

Squirrel



A **squirrel** is one of the many small or medium-sized rodents in the family Sciuridae. In the English-speaking world, "squirrel" commonly refers to members of this family's genera *Sciurus* and *Tamiasciurus*, which are tree squirrels with large bushy tails, indigenous to Asia, the Americas and Europe. Similar genera are found in Africa. The Sciuridae family also include flying squirrels, as well as ground squirrels such as the chipmunks, prairie dogs, and woodchucks. Members of the family Anomaluridae are sometimes misleadingly referred to as "scaly-tailed flying squirrels" although they are not closely related to the true squirrels.

The word *squirrel*, first attested in 1327, comes via Anglo-Norman *esquirel* from the Old French *escurel*, the reflex of a Latin word *sciurus* which was itself borrowed from Greek. The native Old English word, *ācweorna*, only survived into Middle English (as *aquerna*) before being replaced. The word itself comes from the Greek word *skiouros*, which means shadow-tailed, because they use their tail to shade their whole body.

Background: Several species of squirrels have melanistic phases. The most common variety seen in urban areas is the melanistic form of the Eastern Grey Squirrel. Common squirrels include the Fox Squirrel; the Western Gray Squirrel; the Douglas Squirrel; the American Red Squirrel and the Eastern Grey Squirrel of which the "Black Squirrel" is a variant.



Unlike rabbits or deer, squirrels cannot digest cellulose and must rely on foods rich in protein, carbohydrates, and fat. In temperate regions early spring is the hardest time of year for squirrels, since buried nuts begin to sprout and are no longer available for the squirrel to eat, and new food sources have not become available yet. During these times squirrels rely heavily on the buds of trees. Squirrels are omnivores; they eat a wide variety of plant food, including nuts, seeds, conifer cones, fruits, fungi and green vegetation, as well as insects. Ground and tree squirrels are typically diurnal, while flying squirrels tend to be nocturnal – except for lactating flying squirrels and their offspring, who have a period of diurnality during the summer.



Predatory behavior by various species of ground squirrels, particularly the thirteen-lined ground squirrel, has been noted. Bailey, for example, observed a thirteen-lined ground squirrel preying upon a young chicken. Wistrand reported seeing this same species eating a freshly-killed snake. Whitaker examined the stomachs of 139 thirteen-lined ground squirrels, and found bird flesh in four of the specimens and the remains of a short-tailed shrew in one; Bradley, examining white-tailed antelope squirrels' stomachs, found at least 10% of his 609 specimens' stomachs contained some type of vertebrate

— mostly lizards and rodents. Morgart (1985) observed a white-tailed antelope squirrel capturing and eating a silky pocket mouse. Black squirrels in Russia have been accused of pack behavior in the killing and consumption of a dog.

Relationship with humans: Squirrels are generally clever and persistent animals. In residential neighborhoods, they are notorious for eating out of bird feeders, digging in planting pots and flower beds to pull out bulbs which they chew on or to either bury or recover seeds and nuts and for inhabiting sheltered areas including attics and basements. Squirrels use their keen sense of smell to locate buried nuts and can dig extensive holes in the process. Birds, especially crows, will watch a squirrel bury a nut and will dig it up as soon as the squirrel leaves. Although expert climbers, and primarily arboreal, squirrels also thrive in urban environments that are largely free of trees.



Squirrels are sometimes considered pests because of their propensity to chew on various edible and inedible objects. This characteristic trait aids in maintaining sharp teeth, and because their teeth grow continuously, prevents over-growth. Homeowners in areas with a heavy squirrel population must keep attics and basements carefully sealed to prevent property damage caused by nesting squirrels. A squirrel nest is called a "drey". Some homeowners resort to more interesting ways of dealing with this problem, such as collecting and planting fur from pets such as domestic cats and dogs in attics. This fur will indicate to nesting squirrels that a potential predator roams and will encourage evacuation. Fake owls and scarecrows are generally ignored by the animals, and the best way to prevent chewing on an object is to coat it with something to make it undesirable: for instance a soft cloth or chili pepper paste or powder. Squirrel trapping is also practiced to remove them from residential areas.



Squirrels can be trained to be hand-fed. Because they are able to cache surplus food, they will take as much food as is available. Squirrels living in parks and campuses in cities have learned that humans are typically a ready source of food. Squirrels are occasionally kept as household pets, provided they are selected young enough and are hand raised in a proper fashion. They can be taught to do tricks, and are said to be as intelligent as dogs in their ability to learn behaviors. In these cases, a large cage and a balanced diet with good variety will keep a pet squirrel healthy and happy. As a pet, the owner must be aware of "spring fever" at which time a female pet squirrel will become very defensive of her cage, thinking of it as her nest, and will become somewhat aggressive to defend the area.

Squirrels are often the cause of power outages. They can readily climb a power pole and crawl across a power line. The animals will climb onto transformers or capacitors looking for food. If they touch a high voltage conductor and a grounded portion of the device at the same time, they are then electrocuted and cause a short circuit that shuts down equipment. Squirrels have



brought down the high-tech NASDAQ stock market twice and were responsible for a spate of power outages at the University of Alabama. They will often chew on tree branches to sharpen their teeth but cannot tell the difference between a tree branch and a live power line. Rubber plates are sometimes used to prevent access to these facilities.



Squirrels are blamed for economic losses to homeowners, nut growers, forest managers in addition to damage to electric transmission lines. These losses include direct damage to property, repairs, lost revenue and public relations. While dollar costs of these losses are sometimes calculated for isolated incidents, there is no tracking system to determine the total extent of the losses.

Squirrels are also responsible for burrowing into sensitive earthworks such as dams and levees, causing a loss of structural integrity which requires diligent maintenance and prevention. Squirrel burrowing activity has sometimes resulted in catastrophic failures of these structures.

Urban squirrels have learned to get a great deal of food from over-generous humans. One of the more common and inexpensive foods fed to squirrels is peanuts. Recent studies however have shown that raw peanuts contain a trypsin inhibitor that prevents the absorption of protein in the intestines, therefore offering peanuts that have been roasted are the better option. However, wildlife rehabilitators in the field have noted that either raw and roasted peanuts or sunflower seeds are good for squirrels, since they are deficient in several essential nutrients. This type of deficiency has been found to cause Metabolic Bone Disease, a somewhat common ailment found in malnourished squirrels.



Squirrel meat is considered a favored meat in certain regions of the United States where it can be listed as wild game. This is evidenced by extensive recipes for its preparation found in cookbooks, including older copies of *The Joy of Cooking*. Squirrel meat can be exchanged for rabbit or chicken in recipes although squirrel meat is tenderer than the latter. Squirrels can often become prey to different dogs that have the speed and agility to catch them. Its light red or pink flesh has only a slight game taste. In many areas of the U.S., particularly areas of the American South, squirrels are hunted for food. However, the American Heart Association has found squirrels to be high in cholesterol.