

**BOW VALLEY NATURALISTS
NEWSLETTER, WINTER 2011
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PROGRAMS/EVENTS

There will not be a meeting in January. In its place, we strongly encourage people to attend this event in Canmore: **B.C.'s Flathead River Valley: Protect It Now!**

Thursday January 20, 7:30 to 9:30 p.m. Doors open at 7.
Canmore Collegiate High School,
1800 - 8th Ave, Canmore

REMINDER!

Memberships are now due for 2011.

Our financial year is the calendar year.

We want to keep the membership at the low cost of **\$5.00**. If you have extra change to add to the pot when attending a meeting it would help us cover the costs of renting the hall for meetings and mailing the newsletters. We want to remind you that you will receive a charitable donation receipt for donations of \$5.00 or more.

Wed., February 23 7:30 pm.
Pikas, Marmots, and Snow: Alpine Herbivores in a Warming Climate with Dr. Davik Hik.
Location: Banff Seniors Centre.

NOTE.

February 23rd is the evening of our **Annual General Meeting and elections**. Anyone interested in participating on the Board of Directors should contact Peter Duck (762-4335 - evenings) or Heather Dempsey (762-3056 - evenings), or any member of the Board before mid-February.

Wed., March 30 7:30 pm.
White-tailed Ptarmigan: Avian Specialists in the Alpine with Dr. Kathy Martin.
Location: Banff Seniors Centre.

Wed., April 27 7:30 pm.
The Crown of the Continent: Which Country Should Wear it, Canada or the United States? with Ben Gadd. Plus an update on our HELS Project.
Location: Banff Seniors Centre.

Wed., May 11 7:30 pm.
The King of the Mountain, or is it the Queen? Life-history strategies and conservation of mountain goats with Dr. Steeve Coté.
Location to be announced.

2010 Banff-Canmore Christmas Bird Count

Mike McIvor

The 64 participants in this year's CBC were greeted by chilly temperatures first thing in the morning. Surprisingly, few complaints about the cold were voiced at the potluck dinner in the evening. Perhaps this was because our experience on the count 2 years ago helped harden us to these conditions. After all, the overnight low of -24° this year was still a degree warmer than the day-time high back then. However perhaps, much more likely, it was because there was little or no wind and despite the coolness, it was a spectacular day to be outside in the mountains.



Bohemian Waxwing at the Cascade Gardens.
Photo: Amar Athwal

Veils of fog that had risen from some of the areas of open water were draped across the peaks but when these dispersed, Rundle and Cascade and the others looked even more rugged and massive than usual against the brilliant blue sky. And while early morning fog made for difficult viewing along some open stretches of the river and at the Cave & Basin, everyone knows these events are about soaking in the beauty of the place as well as counting birds.

This is the third year in a row that our totals both for number of species and number of individual birds were below the long-term averages. We recorded 41 species, 2.5 below average but 2 more than last year and 5 more than 2 years ago. The number of individual birds took a nose-dive though, as we found only 1752, 500 fewer than last year. More significantly, this was 870 below the average.

Interestingly, the drop in numbers of individuals can be largely attributed to one species - **Bohemian Waxwing**. As their common name suggests, these birds wander; some years they are here in large flocks, other years they may be somewhere else. We did find 193 but this was down dramatically from 822 last year. In contrast, the numbers of a few species such as **Mallard**, **Clark's Nutcracker**, and **Black-capped Chickadee** rebounded somewhat from very low numbers last year.

The "miss" part of the "hit and miss" pattern for winter finches was in evidence as we did not have any **Common Redpoll** for the first time since 2005. And for the 3rd year in a row we failed to find any **Red Crossbill**.

In Canmore, a **Ruffed Grouse** was a nice find, while an unidentified **loon** was reported from the river near the town. In Banff, our Cave & Basin crew could not produce a **Virginia Rail** after finding at least 1 in the 3 previous years, but we partially forgave them because they did contribute **4 Killdeer**, our first since 2006. They also trudged well beyond the C&B to Rainy Bay where they found a **Wilson's Snipe** in a narrow stream of open water. (See photos of Heather Dempsey and Jeannette Fish snipe hunting and killdeer watching.)

We'll hope for a warmer, but windless day next year, along with a much better cone crop on the spruce trees and an opportunity to raise our totals of species and individual birds above average.



photos above: Chuck O'Callaghan

Banff-Canmore Count:

<i>loon sp.</i>	1	Black-billed Magpie	143
Green-winged Teal	3	American Crow	4
Mallard	213	Common Raven	265
White-winged Scoter	cw	Black-capped Chickadee	93
Common Goldeneye	30	Mountain Chickadee	94
Barrow's Goldeneye	cw	Boreal Chickadee	53
<i>Goldeneye sp.</i>	1	<i>chickadee sp.</i>	57
Common Merganser	5	Red-breasted Nuthatch	19
Bald Eagle	<i>adult</i> 3	White-breasted Nuthatch	6
	<i>imm.</i> 1	Brown Creeper	3
Ruffed Grouse	1	American Dipper	16
Killdeer	4	Townsend's Solitaire	21
Wilson's Snipe	1	American Robin	1
Rock Pigeon	93	Bohemian Waxwing	193
Belted Kingfisher	1	European Starling	8
Downy Woodpecker	4	<i>sparrow sp.</i>	5
Hairy Woodpecker	4	Dark-eyed Junco	2
A. 3-toed Woodpecker	11	Snow Bunting	50
Pileated Woodpecker	1	Pine Grosbeak	70
<i>woodpecker sp.</i>	2	White-winged Crossbill	52
Gray Jay	28	<i>crossbill sp.</i>	2
Steller's Jay	3	Pine Siskin	18
Blue Jay	4	Evening Grosbeak	1
Clark's Nutcracker	68	House Sparrow	94

CW: reported count week

TOTAL SPECIES: 41
TOTAL INDIVIDUALS: 1752

Treasurer's Report on BVN Finances in 2010
Shelley Mardiros

In the summer, Earth Day Canada recognized the relentless advocacy of Canmore conservationist Heather MacFadyen in her efforts to protect a functional wildlife corridor through the Bow Valley. As winner of the 2010 Hometown Heroes Individual Award, Heather was authorized to distribute \$5000 from Earth Day Canada to organizations of her choice, and she divided the award money between Bow Valley Naturalists and the Bow Valley Clean Air Society.

Following the sad and sudden death of our friend and supporter André Gareau in October, his wife Mary Dumka asked friends and family to direct memorial tributes to Bow Valley Naturalists. By the end of 2010, BVN had received an outpouring of reminiscences and notes of appreciation and affection for André from well over 100 of André's and Mary's friends and colleagues. Their generous donations to the André Gareau Memorial Fund totaled nearly \$7,000.

BVN received a further \$3,000 in donations from individuals, along with a grant of nearly \$3,000 from Alberta Community Spirit. We collected \$800 in membership fees from our 160 members in 2010, and \$2400 from Parks Canada to reimburse expenses for the Ranger Creek bird banding research project, called MAPS (Monitoring Avian Productivity and Survivorship), which we organize and oversee, as we have done since 1998.

Our unusually high income in 2010 allowed BVN to sponsor a pilot project for observing and reporting High Elevation Localized Species (HELs) through a customized program on our website.

We were also able to bring an out-of-province expert to present an excellent (and well-attended) talk on wolverines. Continuing the HELS theme, we look forward to presentations from equally inspiring and articulate experts in the coming months, and to contributing to HELS research in Alberta.

Many thanks to our members and extremely generous donors for supporting BVN's work in advocacy, public education, and wildlife research.

ISSUES

Parks Canada Proposes to Limit Public Process

contributed

During the recent holidays Parks Canada and the Canadian Environmental Assessment Agency released a discussion paper that proposes to change the requirements for assessment of projects under the Canadian Environmental Assessment Act (CEAA). The proposal relates specifically to environmental assessment of long awaited ski area long range plans. While the discussion paper avoids or marginalizes the issue this proposal is as much about re-defining the public process for these assessments as it is about requiring environmental studies. By proposing to change the regulations so that ski area long range plans will no longer require a comprehensive study and only a "screening" would be required Parks Canada is asking to radically change the timing and nature of public involvement in an issue that has a long history of intense public interest.

The discussion paper states that:

"The proposed amendments would not constitute an exemption from environmental assessment requirements"

The next statement of the discussion paper proceeds to describe one of the requirements that would be exempted:

"With these proposed amendments, participant funding would not be available for projects undergoing a screening type of environmental assessment."

Further, even a brief review of the Act reveals several other points of public access and review activity prescribed for comprehensive studies (e.g. scoping, follow-up, public access to the CEAA Agency and the Minister) that are not prescribed for screenings. It seems that this proposal will not ensure that the "environmental assessment process applicable to the ski areas is current, relevant, scaled appropriately to the project and is up-to-date" as the discussion paper claims. Rather, it will exempt Parks Canada from being required to follow a comprehensive public process currently prescribed by law.

Parks Canada has already been conducting significant environmental assessment activity in relation to the Marmot Basin long range plan. Parks has so far failed to provide the public with the process elements promised to them by the current comprehensive study regulation. The proposal put forth during the holidays to remove the comprehensive study process requirement altogether may simply be a way to reward that bad behaviour. Parks Canada, through comprehensive study requirements has a tool at hand to provide the public with enhanced involvement and accountability in an issue that is important to them. Why would the government chose to remove that tool from Canadians' hands just as they open the hood to work on this complex issue?

(Editor's note) It is very unfortunate that in presenting its rationale for proposing these amendments to CEAA, Parks Canada has been less than honest about the relevant history. In making the claim that until the last 5 years there were no means for setting limits on ski area development in the national parks, it is deliberately ignoring the fact that each ski area has already been through an extensive long range planning process with extensive public consultation. These processes occurred many years ago but they were clearly intended to define limits to development. The overarching problem has been that neither the ski areas nor Parks Canada have respected those limits.

Mt. Norquay Ski Area Draft Site Guidelines for Development and Use

Mike McIvor

Parks Canada recently unveiled its draft site guidelines for Mt. Norquay prepared in collaboration with the ski area. The document is accompanied by a draft so-called strategic environmental assessment.

The site guidelines are intended to establish a context or framework for future planning and management decisions. Following public review and perhaps, revisions, they will form the basis for Norquay to prepare a long range plan. A draft of that plan would then be subject to the requirements of the Canadian Environmental Assessment Act – although as the previous article indicates this may not entail a comprehensive study, if Parks Canada and the ski areas are successful in their efforts to change the regulations of that Act.

As we expected, Parks Canada, having pioneered the "game gain" at Marmot Basin in Jasper, has transported its techniques to the south. And, as it opens the door for summer use to be re-established at Norquay, it clearly is perfectly willing to ignore the fact that during the development of its current long range plan, Norquay gave up summer use in order to gain a major expansion of its winter operation. Now these draft site guidelines offer the possibility for renewed summer activity as well as an expanded winter capacity. According to Parks Canada, any such possibilities are constrained by significant conditions that must be met by the ski area. But given the history we have been part of for the past 4 decades, we can't help but remain skeptical as to Parks Canada's willingness, or ability to stand its ground.

To Learn More

Read summaries of the site guidelines by downloading them (available starting January 12, 2011) from:

<http://www.pc.gc.ca/eng/pn-np/ab/banff/plan/norquay-2011.aspx>.

To Comment

Email opinion@pc.gc.ca until February 11, 2011.

The Species Assessment Catch-22

Mike McIvor

One of the thought provoking issues raised by Jason Fisher during his very fine presentation on wolverines at our November meeting, was what he referred to as the “species assessment Catch-22”. In a nutshell, he explained, the more rare a species, the more difficult it is to collect data about it, especially if it is as wide-ranging and elusive as the wolverine. The problem becomes stark when there is an effort to gain protection for it under provincial or federal legislation applying to various categories of species at risk. Any such effort may be rejected on the basis of insufficient evidence – i.e. proof the species is in trouble. Yet it is entirely possible the reason there is “insufficient evidence” is precisely because of the status or designation being sought? So the circle closes. No recovery plan, no critical habitat identified, populations continue to decline, and sufficient evidence becomes even more difficult to obtain.

Members of the public need to be telling their political representatives that they care deeply about ecological diversity and they want legislation, policy, and procedures that genuinely reflect these values.

Listing Whitebark pine under Canada's Species at Risk Act

Mike McIvor

One of the most perplexing aspects of the process for identifying species at risk in Canada and ultimately taking steps towards their protection, is that after the scientists and aboriginal people with traditional knowledge comprising the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) have recommended listing under one category or another, the matter is then referred to a public review prior to the federal government actually deciding on the status. But surely a species is either at risk, or not. Isn't this fundamentally a scientific assessment that should be carried out by scientists? Period. There is ample opportunity to air these other concerns during subsequent planning.

However, we have to deal with the reality of the current situation. Whitebark pine has been recommended for endangered status by COSEWIC. Below is some contact information if you wish to review the relevant material and comment on its merits.

A copy of notification regarding Consultation on Amending the List of Species under the Species At Risk Act for terrestrial species and an electronic copy of the document are available on the SARA registry:

http://www.registrellep-sararegistry.gc.ca/document/default_e.cfm?documentID=2106

and you can also submit feedback at this site.

Nature, Technology and the Human Soul

Condensed by Karsten Heuer from a January 27, 2010 article entitled "Is There an Ecological Unconsciousness?" by Daniel J. Smith in the New York Times

It was only a matter of time before someone came up with a word for it: Solastagia. Derived from a combination of the Latin word solacium (comfort) and the Greek root algia (pain), it means “the pain experienced when there is recognition that the place where one resides and that one loves is under immediate assault . . . a form of homesickness one gets when one is still at ‘home.’”

According to Glenn Albrecht, the philosopher who coined the term in 2004, it is a global condition, felt to a greater or lesser degree by different people in different locations but felt increasingly, given the ongoing degradation of the environment. As our environment continues to change around us, he wonders, how deeply are our minds suffering in return?

For a hint at the answer, consider recent research conducted in the psychology department at the University of Michigan: 38 students were asked to take a nearly three-mile walk — half in the Nichols Arboretum in Ann Arbor and half along a busy street. The purpose was to validate attention-restoration theory, a 20-year-old idea that posits a stark difference in the ability of natural and urban settings to improve cognition. Nature, the theory holds, increases focus and memory because it is filled with “soft fascinations” (rustling trees, bubbling water) that give the mind the leisure to replenish, whereas urban life is filled with harsh stimuli (car horns, billboards) that can cause a kind of cognitive overload. In the study, the nature-walkers showed a dramatic improvement while the city-walkers did not, demonstrating nature's significant restorative effects on cognition.

The next question then is, can similar benefits be accrued from digital representations of nature? In an experiment reported in *The Journal of Environmental Psychology*, 90 adults were subjected to mild stress and their heart rates monitored while they were exposed to one of three views: a glass window overlooking an expanse of grass and a stand of trees; a 50-inch plasma television screen showing the same scene in real time; and a blank wall. The results showed that the heart rates of those exposed to the sight of real nature decreased more quickly than those of subjects looking at the TV image. The subjects exposed to a TV screen fared just the same as those facing drywall.

In themselves, these findings merely support what many of us already know: the authentic is better than the artificial; nature is more healthful than television. But the plasma-screen study speaks to two powerful trends: the degradation of large parts of the environment and the increasingly common use of technology (TV, video games, the Internet, etc.) to experience nature second hand. “More and more,” write the authors of the study, “the human experience of nature will be mediated by technological systems.” The question is whether our new, nature-reduced lives will be “impoverished from the standpoint of human functioning and flourishing.”

For anyone who knows the feeling after a long walk in the backcountry, the answer is obvious. The challenge for Parks Canada and naturalists in the coming technology-filled years will be how best to share that feeling with the wider, wired world?

A summary of High Elevation Localized Species data

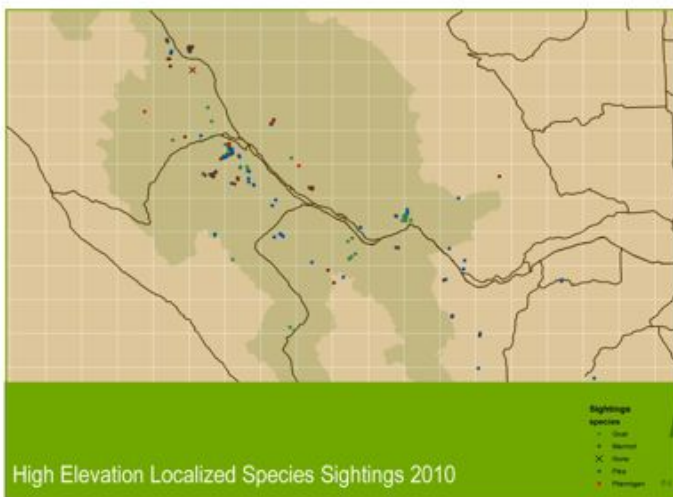
Ben Dorsey

In May of 2010, the HELS mapping website began operation. This report details general user activity, and data reported by Bow Valley Naturalists members and the general public. 22 registered users reported 207 HELS observations of an estimated 678 individual HELS. On average 9 sightings were reported by each individual, with 1 individual reporting 44 sightings. Five users reported 70% of all records (n=144). A few users reported only one (n=4) or two (n= 2) sightings each.

A total of 131 marmot, 143 pika, 354 mountain goat, and 50 white-tailed ptarmigan were reported and mapped (Table 1). Group sizes differed by species. On average 3 marmots were reported per sighting record, 2 pika, 6 goat, and 4 ptarmigan. Importantly, 3 “none observed” have been recorded (i.e. someone searched for HELS and did not detect any). The geographic locations of these sightings included Jasper, Yoho, Banff, and Kootenay National Parks. Observations also were recorded outside the national parks primarily in the Kannaskis area. Sightings were reported from June to November with most sightings reported in August.

(Editor's note: Ben's complete summary will be posted on our website sometime soon.)

Species	Sightings	Individuals reported	Mean Group Size
Goat	58	354	6.10
Marmot	51	131	2.57
None	3	n/a	n/a
Pika	82	143	1.74
Ptarmigan	13	50	3.85



The Other Mountainsnail in Alberta

Dwayne and Brenda Lepitzki

In the last BVN Newsletter we introduced the Mountainsnails of Alberta, the terrestrial snails with the scientific name *Oreohelix*. The Boundary Mountainsnail (*Oreohelix subrudis limitaris*) is found along the southwestern edge of the province extending from Waterton Lakes National Park to at least the Crowsnest Pass. It was originally collected by George Dawson in 1874 while he was part of the British-North American Boundary Commission. Our research project on the Mountainsnails also saw us travel to the other “mountains” in Alberta – those along the southeastern edge of the province – the Cypress Hills. This was because a Canadian malacologist (expert on molluscs) had suggested in 1977 that the “endangerment status of the species of *Oreohelix* in the Cypress Hills and in southern British Columbia ... require(ed) careful evaluation”.

In the same year that Alberta became a province (1905), the Cypress Hills Mountainsnail (*Oreohelix strigosa stantoni*) was described. In contrast to the Boundary Mountainsnail, the Cypress Hills Mountainsnail is much smaller with a maximum recorded shell diameter of 10.0 mm in contrast to 17.3 mm for the Boundary Mountainsnail. But just like the Boundary Mountainsnail, not much work had been done since the species was originally described.



Small form of *Oreohelix* observed above Reesor Lake, Cypress Hills Interprovincial Park, Alberta. Note the size of the snail in relation to the green leaves.



Large form of *Oreohelix* observed at Firerock Campground, near Elkwater Lake, Cypress Hills Interprovincial Park, Alberta (both photos by D. Lepitzki).

We made an interesting discovery when we began our field research, under the authority of an Alberta Tourism, Parks and Recreation Research and Collection Permit. We found two forms of *Oreohelix* in Cypress Hills: a smaller form more consistent with the

description of *Oreohelix strigosa stantoni* and a larger form, more similar to the Boundary Mountainsnail (see photos). There also appeared to be an elevational gradient with the larger form being confined to low-lying areas near streams or lakes and in forests and the smaller form being typically confined to higher elevations, in grasslands and at the edges of woody patches. By digging further into the literature we also discovered that perhaps no one had collected the Cypress Hills Mountainsnail since the original collection at the turn of the last century.

The Cypress Hills are a unique landform in Alberta, well worth exploring. While not as high as the Rockies (for comparison, Tunnel Mountain is 1690 m in elevation while the Banff townsites sits at 1397 m), the Cypress Hills rise about 600 m out of the surrounding prairie to a maximum elevation of 1466 m above sea level at Head of the Mountain. This makes them the highest point between the Rocky Mountains and Labrador. And, there are remarkable similarities between the flora and fauna of the Cypress Hills and those of Banff: Lodgepole Pine forests, Calypso Orchids, Mule Deer and Elk are common in both. Evidence suggests that the top 100 m of the Cypress Hills plateau escaped the last glaciation and was an island surrounded by ice (a nunatak).

The most intriguing question we have: how did the snails get there? The big question of why today's life forms are where they are might be answered by the intertwining threads of the natural and human history of a little snail.

Stay tuned for the final article about Mountainsnails. For this story, we'll jump across the continental divide into British Columbia, and discuss another subspecies of *Oreohelix* that may not have been observed since it was originally found in 1883 near Donald Station until we went looking for it.

WINTER in the WOODS

Colleen Campbell

I recently took my dog on a short ski trip. It was darned cold. Her booties were effective when they stayed on her feet but eventually her feet outnumbered available booties. And then she waded into belly-deep snow beside the trail and stood with her feet in the subnivean depths. She appeared to realize that the temperature where the snow and ground meet is comparatively warm — 0°C — and used it to her advantage. She's lucky. At night, she curls up on a mat in my house.

Wild animals live outside; how do they survive our quixotic winters?



White-tailed Ptarmigan/Stanley Glacier Trail. Photo: D. McKown

Many bird species migrate south but others reside here all year (41 species, according to this year's 'Christmas Bird Count'), braving tempests and cold temperatures. They fluff up their feathers (think: down jacket), settle down over their feet and tuck their heads under a wing to rest or wait out a storm. Some birds use a variety of other strategies, as well, including group nesting in some 'borrowed' real estate. One of our local HELS (*High Elevation Localized Species*), the white-tailed ptarmigan, is adept at tunneling deeply into snow for protection from both weather and predators. I am sure that many readers have skied too near a hidden ptarmigan and experienced a heart-stopping moment followed immediately by a laugh of relief as the birds burst wildly out of the snow. On really cold days, birds spend more time roosting than foraging, conserving energy.

Many species in this area use the autumn to build body fat to help them through the cold. And a lot of them "hibernate", a term now accepted to refer to any state of torpor undergone to deal with cold weather. A few animal species may be in a state of hibernation for an hour or two, saving energy while they nap and others may be dormant for days, weeks or months.

When ground squirrels first go underground they enter a state of torpor for a few days at a time, waking to use food caches and bathroom chambers in a system of tunnels. Eventually a ground squirrel's body temperature cools to match the soil temperatures and it then hibernates deeply for several months. Even though dens are hidden, martens and weasels sometimes broach an entrance to prey on a sleeping resident.

We have several other local members of the squirrel family (*Sciuridae*) in the Rockies. Flying squirrels share nests for warmth in winter. They do not hibernate and typically breed during February or March. A tree squirrel curls up in its nests to keep warm and will visit a food cache periodically. Chipmunks hibernate. And if there were a prize for 'extreme hibernating' hoary marmots (another HELS) would be in the running. After spending summer eating and lolling about in alpine meadows, they snuggle in long before serious snowfalls and hibernate for about eight months. Some of the well-fattened sleepers do become energy for the occasional clever grizzly or wolverine.

Different mice species have different strategies for winter. The deer mouse is active all year, busiest in the dark and entering a state of torpor for a few hours during the day to save energy; they often leave tiny perfect tracks on fresh snow. The jumping meadow mouse is a hibernator.

As the only mammals capable of genuine flight, some of our local bat species migrate south for the winter. Others remain, hibernating in temperature-controlled environments such as caves, sometimes in colonies.

Lynx have large feet for their weight. In winter, they grow long hair between their toes to keep their feet warm as they 'float' on the snow and hunt their favourite food, the hare. Hares turn white for camouflage. Though lynx rely on them, occasionally a cougar, marten, fox, coyote or wolf will prey on hares, too.

Another HELS is the tiny *lagomorph*, the pika. In summer its high squeal will turn our heads and we are sometimes rewarded with a sighting. They collect grasses, sedges, and herbs for drying on rocks before storing them in "haypiles" for winter dining. They leave delicate tracks in the snow when they visit a stash.

Some of us have watched a fox pouncing on a target through several feet of snow. Sensitive hearing enables the fox to hear rustlings and pinpoint the direction for a precise attack on a mouse or vole. The subnivean is hidden but not always safe.

Muskrats and beavers remain relatively warm and safe from predation during the frozen months. Beavers build dams to create ponds from which to access to their lodges during winter. To ensure safety, beavers maintain two entries to their lodges and a whole family may live together through the winter. Muskrats also maintain lodges, accessible through a couple of tunnels from underwater. They also prepare a series of 'push-ups' — holes in the ice, protected with mud and plant debris, like a mini-lodge, where it can surface to rest or feed.

Deer species forage all winter, keeping to lower elevations where both shelter and food are easier to find. They all add insulating and energy-providing fat during late summer and males shed their antlers to save energy as winter passes. Even bighorn sheep tend to use lower elevations in winter; their primary strategies for surviving the season include growing both an ample layer of fat and a thick wooly undercoat. It leaves them looking especially scrawny and scruffy early the next summer.



photo: D. McIvor

The largest HELS, mountain goats, stay high in the cliffs. Their biology ensures that they build fat during the bounty of summer and they also grow thick insulating undercoats. They tend to forage individually or in pairs (often females and young) where winter winds ensure that the snow is shallow and last season's grass and other food items are available.

Coyotes and wolves both use winter to secure their packs. By November, leadership is affirmed and the alphas begin courting. They spend as much time as possible together. By late-February their relationship is consummated and the pack spends the rest of winter preparing a den. The den may be one familiar to the pack and may even have been used for many years, through transitions of leadership that naturally occur. In both species, the alpha female will whelp near the beginning of May. The bonds of the pack will ensure that the pups are fed and protected.



photo: M. Shuster

By the time that canids initiate courtship, bears have tucked into their dens — black bears low in the valleys and grizzly bears in a lee near treeline. Receptive females likely all bred during the previous spring. Delayed implantation of fertilized eggs enables a female bear that denned fit and fat to give birth during mid-winter — about halfway between Winter Solstice and Spring Equinox, just when alpha canids start to breed. Cubs will nurse, sleep and play until spring releases them into the land of summer.

And wolverine? Wolverines are winter royalty. Winter is their best time of year. Like lynx, they travel easily on the surface of the snow, leaving a typical *Mustelidae* Track. (See photo below of another, more common member of the weasel family, American marten.) It cannot be mistaken for other species. Wolverines also breed when opportunity arises and use delayed implantation of fertilized eggs to give birth in late winter; the young kits are safe in a remote den deep in the accumulated snow. Wolverines rule the snow-covered land.



photo: D. McIvor

Some troubling questions are unavoidable. What about winters of the future? Will a warming climate bring more frequent mid-winter thaws, even periods of rain, followed by freezing temperatures forming an ever-hardening crust on the surface of the snow? Will that crust impede the flow of air through the snow and will warmer, wetter, more compacted snow lose some of its insulating qualities? What will be the long term effects on wildlife of more difficult conditions for travelling, feeding, or burrowing for shelter?

Don't forget to visit the BVN website

www.bowvalleynaturalists.org to report HELS sightings — hoary marmots, mountain goats, pika, white-tailed ptarmigan — any time of year. Document wolverine sightings and tracks and report them to Wolverine Watch at www.wolverinewatch.org.

A few references:

Chadwick, Douglas H. *A Beast the Colour of Winter*, 1983
Chadwick, Douglas H. *The Wolverine Way*, 2010
Gadd, Ben, *Handbook of the Canadian Rockies*, 1995
Heinrich, Berndt, *Winter World*, 2003
Orr, Robert T. *The Little Known Pika*. 1977

An "Ice Bug" in Jasper

Mike McIvor

In the Winter 2009 edition of our newsletter I wrote about the ice bug (*Grylloblatta campodeiformis*) Diane and I had seen at the base of Mount Rundle. Back in mid-November we received a message from Andrea Kortello who was working in Jasper but who many people will know from her research in Banff on cougars and damselflies – especially the Vivid Dancer (*Argia vivida*) – among other things. She told us about her excitement at coming across one of these rare creatures “marching across the snow” when she was on her way to Jacques Lake a few days earlier.

The news of her sighting reminded me that I had read a poem about the emblem of the Entomological Society of Canada that features an ice bug. It was written by the man who devised the shield bearing the Society's insignia, Dr. D. Keith McE. Kevan - known as Keith Kevan (1920-1991) - who was President of the Society in 1972-1973. He prefaced his short poem with: “A doodle done during duties and deliberations by the President.”

Emblema:

The Living Fossil of Sulphur Mountain

The emblem of the Society
was selected with propriety.
It does not matter
that *Grylloblatta*
campodeiformis
is not enormous.
Our interest lies,
not in its size,
nor its lack of ubiquity,
but in its antiquity.
It is as old as the hills
upon which it dwells.

Bulletin of the Entomological Society of Canada 5 (4): 147 (1973).



photo: Andrea Kortello

Letter to the Editor

MIND YOUR MAPLE: A CLARIFICATION

The Fall issue of the newsletter contained an article I had submitted on maples. The term Mountain Maple was added by the editor as an alternate common name for *Acer glabrum* which is often referred to as Douglas Maple. In response to all the email and phone calls I received from Central and Eastern Canadian ex-pats I would like to clear up some confusion. If you hail from that region of the Dominion you are likely familiar with *Acer spicatum* and have been referring to that species as Mountain Maple for most of your life. Perhaps a compromise is in order in the interest of national unity. Shall we at least agree that if *A. glabrum* is to be referred to as a mountain maple we call it Rocky Mountain Maple? This is the distinction made in Native Trees of Canada by R.C. Hosie. **Peter Duck**

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