

TREE SQUIRRELS IN WISCONSIN: Benefits and Problems



Five species of tree squirrels live in Wisconsin: the gray squirrel, fox squirrel, red squirrel, and two species of flying squirrel. All five are popular with people who enjoy watching wildlife, although flying squirrels, because of their nocturnal habits, are rarely seen. As abundant animals low in the food chain, squirrels are important prey species for many mammalian and avian predators. Gray and fox squirrels are popular small-game animals.

Squirrels also raid gardens, fields and birdfeeders, invade houses and other buildings, cause power outages and create other mischief.

This bulletin will introduce Wisconsin's tree squirrels and describe various management techniques.

GRAY SQUIRREL (*Sciurus carolinensis*)

The gray squirrel is 18 to 21 inches long, including its 8- to 10-inch tail, and weighs from 16 to 28 ounces. The gray squirrel derives its name from its grayish coat, which may vary from black to white. The black color phase or a golden-yellow "Lady Isabella" gray squirrel can be a source of great interest. Despite the color difference, black or yellow squirrels are perfectly normal "gray" squirrels. The bushy tail of a typical gray "gray" squirrel is banded with brown and black hairs with white tips. They frequently have a tuft of white hair behind their ears (especially during winter), and the chin, throat and belly are also white. There are no size or color differences between sexes.

Gray squirrels live throughout Wisconsin in virtually every wooded habitat type, from urban and suburban to rural. They prefer mature hardwood forests where they feed on acorns, hickory nuts and walnuts. Gray squirrels are opportunistic foragers. They eat a wide array of plants and fruits besides nuts, including corn, berries, apples, sap and fungi. Squirrels (and other rodents) frequently gnaw on shed deer antlers for calcium and other minerals. Feeders intended for birds provide abundant winter food for gray squirrels.

Gray squirrels that find or create access to buildings can be extremely destructive. Never knowingly harbor a squirrel in your attic or walls. They can extensively damage insulation and wiring.

FOX SQUIRREL (*Sciurus niger*)

The fox squirrel is the largest tree squirrel in Wisconsin. It is 20 to 22 inches long, including the tail, and weighs 24 to 32 ounces. It gets its name from its rusty brown coat, which is very similar to the hair color of a fox. The underside is pale yellow or orange-brown. Color variations are common and may even occur within the same woodlot. The fox squirrel's "grizzled" rusty brown appearance and size makes it easy to distinguish from a gray squirrel. Its brown and gray tail is very fluffy and lacks white-tipped hairs. The ears of a fox squirrel are rounded and shorter and wider than those of a gray squirrel. The sexes are similar in size and color.

Fox squirrels live in rural areas of mixed woods and farms throughout Wisconsin, but they are much more common in the southern part of the state. They prefer fencerows and oak-hickory woodlots, but can be found in swamp hardwoods and mixed upland hardwoods as well. Because they often forage away from the protective cover of trees, fox squirrels are frequently seen along roadsides. Fox squirrels are not as well adapted to urban areas, but they can be as troublesome as gray squirrels. Fox squirrels feed on acorns and other nuts, corn, and soybeans, but like grays, will adapt their diet to available foods.

RED SQUIRREL (*Tamiasciurus hudsonicus*)

Boomer, chatterbox, pine squirrel, chickaree — the red squirrel probably has more nicknames than any other Wisconsin tree squirrel. Red squirrels are only 11 to 14 inches long, including a 4- to 6-inch tail, and weigh 7 to 10 ounces. The red squirrel is easily identified by its small size, prominent ears, white eye

ring, and reddish coat. The bushy tail is cinnamon-buff in color and often has black-tipped hairs. During summer, a distinct black lateral line along each flank separates the brown upper coat from the white underparts. In winter, the coat becomes much brighter, the lateral line disappears, and the ears become conspicuously tufted. The sexes appear identical. Unlike gray and fox squirrels, color mutations in red squirrels are rare.

Red squirrels live in coniferous and mixed forests throughout the northern two-thirds of Wisconsin. Their southern limit extends to Sauk County, with a few records in the Madison area. Red squirrels feed primarily on pine seeds, although they will eat fruits, nuts, and berries along with mushrooms and other fungi. There is no mistaking the scolding chatter of a red squirrel as you enter its territory. Occasionally, red squirrels enter attics or empty cabins.

FLYING SQUIRRELS

(*Glaucomys sabrinus* — northern flying squirrel; *Glaucomys volans* — southern flying squirrel)

Flying squirrels are the smallest tree squirrels in Wisconsin. The northern species measures 10 to 13 inches in length, including a broad, flat 4- to 6-inch tail, and weighs 4 to 8 ounces. The southern flying squirrel is 8 to 10 inches long and weighs only 2.5 to 3.5 ounces! You can easily distinguish the two species by size and color. The northern flying squirrel is slightly redder on the upper body parts, and the hairs on its belly are slate colored with white tips. The southern species is more drab, with a completely white underside. Once again, the sexes appear identical in size and color.

The flying squirrel does *not* actually fly. It glides from tree to tree, from a high point to a lower one. A fold of skin extends along both flanks from its front legs (wrists) to its hind feet (ankles). When the animal leaps from a tree, it flattens its body and extends its limbs, which in turn opens its “flaps,” allowing the animal to glide downward and eventually land. The flying squirrel can glide for 150 feet or more, and can control its direction in flight with its flattened rudder-like tail!

Flying squirrels move awkwardly on the ground and can be overtaken by a person.

Flying squirrels are shy animals. Their nocturnal lifestyle keeps them virtually unknown to many people. The northern species lives in heavily wooded, mature-growth, hemlock-maple or hemlock-birch timber. The southern species prefers abandoned orchards and mature hardwood/conifer woodlots. They can also be found in parks and older suburban neighborhoods with mature vegetation. They feed on nuts, fruits, berries, and insects such as moths and beetles. They readily use bird feeders (and frequently cause mysterious overnight seed losses). Flying squirrels don’t create as many problems as the other tree squirrels, but they will move into attics, vacant cabins, or walls, and can do damage. During winter, flying squirrels often gather in communal dens. Woodcutters may find a dozen or more in a hollow tree cavity.

Their large eyes and soft, silky fur make flying squirrels quite attractive. You can increase your chances of seeing them by building nest boxes and floodlighting birdfeeders.

BREEDING/MATING

Tree squirrels in Wisconsin mate in mid- to late winter and again in early summer. Litter sizes are similar (Table 1). The exception is the northern flying squirrel, which bears only one litter per year.

Tree squirrels develop slowly compared to other rodents. The young are born naked and blind, with their ears closed. Flying squirrels have the smallest young (1/8 to 1/4 ounce), and fox and gray squirrels the largest (about 1/2 ounce). Fur develops during the first four weeks. The ears open at about four weeks, and by the sixth week, the eyes finally open. The young are weaned and on their own in two to three months.

Table 1. Reproduction of tree squirrels in Wisconsin^a

| | Mating Season | | Gestation Period (days) | Litter Size ^b | |
|-----------|---------------|---------|-------------------------|--------------------------|---------|
| | First | Second | | Range | Average |
| Gray | Jan/Feb | May/Jul | 44 to 45 | 2 to 5 | 3 |
| Fox | Jan/Feb | May/Jul | 44 to 45 | 1 to 6 | 3 |
| Red | Feb/Mar | Jun/Jul | 38 | 2 to 7 | 4 |
| S. flying | Feb/Mar | Jun/Jul | 40 | 2 to 6 | 3 |
| N. flying | Apr/May | — | 40 | 2 to 6 | 3 |

^aData from Jackson, H. T. 1961. Mammals of Wisconsin. University of Wisconsin Press, Madison. 504pp.

^bWeather, food supply, and the age and body condition of the female affect litter size.

SQUIRREL MANAGEMENT

ATTRACTING SQUIRRELS:

Despite occasional problems, most people enjoy having a few squirrels around the yard to watch. Feeding, housing, and habitat management can help you attract them.

Feeding is the easiest way to attract squirrels. Scatter shelled or cob field corn on the ground near trees or a bird feeder, or place the corn on a shallow feeding platform. You can buy squirrel feeders on which you hang or impale cob corn. Some of the more ingenious feeders require various squirrel acrobatics to get to the food.

Squirrels are fond of sunflower seeds and nuts, but nuts can get very expensive — especially when most end up buried rather than eaten. You can collect black walnuts, butternuts, hickory nuts or acorns in the fall and store them in mesh bags for later use as free squirrel food.

Nest boxes should be made of untreated wood or metal. Squirrels often destroy boxes made of plastic, plywood or particle board by gnawing on them. Extension publication NCR 338, *Shelves, Houses and Feeders for Birds & Mammals*, contains several plans for squirrel nest boxes.

Habitat management. Mature nut-bearing trees, dead, hollow trees and snags, and live trees with cavities caused by storm damage or disease are very attractive to squirrels, and should be preserved whenever possible. Many birds and mammals besides squirrels use snags as dens and nest sites. For safety reasons, you'll probably have to remove dead trees from urban backyards, but you can plant and encourage nut-bearing trees wherever possible.

DEALING WITH PROBLEMS:

Bird Feeders

Squirrels can be a real nuisance around bird feeders. They not only scare the birds away, but they can make a real mess as they scatter seeds and sunflower seed hulls. Several strategies can deter squirrels from bird feeders. Place a metal cone-type barrier around the feeder pole between the feeder and the ground. This prevents squirrels from climbing the pole to get to the feeder. Commercial baffles, barriers, and "squirrel-proof" poles are also available. Prune back branches on nearby trees so squirrels can't jump to the feeder, or move the feeder to a more open setting. If you just want to keep squirrels away from the feeder and not completely out of the yard, try placing an alternative food source (corn, for example) away from the feeder. This will allow birds

to use their feeder while the squirrels feed on the ground. See Extension publication G3176, *Bird Feeding: Tips for Beginners and Veterans*, for other ideas.

Tree Bark Stripping

Squirrels occasionally strip the bark off ornamental trees and shrubs. To stop this, wrap the tree trunks with metal sheeting or protect them with squirrel baffles, much as you would protect a bird feeder pole. Tree wrap keeps squirrels from gnawing on bark by keeping them out of the tree. Thus, all trees within branch-to-branch jumping distance must be wrapped. This method works well on trees near feeders or around your house. Prune back any trees near the house that could provide squirrels access to the roof. Remember to allow for tree growth when wrapping trees. If a continuous tree canopy allows squirrels easy movement, you'll have to find other ways to control them.

Building Entry

Squirrels can cause serious damage when they enter a building. They chew the insulation off electrical wires in attics and walls, creating fire hazards and potential shorts in electrical systems. They can make a mess of insulation as they use it for nesting material or make trails through it. Gnawing damage to siding and other structural components can also be extensive.

If they find their way into the living space of a house, squirrels tend to panic when approached. In a frantic attempt to escape they can knock over planters, dishes and other household items. They will often gnaw along window or door frames in an attempt to get out. If you ever have a squirrel in your home and you can't encourage it to exit via an open door or window, we recommend calling a qualified wildlife removal specialist. Haphazard pursuit with a broom can cause more damage than the squirrel would do!

Other Problems

Squirrels are also a major concern for power companies. In developed areas they often travel along overhead power lines. Occasionally, they short out transformers or even entire substations, leaving neighborhoods in the dark and the power company with costly repairs.

Squirrels can aggravate even the most patient gardener or farmer. Gray squirrels may damage flower and vegetable gardens by digging up bulbs and planted seeds, and eating mature fruits and grains. Fox and gray squirrels feed on newly planted corn in springtime and standing corn in late summer and fall. They also view a corn crib as a giant squirrel feeder.

All species of squirrels occasionally prey upon birds' nests. They may snatch an egg or nestling from an open nest, or enlarge the opening of a bird house in order to get at eggs or recently hatched chicks.

GENERAL CONTROL OPTIONS:

Exclusion

Squirrels enter houses via many natural or created openings. Common entry points include holes along the soffits where boards have rotted out, unscreened attic vents, uncapped chimneys, broken or open windows and doors, and electrical wire and utility pipe openings.

Never knowingly tolerate a squirrel in your house. Preventive maintenance is the best defense against unwelcome squirrels and other wildlife. Periodically inspect for potential entrances and make necessary repairs. (Make sure squirrels or other animals are out of the attic before sealing entrances. If you seal them in the attic, they can do even more damage trying to escape.) Cover the insides of attic vents and similar openings with 1/2-inch hardware cloth, repair rotten boards along soffits or behind eaves troughs, replace broken windows, cap chimneys, and fill the openings for electrical wires and utility pipes.

Shooting

You can shoot gray and fox squirrels during the open season, which generally runs the entire fall and early winter. The owner or occupant of any land can hunt squirrels all year on that land. Consult Wisconsin Department of Natural Resources regulations.

A .22-caliber rifle is ideal for shooting squirrels. A shotgun loaded with number 4, 6, or 8 shot will be more effective but may damage more meat. (Don't waste squirrels shot during a "control" program. They provide excellent table fare.) Many pellet and

BB guns don't have enough power for tough-skinned squirrels.

In developed areas, shooting may be prohibited or require special permission from a law enforcement office. Check first!

Toxicants

No toxicants (poisons) are registered for tree squirrel control in Wisconsin. It is illegal to use poisons for squirrel control.

Trapping

Trapping and removal is an excellent alternative, especially in urban and suburban settings. Try to capture the squirrels alive and relocate them. Wire cage-type traps sell for about \$25 to \$45. Check hardware stores, garden centers, mail order catalogs, or pest control companies that specialize in wildlife removal. The trap should measure about 9 x 9 x 24 inches. Set the trap near an entrance hole or area where you've seen the squirrel. Peanut butter or nuts are the best baits. Please be careful when trapping during the breeding season. Removing a mother squirrel is not a humane way to control the young left behind.

Squirrels can also be captured in a wooden-base, snap-type "rat" trap. Since this trap kills the squirrel or any other animal that gets caught in it, please use a live trap whenever possible.

As mentioned earlier, try not to seal a squirrel in your attic. Leave a trap set in the attic for a couple of days after repairing the entrance hole. This way, any squirrel accidentally sealed in the attic will be trapped before it can do any more damage. If you would rather not trap the squirrel yourself, check the yellow pages under "pests" for a wildlife control specialist in your area. These contractors are usually competent and reasonably priced.

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