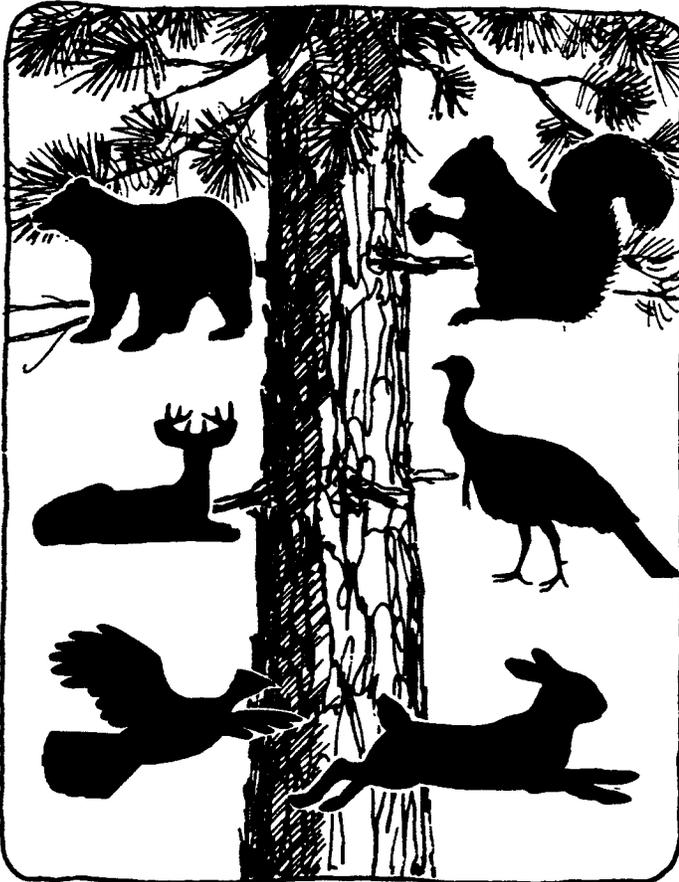


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TIMBER AND WILDLIFE

Robert B. Hazel
NC Agricultural Extension Service



THIS FORESTRY PUBLICATION IS ONE OF A SERIES ON SOUTHERN PINE MANAGEMENT.

1. The Southern Pine Forest
2. Forestry as an Investment
3. The Major Southern Pines
4. Importance of Soil to Tree Growth
5. Regenerating Southern Pines
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Wildlife and timber are both products of the forest. Multiple use of forested lands can, therefore, include optimal use and sustained yield management of the wildlife resource. Southern pine forests can be managed successfully for both timber and wildlife.

Management Possibilities

Properly managed pine stands can provide good habitat for a variety of wildlife species. The key is *management*. Unmanaged pine forests generally constitute low-quality habitat for most wildlife species and are sometimes referred to as biological deserts. Good silvicultural practices, planned with wildlife in mind, are the primary means of providing wildlife habitat in conjunction with pine management. In many situations, additional measures can be taken to further enhance wildlife habitat and populations.

The intensity of wildlife management to be tamed out depends primarily on the interests and objectives of the landowner, the natural capabilities of the land, and the wildlife species present on the area. In most situations, good wildlife habitat can usually be maintained through normal silvicultural practices with little extra cost. All that is required is basic knowledge of wildlife habitat requirements, the effects of various timber management practices on wildlife habitat and proper advance planning.

All wildlife species require the basic necessities food, shelter and wing space. The kinds and amounts of these requirements differ widely between species; some species are adapted to the kind of habitat found in southern pine woodlands, while others are not. Furthermore, there are some compatibility differences in wildlife species, depending on the pine type and stage of plant succession.

Longleaf-Slash Pine Type

Longleaf-slash pine forests can be managed for quail, fox squirrels, doves, deer, bears, wild turkeys, and red-cockaded woodpeckers. The quality of the habitat for these species depends primarily on the timber management practices applied, the growth stage, and the size of the management unit. The big game species (deer, bear, turkeys) require large home ranges (from at least several hundred acres for deer to several thousand acres for bear, while small game species can exist on a few acres.

Opportunities for managing quail are usually good in this forest type, particularly if the area has numerous small streams. Management opportunity for the other species varies from fair to good, depending on such things as associated tree species, plantings, prescribed burning schedules, and size and distribution of cutting and regeneration areas.

Loblolly-Shortleaf Pine Type

This type of forest can be managed for deer and turkey, gray and fox squirrels, quail, and red-cockaded woodpeckers. Quality can range from good to poor for turkeys, depending on size and distribution of key areas of mast-producing hardwoods. The same requirements apply, to a large degree, to management for deer and squirrels. Good quail habitat can be provided in this type of forest.

Recommended Pine Management Practices for Wildlife

Pine stands tend to be used most heavily by wildlife species during the early successional stages. During the first five years, these plantations provide a large amount and variety of quail food and deer browse - the amount varying with the site preparation or regeneration method used. Generally, a pine stand becomes less attractive to wildlife as the stand matures, the canopy closes, and the understory thins. Consequently, pine stands must be managed in order to maintain their value for wildlife.

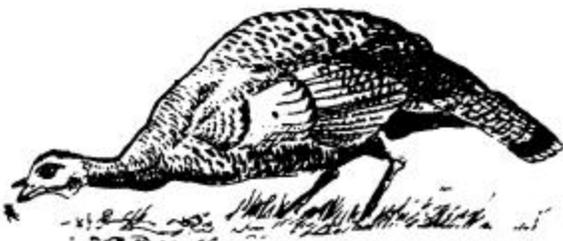
The most important single thing to achieve in management for wildlife habitat **is as much diversity as possible**. In general, the more variety of timber species, size and age classes, small openings, and edge, the better the wildlife habitat will be. Maintaining adequate food-producing plants attractive to the wildlife species desired is vital, along with escape and nesting cover and water.

Silvicultural practices beneficial to wildlife are:

1. Divide timber management units into small blocks (100 acres or smaller if possible), to achieve a variety of age and size classes. Even-aged management of small units of differing ages and sizes provides the necessary interspersion of stands and productive understory conditions for wildlife.

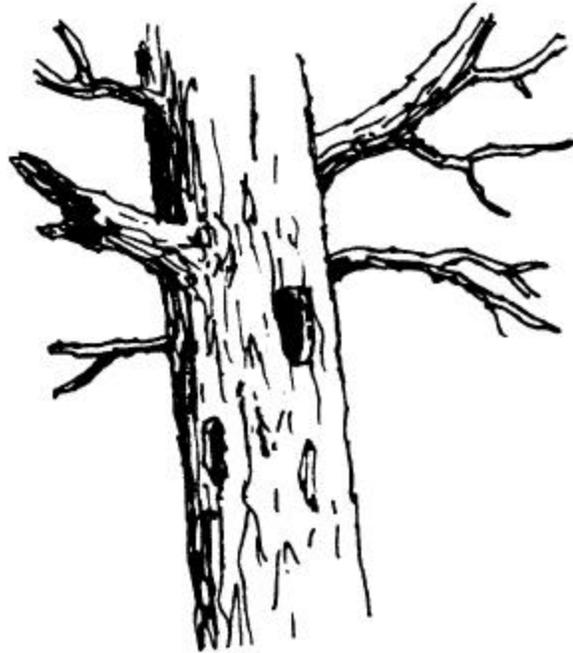
2. Make clearcuts in irregular shapes to achieve maximum edge. Avoid large clearcuts if possible. Deer, for instance, use the outside edge of a clearcut much more heavily than large open areas.

3. Leave hardwoods along drainages and streams to provide travel lanes, escape cover, and food for deer, turkeys, and squirrels. These stream buffer zones also protect the stream from siltation and clogging with logging debris.



4. When thinning or practicing timber stand improvement, leave snags and den trees (at least 2-3 per acre). Remove only those that are suppressing timber growth.

5. Leave areas of mast-producing hardwoods scattered through the area. These should be at least 1/4 acre in size, larger if possible.



6. Seed roads and other small openings to grasses, clovers, or other game food and cover plants adapted to your area. These provide food for deer, rabbits, turkeys, and brood openings for quail and turkeys. Cut trees to open the canopy along roads, allowing light to penetrate and enhance edge growth.

7. Use controlled burnings, particularly in the Coastal Plain, to stimulate growth of legumes and other wildlife food plants and to control undesirable undergrowth. Controlled burning should usually be done in small blocks in a 3-5 year rotation, beginning when stands are pole-sized, and following thinning operations. Burn in winter or early spring (December, January, and February are the best months).

Additional practices that can enhance wildlife habitat and populations are:

1. Planting strips of shrub lespedeza for quail food between rows of pines when a plantation is established or thinned. These plantings should be scattered units of at least 1/4 acre for each 5-10 acres of plantation.

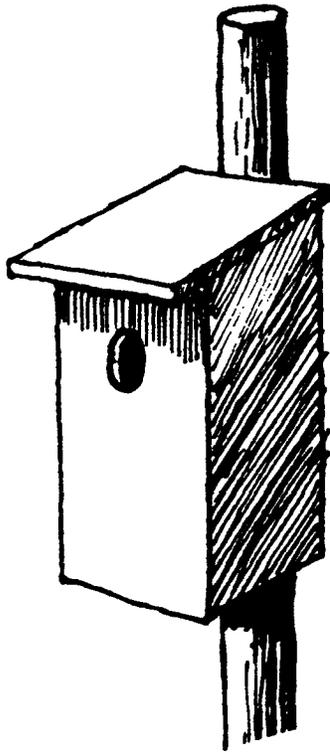
2. Allow volunteer vegetation to grow in the windrows for several years.

3. Plant small openings (1/5 to 1/2 acre) to grass or clover, with a shrub lespedeza border 10 feet wide to provide brood cover for quail and turkey and winter

feeding areas for quail, turkeys, and deer. Where deer are the primary species to be managed, opens can be large (1-5 acres). There should be at least one opening per 160 acres.

4. Where the forest borders agricultural lands, plant field borders with shrub and sericea lespedeza or annual game-food mixtures. These provide food and cover adjacent to woods. Also, leave border strips of such crops as corn and soybeans unharvested to provide food for game.

5. Erect squirrel nest boxes in or adjacent to hardwoods where den trees are not present in sufficient number. Wood duck nesting boxes should be placed in ponds or other water areas. Beaver ponds can provide excellent waterfowl habitat.



6. For red-cockaded woodpeckers, maintain colony sites undisturbed with at least a 200-foot buffer zone around each cavity tree. Also, provide foraging areas of pole-sized or larger pines adjacent to colony sites.

Most important, plan ahead. With advance planning, wildlife can be more than just an incidental by-product of forestry operations. Detailed advice can be obtained from professional wildlife biologists with state or federal wildlife agencies.

Incentives for Wildlife Management

Incentives for the landowner to manage wildlife are important. While wildlife is seldom managed as a major income-producing crop, there are some incentives that make wildlife management worthwhile to the owner. They are:

1. The presence of wildlife species in abundance for the landowner to enjoy through observation or hunting.

2. The sale of hunting privileges. This is usually done by means of a lease agreement with an individual or a group of hunters, or sale of hunting permits to individual hunters on a daily or seasonal basis.

3. The management of hunting through cooperative agreement with the state wildlife agency, wherein the state manages the hunting as a part of its program. This usually releases the landowners of liability, trespass, and other problems related to hunting activities. More detailed information on the above listed incentives in your particular area can be obtained by consulting your state wildlife agency.

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