

SQUIRRELS



Squirrels are wonderful subjects for nature study, photography, wildlife observation, and a favorite pursuit of small game hunters. They also inadvertently help plant forests because the nuts they bury in fall often sprout into seedlings the following spring. There are six species of squirrels in Michigan. The red and eastern gray squirrels can be found in both Michigan Peninsulas, whereas the southern flying, and eastern fox reside only in the Lower Peninsula. Lastly, the northern flying squirrel can be found in the northern Lower Peninsula and entire Upper Peninsula. These squirrel species have a variety of habitats and are important parts of our natural heritage. However, this chapter will focus mainly on gray and fox squirrels.

Profiles of the Species

The **eastern gray squirrel** occupies most of eastern North America within mature mixed hard

wood and conifer forests and was abundant in Michigan when the first settlers arrived. The gray squirrel has an overall silvery gray body, a generally white belly, and tail hairs that are white-tipped. Grays are eight to 10 inches long (minus the tail) and weigh up to one and a half pounds. Black squirrels are simply melanistic phases of the gray squirrels. The two commonly interbreed and litters may contain both color types. The gray squirrel lives most of its life in and around a single nest tree moving no more than 300 yards in a season and is the least social of all tree squirrels.

At one and a half to two and a half pounds, the **fox squirrel** is heavier than the gray and is also longer at 10 to 15 inches (minus the tail). The fox has a buff- to orange-colored belly, a back of tawny brown, and a long plumed tail of black-brown with rust-tipped guard hairs. Fox squirrels prefer small woodlots of mature trees throughout the Lower Peninsula. Before 1850, the fox squirrel was concentrated around grassland openings in oak forests of southwest Lower Michigan. As the forests were cleared for agriculture and timber, fox squirrels used fence rows as travel routes to expand their range. By 1925 the species was found throughout the Lower Peninsula.

Although both species eat the nuts and fruit of many trees and

shrubs, rarely do fox and gray squirrels share the same habitat. Grays like dense stands of timber and will frequent river bottoms of sycamore, swamp white oak, black maple, pin oak, ironwood, and elm. Fox squirrels prefer farm country and are attracted to woodlands next to farm fields. Because of their habitat preferences, they are found in different parts of the state. Today, seventy percent of Michigan's fox squirrels live in the southern Lower Peninsula. By contrast, gray squirrels mainly live in the northern Lower Peninsula. Those that reside in southern Lower Michigan customarily do so in city parks and suburbs with mature trees.

The **red squirrel** lives throughout the state. This small species prefers a forest of conifers or conifers mixed with hardwoods, where it can find both hardwood mast (nuts) and pine seeds.

Few people have seen a **flying squirrel** because they are active only at night. Both northern and southern flying squirrels are found



Flying Squirrel

in Michigan. They are more common than many people think, especially in southern Michigan, and can be attracted to bird feeders placed in woodlots.

The northern flying squirrel thrives in heavily wooded areas containing mixed conifers and northern hardwoods having mature growth. The southern flying squirrel requires trees that produce fruit or nuts.

Life History

The life histories that follow are for fox and gray squirrels, which may live out their lives on only five to 10 acres of habitat if their needs are met. The management prescriptions below are keyed to these two species although red squirrels and flying squirrels may also benefit.

These squirrels mate from January to March and again from June to July, and the gestation period is 44 days. Females, two years of age and older, may bear two litters each year. Males begin to reproduce at 18 months old. In a typical year, about 60 percent of the fall population will be young that were born that year.

Litter size and frequency depend on available food supplies - the less food, the fewer and smaller the litter. A typical litter contains three or four offspring. Nesting dens are found in tree cavities, which the female lines with feathers, moss, shredded bark, and other soft plant materials.

The young are born hairless with closed eyes and ears. Hair begins to grow on their back in about one week and the eyes open at 35 days. At about two months

old, the young may begin exploring outside the den. At this time if the weather is warm, the female may build a leaf nest high in the tree canopy among forked branches. At three months of age, young squirrels can survive on their own, and at 18 weeks they begin building their own leaf nests. These circular leaf nests are compact and waterproof and may be built in both leaf-bearing and evergreen trees.



A Squirrel Nest of Leaves and Twigs

Squirrels forage in tree tops and on the ground. A social hierarchy determines which squirrels get the preferred foods, best nest sites, and mates. Each animal in the local population will have a rank, ranging from the dominant male and female, to the newborn. When food supplies are abundant, squirrels may feed together. During severe winter weather, some even share winter dens which means they can share body warmth. Normally, though, they gather in groups only during mating season.

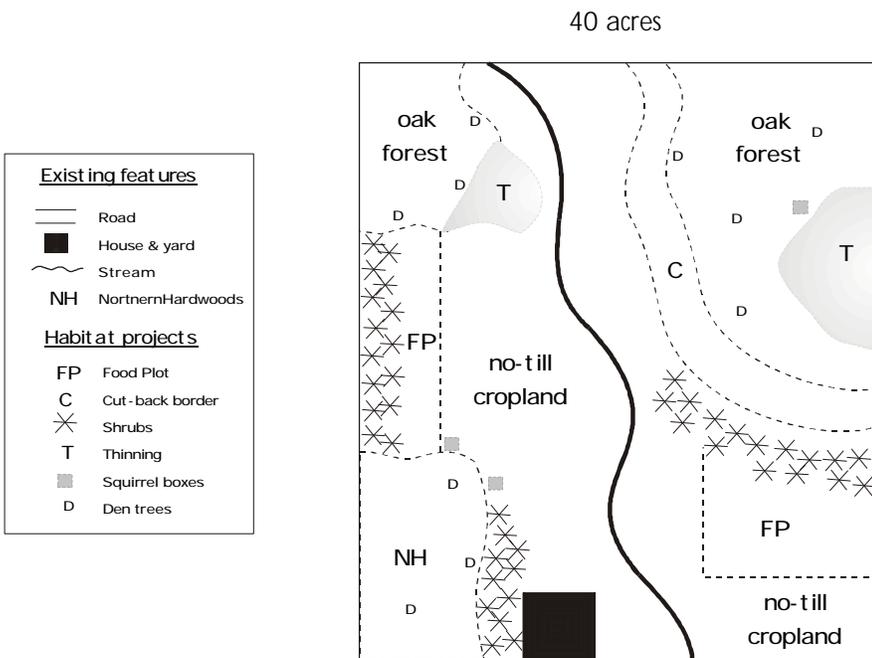
Management Considerations

A consistent food supply and a selection of good den sites in mature trees will attract squirrels to

your land. Although they are omnivorous and opportunistic, squirrels nevertheless have preferred foods. Important hard mast species include the nuts of white oak, red oak, black oak, beech, hickory, walnut, bur oak, pin oak, and butternut. Fox squirrels in particular like walnuts and hickory nuts. The gray squirrel's diet is more varied. Both species, however, also enjoy corn, sunflowers, and soybeans. Squirrels eat the seeds of maple, ash, and tuliptree. They like the soft mast of flowering dogwood, junberries, thornapples, apples, seasonal mushrooms, the buds and catkins of various shrubs, green grasses, and the leaves of legumes in spring. Sometimes they will eat beetles, salamanders, bird eggs, and nestlings. When very hungry, they will consume the bark and sap of sugar maple.

Michigan is at the squirrels' northern range, and it is not unusual for squirrels to die during especially severe winters. About 60 percent live less than one year, but this high mortality rate is also due to predation. Leaving standing corn or soybeans next to woodlots, where they can escape if danger appears, will help them get through lean times. Planting persistent fruit-bearing trees and shrubs along the sunny edge of forest openings or in woodlots will not only help squirrels but other wildlife too, such as grouse, deer, rabbits, raccoons and certain kinds of songbirds. Migrating songbirds, especially thrushes, some vireos and warblers, and finches, will feed extensively on these trees and shrubs. In a similar manner, cutting all trees greater than one inch in diameter in a 30 foot wide strip along the south or west side of a woodlot will lead to the regenera-

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This map is an example that demonstrates the many management options discussed throughout this chapter. The option(s) you choose should depend not only on your goals, but the location, condition, and present use of your land.

(nuts and acorns) producing trees should be left to provide valuable mast for wildlife. Leave trees with grape vines and/or cavities for wildlife at the rate of one to three per acre. Also, establishing brush-piles will provide cover; use materials removed during improvement work. Brush piles should be at least 15 feet wide and five feet high. More information is available in the **Eastern Cottontail Rabbit** chapter.

Concerns

No matter how we manage our property for wildlife, our decisions will always have impacts. When squirrels enter homes and garages,

they tend to annoy homeowners and can create health and safety problems. In farming areas, they sometimes cause damage to corn and other grain crops. Encouraging squirrels may also result in more predation of bird nests or create problems at bird feeders. Lovers of corn and sunflower seeds, squirrels will travel over a quarter-mile from den sites to backyard bird feeders. Here, they can dominate smaller wildlife and sometimes damage feeding structures and frighten away songbirds. One solution is to install squirrel guards (baffles) on the feeders; another is to offer alternative food sources.

When managing your land for squirrels will deter such species as deer and grouse, which could be considered positive or negative. However, some bird species will benefit from squirrel management - such as pileated, red-bellied, and red-headed woodpeckers, thrushes, many species of warblers and vireos, and wild turkeys.

Because these potential problems are usually limited, most landowners welcome the squirrel as an important part of the wildlife community. They add hours of viewing pleasure to ones backyard or woodlot.



FOR ADDITIONAL CHAPTERS CONTACT:

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Private Land Partnerships: This partnership was formed between both private and public organizations in order to address private lands wildlife issues. Individuals share resources, information and expertise. This landowner's guide has been a combined effort between these groups working towards one goal: Natural Resources Education. We hope this guide provides you with the knowledge and the motivation to make positive changes for our environment.

FOR ADDITIONAL ASSISTANCE: CONTACT YOUR LOCAL CONSERVATION DISTRICT