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Identifying Fox Squirrels and Their Damage in Your Yard

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Figure 1. Fox squirrels have reddish fur, and spend most of their time in trees.

Native to the eastern United States, fox squirrels (*Sciurus niger*; Figure 1) were first documented in Utah in 2011. It is unknown how fox squirrels made their way into Utah; however, it is possible they followed riparian corridors (areas along rivers, where trees often grow) through Colorado into Utah and were only detected once their populations grew in number. Since the Utah Natural Heritage Program began tracking them, there have been over 500 observations of this species, predominantly around Salt Lake City and the Wasatch Front. Fox squirrels are the largest tree squirrel in the

US (17–28 inches, and 17.5–37.5 ounces). They are easily distinguished from our native tree squirrel, the red squirrel (*Tamiasciurus hudsonicus*; Figure 2), by their larger size, and orange-red fur on their tails and undersides.



Figure 2. Red squirrels are small with white bellies, and spend most of their time in trees.

Conversely, red squirrels are the smallest tree squirrels (10–15 inches, 5–8 ounces), with greyish red bodies and tails and white bellies.

Although fox squirrels are closer in size to our native rock squirrels (*Spermophilus variegatus*; Figure 3), rock squirrels are greyish-brown and are usually found on the ground in rocky terrain and canyons. A



Figure 3. Rock squirrels are brownish-grey, and spend most of their time on the ground.

distinct difference between rock and fox squirrels is where they nest and forage.

Like their name suggests, rock squirrels burrow in rocky cliffs and boulder piles, while fox squirrels are primarily arboreal (live in trees). Although fox squirrels can be found foraging on the ground, where they dig up nuts that they have stored, they nest, and spend a majority of their time in trees.

They will also quickly scurry up the nearest tree when threatened.

Diet and Habitat

In their native range, fox squirrels live in deciduous forests, where they can readily find a diet of nuts, buds, and berries. Along the urban Wasatch Front, they have found a home among the residential trees, such as oaks, hickories, and maples that provide storable food. Coniferous trees such as pine and spruce provide shelter and food throughout the winter. They prefer to nest in tree cavities; however, when none are available, they build nests using cut branches of the tree. They often maintain three to six active nests in case one gets disturbed by predators, invaded by lice or fleas, or destroyed by weather. Fox squirrels produce litters mostly during February through April. In warmer climates they can have a second litter in the fall.

Problems with Fox Squirrels

Because fox squirrels readily adapt to living among human developments such as housing, farms, and orchards, they can become pests. They harvest nuts, berries, and fruit from residential trees and commercial operations. Also, squirrels may



Figure 4. In winter or when food is scarce, fox squirrels will eat tree bark, sometimes causing damage to the trees.

strip bark from trees during the winter (Figure 4). This can be quite extensive and cause serious damage to shade trees. In residential areas, fox squirrels can damage lawns when they bury and subsequently dig up the nuts they have stored during the winter. Finally, squirrels are known to chew on sprinkler heads, utility boxes, and cable wires, damaging residential and agricultural irrigation systems.

Squirrel Control

Methods to manage squirrels to minimize their damage fall under the following categories: exclusion, habitat modification, repellants, trapping, and shooting or hunting.

Exclusion

Fox squirrels may be excluded from garden boxes by installing a wire mesh fence around the plot. The fence should be at least 3 feet high. Additionally, the wire mesh fence should continue into the ground another 6 inches to discourage a squirrel from digging into the garden box. To discourage entry via climbing, the top of the fence should bend out at a 90-degree angle and extend an additional 6 inches.



Figure 5. A fabric or mesh cover placed over a garden can protect vegetation from squirrel damage. Photo Credit: Candace Schaible

Another option is to create a wire or cloth mesh “cover” to temporarily place over your garden crops when the vegetables are ripening and most vulnerable to squirrels. In this example (Figure 5), the owner fashioned hoops over the garden box so that they could exchange different cover types throughout the year for protection from pests, including netting.

To temporarily exclude a squirrel from a fruit tree, covering the tree with netting, such as used to prevent bird damage, may prove successful as the fruit ripens. Squirrels can chew through the netting, but if other food is available, they may be dissuaded from the fruit trees for a time. A word of caution: check the netting periodically each day, to ensure that wildlife does not become entangled in the netting.



Figure 6. An aluminum barrier to prevent squirrels from climbing a tree.

There has been some success with wrapping the base of a tree with a smooth metal, such as aluminum sheeting (Figure 6). For this method to be successful, access to the tree from above, such as

by jumping from another tree, overhead wires, or house, cannot be possible. For example, this method could work on trees that are isolated in the center of a yard or spaced 20 feet apart. Fox squirrels can jump up to 9 feet off the ground; therefore, a barrier such as the one pictured, should be placed over that span at about 7-9 feet from

the base of the tree, and be 2.5 feet wide (wider than a squirrel 2 feet long can reach).

Exclusion from trees is virtually impossible because of squirrels’ ability to climb and jump from trees and human structures, including telephone and power lines. To reduce access to trees, one could trim branches so they do not grow close to power lines or houses, thus restricting squirrel movement.

Non-lethal Trapping

Non-lethal trapping is not an effective method of managing squirrels and their damage. It is illegal in Utah to trap a squirrel and then move the squirrel to another location. This is illegal because fox squirrels carry diseases that may spread into neighboring areas. Also, they are considered agricultural pests, and thus, we don’t want their populations to spread.

Repellants and Frightening Devices

Repellants, frightening devices, and similar products may succeed in reducing squirrel activity around your house or garden for a limited time. However, research suggests that squirrels will acclimate to these devices and return to their initial behavior within a week or two.

Tree-mounted Kill Traps

Fox squirrels are not native to Utah, and therefore are not a regulated game species at this time. Therefore, it is legal to use lethal traps to control squirrels. ***However, one must be careful to set the trap in such a way that no native squirrel species, bats, or any avian species, will be captured or harmed.*** There are many squirrel traps commercially available, and it is best to use a trap specifically designed to kill squirrels,

particularly large-bodied squirrels like fox squirrels.

To capture fox squirrels, position a trap in a tree, roof, or eaves, where the squirrel is often seen (Figure 7). Keeping traps off the ground will minimize non-target hazards. Traps positioned horizontally on a platform or along a branch will be the most successful at trapping fox squirrels. Positioning the trap on a platform will also reduce non-target hazards to perching birds.



Figure 7. A squirrel tube trap positioned off the ground to reduce risk to other animals or humans. Photo Credit: Derek Braeden

Tube traps and body-gripping traps are two common, commercial-grade traps successfully proven to lethally trap fox squirrels in an efficient, humane, manner.

Tube traps are a baited trap with a spring-loaded metal bar that dislocates the head from the spine or crushes the body when triggered. The spring-loaded device is located midway in the tube, and is therefore comparatively safe to use around children and pets. There are tube traps commercially available and specifically designed for mounting on a house or tree, such as the Kania 2000™ and the Ouell 10™.

Bodygrip traps do not require bait, but do require a bit of know-how to use. These traps are activated when the squirrel runs through the device, touching a trigger along

the side. This trigger causes the spring-loaded trap to collapse, instantly crushing the abdomen of the squirrel. To make body-gripping traps safer when used in areas with children or pets nearby, place them in a handmade wooden housing (tunnel).

For more information on how to responsibly use a bodygrip trap, please read the American Fish and Wildlife Association's guide to body-gripping traps found at <https://tinyurl.com/y7vnehem>.

***Note.** The presentation of specific lethal traps is meant only to provide example, and does not represent an endorsement of the products listed, or an exclusion of those not listed.*

Poison

There are no poisons registered for legal use against fox squirrels in Utah. Do not use poisons registered for use on another species to attempt to lethally control fox squirrels. While you may be able to buy products online that state that they are suitable for use, they are not legal in the state of Utah. Please read all pesticide labels carefully prior to purchase or use.

Shooting and Hunting of Squirrels

In many U.S. states, hunting fox squirrels or shooting fox squirrels is legal within the designated hunting season. In Utah, a hunting season has not been designated for fox squirrels. Therefore, it is legal to shoot fox squirrels at any time during the year. However, keep in mind that most fox squirrels live in and around urban and suburban areas. It is illegal to use a firearm within any city limits in the state of Utah. It is also illegal to discharge a firearm in most state parks in Utah. Therefore, this option is not practical in most damage-control situations.

Have you seen fox squirrels around your home? Aid the Utah Natural Heritage Program's initiative to document and map fox squirrel distribution by following this link: <https://nhmu.utah.edu/programs/utah-fox-squirrels>.

Do you need help controlling fox squirrels in your yard? Find licensed nuisance control officers, specially trained to assist homeowners with urban wildlife issues, by visiting this link: <https://wildlife.utah.gov/discover/utah-wildlife/107-discover/610-wildlife-rehabilitators-and-nuisance-control.html>.

You can also Contact Utah State University's wildlife biologists for more detailed information.

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References

- Frey, J. K., Iglesias, J., & Herman, K. (2013). Eastern fox squirrel (*Sciurus niger*): new threat to pecan orchards in far west Texas. *Western North American Naturalist* 73(3): 382–385.
- Huggins, J. G., & Gee, K. L. (1995). Efficiency and selectivity of cage trap sets for gray and fox squirrels. *Wildlife Society Bulletin* 23(2): 204–207.
- Krause, S. K., Kelt, D. A., & Van Vuren, D. H. (2010). Invasion, damage, and control options for Eastern fox squirrels. *Proceedings of the Vertebrate Pest Conference*, 24: 29–31.
- Whitaker, Jr., J. O. (1997). *National Audubon Society field guide to North American mammals*. Chanticleer Press, Knopf Inc.

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