

OUTINGS

**MAY SPECIES COUNT**

Saturday and Sunday, May 28<sup>th</sup> and 29<sup>th</sup>

The May Species Count, a province-wide event coordinated by the Federation of Alberta Naturalists, is an annual survey of species of birds and plants in flower conducted at various locations throughout Alberta. The aim of the May Species Count is to record accurately and in a standard way what species are in flower, using phenology codes, for the purpose of scientific comparison from year to year. For birds it is a way of tracking the occurrence of species that are residents or migrants passing through or that have arrived at their breeding destination. The challenge is for participants to improve their level of knowledge and broaden their coverage of localities making both as complete and consistent as possible so that variations in the number of species in flower from year to year reflect only local and regional weather differences (e.g. early and late springs). The bird tally, like other surveys such as the North American-wide Christmas Bird Count, if it is done consistently, can indicate a decline in species, an increase in numbers, or changes in migration patterns. The count is always held on the last complete weekend in May. The Bow Valley Naturalists have been conducting the May Species Count since its inception in 1976 in the Yamnuska, Banff, and Canmore areas. **This year, the Yamnuska count will be held on May 28<sup>th</sup>. Our usual meeting times and places will apply. The Banff count will be held on May 29<sup>th</sup>.** We are not organizing any formal group outings for Banff but we strongly encourage people to make their own arrangements for spending this day outside, enjoying the diversity of life in this wonderful place we call home and making an effort to learn more about it. As you can see from the results below it was nearly a tie for the numbers of species reported in the last 2 years.

Flowering plants reported:

**Yamnuska:** Not done last year due to a snowstorm. We had 71 species in 2009

**Banff:** 79 species in 2010 and 79 species in 2009.

The bird numbers:

**Yamnuska:** Not done last year due to a snowstorm. 71 species in 2009

**Banff:** 83 species in 2010, 85 species in 2009.

For more information and to find out how to participate in the Yamnuska count contact: **Diane & Mike McIvor at 403-762-4160**

To contribute results from the Banff count contact **Brenda Lepitzki at 403-762-0864. Please call before 8:00 pm in the evening.**

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 Côté

Location: Canmore Miners' Union Hall



photo: D. McIvor

**Banff National Park  
2011 Research Updates Speaker Series**

**Location: 7 – 9 pm, Whyte Museum, Free.**

Come hear about the science behind the scenery in our mountain national parks. For more information: call 403 762-1464, or email [Heather.Dempsey@pc.gc.ca](mailto:Heather.Dempsey@pc.gc.ca)

Thursday May 12: Archaeologist Brad Himour presents *“Forgotten Dreams: A New Look at Ancient Rock Art”*. Then Jesse Whittington, park wildlife biologist, will give an update on *“Wolves, Caribou, & Other Prey: Feasibility of Caribou Translocations to Banff”*.

Thursday May 19: *“Canada's National Parks, Historic Sites and Marine Conservation Areas: Our Gift to the World”* is a special Parks Canada centennial event with Claire Campbell, editor of One Hundred Years of Parks Canada and Lyle Dick, historian and contributor. There will be a book signing after the presentations.

Thursday May 26: *“Bears and Barbed Wires- Some Mysteries Unravelled”* summarizes Ph.D candidate Mike Sawaya's work in the park, plus Rob Found from the University of Alberta is determining whether *“Fortune Favours the Bold...Sometimes; Research into Elk Personality”*.

The series is a cooperative venture of Parks Canada, the Whyte Museum, and the Friends of Banff National Park's Parks Radio 101.1 FM.

## Banff Community Bird Walks 2011 Spring Migration Series



Ring-necked Ducks

photo: A. Athwal

The Banff Community bird walks have begun. They are guided by volunteers and are free of charge. Everyone is welcome. They will be taking place on Monday mornings. Meeting times are 7:50am with the walks to start at 8:00am except on May 23<sup>rd</sup>. The meeting place is at the corner of Sundance Road and Cave Avenue by the Recreation Grounds. Bring your binoculars and dress for the weather.

Here is the schedule:

- May 9 7:50am
- May 16 7:50am
- May 23 9:00am Victoria Day family walk
- May 30 7:50am
- June 6 7:50am

Any questions? email: [banffcommunitybirdwalk@hotmail.com](mailto:banffcommunitybirdwalk@hotmail.com)

## Treasurer's Report

*Shelley Mardiros*

Thanks to our very generous members and supporters, Bow Valley Naturalists has again qualified for a grant from Alberta's Community Spirit Program this spring, amounting to \$4,120. The ACS Program matches – at a rate of 90% -- the donations that BVN received in 2009.

In the past year, donations and a matching grant from ACSP were used to create a reporting tool on the BVN website, for hikers to report their observations of four High Elevation Localized Species (HELs) – mountain goats, hoary marmots, pikas, and white-tailed ptarmigan – seen (or heard) in Banff National Park. Based on a season's experience using the reporting site and on feedback from users, we will refine and improve the tool for easier reporting in the upcoming season. Please go to <http://www.bowvalleynaturalists.org/hels> to report your sightings.

Donated funds and the expertise of BVN Director Dr. Dwayne Lepitzki improved our website through the addition of an illustrated biography of Banff National Park's most endangered species -- the Banff Springs Snail

– with a highly readable account of the little snail's history, habitat, sex life and more.

Donor contributions also supported BVN's successful series of monthly presentations on the theme of HELS. Our invited expert speakers from across Canada reported on the most up-to-date research about the fascinating high country lives of wolverines, pikas, marmots, and white-tailed ptarmigans. This spring, we'll extend our speaker series into May to include a presentation on that agile alpine acrobat, the mountain goat.

Research, stimulating public education, and first-rate interpretation: all are made possible by generous support from our donors.

## BVN HELS Project

At a meeting last fall to discuss the results from our first year of operating our HELS project it was agreed that we would continue collecting random observations for another year. Following that, we will decide on a more focused approach for the longer term. As Shelley indicated in her Treasurer's Report, we are planning for improvements to the HELS page on our website and hope to have those changes in place in the next little while. We will be delighted to hear from you.



photo: M. Shuster

## The January Mushroom

*Mike McIvor*

In mid-winter a few years ago Diane & I noticed a small mushroom growing on vegetation that was lying in the thermal springs outflow areas at the Cave & Basin. It seemed unusual to us at the time, this fungus reaching above the warm water into air temperatures below 0° C but it wasn't until we showed some images of it to Martin Osis, President of the Alberta Mycological Society that we began to suspect it might be very unusual.

He took an immediate interest in it and sent along the photos to Dr. Scott Redhead, the Curator of the National Mycological Herbarium in Ottawa. Between them, they encouraged us to try to obtain some specimens for close examination and identification.

Our application to Parks Canada for a collecting permit was successful and in late March we made a collection with the assistance of Brenda and Dwayne Lepitzki who helped us in the field, including making sure there were absolutely no impacts to the critical habitat for the Banff Springs Snail, and also showing us how to properly handle and package small, delicate items such as these for shipment. We also had instructions from Dr. Redhead as to the best way to preserve the specimens for study. The mushrooms, some dried, using Diane's food dryer, a couple used to create spore prints, others placed in vials with alcohol, were sent to Ottawa a few days later.

So far, what we know is that they arrived intact. The process of identification may be a long one and of course, Dr. Redhead is busy with many other things as well. We have no idea whether this species that certainly does fruit in other months but was given a nickname based on when we first encountered it, will turn out to be relatively common and widespread, or whether it is another of those very special organisms that call these thermal springs home. We'll keep you posted.



photo: M. McIvor

### **The Last Episode in the Mountainsnail Trilogy**

*Dwayne & Brenda Lepitzki*

In the last couple of BVN Newsletters we introduced the Mountainsnails, a genus of terrestrial snails with the scientific name *Oreohelix*. First, we mentioned the Boundary Mountainsnail (*Oreohelix subrudis limitaris*), found along the southwestern edge of Alberta from Waterton Lakes National Park to at least the Crowsnest Pass. Next, we wrote about the Cypress Hills Mountainsnail (*Oreohelix strigosa stantoni*), confined to the south eastern highlands of Alberta. Now, we'll jump across the provincial border into British Columbia.

Back in 1883 when the Canadian Pacific Railroad was being pushed westward, J.B. Tyrrell (later of Drumheller fame) picked up a single snail shell which S. Stillman Berry described in 1922: "This demure mountain snail is of plain

appearance, offers no very striking peculiarities, and yet seems incapable of reference to any of the races or subspecies heretofore recognized." Berry named the snail *Oreohelix strigosa canadica* and archived it as specimen 2882 in the Victoria Memorial Museum Collection of the Geological Survey of Canada. While the "definite record in the matter seems to be lost", the collection date was estimated to be 21 September 1883 and the location was listed as "Donald Station, B.C.". Later in the same article the location is stated as being just "Donald". Interestingly, about a month earlier, on 25 August 1883, J.B. Tyrrell while assisting Dr. Dawson (the geologist with the British North American Boundary Commission), collected some Boundary Mountainsnails from the shores of Waterton Lakes.

But where is the one and only *O. s. canadica* shell? When the entire collection of *Oreohelix* at the Canadian Museum of Nature (the current name for the Victoria Memorial Museum) was examined in November 2008, we didn't find specimen number 2882. However, we observed and photographed other numbered specimens mentioned in the article by Berry, including those collected by Tyrrell from Waterton in 1883.

We then began to look for "Donald Station" or "Donald". We knew that there was a defunct "Donald Station Post Office" northwest of Golden, just before the TransCanada Highway crosses the Columbia River. This area is also called "Donald" on other maps but when we went to Google Maps, another "Donald Station" appeared. This one was directly north of the boundary of Glacier National Park right along the CPR and a short distance from the TransCanada Highway. Our informal chat with some CPR workers at this site, also called "Rogers" on other maps, revealed that it was also called "Donald Push Station", so named because additional locomotives were required to help push trains over Rogers Pass summit. Comparing an historic photograph taken about 1887 showing a CPR passenger train at Donald Station, BC with the local hills confirmed that this was not the "Donald Station" we were looking for.

Our ramblings to find "Donald Station" and the elusive *O. s. canadica* continued. Along the train tracks just south of the abandoned sawmill and the banks of the Columbia River the hills matched those in the historic photograph. Yes, success: we had found "Donald Station".

On that same trip we rediscovered *O. s. canadica*, the subspecies named from the single shell whose whereabouts is unknown. This find reconfirmed the most northerly point in the distribution of Mountainsnails. The next year other "snailers" looked where we saw the empty shells and actually found a few live snails. Good news indeed as it seems that no one else has observed this species since it was originally collected over 125 years ago!

We will continue our forays into the hills of the Columbia Valley and the Rocky Mountain Trench. Are there any *Oreohelix* between Donald Station and Cranbrook, the next nearest location for *Oreohelix*? If you'd like to help, and are in any of these areas and come across *Oreohelix* shells, leave the shells but take photographs and a location with a GPS or describe it in as much detail as possible and then contact us through the Bow Valley Naturalists website. Your assistance will be gratefully appreciated.





photo: D. Lepitzki

Three species of *Oreohelix*: the Boundary Mountainsnail from near Waterton (left), the Cypress Hills Mountainsnail from Cypress Hills, Alberta (centre), and the newly rediscovered Donald Station Mountainsnail from near Donald Station, BC (right) photographed from the side. The Donald Station Mountainsnail shell has a diameter of around 2 cm. The biggest difference between these three snails is the size and shape of the shell with the Donald Station Mountainsnail being much shorter than the other two.



Tortricid Moths (Tortricidae)



photos: M. McIvor

Thousands of Tortricids, the family of moths that include the budworms, descended on the Banff townsite overnight on August 7, 2008. The ones above occurred last year on August 17 at the Cave & Basin.

Of course trees next to highways and roads are susceptible to salt and other chemical damage. Although usually that eventually kills them, it may increase their vulnerability to insect attack in the meantime.

So a bit of detective work might be required to establish the cause of red trees. It depends on where they are located, if there is any evidence of insect attack, or if there are soil moisture or chemistry imbalances. It must be kept in mind though, that insects and normal climate variations are part of the cycle of forest life and are natural processes. Dead and dying trees provide habitat and food for insects, birds, mammals, and fungi, as well as structure in the forest. However, unlike the natural factors involved in forest health, human-caused effects should be monitored and minimized.

### **There's Red in Them Thar Hills**

*Brenda Lepitzki*

Why are we seeing so much red in the park's forests, including the trees in town? I first noticed it in late winter, and as spring progresses there are more and more affected trees.

Certainly we are aware of the trees killed by pine beetles in recent years, but now we see spruce and fir trees also turning red, losing needles, and dying. There can be no doubt that both the amount and timing of moisture available to trees is very important to their health. The term "red belt" refers to large areas of lodgepole pine that are moisture stressed in the winter and early spring by drying winds and cold temperatures. This happens before the ground thaws and water is available to the trees. The trees are unable to replace the moisture drawn from the needles, which then dry and turn red.

All trees except those adapted to drought may be weakened by prolonged dry conditions and become more susceptible to insect infestations. White spruce and Douglas fir trees both are attacked by beetles that feed on needles. This winter as well as last we found evidence of budworm infestations on trees in the Cascade Valley, up Forty Mile Creek, and on the way to Moraine Lake. Blown from the trees onto the surface of the snow were pupal exuvia (skins) that were shed last summer as the larvae transformed into the moth-like adults. Other insects that attack evergreen trees and kill needles and shoots include caterpillar-like loopers and needle miners (adults of both types are moth-like), caterpillar-like sawflies (adults are wasp-like), and spider mites. Each of these causes specific types of damage to their tree hosts, indicated by red needles. Individual trees or groups of trees may be affected.

## ISSUES

### **“Enhancing” the View?**

*Mike McIvor*

BVN members will be aware of the proposal by Brewster Travel to erect the Glacier Discovery Walk, a glass-bottomed walkway suspended out over the Sunwapta River at the Tangle Ridge Viewpoint in Jasper National Park, north of the Icefields Centre. We were consulted about this by the company and expressed a variety of significant concerns. And a number of individuals attended open houses, taking the opportunity to register their own concerns and opposition.

Issues that have been identified range from aesthetic impacts; the privatization and commercialization of what is – and should remain – a public viewpoint; potential impacts on bighorn sheep and mountain goats; and the precedent this project would establish if approved. Overriding these is a fervent distaste for the attitude that our mountain landscapes just aren’t good enough the way they are, that they need to be “improved” in some way so they will become genuine “attractions”. Our counter proposal to the company and to Parks Canada, especially if they are genuinely interested in emphasizing education, is to convert the Icefields Centre into a world-class interpretive facility. This may not conform to many traditional business models but it would be far more appropriate in a national park than the corruption of an awe-inspiring view.

For more information, check out the website of the Jasper Environmental Association.

< <http://www.jasperenvironmental.org> >

We will be staying in touch with our friends at the JEA and if this proposal continues to move forward we will send around an Action Alert letting you know where to direct your comments.

### **Marmot Basin Ski Area**

BVN submitted comments to Parks Canada on draft Terms of Reference for studies of mountain caribou and mountain goats that must be conducted before some elements of Marmot’s expansion ambitions may be considered. It will be some time before this research is completed, results are available, and implications for long range planning can be evaluated. We’ll be following this closely and responding when necessary. Parks Canada already has started down the wrong trail in this matter with the very generous Site Guidelines it approved for the ski area but we will hope for some second thoughts and wiser decisions in the future.

### **Mount Norquay Ski Area**

BVN contributed comments as part of the public consultation on draft Site Guidelines for Norquay. Unfortunately, Parks Canada was engaging in the same kind of spin and deception it employed earlier with Marmot Basin. Whether the draft undergoes any serious revision based on concerns expressed by conservation groups and individual citizens remains to be seen.

At exactly the same time, the federal government is proposing to weaken the regulations under the Canadian Environmental Assessment Act in order to remove the requirement that proposed long-range plans for ski areas must undergo Comprehensive Study level assessment rather than a less rigorous Screening. We suspect these 2 process are linked in some way but will have to wait to see when decisions are announced.

### **Book Reviews**

#### **The Tiger: A True Story of Vengeance and Survival, by John Vaillant**

Every once in a while a book comes along that redefines the reading experience. The Tiger, by John Vaillant, was such a book for me. Well known for his first book, The Golden Spruce (which won the Governor General’s Award for Non-Fiction in 2005) Vancouver-based Vaillant now tells the story of a three-way hunt between a Russian poacher, an endangered Amur tiger, and a team of anti-poaching specialists; in doing so, once again he explores the age-old clash between human ambition and the natural world.

The core story is a fascinating one and Vaillant knows exactly how to meter it out in page-turning suspense, but the back stories he manages to weave into the main narrative are what most impressed me about the book. Drawing on elements of gestalt theory, wildlife biology, the writings of ethologist Elizabeth Marshall Thomas and biologist George Schaller, ancient cave art, umwelt theory and many other threads, Vaillant quickly transcends the Russian setting of his main story and, without losing focus, takes us on a whirlwind tour that considers some of humanity’s most tragic and most hopeful relationships with large carnivores around the world.

A must-read for anyone who spends time amongst grizzly bears, cougars, and other critters that have the capacity to kill us, but, for reasons Vaillant valiantly explains, rarely do.

**Reviewed by Karsten Heuer**

**Heatstroke: Nature in an Age of Global Warming**  
**Anthony D. Barnosky. Island Press 2009**

When I saw that the author had dedicated this book to 3 graduating school classes “and to young people of their generation everywhere” as well as to his daughters, I realized that a paleoecologist – at least this one – is someone who studies distant yesterdays but thinks, worries, and has hopes about tomorrow.

Anthony Barnosky has been on the faculty of the University of California, Berkeley for more than 20 years. His current positions include Professor of Integrative Biology, Curator of Fossil Mammals in the Museum of Paleontology, and Research Paleontologist in the Museum of Vertebrate Zoology. But while these impressive credentials indicate he knows what he is writing about, they should not intimidate anyone. This book is clearly intended for a lay audience and is eminently readable.

As a paleoecologist, what he brings to this discussion of the way life on Earth has changed, is changing, and most likely will change, is the critical perspective of time. Also apparent, is his interest in, and appreciation for, mountain landscapes of western North America. He and colleagues have examined the fossil record to gain an understanding of what transpired when our planet went through previous periods of warming. There is much to be learned from the past, but he is careful to remind us of two crucial differences between the situation today and previous episodes: the first is that, far from starting in a glacial time, the Earth is warm already; secondly, the changes are occurring much faster than before. Many species will find it extremely difficult, if not impossible to adjust their geographic range – not all, but most will have to move north or uphill – in order to survive. And of course, human barriers of various kinds will compound this problem.

Any mountain-dwelling species forced to move upslope to escape intolerably warm conditions will have to contend with a basic fact of life: mountains are wider at the base than at the top. This is so basic it stares us in the face every time we look outside, yet it took this book to make me think about it as a significant factor in this context. For species heading uphill this means there will be less and less habitat; the result will be smaller, ever more isolated, increasingly vulnerable populations.

(It is not particularly comforting to consider the kinds of organisms he suggests are likely to be most successful in adapting to rapid change. These will be species with many individuals, fast generation times, and many offspring. If that sounds like a description that applies to flies and mosquitoes, that’s because it does.)

When it comes to impacts on biodiversity and the viability of ecosystems as we know them today, Barnosky asserts that global warming is in “bad company” joining 3 other bad actors in what he labels the Gang of Four. The others are habitat destruction and fragmentation; introduction of exotic species; and the growing human population. Because of synergy between the gang members, the problem is bigger than the sum of its parts.

In a finite world with limits on energy and resources, there is no avoiding the painful reality that as more is consumed by humans, less is available to other forms of life. Every new person ultimately contributes to this effect and every single day 210,000 new people are added to our population.

It would be completely wrong for me to convey the impression that this book does little more than present a series of depressing portraits of a world in the process of unraveling. Far from it! Without denying the certainty of losses to come, the author maintains we have the knowledge and technology to slow climate change as well as to plan and manage for persistence of species, natural communities, and ecosystems. But we also need the will to do this now. Postponing action while we continue “deficit-spending the global ecological energy account” - burning up the solar energy that has been in long-term storage in the ground – simply means delaying the inevitable while the problem worsens.

The book outlines 3 broad, general ways in which many people tend to perceive nature: as provider of ecosystem services; as particular groupings of species in particular ecosystems; and as a feeling of wilderness. All are important. All are worth the effort to sustain.

In the same broad terms, there are 2 major threats to these perceptions from global warming: loss of biodiversity that will degrade ecosystem services to humanity; and irrevocable changes to places we have deemed special for preserving nature. A very difficult task will be to determine how best to save certain species on the one hand, and wilderness itself on the other. Until now, the single strategy to accomplish both has been to establish preserves of some kind or another. But this “one size” no longer fits all. Increasingly, steps necessary to protect some species as the Earth heats up, may well require levels of intervention – “assisted migration” is an example – that are incompatible with ideas of wilderness. Those who care both about saving species and saving wilderness will have to recognize that these goals may be diverging to some extent and we will have to find ways to work towards them in parallel.

Barnosky advocates a broad-brush plan based on the principles of “keep, connect, create”: “keep” means continuing long-standing efforts to protect more of the natural world, to maintain that protection, and to carry out restoration; “connect” involves increasing the geographic range for species dispersal through what he calls “climate-connection corridors”, an idea the Y2Y Conservation Initiative has been promoting; and “create” means developing new initiatives, physical as well as conceptual, that acknowledge conservation strategies for sustaining the global ecosystem, saving particular species, and saving wilderness are different but not mutually exclusive.

It is fascinating to read a book written by someone who has spent a considerable part of his life, not to mention his career, observing time from well beyond arms-length, but who is compelled today to convey a sense of urgency. The nature of the future will be shaped to an enormous extent by what we do – or don’t do – in the next few years. Perhaps fittingly, the book concludes with an appendix containing suggestions of things individuals can do to reduce their own carbon footprint.

**Reviewed by Mike McIvor**

While exploring ideas about nature and wilderness for his book *Heatstroke*, Anthony Barnosky spoke to a wide variety of people in an attempt to understand what nature meant to each of them. He found that when it came to identifying the kind of “nature” they thought should be saved, there was a common theme: “nature has leaves instead of concrete; round edges instead of square corners; freedom instead of fences; chance instead of plans; risk instead of security; tranquility instead of stress; species that, for the most part, were there before people, instead of species that were put there by people; and freedom from heavy guidance by *Homo Sapiens*.”