

Gray Squirrel Management

► Gray squirrels are an ecologically important species in Alabama. Their food caching is an important part of seed dispersal and propagation. Gray squirrels are also popular among wildlife viewing enthusiasts and as a game species. Promoting mast-producing trees will not only provide food for gray squirrels, but also potential nesting locations.

Tree squirrels are common Alabama mammals. Three species of tree squirrels occur in our state: the flying squirrel (*Glaucomys volans*), the fox squirrel (*Sciurus niger*), and the gray squirrel (*Sciurus carolinensis*). Of the three, the gray squirrel attracts the most interest. It is numerous and is found statewide, from deep forests to large cities.

The gray squirrel is appreciated by some and hated by others. Hunters appreciate the gray squirrel as a game species. People who enjoy just watching wildlife appreciate the gray squirrel because it is readily visible and adapts well to the presence of people. Some bird-feeding enthusiasts curse the squirrel for its feeder-robbing habits. The gray squirrel competes with pecan producers for a cash crop.

Life History

Breeding Biology

Gray squirrels usually produce two litters of young per year. Breeding peaks in January and June, and gestation normally lasts about 44 days. Litters are usually born in late February to early March and July to August. Adult females usually have larger litters than yearling females, and summer litters are usually larger than winter litters. The average number of young per litter is three.

At birth, gray squirrels are very small, naked, blind, deaf, and helpless. At 10 days of age, the nestling gray squirrel begins to grow hair. At about 3 weeks, the ears open and the lower front teeth begin to appear. The upper front teeth appear at 5 weeks, and the eyes open. Weaning occurs between 7 and 12 weeks of age. In general, the growth and development of young gray squirrels is very slow compared to other mammals of similar size.

At about the time gray squirrels are weaned, trees are producing acorns in the fall or buds are swelling in the spring. These two items make good food for young gray squirrels.



Feeding

Gray squirrels are diurnal, meaning they are most active throughout the day. They can be found foraging for food just before daylight, for several hours into the morning, and during the last several hours of late afternoon until dusk. Bad weather can change these regular patterns.

Gray squirrels usually feed on only one or two types of food at a time. They will also bury (cache) nuts and acorns in the fall and then dig them up and eat them in the winter and spring. A list of important food sources for squirrels is shown on page 2.

Nests and Dens

Gray squirrels use leaf and twig nests as well as dens in tree cavities. Leaf nests are often cooler in the summer and temporary structures, seldom used longer than one season. Dens are often used for many years. Dens offer protection from cold and wet weather and safety from predators and are often preferred over leaf nests. Tree dens are necessary to maintain high gray squirrel populations.

Gray Squirrel Management

The best gray squirrel habitat consists of mature, mixed oak and hickory forests. The best management for gray squirrels is to provide as many mature stands of acorn- and nut-producing trees as possible. Large, extensive hardwood forests are most desirable for gray squirrel management, but smaller stands can be successfully managed as well. Woodlots as small as 5 to 10 acres can support one to five gray squirrels per acre.

Some characteristics are essential for good gray squirrel habitat. To produce the maximum number of gray squirrels, the habitat should contain hard mast, seasonal foods, and nest sites.

Hard Mast

Hard mast is another name for a nut crop such as acorns, hickory nuts, or beech nuts. A large supply of hard-mast-producing trees is essential. These trees must be of the proper age to produce mast. Generally, trees have to be 25 to 30 years old to produce nuts.

Oaks, hickory, and beech do not produce a good crop of nuts each year. Because of this tendency, it is good to have a mix of these species and different types of each species to guard against a mast failure.

Seasonal Foods

Gray squirrels eat a wide variety of seasonal plant foods. Learn to recognize these plants so they can be saved during construction, wood cutting, or other forest activities. A list of the seasonal foods squirrels seem to prefer is shown to the right.

Nest Sites

Try to provide two to six good den sites per acre. Research shows that gray squirrels rarely use more than 50 percent of available cavity sites, so you should probably double these figures. Also, one or two grape or other climbing vines should be maintained as potential sites for leaf nests.

A variety of tree species should be saved for den trees, since different types decay at different rates. A list of tree species suitable for squirrel dens is shown to the right. A good den may take 8 to 10 years to form and might have a useful life of 10 to 20 years.

Artificial nest boxes for squirrels are easy and fun to build. They are a good substitute for or supplement to natural cavities. Plans and instructions for building and installing a squirrel box are shown at the end of this publication.

Timber Management

Stands of oaks and hickories should be thinned periodically to promote crown vigor of the remaining trees. Small selection cuts that create openings of 0.25 to 1 acre are less disruptive to squirrel populations than clearcuts. Clearcut areas should be kept small (20 acres) and narrow (500 feet).

Important Food Items for Squirrels

Hickory	Red mulberry
Oak	Black walnut
Beech	Maple
Fungi	Flowering dogwood
Animal matter	Corn
Yellow poplar	

Seasonal Foods Squirrels Prefer

American hornbeam	Hackberry
Wild plum	Hophornbeam
Ash	Magnolia
Bald cypress	Osage orange
Basswood	Palmetto
Blackberry	Persimmon
Black cherry	Pine
Blueberry	Sweetgum
Carolina silverbell	Sycamore
Chinquapin	Tupelo gum
Grape	Witchhazel
Greenbrier	

Common Cavity Trees Used for Squirrel Dens

Ash	Maple
Bald cypress	Oak
Beech	Sassafras
Blackgum	Sweetgum
Hickory	Sycamore

When a stand is thinned, 40 to 60 percent of the management unit should be left in trees of mast-producing age (25 to 30 years old). Young stands should be scattered among older stands. If clearcuts must be greater than 20 acres, retain travel lanes of mature trees that are 50 to 100 yards wide until the young trees in the clearcut are old enough to produce mast.

Building a Squirrel Box

Materials and Construction

A squirrel box can be constructed to create an artificial den when cavities are limited. For a squirrel box, any type of 1-inch-thick wood will work, but rough-sawn cedar or cypress is best because these types are weather-resistant. Treated wood also works well.

If you use other types of wood or plywood, paint the outside. A light brown or gray color is best. Plans for constructing the box are shown on the next page.

Installation

Place a 1-inch layer of dry leaves in the wire floor and mount the box 20 to 25 feet above the ground on the trunk of a tree. Preferred tree species for squirrel nesting boxes are oaks and hickories. Drive one 40-penny non-ferrous nail (aluminum nails are best) into the tree and suspend the box by the metal hanger. Drive the second nail through the slot in the batten so that the nail helps to support the weight of the box.

Leave a 1- to 2-inch clearance between the nailheads and the top and bottom of the batten strip. This space will allow for tree growth. Make sure that the box can be easily lifted from the supporting nails.

Pull the wire tight around the box and the tree trunk and twist the ends together. The wire should be tight enough to prevent the box from moving in the wind, but loose enough to untwist as the tree grows.

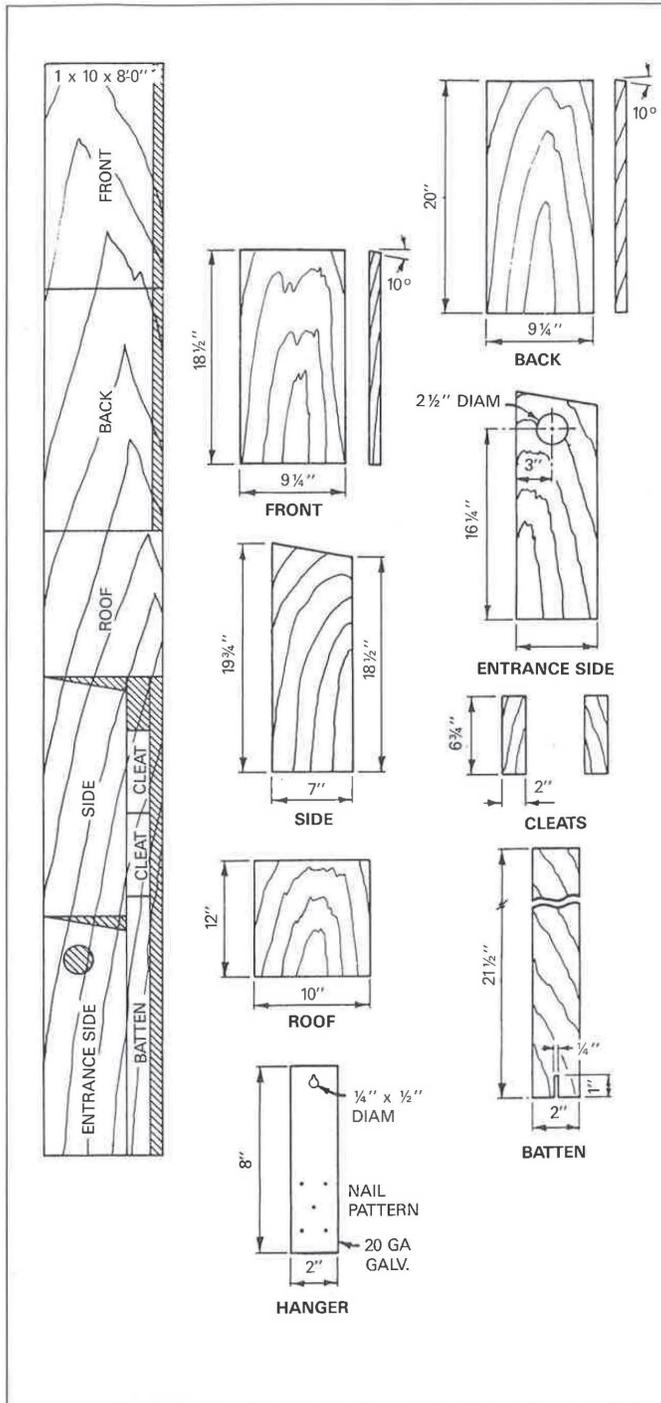


Figure 1. Construction details for a wooden nest box for gray and fox squirrels (after Barkalow and Soots, 1965b).

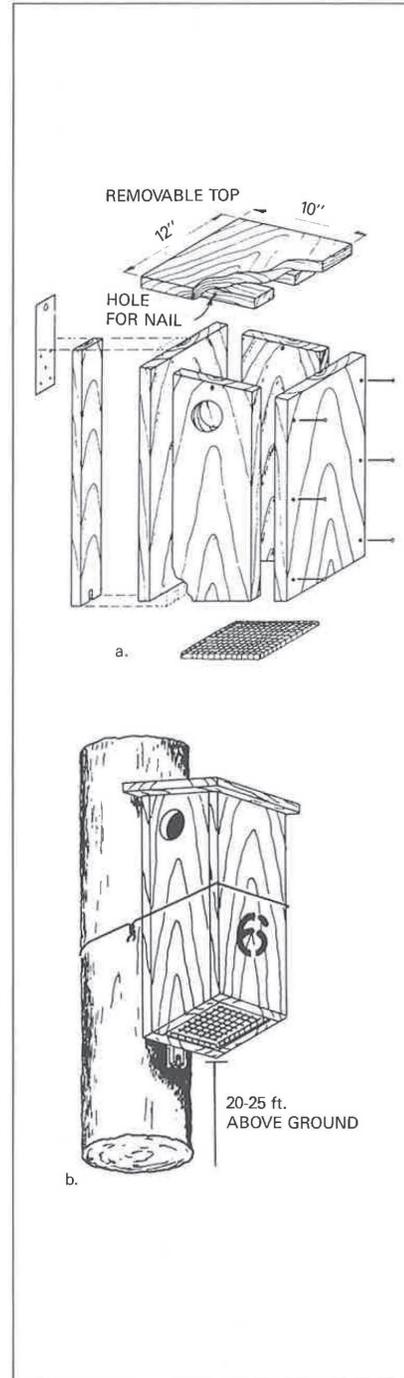


Figure 2. Assembly and installation details for a wooden nest box for squirrels (after Barkalow and Soots, 1965b).



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