Staying All Winter; How Little Animals Survive

Eye on the Environment

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Respecting each other.
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How do little creatures make it through the winter? Their survival usually depends on a reliable food source and the ability to either stay warm or lower their body temperatures. But some year-round residents develop unusual strategies that help them winter over.

Ruffed grouse grow snowshoes on the sides of their feet, described as comb-like structures in the nature guides, to help them stay on top of the snow. They eat aspen and willow buds throughout the winter and any remaining fruits and berries that can be found.

Last week a small flock of grouse left a crisscrossed maze of tracks in the snow throughout a stand of young lodgepole. The birds had visited the base of every tree on a small ridge. A bed of kinnikinnick was growing under each tree, free of snow. But no red berries remained under the trees the birds had visited.

On cold nights grouse stay warm in tiny snow caves. I've never seen it done, but ruffed grouse apparently burrow into snow or fly directly into it to create their snow roosts.

The adult mourning cloak, Montana's state butterfly, hibernates in bark crevices, while other insects migrate or remain in protected nooks and crannies as eggs or pupa. When butterflies and other insects hibernate during any stage of metamorphosis they enter a dormant phase called diapause. If their life cycle has no diapause they can't tolerate cold and fly to warmer climates. Dragonflies are insects that migrate because they don't undergo diapause.

Little birds that overwinter in the Swan Valley must consume enough calories during short winter days to survive the long cold winter nights. To do this they eat all day long. Chickadees, nuthatches, brown creepers, downy woodpeckers and golden-crowned kinglets often flock together and find sleeping insects in tree bark.

Black-capped, mountain and chestnut-backed chickadees eat coniferous seeds, which are rich in fats and oil, available all year and plentiful in our forested valley. The chickadees have tough little beaks designed to crack small nuts and seeds.

On the coldest nights chickadees can band together in tree cavities where their combined body temperature is enough to warm a small space. They can also lower their body temperatures by up to 14 degrees, which allows them to consume fewer calories. But they don't, or can't, do this every night.

Brown creepers, those little birds that look like bark chips, eat insects, spiders and their eggs in winter. Some brown creepers may migrate south, but during most winters, creepers can be found in our dense-canopied forests where the temperatures are warmer than in open stands exposed to the cold sky.

Many of our wintering birds can survive cold weather because they join coyotes and other scavengers at road-killed and predator-killed carcasses. The easiest way to find a dead animal in the woods is to watch and listen for the eagles, ravens, Steller's jays, camp robbers, hairy and downy woodpeckers, chickadees and nuthatches that congregate at kill sites. Unlike people, these birds aren't seeking the lean red meat. They go straight for the fat that keeps them warm, fearless of LDL cholesterol levels and unhampered by guilt.

During fall when bears are still awake and ravenous, it's prudent to listen for the raucous calls of scavenging birds and avoid kill sites. But in winter a cautious approach to a comfortable viewing spot can garner several species for your winter bird list.

Researching on the Web (Gerbrandt.com), I came across an amazing tale. Greg Gerbrandt was snow camping on Mt. Hood during a winter survival class. His instructor imitated a coyote's howl while Gerbrandt happened to be observing a flock of chestnut-backed chickadees. Immediately one of the chickadees responded by mimicking a coyote howl.

Gerbrandt, an experienced bird surveyor, was surprised that chickadees could mimic. But he has a theory for this incident. Chickadees benefit by keeping an eye on coyotes because the little birds depend on the predators to tear open the tough skin of deer carcasses and other dead animals. He thinks the chickadee he observed was alerting others in its group to the proximity of a coyote that might nose out a winterkill.

I've seen pileated woodpeckers eating from carcasses. After hunting season and the bears have hibernated, I like to hang a deer ribcage in a tree near the house. This is my bird feeder. It attracts most of our small wintering birds, except those that rely solely on seeds. The birds spend several months cleaning the meat and fat from the bones and I'm comforted knowing they're eating natural foods. But the red topnotch of a big pileated emerging from inside a hanging chest cavity is somewhat unnerving at first glance, sort of an unholy birth.

Caching food is a common winter survival strategy. Clark's nutcrackers are the premier cachers in our country. Scientists are studying nutcrackers to learn how brains retain facts. The birds can remember thousands of locations where they planted seeds of whitebark pine nuts. Nutcrackers may use spatial memory, visualizing landmarks as they fly up to 15 miles to retrieve seeds they

stashed on the other side of the valley. One study compared the memory of Clark's nutcrackers to that of a graduate student. Thirty days after hiding the seeds, nutcrackers could find more than half the seeds the student could find.

Chickadees also store food and remember where to find it. Apparently birds in colder climates have better memories because they are more dependent on their caches for survival. One study showed that Colorado chickadees from lowland areas remember fewer storage sites than southern Alaska natives where the winters are longer. Kind of makes you wonder: will global warming cause a decline in chickadee IQ?

Of course our little red squirrels rival nutcrackers and chickadees as food cachers. They store their food in mounds and hollow logs close to home, and sometimes in the attics of our homes. Apparently an ordinary rodent brain is all they need to keep a good food supply on hand for winter.