

**BOW VALLEY NATURALISTS
NEWSLETTER, Fall 2012
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PROGRAMS/EVENTS

**BVN meetings:
7:30 pm., Banff Seniors Centre.**

Wednesday, OCTOBER 24

**Alpine Larch or subalpine Larch? A Disturbing
Dilemma** with Dr. Brendan Wilson.

Wednesday, NOVEMBER 28

Wildlife and National Parks in Afghanistan with Chris Shanks.

**Banff-Canmore Christmas Bird Count
Saturday, December 15**

Potluck supper and compiling of results will follow at 6:00 p.m. in
the Banff Seniors Centre

For details, contact Diane or Mike McIvor at 762-4160
or Colleen Campbell at 678-2051

We recently received a message from Bird Studies Canada that
participants will no longer be charged the \$5.00 fee.



Great-gray Owl

photo: M. Shuster

BANFF NATIONAL PARK PLANNING FORUM

Thursday, Nov. 8, 7 – 9 p.m.

Harkin Hall, Banff Administration Building

Superintendent Dave McDonough, Banff Field Unit, and Caroline Marion, Acting Superintendent Lake Louise, Yoho, Kootenay Field Unit, will provide highlights from this past year as they relate to the Banff National Park Management Plan, then host an open question and answer period.

Friday, Nov. 9, 8 a.m. – 4:30 p.m.

Location to be determined

According to a message we received from Parks Canada: on Friday from 8:30 a.m. to 4:30 p.m. we'll roll up our sleeves for a day of discussion and collaboration about ways and means to encourage appropriate visitor behaviour and expectation through communication and education. We want to identify progress towards meeting the objectives in the Banff National Park Management Plan; look to the park's future together; and take this opportunity to discuss the future frequency of the Planning Forum.

ISSUES

Parks Canada's Budget Cuts

Mike McIvor

We will have more news about this in our Winter newsletter after we learn more details. Unfortunately, Parks Canada's senior managers have been anything but straightforward when it comes to informing the public about what exactly they chose to do. It does appear that the programs they seem to consider expendable "frills" such as science and education have been hardest hit while those involved with selling the parks and attracting more visitors have survived very nicely. Some good people who knew and cared for the parks have been, and will be, lost to the organization.

Extraordinarily Ordinary

Colleen Campbell

Glass-floored attractions pepper the planet. Transparent floors have been designed into observation decks for decades and have been retrofitted into older structures, as well. The range of potential experience is extensive, from second-story transparent catwalks that join bedrooms in up-scale real estate to walkways with space plunging beneath that are drilled into the sides of steep stone mountain walls.

In Japan, Ryokan Sanukiya, built in 1879, advertises its proximity to Uzo-no-michi where visitors can view the Naruto whirlpools, 45 metres below, directly through the transparent floor. It is one of the few examples where the primary function of the glass floor is the view down without also looking over the side of a railing.

Blackpool Tower, built in 1894 has been renovated to include a glass-floored balcony 116 metres above other seaside facilities.

Spinnaker Tower, a sail-like structure in Portsmouth, UK, has a glass-floored observation deck but the glass floor adds little to the horizontal views across the Solent to the Isle of Wight, into the complicated local harbour and inland to the ancient rolling hills.

Observation decks with glass sections can be found in many cities: Tokyo Tower(1958), Calgary Tower(1967), Ostakino Tower in Moscow(1963), Willis (formerly Sears) Tower(1973) in Chicago, CN Tower(1976) in Toronto, Sydney Tower Eye(1981), The Shanghai World Financial Centre(2008) and Tokyo Skytree (2011) each offers an opportunity to look through the floor several hundred metres to the streets below. They also present impressive distant views.

SKYCITY Auckland Casino Complex(1996), New Zealand takes the experience a little further. One viewing deck has transparent floor sections. Another deck leads to the SkyJump, “described as base jumping, while attached to a wire – just like a movie stuntman!” The plucky thrill-seeker might speed to 85 kilometres an hour (nearly as fast as the 90 kph limit on Mountain National Parks highways) during the 11-second vault to the ground.

In 2013, the Princess Cruise Line will add a new ship to its fleet with a glass-floored "Sea Walk — an 8.5 metre cantilevered projection from the side of the ship, 39 metres above the ocean splashing beneath one’s feet.

Some glass-floors on the wild side require some of that “suck-in-your-breath-and-concentrate” commitment.

Capilano Canyon Cliff Walk in North Vancouver includes glass-floored sections in the walk suspended and projecting from the canyon wall to expose 91 metres of space to the rush of water below. Most people do look down.

A 7,455 metre cable-car ride and a road with 99 hair-pin bends both lead to a multi-kilometre long path built into the cliff on Tianamen (Heavenly Gate) Mountain in Hunan Province, China. The walk, 1220 metres above the valley, includes long sections of cantilevered transparent floor. Shifou Mountain, 130 kilometres away, also boasts a jaw-dropping stroll. It is built with short wooden planks projecting from a rock face to form a cantilevered path up to a metre wide. In some places, the planks give way to natural rock ledges. Who needs a glass floor?

The Brewster/VIAD project in Jasper is probably based on an example closer to home. In Arizona — location of the head office of VIAD — the Hualapai approved a glass-floored projection over a short arroyo leading to the Grand Canyon when the notion was refused by the US National Parks Service. The glass walk projects 21 metres from the rim of the canyon to offer airy views down to the Colorado River, about 2.5 kilometres distant and 1525 metres lower in elevation. Several fees are levied, among them, for road access to the site, for a visit to the cantilevered deck, and for personalized photographs or video souvenirs. (Visitors to the deck are not permitted any personal items, including cameras and cell-phones.) The viewing platform is intended to anchor an encompassing development including an ersatz native village (already built) and hotels, museums, gift shops, restaurants, movie theatre, VIP lounge, golf course and a cable car to the canyon floor are all proposed. The goal is 5000 to 6000 visitors a day during the tourist season — all spending money.

Apparently views from Grand Canyon West do not rival the freely available experiences from either the north or south rims of the Grand Canyon in the National Park.

Located at a formerly popular and free viewpoint along the paved Icefields Parkway, the Brewster/VIAD Glacier Discovery Walk, approved and under construction, pales when compared against those one might describe as awesome, terrifying, breathtaking, fearful, or alarming and will not add to the magnificent, wondrous and awe-inspiring scenery looming persistently in view whether one is travelling north or south along the road.

Brewster/VIAD’s claims for its proposal at Sunwapta viewpoint appear convincing in the media but not to anyone who has even a distant memory of the spectacular views along the entire 230-kilometre length of the Icefields Parkway. Claims of improvement to the natural views are rude. Claims of improved access are strange: access will be complicated by leaving one’s vehicle, finding and boarding a bus for a 6.5 kilometre drive simply to visit the viewpoint, without committing to the walkway. Promises of an engaging experience lack convincing detail. The best local glacier view is from the Columbia Icefields Centre (a.k.a. Glacier Discovery Centre) where one will embark for the viewpoint and where the potential for first-rate interpretive and learning experiences for visitors has been neglected and remains unfulfilled.

Few glass-floored structures offer more than a sense of carnival, akin to roller-coasters and ferris wheels. The potential of ‘vertigo’ may open wallets but “connection to place” is subsumed by the “amusement” qualities of the experience.

To me, most such attractions are like the chocolate ‘scratch-and-sniff’ stickers I saw recently at a local shop — a lot of promise, disappointing delivery...

A Joyful Protest

Mike McIvor



Our friends in Jasper organized an event on the afternoon of September 7 in a parking lot at the Icefields Centre. It was intended

as a demonstration against the so-called Glacier Discovery Walk, but perhaps more importantly, as a celebration of true national park values. Several people from the Bow Valley made the trip up the Parkway to join them and we can attest that it was a fine way to spend an afternoon. There was music; a “drama” that actually was a skit with one of the actors playing a Parks Canada spin-doctor delivering verbatim quotes from some of the ridiculous justifications these officials have provided; 3 people in mountain goat costumes wearing “EVICTED” signs on their chests; a few short speeches; a major contribution from a First Nations woman who not only spoke eloquently, but drummed, sang some original songs, and encouraged people to get up and move – dance. A number of retired park wardens were there, one taking the microphone to speak very strongly against the project as well as the current direction of Parks Canada and the Harper Conservative government.

All this in a truly spectacular setting on a day without a cloud in the sky. You couldn't help looking around, wondering how anyone could possibly think this landscape was not good enough and therefore needed to be dressed up with an artificial, irrelevant distraction. With construction underway no one was under any illusion that the decision might be reversed but it was important to send a message in advance of the inevitable next proposal to desecrate a park landscape for profit.

Of Wild Things...

HELS Project Report
Mike McIvor

In our Winter newsletter that will come out in January we are planning to provide a summary of the observations of High Elevation Localized Species that have been submitted to our website in 2012. In the meantime we want to thank everyone who has contributed your sightings and strongly encourage you to keep them coming. Keep in mind that of the 4 species we are tracking only the Hoary Marmot takes the winter off.



photos: M. Shuster

Checking out the View

Mike McIvor

Who says marmots can't climb trees? After all, they are members of the squirrel family (*Sciuridae*). In fact, not only is the Hoary Marmot the largest squirrel to be found in the Rocky Mountains it is the largest in North America. Not surprisingly however, given the behavior we observe when we are in their high country habitat, they tend to be grouped more with the ground squirrels.

So in late August when Diane and I were heading down the trail not far below Saddleback Pass it certainly was a surprise to see this one in a larch tree busily chewing needles and buds. Then, as we were watching we heard another marmot whistle an alarm; the climber – a first for us - quickly scuttled down the tree and galloped off to a nearby talus slope where it sprawled on top of a large, flat rock. Diane photographed it there as well and in the image we could see that its lips were stained green from what it had been chewing. I walked over to stand beside the larch and estimated it was approximately 5 metres tall and the marmot had been fairly close to the top, about 4 metres up. Always something new to see.



photo: D. McIvor

Police Car Moth
Mike Potter

Cue the sirens, the Police Cars are out! Well, maybe there won't be sirens wailing, but in July and early August we do have adult Police Car Moths out in force. These moths are recognized by their conspicuous black-and-white markings, which bring to mind the classic colour pattern of, well, police cars. There are also orange markings near the head, analogous to the lights on top of police cars.

The Police Car Moth (*Gnophaela vermiculata*) is found throughout the province in or near forested areas. Unlike most moths, they are diurnal, and as suggested by their bold markings they have defensive chemicals that give a bad taste to potential predators such as birds. At first glance they might appear to be a species of butterfly, but closer examination (generally quite easy) reveals that they have the feathery antennae of moths rather than the club-ends of butterflies.

The adults feed on the nectar of a wide variety of flowering plants. On an early August foothills hike along the Eagle Hill trail near Sibbald Lake in Kananaskis Country, adults were visiting Fireweed, Tall Larkspur, White Geranium, Wild Gaillardia (Brown-eyed Susan), Cow Parsnip, an Aster species, a Goldenrod (*Solidago* sp.), Yarrow, a Clover, and the alien Scabious.



photo: D. McIvor

The caterpillars are also brightly coloured, with a red head, yellow markings on the body, and clusters of small shiny blue spheres in the intersections between segments. The caterpillars feed on Lungwort (*Mertensia paniculata*).



Police Car Moth caterpillar on Lungwort. Flowing Water trail, Bow Valley Provincial Park, 23 June 2010. Mike Potter

According to the Royal Alberta Museum website, from which much of the above information was taken, even when the Police Car Moth is abundant it does not seem to do serious damage to foliage.

One Less Pika Voice

Dan Rafla

The mid-day sun held some warmth on that early September day high on Mt. Douglas along the Red Deer Valley. It was the fourth day of a twelve-day backcountry mission on horseback to investigate wolf cluster sites as part of the ecological monitoring

program for Banff National Park. Following the trail of the wolf brought me onto the high plateaus and the realm of mountain goats and big horn sheep. The unmistakable shrill calls of pikas bounced off the towering cliffs as they made haste gathering their fodder with winter's breath not far off. In the recent past, wolves had passed along this area characterized by a jumble of stone giving way to a small meadow before dropping sharply to the densely forested valley. It made for an agreeable lunch spot. By stopping and watching, little nuggets and mysteries reveal themselves. An unusual flash out the corner of my eye grabbed my attention; I turned to see a short-tailed weasel carrying a pika in its mouth. Both were well camouflaged over the broken rock; it was only their movement that gave them away. Within a few heartbeats, they were gone. The weasel had earned a good meal, and the shrill call of this particular pika would be heard no more.



Short-tailed Weasel with Pika

photo: Dan Rafla



Red Deer Valley from the site east towards Sandhills Cabin

photo: Dan Rafla

IT WILL HAPPEN AGAIN...AND AGAIN

Peter Duck

An ecosystem is a community of plants and animals and the processes that connect them to each other and to the physical environment. Only the first of these three components is typically in our minds as we walk or ride, our way along Vermilion Lakes Drive. But plants and animals are a temporary veneer on an ever-changing physical landscape. Scrape off the green fuzz and you find this landscape is biologically diverse because it includes sand dunes, extremely rare beach ridges, debris flow fans, delta levees and channels, bedrock outcrops scraped clean by glaciers, alluvial fans, debris flow fans and glacial moraines. Those physical forms and the processes that create them are the foundation upon which

Snails and Vikings

Brenda Lepitzki

the much celebrated Vermilion Lakes natural area's biological diversity stands and which has, mosquitoes excepted, allowed for a hospitable human environment for approximately 11,000 years. Next time you round the bends of Vermilion Lakes Drive and look out over diverse patterns of water, willow, sedge and spruce think about how physical processes occurring over thousands of years filled in the lake that once filled this Valley. Consider how deposits of silt, sand, gravel and even volcanic dust worked by wind and water made those gentle bulges of hillside that the road curves over and wove those subtle patterns into the wetlands.

This year's dramatic June rains treated us to a demonstration of many of these processes. We were shown rivers flooding silt into backwater basins, alluvial fans extending their toes a little further out on to the valley floor. Debris flows caused even the Trans Canada Highway to pause while Nature took a little time to work on this sculpture. It is a work in progress. This will happen again. When it does, stare into the surging, rumbling streams and fast-forward another 11,000 years. Will Vermilion Lakes Drive become simply another buried layer in an archaeologist's cross-section? In the mean time enjoy the ducks.



Layers in the bank of Healy Creek in the west end of the Vermilion Lakes natural area tell of changing physical process where this stream meets the wetlands. In the lower zone mixed-up sizes from very large stones to gravel and grains of sand and silt suggest a flow of mixed debris with minimal sorting by free flowing water. The middle band of silt speaks to a time of relatively calm water allowing a uniform layer of fine material to settle. At the top, flowing water has likely dropped the big pieces farther upstream. The current remaining was only strong enough to carry sand and gravel to this location. Finer silt was moved further downstream at this time. (photo: M. McIvor).



A small creek has recently dumped tonnes of debris and buried vegetation where it escapes from the confines of its headwaters. Deposits similar to this, now covered with vegetation, shape the margins of the Vermilion Lakes natural area west of Banff. (photo: Peter Duck).

The last time we were on the east coast of Canada we saw the tiny, fossilized snail *Dendropupa* which provided further evidence Charles Darwin needed for his theory of evolution (see winter 2009 BVN newsletter).

This autumn we were again on the east coast, and once again we found snails at the centre of scientific discovery. This time it concerned a living species, *Cepaea hortensis*, common name White-lip Garden Snail. This snail is widespread in Western Europe, and has been considered an introduced species in Canada, possibly brought here by the Vikings who visited Newfoundland and established a community at L'Anse aux Meadows about 1000 years ago. We had this in mind as we slipped and slogged our way up a short trail behind our knowledgeable guide John Maunder, Curator Emeritus of Natural History at the Newfoundland and Labrador provincial museum. We were climbing a hill just beyond the local village cemetery at the estuary by Salmon Point near Rocky Harbour, Newfoundland, along the appropriately named "Viking Trail". We'd had a wonderful time already wading through the tidal pools there, finding a number of marine snails and limpets amongst the kelp and seaweeds. Despite the blasting winds and sheets of rain courtesy of hurricane Leslie, the group of intrepid mollusc aficionados was (dare I say this about reserved scientists) giddy with excitement. As we topped out at the bluff overlooking the ocean, there was silence except for the buffeting wind and pounding rain as we gazed upon the reason for our effort. Elsewhere on the hilltop the soil had been dug into and removed, to create a viewpoint at a better vantage point. Erosion by wind and water had subsequently removed much of the vegetation and soil, but off to the side in one small, untouched area was an incredible exposed aeolian deposit of soil under a mat of grassy vegetation. Embedded in this soil were the large shells of *Cepaea hortensis*. These layers of wind deposited soils have been dated to just post-glaciation around 10-12,000 years ago. John referred to these shells as "sub-fossils" which presumably would fossilize given enough time and correct conditions. We were witnessing the second site in Canada which proves *Cepaea hortensis* is native to at least part of Atlantic Canada, the other site being in a cave on the Gaspé Peninsula. Populations of this species in Ontario however, are known to be recently introduced.



Live *Cepaea hortensis* in the rain at Salmon Point, Newfoundland.
(photo: Dwayne Lepitzki)

Immediately I thought of what we have found in the tufa at Banff's thermal springs. Here we have seen snail shells embedded deep within the tufa, which has been made by the thermal springs over the years since the last local glaciation. It remains to be determined exactly how old are these pieces of tufa although the tufa within the

Cave has been aged to between 3200-5300 years old. But it is solid evidence that the snails are not a recent addition to the springs where the tufa-bound shells are found. These snail shells from either end of the country provide valuable information about biodiversity of post-glacial Canada.

Book Review

CRIMINALS AND VICTIMS

Colleen Campbell

Bark beetles are still on trial.

One July afternoon I stopped at the site (formerly) known as Protection Mountain Campground. Apparently the logging had occurred because trees were damaged by bark beetle and had to be removed because of blowdown hazards. Some of the trees still standing were deemed to be at risk and they, too, were removed. The process left the campground with only short spindly twigs and open lines of sight around the area. Almost clearcut.

Recently, the sad state of Alberta's northern forests has also been blamed on bark beetles. Those darned bugs have "invaded" across the BC-Alberta border.

Last season, well-known author Andrew Nikiforuk presented a program on bark beetles at a regular meeting of Bow Valley Naturalists. If you attended, likely you were enthralled. The intriguing story was derived from, but not a summary of, Andrew's book, *Empire of the Beetle*. The story of bark beetles is a complex saga.

Have you ever read or watched a mystery with a villain well-cloaked in guilt, apparent behaviour supporting the notion of a heinous crime, all the evidence filed and thoroughly implicating the identified culprit? The story should resolve with certain predictability. After all, the guilt has been described clearly in the first chapter.

That is how most of us have understood the story of pine bark beetles. Pine bark beetles (Scolytidae) have been (wantonly) destroying our forests, accompanied by a fungal sidekick that makes the wood of the dead trees aesthetically marginal. All over North America, mature forests have been decimated by hordes of murderous little bugs, no larger than a grains of rice, barely able to fly any respectable distance. Popular media has convinced us that bark beetles, alone, have killed millions of trees, created massive wildfire hazards, robbed the logging industry of entitled profits and spoiled views from northern Mexico to Alaska and the Yukon.

Andrew Nikiforuk's *Empire of the Beetle* (2011) came out after many years of assault by the little monsters, first in BC and Alaska, and then — oh horror — riding the westerly winds, they pressed into Alberta, the Yukon and points east. During the wildly destructive criminal abuse delivered by the tiny villains, we heard only of the wasted trees and the latent fire hazard of abandoned lifeless forests. Nothing, ever, was shared about the natural history of bark beetles, except that a few weeks of dreadfully cold weather most certainly would finish them off and curtail further damage. The co-evolution of the many bark beetle species with equally numerous tree species was never filed with the evidence.

It was a set-up. Bark beetles were in the docket, being judged and found guilty for ruining our forests, consequently laden with damning blame for a crime they did not commit. They were shown to belong to a large and equally dastardly family of relatives wreaking havoc in overly mature forests all over the world.

The beetles are guilty! Guilty! Guilty! Guilty! Guilty!

Sanction of immediate removal of the unsightly and dangerous dead trees through logging made politicians look "wisely" responsive to the plight in our forests. Win-Win. Politicians have acted quickly. Loggers have work and all kinds of public relations turn the (initially undesirable) blue-stained wood into design cachet for floors, walls, tables and all sorts of trifles. Gainful work for many. Money flows. At least part of the problem is mitigated.

In *Empire of the Beetle* Andrew Nikiforuk carefully deconstructs the story. In the final analysis, beetles are being beetles and humans are also being humans, both species taking their own best advantage, each feasting on conditions prepared for them by the complexity of events.

The beetles discovered endless stands of geriatric trees. They tackled the work, did their job, helped the old gaffers to die, enabling renewal of the forest with younger "hungry youth", that naturally take up more water during rainstorms and sequester more CO² than can their geriatric parent and grandparent trees. The beetles worked well, reproducing madly to be able to take advantage of the bounty of old trees. The result was a staggering overpopulation of bark beetles all keen to reproduce again and again. In a healthy forest, one with a natural tapestry of tree species and ages, the beetles would not have become overly numerous, barely would gain a nod of recognition.

But humans did notice, called it a plague, a damnation, an environmental disaster. Immediately we identified the beast and put bark beetles on trial. When persistent extreme cold winters failed to materialize we implicated global warming as accessory to the crime.

We must ensure that the criminal is punished.

Execute the beetles. Somehow. Scientists are working hard to create new toxins to kill them, pheromones to fool them into thinking they are breeding when they are not, and sounds that interfere with their natural communications and reproductive cycles.

Read ***Empire of the Beetle***. It is a gripping tale. The bark beetles have charisma (as should any clever criminal with a starring role) and Andrew Nikiforuk will keep you riveted to the last page as you puzzle the bits of evidence together and discover who the criminals are and where lies the guilt in the story of the beetles and the pine trees.