

Central Parks

Birds Hill Provincial Park

Cedar Bog Self-guiding Winter

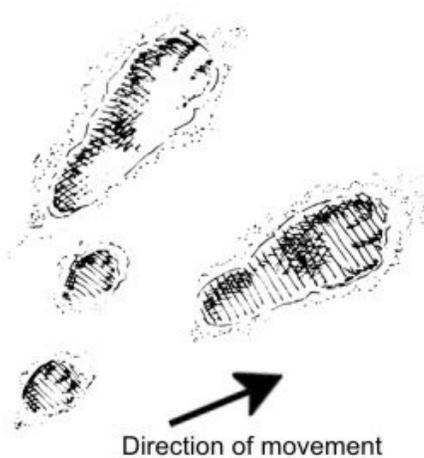
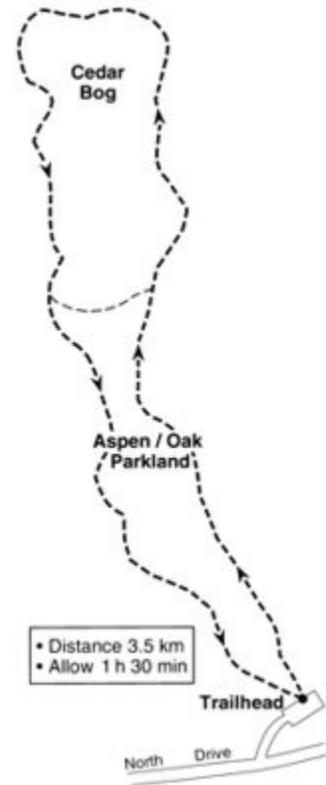
1. Introduction

Welcome to the Cedar Bog Self-guiding Trail.

Still is a word commonly used to describe winter. Yet, by looking closely at the snow-covered landscape, you can discover countless signs of life and action.

All species that remain in a snow environment must adapt to it. Plants produce seeds that will survive the winter. Seeds of many annual plants actually require freezing to activate germination. Winter animals must be equipped to find food and shelter. Signs of animal activity can be found all around this area. Tracks, gnawing marks, droppings and scrapings can tell us which creatures made them, in which direction they were going, and what they were doing.

As you follow the 3.5-km trail, listen and look for blue jays, black-billed magpies, common redpolls, pine grosbeaks, hairy woodpeckers, black-capped chickadees, and ruffed grouse. Common mammals in this area are white-tailed deer, snowshoe hares, squirrels, mice and voles.



Tracks of snowshoe hare

2. Snow

Winter in Manitoba means snow. Snowflakes are formed when water vapour freezes around dust particles in the air. There is more air than ice in snow. This trapped air makes snow an excellent insulator and prevents the warmth of the ground from escaping. This protects animals and plants near the ground from freezing because it is warmer under the snow than above.

3. Aspen Bloom

Plants exposed above the snow need to protect themselves from the harsh conditions of winter. Touch the southfacing side of the trunk of a trembling aspen. The white powder on your hand is bloom. Bloom acts like sunscreen lotion. In late winter and early spring, when the side exposed to the sun may be well above freezing, the shady side is still frozen. The tree must be able to reflect the sun's rays to remain dormant until spring.

4. Hibernation

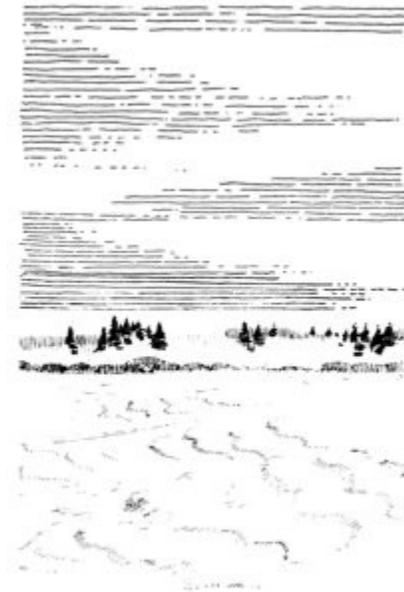
Animals that do not migrate and are inactive in the winter adapt to the cold by hibernating. When an animal hibernates it goes into a deep sleep. Less energy is required to live when its body functions are slowed down considerably. However, it still needs good shelter and enough fat or stored food to last through the cold months.

In winter you will not see woodchucks, snakes, frogs and toads since they are hibernating in dark dens or burrows. Semi-hibernators such as chipmunks, ground squirrels, and raccoons awaken from their deep sleep to eat and attend to their toilet. Skunks and squirrels are often active in a mild winter but retire to their cozy dens when it becomes too cold.

5. Exposed Areas

Open grasslands are more exposed to the effects of weather, particularly wind. Snow cover is usually sparse in a wind-swept area, though snow may accumulate to a greater depth around shrubs or clumps of grass. Wind creates drifting snow on the surface called snow snakes or siqoq (See-KOK). When the snow cover becomes hard it is called upsik (OOP-sik).

In the dense forest the snow is much deeper and usually soft. You will sink in the deep forest snow.



Siqoq

6. Small Mammals and Pukak

The warmth from the ground has melted and changed the bottom layer of snow to form a fragile, lattice-like structure termed pukak (Poo-Kak). Because of the insulation provided by snow, the temperature of pukak may be as high as -5°C even when the air temperature is -30°C . Small mammals such as pocket gophers, mice, voles and shrews which tunnel in pukak find the warmer temperature and lack of wind more tolerable than the harsh conditions above the snow. Also, they have some protection from predators such as hawks and owls.



Pukak layer

7. Winter Food for Animals

Animals that are active in winter eat the seeds and berries of plants in the area such as wild rose, high bushcranberry, bittersweet, snowberry and chokecherry. Spruce cones and acorns are relished by red squirrels.

The parts of plants eaten by animals are called browse, also a staple winter food. Hare browse is identified by the clean cut 45-degree angle where the buds and bark were nipped off. Some hare browse signs are quite high off the ground. Deep drifts of snow allow the hare to reach new supplies of food with each snowfall.



Hare browse

8. Birds

In the fall, many birds migrate to warmer climates since their food, insects and seeds, is scarce here during the winter. Birds that remain with us search constantly for food.

To combat the cold, birds may grow more body feathers in the fall or fluff up the ones they have to retain their body heat. Birds also roost together in crooks of trees. To conserve heat the ruffed grouse plunges into the snow at night to form a burrow, known as a kieppe (kee-ep-ee). When disturbed, grouse may burst out from beneath the snow.

9. Active Mammals

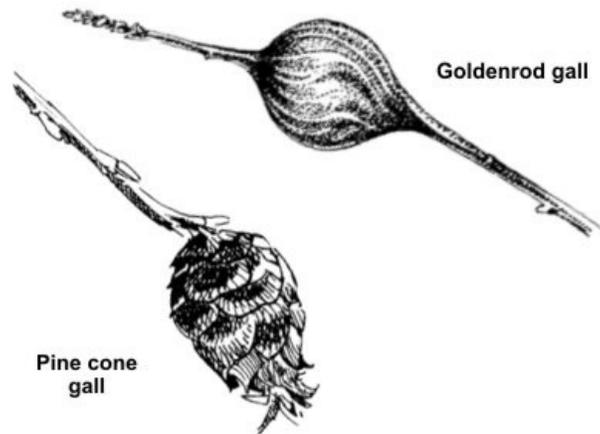
Tracks of mammals active in winter are prominent in the snow. It is essential that these animals are able to move over the snow easily. The snowshoe hare and lynx have large fur-padded paws; the greater surface area distributes the animals' weight more evenly over a larger area and enables them to stay on the surface of the snow.

While travelling from resting to feeding places the snowshoe hare forms well-worn, clipped paths or "hare highways" which are used all winter. They also serve as escape routes should a fox appear on the scene.

10. Insects

What happens to insects in the winter? In autumn most insects "hibernate" in an adult, juvenile or egg stage in any sheltered warm place such as soil. Insects also shelter in cracks in black knot fungi, the black growths on chokecherry shrubs, or in galls, swellings created by insects on twigs and stems of plants like willow and goldenrod. Look for galls along the trail.

Some insects migrate; others, like ants, remain active under the snow. Both the active and the dormant insects in the soil are food for small animals.



11. Plants

In the winter, plants are unable to obtain food and water from the frozen ground. So, they stop growing. Sap stops flowing through their stems and they "sleep" during the winter.

Deciduous trees like trembling aspen and bur oak lose their leaves in the winter. They are no longer needed for growth and would release too much moisture from their surfaces. Except for the tamarack, conifers shed and regrow their needles continuously throughout the year. Conifer leaves are small and waxy, and do not lose water quickly.

12. Cedar Bog

The impressive eastern white cedars dominating this bog have affected the types of plants and animals found here. Since little sunlight can penetrate the upper layer of branches, few plants can grow on the forest floor below. Since food is scarce, few animals or their tracks can be seen in this area. The thin snow cover under the cedars hinders the survival of both plants and

animals. However, the bog does provide excellent shelter on very windy days, particularly for white-tailed deer.

13. Snow Names

The vocabulary of the English language is limited in its descriptive terms for the different types of snow. However, northern Aboriginal cultures developed names for many types of snow because their survival depended on an intimate understanding of them. Pukak, siqoq, and upsik are terms describing specific kinds of snow. Quali (KAL-i) is snow that collects on trees, stumps and posts. Api (Ah-PEE) is snow on the ground, of which pukak is one special type. You are walking on api.



Quinzhee

14. Conclusion

Those living in northern snow-bound areas found it essential to adapt to the prevailing conditions in order to survive. What qualities of nature did they copy? Snow shelters such as quinzhees and igloos are effective because of the insulating quality of snow. Warm waterproof animal furs provided clothing. The ability of the snowshoe hare and the lynx to "float" over the snow on their large feet inspired the creation of snowshoes. By copying from Nature, people have been able to adapt to, and enjoy winter.

You can discover more about the cedar bog trail online at manitobaparks.com