

Providing Wildlife Cover¹

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Food, water, space and cover are the four essential elements of wildlife habitat. Cover is considered any place an animal can use for living space and can be easily provided by forest landowners. Components of cover include all forms of vegetation and any physical entities such as brush piles, fallen logs, snags, and/or tree cavities. Because the position, height and physical structure of these components greatly influence habitat quality, manipulation of these same elements through planting, cutting, burning and grazing can have positive or negative effects depending on how they are implemented and what species of wildlife you are targeting.

Some animals are more selective or specialized than others about their cover requirements. For example, opossums will live just about anywhere, including urban areas, whereas bobwhite quail prefer specific habitat types – frequently burned open woodlands and old field sites with small, scattered patches of dense shrubs or hardwoods for escape cover. Cover requirements for any particular species will also vary according to season and stage of the animal's life cycle. The type of cover you provide should be influenced by the type of wildlife that frequent your property or those that you would like to

attract. In many cases the cover requirements for one species overlap with those of another. In general, a mixture of shrubs, woodland, and small openings provides more habitat diversity than a single block of even-aged timber. A key to encouraging the greatest variety of wildlife species on your property is diversification and intermixing of cover components over the entire property.

Nesting, Hiding and Escape Cover

The success of any wildlife population often depends on providing the appropriate cover components associated with nesting, foraging, brood rearing and escape. There are generally four ways to provide for or improve these habitat elements on your property:

1. ***Permanent openings*** are areas where the ground is covered with a mixture of grasses and other herbaceous (non-woody) plants that are important for escape, nesting, brood rearing, and food for a variety of birds and mammals such as cottontail rabbits and broods of quail, turkey and songbirds. Openings can be created during routine silvicultural treatments such as thinnings or laid out prior to initial reforestation. Size and shape can vary, but linear openings, ranging

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from 1/4 acre to several acres are considered optimum. Periodic maintenance will be required to minimize encroachment of woody vegetation. This can be accomplished using a combination of mowing, burning and/or disking. If desired, all or portions of these openings can be planted to annuals or perennials. Plantings should be compatible with available soils and the needs of featured wildlife species.

2. **Shrub/Seedling areas** are valuable as nesting cover, escape cover and a food source for many birds and mammals. Allow some areas of young trees and shrubs across your property to grow more densely than silvicultural guidelines for fiber production might dictate. If you are managing young planted pines, leave several untreated (no herbicide or mowing) strips every 5-10 rows, depending on the species of wildlife you are targeting for management.
3. **Brush Piles** provide cover for small birds and mammals. Creating brush piles can also assist with excessive woody debris after logging. Brush piles left for wildlife should be stacked so as to provide for animal movement within the piles. The most beneficial arrangement is that with large logs at the bottom and smaller limbs on top.
4. **Edges:** Brood cover for many bird species is found along forest edges: areas where two or more types of vegetation meet. For example, the area where an open pine forest meets a field, hardwood hammock or cypress pond is an edge. Edges also serve as important food sources. If artificially created around open fields, edge plantings should be at least 20 feet wide and usually contain taller plants than adjacent open areas. Sometimes the only action needed to establish a stand of shrubs, vines, and other wildlife food plants along an edge is to cut existing trees and let succession run its course. Once established, periodic burning or mowing can be used to maintain the quality and composition of this cover component. A unique and inexpensive way to seed these areas is to plow the strip, then stretch a wire or cord between poles along its center. Birds resting on the wire will drop seeds to revegetate the strip.

The disadvantage of this method is the lack of control over species composition.

Although edges are desirable habitat for many species, they are detrimental for others that require large, unbroken areas of mature forest for cover. Consult with a wildlife professional to see if edges will benefit the species you wish to manage for.

Nest Cavities

Cavities or holes in trees are used as nesting sites by at least 25 bird species in Florida including woodpeckers, Carolina wrens, chickadees, brown-headed nuthatches, flickers, owls, titmice, warblers, and bluebirds; as well as several species of mammals, reptiles and amphibians. Good nest sites may already exist on your property and you should be aware of these so they continue to benefit cavity-using wildlife species.

One of the most important naturally occurring nest cavity sites is the *snag*. A snag is a standing dead or dying tree suitable as a perch or nest site for cavity-using birds and mammals. Snags provide both food and cover making them very important to the distribution and abundance of many wildlife species. Woodpeckers and other small birds feed on insects that use snags, and raptors frequently use snags as hunting perches. Songbirds occupying edge or open habitats use snags as singing perches. Woodpeckers use resonant undecayed portions of snags as drumming sites for territorial advertisement. The value of woodpeckers cannot be understated as research has shown that the presence of four different species of woodpeckers can result in the elimination of about 65% of adult southern pine beetles. Birds, in general, consume a large number and variety of insects, providing some degree of biological control associated with bark beetle outbreaks. Snags are produced naturally by fire, disease, lightning, flooding, and drought. If you do not have snags on your property, you can girdle several trees and leave them standing to become snags. Cavity nesting birds depend on trees with fungal heart rots because such trees have softened heartwood allowing easier excavation. Suitable nest site conditions are often indicated by the following snag characteristics:

- Fungal conks (fruiting bodies) of heartrot species
- Dead branch sites
- Old wounds on trees
- Discolored or soft, decayed wood in increment borer borings
- Existing woodpecker holes or cavities
- Obvious dead portions of trees

When harvesting timber using even-aged reproduction methods (i.e., clearcuts, shelterwood and seed tree) leave at least three suitable snags for every 400 feet of edge. Snags should be within 50 feet of the edge. An average of 3-5 snags left per acre is a good rule of thumb. Snags, on average, stand for 4 years and then fall, so it may be necessary to girdle 3-5 trees per acre every 4 years or so.

Other natural nest sites may be found in or near wetlands or ponds. Waterfowl, such as wood ducks, often use snags or natural cavities adjacent to wetlands for nest sites. These areas should be protected from fire, timber harvest or destructive forces when feasible.

Artificial Nest Sites

There are a variety of nest boxes and other structures that are relatively easy to assemble. These can be placed in trees or around ponds and marshes when natural cavities or platforms are in short supply. Contact the Florida Fish and Wildlife Conservation Commission at 904-758-0525 for information on design and placement of nest structures for the species you are interested in. Regardless of the type of nesting structure selected, the use of a predator guard and annual renovation is the key to success with any nest box project. The University of Florida Department of Wildlife Ecology and Conservation and Missouri's Department of Conservation provide detailed, on-line instructions on building a variety of nest boxes and other structures for wildlife. See their respective Web sites at: edis.ifas.ufl.edu/UW058, www.conservation.state.mo.us/nathis/woodwork/.

Travel Corridors

Another important factor affecting the success of wildlife populations on a property is the presence of travel corridors. Many animals require large strips of continuous habitat in which to travel securely from one area to another. Corridors may be riparian zones along streams, drains or rivers, old grown-over fence lines, or other strips of vegetation that connect larger blocks of habitat across a landscape. Corridors need to be wide enough to provide shade and concealment for both small and large animals. They are important on both individual properties and on a larger regional scale where the term "corridor" refers to a major vegetation connection between large, but separated, forest ecosystems. The latter are especially important as our regional landscapes become fragmented by roads, urban development, and agricultural and industrial activities.

Conclusion

If you wish to incorporate wildlife into your management objectives there are some points to consider before making final decisions. One of the most fundamental goals of wildlife management anywhere is to maintain or restore native populations. The word 'native' is used loosely here because of the dramatic changes that have taken place in the Florida landscape since it was first established as a territory in the early 1820's. Put practically, management should favor plant and animal species that are best suited and adapted to the site. It is always a good idea to avoid exotic plants and animals because they have the potential to disrupt the balance of native communities. Also, try to plant two or more species of trees to compliment the biological diversity you already have on your property. Pines and hardwoods, though not always economically compatible, are very good combinations for creating habitat diversity and increasing the types of cover and food available for wildlife.

Various plant and animal species are associated with different stages of plant succession or utilize different stages throughout their life cycle. Balancing the age structure of a forest accomplishes two objectives: (1) sustained yield of forest products, and (2) diverse wildlife habitat and animals. Since

wildlife habitat and timber have some differing managerial requirements, a small amount of timber production may be compromised in order to meet wildlife habitat objectives. However, these trade-offs can be minimized by adjusting the timing and placement of silvicultural practices to benefit wildlife and by setting aside for wildlife areas where timber production would likely not be cost effective (e.g., hardwood swamps). As always, seek the help and advice of professionals so you can take the most cost-efficient route to meeting your objectives.

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