

**BOW VALLEY NATURALISTS
NEWSLETTER, SPRING 2012**

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OUTINGS

MAY SPECIES COUNT

Saturday and Sunday, May 26th and 27th

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 26th. Our usual meeting times and places will apply. The Banff count will be held on May 27th.** 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.

Flowering plants reported:

Yamnuska: 32 species in 2011, snow half way down the mountain. Not done due to snow in 2010.

Banff: 64 species in 2011 and 79 species in 2010.

The bird numbers:

Yamnuska: 54 species in 2011, not done in 2010 due to a snowstorm.

Banff: 85 species in 2011, 83 species in 2010.



2010 May Species Count keepers. photo: D. McIvor

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.**

Sad News from our Jasper Friends

Mike McIvor



Shortly before this newsletter was ready for publication, we received a message from Jill Seaton with the very sad news that Basil had died on Friday, May 12, his 93rd birthday. He and Jill had been married for 58 years.

Basil and Jill were the heart and soul of the Jasper Environmental Association and Canadians were extremely fortunate to have this incredibly strong team of two caring people volunteering to fight for many years on our behalf for the protection of Jasper National Park, its ecosystems and wildlife. Usually out of the limelight, as Jasper so often is compared to Banff, they did their best to resist attempts by some business interests or Parks Canada managers who had lost touch with their correct priorities, to degrade the landscape and character of the park. They led the fight against the Glacier Discovery Walk. They did so with humour and with an energy and commitment that people decades younger could only hope to come close to matching. The Bow Valley Naturalists are thankful we had the opportunity to know and work with Basil. We send our warmest sympathy and best wishes to Jill and her family. The news is sad but his is a life to be celebrated.

EVENTS

Parks Canada has discontinued its long-running Research Updates series but there will be this one program.

Conservation Updates: Research and Active Management in Banff National Park.

Thursday, May 24, 7 PM.

Whyte Museum of the Canadian Rockies. Free

**Banff Community Bird Walks
2012 Spring Migration Series**

These walks are taking place twice a week this year. **Monday at 7:00 AM and Saturday at 8:15 AM.** Meet on Sundance Road just after you turn off Cave Ave. The last walk will be on June 4th. For more information: BanffCommunityBirdWalk@hotmail.com

MAPS – Thanks for Support

Peter Duck

We are about to begin another season of Monitoring Avian Productivity and Survivorship at the Ranger Creek bird banding site. BVN has been coordinating this monitoring project since the late 1990s with the help of volunteers and the assistance of licensed bird banders.

As we plan the schedule for this year's sessions we would like to thank the volunteers who have helped over the years by subjecting their bodies to cold mornings and mosquitoes in the interest of shedding light on the population trends of breeding birds. We have also recently been assisted by some generous contributions in kind. In preparation for last year's season BVNer Edith Gordon was kind enough to sew a supply of much needed banding bags. Last fall George Garden, a long time servant to avian science, donated a set of electronic callipers and a weigh scale to our Ranger Creek MAPS kit. Special thanks to Edith and George.

All this support makes it possible to continue important work with a minimal budget. More information on the MAPS project and the valuable information it is providing is available on the BVN web site at <http://www.bowvalleynaturalists.org/> under the "Bird Monitoring" tab. If you are interested in visiting our Ranger Creek site during one of our banding sessions to see monitoring science in action and some very special creatures up close send a note to Peter.Duck@Shaw.ca.

greatest number of HELS individuals reported (n=364 which is about 30% of all individuals – see figure 2).

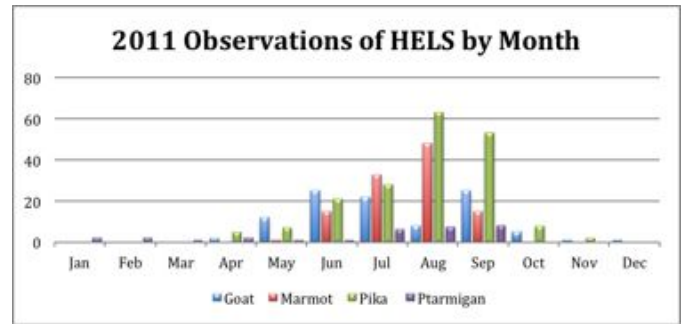


Figure 1: Observations made per month in 2011

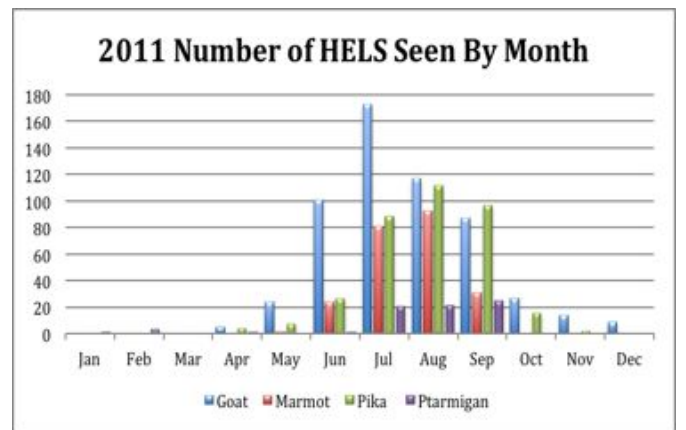


Figure 2: Count of individuals sighted per month in 2011

We thank all registered users for their contributions in 2011 and look forward to another successful season in 2012.

HELs 2011 numerical summary prepared by Jon Ball.

BVN HELS Project

Our site is ready for your 2012 observations. Thanks to Ben Dorsey for constructing it originally and to Jon Ball who is managing it for us now and prepared this summary.

To report your sightings please go to <http://www.bowvalleynaturalists.org/hels>

High Elevation Localized Species Sightings 2011

In May of 2010, the HELS Project began online operations, with members of the Bow Valley Naturalists and the general public contributing observations and counts of four High Elevation Localized Species – goat, marmot, pika and ptarmigan. That first (partial) year saw 22 observers contribute 207 observations of an estimated 678 individual HELS. 2011 was the first full year of the project and we can now report that there was a significant increase in the numbers of observers and observations as well as in the number of HELS sighted.

In 2011, 32 registered users reported 433 HELS observations of an estimated 1225 individual HELS. On average 14 sightings were reported by each individual, with 1 individual reporting 86 sightings. Seven users reported 70% of all records (n=301). A few users reported only one (n=8) or two (n= 6) sightings each.

Species	Sightings	Individuals Reported	Average Group Size
Goat	101	557	5.51
Marmot	112	231	2.06
None	3	0	n/a
Pika	187	357	1.91
Ptarmigan	30	80	2.67

Table 1: High Elevation Localized Species reported in 2011

A total of 231 marmot, 357 pika, 557 mountain goat, and 80 white-tailed ptarmigan were reported and mapped (Table 1). Group sizes differed by species. On average 2 marmots were reported per sighting record, 2 pika, 6 goats, and 3 ptarmigan. The largest group reported was a gathering of 61 goats, with several other observations (n=5) of groups of goats numbering 30 or larger. The largest non-goat group was an observation of 28 pika.

The busiest month for observations was August (n=126 which is about 29% of all observations – see figure 1), and July saw the

BVN Website

Shelley Mardiros

If you haven't visited the BVN website recently... dare I say? ... take a gander!

From October to April, the homepage features one of BVN board member Colleen Campbell's beautiful posters announcing – and illustrating – the monthly BVN presentation. The posters are also archived as "Past Presentations" on the right-hand menu. During the summer hiatus, we would like to use this space to display nature photographs taken by BVN members, so we invite you to send one or two of your best Bow Valley pics to info@bowvalleynaturalists.org along with your name for the credit line. We'll post a selection of photos throughout the summer.

Our website is a source of comprehensive information on Banff National Park's most endangered animal: *Physella johnsoni*, the Banff Springs Snail. Written by BVN board member Dr. Dwayne Lepitzki, the world's foremost expert on this endemic snail, the engaging treatise tells the fascinating geological history of thermal springs on the slopes of Sulphur Mountain, along with details in the life cycle of this vulnerable little hermaphrodite. While the page has not (yet) "gone viral", it gets lots of views from scientists, students, and people interested in natural history.

Another web page that is popular with enthusiasts from far afield – in this case, mycologists – is the Mushroom Primer, organized and photographically illustrated by BVN board member Diane McIvor. Who, among mushroom-lovers, can resist...say... the bulbous beauty of *Lycogala epidendron*?

Want to know more about pika populations in the park? Read the results of the pilot Pika Monitoring Study undertaken last year by Julie Timmins and Jesse Whittington. If you want to participate in a little monitoring yourself, make note of your observations of 4 high-elevation localized species (HELS) – pika, mountain goat, hoary marmot, and white-tailed ptarmigan – while you are hiking this summer, and post your findings (and photographs, if you like) to our HELS project site. We'll report results at the end of the season.

On the avian front, the BVN-led MAPS (Monitoring Avian Productivity and Survivorship) research project has been conducted at Ranger Creek each summer since 1999, and a summary report by Cyndi Smith has recently been posted on the website, as has a photo gallery. Under the "Bird Monitoring" tab, we have also recently posted BVN board member Jason Rogers's assiduously researched checklists of birds observed in Banff and Jasper National Parks. So if you spot a bird you think may be a first for the park, consult the checklist and drop Jason an alert.

Be sure to check out bowvalleynaturalists.org for your summer surfing pleasure – there are several more inspiring items that I haven't mentioned – and send us your best photos of summer in the mountains.

ISSUES

Viad-Brewster Glacier Discovery Walk

Mike McIvor

An article in our Winter newsletter stated that a decision on this inappropriate project was expected by the end of January. I wrote that the decision "*will be a real test as to how far Parks Canada is prepared to go in its current misguided attempt to peddle the parks for crowds and profits.*"

And now, unfortunately, the results of that test reveal that Parks Canada is prepared to go a long way. In late January, Jasper National Park Superintendent, Greg Fenton announced that the decision would be delayed. But then suddenly, on February 9th, Environment Minister, Peter Kent announced the project had been approved. (This may have been a political decision but it seemed pretty obvious that Parks Canada management was in favour from the outset.) It seems very unlikely the timing of this was random since it occurred at exactly the same time Prime Minister Harper was in China, extolling the virtues of Canada's natural resources and promoting the tourism industry.

As part of his announcement, Minister Kent declared his belief that this gimmicky structure imposed on the national Park landscape "*will eventually become an iconic tourism destination*".

The Tourism Industry Association of Canada echoed his enthusiasm. According to its president, this artificial distraction "*will be a compelling addition to Canada's tourism product*".

As for Parks Canada, it insisted the public review process had been "*robust, transparent, timely and national in scope*". In its analysis of what it heard from the public it admitted, perhaps reluctantly, "*most respondents opposed the 'principle' of the project and felt*

that this kind of new commercial development does not belong in a national park. Concerns were raised about the privatization of land within the national park, and the precedent for further development in Jasper National Park and other parks."

However, it proceeded to demean these respondents in the most condescending terms, stating that these poor folks were behind the times when it comes to national park values and therefore didn't really know what they were talking about. "*The largest number of comments received and the central public debate in the petitions and media against the proposal related primarily to the interpretation of Parks Canada Agency policy and appropriateness. While these comments were well meaning, caring and passionate, they were philosophically in opposition to the interpretation of policy and the determination of appropriateness by the Parks Canada Agency.*"

Brave New National Park

Alldust Huckster

Some mountain-dwelling, radical extremists have been whining about Parks Canada's new direction and recent decisions shaped by it. But I must say I sympathize with senior managers of Parks Canada; it is truly exasperating these sincere, well-meaning but hopelessly misinformed, misguided people can't simply get over their nostalgia for an outdated version of national park values, move into the 21st century and embrace a contemporary, far more exciting vision for the future of these places. I think we should be looking on the bright side of life.

Here's just one small example: Parks Canada's Banff National Park Research Updates. Some people seemed to believe this annual series of reports from people studying the natural and human dimensions of the park actually contributed to their understanding and appreciation. (Personally, I never attended any of these during the 16 years they were presented to the public, but let's be completely honest about the flow of information in this modern age in Canada: the only completely reliable source of the truth is to be found in our Prime Minister's Office.)

Not surprisingly, these folks are mourning the passing of Research Updates after Parks Canada wisely decided to terminate the series. I say "wisely" very deliberately because in the Canada of today where the only thing that matters is The Economy, any efforts to expand our knowledge of the world around us are completely irrelevant, if not potentially obstructionist.

So while the termination of Research Updates is good news, there is even better news on the horizon. Credible rumours are circulating about the launch of a replacement series to be organized by Parks Canada managers under the direction of Banff-Lake Louise Tourism. It will be called Product Offer Updates. Apparently audiences will be treated to enthusiastic depictions of the latest, greatest, special events; newly approved recreational activities; ski area expansion plans on a fast track to approval; and a variety of innovative attractions to enhance landscapes in the park, following the lead of the Glacier Discovery Walk in Jasper. I can hardly wait!

Editor's note: Alldust, whose younger sister, Helluva, has accepted a position as a Promotions Specialist with either Parks Canada or the tourism industry, he wasn't sure which, persuaded us we had a responsibility to offer an alternate perspective from that usually espoused in these pages. However, it should be made clear we were not swayed in the slightest by suggestions that failure to do so could lead to allegations that we are enemies of the state. There also was some indication he may wish to submit more material in the future since he is closely watching what he refers to as "our wonderful majority government" in action in Ottawa, cheerfully witnessing the current attacks on the Canadian Environmental Assessment Act and eagerly anticipating forthcoming moves against the Species at Risk Act, the Fisheries Act, the Migratory Birds Convention Act, and other legislation that stands in the way of progress.

Obligations of the Species at Risk Act

From a news release issued by several conservation groups:

Conservation groups are taking Environment Minister Peter Kent to Federal Court over his continued failure to protect Canada's endangered Greater Sage-grouse and fulfill his duties under the Species at Risk Act (SARA). In November, Ecojustice filed a petition demanding Kent use a SARA provision to recommend emergency protection for sage-grouse and the habitat the species needs to survive in Canada. The protections requested included an end to further human disturbance, particularly oil and gas development, in crucial sage-grouse habitat. The petition, sent on behalf of an international coalition of 12 environmental groups, requested a response from Kent by Jan. 16. None was received. In response, Ecojustice filed an application in the Federal Court on February 14, seeking a court order to force Kent to issue recommendations for emergency protection. The sage-grouse, known for its elaborate courtship dance, was once a common game bird on Canada's Prairies. As a result of habitat destruction, particularly oil and gas development, almost 90 per cent of its Canadian population died off between 1988 and 2006. As few as 13 male birds currently remain in Alberta and at last count, as few as 42 males were left in Saskatchewan. The sage-grouse are highly sensitive to habitat disturbance. Research shows that, when confronted with oil and gas development, sage-grouse abandon their leks (central courting and breeding grounds) and other habitats that are crucial to their survival. Provincial laws in Alberta and Saskatchewan don't adequately protect sage-grouse and their habitat from threats posed by oil, gas and other industrial development, which is why immediate federal action is required. Ecojustice is representing Alberta Wilderness Association, Wilderness Committee, Nature Saskatchewan and Grasslands Naturalists in this action.



photo: U.S. Fish & Wildlife Service

Recent COSEWIC Assessments and SARA listings: Banff's Grizzlies remain Special Concern, Little Brown Bats undergo an emergency assessment as Endangered, and White-bark Pine close to being listed as Endangered under SARA

By Dwayne Lepitzki, Ph.D., Member of COSEWIC

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) held their spring Wildlife Species Assessment Meeting (SAM) in Kananaskis Country, 29 April – 4 May. Several observers were in attendance and saw how COSEWIC does business. The approximately 2 1/2 year process that begins with the call for bids, when anyone can bid to write a status report, culminates at a SAM when status is assigned. Among the 35

species (or 41 designatable units = DUs, which are entities below the species level) discussed at the meeting, the vast majority (32/41) were re-assessments. Every wildlife species assessed in a risk category by COSEWIC is required to be re-assessed every 10 years under the *Species At Risk Act (SARA)*. Risk categories can range from Extinct (gone forever) to Special Concern (a species that may become threatened or endangered because of a combination of biological characteristics and identified threats). There are also categories for Not at Risk as well as Data Deficient, the latter when all the available information is insufficient for COSEWIC to assign status.

The biggest species to be re-assessed at the spring 2012 SAM was the Blue Whale: both the Pacific and Atlantic Populations remain at Endangered. The smallest species to be re-assessed was probably one of the mosses, either the Silver Hair (Endangered) or Incurved Grizzled moss (Extirpated). The largest and smallest species to be assessed for the first time were one of the Skates (Thorny or Smooth, marine fishes found off the east coast, whose DUs ranged from Data Deficient to Endangered) and the Magnum Mantleslug (Special Concern, confined in Canada to the Columbia River Basin in BC).

The highest profile species to be re-assessed was the Grizzly Bear. The Western Population which extends from southern British Columbia eastward through southwestern Alberta and north and eastward from the Yukon to Nunavut remained at Special Concern. While some subpopulations with this range, especially those in southwestern Alberta and southern BC, appear to be in trouble, the Western Population as a whole appears to be stable but under increasing pressure from a variety of human-caused threats. The Ungava Population, confined to northeastern Quebec and northern Labrador, was declared Extinct – gone forever.

Two of the recurring threats among almost all of the species discussed were habitat loss and decline in habitat quality. Without adequate and quality habitat, regardless of whether that habitat is land or water, species cannot persist and will be on the road to disappearing. Many suggest that proposed amendments to the *Canadian Environmental Assessment Act* and *Fisheries Act* will do little to protect habitat.

Earlier in the year, the plight of three flying mammals was so serious that COSEWIC undertook emergency assessments, only the fourth such time over the past 10 years. In February 2012, COSEWIC assessed the Tri-coloured Bat, Little Brown Myotis (previously called the Little Brown Bat), and Northern Myotis (previously called Northern Long-eared Bat) as Endangered due to the rapid spread of White-nose Syndrome. Populations of all three species have recently declined precipitously from this disease, which is now believed to have originated from Europe, and is rapidly moving westward across Canada. Of these three, the Little Brown and Northern myotis are found in Banff. The Tri-coloured Bat is confined to Ontario, Quebec, New Brunswick and Nova Scotia where its distribution nearly completely overlaps the current distribution of the fungus responsible for White-nose Syndrome.

After a scientific COSEWIC assessment, which includes the incorporation of Aboriginal Traditional and Community Knowledge, the results are forwarded to the Government of Canada. It is the Government that then determines if a species warrants listing and protection under SARA. Part of that process includes consultation with the public. The public consultation period on the latest government proposal to add 18 terrestrial species to Schedule 1 of SARA, to reclassify seven terrestrial species already listed on Schedule 1, and to not list three of the terrestrial species that have been assessed as at risk by COSEWIC closes on 21 May. Of local interest, the White-bark Pine is included in the list to be added to SARA. In April 2010, COSEWIC assessed the White-bark Pine as Endangered.

Full results, including the press releases from the recent SAM and the emergency assessments of the three bats can be viewed at <http://www.cosewic.gc.ca>. The consultation document on adding species to SARA can be viewed at

http://www.sararegistry.gc.ca/document/default_e.cfm?documentID=2410.

THE THREE-LEGGED STOOL AND RELATIVES
a.k.a. Ecological Integrity, Education and Visitor Experience
Colleen Campbell

The Three-Legged Stool

Occasionally, Parks Canada and others use the image of a three-legged stool to represent the relationship between ecological integrity (EI), education and visitor experience. The three-legged stool relies on *equal* importance of visitor experience and education.

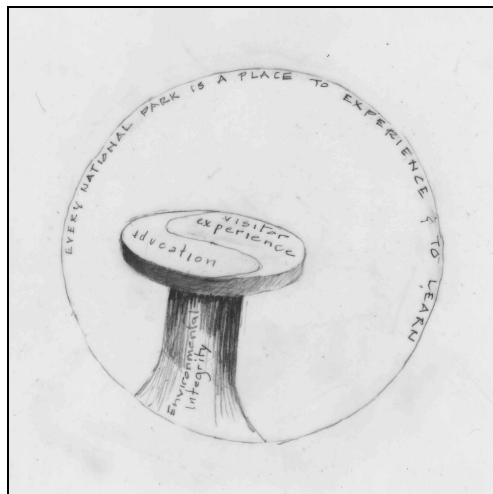
However, to maintain EI as the principle consideration (included as a concept in the 1979 Parks Canada Policy, formalized as the first priority in amendments to the Canada National Parks Act in 1988 and further strengthened in amendments to that legislation in 2000), education and visitor experience ought to be engaged in ways that foster ecological health. Regardless of the analogy, without ecological integrity, education and visitor experience will not have a secure link to intrinsic attributes and values of our national parks

There are likely many appropriate models that could establish a sound, yet somewhat malleable relationship, using EI as the foundation or core to which education and visitor experience are solidly linked.

Here are a few to ponder:

A PEDESTAL

The pedestal offers ecological integrity as the support, the base on which education and visitor experience are balanced and interconnected as a platform overhanging the vertical support. The thickness of the platform could represent the robustness of education opportunities and visitor experience. The extent of the cantilevered perimeter could represent a sheltering or protection of the environmental integrity, born from the educations and visitor experience.



A CLIMBING ROPE

The climbing rope is strong, with a complex core protected by the mantle, but not attached to it. The many differently twisted cords of the core represents environmental integrity: many parts, interacting but sometimes a bit independent of each other as well. The mantle is interwoven themes of education and visitor experience. They are two interdependent 'threads' working together, gaining support from the core and working together to understand, interpret, and protect EI.



A TREE

The tree is the only organic model. The roots and trunk represent environmental integrity, the branches represent education and the leaves represent visitor experience. Visitor experience, if it is well-shaped by educational opportunities (excellent interpretation at every turn) brings resources and energy to the structure (both EI And education) – thus completing the mutuality of the relationship.



Each of the models can be adapted to visually emphasize one or another of the three concerns. Though they all work together, they are not equal and EI should not be abandoned as the first priority.

Each of the alternative models shows strong relationships of the three parts. Each one also both prompts and relies on education and visitor experience as important in the parks system while emphasizing ecological integrity as the first priority, required by the National Parks Act since 1988.

Of Wild Things & Wild Places

Butterflies of Spring

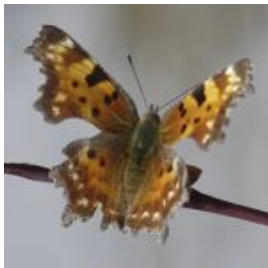
Mike McIvor

While many of us look forward to the first migrant birds returning to the mountains or the first wildflowers in bloom as signs of spring, some of us also eagerly anticipate the first butterflies of the season. As a group, butterflies in our part of the world hibernate to survive the harsh conditions of winter. Hibernation may occur at any stage in the life cycle – eggs, larvae, pupae, or adults – with that stage being specific to each species. Not surprisingly, the earliest butterflies tend to be species that overwinter as adults.

Compton Tortoiseshell (*Nymphalis vaaalbum*), Mourning Cloak (*Nymphalis antiopa*), and Milbert's Tortoiseshell (*Nymphalis milberti*) are three of the species we most associate with warm, sunny days – if there are any – in April. (Some smaller anglewings also appear very early but are harder to narrow down to the correct species. The Green Comma (*Polygonia faunus*) may be the most common around here.) They are members of a sub-family known as Anglewings (Nymphalinae) within the larger family of Brushfoots (Nymphalidae).

Each of these three is strikingly marked and coloured making them easy to identify. They always offer a good reminder to be on the lookout for other butterflies as the season progresses.

Green Comma



Compton Tortoise-shell



Milbert's Tortoise-shell



Mourning Cloak

Trumpeter Swan at Vermilion Lakes

Mike McIvor

In the morning of April 3rd this year I was fortunate to see a Trumpeter Swan at 3rd Vermilion Lake. (This species occasionally shows up during migration in Banff National Park but not as commonly as the Tundra Swan. See Amar's photo of 2 trumpeters taken at Vermilion Lakes last year.) There still was not a very large area of open water so it was close enough for me to have a great look with binoculars and scope but far enough away I could watch without disturbing it.



I noticed this bird was banded and although I was frustrated initially, wondering how I possibly could read the band, the swan slowly swam in my direction then lifted its leg. (Needless to say, I whispered "thank you"). Cyndi Smith from Waterton Lakes National Park, who has been involved in much of the bird banding activity in this park, from Harlequin Ducks to songbirds, gave me the contact info I needed to send in my observation.

A few days after I reported it to the Patuxent Wildlife Research Centre Banding Laboratory I was very surprised to receive a response in the form of a Certificate of Appreciation from the U.S. Geological Survey and the Canadian Wildlife Service, the organizations that operate the North American Bird Banding Program. The best part of this was the opportunity to learn where and when the banding had occurred:

Hatched 2005. Banded June 2006, 3 miles south of Poulson, Lake County, Montana south of Flathead Lake Bander - Confed Salish and Kootenai Tribes

According to some additional information I tracked down, the Confederated Salish and Kootenai Tribes of the Flathead Nation have been reintroducing this species to their lands for more than a decade, primarily from captive breeding pairs.

You always wish you could know more about where these birds are going and what the rest of their lives will be like. But many mysteries will remain.

Swift Fox in Banff National Park

By Karsten Heuer

Two months ago, someone from the highways department showed up where I work at the Resource Conservation Office in Banff with what he thought was a dead coyote pup. It had been hit between Banff and Canmore. What we soon realized, however, was that it wasn't a coyote, and, given the black-tipped tail and extremely narrow muzzle, it wasn't a red fox either. After consulting a few field guides and making a quick phone call to Clio Smeeton at the Cochrane Ecological Institute (who has bred and raised captive swift foxes for reintroduction for over 40 years) we confirmed it was a wild swift fox – the first ever reported in Banff National Park!

Swift foxes are amazing animals. No larger than a housecat and able to run 50 km/h, they fill a niche that revolves around catching insects and small, burrowing animals. Unfortunately they were trapped heavily in the late 1800s and early 1900s for their sleek, silvery fur. This persecution, combined with a loss of habitat and a boom in their main predator, the coyote, led to the extirpation of the species in Alberta in the 1970s. After a number of reintroduction efforts in the southern part of the province the swift fox is now listed as Endangered by COSEWIC. According to the Alberta Recovery Plan (2006), about 1,100 now roam the prairies, mostly clustered around the US/Canada border south of Medicine Hat.

There is some disagreement over the historic range of the swift fox. The official recovery plan claims arid short grass prairie is their favoured habitat but trapping records and First Nation oral histories suggest they were once a much wider ranging species. Indeed, the swift fox is sacred to most of the Great Plains tribes, and, according to Clio Smeeton, their red-ochre-coated bones have been found in grave sites as far west as Waterton Lakes National Park. And if that doesn't make you curious, take a look where the field specimen for the Smithsonian Museum was collected next time you're in Washington, D.C.: just outside of Calgary.

All this begs the question: was the poor guy that got hit here in March a one-off, 400+km disperser from the southern prairies or was there something more to his movements, some ancestral memory lingering in his bones that led him to cross countless roads, rivers and ranches in the flatlands to this forested world of tilted rock? The bit of backtracking I did the morning after he was hit didn't give me any answers (I lost the tracks within a kilometre due to lack of snow), but perhaps the DNA work now being done on his carcass will.

Where did he come from? What was his relationship to the hundreds of captive bred foxes released in the wild? Through the wonders of genetic mapping hopefully we will know more soon.



photo: Dan Rafila

ROCK 'N ROLL FANS NO MORE: CHANGES TO BOW VALLEY ALLUVIAL FANS

*Fes A. de Scally**

Alluvial fans are common landforms of deposition in mountainous areas, their formation resulting from the fact that the ability of tributary streams to transport sediment is drastically reduced at the point where they enter a trunk valley such as the Bow. While true alluvial fans consist of sediment transported by streamflow, particularly during floods, a secondary or even dominant mechanism of formation may be debris flows - destructive events involving the sudden movement of thousands of cubic metres of water, sediment, boulders and logs. On some steep fans snow avalanches may also contribute a portion of the sediment which builds the fan. The common characteristic of all these processes is their highly episodic nature, with short-lived periods of sediment transport separated by long intervals, in the case of debris flows even decades, of relative quiescence.

The title of this article is meant to suggest that alluvial fans in the Bow Valley are no longer the active sediment transport and deposition systems they once were. Why not? The first reason is that most if not all fans in the Bow Valley are 'paraglacial', that is they formed rapidly following the final disappearance of Pleistocene glacial ice, at a time when large amounts of unstable

sediment were available for fan construction. This supply of easily transported material was quickly (in terms of geological time) exhausted, and today on most of these fans only the active channel and immediately adjacent areas are subjected to regular flooding and sedimentation. Yet these hydrologic-geomorphic processes have important ecological roles today. Riparian habitats are among the most diverse habitats for plant and animal species in Banff National Park, and the flooding and sedimentation which occurs on fans maintain important riparian communities of trembling aspen and shrub species. As well, the sediment which reaches trunk streams such as the Bow becomes an important component of that stream's sediment load, supplying coarse material for the construction and maintenance of downstream gravel bars and the riffles used by fish for spawning.

Another reason water and sediment movement on many alluvial fans in the Bow Valley is no longer as active as in the past is due to human alteration. The stabilization, straightening, re-routing and culverting of the active channels which has taken place during the construction of transportation routes such as the Canadian Pacific Railway, Trans Canada Highway, Bow Valley Parkway and other roads, as well as continued maintenance such as removing sediment from channels, has had a profound impact on their ability to transport water and sediment. In many cases, having removed parts of the fan surface from the natural cycle of disturbance by flooding and sedimentation, these changes have contributed to the reduction in young successional riparian vegetation in the Bow Valley (Banff-Bow Valley: At the Crossroads, Technical Report, 1996). In many other instances, the movement of sediment into trunk streams has been severely disrupted, with unknown effects on stream morphology and ecology downstream.



Parks Canada machine above Minnewanka Road. photo: M. McIvor

The objectives of the study we conducted were two-fold. The first was to document the extent and nature of human alteration of alluvial fans in the Bow Valley between Castle Junction and the East Gate. The second was to examine, by way of pilot studies on two impacted fans, options for restoration of more natural water flows and sediment transfers and therefore re-establishment of young successional vegetation communities. The eventual implementation of any restoration measures may well hinge on being able to devise road and rail crossings of active channels which are less disruptive to water and sediment movement while at the same time addressing some of the safety and maintenance issues associated with present crossings.

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(Editor's note: BVN very much looks forward to learning Parks Canada's plans for alluvial fan restoration.)

Book Reviews

The Whistling Hare

By Brian Webster

The pika is a small rock-dwelling mammal that lives near treeline in rocky alpine terrain. Often mistaken for a rodent, they are more closely related to rabbits and hares (*lagomorph order*). Active year round, pikas have earned my respect as they somehow manage to survive the long winter months living beneath the snow, eating the dried grasses that they have collected during the previous summer.

While hiking and in my job as a mountain rescue specialist, I often come across their haystacks (piles of vegetation drying in the sun) as these industrious animals prepare their winter food supply. Occasionally I hear their shrill whistle as they sense my presence, send out an alarm call then disappear into the talus. But rarely am I lucky enough to get a glimpse of them, which makes the following incident all the more special and strange.

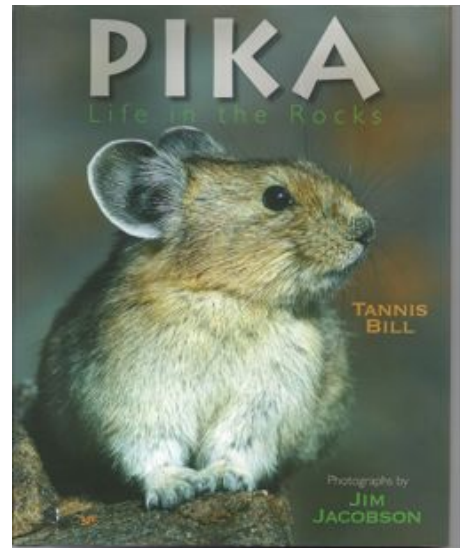
On April 9th, 2012, I was ski touring on Mt. Field in British Columbia. It was a beautiful sunny day. I was at 2400 metres elevation, the snowpack was three metres deep and there wasn't a tree in sight. Out of the corner of my eye I saw in the distance a movement of brown over the otherwise white landscape. As the blur of colour came closer I realized that it was a lone pika, and it was headed straight for me. Upon its arrival, the pika displayed no fear as it jumped up on my skis and started nibbling at my boots. At one point it tried to climb up my pant leg and reached past my knee before falling back into the snow. It even allowed me to scratch it behind the ears. After ten minutes of watching this incredible sight, I carefully skied away and wouldn't you know...the pika followed me like a lost puppy. After 200 metres its interest finally waned and it veered off to what I hope was a cozy home beneath the snow.



photo: Brian Webster

Pika: Life in the Rocks by Tannis Bill and Photographs by Jim Jacobson

Pika: Life in the Rocks is a fun and interesting book about the pika's life cycle in the mountains. I read it to my little brother Finn and he liked it too. We both enjoyed the great photographs and the writing. **Book Reviewed by Rylan McKenna, age 8 Banff, Alberta.**



The Sound of a Wild Snail Eating, 2010, by Elisabeth Tova Bailey, Algonquin Books of Chapel Hill, a division of Workman Publishing, New York NY. 190 pp. www.algonquin.com

Review by Brenda Lepitzki

Like most of us, Elisabeth Tova Bailey led an active life, enjoying walks in the woods near her farmhouse with her dog Brandy in her spare moments. It wasn't until she was stopped in her tracks by a serious, debilitating disease that she had the time to pay attention to the details of the world around her, especially one of the smaller enigmatic creatures usually overlooked on a quick walk.

"The Sound of a Wild Snail Eating" is the captivating story of how the author manages to work through her disease with the help of a forest-dwelling snail, given to her by a friend in a pot of violets from the nearby forest. Later the snail lives in a larger terrarium with a complete mini habitat, before its release back to the forest. Her research draws her deeper into the life cycle and biology of land snails and is presented with many background references that present enticing trails to follow. You will come to understand her new respect for snails as the perfectly adapted, intelligent organisms they are. There is much to learn from the microcosm explored in this book, and it's relevance to our world and the way we live. Once you pick it up you'll have a hard time putting it down. It's a small book, but not inconsequential. I found this copy at a local big box bookstore, surprisingly, but it has gained even worldwide attention in the last year.