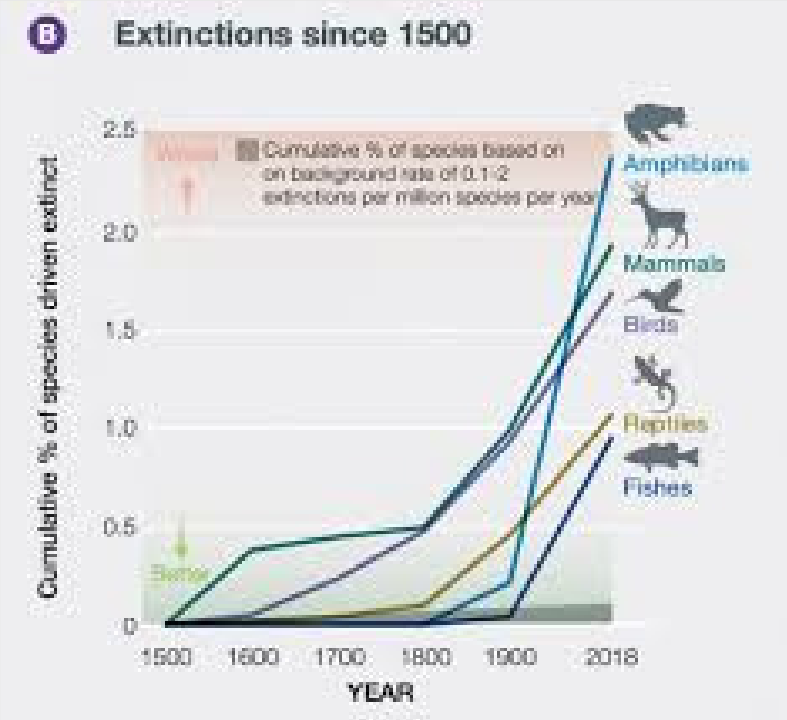
Biodiversity

Biodiversity



Rick Enser, Conservation Biologist

Rhode Island Natural Heritage Program

Coordinator/Botanist 1979-2007

The Conservation Cooperative 2007-Present

Biodiversity Assessments

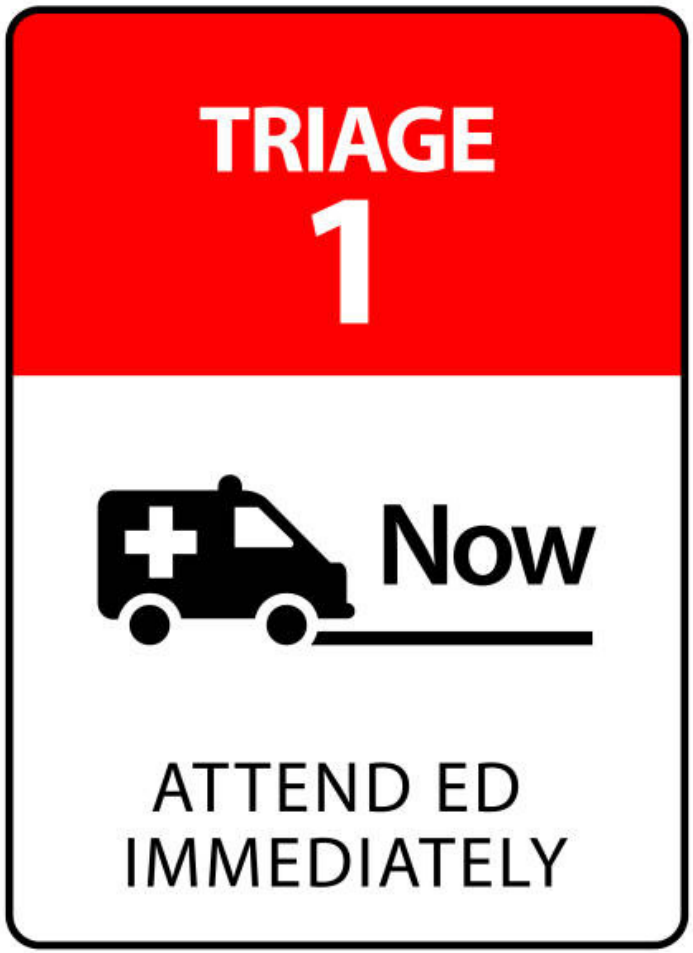
Environmental Impact Assessments

Natural Heritage Network

- Created by The Nature Conservancy in 1974 in cooperation with state governments.
- Tasked with inventorying state biodiversity to identify species/ecosystem conservation needs.
- Results used to identify targets for conservation by TNC and State land protection programs.

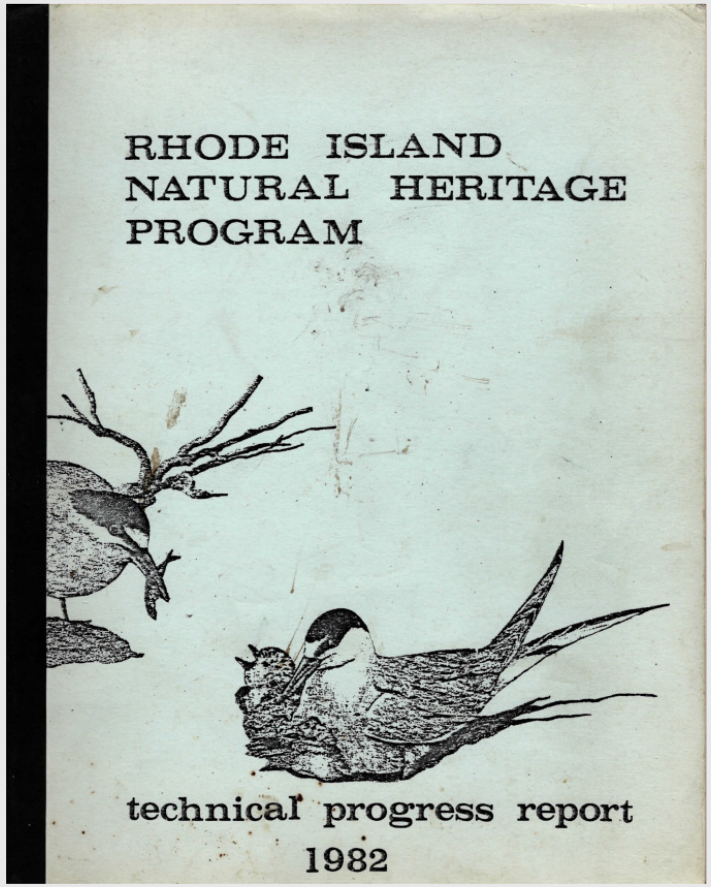
Global Conservation Status Ranks

G1	Critically Imperiled	Very high risk of extinction
G2	Imperiled	High risk of extinction
G3	Vulnerable	Moderate risk of extinction
G4	Apparently Secure	Low risk of extinction
G5	Secure	Very low risk of extinction
GH	Historic	Possibly extinct
GX	Extinct	



State Conservation Status Ranks
Rhode Island

S1	Critically Imperiled	1 site
S2	Imperiled	2-4 sites
S3	Vulnerable	5-10 sites
S4	Apparently Secure	11-20 sites
S5	Secure	20+ sites
SH	Historic	



Rhode Island Plants
N = 1307

Rank	1982	2017
SH	17	84
S1	71	80
S2	142	162
S3	39	88
Total	269	414 (31%)

Limerock Preserve, Lincoln, Rhode Island

1972

2024

Act 59
Community Resilience & Biodiversity Protection Act

The vision of the State of Vermont is to **maintain an ecologically functional landscape** that sustains biodiversity, maintains landscape connectivity, supports watershed health, promotes climate resilience, supports working farms and forests, provides opportunities for recreation and appreciation of the natural world, and supports the historic settlement pattern of compact villages surrounded by rural lands and natural areas.

VERMONT CONSERVATION DESIGN

MAINTAINING AND ENHANCING AN ECOLOGICALLY FUNCTIONAL LANDSCAPE

Summary Report for
Landscapes, Natural Communities, Habitats, and Species

February 2018

Eric Sorenson and Robert Zaino

Core Participants:
Jens Hilke, Doug Morin – Vermont Fish and Wildlife Department
Keith Thompson – Vermont Department of Forests, Parks and Recreation
Elizabeth Thompson – Vermont Land Trust

VERMONT
AGENCY OF NATURAL RESOURCES
Respect. Protect. Enjoy.

VERMONT CONSERVATION DESIGN

PART 2: NATURAL COMMUNITIES AND HABITATS
TECHNICAL REPORT

March 2018

Robert Zaino, Eric Sorenson, Doug Morin, Jens Hilke – Vermont Fish and Wildlife Department
Keith Thompson – Vermont Department of Forests, Parks and Recreation

FORESTS, PARKS & RECREATION
VERMONT

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Respect. Protect. Enjoy.

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Ecologically Functional Landscape

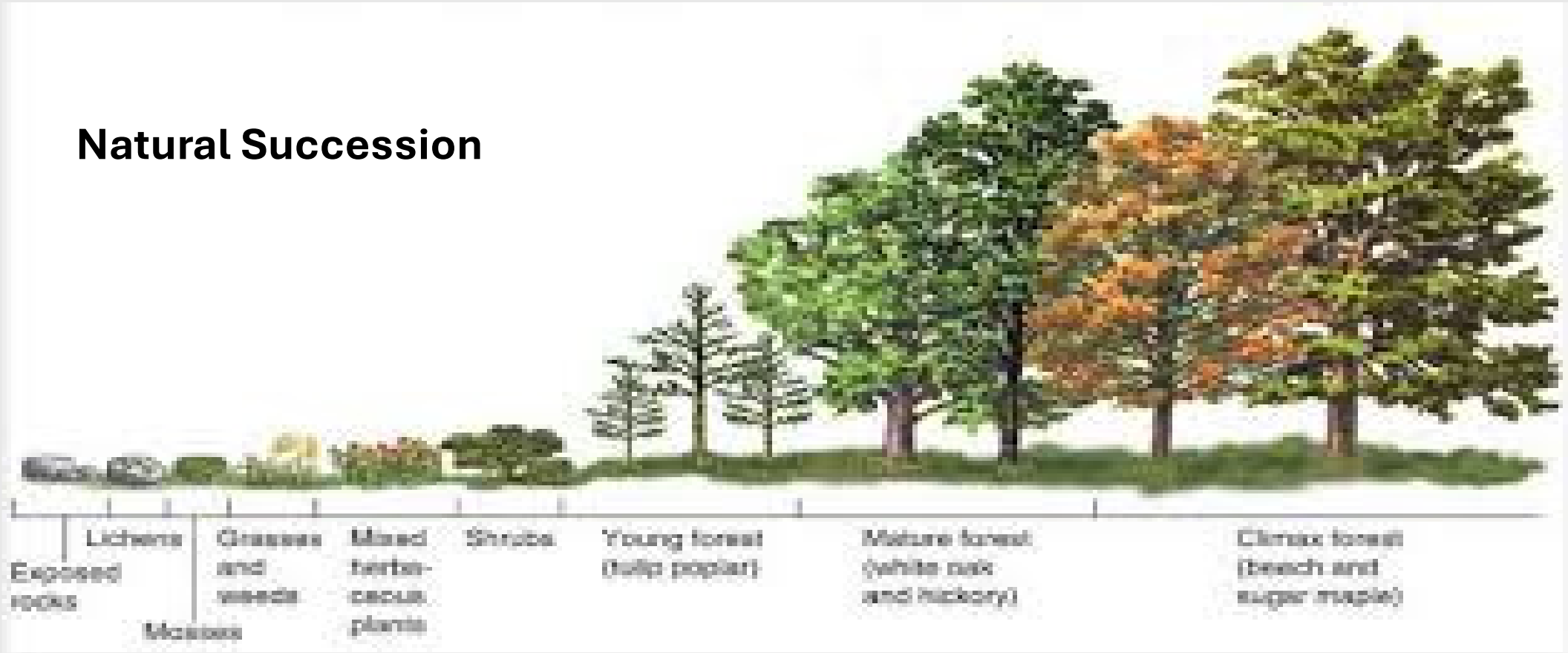
...maintaining and enhancing ecological function across the landscape is fundamental to conserving biological diversity.

People have been and will continue to be an integral part of the ecologically functional landscape.

Anthropogenic Communities

Young Forest
Grassland
Upland Shrub-Forb

Natural Succession



Vermont Conservation Design – Young Forest

Young forest is forest habitat that is regenerating from natural or human disturbance… an area with greater than 50 percent cover of woody seedlings, shrubs, or saplings,…comprised of trees less than 15-20 years old.

Provide young forest in discrete, contiguous blocks of at least 5 acres

When creating young forest through active management, locate young forest in widespread matrix natural communities.

The creation of young forest has the potential to impact other conservation targets.

Prevent or control the spread of invasive plant species in young forest patches.


National Park Service


62

American Woodcock

dlife

Woodcock Management Demonstration Area

In 1984, forest managers began creating a series of strip- and patch-cuts in the forested area below this vista point (pictured in the aerial photo, right). These cuts are growing back as dense stands of paper and yellow birch, sugar and red maple, aspen, and black cherry. Along the logging roads and log landings, male woodcock court their mates. Hens nest and rear their young in the cut-over areas, protected by dense leaf cover. Forest managers are restoring the four-acre gravel pit near the center of this management area, creating further shrubland habitat, as well as a ground-roosting area for woodcock.

Cutting mature alder to encourage new growth.

Young forests soon grow into mature forests. That's why forest managers regularly create new openings in this demonstration area to maintain the dense new growth needed by woodcock and other shrubland species. (2011 NAIP Natural Color Imagery for Vermont.)

www.timberdoodle.org
www.timberdoodle.org/demo/groton-state-forest-caledonia-and-washington-counties-vermont

dlife

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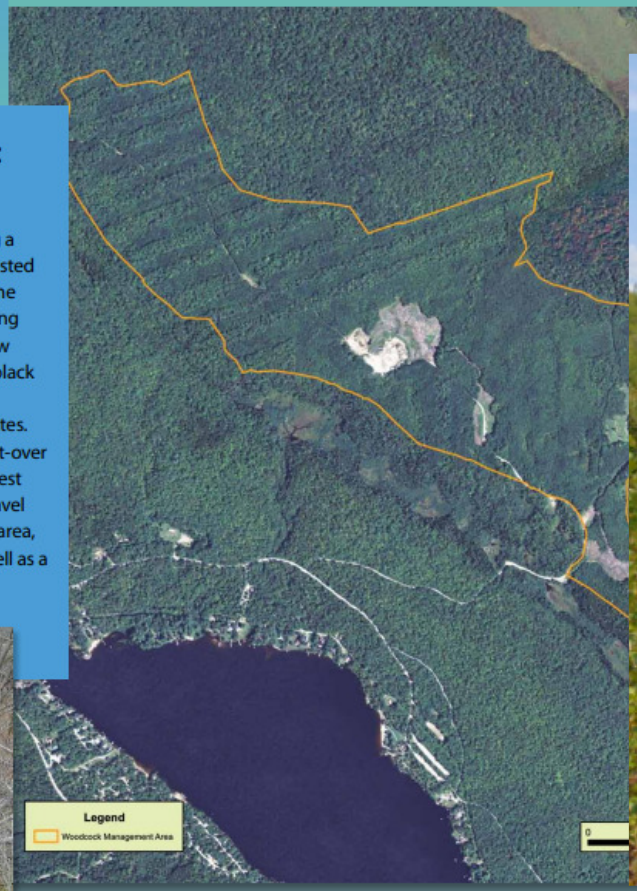

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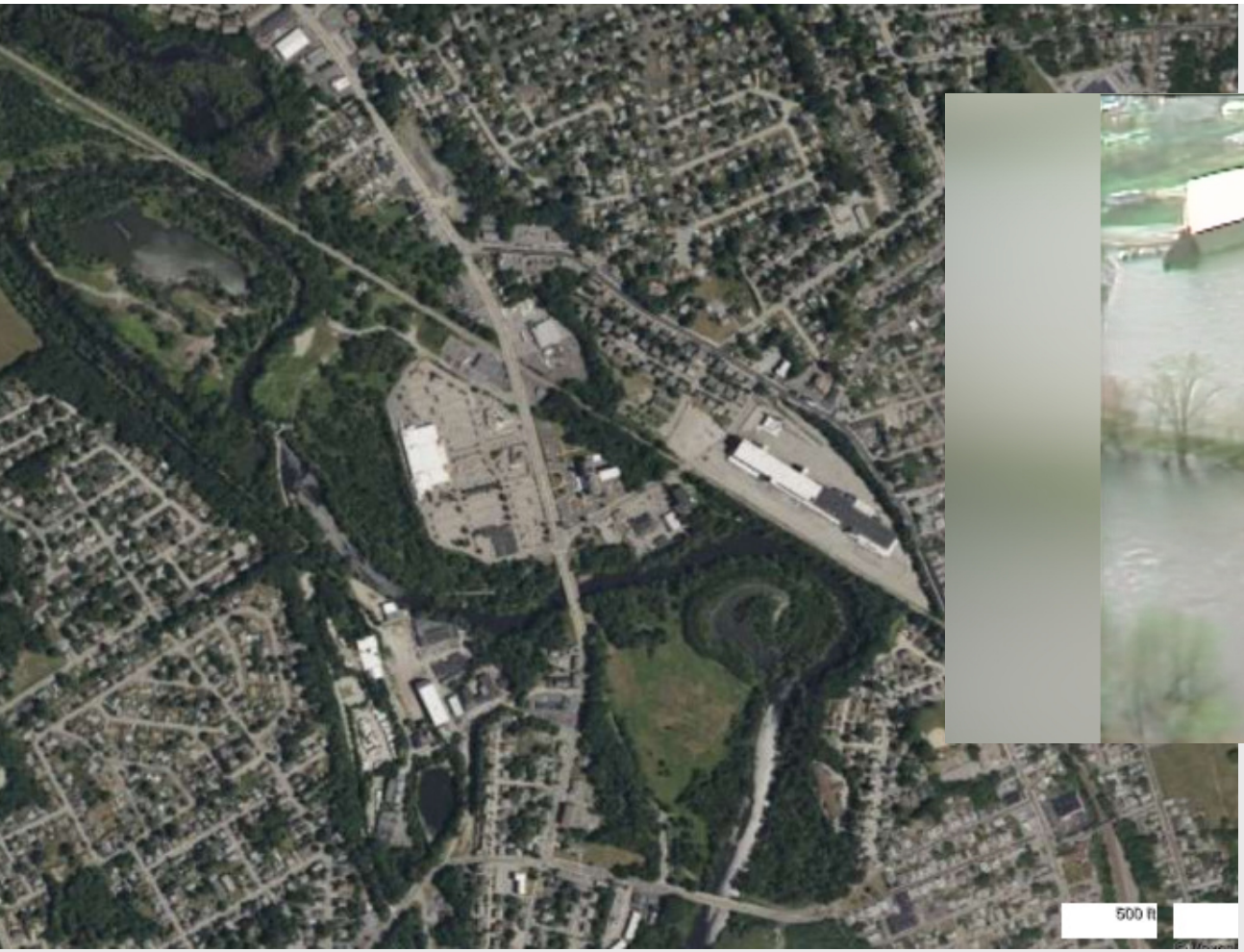
500 ft

Why are Wildlands Important to Biodiversity Conservation?

Wildlands are the "Ecological Reserve Areas" of Act 59, *managed to maintain a natural state within which natural ecological processes and disturbance events are allowed to proceed with minimal interference*.

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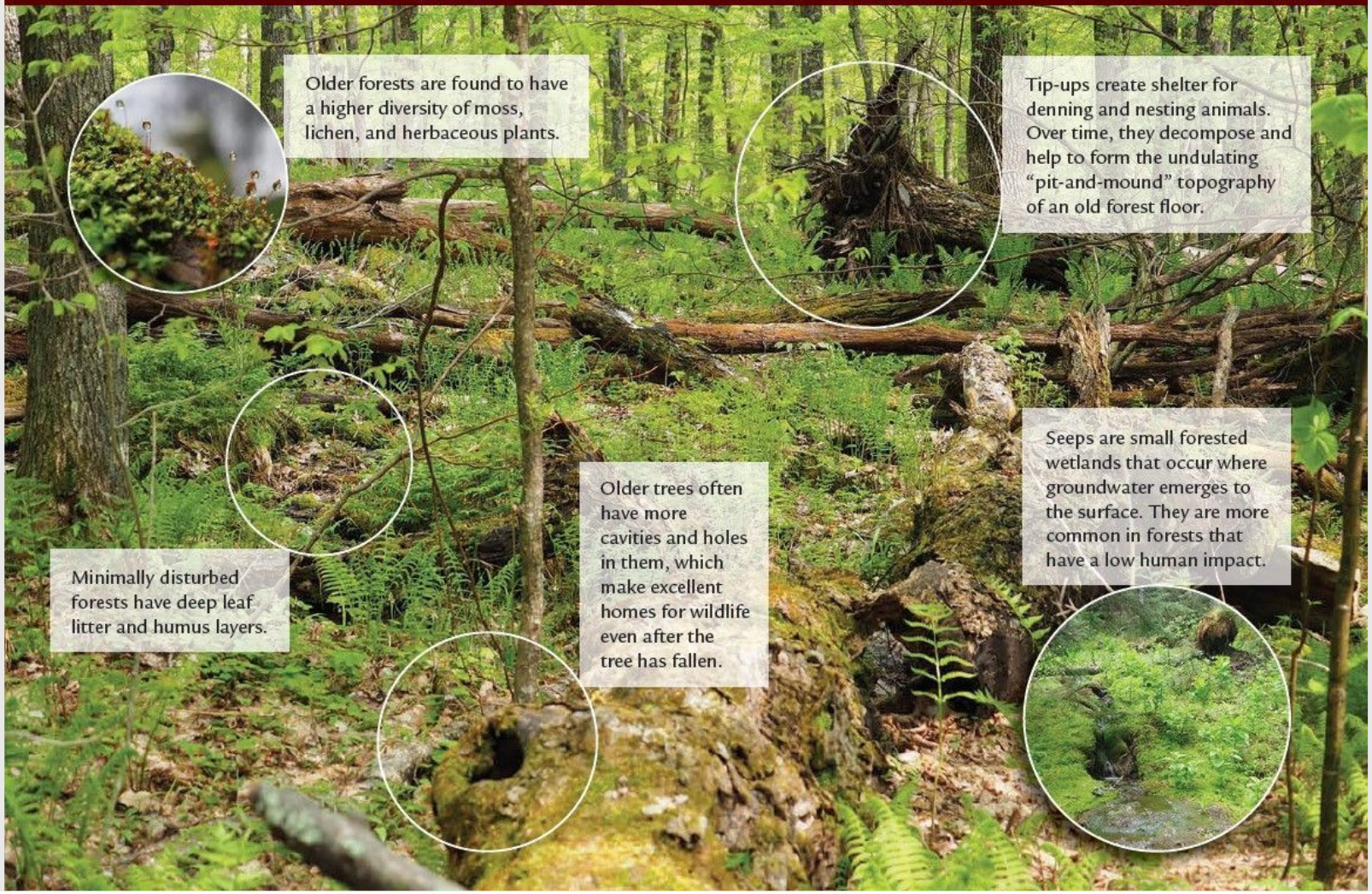
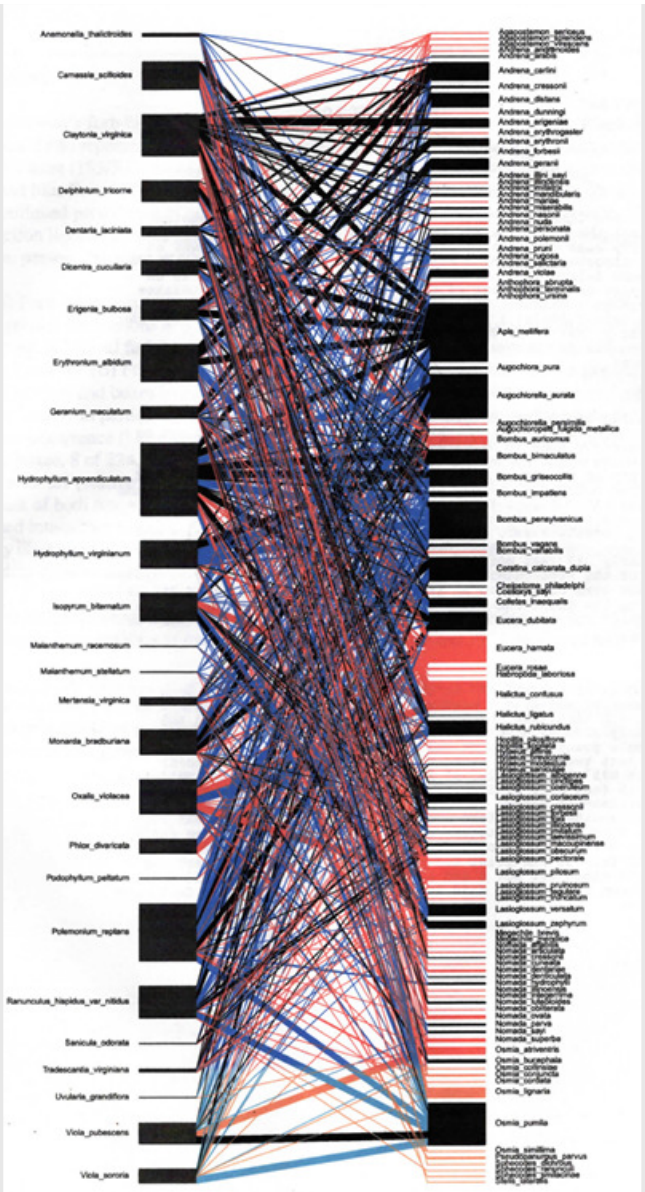
"Natural Resource Management Area": an area having permanent protection from conversion…but that is subject to long-term, sustainable land management.

FIGURE 3) COMPLEXITY IN UNDISTURBED FORESTS

Forests that are old or minimally impacted by people have a higher occurrence of the following features. Bramhall Wilderness Preserve, pictured below, is a mature forest in Vermont protected by Northeast Wilderness Trust.





Plant – Pollinator Associations

Plants = 26 **Bees = 109**

Chart compares associations present in 1890 and 2010 in Carlinville, Ill.
Black lines indicate associations that persisted between periods.
Red lines indicate associations lost due to species extirpations.


‘We abuse land because we regard it as a commodity
belonging to us. When we see land as a community
to which we belong, we may begin to use it
with love and respect.’
Aldo Leopold