



Southern Flying Squirrel

North Carolina Wildlife Profiles



Chris Kelly

Southern Flying Squirrel

(*Glaucomys volans*)

This diminutive rodent with the big saucerlike eyes is probably the most common mammal never seen by humans in North Carolina. It occupies habitat similar to that of the gray squirrel and, to a lesser extent, the fox squirrel, yet because it is a nocturnal species, it is not seen as often as the other two. It is truly arboreal, gliding from tree to tree on folds of outstretched skin.

Description

The southern flying squirrel is smaller than its northern cousin and ranks as the smallest of the state's five tree squirrel species, which include the red squirrel, fox squirrel and gray squirrel. It weighs no more than 2 or 3 oz. and measures from 8 1/2 in. to 97/8 in., including a 3- to 4-inch-long tail. Its fur is a lustrous light brown or and its belly is a creamy white. This squirrel's most distinctive feature is the patagium, a cape of loose skin that stretches from its wrists to its ankles and forms the membrane on which it glides. The patagium is bordered in black. When the squirrel stretches its legs to their fullest extent, the patagium opens and supports the animal on glides of considerable distance. During surveys, biologists use the southern flying squirrel's shorter head to tail length, shorter hind foot length (<33mm), and uniform creamy-white belly hair coloring to distinguish it from the rarer Carolina northern flying squirrel, which is larger overall and has bicolored belly hairs.

Flying squirrels produce a birdlike chirping sound. Some of their vocalizations are not audible to the human ear.

History and Status

The southern flying squirrel is one of two flying squirrels found in North America—the other one is the northern flying squirrel (*Glaucomys sabrinus*). Thirty-five species of flying squirrels in the family Sciuridae exist worldwide, most of them in Asian countries. Both southern and northern flying squirrels are found in North Carolina, although the northern flying squirrel is rare, occurring at higher elevations on only nine massifs (mountain ridges) in the western part of the state. Flying squirrels are a nongame species, but only the Carolina northern flying squirrel is listed as an endangered species by the federal government.

Habitats & Habits

Southern flying squirrels live in hardwood and mixed pine-hardwood forests. They require older trees with cavities for roosting and nesting, and in winter readily roost together in surprisingly large numbers. Tree cavities have been found with as many as 50 roosting squirrels. Because of their need for tree cavities for habitat, they are a natural competitor for woodpecker's homes. Flying squirrels prefer cavities with entrances from 1 1/2 to 2 in. in diameter but will also customize holes to fit. In Sandhills

The southern flying squirrel is the smallest tree squirrel in North Carolina.



Southern flying squirrel (Photo by Amy Young)



The southern flying squirrel's creamy-white belly distinguishes it from the rarer and larger Carolina northern flying squirrel, which has bicolored belly hairs. (Photo by Chris Kelly)

Range and Distribution

The southern flying squirrel is found throughout North Carolina, in urban areas as well as in forests, in the lowlands of the Coastal Plain and at elevations up to 4,500-5,000 feet. It ranges along the East Coast, north into southwestern Ontario and south into Mexico. Its close kin, the northern flying squirrel, roams throughout Canada, down into some of our northern states and along the Appalachian spine.

Range Map



■ Southern Flying Squirrel Range

Southern Flying Squirrel

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longleaf pine forests, where suppression of natural periodic fires has allowed scrub oaks to grow in dense thickets, southern flying squirrels have been known to occupy the pine cavities of the endangered red-cockaded woodpecker.

The most distinctive trait of the squirrel is the way it glides from tree to tree. It does not “fly” so much as it parachutes. To travel about its home range, it climbs to the top of a tree and jumps. The squirrel can direct its “flight” around branches and other obstacles with remarkable agility by contracting muscles in its wrists and ankles to vary the tension on the patagium and by using its tail as a rudder. It can turn suddenly at a 90-degree angle to the direction of its glide. The flying squirrel lands hind feet first, head up, and scampers to the other side of the tree to avoid detection. It glides downward at about a 30-degree angle. Thus on a long journey, flying squirrels repeatedly climb and glide until they reach their destination. In this way, a flying squirrel is able to cover large distances, exploiting patchily distributed resources. Like other squirrels, the southern flying squirrel can hop from branch to branch and spends considerable time foraging on the ground.

Southern flying squirrels seek nests in hardwood trees that provide cavities, and seeds and nuts. A typical nest will be lined with finely chewed bark, especially cedar bark in the east, and grasses. Lichen, moss and even feathers provide a soft bed. The squirrels are omnivorous. They store hard mast—nuts and acorns—in nests, in tree crevices and on the ground. They also eat fungi, berries, fruits and seeds, flower blossoms and buds in season, and even animal carcasses, bird eggs and nestlings.

Human & NCWRC Interactions

Southern flying squirrels are periodically encountered by N.C. Wildlife Resources Commission biologists during surveys for red-cockaded woodpeckers in the Sandhills. They are occasionally captured incidentally in squirrel boxes or traps during surveys for the rarer Carolina northern flying squirrel, particularly in the mountains where their ranges overlap. This species does quite well in a variety of habitats and, in general, populations seem to be stable and/or expanding in some areas. In fact, where the two species overlap, southern flying squirrels may actually out-compete northern flying squirrels for available resources. NCWRC biologists are considering management strategies that favor northern flying squirrels and discourage southern flying squirrel encroachment in appropriate habitat at elevations above 4500 ft. Southern flying squirrels are also known to take up residence in attics of suburban and rural residences. Although they can make quite a racket, they don't generally pose any significant problems for the homes they occupy. However, there are many nonlethal and humane exclusion techniques that can be used to evict the squirrels.

References

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Credits

Written by Lawrence Early, updated by Chris Kelly, NCWRC, 2018.

Wild Facts

Classification

Class: Mammalia

Order: Rodentia

Average Size

Length: from 8½ inches to 9⅞ inches, including a 3- to 4-inch tail

Weight: Adults weigh no more than 2 or 3 ounces

Food

Omnivorous. Acorns and nuts carry them through the winter. Fruit, berries, flower blossoms and buds in season. Bird nestlings and eggs, animal carcasses.

Breeding/Young

Twice a year, in January and February and again in June and July. Not all females breed twice. Produce one to six young although the average litter contains two to three. Gestation is 40 days. They weigh less than a quarter of an ounce at birth. Young can glide in 8 weeks. Squirrels stay with their mother until the next litter is born. Young mature in one year.

Life Expectancy

Up to 15 years in captivity, but rarely more than five years in the wild. Predators include owls, hawks, snakes, bobcats, raccoons, weasels and foxes.



Ohio Department of Natural Resources