BOW VALLEY NATURALISTS
NEWSLETTER, SPRING 2008
BOX 1693, BANFF, AB
T1L 1B6
PHONE: 762-4160
Web site: http://www.bowvalleynaturalists.org

O U T I N G S

MAY SPECIES COUNT
Saturday and Sunday, May 24 & 25

The Bow Valley Naturalists' portion of the May Species Count, a province-wide event co-ordinated by the Federation of Alberta Naturalists, will be held on May 24th in the **Mount Yamnuska** area and on the 25th in the **Banff-Canmore** area. It always is fun and rewarding to spend a weekend in the spring looking at birds and wildflowers in the Bow Valley.

Compared to 2006, the numbers reported last year were lower both for birds and flowering plants. With the count date being the earliest that it can be held (always the last full weekend in May), we wonder what this spring will bring us. Could we have a heat wave by then?

Last year, in the **Yamnuska**, we reported 84 species of plants in flower compared to 100 in 2006. **Banff** had 88 species, 109 in 2006.

The bird numbers compared to the previous year:
Yamnuska: 58 species (69 in 2006).
Banff: 85 species, (108 in 2006).

For more information and to find out how to participate contact:
Diane & Mike McIvor at 762-4160
Bob Smith at 678-4720

E V E N T S

Banff National Park
2008 Research Updates Speaker Series
at the Whyte Museum

Thursday, May 22, 7 – 9 pm

- **"Bears and Barbed Wire: Unraveling the Mysteries of Banff's Crossing Structures through DNA Hair Analysis"**
  Mike Sawaya
- **"Perfection of the Morning: Volunteer Songbird Monitoring"**
  Peter Duck

Thursday, May 29, 7 – 9 pm

- **"Climate Induced Changes in Alpine Lakes Over the Past 400 Years in the Canadian Rockies"**
  Mark Graham, University of Alberta
- **"Co-existing with Brown Bears in the Italian Alps"**
  Claudio Groff, Mgr. Brown Bear Re-introduction Program, Province of Trento, Italy

Thursday, June 5, 7 – 9 pm

- **"Imagining Place in Winter: Photographic Albums and Growing Up in Banff in the 1920's"**
  Lauren Wheeler, Carleton University
- **"Studying People in the Mountain National Parks"**
  Kathy Rettie, Parks Canada

Events are free! Call 762-1464 for more information or email Heather Dempsey@pc.gc.ca

Bow Valley Happenings

MAPS VOLUNTEERS HELP WANTED!

If you dare to watch the sunrise and get up close and personal with birds there's no life like it. We have a job for you! For several years BVN has been running a bird banding project in the Bow Valley. The project is part of the monitoring program managed by the Institute for Bird Populations based at Point Reyes Bird Observatory in California. MAPS's (Mapping Avian Productivity and Survivorship) goal is to provide long-term demographic data on birds as an aid to identifying the factors driving bird population trends. We will be setting up a schedule of volunteers for the summer to be sure we have the help we need to operate the MAPS bird banding station at Ranger Creek.

Email Peter.Duck@shaw.ca if you want to add your name to our list of potential volunteers.

The PASSIVE and the ACTIVE of collecting DNA from bears
Colleen Campbell

During the decade of the Eastern Slopes Grizzly Bear Project, people in the Bow Valley became comfortable identifying grizzly bears by their personal research numbers. Though the pale-coated

Bow Summit bear, GB #36, became popularly known as 'Blondie' most people became accustomed to speaking particular numbers with tinges of reverence, awe or confusion: #16, # 30, #56, #66.

While bears sported a wee bit of wardrobe that rendered them identifiable, they were also subject to paparazzi-like followers, and news stories were anchored by the identifying specifics of a particular animal. After ten years of research, we gave up the seductively interesting technology of VHF collars, transmitting ear-tags and self-locating GPS collars. We, then, had to wean ourselves from the insatiable appetite (that had developed) to know every factual detail of bears' lives. Since 2005, when the *Final Report of the Eastern Slopes Grizzly Bear Project* was published, there have been infrequent newspaper articles about individual known bears or the continuing investigation related to grizzly bears in the Bow River watershed.

Yet, research continues. It has shifted to 'passive DNA collection and still involves coordination of different though related projects, many, many field researchers and lots and lots of human energy. During the past few years, trees that bears typically use for 'rubbing' have been identified, located precisely with GPS, and numbered ("ah….there's tree #2217" sighs the researcher walking along a distant trail). Researchers visit tagged trees at regular intervals over the 'bear-active' season to collect hair samples. The required data is recorded and the samples are submitted for DNA analysis.

Rub trees have rough surfaces and a bear rubbing against the tree will leave hair on many of the barky projections. Because it is difficult to sort out discrete samples, barbed wire is attached to rub trees in the area of most obvious use. The barbs on the wire are not problematic for bears and barbs enable collection of discrete hair samples. Samples *are* also collected from the bark, and differentiated from those collected from the wires in the data. Bears rub other surfaces as well — any place where it is convenient to communicate a message for other animals; hair samples have been found on poles, fences, bridge rails, and the corners of cabins.

Additionally, some trees are monitored with remote cameras. The images of individuals enable comparison with the collected DNA samples, record some behaviour, and improve our understanding of bears in the local habitat. Equally important, camera images identify bears that *do not rub* and leave hair samples, contributing further to our assessment of the population.

Though the target species of the research is grizzly bear, we have learned through the camera images that many other species are attracted to the rub trees; some sniff the tree and some scent mark in other ways. It appears that rub-trees are communication links amongst different species as well as between individual bears. Deer, elk, wolf, moose, fox, cougar, and coyotes as well as black and grizzly bears are some of the wild species known to attend to rub trees in different ways.

Specifically, the deposit of hair samples enables bears to communicate, *passively*, new information to researchers. We don't know that every bear will use rub trees, but mapping with the collected DNA identification provides useful minimum population numbers and distribution of individual bears, gender, how widely specific bears may range in the habitat, information about travel routes, some behavioural characteristics of males and females, and relatedness amongst bears in the local population.

Passive DNA and image collection is being done along the trails and at the wildlife highway crossings, and through scat collection (a bear that avoids rubbing a tree will leave scat along a trail, somewhere) throughout the Bow River watershed. Scat typically includes epithelial cells that yield to reliable DNA analysis. Each category of information contributes to our understanding of the bears: numbers, relationships, behaviour. The *active* part of the equation involves dedicated field researchers. A few researchers willing to work in any weather conditions monitor wildlife crossings throughout the year; during the summer, the phalanx of field researchers expands and individuals travel the trails to regularly monitor each of several hundreds of rub trees until snow flies again, in autumn.

Though the local research is focused on grizzly bears in the Bow River watershed, there is also limited monitoring over mountain passes to gain some information about exchange of animals between associated watersheds. Similar research is being conducted in eastern slopes grizzly bear habitat on provincial lands and, eventually, the findings will provide an overview of grizzly bear populations and movement on the eastern side of the Rockies.

Keep a sharp eye as you travel the trails. You may encounter signs of passive DNA collection while actively hiking trails anywhere in grizzly habitat in Alberta. Please respect the research. Look, photograph and …..…. and resist the urge to touch…. or to leave your own 'sign' in any other way.

photo: Parks Canada

Bee Concerned II

Brenda Lepitzki

Spring is the time of year when thoughts move from heavy toques to broad-brimmed sun hats, from -50C rated boots to sandals, from snowflakes floating in the wind to bees buzzing in the garden. But have you seen any bees this year?

Since last spring's BVN newsletter article about problems facing honey bees, (Colony Collapse Disorder, mite and fungal infections) more research has gone into the potential catastrophe. Although data for this winter are not yet available, some estimates suggest 40 percent of all American bees were killed last winter (2006-2007). In Canada, 29 percent of all bees were killed during the same time period, with 23 percent lost in BC and 30 percent lost in Alberta, about double the normal national and Albertan averages of 15% loss. Incidentally, Alberta has the third largest number of colonies in North America after California and Florida.

The prairie provinces account for 80 percent of Canadian honey production, contributing 1 billion dollars to the economy. The value of native bees in the ecosystem is beyond an economic price. Humans might survive only 4 years on the planet after the disappearance of bees, states a possible quote from Albert Einstein.

The way humans are using honey bees is a large part of the problem. Agribusiness over uses chemical pesticides and antibiotics, resulting in increasing resistance to these substances, and uses European bees in place of native bees for pollinating food crops. In fact, beekeepers make more money selling pollinating services by trucking their colonies across the country – a role the displaced native bees used to fulfill - than producing honey. Some 50,000 colonies are rented in Alberta alone to pollinate the canola crops.

What does this do to the bees? They are weakened by single crop diets and stressed from being moved frequently, which both increase mortality. Global warming also affects bees, with warmer weather later in the year encouraging them to stay active and consume the honey required later in the winter when they face starvation.

One is reminded of that web-of-nature string game: pluck one strand and all the others move; remove one piece and watch the web weaken or collapse.

It is imperative that a diverse fauna of native bees is allowed to survive and return so they can regain their natural pollination role. National Parks and protected areas are biodiversity banks, for native insects as well as charismatic mega-fauna, providing refuge and habitat they need to thrive. Who knows? Native bees may even reveal ways to combat diseases and parasites bombarding domestic honeybees.

Spring Insecting

by *Brenda Lepitzki*

When you're outside this spring and summer, don't spend all your time just birdwatching, but take a closer look at what they're eating or chasing. You'll maybe learn a bit more about their behaviour but also make a stronger connection to the intricate relationships in the natural world.

Folks on a recent morning bird walk saw Bohemian waxwings catching insects on the "fly", and wondered which flowers these insects were pollinating.

Most likely those insects were not doing any pollinating at all, especially those flying over water. Many insects do not pollinate plants (and, many plants are not pollinated by insects). Insects hatching from a pond or even a ditch may have been aquatic as larvae or may be terrestrials flying over the water in mating swarms, selecting that air space due to thermal or wind conditions. Many have no desire or ability to eat at all. Mayflies and most stoneflies do not eat as adults, and are very short-lived. They have only rudimentary mouthparts and incomplete guts. Some caddisflies and midges, if they eat, will only take a liquid meal like aphid honeydew or nectar, but still have no pollination role. They don't require food, but extra carbohydrates help them produce more eggs.

Aphid honeydew is a food source for male mosquitoes, and for female mosquitoes which will overwinter. Keep in mind while swatting those annoying insects that they are dinner for a myriad of other creatures including bats and birds! Things just wouldn't be right without them.

Although shunned by birds as food, butterflies are also seen in the spring long before all the snow has melted. Early butterflies which overwinter under leaf litter and bark include the mourning cloak, the cabbage white, and Milbert's tortoiseshell. They provide a glimpse of the diversity of life and colour on spring's doorstep. Make sure you take time to enjoy insect watching along with the birdwatching this year.

WHAT'S THIS?

photo: Peter Duck

This seven centimeters tall "structure" looks like some sort of large insect cocoon. It does not seem to be constructed in the same way as the rolled-leaf insect chambers commonly found on aspen suckers. If you have any clues let us know!

Boreal Toads

photo: M. McIvor

Boreal toads in amplexus in Ranger Creek Wetland. Note the sexual dimorphism: the male is much smaller than the female who must produce the egg string emerging while they mate. (Check the BVN website to see the colour differences.)

Bird Notes

Shelley Mardiros

On April 4th, Doug McKown drove up the Bow Valley Parkway to check out a nesting hole that is occupied each spring by a pileated woodpecker. To his surprise, a northern hawk-owl flew out of the hole, and Doug adroitly snapped this photo:

Whether the owl was looking for a snack or a ready-made nest is a matter of speculation, but hawk-owls breeding in BNP would be an extremely rare event.

Later in the week, Michael Shuster visited the aspen and found the rightful tenant – a male pileated – back at the old nesting hole, although the busy woodpecker was also drilling at a fresh hole higher up in the same aspen.

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In the third week of April, Peter Poole and others spotted two snow geese mingling with the horses at Warner's stables. BNP is somewhat west of the regular migratory route that snow geese fly from their wintering grounds in California to their breeding grounds in the far north.

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On a snowy day in late April, Jim Davies noticed an unusual woodpecker in his neighbour's yard on Grizzly Street, and took a closer look. Unusual indeed – it was a red-breasted sapsucker, a species whose range does not extend east of interior B.C. Jason Rogers notes that there is only one formal record of a red-breasted sapsucker seen in BNP – and that one was observed by another of Jim's neighbours – Jill Beleyme – in November 2003.

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On May 9th, Peter Poole and Tomo Fujimoro found another out-of-place migrant – a male long-tailed duck floating on Lake Minnewanka. This beautiful sea duck, formerly known as oldsquaw, is at home along the northern coasts of North America, but individuals have been sighted as rare visitors throughout the interior of the continent.

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Continuing the theme of unusual visitors, Mike McIvor heard, then saw, first an eastern phoebe and later a common grackle during an early morning birding stroll around the stables area on May 11th. Both birds were outside the western limits of their usual range.

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See www.bowvalleynaturalists.org for photos of the birds mentioned in this article, where available. Look under "Recent Birds".

Leucosticte tephrocotis

Shelley Mardiros

In China it is the Year of the Rat, but in Banff National Park and environs, I consider it the Year of the Gray-crowned Rosy-finch. Since January, individuals and flocks of rosy-finches have been a constant presence in Banff, and Canmore birders have also reported frequent sightings. The Cornell "Birds of America On-line" site describes rosy-finches as "extreme-environment specialists" and possibly the highest-altitude breeding bird in North America. In part because of their relatively remote habitat, not a great deal is known about gray-crowned behaviour. The species does migrate altitudinally, as well as latitudinally, and we see them most often in winter when they descend from higher breeding grounds, or in summer when we hike to their lofty home territory. We don't usually see them in our valley on a daily basis for a 5-month stretch, as we have this year.

Gray-crowned Rosy Finch

photo: M. Shuster

Hundreds of Gray-crowned Rosy Finches

photo: D. McIvor

Interestingly, no rosy-finches were seen on our December 18th, 2007 Christmas bird count, nor on CBCs during the last decade, though they had appeared on 7 previous CBCs since 1975.

The Cornell site describes 5 sub-species of *L.t.,* while Sibley illustrates 3 distinct populations. By far the commonest form found in this area is *L.t. tephrocotis*, the gray-crowned form, but some gray-cheeked individuals are also seen. What is perhaps most alluring about gray-crowned rosy-finches, aside from their subtle beauty, is their adaptability to apparently hostile conditions. They seem to cheerfully inhabit austere craggy mountaintops and to admirably weather blustery winter storms. It has been a rare pleasure to observe them so closely and so often in 2008, but probably not a privilege we can expect to enjoy so consistently in future years.

I S S U E S

Some Dark Days For Public Involvement

Peter Duck

Case 1: Father Knows Best

Parks Canada has approved site guidelines for Marmot Basin. Here is how things went over the last many months. Park Canada designed a ski area long-range planning process in consultation with ski area operators and then told the public what that process will be. Parks Canada then collaborated (their word) with the ski area to develop site guidelines that establish key components of the Marmot Basin Long-Range Plan. Then they conducted a strategic environmental assessment of the proposals. Next Parks Canada asked the public what they think. Once the comments were in they spelled out how the public comments have been dismissed.

The only strategic thing about Parks Canada's strategic environmental assessment of the Marmot Site Guidelines is that it was a clever little twist of process that allowed them to "collaborate" strategically with the ski area operator in advance of meaningful public participation. This approach took the meaning out of meaningful. It's kind of funny how that all worked out. Why wouldn't Parks Canada choose to "collaborate" with the public for some strategic discussion before they approached a commercial operator? After all, it is our land - isn't it?

This planning vehicle will now travel the ditch back south for employment in whatever deals may be contrived for the 3 ski areas in Banff National Park. Be sure to take every opportunity to express your views in support of park protection to senior bureaucrats and to politicians.

Case 2: Big Brother Knows Better

The Alberta Government recently announced environmental assessments under the Environmental Protection and Enhancement and Act would no longer be required for proposed electrical power transmission developments. The Government has assured us that the process of the Alberta Utilities Commission has the same kind of expertise and the duplication of process was not necessary. Really? Isn't this the same governance gang that hired private investigators to infiltrate a group of landowners planning their response to a power line proposal? The Alberta Government's and the energy industry's real problem likely was that the environmental assessment process has too much participatory democracy. The practical problem for environmental advocates is that this type of big brother commission runs a quasi-legal public involvement process. If you want to participate (or "intervene" as the legals say) in environmental assessments of these projects now. I hope you have deep pockets and a good lawyer.

Case 3: On a Need to Know Basis

The federal government is moving to eliminate the Co-ordination of Access to Information Requests System. This public registry allowed researchers and journalists to track what requests are being made for the release of information that the federal government is trying not to release. For example, this information system would make it possible for a journalist to notice that someone is applying for access to the scientific advice Parks Canada has received with respect to Marmot Basin. This information allows that journalist to consider whether there is a story worthy of research and public reporting. I guess we will still have free press without the registry. We'll just stop making it easy for the media to understand what the public wants to know.

The Gain Game Moves On

Mike McIvor

In our winter newsletter I wrote about the "*gain game*" senior Parks Canada officials might be willing to play to accommodate the demands of the Marmot Basin Ski Area in Jasper National Park. I said the potentially useful concept of "*substantial environmental gain"* was a planning vehicle that had been steered into the ditch. BVN and others argued that simply moving a lease boundary to excise an area that is neither developed nor threatened cannot possibly constitute "*a positive change in key ecological conditions",* which is Parks Canada's own test for determining an environmental gain. Unfortunately, as we can see from the final Site Guidelines approved in March by Parks Canada CEO Alan Latourelle, these senior managers seem to like the view from the ditch. Despite strong objections to the inherent dishonesty of the "*gain game"* the final Site Guidelines remained substantially unchanged from the draft.

Snails, Polar Bears, and Vancouver Island Marmots (and the COSEWIC process)

Dwayne Lepitzki, Ph.D.

For the final trivia question: What three things do Polar Bears, Vancouver Island Marmots, and Banff Springs Snails have in common?

Answer: They were all species recently re-assessed by COSEWIC (Committee on the Status of Endangered Wildlife in Canada), all maintained their previous COSEWIC status, and all are threatened by global climate change.

At the April 2008 Species Assessment Meeting in Yellowknife NWT, COSEWIC met to deliberate, review, and re-assess the status of these three species, among others. By law, COSEWIC must re-assess previously assessed species at least every 10 years.

This recent journey for the snail began in November 2005 and followed the typical 2+ year process to re-assess a species. Bids to write the report were reviewed by experts, a contract for the report

writer was awarded, a draft outline written, and a full draft report written and reviewed by species' experts, recovery team co-chairs, and jurisdictional authorities such as officials from Parks Canada, Department of Fisheries and Oceans, Canadian Wildlife Service, the provinces, territories, aboriginal groups, and wildlife management boards. The result was a provisional report that went through the whole review process once again. Based on this provisional report, a status was then recommended by the Species Specialist Subcommittee (SSC) in charge of that group of animals or plants. A total of 9 SSCs exist for species such as terrestrial mammals, marine mammals, birds, reptiles and amphibians, marine fishes, plants and lichens, and molluscs. Some BVN members and other interested parties attended the Mollusc SSC meeting that was held in Banff last October (see Winter 2007 BVN newsletter). After the SSC recommends a status, a 2-month report is produced that is reviewed once again by the jurisdictional authorities, provincial and territorial COSEWIC members and the two co-chairs of each SSC. This group then meets to decide on the final species assessment. Talk about peer-review!

It will be another couple of months or so before the final status reports will be available, primarily due to translation requirements, but summaries of why COSEWIC assigned a particular statuses to each species are available at the COSEWIC website <www.cosewic.gc.ca> and posted immediately after the Species Assessment Meeting.

Even though it's been 30 years since COSEWIC first assessed the Vancouver Island Marmot as "endangered", the species' situation still hasn't improved sufficiently to prompt down-listing to a lower at-risk category such as "threatened". The same can be said about the Polar Bear which stays at "special concern". And while major steps towards the recovery of the Banff Springs Snail have been made, including the re-establishment of two sub-populations and additional protection of the snail's habitat, COSEWIC decided that because of the inherent nature of the snail, it remains "endangered". Having some of the thermal springs it calls home dry during 10 of the past 13 winters means a new threat has arisen, just like thinning ice conditions in the arctic now threaten the survival of some polar bear sub-populations. But while the marmot and the snail are also listed under the Species at Risk Act (SARA), making the killing of them or destruction of their habitat illegal, the same protection has not been given to Polar Bears. Even though Polar Bears have been a species of "special concern" since April 1991, they have not been listed under SARA (for a discussion about the difference between COSEWIC and SARA listing, see the last BVN newsletter).

So it seems that global climate change is affecting the big and the small, way up north and in our back yard. Just as telling is that of the 22 species re-assessed by COSEWIC in Yellowknife, not one was down-listed to a lower at-risk category, 7 of the 9 new species assessed were designated endangered (with 1 being threatened and the other special concern), and the list of Canadian at-risk species now stands at 565, including 13 extinct (gone forever) and 22 extirpated (gone from the wild in Canada).

Dr. Dwayne Lepitzki is the Principal Investigator on contract with Parks Canada with the Research and Recovery Program for the Banff Springs Snail. He wrote the original and updated COSEWIC status reports and has been a member of the COSEWIC Molluscs SSC since January 2005.

MARTHA KOSTUCH 1949-2008

Peter Duck

In late April, Martha Kostuch died. Martha was an environmental advocate who was known and respected across Canada by people in government, industry, and especially among environmental advocates. She was steadfast in her principles of environmental protection while using her tremendous organizational energy to bring all sides of an issue together. She worked across Canada empowering and inspiring advocates to use every democratic tool available including the Supreme Court of Canada, to achieve their environmental protection goals.

Martha was especially dedicated to ensuring the habitat provisions of the Fisheries Act were used to trigger environmental assessment of developments across Canada. She may be most widely remembered in Alberta for her campaign against the construction of the Oldman Dam. More recently she took great pride in sitting on the Alberta Oils Sands Review Panel and ensuring the grassroots concerns of individuals and their communities were documented.

Martha always saw the personality in people and used her sense of humour to bring humanity to meetings. She was a veterinarian and a tireless multi-tasker who was never found without her knitting needles. At least one conference call to Ottawa was conducted with one hand on the phone and the other up to the shoulder in a bovine uterus. I fondly remember a high level meeting involving government and industry leaders when she became especially frustrated with the slow pace of government. She turned a ball of wool into a turtle on the spot and formally presented it to the Assistant Deputy Minister of Fisheries and Oceans to hang in his office as a symbol of the rate of government progress towards protecting the environment.

Martha lived near Rocky Mountain House and one of her favourite places was Kootenay Plains. She resisted every attempt to establish a major development in that special area. On May 31 people from across Canada will gather there for a tribute.