

FORESTS AND WILDLIFE

Wildlife and forest management are not only compatible, but are interrelated. Developing an active forest resource management plan allows you to place a special emphasis on wildlife species in which you are interested, while improving forest productivity and increasing bio-diversity, beauty and personal enjoyment. See the table below for species commonly managed in Georgia.



Photo courtesy of the National Wild Turkey Federation

<u>GAME</u>	<u>NON-GAME</u>
White-tailed deer	Red-tailed hawk
Eastern wild turkey	Gopher tortoise
Bobwhite quail	Indigo snake
Gray squirrel	Great horned owl
Fox squirrel	Barred owl
Eastern cottontail rabbit	Indigo bunting
Raccoon	Bald eagle
Black bear	Brown bat
Grey fox	Box turtle
Red fox	Red-headed woodpecker
Waterfowl	Pileated woodpecker
Ruffed grouse	Red-cockaded woodpecker
Mourning dove	

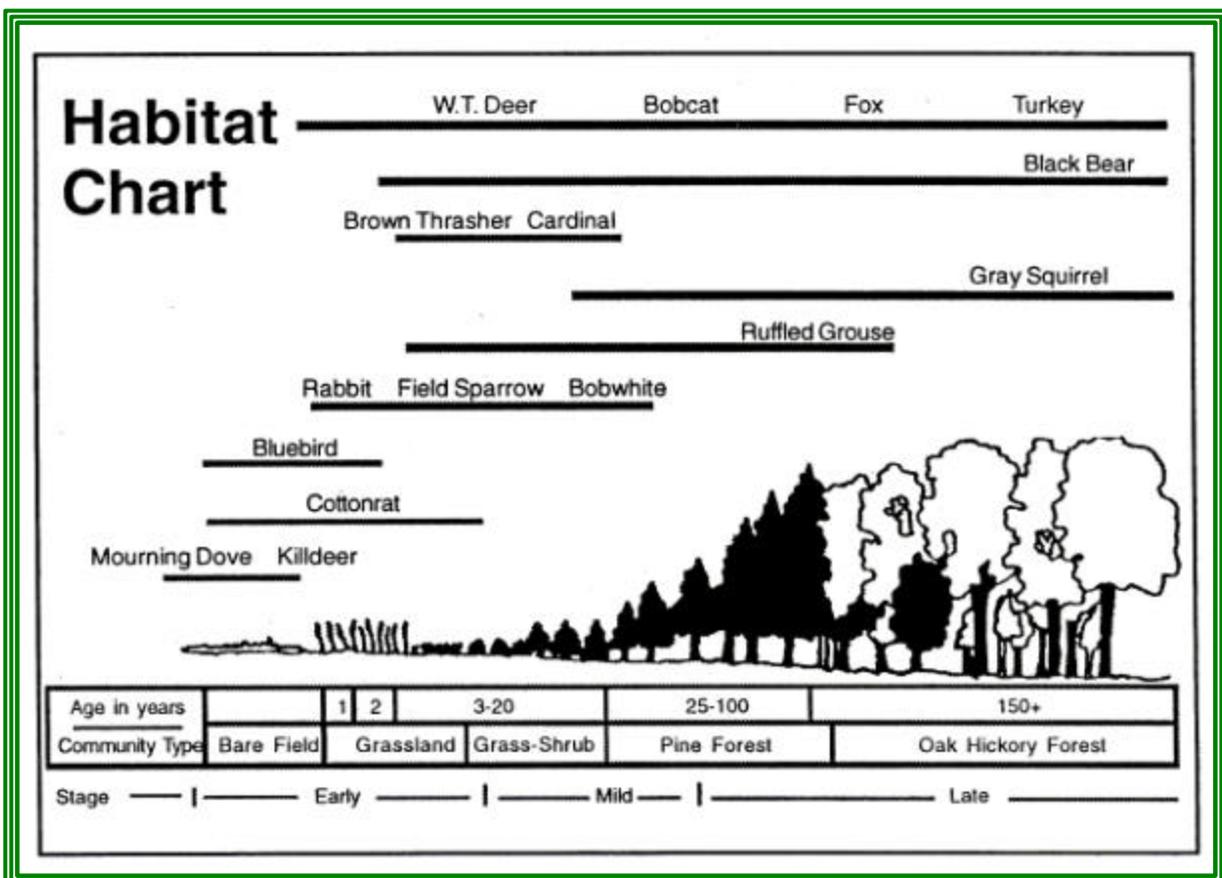
Linking the forest and wildlife

Wildlife have four basic requirements: food, cover, water and space. Different wildlife species require different stages of forest growth to meet these needs. The arrangement and ratio of these stages dictates the kinds of wildlife that can live on your land. The key to wildlife diversity and abundance is habitat diversity. How you choose to manage your forest contributes to the presence and arrangement of habitats, directly impacting the use of your land by wildlife. Several aspects of your property determine how many species can live and thrive in your forest: plant cover, harvest operations, water resources and topography.

Your forest may have streams, swamps, rivers, ponds, and areas that adjoin fields, pastures, roads and other openings. Even managing these “edges” of your forest is crucial to abundant populations of some wildlife species. Edge is easy to manage but some interior species can be harmed by creating edge habitat.

The relationship between vegetation management and wildlife species habitat is well established. Understanding relationships is the first step in determining how your own forest can be managed to promote the wildlife species you want to attract.

For example, quail, many songbirds, and some small mammals feed on seeds of annual and perennial weeds and grasses that occur in young stands of timber, where sunlight reaches the forest floor. This is early successional habitat. Pileated woodpeckers, gray squirrels, and other songbirds depend on mature forests. This is late successional habitat. Still other wildlife prefer mid successional habitat, the stage between early and late *succession*.



Management practices impacts on wildlife

Young, even-aged forests are a benefit to early successional wildlife species by encouraging forbs, grasses and brush. The size and shape of harvest areas is important.

There are several ways you can improve the value of even-aged harvest/regeneration areas for wildlife:

- Small harvest areas (up to 50 acres) scattered over the landscape provide more edge and landscape diversity,
- Irregularly shaped areas provide more edge than square or round areas,
- Planting at low density stocking rates (less than or equal to 500 trees per acre),
- Separating harvest areas with 100-foot (or wider) areas of uncut timber enhances diversity of habitats and provides travel corridors between fragmented habitats,
- Buffer strips adjacent to streams and other water bodies protect water quality, but are also critical wildlife corridors, and
- Islands of uncut timber within harvest areas will enhance wildlife habitat by leaving mast (food) producing trees. Oaks, hickories, dogwoods, persimmons and berry producing shrubs are excellent hard and soft mast species to leave.

Uneven-aged forests

This method simulates minor natural disturbances such as windthrow, insect and disease mortality, or spot fires. Mid and late successional habitat types are maintained with single tree harvest selection. Group selection harvests provides pockets of early successional vegetation interspersed within the mid and late successional habitat. A multi-layered forest canopy, from 5 to 30 feet, benefits native and migrating songbirds by providing nesting habitats.

Thinning

Thinning stands allows more sunlight to reach the forest floor resulting in more vigorous understory growth. This practice encourages the development of early successional growth in the understory, yet leaves some mid and late successional trees in the overstory.



Ten year old longleaf at a 10' by 10' spacing



Same stand one year after precommercial thinning

Prescribed Burning

This controls woody vegetation, releases nutrients and increases seed germination and herbaceous vegetation — including legumes, forbes, and grasses. Prescribed burning in stands of fire resistant tree species sets back succession and does not damage timber crop trees. Burning cannot be used in many regions and certain types of forests.

Prescribed fire improves wildlife habitat by controlling succession and making wildlife browse more digestible, palatable, and nutritious food, without damaging potential timber crop trees. Fire also stimulates the production of soft trees from fruit bearing shrubs.

Most controlled burns to improve wildlife habitat are low intensity burns conducted during the winter months. Burning should be avoided during the primary nesting season of desired wildlife species. Contact your local wildlife biologists to determine the nesting seasons of the desired species on your land.



Before Prescribed Burning



After Prescribed Burning

To control fire, firebreaks must be constructed to keep the flames from spreading to areas where burning is not appropriate. These breaks can be managed as linear openings or food plots to benefit certain wildlife.

Den trees, mast trees, and snags

These trees are critically important for food and cover. Den trees have one or more cavities used by birds, reptiles, and mammals for roosting or nesting. As a rule, two to four den trees per acre should be left in any unthinned or harvested area.

Small den trees might house chickadees, woodpeckers, screech owls or flying squirrels. Large den trees are used by squirrels, raccoons, wood ducks and occasionally, even a bear. Mast trees produce fruits and nuts used by wildlife for food. Hickory, oaks, beech, persimmon, serviceberry, black gum, hollies, hawthorns, dogwoods, grapevines, and many other species are valuable to wildlife. The ideal time to select and mark den and mast trees is before you thin or harvest your timber.

Snags are dying or dead trees still standing. They provide perch sites for birds of prey, act as a food source for insect-eating birds, reptiles, amphibians, and mammals, and serve as den trees to various wildlife species. Snags and potential snags should be left during harvest and site preparation of forest stands.

Road construction and maintenance

Access to your property is essential and can provide multiple benefits. Proper location, design, and construction increases the value and enjoyment of your forest. One practice that benefits wildlife is 'daylighting.' In this process, trees shading the road surface are removed. Sunlight on the road surface enhances the growth and proliferation of grasses and weeds which are food plants for wildlife. Insects attracted to the vegetation are also an important food source for many wildlife species.

Restricting vehicle traffic also increases wildlife use, particularly during nesting season.

Wildlife Openings

Permanent wildlife openings are important in the annual life cycles of many game and non-game species. Wildlife openings by definition are areas composed primarily of low, grassy, herbaceous vegetation. Maintain a minimum of 2.5% of the total tract acreage in permanent wildlife openings. These openings may be maintained in early successional native vegetation by periodic prescribed burning, disking, or mowing or by use of herbicide. Agricultural plantings, such as corn, sorghum, wheat, oats, millet, ryegrass, and clover may also be planted within these openings. Call your local wildlife biologist for a list of selected wildlife plants.

Establishing ground cover or wildlife food

Along roads, forest edges, logging decks, food and ground cover vegetation controls soil erosion, improves water quality and enhances wildlife food and cover. These areas create diversity in the forested landscape by providing early and mid successional components throughout the life of the forest.

Seeding and establishment recommendations vary widely depending on geographic region, soil type, moisture availability and fertility. Successful plantings require soil testing, fertilization, adequate seedbed preparation and planting at the appropriate

time. Most ground covers require maintenance by mowing, disking, burning, fertilization or liming.



Native Warm Season Grasses

Establishment of native or naturalized ground cover through natural succession often is more valuable to wildlife and is less expensive for the landowner. Consult a natural resources professional for specific recommendations for your area. A soil sample should be analyzed to determine liming and fertilizer rates.

Streamside Management Zones and Upland Corridors

Corridors, both streamside and upland, serve many valuable wildlife functions. They provide safe travel, food, nesting, denning, and foraging sites, as well as cool refuges during the hot summer months. These corridors also protect your property from soil erosion and help maintain water quality in streams. To maintain their value, corridors should be areas of mature timber and a minimum of 300 feet wide to accommodate the needs of various wildlife that rely on these areas. Corridors should connect similar habitats together to help offset the effects of forest fragmentation. Integrity of the canopy is very important in managing corridors, especially streamside management zones. The key to successfully managing these sites is to provide an open understory to facilitate travel by species such as wild turkey and maintain a condition similar to interior forest habitat.

Additional Information:

Georgia Department of Natural Resources-Wildlife Resources Division – www.georgiawildlife.com

National Wild Turkey Federation – www.nwtf.org

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