

Red Squirrel

Tamiasciurus hudsonicus

Perched on a limb, tail aloft, a Red Squirrel chews seeds from a spruce cone. Alerted by voices, it "chucks" out a challenge, then scolds when footsteps move closer. The most widespread of North American squirrels, this bold tree dweller is the best known mammal of Yukon forests.

DISTRIBUTION

The Red Squirrel inhabits boreal forests from Atlantic to Pacific, ranging north to tree line and south into the mountains of the eastern and western United States.

Here in Yukon, Red Squirrels chatter and chase throughout forests to the edge of alpine and Arctic tundra. Unlike many other mammals, they prefer to live among mature evergreens, where dense branches offer them highways through the sky, and they can gather plenty of cones for food. Our best Red Squirrel habitat is older White Spruce forest, where squirrels reach densities of two to three per hectare. They also inhabit stands of Black Spruce, pine, and aspen or poplar mixed with conifers.

CHARACTERISTICS

One of the smallest of North America's tree squirrels, the Red Squirrel in Yukon reaches a length of 30 cm and a weight of 280 grams. It boldly advertises its presence and aggressively challenges any and all intruders that enter its particular patch of forest.

Active by day, this feisty rodent attracts our attention with barked challenges and muttered threats. Its winter coat of rust and grey stands out in a snow-dusted world. In summer, it's cloaked in olive-brown and white, with a bright black line along its side.

At home in the treetops, Red Squirrels race up and down trunks, gripping bark with curved claws and keeping balance with bushy, flattened tails. They cling to the undersides of branches, dash through the canopy, and leap spread eagled to branches below or to the ground. Some fall tens of metres from the tops of trees, yet scamper away unhurt.

On the ground, the Red Squirrel sticks close to trees, running quickly from the base of one to another until it gets where it's going. It occasionally takes to the water and swims strongly, sometimes covering distances that surprise summertime paddlers.

Red Squirrels in Yukon build oval nests of dried grasses and stick them firmly into the forks of tree branches. Some of these nests are used simply as platforms for sitting and eating. Others are filled with stores of mushrooms. Most nests are found about half-way up spruce trees, often tucked into the untidy clumps of witch's brooms (a witch's broom is an unnaturally thick growth of twigs that looks like a big

lump on a spruce tree; it's caused by a parasitic fungus). Sheltered by the trees themselves, these nests have linings of grasses shredded so finely that the pieces resemble sawdust.

GUARDING THE CONE CROP

Lovers of conifer seeds, Red Squirrels rely on stored cones to carry them through the long northern winters. Their lives depend not only on finding enough cones to harvest, but also on defending cone supplies from thieves. Both of these ends are achieved by the same means - territoriality. Individual squirrels occupy areas within the forest and defend them from others of either sex.

When a twig snaps in the squirrel's domain, it goes on defense, barking out a series of challenging "chuck-chucks" punctuated by emphatic body jerks and tail flicks. If the intruder moves closer, the squirrel bursts into a frenzied chatter, feet-stamping and body-quivering with aggression.

If trespassers are neighbouring squirrels, the resident squirrel may chase them out. However, Red Squirrels usually spend less than one percent of their time in defense of their territories, and of this, only a quarter involves chases; the rest is purely and loudly vocal.

In Southern Yukon, a Red Squirrel territory ranges from one-third to half a hectare in size and usually has the same boundaries year after year. Within this area, the squirrel may harvest up to 16,000 cones in one season. Occasionally it caches them in a few small stockpiles scattered about its territory, but most often the squirrel stashes all its cones in a central storage depot called a midden.

Middens are piles of bits and bracts from cones already eaten. They're often found around the bases of large trees or under windfalls. Since Red Squirrels use the same middens year after year, these piles of cone refuse grow in size with age. Older middens may be a metre deep and more than 20 square metres in area.

CHATTERING THROUGH THE SEASONS

Spring

Red Squirrels mate while the fresh winds and warm sun of spring slowly melt the boreal forest's carpet of snow. Zipping through trees overhead and racing across the forest floor, they chase intruders and potential mates in what we see as games of high-speed tag.

Female Red Squirrels allow males onto their territories for only one day during a breeding season. This starts as early as late-March and ends in mid-May. On mating day, their scent attracts a group of males, and females mate with one or more suitors before banishing them once again to their own territories.

About a month after mating, female Red Squirrels give birth to three or four young. Like Red Squirrels throughout most of Canada, females in Yukon produce a single litter each year. Pink and naked, the newborn squirrels depend entirely on their mothers for food and protection. Within a month the young

are covered in fine fur, their eyes are open and their teeth have erupted. Although weaned in June or July, at about 50 days of age, young squirrels will remain with their mothers until August.

Summer

Green cones bulge with ripening seeds as young Red Squirrels play fight and chase each other, both inside and outside of nests. Soon after weaning, they start to practice territorial calls and to forage on their own.

Bustling and busy, both young and adult Red Squirrels power their lively antics with a fast metabolic rate that depends on high-energy foods. Most of this energy comes in the form of conifer seeds, buds, and flowers, as well as mushrooms. While these foods supply over 90% of their diet, Red Squirrels also eat aspen buds, lichens, and berries.

More carnivorous than other species of squirrels, Red Squirrels take advantage of the summer season to eat insect larvae, wasps, bird eggs and young birds. Scavengers too, they drag foot bones of Snowshoe Hares and whole carcasses of young hares up into trees to chew on them.

The Red Squirrel is most active in the cool hours after dawn and before dusk, and spends 80% of its time searching for, collecting, and eating food. At midday, it takes a rest, often soaking up some sun on a log or branch. Careful to "freeze" when a hawk flies over, it races up a tree to taunt any earthbound hunter that appears. Predators of this bushy-tailed tree-dweller include Northern Goshawks, Northern Harriers, Red-tailed Hawks, American Kestrels, Northern Hawk Owls, Great Horned Owls, lynx, Coyotes, wolves, Ermine, marten, and Fishers.

Autumn

Spruce cones thud on the forest floor as Red Squirrels harvest their cone crops. They cut the cones green in August and September, before seeds start to fall. They also collect mushrooms for a winter snack and stash them in trees.

Squirrels living in poor habitats must travel far afield to collect enough cones to survive the winter. These are usually juveniles that have been excluded from better habitat by adults. On the move, they are often exposed to predators and suffer high death rates in the autumn and early winter months. Those that can't find a territory by autumn usually don't survive the winter.

A Yukon study has shown that some Red Squirrel females give up parts or all of their territories to one or two offspring. By giving up territories to their young, female Red Squirrels may increase their offspring's chance of survival, to carry the family genes on to new generations. Most squirrel deaths occur in the first year of life. However, once a squirrel claims a territory, it may live up to six or more years.

Although the cone crops of pines and Black Spruce vary little from year to year, that of White Spruce occasionally fails completely. When it does, hardship may come to the chatterbox of the boreal forest. White Spruce seeds are higher in energy than Black Spruce seeds and far easier to open than the sealed

cones of pines. For these reasons, they are the staple of the squirrel's diet. By eating the buds, sap, and inner bark of spruce trees, as well as mushrooms and rotting cones, the Red Squirrel may survive the winter following a cone failure.

Winter

When winter's white cloak settles over the boreal forest, the Red Squirrel slows down to conserve energy. Forty times less active than in mid-summer, it sticks to its nest more, moves about and calls less. Cold temperatures, high winds, and decreasing daylight have a negative effect on activity levels, with the squirrel leaving its nest only around midday.

During cold snaps, Red Squirrels abandon tree nests and burrow into their middens beneath the snow's insulating layer. Snug in their food cache with cones close at hand, they await warmer weather's return.

RED SQUIRRELS AND PEOPLE

In the old days, Yukon First Nations ate Red Squirrels only in times of starvation, and ignored their fragile skins. However, the squirrel was put to other uses. In the depths of winter, it was sometimes used to cast a warm-weather spell, and throughout the year babies wore diapers of squirrel nest linings, smoked first to rid them of fleas.

After a method was developed to process squirrel skins commercially, the Red Squirrel became a wanted species. Today more Red Squirrels are trapped in Yukon than any other furbearer. Trappers snare many from a single midden, which has led to a belief that squirrels share winter nests. Despite being territorial, Red Squirrels will occasionally share nests with closely related animals for warmth. Squirrel pelts are most often used to line coats, but light garments are also made from pelts that are tanned and dyed.

Bold and brazen, Red Squirrels often invade camps and yards, where they steal objects both edible and inedible, chew up clothing, and pull out cabin insulation to line their nests. Nonetheless, these feisty tree dwellers liven up many a winter's day and likely provide Yukon residents and visitors with more hours of entertainment than any other animal of our boreal forests.

VIEWING OPPORTUNITIES

Watch for Red Squirrels dashing across the road with cone in mouth and tail streaming behind. Look for them and their rust-coloured middens in spruce and pine woods near your home, at a campsite, or deep in the back country. Keep an eye out too for mushrooms stashed in trees.

When you're in squirrel country, you'll hear about it. Listen for the Red Squirrel's scolding chatter, then search the treetops for its jerky movements and twitching tail. If you stay still, it may even check you out; especially your lunch!

DID YOU KNOW?

The Red Squirrel's generic name, *Tamiasciurus*, means "the steward who sits in the shadow of his tail".

Pure black squirrels, a melanistic or dark phase of colouration, are occasionally seen in Yukon.

The 'floater' is a secretive squirrel that never calls and never challenges. Instead, it bides its time in areas outside territory boundaries. When a territory becomes vacant, the 'floater' moves in and tries to defend it against other squirrels with the same plan.

Red Squirrels can cut one White Spruce cone per second and eat 40 to 50 cones a day in winter.

When temperatures plunge to -40°C , Red Squirrels increase their metabolic rate by three to four times to burn enough energy to stay warm.