local Connectivity

Vermont needs to maintain a network of resilient and connected lands. Vermont is a national model in its public/private partnership that crosses state and national boundaries to protect wildlife connectivity. The Nature Conservancy is a critical player in the four state, 21 partner Staying Connected Initiative (SCI).[12]

The Fish and Wildlife Department's Vermont Conservation Design has identified a network of forest blocks and connectors that are needed to maintain Vermont's biodiversity. The map is available to the public using ANR's Biofinder tool. See: http://anrmaps.vermont.gov/websites/BioFinder2016/

Recent projects in Wolcott along Route 15, Pomainville along Route 7 and the Shutesville Hill Wildlife Corridor are examples of how Vermont can maintain critical connectivity points.

Slide 8: Forest Fragmentation and overarching threat to wildlife

Vermont is losing 1,500 of forest per year. [13]

The problems most frequently identified as impacting SGCN are loss of habitat (due to conversion, degradation, fragmentation and lack of needed successional stages), the impacts of roads and transportation systems, pollution and sedimentation, invasive species and climate change.[14]

In 2015, the Department of Forests Parks and Recreation produced the 2015 Forest Fragmentation Report for the Legislature. It is the best overview of forest fragmentation in Vermont. Including policy options. [15]

The Vermont Natural Resources Council has documented recent trends in parcelization. Between 2004 and 2016, "The amount of "woodland," which represents mostly undeveloped forestland (there may be a seasonal camp), decreased by 147,684 acres, or approximately 12-15% over the study period."[16]

Slide 8 TNC's Burnt Mountain: Nature Based Solutions

TNC recently acquired the 5,400 acre Burnt Mountain Preserve. In addition to protecting critical core forest habitat that will help Vermont achieve its goal to have 10% of our forest in late-successional forest condition (ie old growth). Our forever wild management is allowing us to sell the carbon stored in the forest in the California Cap and Trade market. The funds from the carbon sale will be used to protect additional forest lands in Vermont. Carbon markets are an emerging market opportunity that is a nature based solution for addressing climate change. See: https://www.nature.org/en-us/about-us/where-we-work/united-states/vermont/stories-in-vermont/burnt-mountain-beauty/

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[12] http://stayingconnectedinitiative.org/

[13] https://www.wildlandsandwoodlands.org/ also
Olofsson, P., C. E. Holden, E. L. Bullock, and C. E. Woodcock. 2016. Time series analysis of satellite data reveals continuous deforestation of New England since the 1980s. Environmental Research Letters 11(6):1–8

[14] See Vermont State Wildlife Action Plan.

[15] 2015 Forest Fragmentation Report. https://fpr.vermont.gov/node/1300

[16] https://vtforesttrends.vnrc.org/reports