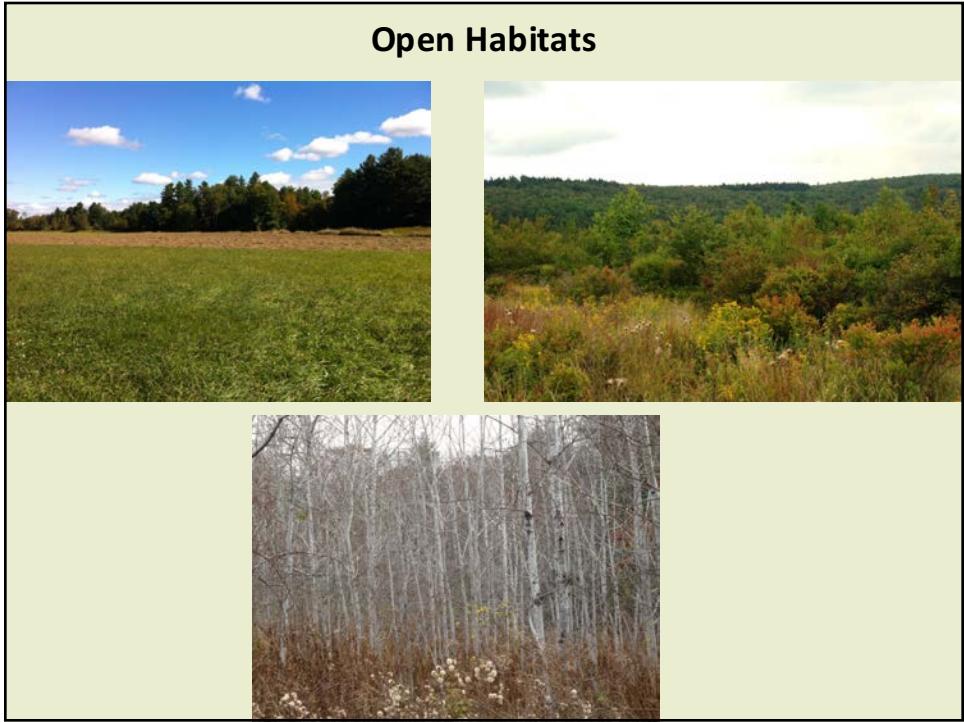




Grassland and Shrubland Habitats for Wildlife

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Open Habitats







Grasshopper Sparrow



Upland Sandpiper



Henslow's Sparrow



Fields and Shrublands in the NH Landscape

70% of the 250 birds, mammals, reptiles & amphibians that breed in NH, use fields, old fields, or young forest habitats at some time during their life



This doesn't include the countless numbers of insects!

Fields and Shrublands in the NH Landscape

60 wildlife species *require* fields, old fields, or young forest as their *primary* habitat type



New England cottontail



American woodcock



savannah sparrow



meadow jumping mouse



brown thrasher



eastern towhee

Populations of many of these species are declining as farmland reverts to forest and as forests become more mature

**A Checklist of Factors that determine what wildlife will use
“open habitats”:**

1) Size



large and open



small & blocky

**A Checklist of Factors that determine what wildlife will use
“open habitats”:**

1) Size

2) Plant Structure



short (less than ~12")



tall & dense



mixed height & density

**A Checklist of Factors that determine what wildlife will use
“open habitats”:**

- 1) Size
- 2) Plant Structure
- 3) Plant Species



mostly grass



grasses & wildflowers



mostly shrubs or small trees

**A Checklist of Factors that determine what wildlife will use
“open habitats”:**

- 1) Size
- 2) Plant Structure
- 3) Plant Species
- 4) Water



**A Checklist of Factors that determine what wildlife will use
“open habitats”:**

- 1) Size
- 2) Plant Structure
- 3) Plant Species
- 4) Water
- 5) Location



isolated in a larger opening



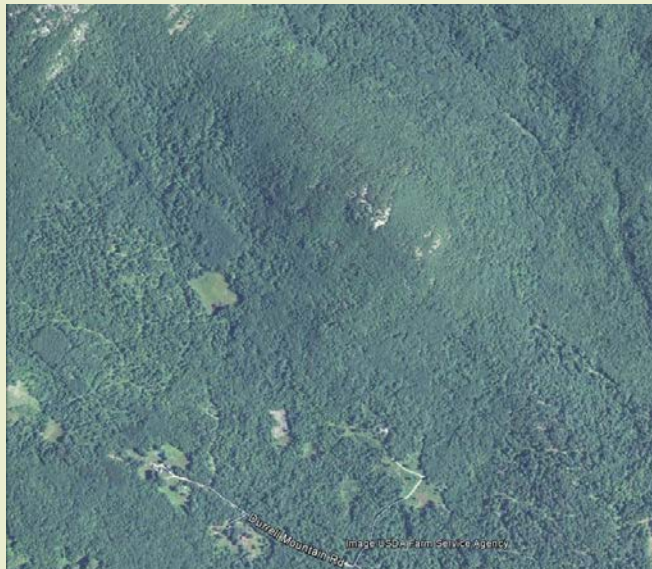
in larger opening, connected to the edge



along the edge

**A Checklist of Factors that determine what wildlife will use
“open habitats”:**

- 1) Size
- 2) Plant Structure
- 3) Plant Species
- 4) Water
- 5) Location
- 6) Landscape



**A Checklist of Factors that determine what wildlife will use
“open habitats”:**

- 1) Size
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***Managers* can control most of these factors that determine what
wildlife species will be attracted to open habitats!**

- 1) Size
- 2) Plant Structure
- 3) Plant Species
- 4) Water
- 5) Location
- 6) Landscape



**Let's look at specific open habitats and see what wildlife species
can be expected to use those areas**

Grasslands

Wildlife using very small grassy patches or strips



Syrphid "flower" flies



solitary bees



bumble bees



honey bees



butterflies



moths

Grasslands

Wildlife using very small grassy patches or strips



Grasslands

Wildlife using very small grassy patches or strips



eastern coyote



red fox



red-tailed hawk



house cats

most birds & small mammals
tend to avoid these areas...

Larger areas of cover will attract &
support more wildlife

Grasslands



bobolink (5-10 acres)



meadowlark (25 acres)



savannah sparrow (20 acres)



grasshopper sparrow (30 acres)
(Threatened in NH)

Grasslands

These grassland birds tend to:

nest toward the center
of square or round
fields

forage on field
edges but avoid
them for nesting

avoid nesting in
narrow fields
(too much edge)



If your property includes large fields you may have opportunities to benefit grassland bird species

Grasslands

Wildlife using grasses & forbs **less** than 12 inches tall



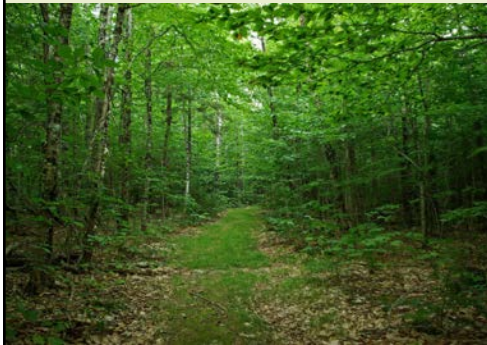
Grasslands

Wildlife using grasses & forbs **less** than 12 inches tall



Grasslands

Wildlife using grasses & forbs **less** than 12 inches tall



Wildlife are specifically attracted to:

- highly palatable plant species or varieties
- young, nutritious, very digestible plants
- short or sparse vegetation

Grasslands

Wildlife using grasses & forbs **less** than 12 inches tall



Grasslands

Wildlife using grasses & forbs **less** than 12 inches tall



Male turkeys prefer to display in short grass openings in the spring...

toms, hens, & chicks forage in openings with short grasses & forbs throughout the year



Grasslands

Wildlife using grasses & forbs **less** than 12 inches tall



chipping sparrow



mourning dove



American robin



American crow

Grasslands

Wildlife using grasses & forbs **less** than 12 inches tall



porcupine



groundhog



eastern cottontail

Grasslands

Wildlife using grasses & forbs **less** than 12 inches tall



mallards

If these fields contain any ponded water they can serve as important resting sites for migrating waterfowl & shorebirds



Wilson's snipe

Grasslands

Wildlife using grasses & forbs **taller** than 12 inches



Grasslands

Wildlife using grasses & forbs **taller** than 12 inches



Wildlife are specifically attracted to:

- tall plants for cover
- flowers, seeds & insects for food
- important winter food & cover

Grasslands

Wildlife using grasses & forbs **taller** than 12 inches



Grasslands

Wildlife using grasses & forbs **taller** than 12 inches



Grasslands

Wildlife using grasses & forbs **taller** than 12 inches



Grasslands

Wildlife using grasses & forbs **taller** than 12 inches



white-tailed deer fawns regularly hide in the cover of tall grasses and wildflowers

turkeys often nest on field edges within tall cover of grasses, forbs, and shrubs



Blanding's turtles will use dense, tall grasses & wildflowers as cover from summer heat
(Blanding's turtles are Endangered in NH)

Grasslands

Wildlife using grasses & forbs **taller** than 12 inches



smooth green snake
(species of special concern)



northern black racer
(Threatened in NH)

Grasslands

Wildlife using tall grasses & forbs in **wet areas**



Grasslands

Wildlife using tall grasses & forbs in **wet areas**



Grasslands

Wildlife using tall grasses & forbs in **wet areas**



Grasslands

Wildlife using tall grasses & forbs in **wet areas**



pickerel frog



eastern box turtle
(species of special concern)

Grasslands

Wildlife using tall grasses & forbs in **wet areas**



American bittern



great blue heron

Mowing Timing & Frequency



Very frequent mowing (once/month)

- primarily clover, chicory, alfalfa food plots
- keeps forages vigorous, nutritious, attractive
- discourages grasses & “weeds” (like your lawn)
- great bugging for turkeys, grouse

Frequent mowing (1-3 times/year)

- classic “hayfield”
- cover & forage (deer, turkey, bears)
- bird nesting & fawning cover

Ideally mow after August 1st



Mowing Timing & Frequency



Infrequent mowing (once/2-3 years)

- greatest diversity of non-woody plants
- great cover for fawns, turkeys
- great foraging for turkey broods (and grouse along field edges)
- blueberries (dry/wet sites), cranberries (wet sites) provide additional forage

Lots of pollinating insects, small mammals, snakes

Great low-maintenance way to manage small fields to benefit many wildlife species!

Equipment



Often best to mow larger fields in blocks to always maintain some cover

Fields 5 acres or larger may support grassland birds and warrant regular maintenance to maintain grassy conditions



Shrublands

Wildlife using shrubby old-fields and shrubby farm edges



Shrublands

Wildlife using shrubby old-fields and shrubby farm edges



Shrublands

Wildlife using shrubby old-fields and shrubby farm edges



This abrupt transition from field to forest is called a "hard edge" and it provides limited habitat opportunities to wildlife



This "soft edge" is much better habitat – areas like this usually support the greatest number of wildlife species on a property

Shrublands

Wildlife using shrubby old-fields and shrubby farm edges



Shrublands

Many native shrubs produce fruits eaten by birds & mammals



northern arrowwood



nannyberry



silky dogwood



high bush blueberry



common elderberry



sumacs

Shrublands

Wildlife eating fruit produced by native shrubs on forest-field edges



purple finch



rose-breasted
grosbeak



Baltimore oriole



eastern
chipmunk



white-footed
mouse



yellow-bellied
sapsucker



black-capped
chickadee



cedar waxwing

Shrublands

Wildlife **nesting or foraging** on shrubby edges



eastern towhee



brown thrasher



American woodcock



meadow jumping mouse



chestnut-sided warbler



black-billed cuckoo

Shrublands

Predators that hunt in shrubby edges



eastern coyote



eastern hognose snake
(Endangered in NH)



sharp-shinned
hawk



ermine



bobcat



great horned owl



gray fox

Shrublands

Wildlife using small shrubby edges and hedgerows



northern cardinal



northern mockingbird



white-throated sparrow



dark-eyed junco



fox sparrow

Shrublands

Wildlife using larger shrublands



field sparrow



willow flycatcher



prairie warbler



blue-winged warbler

Shrublands

Wildlife using larger shrublands



NE cottontails require large patches of *very dense* cover to avoid predators

Properties in southern NH may provide habitat for this state-Endangered species!

New England cottontail
(Endangered in NH)

Shrublands

Wildlife using wet shrubby areas



song sparrow



gray catbird



common grackle



common yellowthroat

Mowing Timing & Frequency

Very Infrequent mowing (once/4-10 years)



>3 yrs fields get shrubby
fruiting shrubs & small trees
diversity of cover & food:

- bears
- deer & moose
- turkeys & grouse
- woodcock

Very ephemeral (grows up quickly), very uncommon habitat in NH!

Equipment

Brontosaurus or similar forestry mower used to mow large shrubs and trees less than 4" in diameter



Can mow selectively around fruiting trees and shrubs



Grinds woody material
into fibrous strips that stay
on the ground



Mowing Timing & Frequency

Area is mowed and allowed to regrow naturally...
mowed every 10-15 years



Autumn mowing



Plant growth following summer

Managing Edges



Managing Edges



Mowing Timing & Frequency

Mow openings at least 2 acres in size
Create a new opening at least every 5 years
Each opening gets mowed about once every 15-20 years



Year 1	Year 4
Year 16	Year 12
Year 8	Year 12

Financial Help for Landowners

Natural Resources Conservation Service

Conservation Stewardship Program, Environmental Quality Incentives Program, Working Lands for Wildlife

- Private Landowners – Individuals and Organizations

NH Fish and Game Small Grants Program

- Private Landowners
- Towns

US Fish and Wildlife Service Partners Program

- Private Landowners
- Town Lands

