

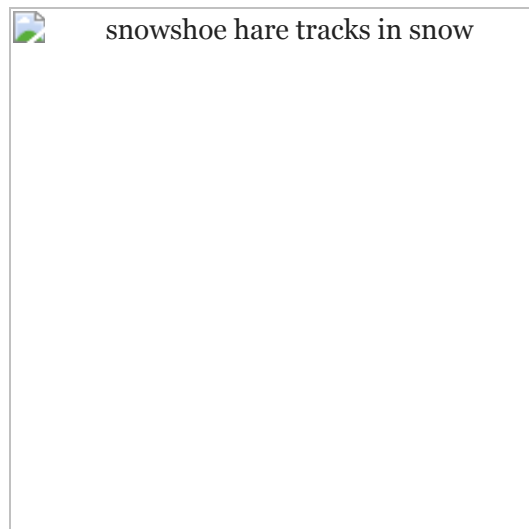
A Rambling with Winter Wildlife

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Webmaster

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By far my favorite time to explore the forest and alpine areas in our western mountains is during the snow season on my lightweight cross-country skis. Then, the mountains always seem wilder, more pristine and I can quietly glide through the winter haunts of wildlife knowing my tracks will be erased by the next snow. To paraphrase John Muir, when the snow comes, "...the rough places are made smooth, the death and decay of the year is covered gently and kindly, and the ground becomes as clean as the sky..." After a snowfall, those snow-covered meadows and slopes become a clean palette, which records the presence, activities, and survival strategies of the active wildlife species that have not migrated or are not asleep in their hibernacula. This is when deep snow and low temperatures limit food resources, impede movement, and require metabolic and behavioral adaptations.



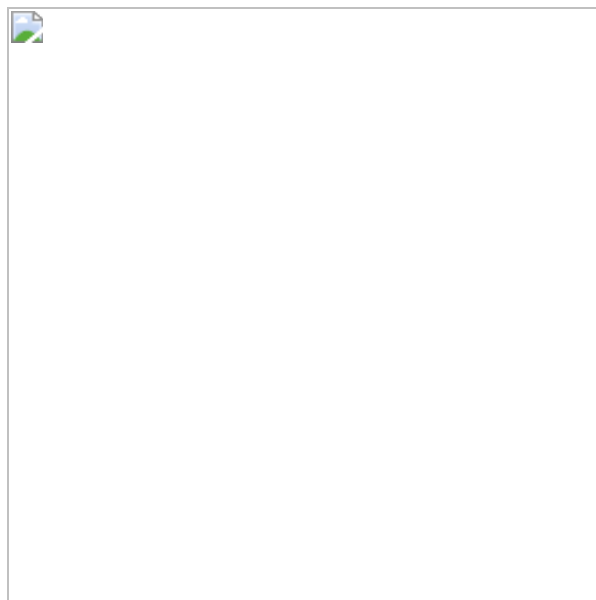
Snowshoe hare tracks in snow. (photo by Larry White)

A few days ago, I headed over to Jim Creek near Winter Park. There, a recent light snowfall had created ideal conditions for easy skiing and observing animal tracks. As soon as I traveled a short distance up from the trailhead I started to encounter tracks of a very abundant resident mammal that was scampering on top of the fresh snow in darkness a few hours earlier. On almost every winter ski tour in the spruce-fir and subalpine zones, I see Snowshoe Hare tracks, but actual sightings of the animals are infrequent. They're usually active only at night. During the day they remain still in shallow depressions under the dense cover of brushy areas. Except for their black ear-tips they are well camouflaged from predators by their snow-white winter pelage.

On those few occasions when I have skied too close to their hiding place, they shoot off like rockets using their enormous hind feet and strong leg muscles to seemingly fly over the snowpack. A key to their abundance is their ability to survive on poor quality woody forage that protrudes above the snow. They have evolved a very efficient gastrointestinal track with bacteria that can digest really tough stuff. And, as with other lagomorphs (rabbit family), they practice "zero waste" by eating their own fecal pellets, which gives them a second chance to digest a source of concentrated protein. Near timberline I have seen tracks that indicate they will venture out from the cover of subalpine spruce thickets onto windblown alpine areas where they relish exposed tender alpine plants and grasses.

Very soon I cross another set of very common tracks left by a mammal that is active and chattering during the day. The Chickaree (aka pine squirrel) is a feisty little arborist that has solved his food availability problems by harvesting and storing conifer cones in larder caches or “middens” during the previous summer and autumn. These caches, sometimes used for generations, are piled high up to 50’ wide and 3’ deep. They are located on the ground at the base of a standing large tree or deadfall log. I often encounter chickaree tracks leading from the base of a conifer, heading back and forth across a stretch of snow, and disappearing down an opening in the snowpack. I’m sure that they have been traveling from the bedroom to kitchen. High up in tree crotches they build nests lined with twigs and grasses, which provide insulation and cover. I believe that during exceptionally cold sub-zero periods they will seek cover down with their caches where the snowpack provides greater insulation and some heat is created by composting of their cone piles. They often start their territorial chattering when I ski under an occupied tree. Now I hear their chattering off in the distance, and wonder if they are sending out warning alarm calls because of a nearby predator.

As I glide across a streamside meadow interspersed with willows and alders, I’m not surprised to see the dime-sized tracks of a hungry little predator associated with this habitat. A Long-tailed Weasel has been zigzagging over the snow after emerging from a snow-hole. Like his smaller cousin, the Short-tailed Weasel (aka Ermine), this weasel turns completely snow-white except for the black tail tip. Due to their thin small size and corresponding large surface to volume ratio, they radiate and quickly lose body temperature. To maintain a constant high body temperature they must consume up to one third of their body weight each day. Their diet is mostly mice, voles, gophers, and shrews that are active under the snowpack. When weasels sense their prey, they can slither or “swim” through the snowpack for their meal. Their thin “elastic” bodies can easily negotiate through underground rodent burrows to catch prey and use for shelter.



A long-tail weasel standing up in the snow.
(Photo by Tracy Dotty)

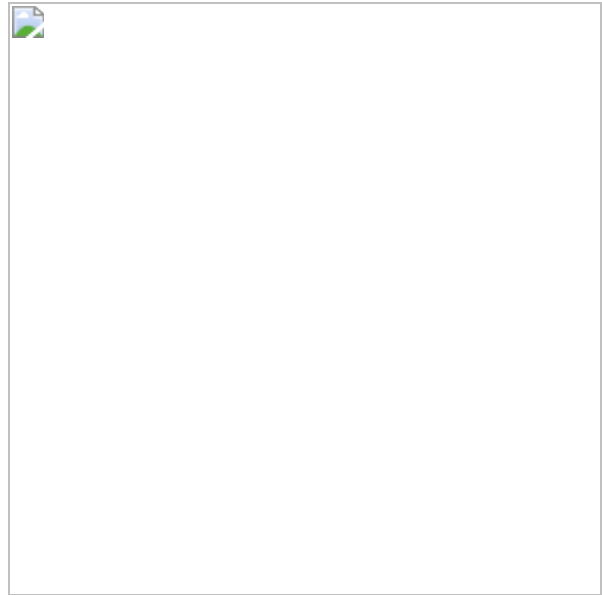
As I enter a dense old-growth spruce-fir forest I’m happy to see tracks of the “arboreal weasel” which I’ve seen in this area on previous trips. The American Marten is seen less frequently in the winter since he spends much of his time traveling up in the forest canopy hunting pine squirrels. Martens seek shelter and nest in abandoned squirrel nests, tree cavities and hollow logs. During their once-a-year molt in autumn, a dense patch of

insulating fur grows on their feet, which gradually wears off in the summer. Historically, Martens were almost completely extirpated from our mountains by trappers for “sable” fur garments.

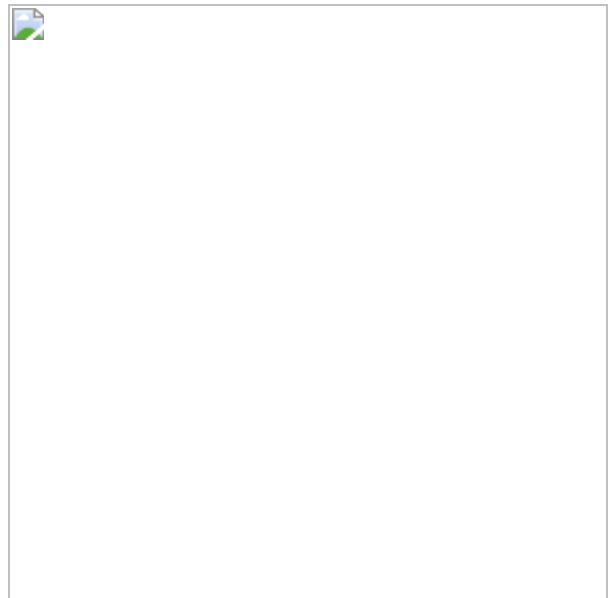
As usual during these deep-winter rambles, I see and hear relatively few passerine birds. To conserve energy during intense cold periods they are less active and rarely calling. Notable exceptions are the Mountain and Black-capped Chickadees. Even during the coldest, stormiest weather I’ve seen chickadees actively foraging amongst snow-covered conifers – even in the frigid Yukon and Alaska forests. It’s amazing that these tiny birds, in spite of their very high surface to volume ratio, can stay warm and survive the long winter nights. During the day they must eat continuously. In addition, they shiver to produce heat and can lower their body temperature by 15° F at night to conserve energy and fat reserves. And they can start their early morning foraging with their lower body temperature. They are usually the first bird I see in the early morning. They also store seeds and insects that are high in fats and protein. Like the Pygmy Nuthatch, chickadees are known to roost communally. As a general rule many cavity nesters (woodpeckers, nuthatches, brown creeper, chickadees) do not migrate and fare better in winter than other resident birds.

Another small bird that sticks around all winter in the snowy spruce-fir zone is the Golden-crowned Kinglet. Less is known about their winter survival adaptations. However, the famous naturalist Bernd Heinrich has observed kinglets huddled together on open branches and that they prolong their foraging later into the twilight hours. He surmises that their high winter mortality during exceptionally cold winters may be compensated by their high reproductive rate. The reported recent increase in golden-crowned kinglets throughout their range may be related to climate change.

As I reach the end of my route and start to head downhill, the clouds are lowering and it is starting to snow again. A cold wind is blowing snow whirlwinds around the snowpack and I



Marten tracks in the snow. (Photo by Larry White)



Golden Crown Kinglet. (Photo by Mick Thompson)

notice that my ski tracks as well as animal tracks are filling. In the unlikely event that I have to spend the night in the snow, I am equipped with extra clothing and food, a space blanket, matches, etc. But I hope I don't! As I glide back to civilization, I think about all the forest animals that I'm leaving behind to survive the storms and cold as they've been doing for eons.

~ Larry White