

WILDLIFE

management guide



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Songbirds

At least 100 species of songbirds nest in the Southeast, with many additional species overwintering or passing through as migrants.

Habitat requirements differ by species, and can generally be characterized according to the successional stage(s) in which a species specializes.

SELECTED SONGBIRD SPECIES COMMON TO MAJOR SUCCESSIONAL STAGES*

Species	Grassland	Shrubland	Pine Forest	Mixed Pine Hardwood Forest	Hardwood Forest
Grasshopper sparrow	x				
Eastern meadowlark	x				
Northern bobwhite	x	x			
Field sparrow	x	x			
Common yellowthroat		x			
Yellow-breasted chat		x			
Prairie warbler	x	x			
Rufous-sided towhee		x	x	x	
White-eyed vireo		x		x	x
Carolina wren		x	x	x	x
Northern cardinal		x	x	x	x
Pine warbler			x		
Brown-headed nuthatch		x	x		
Yellow-throated warbler		x	x	x	
Summer tanager		x	x		
Yellow-billed cuckoo		x	x	x	
Hooded warbler		x	x	x	
Parula warbler		x	x	x	
Blue-gray gnatcatcher		x	x	x	
Great crested flycatcher		x	x	x	
Carolina chickadee		x	x	x	
Tufted titmouse		x	x	x	
Downy woodpecker		x	x	x	
Hairy woodpecker		x	x	x	
Red-bellied woodpecker		x	x	x	
Pileated woodpecker			x	x	
Broad-winged hawk			x	x	
Acadian flycatcher			x	x	
White-breasted nuthatch			x	x	
Wood thrush			x	x	
Red-eyed vireo			x	x	
Black and white warbler			x	x	
Scarlet tanager			x	x	
American redstart				x	



* Modified from Johnston and Odum (1956) and Meyers and Johnson (1978).

HABITAT REQUIREMENTS

▲ Food

Most birds are insectivorous during all or part of their lives, providing an important biological control on destructive forest insects.

Most fruit, seeds, and insects along with small animal life are eaten.

A few of the more important food-producing plants for songbirds in the Southeast are:

<u>Trees</u>	<u>Shrubs, Vines</u>	<u>Forbs, Grasses</u>
Pine	Grape	Grain
Oak	Blackberry	Bristlegrass
Mulberry	Virginia creeper	Panic grass
Wild cherry	Poison ivy	Pokeweed
Dogwood	Wax myrtle	Ragweed
Holly	Blueberry	Smartweed
Blackgum	Elderberry	Crab grass
Hackberry	Greenbriar	Paspalum
Cedar	Wild plum	Croton
Beech	Sumac	Pigweed
Viburnum	Lamb's quarter	
	Primrose	
	Gallberry	

Flowering plants with bright red and orange flowers are very attractive to hummingbirds. Suitable flowering species include:

Mimosa	Buckeye
Columbine	Trumpet vine
Azalea	Petunia
Larkspur	Nasturtium
Weigela	Day lily
Delphinium	Iris
Cardinal flower	Snapdragon
Phlox	Yellow jessamine
Wisteria	



▲ Cover

Individual nesting requirements are often unique to each species. The variety of habitat niches that exist in a forest with a balanced distribution of different age class stands will meet the needs of the greatest number of species. The majority of songbirds nest in shrub-type vegetation and shrub-like stages should be protected. About three-fourths of all birds build nests less than 15 feet above the ground with an average height of around eight feet.



Some birds use tree cavities and abandoned woodpecker holes are particularly important.

Some common cavity nesting birds are:

Yellow-shafted flicker	Screech owl
Pileated woodpecker	Kestrel
Red-bellied woodpecker	Carolina chickadee
Red-headed woodpecker	Tufted titmouse
Downy woodpecker	Chimney swift
Hairy woodpecker	Prothonotary warbler
Great-crested flycatcher	Starling
White-breasted nuthatch	Bluebird
Red-breasted nuthatch	Wren
Brown-headed nuthatch	

Others, such as the Kingfisher, Phoebe, and most swallows nest in holes in steep banks, caves and cliffs. Still others such as Chuck-will's-widows and Whip-poor-wills nest on bare ground.

▲ Water

Many forest birds use open water. A bathing area should be no more than 2 to 3 inches deep with a relatively hard bottom such as sand or gravel. The bath area should be gently sloping and free of vegetation. Avoid having any dense ground cover within 10 to 15 feet.

Areas of open water, such as impoundments, marshes, and beaver ponds provide a highly diverse habitat for a wide variety of birds.

▲ Home Range

Some forest species of songbirds are migratory. Warblers, vireos, and flycatchers comprise a high proportion of the breeding population in forest communities. Often they overwinter in Central and South America.

A few, such as cardinals, chickadees, titmice, several finches, and woodpeckers overwinter within the region. However, their population may be increased by the influx of northern migrants.

The range for nesting birds is usually correlated with body weight. For instance, warblers generally have a home range of 5 to 15 acres; woodpeckers 200 acres; and ravens 10 square miles.

▲ Population Objectives

The following are reasonable objectives for general forest types:

Stand Condition	No. Pairs/Acre	No. Species
Regeneration	2-3	10-20
Poletimber	1-2	5-10
Mature timber	2-51	5-25

STANDARD MANAGEMENT PRACTICES

Silvicultural practices for other wildlife species will usually meet the objectives for songbirds in the general forest area.

A mixture of pine-hardwood in small stands that provide vertical diversity within a unit composed of several stands, yields the maximum number of habitat niches. Stand sizes of 5 to 20 acres are well-suited for most songbirds. Some forest interior birds, however, do not benefit from stands this small and require much larger expanses of unbroken forest to reproduce successfully (*example: American redstart*).

Use long rotations (80 to 100 years).

▲ Regeneration

Shelterwood cuts are preferred over seed tree cuts, and both are preferable to clearcutting. Retain all nest cavity trees and do not harvest March through June where songbirds are a management objective.

For forest-interior songbirds, do not fragment woodlands with wildlife openings and clearcuts; rather try to maintain some unbroken tracts of woodland (several 100 acres preferably).



Do not convert to pure stands of any one tree species. Stands of mixed composition are more beneficial when managing for songbirds.

Recognize glades, dense evergreen cover, vine mats, spring seeps, wetlands, savannahs, and other inclusions and retain them for habitat variety.

▲ Intermediate Treatments

Thinnings should provide stands with as much horizontal **AND** vertical vegetative diversity as possible in ground cover and overstory. Thin early and frequently. Do not use herbicides or pesticides. Encourage preferred food plants following thinnings.

Encourage development of shrubby understories and edges, protecting these areas from cultural treatments.

▲ Prescribed Burning

Use prescribed burning sparingly to preserve brushy understory. Confine it to the dormant winter season in pine stands. Coverts of wild plum, grape, blackberry, red cedar, honeysuckle, and viburnum as well as shrubby transitions should be protected from fire.

DIRECT IMPROVEMENTS TO HABITAT

Provide water for drinking and bathing. Construct or maintain loose brush piles within or along margins of openings. Establish and maintain clumps of blackberry or other dense-growing late-fruiting shrubs for cover and/or late winter food.

Construct and maintain nest boxes and artificial cavities in locations suited to desired species.

When possible, protect and maintain beaver ponds where managing for songbirds. Beaver ponds provide a highly diverse habitat and attract a wide variety of birds that would not normally be found in well-drained, forested habitat.



OTHER SPECIES THAT BENEFIT FROM SONGBIRD MANAGEMENT

Songbirds are unique barometers of habitat composition and quality. Each habitat type will have a unique community of bird species living in it, and songbird management should be approached at this level. Additionally, management techniques designed to foster diversity and abundance of songbirds will also benefit numerous other wildlife species that should be considered a part of management plans and objectives.

The following are some species that would also benefit from songbird management practices:

Open Fields	Early Regeneration
quail	rabbit
red fox	ruffed grouse
marsh hawk	gray fox
kestrel	white-tailed deer
red-tailed hawk	
Forested Wetlands	Old Growth
Great blue heron	gray squirrel
red-headed woodpecker	fox squirrel
wood duck	raccoon
beaver	wild turkey
	black bear

