

MAMMALS

Status: Native Resident

NORTHERN FLYING SQUIRREL

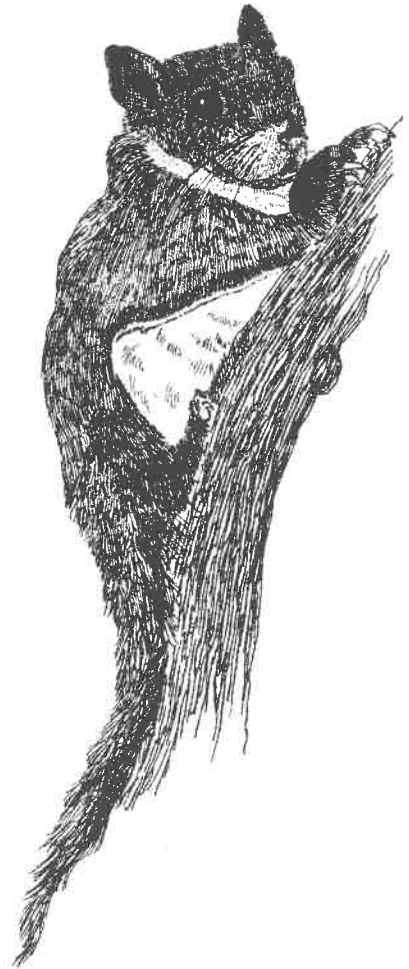
(*Glaucomys sabrinus*)

Description

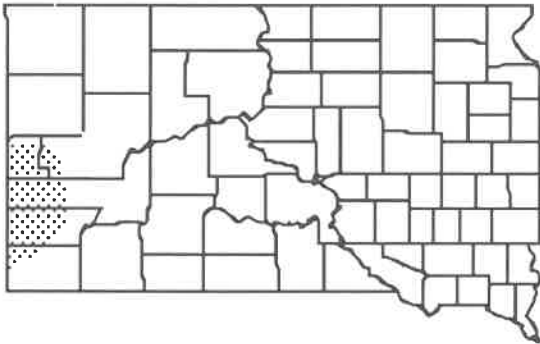
Although they are called flying squirrels, these small mammals do not really fly; they glide using a thin, furred membrane of skin that extends from their wrists to their ankles. Weighing between 3 and 5 ounces (100 - 167 gm), the flying squirrel is the smallest of all the squirrels. Their body length ranges from 9 to 14 inches (23 - 35.6 cm). Their scientific name, from Greek, means silver-gray (*glaukos*) mouse (*mys*). However, their velvet soft fur varies in color, ranging from cinnamon or grayish to reddish-brown or blackish-brown. The belly hair is dark gray at the base, but tipped with a lighter color, such as cream, white, or pale cinnamon. Their tail is broad, flattened and fluffy. Large, black, dreamy eyes dominate the head. Flying squirrels' ears are small, rounded and lightly furred. Males and females are similar in appearance. A soft churning noise and a chirp are the only sounds these animals make.

Distribution

Northern flying squirrels reside in areas with dense *conifer* or mixed *conifer* and *deciduous* forests. They are found in Canada, the northern United States including North Dakota, South Dakota, and eastern Wyoming, and in the Sierra



Nevada, Rocky Mountain and Appalachian ranges. In South Dakota they are restricted to the Black Hills.



Natural History

Flying squirrels nest in tree cavities and use *lichen*, dried grass, and finely shredded bark to line their nests. Sometimes an abandoned woodpecker nest will be used. When natural cavities are scarce, leaf nests will be constructed or an abandoned squirrel or crow's nest will be modified. In some areas, flying squirrels have been known to nest in bird boxes and in attics.

Flying squirrels primarily eat berries, blossoms, buds, cherries, and all types of nuts, except for walnuts, because the shells are too hard to gnaw. They also never pass up a chance for meat. Insects, stolen bird eggs, or small nestling birds constitute the remainder of their diet. The major predators of flying squirrels are foxes, weasels, martens, and owls.

Flying squirrels are *communal*. They often live together, usually with more males than females in a nest. Once young are born, females live with the young in nearby *maternal* nest sites. Mothers are very nurturing and protective. Males are not allowed near the maternal nests and do not take part in raising the young. The yearly mating season begins in February and ends in March. During this time the flying squirrels are *monogamous*;

however, they may not choose the same partner year after year.

Forty days after mating, a litter of 3 to 6 young is born. The thin, transparent membrane of skin which will help them glide when they are older, is already present. The ears and eyes are sealed shut for the first 28 days. Nutrition first is supplied by the mother's milk, and then, slowly, by soft things, such as insects and tender twigs. Silky fur soon covers their naked bodies. At 8 weeks the young develop enough confidence to attempt their first glide. Near September the squirrel will molt its coat for winter. After 18 months the squirrel is an adult. The flying squirrel's life span is about 5 to 6 years.

Because walking is so awkward with the membrane between their wrists and ankles, being on the ground makes them very vulnerable to predators. Protection is found by both living in the trees and being active after dark. The flying squirrel is the only squirrel species that is *nocturnal* and spends the majority of its life in a tree. Because flying squirrels are *nocturnal* most people have never seen the spectacular sight of a gliding squirrel or are even aware that the species is in the area.

This unique squirrel is specialized for its main source of locomotion, gliding. By gliding with outstretched arms and legs, the flying squirrel is able to move about the tree tops, gliding up to 100 feet (30.8 m) at a time. Holding onto the tree trunk, the squirrel judges the distance to the desired destination. Using its hind legs, it leaps into the air. During "flight" the arms and legs are stretched to form a horizontal plane creating a flat surface area for gliding. Upon approaching a landing site, the tail flips downward and is used for steering and as a brake. The feather-light landing takes place in a vertical, upright position with the back feet making contact first.

Significance

Flying squirrels are so small and secretive that they are of no commercial value. Since they are not considered a pest, they are rarely disturbed by people. If a family of flying squirrels is discovered, they are usually cherished for their cute appearance and unique behavior.

Management Considerations

Conservation of *snags* in a forest is important for maintaining flying squirrel populations. Most flying squirrel dens in the Black Hills are in dead trees, especially in large, old *snags* and large, downed trees. The older undisturbed pine or spruce forests have the most den sites and greatest variety of food sources for flying squirrels.

Glossary

- Conifers** - trees that reproduce through production of cones and usually have needles instead of leaves.
- Lichen** - an organism that grows on trees and rocks and is a symbiotic combination of fungus and algae.
- Carnivorous** - meat-eating.
- Communal** - living together with others of the same species.
- Maternal** - of or like a mother.
- Monogamous** - having only one mate.
- Nocturnal** - active at night.
- Snags** - tall, dead trees that are left standing in the woods.

References

- Burt and Grossenheider, 1976. A Field Guide to the Mammals, 3rd ed. Houghton Mifflin Company. Boston.
- Cahalane, Victor Harrison, 1954. Mammals of North America. MacMillan Company N.Y. pg 417-424.
- Jones, J. Knox, et al, 1983. Mammals of the Northern Great Plains. University of Nebraska Press. Lincoln, NE.
- Rue, Lenard Lee, 1967. Pictorial Guide to the Mammals of North America. Crowell. pg 87-91.

Written by:

Rebecca Studelska, biology student, Northern State University, Aberdeen, SD. ©1997.

Reviewed by:

Doug Backlund, Resource Biologist, S.D. Dept. of Game, Fish, and Parks, Pierre, SD.

Publication of the *Northern Flying Squirrel* fact sheet was funded by the South Dakota Department of Game, Fish and Parks, Division of Wildlife, Pierre, SD.