

Wild About Small Mammals



Northern Flying Squirrel
Glaucomys sabrinus

The northern flying squirrel is found across Canada except in Newfoundland. Its large eyes allow it to see better at night when it is active. Flying squirrels can glide long distances thanks to an elastic flight membrane between their front and back legs that becomes taut when extended. By adjusting the tension on these membranes and manoeuvring their tails, they can change direction and reduce speed for a smooth landing. Their diet consists mainly of lichens, fungi, and the buds and seeds of trees such as beech, aspen, maple and oak. Their predators include weasels, bobcats, fishers and domestic cats. They are an important part of the diet of owls, especially the endangered northern spotted owl. There are two species of flying squirrels in Canada.



Ord's Kangaroo Rat
Dipodomys ordii

Ord's kangaroo rat is nocturnal, solitary and aggressively defends its burrow and stored food. It engages in aerial combat, leaping into the air and slashing with its hind feet. Ord's kangaroo rats will also kick sand in the face of predators, including rattlesnakes. It uses its hind legs to propel itself distances of over two metres and uses its tail for balance. Ord's kangaroo rats are known to take sand baths to keep their fur clean. They feed on small seeds and insects, gathering food with their forepaws and packing it in their cheek pouches. Ord's kangaroo rats are only found in southwestern Saskatchewan and south-eastern Alberta. Predators include long-eared and barn owls, badgers and foxes. Ord's is Canada's only species of kangaroo rat and is considered endangered.



Least Chipmunk
Tamias minimus

The least is the smallest chipmunk and has five black dorsal stripes. Active during the day, its chatter-box calls warn everyone of intruders. Its range covers the Yukon and Northwest Territories, and from British Columbia across to western Quebec. Least chipmunks search for the seeds of grasses, sedges, strawberries, raspberries, blueberries, acorns and hazelnuts, which they stuff in their cheek pouches. Over the winter they periodically wake up to feed on seeds stored in their burrow. During the warmer seasons, they also search for prey in the form of grasshoppers, beetles and caterpillars. Their enemies include hawks, weasels and bears. Although generally beneficial, they can cause problems if they feed on cultivated berries. The least chipmunk is one of five chipmunk species found in Canada.



Muskrat
Ondatra zibethicus

The muskrat spends most of its life in water, where its waterproof fur, paddle-like hind feet and flattened, furless tail, which it uses as a rudder, are an asset. It can remain under water for over three minutes. Bulrushes and cattails are important to muskrats – for building shelter and as their favoured food. They also feed on arrowhead, pondweeds, sedges and other plants and will prey on frogs, insects, snails and fish when plants are limited. In winter it builds "push ups" by chewing through the ice and creating a cover of frozen vegetation to use as feeding and resting stations. Muskrats create valuable open water habitat and are an important food source for owls, pike, mink, wolves and foxes. Found across Canada, it is our only species.



Northern Collared Lemming
Dicrostonyx groenlandicus

The long silky fur of the collared lemming helps it survive in the Arctic tundra of the Yukon, Northwest Territories, Quebec and Labrador. It has broad feet with heavily furred soles. In winter, the collared lemming's colouring changes to white. It forms strong family bonds with both parents caring for the young. The collared lemming uses shallow burrows in summer and grass nests under snow drifts in winter. Active both day and night, it feeds on sedges, grasses and berries, switching to the buds, twigs and bark of willow in winter. Lemmings are a crucial food source for the Arctic fox and long-tailed jaeger, whose populations fluctuate according to lemming numbers. Other predators include wolves, owls and rough-legged hawks. There are six Canadian lemming species.



Snowshoe Hare
Lepus americanus

The snowshoe hare has long, broad hind feet matted with coarse hair, facilitating travel in deep snow. Its coat turns white in winter. Active at night, the snowshoe hare spends its days in the shelter of shrubs, stumps or logs. Found across Canada, the snowshoe hare was also introduced to Newfoundland. It inhabits swamps, river thickets and forests. It can bound up to three metres, hit speeds of over 40 kilometres per hour and will take to water to escape predators. Snowshoe hares eat grasses and leaves in summer and the buds, twigs and evergreen leaves of woody plants in winter. It is the main food of lynx and important prey for bobcats, red foxes and wolves. It is one of four Canadian hare species.



Deer Mouse
Peromyscus maniculatus

The deer mouse huddles with relatives during cooler weather. The male cares for the young – grooming them, maintaining the nest and leading foraging excursions. The deer mouse is mainly nocturnal, a great climber and active year-round. Its food sources include seeds, berries and insect eggs and larvae. It gathers grass seeds for the winter, storing up to three litres in one cache. The deer mouse is found from the Yukon and Northwest Territories, through British Columbia and across to Prince Edward Island and Labrador. The deer mouse is a staple food source for predators such as short-tailed shrew, skunks, foxes and many owls. It is the only one of Canada's five native mouse species that will enter houses. The house mouse was introduced from overseas.



Eastern Cottontail
Sylvilagus floridanus

The eastern cottontail is a small rabbit distinguishable from hares by its shorter hind feet and lack of black tips on its ears. It spends the day crouched in the safety of brush piles or other shelter, becoming active at night. The eastern cottontail favours shrubby areas. In summer it feeds mostly on grasses and herbs, turning to the bark and twigs of shrubs and young trees in late fall and winter. Sometimes a problem in gardens, chicken wire fences and metal tree collars provide some protection. Cottontails are important prey for many birds and mammals, including owls, foxes and bobcats. Its current range includes southern Ontario, Quebec, Manitoba and British Columbia. The mountain or Nuttall's cottontail, a species of special concern, is Canada's other species.



Meadow Jumping Mouse
Zapus hudsonius

The meadow jumping mouse has long, spindly hind legs, a long, slender tail and large ears. It is solitary, active at night and can bound almost a metre. An excellent swimmer, this jumping mouse can dive deep into the water and also climbs well. It feeds on grass seeds, small fruit and insects. The winter is spent in a deep sleep in underground burrows lined with leaves. Its range includes the Yukon, south-western Northwest Territories and northern British Columbia across to Labrador, Nova Scotia and Prince Edward Island, where it prefers moist grassland along stream banks and the edges of marshes and woodlands. The meadow jumping mouse is prey for owls, hawks, bullfrogs, pike, martens and domestic cats. There are four Canadian species of jumping mice.



Pygmy Shrew
Sorex hoyi

At an adult weight as low as 2.2 grams, the pygmy shrew is one of the smallest North American mammals. Their range extends across Canada, with the exception of Newfoundland. It has the typical voracious shrew appetite, feeding almost continuously on insects and worms. The pygmy shrew can be found living under boulders, rotting logs and leaf litter in a variety of habitats including the bog-real forest, grassy meadows, sphagnum bogs and wet meadows. Shrews are prey for owls, fishers, weasels, minks, foxes and domestic cats. There are approximately 20 species of shrew in Canada, all beneficial for their consumption of insects and other invertebrates. The Pacific water shrew of southwestern British Columbia is endangered due to habitat loss and water pollution.



Bushy-tailed Wood Rat
Neotoma cinerea

The bushy-tailed wood rat is Canada's only native rat. Its long bushy tail distinguishes it from the introduced Norway and black rats. It is active year-round, mostly at night. The bushy-tailed wood rat is found in rocky areas of the Northwest Territories, British Columbia, Alberta and the Yukon. It feeds mostly on the leaves of trees, shrubs and herbaceous plants. It collects plant cuttings, dries them in piles and stores them for winter. This wood rat builds bulky dens of sticks, bones, foliage and man-made objects, such as false teeth and jewellery, earning it the nickname "pack rat." Its predators include rattlesnakes, barn owls, northern spotted owls and the long-tailed weasel. Problems arise if it spends the winter in a cabin, leaving behind its musky odour.



Northern Pocket Gopher
Thomomys talpoides

The northern pocket gopher has fur-lined cheek pouches that open to the side of the face instead of into the mouth as squirrel's pouches do. It is active year-round and solitary. It burrows under plants, such as dandelions or dogtooth violets, and pulls them from below. The northern pocket gopher cuts up plants, uses its forepaws to stuff them into its cheek pouches and brings them to its burrow for storage. It is found in the grasslands, roadsides and riverbanks of Manitoba, Saskatchewan, Alberta and British Columbia. It contributes to grassland ecology by keeping the soil aerated, though it can create problems in agricultural areas and gardens. Pocket gophers are prey for owls, badger, long-tailed weasel and other predators. The plains pocket gopher in southern Manitoba is another Canadian species.



Star-nosed Mole
Condylura cristata

The star-nosed mole has 22 pink tentacles at the tip of its nose, which provide information on its surroundings. It lives in groups and is active day and night year-round. Its range includes Ontario, Quebec, Labrador, New Brunswick and Nova Scotia. An excellent diver and swimmer, it uses its forefeet as paddles and tail as a rudder. The star-nosed mole feeds on aquatic worms, insects, crustaceans and small land animals. Its unsavory odour protects it from predators, though it occasionally falls prey to fish, hawks and great-horned owls. Since it normally lives in wet areas, it rarely conflicts with humans. There are six mole species in Canada, including the endangered Townsend's mole of British Columbia and the eastern mole of southwestern Ontario, a species of special concern.



Mountain Beaver
Aploidontia rufa

Considered a living fossil, the mountain beaver has the muscle and jaw structure of the most primitive rodents. It is not actually a beaver, but resembles a stubby-tailed muskrat with a stout body, short legs and long whiskers. It occurs in the Cascade Mountains of British Columbia. The mountain beaver digs burrows that can extend more than 40 metres and has many entrances hidden among ground cover. The mountain beaver spends day and night alternating between resting and foraging. It dries grasses and ferns in the sun at its burrow's entrance and stores them for winter. The mountain beaver falls prey to ermine, cougars and other predators. This is the only species of mountain beaver and it is considered a species of special concern.



American Red Squirrel
Tamiasciurus hudsonicus

The American red squirrel is found across Canada and was introduced to Newfoundland. This squirrel is very vocal in protecting its territory and food supply. Agile on both land and water, it is able to swim long distances. It makes its home in tree cavities, stumps or stone piles, but will make its nest out of twigs and leaves in summer. Red squirrels primarily eat the buds, seeds and nuts of hickory, beech, oak, Douglas fir and other trees. They store a large amount of food in the ground each fall, which they access by digging tunnels under the snow in winter. Their predators include marten, fisher, owls and bobcats. There are four species of tree squirrels in Canada.



Black-tailed Prairie Dog
Cynomys ludovicianus

The black-tailed prairie dog has short ears, a skimpy, black-tipped tail and a distinctive yipping bark. These social creatures live in densely populated colonies called towns, which are divided into smaller family groups each supervised by a dominant male. They like to play and identify each other by touching noses. Black-tailed prairie dogs feed on grasses, sedges, forbs and insects, especially grasshoppers, and moth larvae. Their range includes the open flats and short-grass plains of southern Saskatchewan. Black-tailed prairie dogs have several enemies including eagles, hawks, owls, coyotes and badgers. Initially humans helped the species by killing their predators, but as their numbers increased, campaigns to eradicate them met with considerable success. This species of special concern is Canada's only prairie dog.



Gapper's Red-backed Vole
Clethrionomys gapperi

Gapper's is found in forests and bushy areas, mostly near water. Its range extends across the country. Logs, stumps and brush provide safe cover while it forages for leaves, berries and seeds. In winter, it congregates in family groups and feeds on the buds and bark of trees. They nest in tree cavities, abandoned burrows, brush piles or under logs. Voles are important food for many predators, including great gray and barn owls, American kestrel, red-tailed hawk, weasels and mink. In some areas, the Gapper's vole causes problems by eating the bark of small trees – wrapping trunks with tar paper or metal collars helps prevent damage. The Gapper's vole is one of 17 vole species found in Canada, including the woodland vole, a species of special concern.



Hoary Marmot
Marmota caligata

This prize whistler is our largest marmot, twice the size of its cousin the common groundhog. Its range includes Alberta, British Columbia, Yukon and Northwest Territories, where it lives at an average elevation of 2000 metres. The hoary marmot lives in colonies and enjoys greeting, grooming and wrestling with its neighbours. They build burrowed boulders to gain protection from large predators such as grizzly bears. If they wander too far away from their burrow in search of food, they can become prey to golden eagles. The hoary marmot feeds on grasses, sedges, berries and other alpine vegetation, and spends up to eight months in hibernation. The hoary is one of four confirmed species of marmot in Canada, including the endangered Vancouver Island marmot.



Olive-backed Pocket Mouse
Perognathus fasciatus

One of Canada's smallest rodents, the olive-backed pocket mouse has large hind feet and small forefeet. It lives in loose sandy soil on the arid grasslands of southern Manitoba, Saskatchewan and Alberta. It is a solitary, nocturnal creature that moves slowly using all four feet or at a gallop with its strong hind legs propelling it distances of over one metre. The olive-backed pocket mouse uses its forepaws to dig, propelling sand backwards with the kicks of its hind feet. While burrows created in the summer are shallow, winter burrows can descend two metres into the ground. The olive-backed pocket mouse has adapted to the seasonally restricted food supplies of semi-desert conditions by becoming drowsy and sluggish when food is limited. It feeds on grass seeds and insects and can go long periods without water. During winter it remains in its burrow, partially dormant and consuming stored food. Predators of pocket mice include rattlesnakes, burrowing owls, badgers, the swift fox and bobcats. The great basin pocket mouse is Canada's only other species.



American Pika
Ochotona princeps

The American pika has rounded ears, no visible tail and resembles a guinea pig. It is active during the day, solitary and loves to sun on prominent rocks. Its nasal bleat appears to come from many different directions, making it hard to locate. The pika's habitat includes rocky slopes in the mountains of northern British Columbia, southern Yukon and western Northwest Territories, where it remains active all winter. In late summer and fall, it gathers grasses, sedges, tender shoots of shrubs and flowering plants, spreading them in the sun to dry and then piling them in stacks under overhanging rocks. It falls prey to a number of birds and mammals, including martens and ermine. The collared pika, also found in northwestern Canada, is our only other pika species.



Arctic Ground Squirrel
Spermophilus parryi

The Arctic ground squirrel performs its chattering call while standing on its hind legs. It is the largest and most northern of our ground squirrels, ranging from the Arctic Circle south through the Northwest Territories, including the Yukon and northern British Columbia. This diurnal mammal lives in colonies of up to 50. The Arctic ground squirrel digs extensive systems of shallow tunnels and burrows and spends more than half the year in hibernation. These ground squirrels feed primarily on grasses, sedges, mushrooms, bog rushes and willows, but will sometimes feed on insects and carrion. A staple food of grizzly bears, they are also preyed upon by foxes, wolves, falcons and snowy owls. The Arctic ground squirrel is one of seven species of ground squirrel in Canada.

Scampering from one shelter to another, small mammals can sometimes incite a seemingly irrational fear in people. For others, these critters' food choices and burrowing habits stir up anger. And yet, these furry little creatures are an essential part of many healthy habitats. Their abundance makes them a valuable food source for many of our more popular predators such as owls, bobcats and wolves. In fact, some wildlife, such as the lynx, depend on many of these small mammal species for their very survival.

Canada has a great variety of small mammals and although we couldn't incorporate all of them here, we have managed to include representatives from each of our rodent families, with the exception of the already well-known porcupine. Also illustrated are representative species of shrews and moles; the two families of the order *Insectivora* or insect eaters; and hares, rabbits and pikas of the order *Lagomorpha*.

A fair number of Canada's small mammals have been identified as species at risk – some because they reach the northern extent of their range in Canada – others in large part due to habitat loss. If you choose to provide a bit of habitat for some of our small mammals, be sure to provide shelter for them in the form of brush piles, logs and dense vegetation, as many of these creatures prefer to stay in the safety of cover. Check out their food preferences and see what your property might be able to provide. Be sure to protect them from non-native predators by keeping your cat indoors. Sources of water in the form of streams or ponds will also be appreciated. And try some tolerance if they nibble plants that were not added for their benefit. For tips on habitat creation and dealing with problems, go to WildAboutGardening.org.

You may have difficulty spotting many of these species in the wild as they tend to be shy of intruders and many are active only at night. If you encounter any that don't run away, be wary of handling them – it could be an indication that the animal has contracted an illness or disease, which could possibly be passed on to humans.

A great time to discover what mammals are around your property or local park is in the winter when you can discover their tracks in the snow. Invest in a good guide book of wildlife tracks or check them out on our website at cwf-fcf.org.

Please note: Due to the small size and secretive nature of some of these mammals, new species are still being discovered. There can also be differing opinions on designation as a species or subspecies. Species numbers given are based on research at the time of production.

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