

Habitat Management Strategies for Ruffed Grouse and Woodcock

A Short Course for Foresters



Habitat Management Strategies for Ruffed Grouse and Woodcock

Course Instructors –

Name, Title

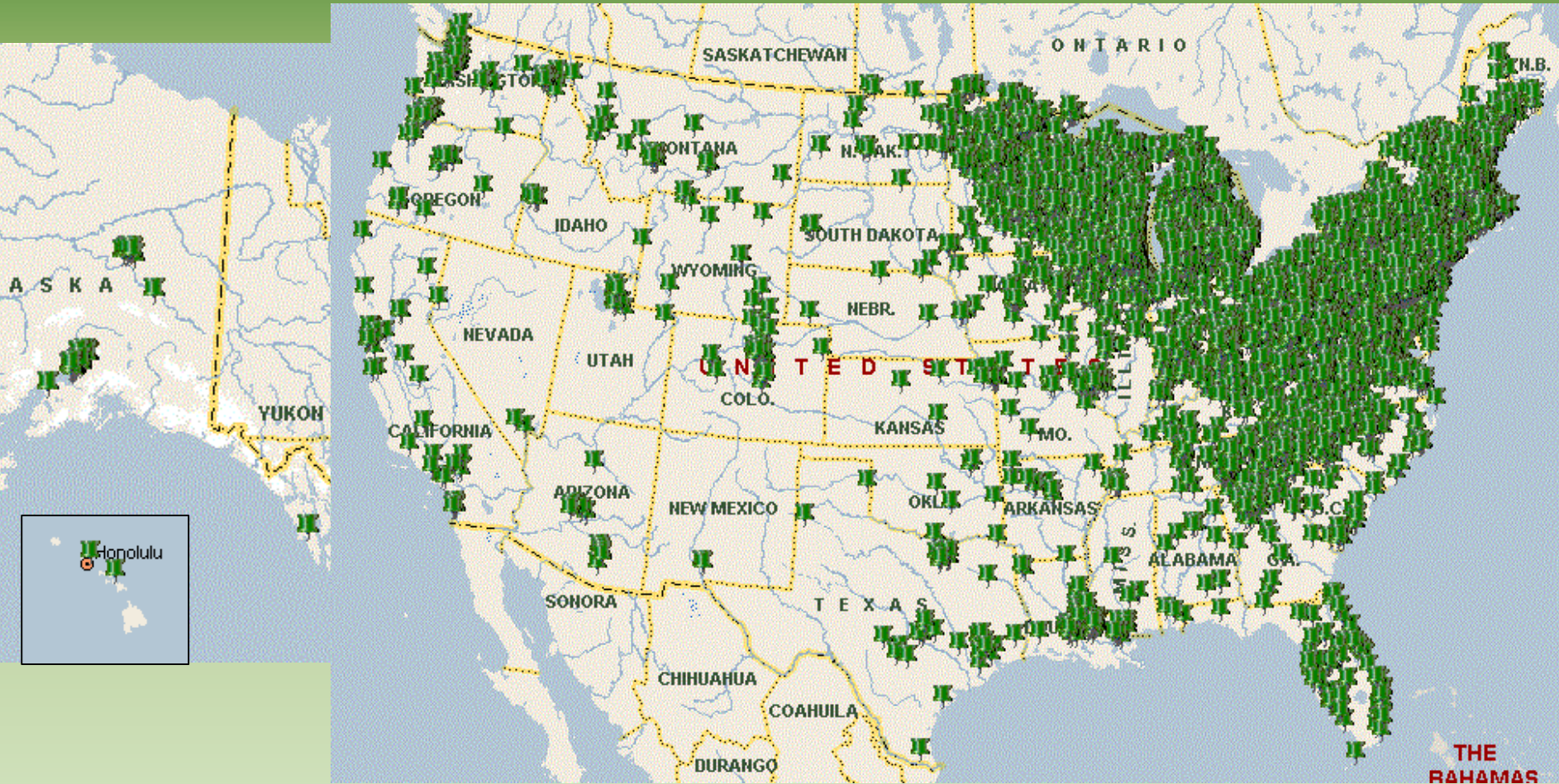
Name, Title

Ruffed Grouse Society or RGS –

www.ruffedgrousesociety.org

Other –

RGS History



RGS Programs

Habitat Management



Sporting Traditions



Advocacy



Education

RGS Mission

Healthy Forests

Abundant Wildlife

Sporting Traditions



RGS Accomplishments

Management Area Program

- Started in 1985
- 600+ projects
- 28 states
- Over 500,000 acres

State Drummer Fund



RGS Coverts Project

A Woodland Wildlife Management Course for Private Landowners

- Initiated in 1983
- Worked with Cooperative Extension Services
- At peak, 11 Midwest and Northeast states involved
- Train the Trainer concept
- Over 1 million A affected





WHY SHOULD FORESTERS CONSIDER WILDLIFE?



***“Wildlife is the window
through which
the public views our forests.”***

- Neil Sampson, Forestry Consultant

Why should foresters consider wildlife...

**National Woodland Owner Surveys
show family forest owners' reasons to
own forests:**

- **#1 Beauty and scenery**
- **#4 Nature protection**
- **#7 Hunting or fishing**
- **#10 Timber production**

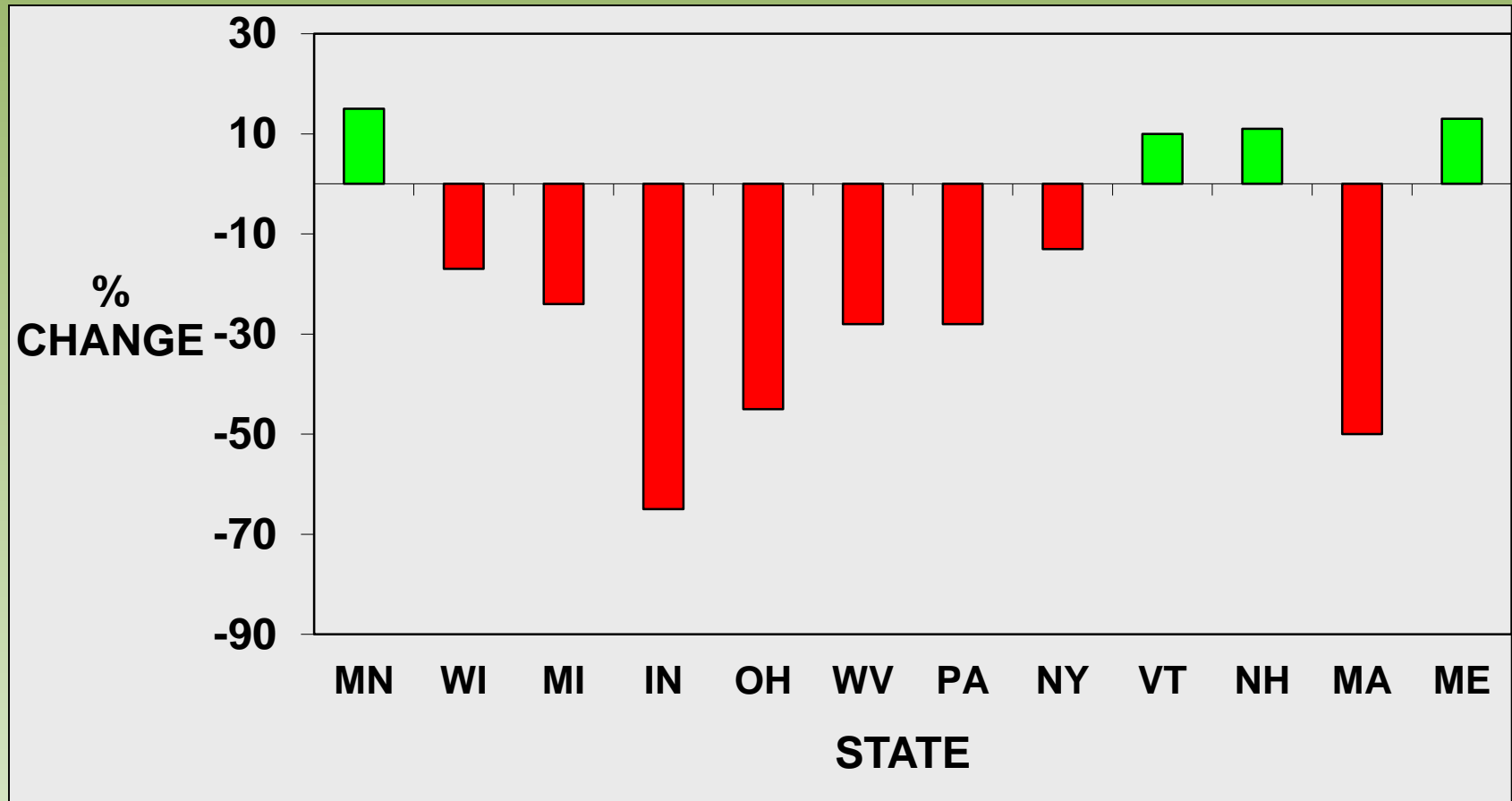
Workshop Focus: Species of Young Forests



Young Forest Habitats

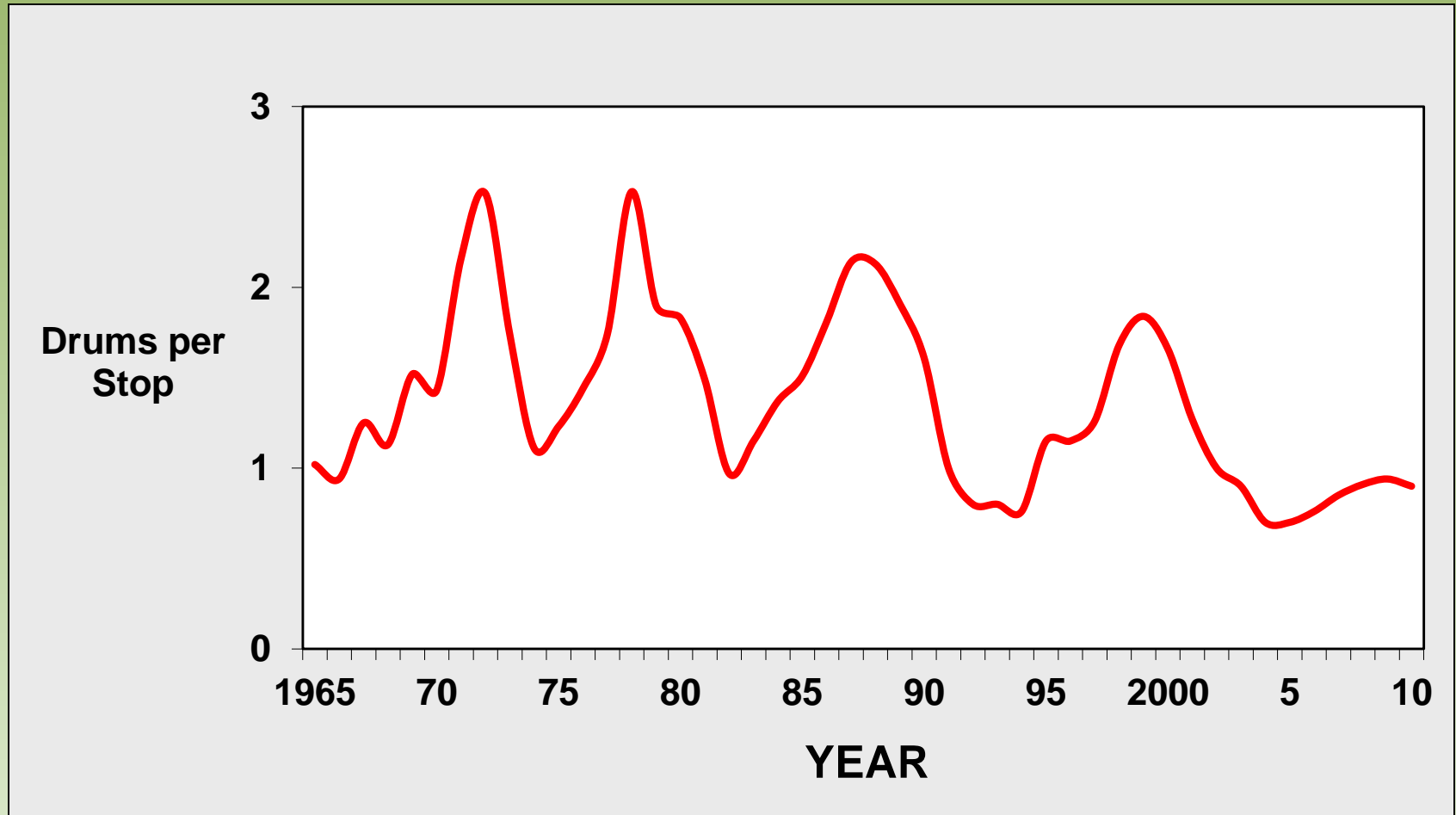
(1 – 20 years old)

1985 - 2005

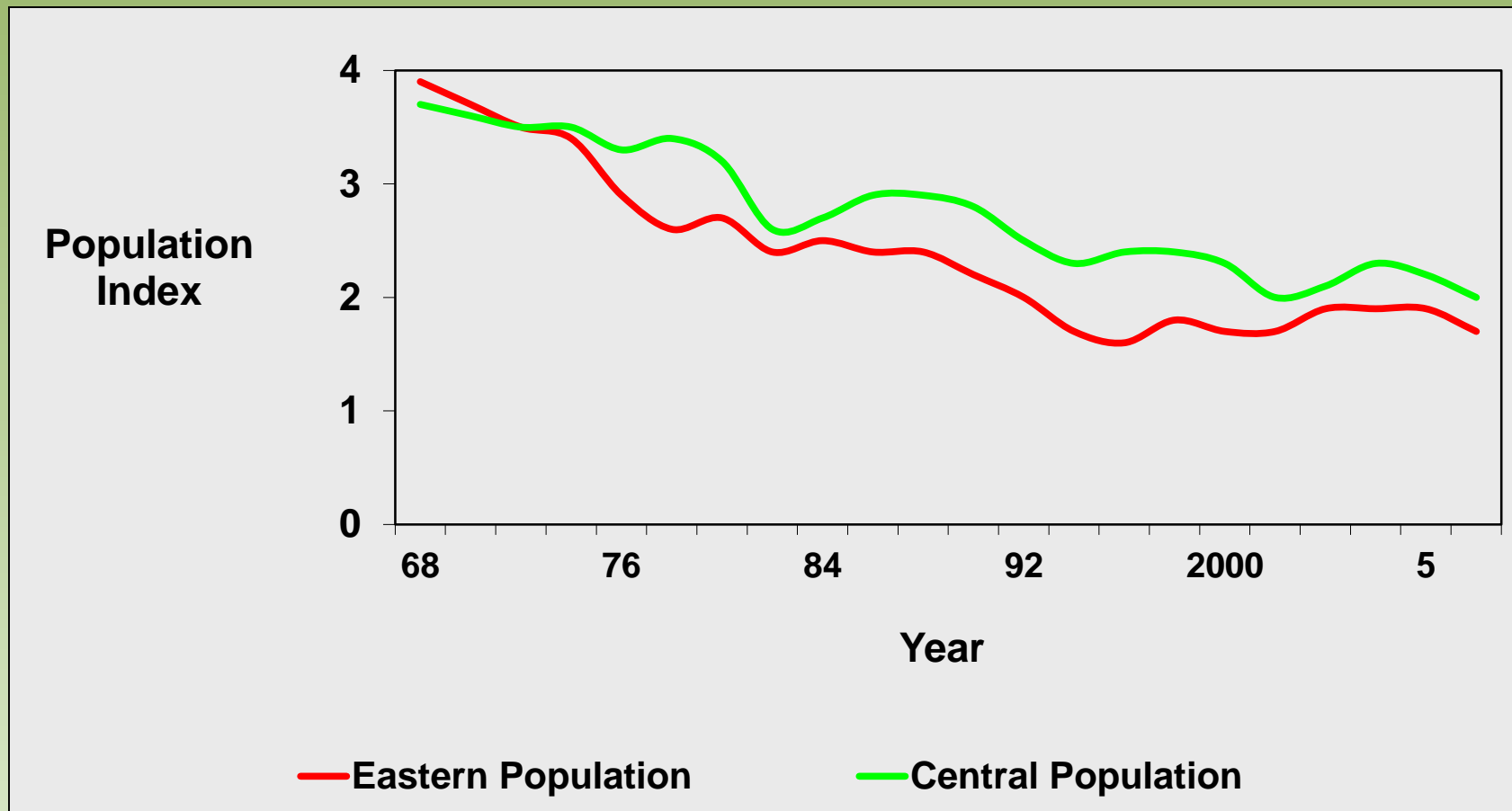


USFS FIA Data

RUFFED GROUSE POPULATION TREND Wisconsin

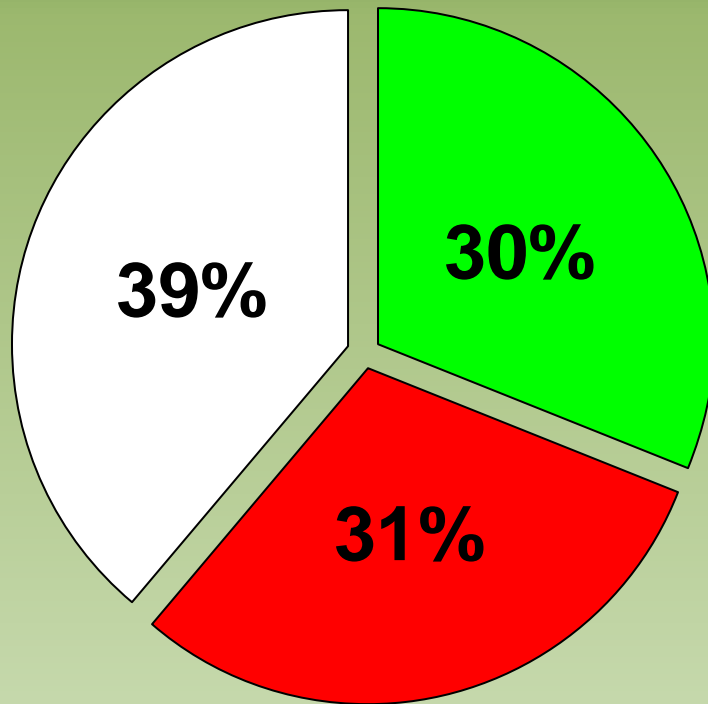


American Woodcock Population Trends

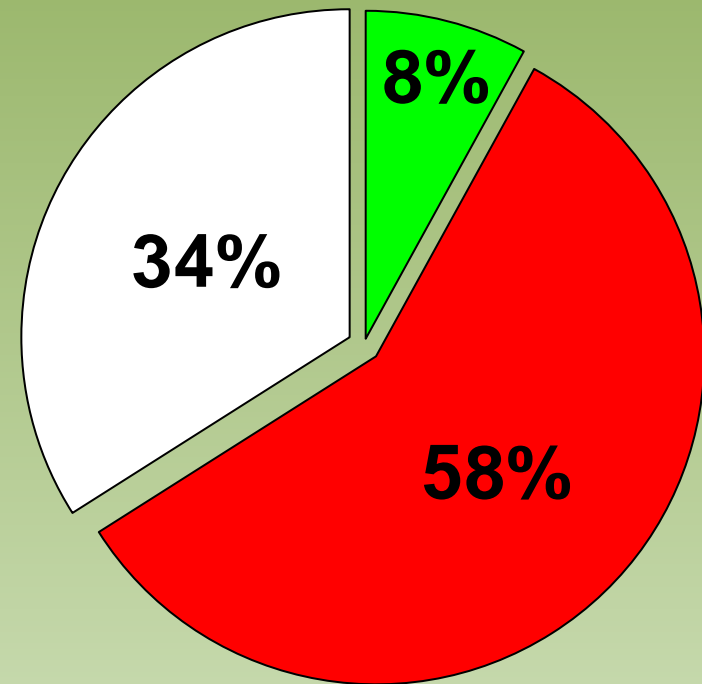


USFWS Singing Ground Survey

Breeding Bird Population Trends Eastern United States (1980 – 2009)



**Mature Forest
Breeding Habitat**



**Young Forest – Shrub
Breeding Habitat**

Red = Decreasing

Green = Increasing

White = Stable

USFWS Breeding Bird Survey

Young Deciduous Forest

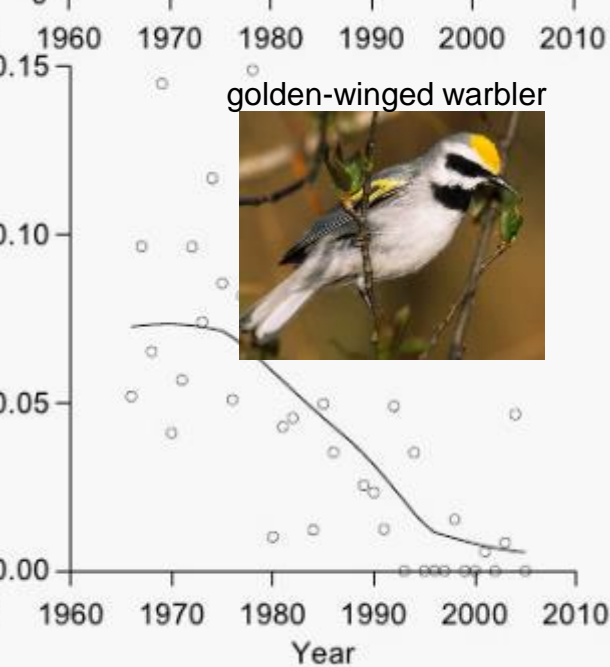
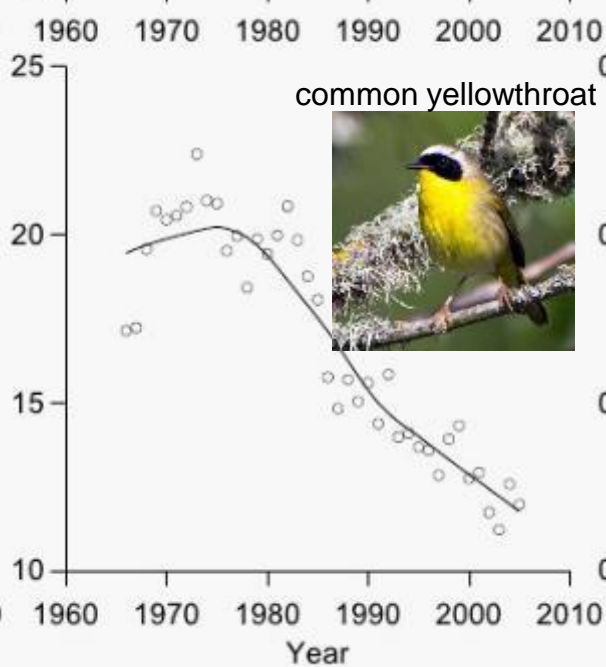
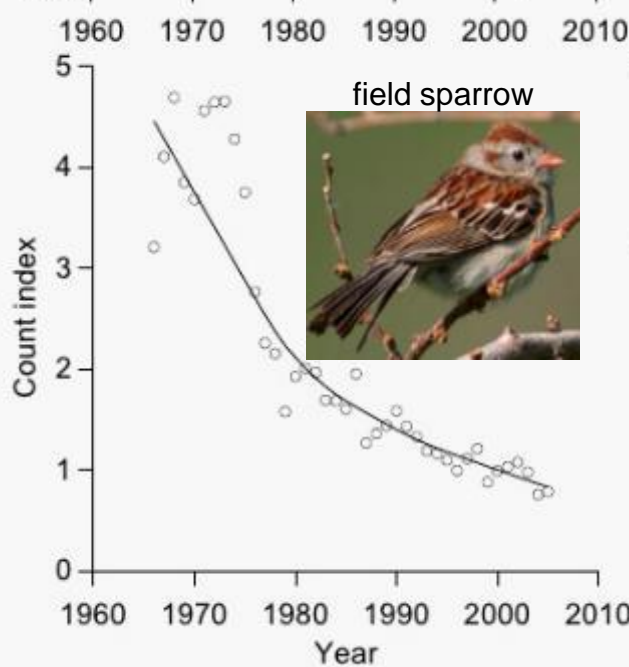
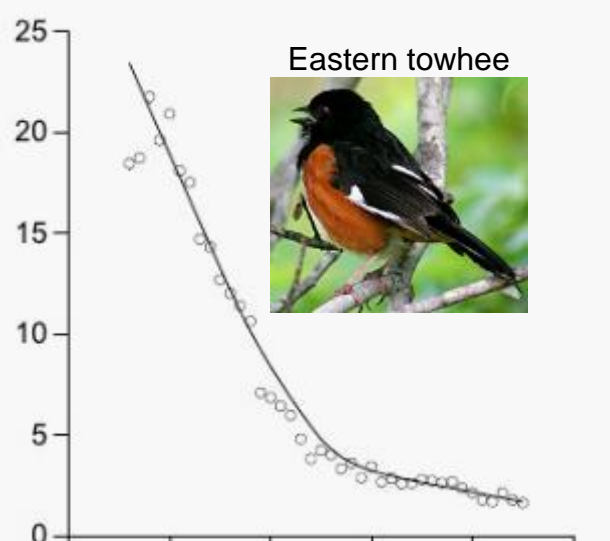
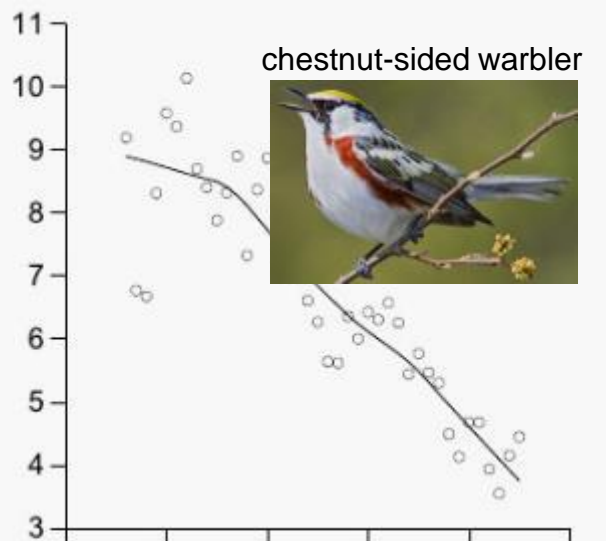
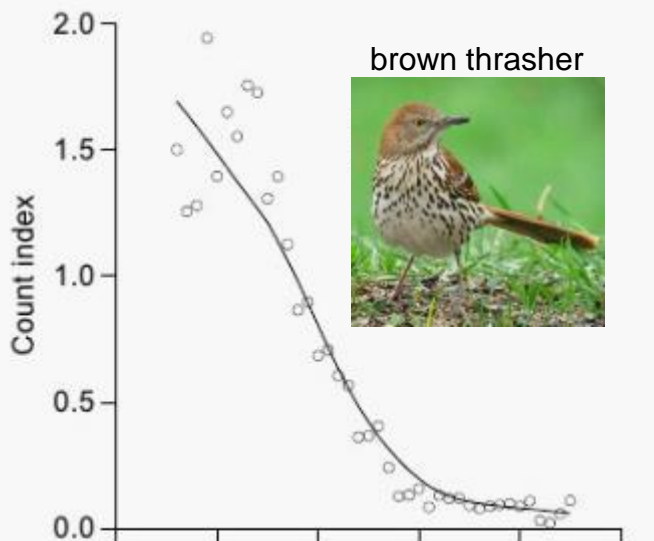


***“Top 20 Threatened
Bird Habitats in U.S.”***



***American Bird Conservancy
February 8, 2007***

Declining Young Forest Birds

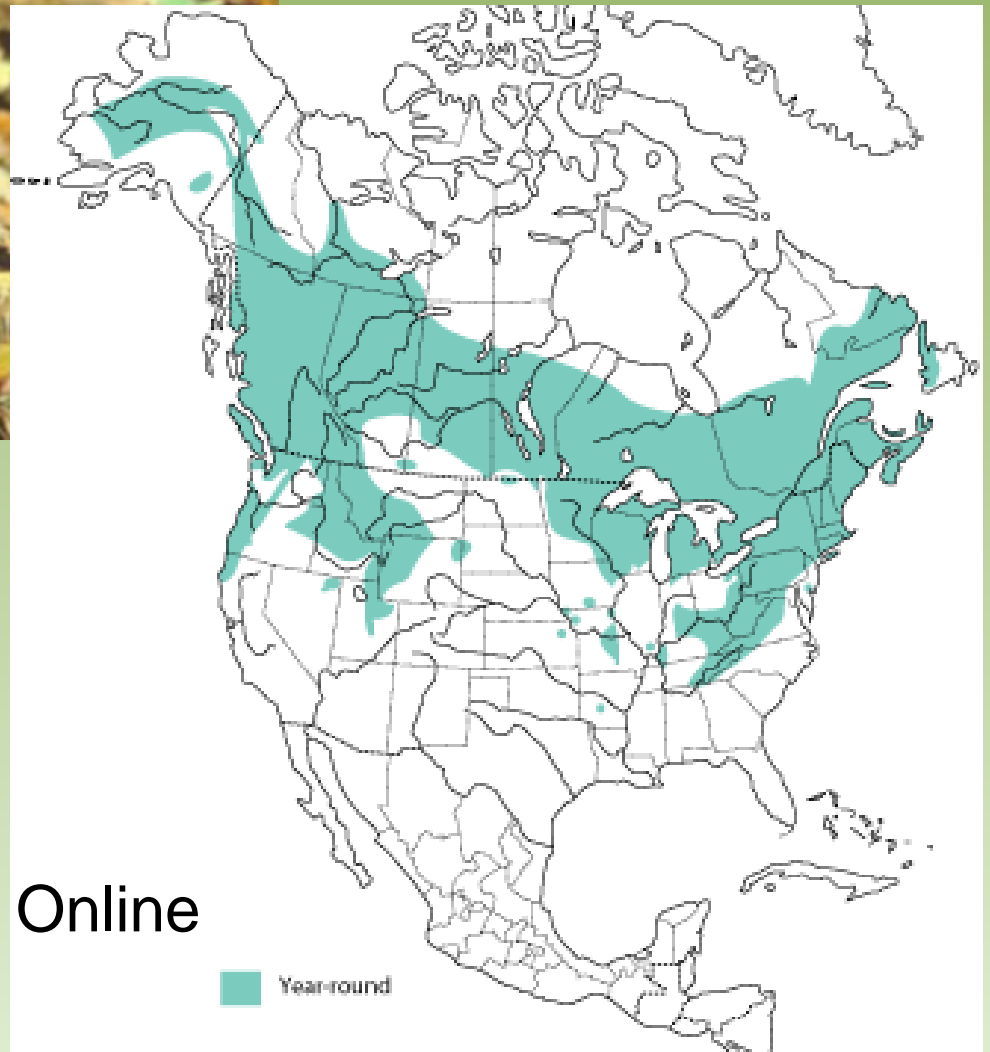


Questions??



RUFFED GROUSE AND AMERICAN WOODCOCK ECOLOGY

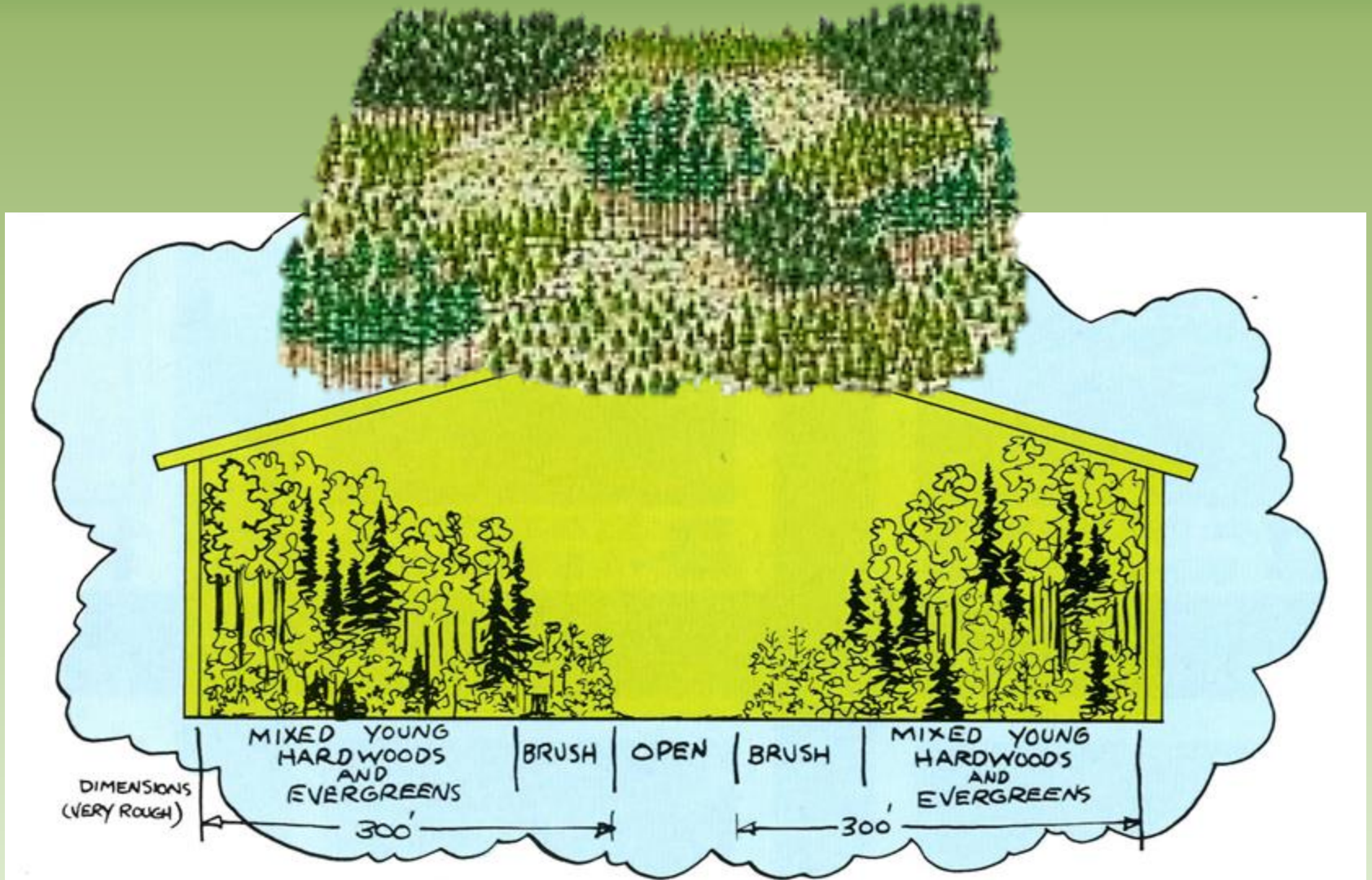




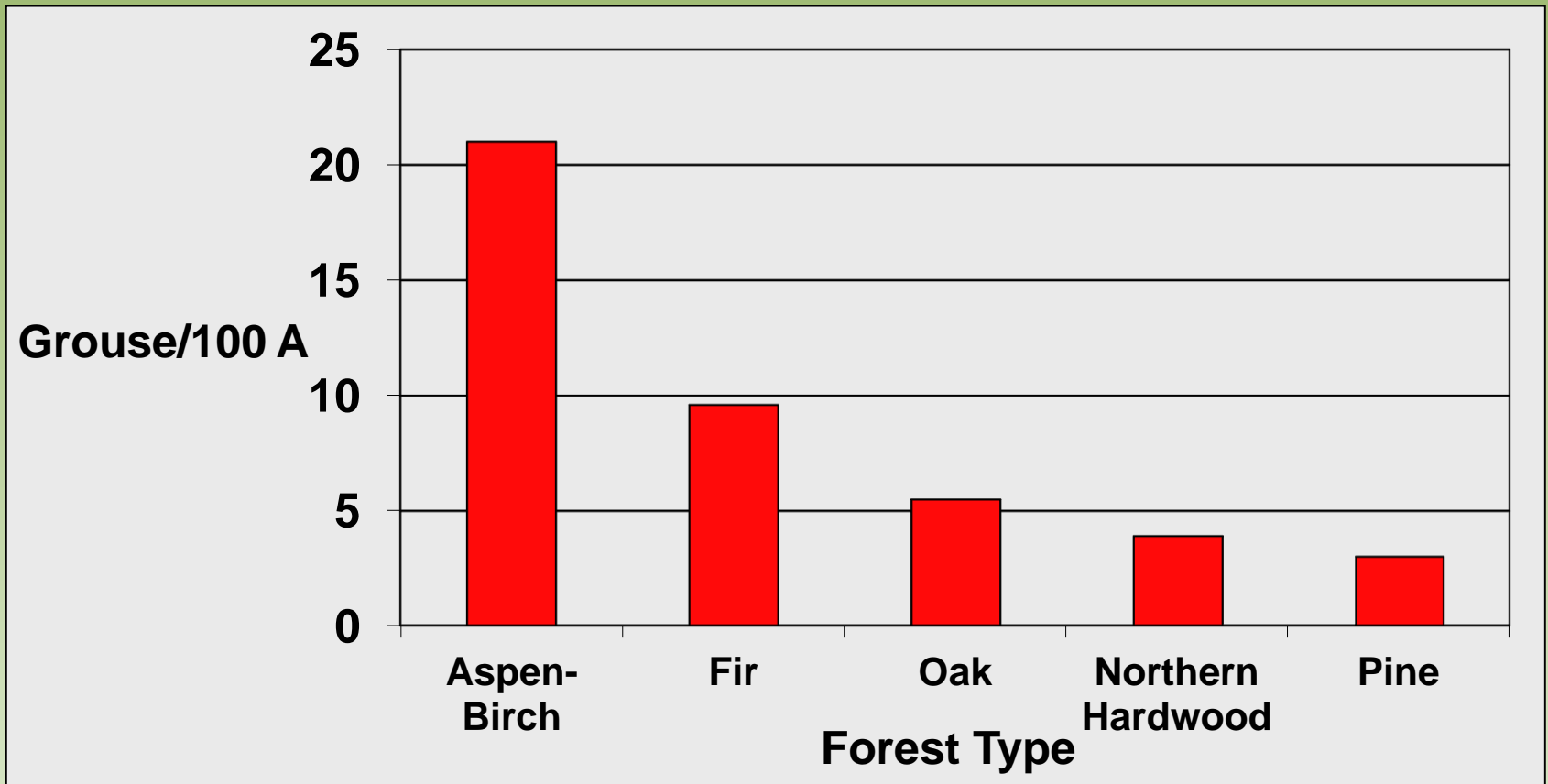
Birds of North America Online

<http://bna.birds.cornell.edu/bna>,
maintained by the Cornell Lab of Ornithology

Ruffed Grouse Dream Home



Ruffed Grouse Fall Population Density by Forest Type







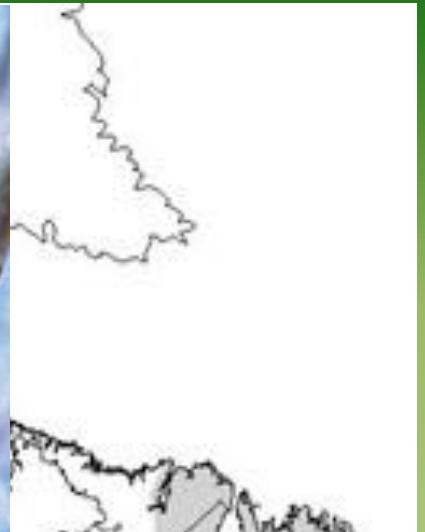


“But afterward, will I ever see you again.....?”





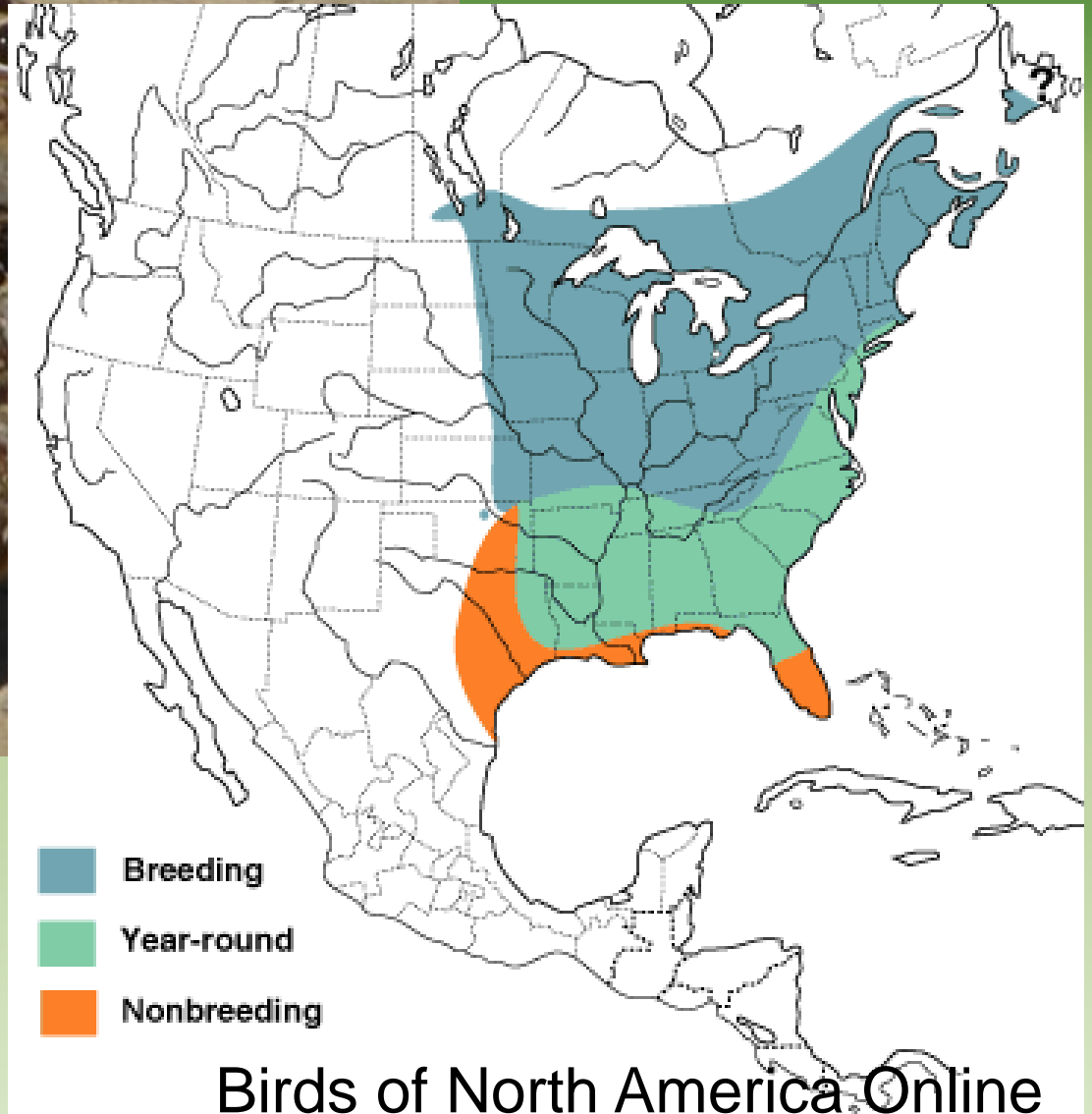










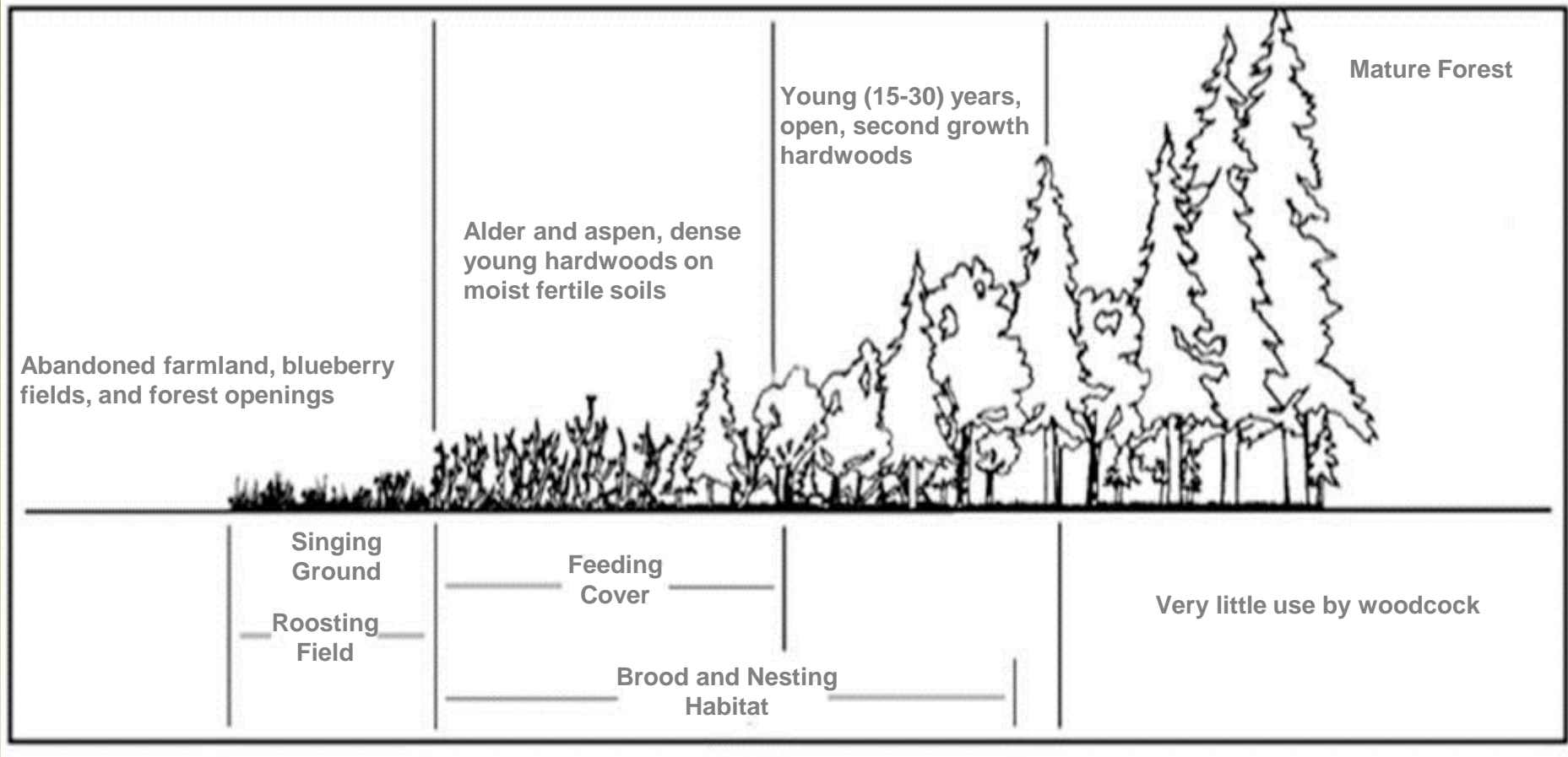


<http://bna.birds.cornell.edu/bna>,
maintained by the Cornell Lab of Ornithology





Woodcock Habitat Related to Forest Succession



Waiting out April snow in eastern Maine





Nest:
Depression in leaves, 4 eggs typical





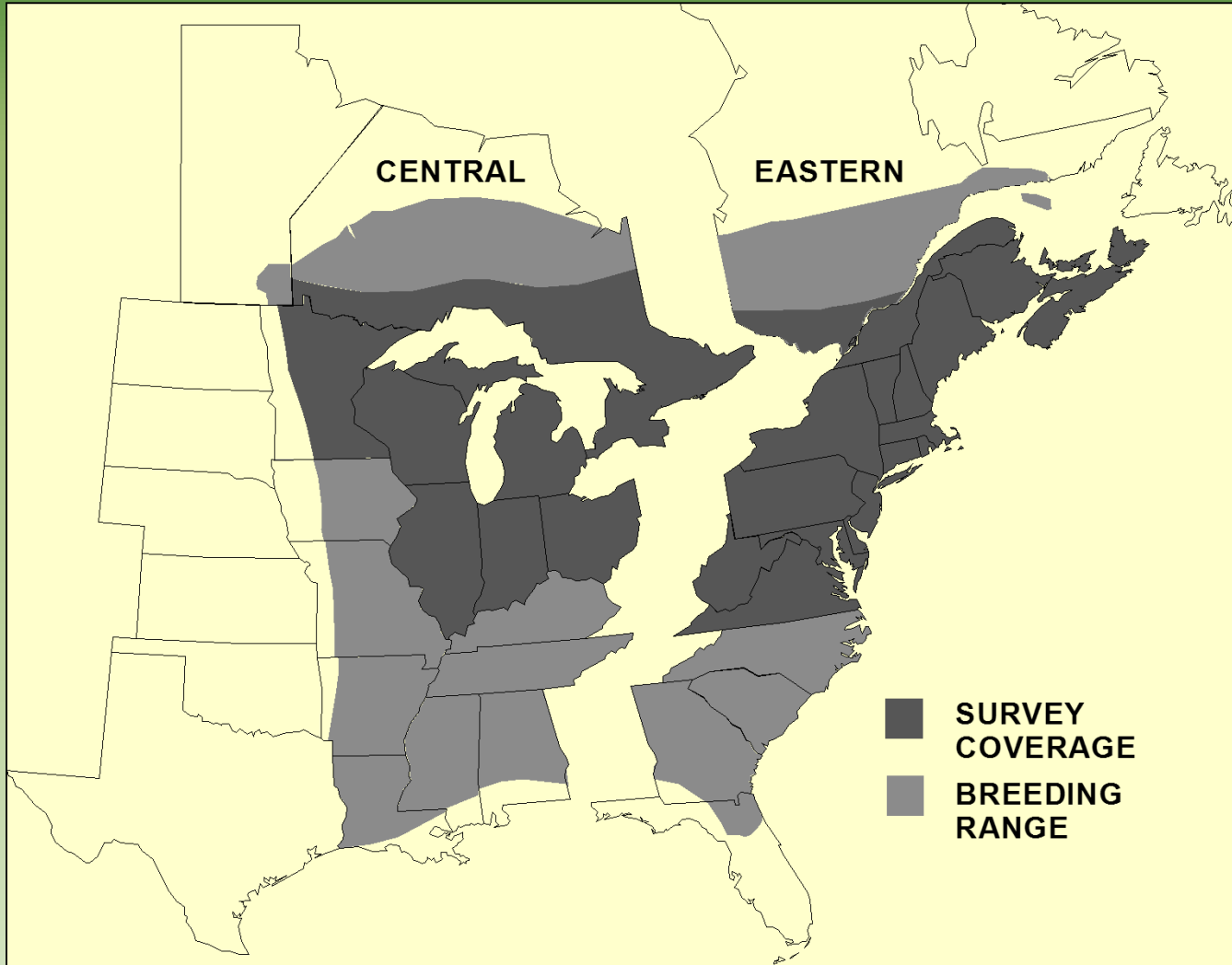
Find the woodcock chick!





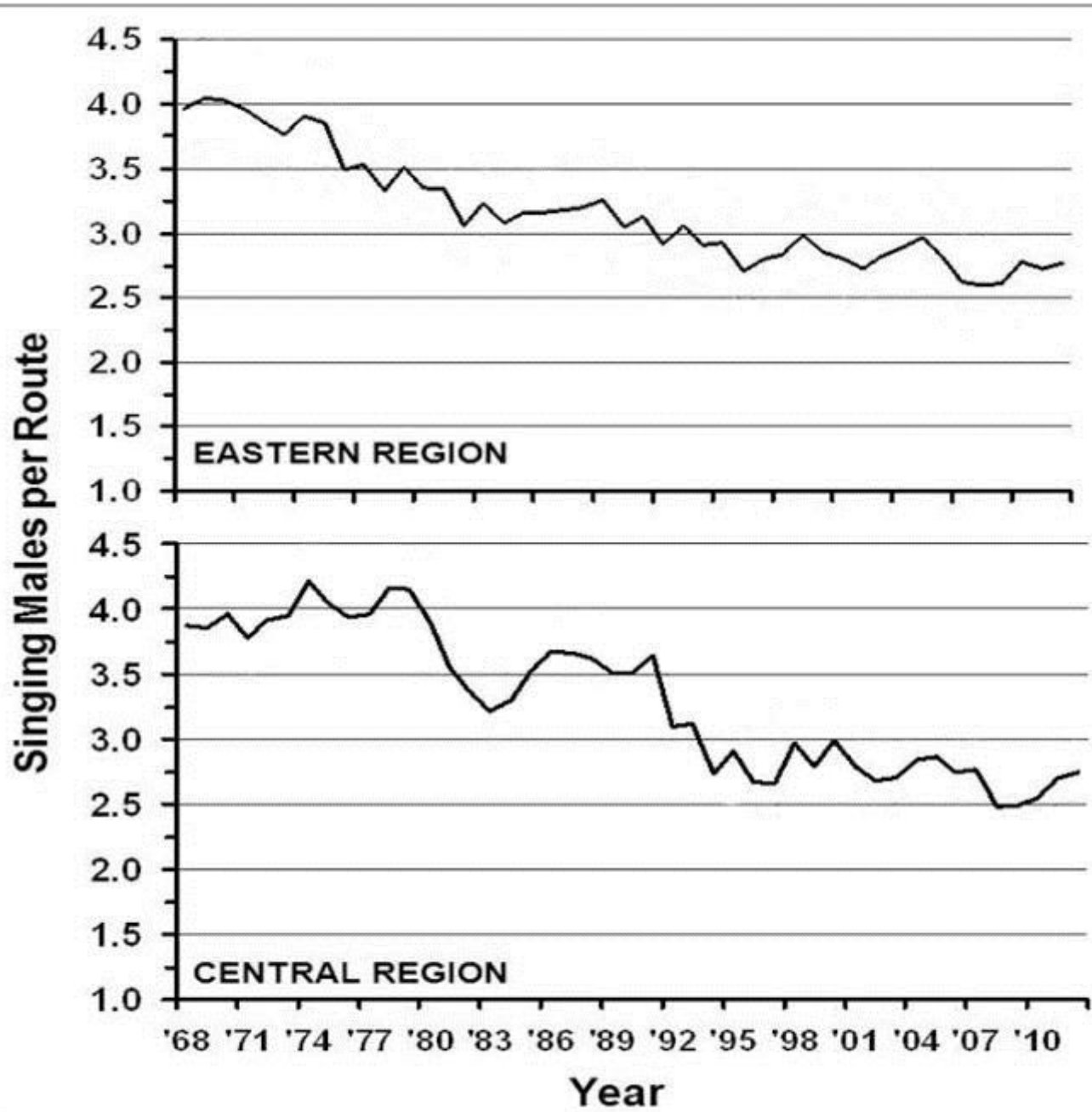
Woodcock nesting & feeding habitats





USFWS Woodcock Status Report

Long-term decline

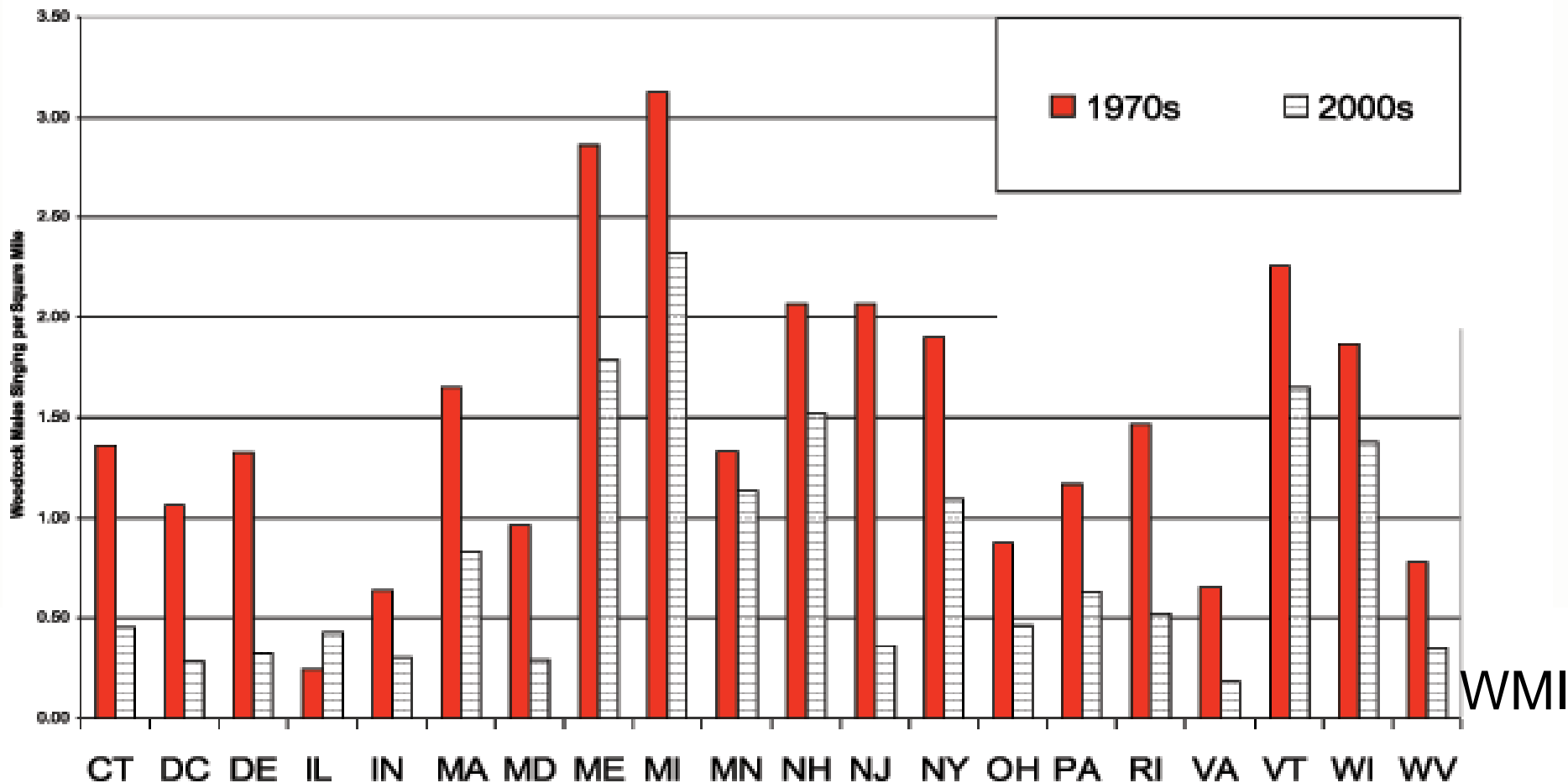


0.8% per year
approx. 31%
cumulative

USFWS Singing
Ground Survey
Data

Range-wide Population Declines Since 1960s

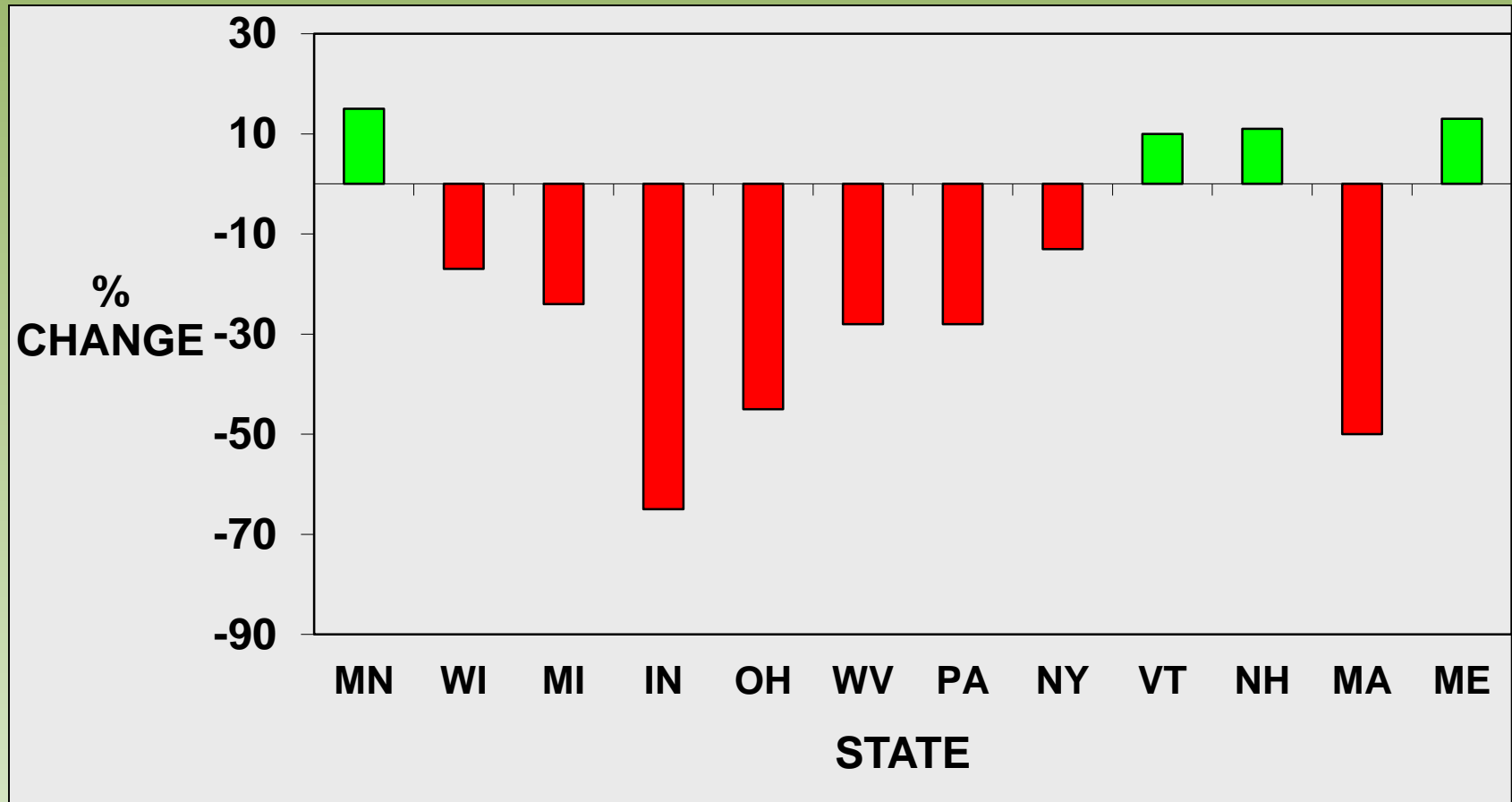
Woodcock Abundance by State



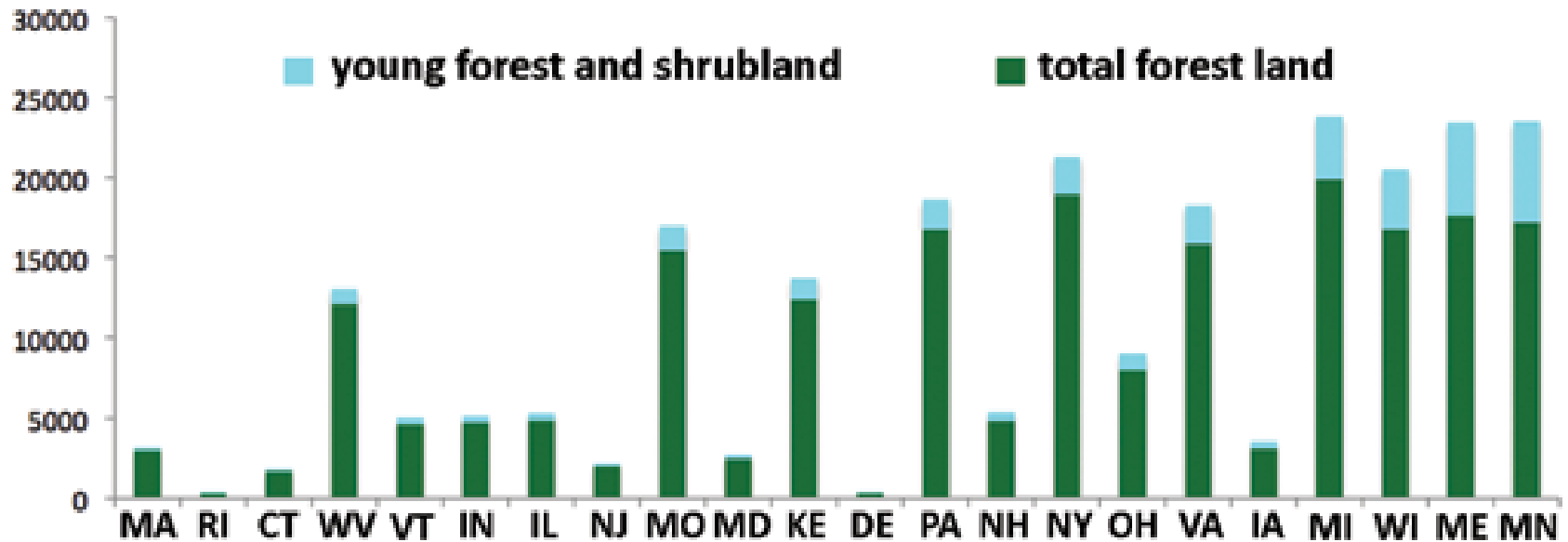
Young Forest Habitats

(1 – 20 years old)

1985 - 2005



Forest Cover (thousands of acres) in the Eastern States

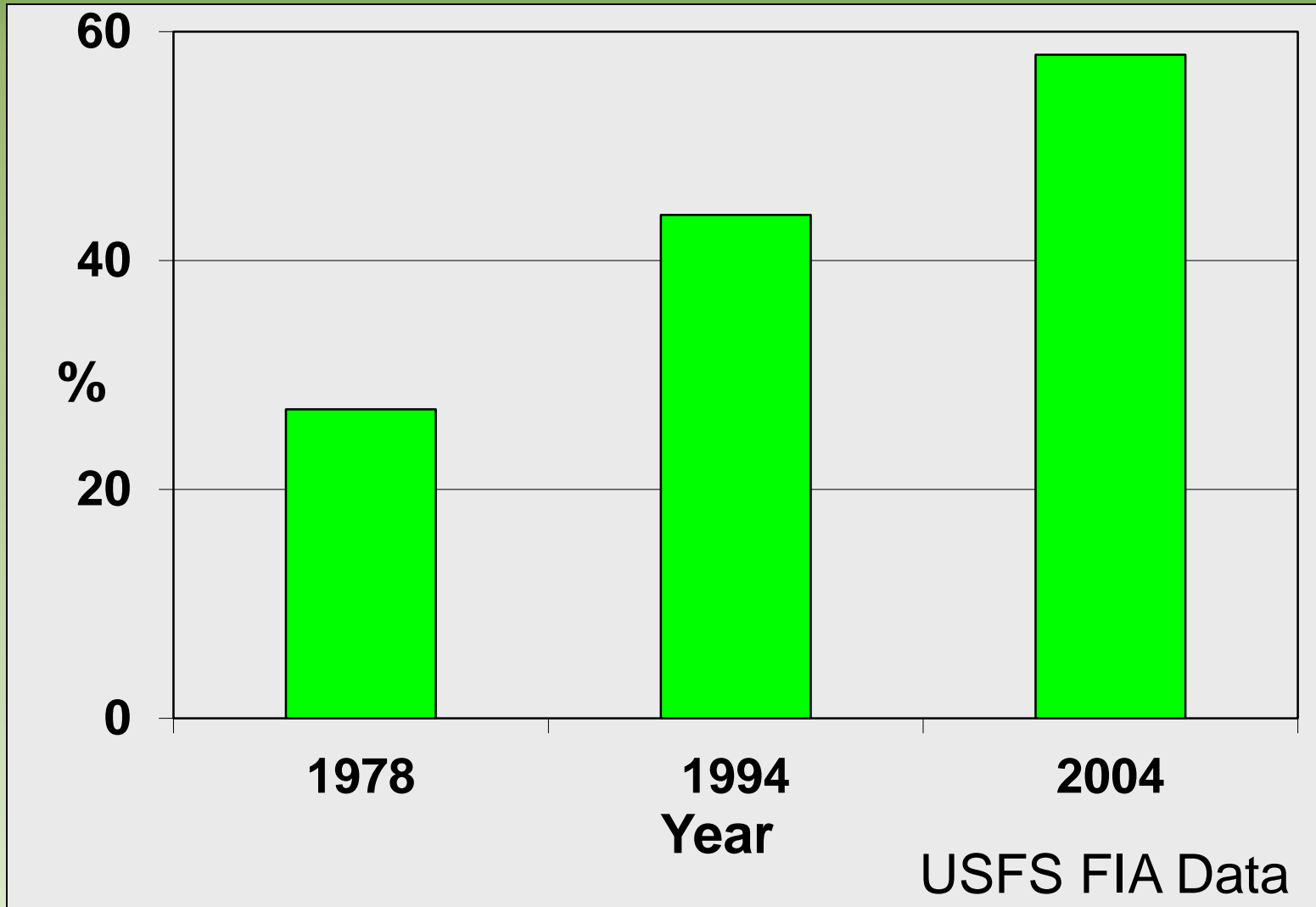


Acreages of young forest and shrublands and total forest cover for the eastern states were retrieved using the USDA Forest Inventory Analysis data from 2005 to 2009.

- Young forest and shrubland = 17% of forestland
- Range: 4% in MA to 37% in MN

Private Forest

Tracts < 100 A



Suite of Animals Dependent Upon Young Forests



Species Dependent on Young Forest

D e c l i n i n g

- 40 Species of Greatest Conservation Need (SGCN) within MI, MN, and WI are dependent on early successional forest and similar habitats
- 19 of these species are included on the U.S. Fish and Wildlife Service Region 3 Priority Species List
- 9 are included on the 2007 American Bird Conservancy/National Audubon Society Watch List

“95 of 187 species of neotropical migratory songbirds that breed in the Midwest use shrub/sapling or young forest habitats to some degree during the breeding season.”



Probst and Thompson (1996)

Golden-winged Warbler

- Petitioned for Federal Listing in February 2010
- 78% of GWW populations in North America are in our region
- GWW declining by 2.2% per year in Wisconsin
- GWW prefers very young forest and shrub habitats



Golden-winged Warbler Habitat



aspen clear cut



alder swamp



shrub-field



utility right of way



beaver wetland



tamarack bog



reclaimed stripmine



abandoned farm

From Tom Will, USFWS

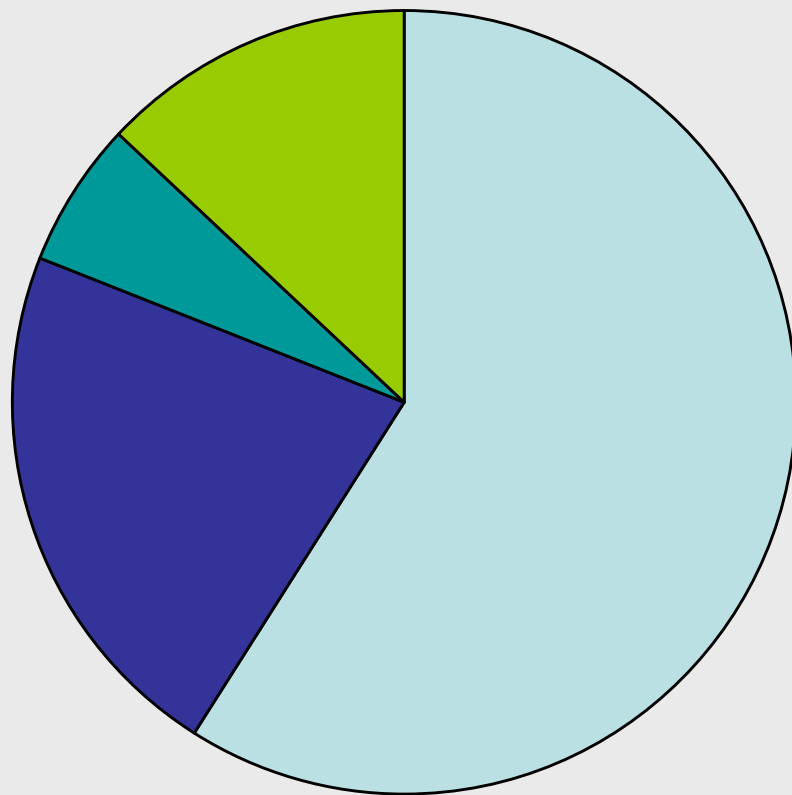
Questions??



Enhancing Habitat for Ruffed Grouse and Woodcock



Ownership of Forests in the Eastern U.S.



- **NIPF 59%**
- **Corporate 22%**
- **USFS 6%**
- **Other Public 13%**

USFS FIA Data



So what can you do?





Develop a Forest Plan for Their Land

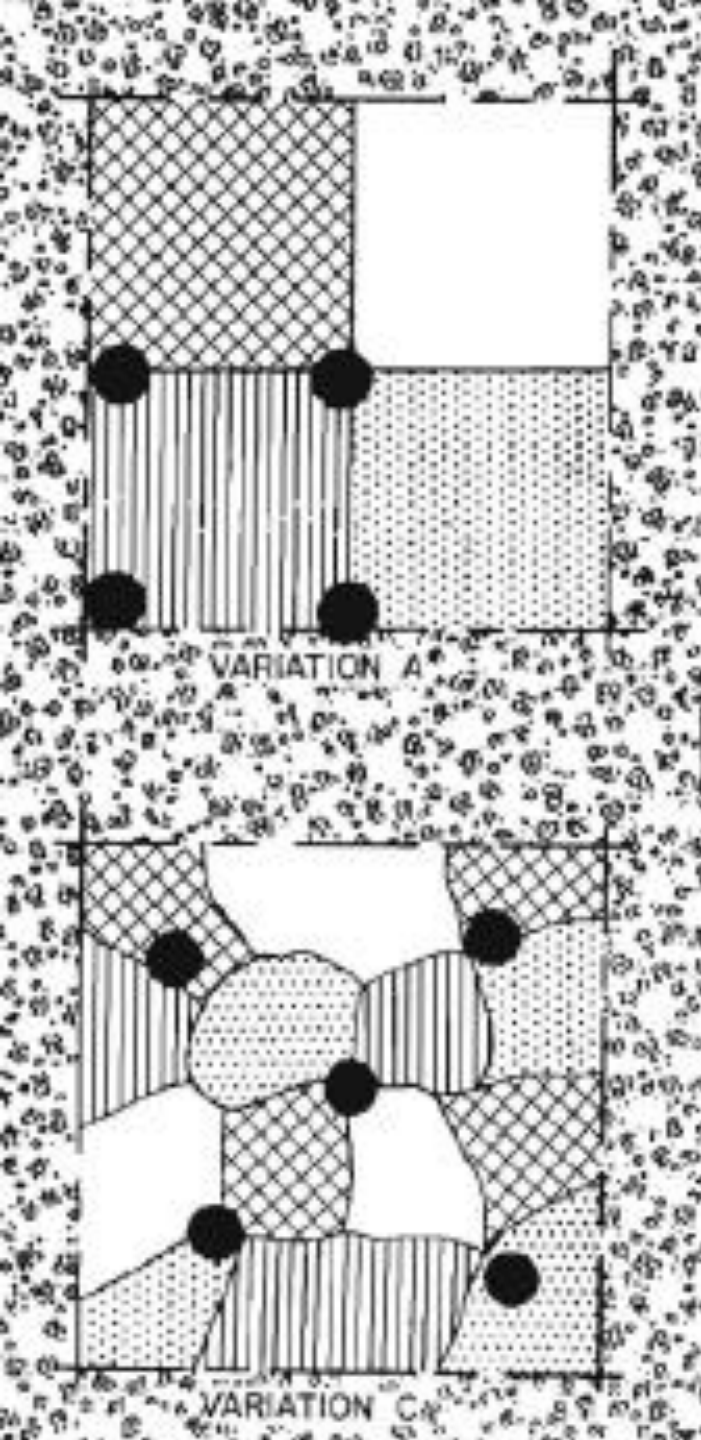
- **Define the landowner's management objectives**
- **Inventory vegetation types/age classes**
- **Identify management options and long-term habitat goals**
- **Select management practices to best achieve target goals**
- **Evaluate results and make adjustments**

Example 40 A parcel

● EXPECTED CENTER FOR RUFFED GROUSE BREEDING ACTIVITY FOLLOWING MANAGEMENT



-  INITIAL CUTTING
-  CUT 10 YEARS LATER
-  CUT 20 YEARS LATER
-  CUT 30 YEARS LATER



Gullion 1984



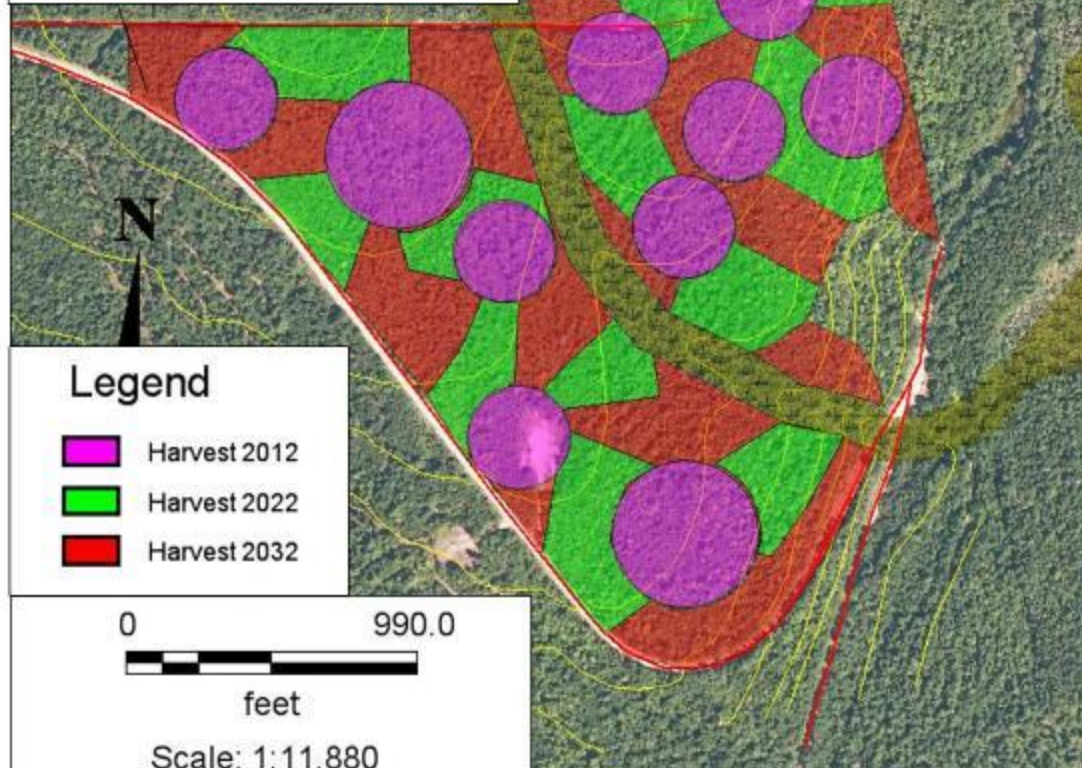
Downeast Lakes

LAND TRUST

www.downeastlakes.org

Winter 2012 Ruffed Grouse Habitat Plan

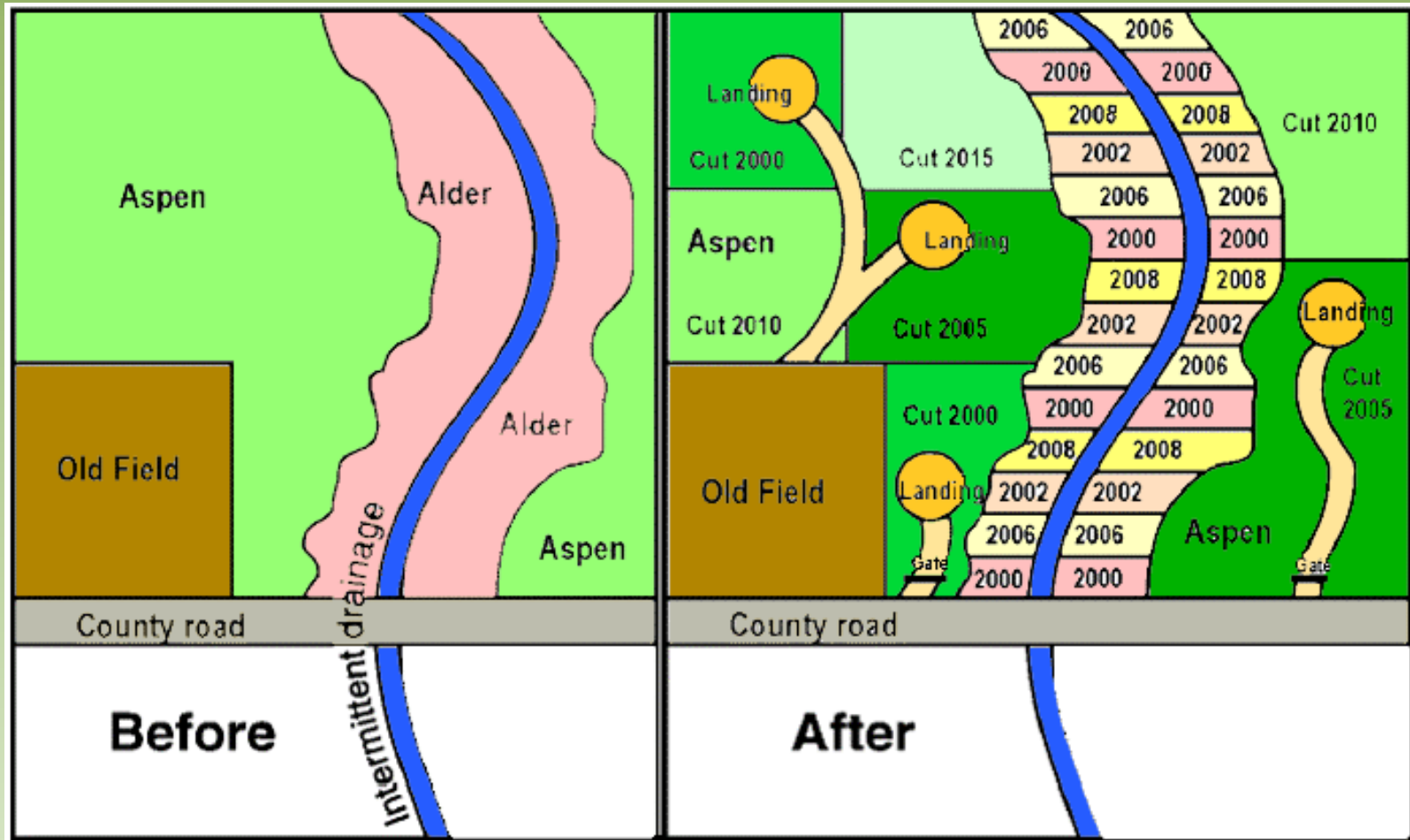
Developed in partnership with
The Ruffed Grouse Society



2012:	40 A
2022:	35 A
2032:	<u>36 A</u>
Total:	101 A



Illustration of a long-term habitat management plan



Modified from Minnesota DNR

Eastern Forests Are Maturing

80 yrs. old



40 yrs. old



10 yrs. old



20 yrs. old



Ruffed Grouse



**Dense Cover is
the Limiting
Factor For
Ruffed Grouse**







Arrangement of Habitat is Very Important

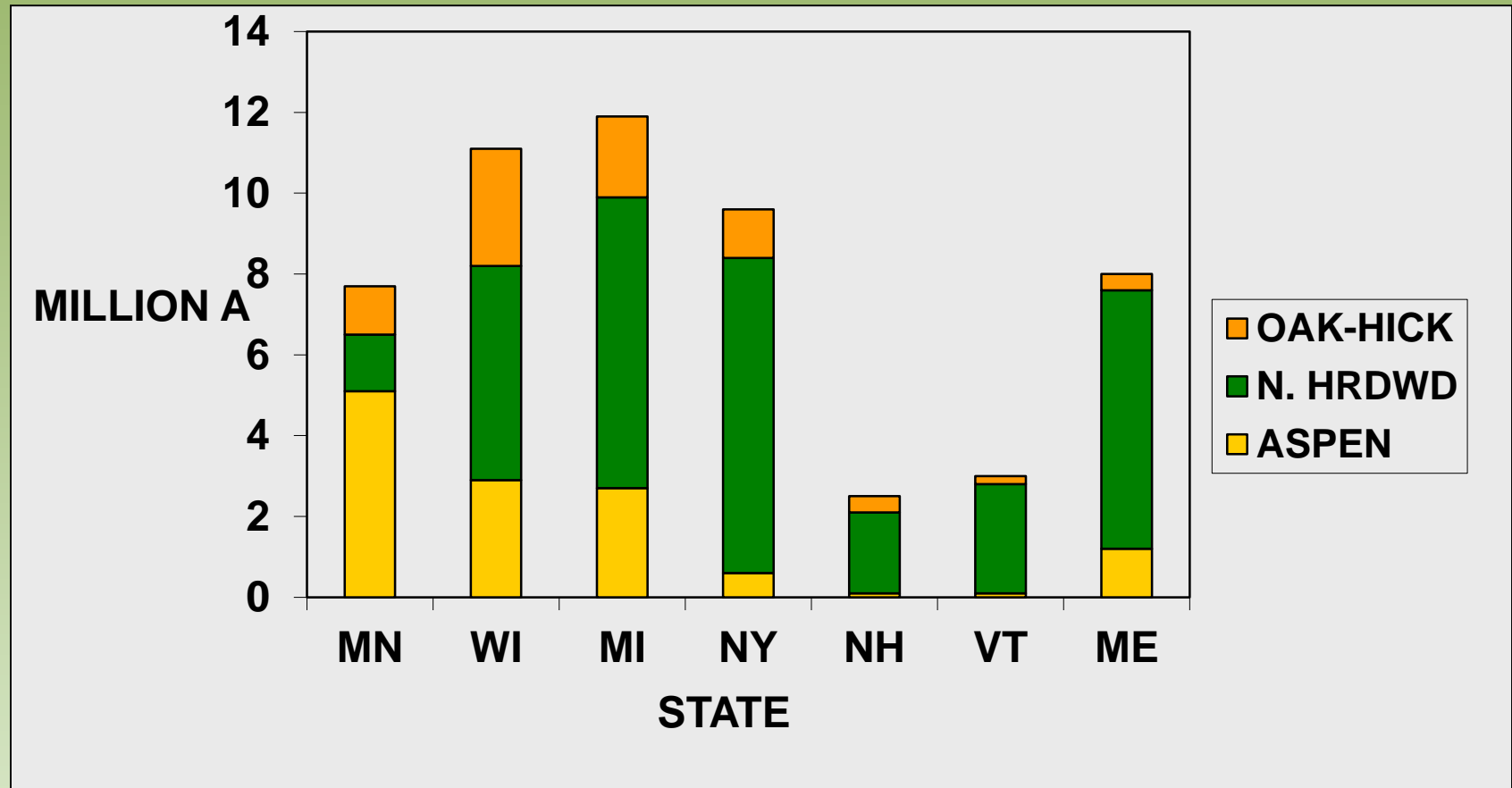
- **Small home ranges:**
5 - 50 A
- **Secure cover always in territory:**
(8-20 yr. old stands)
- **Winter food sources in close proximity:**
Budding trees
- **Corridors or linkages important:**
Hens, broods, fall dispersal



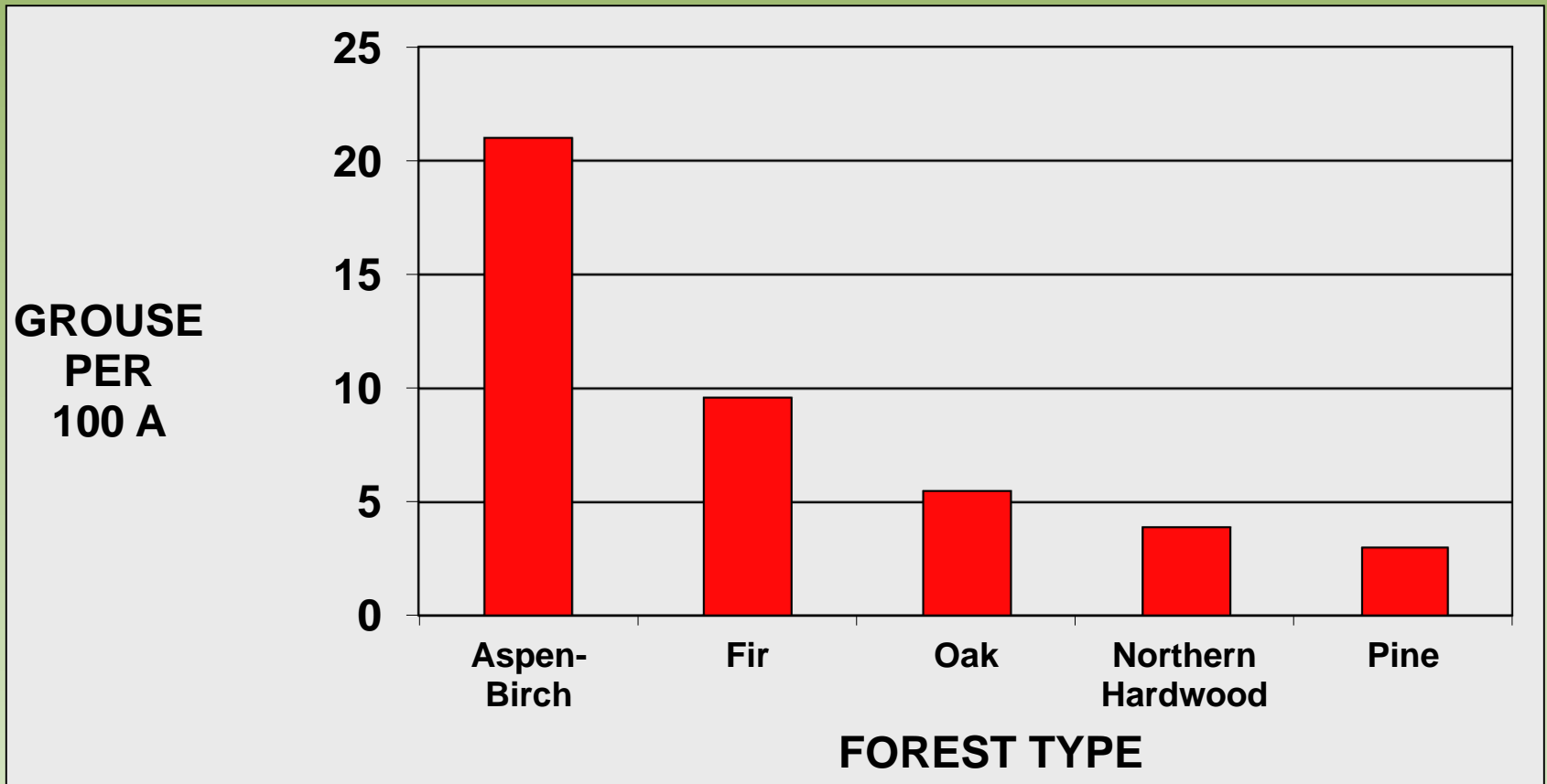
Requires Forest Disturbance



Forest Composition: Deciduous Northern States



Ruffed Grouse Fall Population Density by Forest Type



Data Source: WI DNR 1985

Aspen Management



Aspen Regeneration



**Clearcut Harvest
(October)**



**10 Months Post-harvest
(August)**

4 months of growth

Maintain 3-4 Aspen Age Classes



Aspen < 10 yrs = Brood Cover



Aspen 8-25 yrs = Breeding/Protection



Aspen > 25 yrs = Winter Food/Nesting

Male Aspen Buds/Catkins



Interspersion of Age Classes



Interspersion of age classes

Harvest in 5-20 A units



Promote High Stem Density



< 15% residual stems



> 15% residual stems

Expanding Aspen Clones



Clear cut to regenerate and expand aspen

- Aspen-dominated patch along fence line in old field
- Bush-hog shrubs out to 70' from outermost trees to reduce shade
- Cut during dormant season



© 2011 Google

©2010 Google

2/2011

43°07'20.43" N 75°46'52.25" W elev 397 ft

Eye alt 954 ft

Aspen clone in old field prior to treatment



Cutting in February



Aspen sprouts July 30



Mixed Hardwood/Oak Forest Stand Regeneration Methods

- **Clearcut**
 - + creates abundant young forest habitat
 - eliminates much of existing mast production
- **Shelterwood**
 - + maintains mast and seed production until regeneration established
 - removal harvest can impact developing habitat
- **Two-aged** (Modified shelterwood)
 - + provides food and cover within same stand



What Do Grouse Need?



Drumming Logs

- **Audio and visual platform**
- **Activity center of male's territory**
- **Typically > 8" in diameter, 70" long**
- **Leave 2-3 potential drumming logs/A (snags, downed trees)**
- **Protect large downed logs from harvest-related damage**



Plantings For Grouse - Shrubs



- **Fruiting trees, shrubs and vines that hold fruit into the winter are valuable**
- **Dogwood, sumac, cherries, grape, crab apple, thorn apple, plum, mountain ash**
- **Plant along the edges of wildlife openings and close to cover**

Plantings for Grouse - Shrubs



Planting For Grouse - Clover



- Grouse love clover, but they don't **NEED** it
- Drawing grouse out of dense cover to feed makes them easier to hunt, but exposes them to predators
- Any clover seeded in trails, log landings, etc.. will work, but plant it close to dense cover

Plantings For Grouse - Cover



- **Conifers are important winter cover in snowless regions**
- **Densely-neededled cedar, spruce or fir can be planted in clumps on south or west facing slopes**
- **Plant close to dense cover**

Wildlife Openings

- **Important component of landscape diversity**
- **Nesting and roosting area for songbirds and woodcock**
- **Brood rearing area for grouse, high insect populations**
- **Spring forage area for deer and turkeys**



Opening Management

- **Mow or bush-hog opening every 3 years to keep trees from encroaching**
- **Delay mowing until after July 1**
- **Leave a few small trees or shrubs**



Recipe for Ruffed Grouse Habitat

- **3-4 different stand age classes in close proximity**
- **Harvest units in 5-20 A blocks**
- **Nearby winter food source**
- **Retain 2-3 potential drumming logs/A in newly regenerated stands**
- **One 0.5 - 1 A upland opening for every 25 A of habitat for brood rearing**

American Woodcock



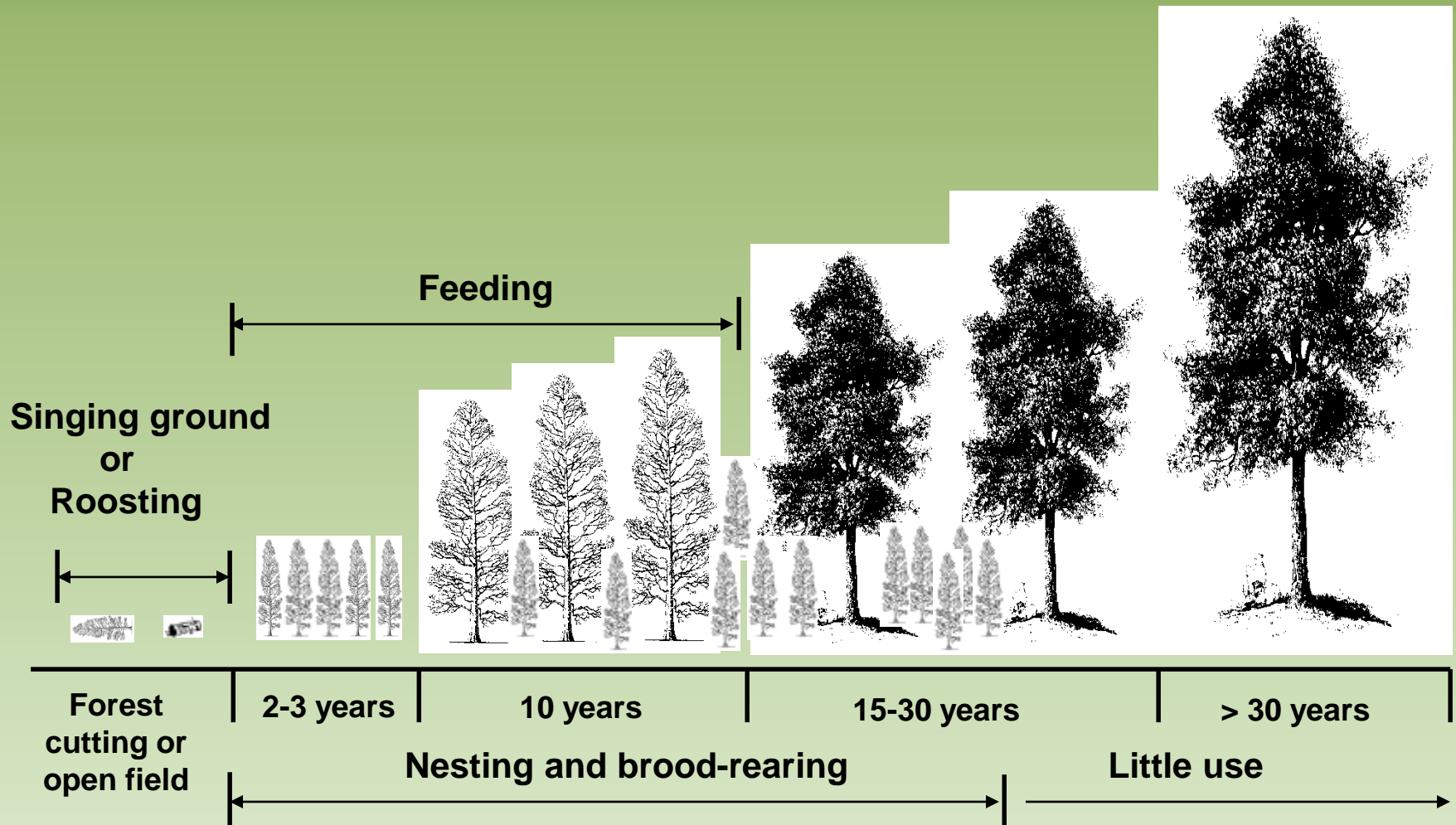
Nature Exposure, T. Flanigan

Woodcock Wisdom

- **Shrubs and young forests on moist soil sites**
- **Bare ground for access to earthworms**
- **Structure for overhead protection**
- **Small openings for singing grounds**
- **Large openings for night roosting**



Woodcock Habitat Use in Relation to Forest Succession



Habitat Management for Woodcock

- **Size of Unit Variable:**
1- 40 A
- **Will use pockets where moist soil conditions exist**
- **Emphasis is on young forests:**
stands with stems > 2"
seldom used
- **Stem density still a key**



Challenges to Woodcock Management



**Riparian Area
Restrictions**



Alder Management



Strip Cutting in Alder/Aspen

Diurnal Feeding Cover:

- **Cut strips in alders or dense aspen >60' wide**
 - Leave 3 equal uncut strips
 - Manage on 5 yr. cutting cycle
 - Slash removal is **optional**
 - Should be w/in 0.5 miles of brood/nesting habitat
- **Strips should be perpendicular to drainage**
- **Abandoned ag. land ideal**



Roosting Field Management



- 3-5 A in size; one per 100 A of habitat
- Mow every 2-5 years
- Typically 60-70% shrub/early regeneration covered
- Patchy vegetation w/ bare patches preferred
- Dense or rank herbaceous vegetation avoided
- Clearcuts work short term



Singing Ground Management



- **Rectangular, south facing; one site per 20-25 A of habitat**
- **Complete slash removal**
- **Forested areas:**
 - trees >25', maintain clearing of 0.5 A
 - trees <25', maintain clearing of 0.25 A
- **Mow on a 2-4 year cycle**

Recipe for Woodcock Habitat

Close proximity to moist soils

- Dense seedling/sapling stands
- Night roost - old semi-abandoned farm field/recent clearcut > 3 A
- One or two 0.25 to 0.5 A upland openings for every 20-25 A of habitat
- Lowland shrub patches (i.e. alder)
- Conifer cover for drought conditions



Questions ?