

Forest Management Options and Wildlife Benefits



NRCS

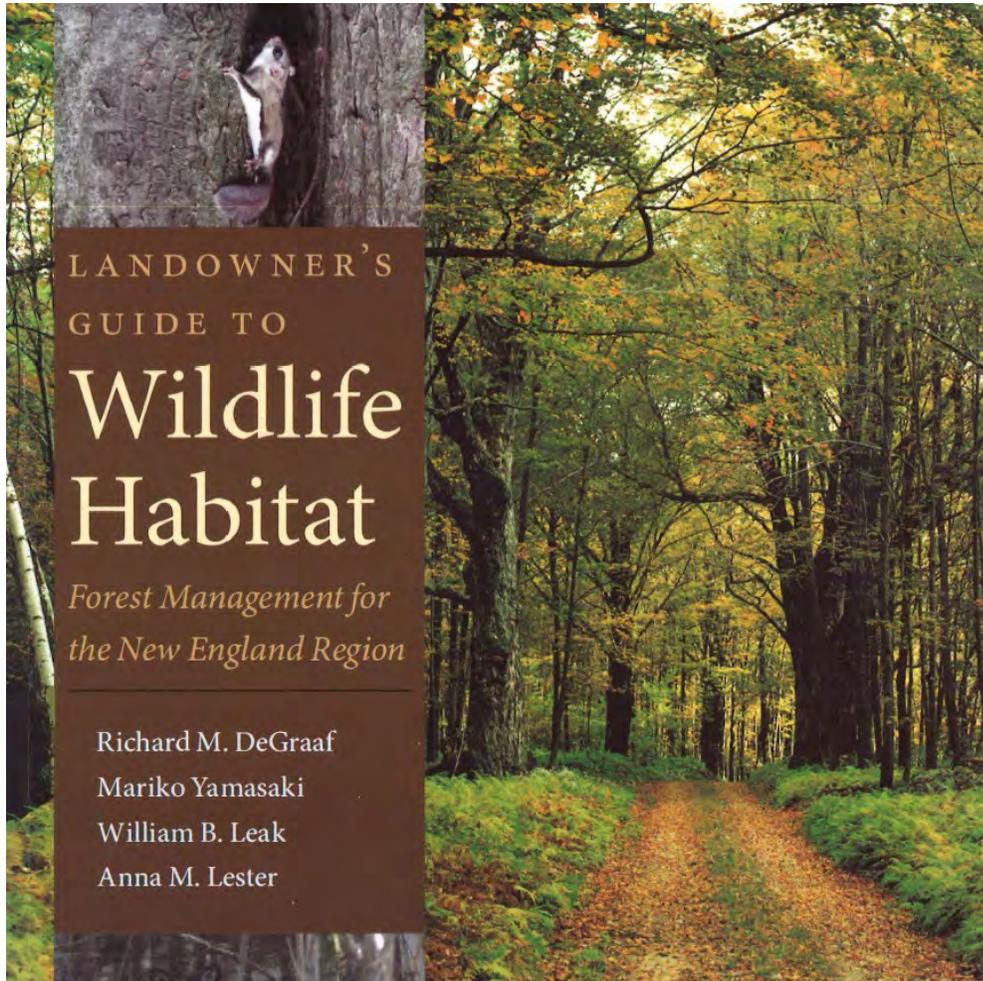
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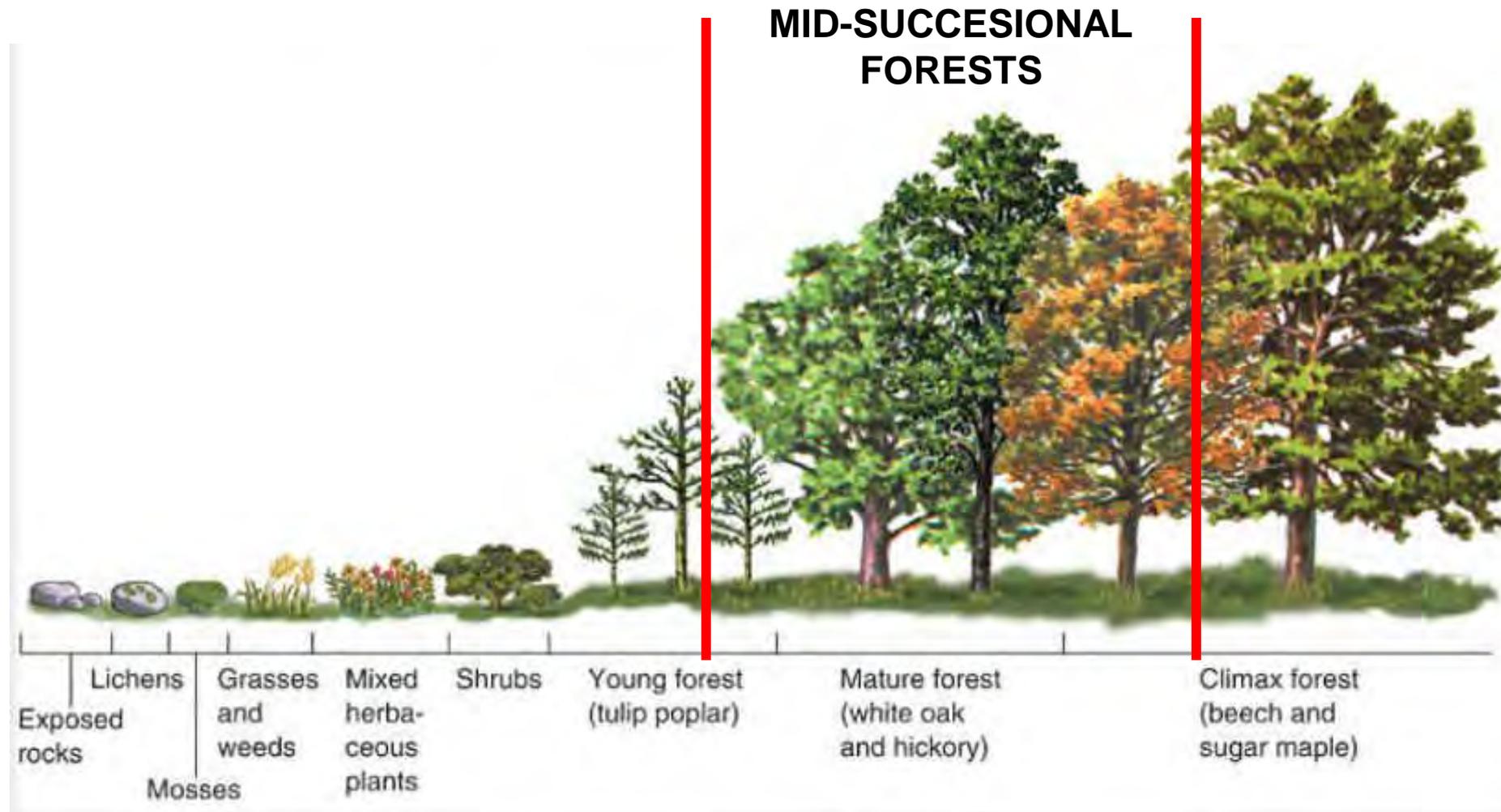


Overview



- Wildlife needs
- How your land fits into the bigger picture
- Characteristics of mid-successional forests
- Some active forest management approaches
- Other habitat features you can enhance to benefit wildlife
- Passive management

Stages of Forest Development



Typical Forest Types in southern New England



Oak Pine



Oak - Hickory



White pine

Different forest types favor different wildlife species

Typical Forest Types in southern New England



Pitch Pine



Hemlock – White pine



Red Maple

Different forest types favor different wildlife species

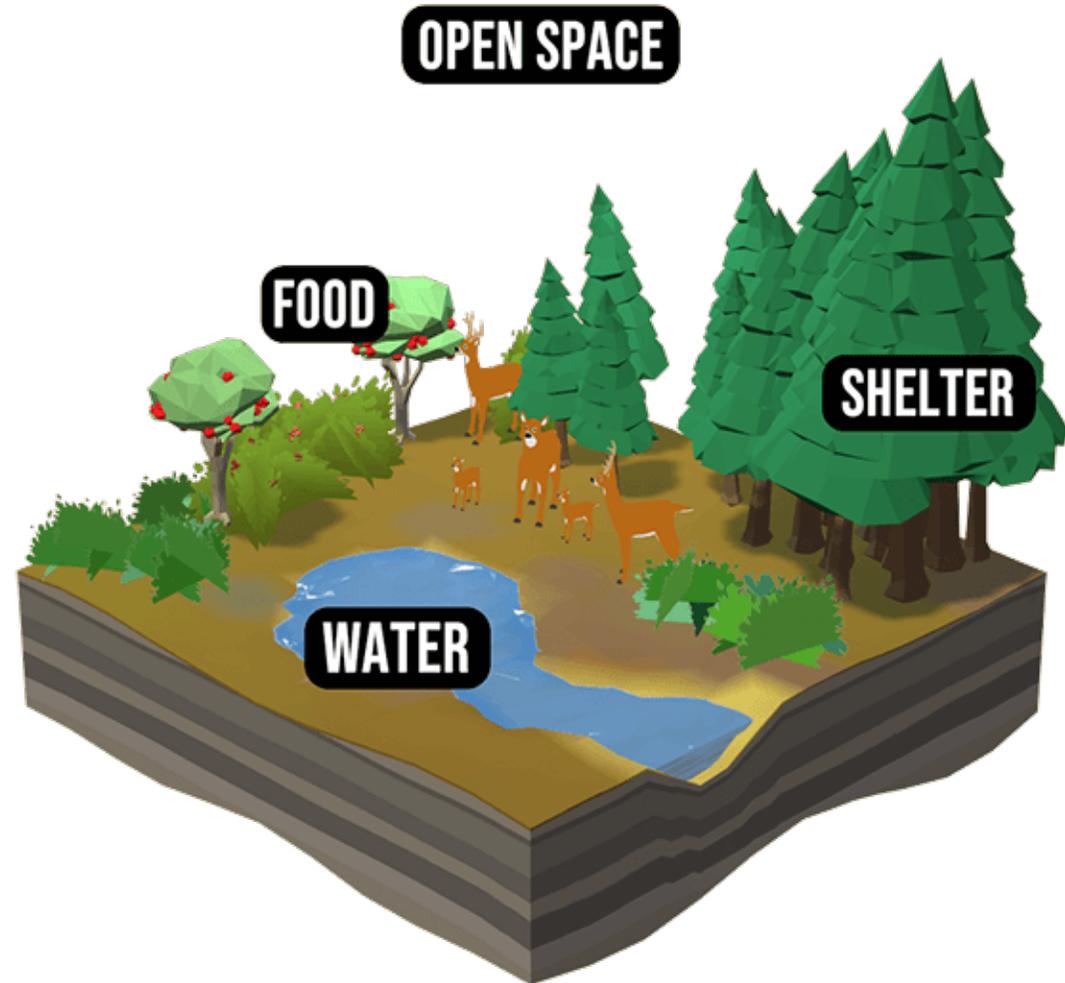
Mid-Successional Forest Characteristics



- Often between 40-120 years old
 - Based on characteristics, not age
- Forest canopy has closed
- Large canopy gaps are typically not yet widespread
- Often two age classes of trees but not multi-aged unless managed
 - canopy trees + seedlings/saplings
- A key variable is understory development (or lack thereof)
- In general, wildlife benefits from a flourishing understory

Wildlife Needs

- Food
- Water
- Shelter



Landscape Context



- Consider your property from a bird's eye perspective
- What types of land cover and use surround your land?
- Are any types of habitat underrepresented?
- What kinds of wildlife have the potential to thrive here?
- Is there anything you could do to improve habitat conditions?

Stocking

- Stocking is an important way of describing a stand of trees.
- Stocking is based on the number and size of trees
- Stocking is also important for wildlife habitat considerations

Overstocked (for growing trees)

- Trees are spaced so closely that they compete for resources.
- Growth and health of trees is reduced.



Understocked (for growing trees)

- Trees are spaced so widely that the site is not fully utilized.
- Total growth per acre is reduced.



Well-stocked for forest growth – and some wildlife

- Trees are spaced widely enough to avoid competition but closely enough to utilize the entire site.
- Growth per acre is maximum.
- Trees are healthy.



Dense Stands



Hardly any understory development, little habitat value for most wildlife

Pre-Commercial Thinning & Crown Release



Photo Courtesy of Maine Forest Service – What Will My Woods Look Like

Improvement Thinning (younger trees)



Univ. of Minnesota Extension

Crown Thinning (older trees)



Thinning & Crop Tree Crown Release

After 5 Years



Black-throated
green warbler

Group Selection (Patch Cuts)



A forest gap of about 0.6 ha created by implementing silviculture. Gaps of this size are sufficient to support several shrubland bird species capable of using small forest openings.

Regeneration Harvests (turning back the clock)



Before



After

Regeneration Harvests

Seed Tree



Shelterwood



Regeneration Harvests (Wildlife)



Recent Harvest



12 months later



After 20 Months

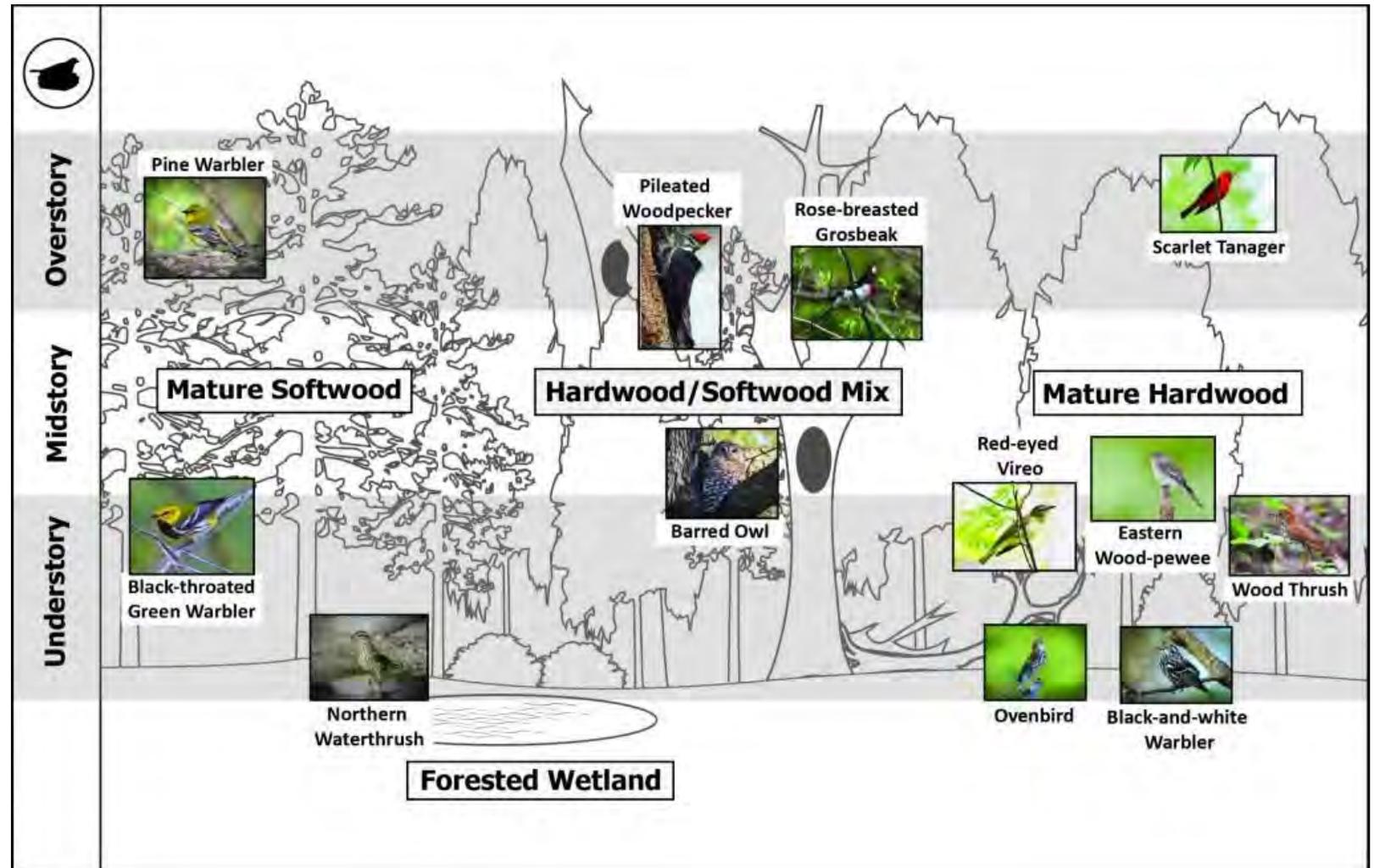
Types of wildlife that benefit from opening the canopy



- Songbirds that prefer light and the presence of young trees & shrubs
- Ruffed grouse and wild turkey
- White-tailed deer
- Fox and coyote
- Box turtle
- Sun-seeking reptiles

“Forestry for RI’s Birds” project

- Using active forest management to improve habitat conditions for forest birds
- RI program focuses on 12 species representing priority habitat types of conservation need



Management Practices & Bird Response



Regeneration

Common yellowthroat
Chestnut-sided warbler
Cedar waxwing
White-throated sparrow
American goldfinch
Willow flycatcher
Mourning warbler
Ruby-throated hummingbird
Philadelphia vireo
Gray catbird

Saplings

Rose-breasted grosbeak
Veery
White-throated sparrow
Black-and-white warbler
Red-eyed vireo
Ovenbird
Canada warbler
Blue jay
Black-capped chickadee
Common yellowthroat

Poletimber

Red-eyed vireo
Ovenbird
Black-throated green warbler
American redstart
Yellow-bellied sapsucker
Veery
Winter wren
Swainson's thrush
Scarlet tanager
Rose-breasted grosbeak

Management Practices & Bird Response



Sawtimber

Ovenbird
Red-eyed vireo
Least flycatcher
Blackburnian warbler
Black-throated blue warbler
Wood thrush
Eastern wood-pewee
Black-throated green warbler
Blue-headed vireo
White-breasted nuthatch



All-aged

Red-eyed vireo
Ovenbird
Black-and-white warbler
Blue-headed vireo
Brown creeper
White-breasted nuthatch
Yellow-bellied sapsucker
Least flycatcher
American robin
Black-throated blue warbler



Old forest

Red-eyed vireo
Ovenbird
American redstart
Rose-breasted grosbeak
Hermit thrush
Yellow-bellied sapsucker
Black-capped chickadee
Eastern wood-pewee
Black-throated green warbler
Scarlet tanager

Forest Structural Diversity



- Wildlife species tend to favor forest habitats that have variety over those that are homogeneous
- Imagine a sheet draped over the canopy...the more fabric needed, the better
- Forest stand at left provides...
 - Trees of different sizes and gaps
 - Dense understory vegetation
 - Irregular edges

Forest Edges

- Forest edges are important to wildlife
- They offer a different habitat type and cover that wildlife can use in between ventures into open areas
- Irregular or “feathered” edges that mimic those in natural forest gaps are preferable to hard edges
- Consider leaving small trees and/or planting shrubs at edges



Wildlife Structures

- Standing dead trees (snags) that don't pose a safety hazard
- Live trees with cavities
- Downed logs and coarse woody material
- Brush piles
- Nesting structures for birds and bats



Logging Slash

- Considered unsightly by some
- In New England it is quite temporary
- Smaller pieces decompose within a few years
- Contribute to forest soil health
- Larger pieces improve cover for a range of wildlife, especially small mammals, birds, and reptiles



Log Landings



- Edges provides cover to small mammals.
- The tall pine provides an excellent perch for owls, hawks and other raptors, drawn by small prey like mice and voles.

Trees for Bees



Riparian Buffers

- Help comply with RI BMPs for Water Quality Protection
- Necessary for some species that live adjacent to water bodies
- Buffers also play an important role in protecting water quality
- Preferable to protect existing riparian buffers than to restore degraded ones



Wildlife Corridors

- Try to minimize barriers and help wildlife move among suitable habitats to meet their needs
- Habitat features can influence wildlife behavior
- Features used by humans are often used by wildlife as well (trails, roads, bridges, etc.)



Providence Water

Passive Management (no active stewardship)



Red maple swamp in fall

- Can be informed by goals for the land
- Will desirable characteristics persist without active stewardship?
- It can often be appropriate to practice both active and passive management in different areas of a given property
- Potential areas to prioritize:
 - sensitive sites (wetlands)
 - older forest stands
 - unique habitat features
 - places where active management is not feasible

Some (but not all) wildlife species can benefit from passive management



Northern goshawk

- Depends on the type of forest (hardwood vs. conifer)
- Best to maximize ratio of interior forest to edge
- May use managed habitats as well
- Examples of specific species
 - Avian species: wood thrush, Cerulean warbler, Northern goshawk, woodpeckers
 - Several owls
 - Northern long-eared bat (endangered)
 - Fisher
 - Wood turtle (riparian areas)

Anything you do will benefit some wildlife!





THANK YOU

QUESTIONS?

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