The Victoria NATURALIST

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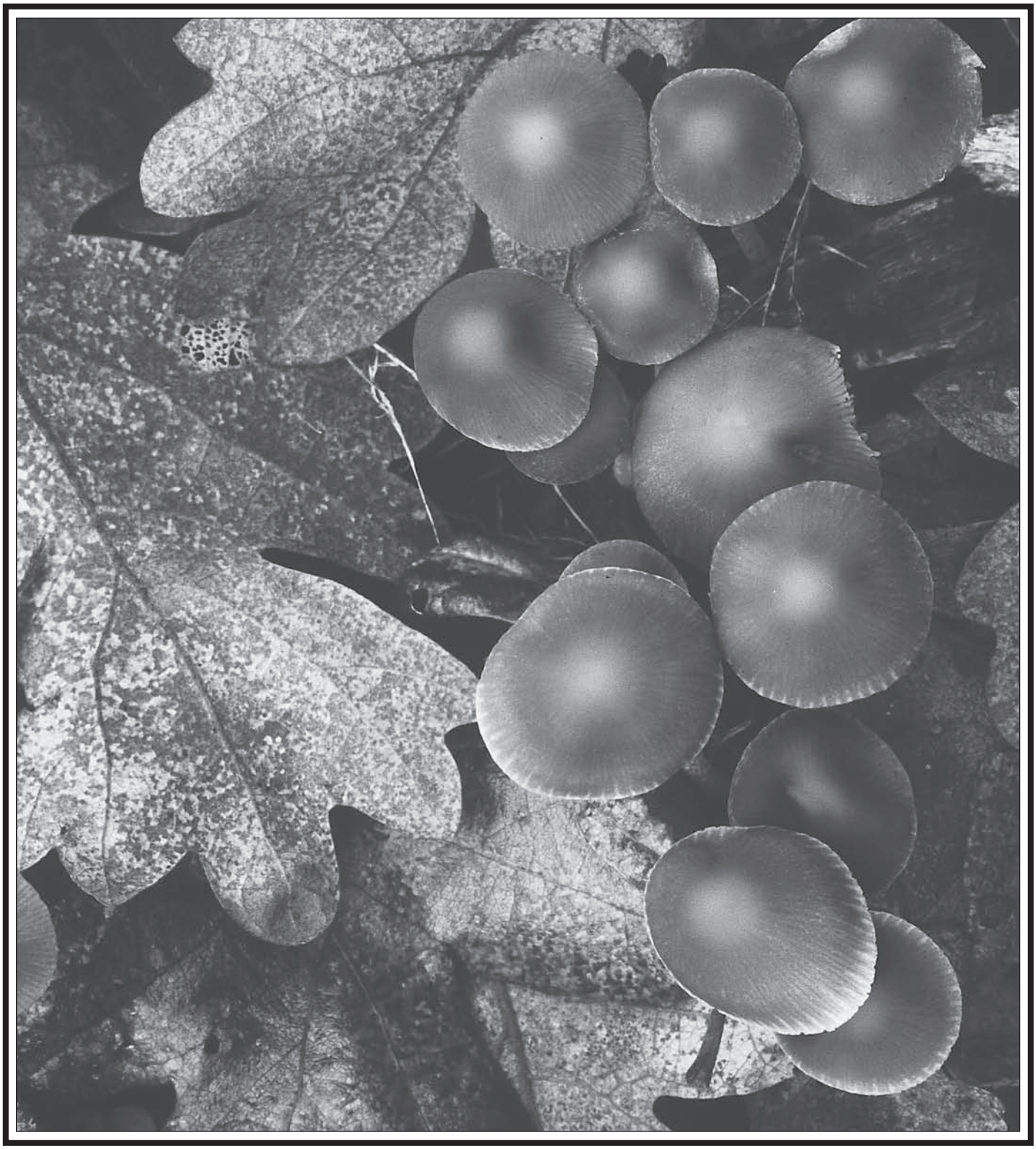

The Victoria NATURALIST

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Members are encouraged to submit articles, field trip reports, natural history notes, and book reviews with photographs or illustrations if possible. Photographs of natural history are appreciated along with documentation of location, species names and a date. Please label your submission with your name, address, and phone number and provide a title. We request submission of typed, double-spaced copy in an IBM compatible word processing file on diskette, or by e-mail. Photos and slides, and diskettes submitted will be returned if a stamped, self-addressed envelope is included with the material. Digital images are welcome, but they need to be high resolution: a minimum of 1200 x 1550 pixels, or 300 dpi at the size of photos in the magazine.

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For membership information and renewal, please contact Darren Copley, 479-6622, or write to Membership Committee c/o The Victoria Natural History Society, Box 5220, Victoria, B.C., V8R 6N4. A copy of our membership form is available on our website www.vicnhs.bc.ca.

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Contents

COVER PHOTO:
Autumn Under a Garry Oak by Jo Finlayson won first place in the "flora" category of the VNHS 60th Anniversary Photo Contest.

Roads have been on my mind a lot lately – probably because they're frequently in the news. While this issue was coming together, the federal Department of Fisheries and Oceans approved the 160 km proposed mining road into Taku Wilderness Area, the largest un-roaded watershed on the Pacific coast of North America. Access to the oil reserves in the Arctic National Wildlife Refuge are again making the news with the release of the latest U.S. energy policy. The Sea-to-Sky Highway upgrade, in time for the 2010 Olympics, is a topic we're sure to hear more about. We have a friend who helped with a project to protect turtles crossing a section of roadway in Florida, and similar efforts have occurred in BC for painted turtle populations (e.g. West Kootenay EcoSociety's efforts in the Nelson area). The section of the Island Highway racing through Goldstream Provincial Park has its impacts: on several occasions Darren has rescued Common Merganser chicks trapped on the road-side of the highway barrier as they attempt to follow their mother to the estuary; and regularly there are less fortuitous encounters. Almost every day I see creatures that did not make it across our rural road, and, as I continue my ride into work along the Pat Bay Highway, I'm forced into noticing what an almost insurmountable barrier four lanes of speeding traffic poses to wildlife movement patterns.

Of course we also need roads. We'll all need a road to get to the artshow being held at the Goldstream Park Nature House (see back page), and later when we head back there for the annual spectacle of the salmon run (p.10). And this summer it was on a logging road that I saw my first (and likely only!) lynx. So this issue includes an excerpt of an article that seemed apropos (p.12). When the subject of the Malahat and an alternate route up the island is re-visited in the local news, we'll all have a better understanding of what is at stake when a new road goes in. Convenience can't be the only consideration.

Back to the subject of the Olympics: I hope one local organization gets to feel a flush of pride from meeting their 2010 goal (p.8) and p.6 highlights a trip to the Olympics you'll want to do before 2010!

Claudia

Erratum: The photographs accompanying Mary Hampson's article *Bewick's Wren Nesting Early* (Vol. 62. 1: 2005) were taken by Sharon Godkin.

President's Message

It's a confusing time to be a naturalist and environmentalist. This summer, several good news stories have been in the media. The Sooke Potholes have been preserved, the marina expansion in North Saanich was turned down, and the proposal for development of a shopping centre in the Campbell River Estuary was denied. The Ministry of Environment has been re-established, and even Wal-Mart is jumping on the conservation bandwagon by pledging to conserve an acre of valuable wildlife habitat for every acre it develops in the United States. The *Times-Colonist* is running many articles of environmental interest and even provides a weekly column to spotlight endangered species. Natural history and the environment are becoming topics of interest to the general population, not just the few. This is all good and gives us reason to be optimistic about our environmental future.

Then, as we look to the hillsides and forests of Greater Victoria, we see environmental devastation in many forms. Logging and residential development are familiar scars on the landscape. But more than ever in my lifetime, I am noticing the brown patches of dying trees in our undeveloped and even protected areas. Grand Firs have been noticeable as rusty "candles" for the last few years. This summer, I was struck by the dry, brown areas inhabited by Arbutus trees. This evergreen broadleaf tree bloomed like crazy in the spring, and now many trees are suffering the effects of years of drought in the area.

It's not only the plant life that is changing. Cormorants are nesting in lower numbers, and long-time birders report decreases in numbers of many species. Even our record Christmas Bird Count in 2004 had surprisingly low numbers of some common species. Butterfly numbers of some species are higher than usual, while others are much lower. Are these observations just part of the normal cycle of life? Are they the results of climate change? Is it something else?

As observers of nature, we can help answer these questions by documenting our own observations, even if our notes simply reside in personal journals until they are sought by the scientists. Better yet, report what you have seen by writing an article for this magazine. Participate in activities like PlantWatch, IceWatch, butterfly counts and bird counts so that your results will be compiled with those of others. Check out the links under Citizen Science at www.science.gc.ca.

Take notes, take pictures, and above all, take time to enjoy what we have. It may not be here forever!

Ann Nightingale

Treacherous Beauty Threatens Wetlands

By Sharon Godkin

On a recent trip into Rithet's Bog (24 July 2005; walk led by Sharon Hartwell) I encountered a plant I had never seen before. It looked like a strikingly beautiful giant willowherb. My first thoughts were: "Wow!! What is that? Will it grow in my garden?" The larger of the two specimens seen was taller than I could reach, making it at least 2 m tall. This plant arose from a single stem about 2 cm in diameter, and branched upwards. The long leaves (up to 10 cm) were lanceolate, toothed, and mostly opposite. Both stem and leaves were covered with fine soft hairs. Purplish-rose flowers, at least 3 cm across, bloomed from the upper leaf axils. The slightly cupped flowers had the overall structure of willowherb blossoms, but the petals were broad and shallowly notched with 2 rounded lobes, making the flowers showier than those of our usual willowherbs. Frosted white crosses, the 4-lobed stigmas, bobbed above the flowers on thin, barely visible styles.

A brief read through botanical keys (Hitchcock and Cronquist, 1973; Douglas, *et.al.*, 1999) identified it as *Epilobium hirsutum*, the hairy willowherb. It is illustrated as a native wildflower by Niering and Olmstead (1996). It had been reported from areas of Washington State, one location in the Fraser Valley, and one in the Okanagan. John Pinder-Moss, the Botany Collection Manager at the Royal BC Museum, indicated he has collections from the Wilkinson Road/West Burnside area (21 June 1992; by Adolf Ceska and Kelowna (July 11 1998; by George Scotter). Sharon Hartwell had found it in Rithet's bog three years ago; after it was identified by Matt Fairbarns, she removed it. But it has returned! It appears that it is being reintroduced by water flowing into the bog from storm drains.

A "Google" search brought up several pages of links. One of the most informative sites is <http://www.ecy.wa.gov/programs/wq/plants/weeds/willowherb.html>. The more I read the more horrified I felt – definitely ***not*** a candidate for my garden! And definitely not a species we should allow to become established in our area. It is an impressively adaptive perennial, growing from sea level to 2500 m. It prefers wet to damp areas, colonizing riparian areas, ditches, wetlands, pastures, waste places, roadsides, meadows and gardens. Initially shade intolerant, once established it is somewhat shade tolerant. In wetlands it grows aggressively, crowding out all other species except purple loosestrife (*Lythrum salicaria*). In fall, it outcompetes purple loosestrife; in spring the reverse happens – purple loosestrife grows faster. It reproduces by wind-blown seeds, spreading and branching rhizomes, and a type of stolon. The shoots die down in fall, but the rhizomes remain to resume growth the following spring.

Hairy willowherb is a native of Eurasia and has been spread by people: as a garden ornamental, a weed, and in ships' ballast. It became established in the northeastern USA about 140 years ago, and has been moving west ever since. It was first collected in Washington State in 1965, where it is being spread by gardeners, who consider it a replacement for purple loosestrife. The latter is listed in Washington as a noxious weed; but hairy willowherb is listed only as "wetland and aquatic weed quarantine", and its spread is being monitored. It is found in nine states of the USA, and throughout southeastern Canada. It has various degrees of weed listings depending on the location, up to noxious weed status. It is listed in *The Global Compendium of Weeds* (http://www.hear.org/gcw); so why is it being sold as an ornamental?? No responsible gardener should grow it, despite its beauty. I'm sure Sharon Hartwell (479-0491) and the Rithet's Bog Conservation Society would greatly appreciate any volunteers (especially with hip waders) willing to help remove this lovely weed from the bog before it becomes irreversibly established.

Hairy willowherb *(Epilobium hirsutum). Photo:* Sharon Godkin

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Trip to Hurricane Ridge, Olympic National Park – July 17, 2005

By Agnes Lynn and Rick Schortinghuis

The Society has been taking trips to Hurricane Ridge in Olympic National Park for several years, but this year was one to remember. The weather was perfect and so were the flowers. The trip is also a very economical way to visit the area; approximately $50 covers the ferry, the bus on the other side, and the park entry fee. A bonus of the trip is to do some birding from the ferry. Along with the usual sea birds, we saw as many as one hundred Red-necked Phalaropes.

From Port Angeles it is a very pleasant half hour or so ride to the top of the hill. We wind our way up through the first of the four elevational zones, the lowland zone. Here we saw the typical plants we might see on a trip to Sooke. Trees include western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*) and grand fir (*Abies grandis*) and the smaller plants we saw included salal (*Gaultheria shallon*), goatsbeard (*Aruncus dioicus*) and cow parsnip (*Hieracleum lanatum*). As we climbed higher, we started to see plants of the montane zone. Trees we saw included silver fir (*Abies amabilis*) and western white pine (*Pinus monticola*) and the smaller plants included Sitka mountain ash (*Sorbus sitchensis*), false bugbane (*Trautvetteria carolinienis*), heart-leaved arnica (*Arnica cordifolia*), narrow-sepaled phacelia (*Phacelia leptosepala*) and the paint brush (*Castilleja hispida*).

As we neared our destination, we entered the sub-alpine zone, which is where we spent the bulk of our visit, although we did get into the arctic-alpine zone up at the top of Hurricane Hill. At the park gate we received a newspaper with current park activities plus a map of the Olympic Park and a very informative natural history collage showing what we might see in the park. We were also fortunate to have copies of a plant list prepared by botanist Dr. Hans Roemer of Victoria to help us sort out the plants. There is an excellent field guide that can be obtained in the park: *Wildflowers of the Olympics and Cascades* by Charles Stewart.

At the parking lot near the Visitor Centre we were surrounded by meadows filled with masses of puffy white bistort (*Polygonum bistortoides*) and blue lupines (*Lupinus latifolius*) as well as many other wildflowers. (They actually have a web cam set up there so that you can check it out from the comfort of your home whenever you like. The address is http://www.nps.gov/olym/cams/hurricane/current_ridgecam.jpg). Some people stayed there and investigated the loop trails around the centre, but the bulk of us headed along the road to Hurricane Hill, botanizing as we went. The 1.5 miles to the base of Hurricane Hill is not accessible by buses and it has intriguing side trails. The plants along the road itself are also very interesting. We came across some little white flowers which resembled strawberries plants, called five-leaved bramble (*Rubus pedatus*) plus the tiny purple parasitic broom rape (*Orobanche*

Photos by Agnes Lynn

uniflora) and the cute little blue Jacob's ladder (*Polemonium pulcherrimum*). All the flowers were very fresh looking. There were also a number of butterflies that would not stay still long enough to be photographed.

As we started to climb Hurricane Hill, the contrasting colours of the dark blue larkspur (*Delphinium glareosum*), the intense yellow woolly sunflower (*Eriophyllum lanatum*) and the red/orange paint brush (*Castilleja hispidula*) were startling. Scalloped onion (*Allium crenulatum*) hugged the ground, and we saw large patches of it in both white and pink shades. Another short little beauty with foliage that forms thick mats is the creamy partridge foot (*Luetkea pectinata*). As we climbed higher, patches of the ground hugging pink Douglasia (*Douglasia laevigata*) caught our attention. One section of the trail had extremely prostrate roses with very large flowers. It may have been dwarf Nootka rose (*Rosa nutkana*). Their fragrance was amazing. There were only a few spots where we saw clumps of the pink owl clover (*Orthocarpus imbricatus*) and every time we go up there we search in vain for the endemic Flett's violet (*Viola flettii*) but have to settle for the more common purple Hook violet (*Viola adunca*). Near the top of the hill we saw many small blue butterflies crowded into any slightly moist dip in the terrain. They just covered the ground in these areas.

The top of the hill is a convenient lunch stop. That's where the cheeky chipmunks really turned out in force. You had to be careful not to zip one up in your backpack because they know where the food is kept. There are many signs warning not to feed the wildlife but the chipmunks can't read and constantly check for any dropped crumbs. Fortunately, the deer we saw near the top were a little wilder, and didn't stop for handouts. Some people saw the endemic Olympic marmots near the top as well. Birds higher up included Grey Jays, and Hermit Thrushes could be heard singing along the way. Some people saw a Blue Grouse with young and others saw a Cooper's Hawk. There were about 20 American Pipits at the top.

Views were amazing! Some of the steep slopes were intense green and others were scree covered. Most are topped by rugged snow-covered peaks. This year there was very little snow at the top, while in other years, at the same time, the trail hasn't been passable at the top. We had great looks at Port Angeles and could see all the way across the strait to Victoria.

The top of Hurricane Hill is about 5900 feet and is into the arctic-alpine elevational zone, so it presents a totally different selection of plants. A favourite is the purple silky phacelia (*Phacelia sericea*). Another plant which presented a variation of blue to purple flowers in drifts was the herbaceous penstemon (*Penstemon procerus*). We enjoyed the cream coloured alum root (*Elmera racemosa*), a saxifrage relative, and the other cream coloured plant was mountain oxytropis (*Oxytropis monticola*) that is only found at high elevations such as this. Another favourite was old man's whiskers (*Geum triflorum),* with its feathery plumes. When we were wandering around near the top we also came across magenta paintbrush (*Castilleja parviflora*) but the endemic Piper's bellflower (*Campanula piperi*) was one of the few

Woolly sunflower (*Eriophyllum lanatum*).

flowers that was not out yet in the spot where we have seen it in previous years.

Some of us spent much too much time wandering around taking pictures, and had to rush back down and along the road to catch up with the bus. The road is slightly up hill on the last stretch so allow enough time to get back. If you are one who does make it back early, you can wander around the Visitor Centre. The choice of books is limited there, so if you are interested in a wider selection, try to stop at the Visitor Centre at the bottom of the hill.

This year we didn't stop part way down, but in other years we have. There is a lovely woodsy area near a stream where we can see a completely different array of moisture loving plants. Highlights there are the butterwort (*Pinguicula vulgaris*), one-sided wintergreen (*Orthilia secunda*), bronze bells (*Stenanthium occidentale*) and a tall larkspur (*Delphinium glaucum*).

We arrived in time for the 5:15 ferry and had a few minutes for a quick drink before going aboard. We did not do much birding on the return trip, partly because of the time of day and partly because we were just content to rest up after a full day. We arrived back in Victoria in time for a late supper and to think about plans for next year's trip. We might try to split up into a couple of groups, one doing the traditional climb up the hill and one group going down the trail from the Visitor Centre to meet up at that spot part way down where we sometimes stop. Who knows!

If you want to see some of the other photos taken on the trip, check out CadboroBayToday.com on the Pictures page and look for the heading of "Olympics Trip". A few thank you's go out to Vancouver Rock and Alpine members Rick Hendrickson and Bonnie Moro, who helped with identifying plants along the way, and thanks to the volunteers and staff at the Goldstream Park Nature House for taking reservations for the trip.

P.O.O.P. – Victoria's Movement

By James Skwarok (Movement Coordinator of P.O.O.P. and Mr. Floatie)
and Marc Fernandez (Ph.D student in the Faculty of Environmental Science,
University of Alberta and a P.O.O.P. volunteer)

"I've eaten fish from the outfall area for years," a man told Mr. Floatie. "Wow, you must be almost as toxic as our resident killer whales". With a grunt, the man got up and walked off. Mr. Floatie, the mascot of P.O.O.P., smiling his cheery smile, continued along his way spreading awareness of Victoria's sewage problem and the importance of high fibre.

Did I hear correctly? P.O.O.P.? That's right, it's P.O.O.P. – People Opposed to Outfall Pollution, a local non-profit society dedicated to increasing awareness of Victoria's sewage problem, while raising money to build a sewage treatment system for Victoria. For treatment, we are asking the Capital Regional District (CRD) to implement a minimum of secondary sewage treatment by 2010, so, as Mr. Floatie says, we can win a gold medal, not a brown one, when the world comes to B.C. for the 2010 Olympics. P.O.O.P. aims to accomplish the above goals by participating in community events, such as parades, and organizing fun events, such as the Annual Victoria Toilet Regatta.

The First Annual Victoria Toilet Regatta was held on July 23, 2005 in Victoria's Inner Harbour. The Regatta is a human powered boat race in which each person in the race is sitting on a porcelain toilet. Six entries participated in this year's race, with Tim Green and his boat, *Lil' Ship Disturber*, taking Flaming First Place. Brandon Leudke and Micah Carmody rowing *Ring O' Fire* came in Number Two, and Jim Laliberte and Troy Morin, paddling closely behind in *Montezuma's Revenge*, finished Turd Place. Arthur Black (previously of CBC's Basic Black) gave a passionate and humorous speech to start the event, and Outlaw Social played some amazing "hillbilly art" music during the event. About 150 people watched the actual race, and P.O.O.P. was able to educate about 400 people (who passed through) about Victoria's sewage problem.

Currently, Victoria pumps a total of 120 million litres of raw, screened sewage from Clover and Macaulay Points into the Strait of Juan de Fuca every day. Now even Mr. Floatie knows the problem is not as simple as "poop", and you know what he has for brains. There may be a real threat to recreational users of Victoria's waterfront (e.g. wind/kite surfers, scuba divers, etc.) with exposure to the high levels of human pathogens inevitably present in domestic sewage (Tchobanoglous *et. al*., 2003). Currently used monitors for human pathogens by the CRD (i.e. fecal coliform) may be inadequate for a marine environment (Wait and Sobsey, 2001). The other big issue is the ocean life which may be exposed to toxic heavy metals and other chemicals that are flushed out with the sewage. The heavy metals of concern in wastewater include mercury, cadmium, lead, chromium, copper, and zinc among others. The known toxic chemicals number over 200, and include polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), dioxins/furans (PCDD/Fs), pesticides, phenols and volatile organic compounds (e.g. solvents) (Tchobanoglous *et. al*., 2003). In

Boats racing in the First Annual Victoria Toilet Regatta.

Our resident killer whales contain some of the highest levels of industrial chemicals in the world.

addition, there are newly discovered chemicals such as brominated flame retardant compounds (PBDEs) used for flame proofing various plastics and foams, as well as substances in pharmaceuticals and personal care products which are present in domestic wastewater and known to be toxic to animals in laboratory experiments (Rayne *et. al.,* 2003; Ternes *et. al.,* 2004). There is a good chance that some of these chemicals are adversely affecting local sea life. Our resident killer whales contain some of the highest levels of industrial chemicals in the world (Ross *et. al.,* 2000). In addition, several gull and alcid species are known to feed year round on the sewage plume from the Clover and Macaulay Point outfalls. No one knows how the chemicals in the sewage are affecting these seabirds. Some of the chemicals in the sewage also act as endocrine disruptors, which can affect the growth and sexual development of aquatic organisms. Just listen to Mr. Floatie's voice! It's a bit high for a "Mr."!

But really, I digress. P.O.O.P.'s goal is to raise awareness and money for sewage treatment. After all, Mr. Floatie is just a simple lovable piece of poo trying to let people know there is a problem. If you wish to dive further into the science of the problem, please contact the Georgia Strait Alliance, www.georgiastrait.org, the T. Buck Suzuki Foundation, www.bucksuzuki.org, or the Sierra Legal Defence Fund, www.sierralegal.org.

P.O.O.P. also needs people to help fundraise, update our website, brainstorm, organize events, and do public outreach at community events. So join the movement! For more information or to donate (to help P.O.O.P. push for sewage treatment) please visit our website www.POOPVictoria.ca.

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Mr. Floatie presenting the "Mr. Floatie's Dream Home" award for the most creative boat in the Regatta.
Photos provided by James Skwarok

Welcome to New Members

Ms Jennifer O'Halloran
Ferguson Road
birds, marine, botany

Phil Ballam
Beach Drive

Bonnie Moro
Bear Hill Road
birds, botany

Judy Plummer
Lang Street
programs

David and Beverley Cattrall
Hewlett Place
birds, butterflies, botany

Alan P. Murray
Mrus Drive

Interpreting Upstream

By Pam Murray, Park Interpreter, Goldstream Provincial Park and Greater Vancouver Regional District

I'm soaking wet. It's been raining hard all morning and the trails are starting to flood. My waterproof boots are starting to feel damp inside, and earlier, when I pulled my hood on, the puddle of water it had been collecting poured down the back of my neck. The school group I'm leading wants to see salmon spawning, but the river is cloudy with runoff water and the salmon run is starting to taper off early because thousands of the fish were caught by fishermen out in Satellite Channel earlier in the month. The group wants a dissection, but the only fish I can find are covered in fungus and their eyeballs have been eaten. This is one of the nine school programs we have today, and the entire staff is fighting off the flu.

Welcome to Goldstream Provincial Park.

Being at the mercy of both Mother Nature's whims and the expectations of teachers is something I've learned to deal with as a park interpreter. Like determining a theme for your program or learning how to ask good questions, being able to suck it up and be cheerful under adverse circumstances is just part of the skill set an interpreter needs.

Since February 2002, when the provincial government cancelled interpretive programs and broke contracts with companies who had been providing these services in BC Parks, those of us who interpret these parks have been acquiring skills never yet seen in any Interpretive Skills training module. Like how to sell glowsticks and stuffed animals, for instance.

When interpretation was cancelled, we were angry, and sick with the irony of the situation. We were effectively told by the agency we worked for that we weren't valuable. The government defended the cuts by stating that they wanted to find cost effective ways of focusing on conservation in BC Parks. Hello, try educating the park visitors? Prior to the cuts, Gordon Campbell hosted a Premier's Conference in Victoria, and sent the children of the visiting premiers on a field trip to Sidney Spit Provincial Marine Park, for an interpretive program provided by a private company, whose 10 year contract Campbell cut just a few months later.

Luckily, all those days in the rain, wind, or snow, have made interpreters a resilient bunch, and we are finding ways to survive. In Manning Park, Kelly Pearce is hawking glow sticks between programs. At Goldstream, they're selling stuffed toys in the nature house and providing programs through an agreement with the Park Facility Operator. Both contractors have given up space once used for displays in their visitor centres to sell retail items.

Working on Newcastle Island, I learned wedding coordinating and building maintenance while managing the

Programming at Goldstream is supported by the local land trust, a team of volunteers, retail sales, and a donation box. The donation box has been receiving fewer visits since BC Parks implemented a parking fee in 2003.

historic Newcastle Pavilion as the park's visitor centre. We managed to provide programs throughout the summer by renting the Pavilion for weddings, subcontracting a restaurant, and setting up a bookstore. I also got to do the occasional program, but had to charge for them. My historical hike didn't sell well, despite the appealing title of "Mining, Middens, and Murder", so I resorted to scheduling a squid program that involved the serving of calamari for every single Saturday night, and can no longer stand the smell of squid juice.

The interpreters at Goldstream no longer receive thank-you letters from groups – schools are instead encouraged to send these to *Goldstream Chums* – corporate sponsors who donate to support school programs. Programming at Goldstream is also supported by the local land trust, a team of volunteers, retail sales, and a donation box. The donation box has been receiving fewer visits since BC Parks implemented a parking fee in 2003. The parking fee was recommended by the Parks and Recreation Stewardship panel as a way to provide funds to restore services, including interpretation, to BC Parks. The parking fee was implemented, but no funding has been restored. School groups at Goldstream now have to pay not only for programs, but also to park parent drivers' cars. This is frustrating for staff, who have Jazzercised dressed as salmon and learned corporate schmoozing in an effort to bring down the cost of school programs. After these rainy school programs, we spend the afternoon folding T-Shirts for the bookstore, re-writing the sign for the fundraising raffle, and restocking the coffee display.

Struggling to keep interpretation alive in BC's parks is a daunting task, and can seem futile at the best of times. The provincial government continues to choose to spend money on television ads promoting BC's 'world class' parks rather than on the parks themselves. Park visitors see retail space taking over space in nature houses and complain under their breath about commercialization. British Columbia remains the only jurisdiction in North America other than Mississippi which does not provide interpretive services

British Columbia remains the only jurisdiction in North America other than Mississippi which does not provide interpretive services in its parks.

in its parks, and park visitors are increasingly referred to a website for information. Because, as we know, everyone brings their laptop with them camping, right?

I left provincial parks for greener pastures last year, but have returned to Goldstream for salmon run to work with the crazy folks who are continually finding creative ways to keep their nature house open and their sanity intact. On November 11th of this year, over 2,500 people came through the unfunded Goldstream Visitor Centre, and today I am taking 23 kids on their favourite field trip of the year.

It's still raining. I've given up trying to convince my school group that the dark and vaguely fish-shaped objects they can barely see in the river really are salmon and walked them to a little used trail on the other side of the three dollar a day parking lot. Tall maples covered in moss and licorice fern absorb the rain and it falls on us a little more gently. At the end of the trail, an ephemeral waterfall cascades down the side of Mt. Finlayson and pools beneath a giant western red cedar.

The kids are soaking wet and smiling. They want to play under the waterfall. I can see their imaginations start to spin as I point out the salmon carcasses dissolving into the earth metres away from the stream and tell them about the black bear that has been visiting the park and helping to fertilize the forest. At the end of the channel, a half a dozen chum salmon swim towards a dead end. A parent asks if what the salmon are doing is pointless. "Won't the stream dry up?" It won't. It used to, but salmon enhancement work at Goldstream now keeps the channel running year round. They ask what would happen if the stream did dry up, and I explain that the salmon would find another stream to spawn in. This is what they're destined to do, and they won't let something like a dry streambed stop them.

Nature has a way of carrying on, and so do the people who interpret it. Some days it feels like we are all going to die from exhaustion like spawned out salmon, and never see the results of our work, but every unfunded program we manage to pull off is like one more tiny pink egg under the gravel, waiting to hatch when spring comes.

Editor's Note: This article first appeared in the March 2005 issue of the *Provocation*, the newsletter of Interpretation Canada's B.C. Chapter. It is reprinted here with the permission of the author.

The Relationship between Rare Carnivores and Highways: An Update For Year 2000

By Bill Ruediger, Endangered Species Program Leader – USDA Forest Service Northern Region, Missoula, Montana.

When it comes to highways, the road to ecological hell was literally paved with good intentions. Highway agencies in many states now have a better understanding of the potential problems highways create, and have begun corrective measures. Highways are now considered at least part of the problem – and the solution – to conserving threatened and endangered species like the wolf, lynx and grizzly bear.

For years, biologists and scientists have discussed a perplexing question, "Why are forest carnivores disappearing from much of their historic range in southern Canada and the lower 48 states?" In many cases, such as California, forest carnivores such as wolverine and fisher had not been legally trapped for decades and habitat appears to be adequate for far greater populations.

One of the most serious environmental issues facing large and mid-sized carnivores is highways. One of the unforeseen costs of our transportation system has been an unfathomable slaughter of wildlife on our roadways, serious fragmentation of terrestrial and aquatic ecosystems, and the loss of millions of acres of critical fish and wildlife habitat. Another unforeseen consequence has been the role highways have played in the extirpation of species – including many of our mid-sized and large carnivores.

There are several important factors that contribute to the relationships between highways and carnivores; and other wildlife species. Most of these factors are self-evident, yet may not be recognized by many highway management agencies, land management agencies, wildlife management agencies, the public or the general wildlife biologist community.

Why are carnivores such a concern when coordinating highways?

Carnivores have certain biological traits that suggest vulnerability to highways. These include low population densities, low reproductive rates and large (many would consider these huge) home range sizes. The large home ranges of most of mid-sized and large carnivores require that they regularly cross highways.

World Wildlife Fund and the Western Forest Carnivore Committee estimate that a functional ecosystem for carnivores in the Northern Rocky Mountains probably needs to include a landscape from west-central Wyoming to mid British Columbia and Alberta. In such a situation, carnivores would be required to cross at least 4 highways in Wyoming, 17 highways in Idaho (including 2 Interstates), 23 in Montana (including 2 Interstates), and 17 in British Columbia and Alberta (including the Trans-Canada Highway). This totals 61 highways for one population of carnivores. The Region is experiencing increased tourism, commercial and resident traffic volumes. Not to mention that highways are being upgraded and added to the system at an unknown rate.

Highways have the potential of fragmenting populations, which can contribute to the extirpation of small meta-populations. Large connected populations have the highest likelihood for persistence over time.

Highways effects on biological requirements of carnivores:

1. **Habitat and population connectivity.** Highways have the potential of fragmenting populations, which can contribute to the extirpation of small meta-populations. Large connected populations have the highest likelihood for persistence over time. The division of habitat into disjointed pieces starts with the paving of gravel roads and gets progressively worse as highway capacity increases. Fragmentation begins with wildlife's behavioral avoidance of highways and progresses, as highways become sources of mortality. Eventually, highways become complete barriers through traffic volume or structural features.
2. **Home range use.** Highways can artificially constrict and define home ranges, often severing important feeding or breeding habitats that would benefit an individual or population. An example of this is the effect the Trans-Canada Highway has on the Bow River Valley, where important low elevation and bottomland habitats are severed (perhaps only partially because of wildlife crossings). This affects both the elk carrying capacity (prey) and the ability of wolves to effectively exploit their primary habitat (low

elevation, gentle terrain). Additionally, in combination with the towns of Banff and Canmore, it restricts home ranges of wolf packs primarily to the upper Bow River Valley, while most of the prey species migrate east to the Rocky Mountain foothills. This has lead to a number of problems, including reduced elk densities in the upper Bow River Valley, loss of pack viability in Banff National Park, and unnaturally high densities of elk and other prey in the town site of Banff and the foothills.

3. **Dispersal** is a critical factor to population fitness and viability. Young animals, particularly males, usually must establish home ranges outside that of the parents. Long-range dispersal of young animals is common among large and mid-sized carnivores. Highways can act as filters or barriers to such movements, with the possible effect of loss of small metapopulations and reduction of overall population fitness. For several forest carnivore species such as lynx, wolverine and fisher, most of the population consists of small groups of animals separated by many miles.

Female home ranges are almost always smaller than males in carnivore species. Dispersal to new home ranges is often closer to natal home ranges than for males. Female carnivores such as wolverine and bears often are poor dispersers compared to males. Since population growth and range expansion is largely dependent on female dispersal and reproductive success, the ability for females to move uninhibited across potential habitat is an important process, particularly for species that are threatened or endangered. Highways tend to be greater barriers for female grizzly bear and wolverine than for males.

How highways adversely affect carnivores

1. **Habitat Fragmentation** is the most important issue to address and correct. Highways, and other human developments, tend to create boundaries for both individuals and populations. The solutions to the complex issues of wildlife habitat and population connectivity will not be "one size fits all." An issue with carnivore conservation that has not been addressed is the filter effect highways

Unlike many large carnivores, coyotes are known to be attracted to roadways. *Photo*: Darren Copley

can have on certain age classes and sexes. It is important to provide regular connectivity for all ages and sexes, particularly dispersing females and females with young.

2. **Direct Mortality**. Carnivores are particularly susceptible to highway mortality because of their large home ranges, low biological productivity and the enormous areas required to sustain populations and individuals. Due to the long life spans (over 30 years for grizzly bear), carnivores can continue existing as individuals-without persisting as populations.

3. **Displacement and Avoidance**. While the impacts of forest roads on carnivores have been studied for decades, information on highways is much less documented. Information has emerged from Yellowstone National Park and Banff National Park that suggests wolves and grizzly bears are displaced by highways and generally avoid crossing them. Researchers concluded that, "wolves have been physically displaced, partially alienated, or blocked from using a minimum of 92 km^2 of the Bow River Valley's montane, i.e., 62% of the best wolf habitat in the Bow River Valley. Much of the problem is the result of disruption from the Trans-Canada Highway." This can result in a number of biological concerns, from disproportionate use of habitat, to fragmentation of populations. Wolverine and other carnivore's home ranges tend to be along highways, rather than crossing them.

   Again, avoidance and displacement of carnivores due to highways appears species-specific, with some species having high levels of aversion (grizzly bears and wolverine) and others, like coyotes, being attracted to highways. Overall, most carnivores are intimidated by highways and tend to avoid them when possible.

4. **Direct Habitat Loss**. This is an obvious impact that is rarely documented. The cumulative effects of habitat loss must be staggering across North America and other continents. Indirect habitat loss due to displacement or avoidance is unclear, but likely averages 1 kilometer on each side of a highway in heavily forested or vegetated areas to 3 kilometers on each side in open habitats. This habitat loss should be considered permanent.

5. **Associated Human Development**. As access increases, the amount of associated development increases also. Land values reflect ease of access. This impact is severe and permanent for carnivore communities. The assumption should be: if we build a better road, they would come. And, they do!

Highway standards, traffic volumes and effects on carnivores

At some point, highways become barriers or mortality sinks for carnivores, even where adjacent land uses allow their existence. There is increasing evidence that this occurs when highways are 4-laned or twinned, which is usually the result of increased traffic volumes. There is a growing body of knowledge that two lane highways with low or moderate

Fences and underpasses have been constructed in an attempt to reduce vehicle collisions with Florida panthers, an endangered subspecies of cougar. *Photo*: Darren Copley

traffic volume can be negotiated by many wildlife species – particularly when long traffic pauses occur. At some point, large and mid-sized carnivores cannot compensate for the increased mortality – or they stop trying to cross busy highways.

At each point in the highway development cycle, carnivores and other wildlife require careful consideration. The beginning point in the highway development cycle is when gravel forest roads are paved. Paving creates several effects that adversely affect carnivores. Paving increases vehicle speed, which place wildlife at greater risk to injury and mortality. Traffic volumes increase with paving, as access becomes faster and easier. Seasonal and permanent homes usually increase after paving. Potentially serious and permanent habitat fragmentation occurs as the density of highways is increased. The paving of forest roads, while providing more efficient public access, is almost always detrimental to wildlife.

Although not precisely known, it is estimated by biologists that traffic densities less than approximately 2,000 vehicles per day maintain relatively low mortality rates for animals like deer and elk. When traffic volume approaches 2,000 vehicles per day, agencies should begin considering wildlife passage structures. It is important for wildlife to learn to use highway passage structures like underpasses and overpasses. Females may pass safe routes and crossing behaviour on to offspring.

At some point, traffic volume and highway design become functional or complete barriers for wildlife. This is probably due to both highway design structures like fencing; large right-of-way clearing widths and "Jersey barriers" needed for highway safety, plus the effects of high traffic volume. The point at which highways become functional barriers to wildlife is likely between 2,000 and 4,000 vehicles per day.

One of the most important aspects of highway planning

When planning the construction of highways, we need to treat wildlife communities with the same care that is currently given to highway costs, human safety, and impacts on wetland and human communities.

is that wildlife linkage zones must be identified and secured, or restored now. At this time, there are still areas where wildlife can cross highways. There are many factors that contribute to natural movement corridors. One is that linkage zones must be in, or very close to, the habitat that the particular species prefers. The level of human disturbance must be minimal. On some private lands where potential human developments are likely, purchases, land trades, or conservation easements should be considered. These should be part of the highway wildlife mitigation program – and should be a coordinated effort between highway agencies, wildlife agencies, land management agencies, local governments, concerned citizens, and conservation groups. This can be a relatively trouble-free process if planning is done early.

What do we need to do?

Highway departments at all levels need to address wildlife habitat connectivity as major highway planning and ecological issues. Land management and wildlife agencies must also take responsibility to ensure that highway projects within their jurisdiction receive state-of-the-art coordination and mitigation.

Highway planning at all agency levels must move from being primarily an engineering project to interdisciplinary projects where wildlife biologists and other professionals are fully integrated. When planning the construction of highways, we need to treat wildlife communities with the same care that is currently given to highway costs, human safety, and impacts on wetland and human communities.

We must act now! The situation will require adaptive management-trying new ideas, retrofitting old highways, learning and applying what works well in a given situation. Maintaining connectivity of habitat must be the immediate primary objective. This will require developing passage facilities in an ecosystem context, such as understanding how large and small blocks of habitat must fit together. We must move highway planning far beyond the right of ways. Underpasses and overpasses (wildlife crossings) must be provided. We should start with common sense approaches such as retrofitting existing highway structures such as drainage culverts and bridges to better facilitate wildlife movement. Consideration should be given to new highway construction techniques such as tunneling through ridges, instead of making huge cuts. We must rethink cut and fill highway construction techniques. Such techniques require immense earth movement in mountainous terrain and can impact wildlife and fisheries habitat severely. By spanning drainages and tunneling through some ridges, wildlife and fisheries connectivity would be greatly improved.

Lastly, we desperately need to obtain research and information. Highway departments need to work closely with universities, wildlife agencies, and conservation groups to provide missing gaps in species ecology, habitat fragmentation, highway mortality, human safety, displacement and avoidance, and overall wildlife passage effectiveness. What is needed is a coordinated highway/wildlife/fisheries research program that systematically reviews the wildlife issues that need to be addressed.

Editor's Note: This is an excerpt taken from an online article available at http://www.fs.fed.us/r1/wildlife/igbc/Linkage/Relationships.htm. The original document was 16 pages (including the literature cited section), so for the complete story please consult the web version.

Victorian Birders at Victoria Falls

By Bryan Gates

How many of us have had childhood dreams about an adventure into the wilds of Africa? Has the word "safari" not been synonymous with Africa? Have we not all wanted to witness the amazing variety of magnificent animals and exotic birds that have given the Dark Continent the wilderness reputation that it has? Few can say no to these questions. Fourteen of us – all from Victoria – were given the opportunity to fulfill that dream last January…and we took it.

In November 2003, our Birders' Night guest speaker (thanks to a tip from Joyce Clearihue) was Grant Reed. Grant and his brother Brent own and operate Letaka Safaris out of Maun, Botswana, a busy little town near the famous Okavango River Delta, a river whose waters never reach the sea. Grant's slide presentation was truly inspiring, concentrating on birds, but including enough images of elephants, leopards, antelopes, baboons and other striking creatures to capture our interest. When he offered to arrange a special safari geared to our wishes – with an emphasis on birds – there was an immediate sign-up. Twenty-four showed interest, but there was room for only 14. We would enjoy 16 days on safari, concentrating on northern Botswana, but also including the picturesque and bird-rich Victoria Falls region of Zambia and the Caprivi Strip of northeast Namibia.

We knew that this would not be a safari like those of our childhood dreams…on foot, with marauding lions, poisonous snakes, endless hardships and overheated exhaustion. We would be in sturdy vehicles, but at least we would be sleeping in tents for the most part, and much of it in wilderness quite unchanged over the decades. Botswana is a little more than half the size of British Columbia, but one third of its land base has been set aside as parks, wildlife or forest reserves…ideal for exploration.

We flew to London first, then on to Johannesburg and then to Maun. It was a long trip (almost 40 hours for some), but relaxed waits at London's Heathrow and at Jan Smuts Airport in Johannesburg made it pleasant. Most of us even added life birds at the airports – Little Swifts, Rock Martin, Black-headed Heron, Cape Wagtail. As we landed in Maun, a dozen or more Abdim's Storks fed along the runway fringe, and a Black Kite and Palm Swifts flew over. Grant and Brent met us, we climbed into our two Land Cruisers, and immediately were birding our way to the Moremi Game Reserve in the Okavango Delta.

Three of the six "Big Eight" mammals seen on the trip: lions, elephant and leopard. *Photos provided by the author*

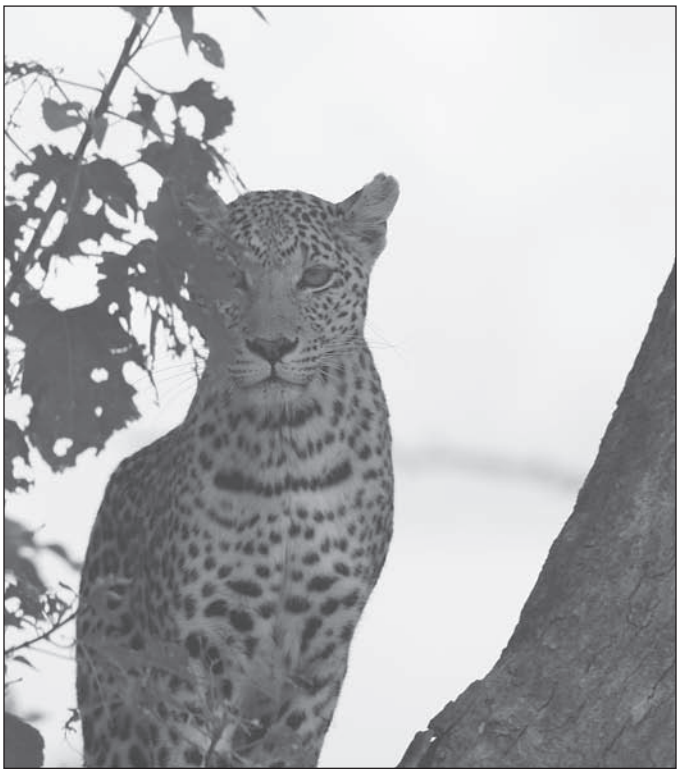
We lived safari-style for the first nine days – in mobile tent camps, spending two or three nights in each. A crew of five moved on ahead of us, led by Tylo, our amazing camp cook. She and her helpers prepared miracles on an open fire – roast lamb, tasty stews, fresh bread, bacon and eggs and even delicious cakes – and always enough to keep us happy. Our individual tents were private, cool, and adequate, and included raised cots, warm-water wash basins and individual biffys. It was summer in Africa, so it was warm. The bucket showers – again with fire-warmed water – were most welcome, but occasionally had to be interrupted as night-grazing hippos or a herd of Cape buffalo wandered through camp. So secluded were we, and in such great wilderness, that in the first five days we encountered only two other vehicles, and one of those was a park ranger.

On our first day, mostly driving, we tallied 92 species of birds, and saw our first elephants, giraffes, impalas and Cape buffalo. On each of the remaining days we saw over 125 species of birds (most of them lifers for our group), and on Day Nine tallied 171 species. That day included one of many amazing boat rides, this one on the Chobe River, with Botswana on one side of the river and Namibia on the other. Brent and Grant had explored much of southern Africa as youngsters, under the guidance of their naturalist father. They knew the territory and birds well, and took us into superb habitats.

We enjoyed two camps in the Moremi Reserve (Xakanaxa for three nights and Mogotho/Khwai River for two nights), where we saw such specialties as Luapula (Black-backed) Cisticola, Pink-throated Longclaw, African Hawk Eagle, and Harlequin Quail. Two nights were spent in the Savuti Marsh region of the huge Chobe National Park (Montagu‘s Harrier, Tropical Boubou, Dwarf Bittern, Scaly-feathered Finch, Lanner Falcon), and two nights in the Chobe Forest Reserve just south of the Chobe River (Temminck‘s Courser, Coqui and Orange River Francolins, Marico Sunbird, Violet-eared Waxbill).

Then it was on to Zambia, where we enjoyed two great nights in the spectacular Taita Falcon Lodge. This beautiful setting is perched on the lip of the Zambezi River Gorge, just downstream from Victoria Falls. We were able to bird right from our lounge and outdoor dining area here (Mocking Cliff Chat, Red-winged Starling, African Black Swift, Peregrine Falcon), and some of us hiked down into the 800-foot gorge…well, at least part way down…to find Verreaux‘s (Black) Eagle, Emerald-spotted Dove, Horus Swift, Diederik Cuckoo. A short drive to the roaring, misty Victoria Falls was a real highlight, and with the guidance of Bob-the-Birder (a well known local who has spent 35 years there), we added to our new Zambian bird list (Jameson‘s Firefinch, Bronze Mannikin, White-winged Widow, and the only trogon of southern Africa, Narina Trogon).

We then moved west to the Kwando River of Namibia’s Caprivi Strip, spending two nights at the luxurious Namushasha Lodge. Boat trips and night birding were features here (Mozambique, Natal and Pennant-winged Nightjars, Flappet Lark, Coppery Sunbird, Red-shouldered Widow). Our final two nights were on the Okavango River, this time at Xaro Lodge, just south of the Caprivi Strip. Boat cruises and sunsets here were excellent (White-backed Night-Heron,



Goliath Heron, Yellow White-eye, Brown-throated Weaver). The combination of tent camps for the first nine nights followed by comfortable resorts with excellent cottages and hot showers for the final six nights was perfect.

Did we feel safe? At all times! We were in excellent hands, and this region of southern Africa is politically stable. Big game animals, including lions, leopards, elephants, Cape buffalo and hippopotamus may have been nearby, but we never felt threatened, and in almost all places we were able to get out of the vehicles to walk, bird, and photograph.

Brent and Grant delighted in catching snakes, monitor lizards and Nile crocodiles – small ones, mind you – for us to study.

The weather? We were in luck. Thunder storms threatened each day, but invariably the rain held off until we were back in camp; we never really got wet. But we did get stuck in the mud…especially with Grant driving. Six times Brent had to come to the rescue. No problem! There were great birds to see while waiting.

There were many non-bird highlights, as well, tops among them being a prolonged encounter with a leopard…the first of four we saw. Thanks to radio communication between vehicles, those already back in camp piled into their vehicle when they got the call and were able to watch and photograph this sleek adult as it walked casually near us and then climbed onto a low branch… just meters away. The consensus? The most beautiful member of Africa's cat family.

Equally exciting was a pride of 13 lions that we found in Savuti. They allowed us to approach as they rested in the shade. Great photographs! As we drove away, though, a young male lion found Grant's bird book, which had fallen out of the open door. Grant just had to get it back; it contained all of his bird lists. The chase was on! Bumper to tail…at 20 km/h…until the lion reluctantly dropped it. Even with the vehicle stopped over top of the book, the lion turned and started back for it. Grant won out, though, but is probably still trying to wipe lion saliva off his life lists.

Saddle-billed Stork

Zebras, mongooses, snakes, flowers, and butterflies aside, this was primarily a birding trip. So we did our part. We set a new record total for Letaka Safaris – 366 species in 16 days, 367 if we add the Ayres' Hawk Eagle initially recorded as an Osprey. It was identified as Ayres' from photographs after our return.

We encountered representatives of 67 different bird families. Of the species we could possibly find in the habitats we visited, we saw the vast majority, including all nine herons/egrets, all eight kingfishers, all four woodpeckers, all five gallinules/moorhens and all five lapwings (plovers). We had fun during some very exciting night birding and saw five species of nightjars and eight of nine owl species. (Interesting, though, most of the latter we found in full daylight). Small birds are always tough to identify, but we did score six of seven bee-eaters, seven of eight beautiful sunbirds and six of the eight nasty little cisticolas of the region, this latter group presenting an ID challenge as difficult as our empids.

Raptors are amazingly abundant and diverse in Africa; we saw six of the eight goshawks and 12 of the 15 eagles, including the massive Martial Eagle. An important find was a Long-legged Buzzard, a rare vagrant to southern Africa.

In all, we tallied 37 species of raptors and four vultures.

And who can forget the mammals? We saw an amazing 39 species, from African wild cat to side-striped jackal to puku to sable to vervet monkey. Included were six of the Big Eight – elephant, leopard, lion, cheetah, giraffe and hippo. Our big miss? The painted wolf, also known as the African wild dog.

Each of us had our own "Bird of the Trip", among which were the huge Pel's Fishing Owl on the Okavango River, the Narina Trogon near Victoria Falls, an African Finfoot on the Zambezi River (a life bird for Brent), the garish Crimson-breasted Shrike in many places, and a displaying Northern Black Korhaan at Savuti. Our experience with the leopard was clearly the mammal of the trip, although the pride of lions and the delicate beauty of the many impalas will never be forgotten.

The terrain was endless and diverse. Strange species of living things awaited around every bend…enough to satisfy even the non-birders. We took thousands of photographs. And we laughed. It was a fun trip, with keen leaders and a happy bunch of campers.

So we plan to do it again, tentatively in early 2007. Grant and Brent are working on a new itinerary for us, to include different parts of the Okavango Delta and northern Botswana, maybe further into Zambia, and to extend west across neighbouring Namibia. This would take us to the rich Etosha National Park and the spectacularly desolate Namib Desert. We would venture out to the Atlantic coast of Namibia where one or two pelagic birding trips may be included. The Jackass Penguin, three or four species of albatross, petrels, fulmars, shearwaters, prions, gulls, skuas and others are all possible. If you are interested in hearing more, please call me at 250-598-7789 or email at bgates@pacificcoast.net. Costs are yet to be determined and we may have some flexibility in dates.

Natural History Specimens? – or Time?

Mt. Douglas High School needs to establish a collection of natural history specimens for teaching Biology 11 and Earth Science 11. What we have now is very minimal, and we would appreciate any contribution of shells, fossils, identified rocks or minerals, plants, skulls, jaw bones, sea weeds, stuffed birds or mammals etc., native to B.C., or from the around the world, that you may have in your possession. If we receive duplicates, we will pass them onto other schools. Collections in schools can be well cared for. Vic High, for instance, has collections that date back more than 50 years!

While we are talking about this, have you considered volunteering a little bit of your time in helping out with the Victoria Natural History Society's initiative "Natural History in Schools" program? We need individuals to help out teachers in the classroom by offering their expertise on some aspect of natural history. For example, you could give a lesson on your specialty, or join in on a nature walk to a local pond/ intertidal zone/park. We will be sensitive to your time and preferences, and much of this will depend upon teacher requests. Darren Copley and I, David Newell are trying to stimulate an interest in natural history in Greater Victoria schools by providing them with these free services. Teachers who make use of our program will also be eligible for a $230 supply of field guides for their school (through a bequest by the late Anne Adamson). If you are interested in participating in the volunteer program call **Darren Copley** at Goldstream at 478-9414 or dccopley@island.net or **David Newell** at 477-6977 (Mt. Douglas High School) or dnewell@sd61.bc. If you are interested in giving a donation of natural history specimens to schools, contact David Newell at the above telephone number or e-mail address

Thank you!

Will He Ever Learn?

By Lyndis Davis

I have a robin that perches on a branch of the weeping plum outside my window and flies up to the top of the window, about four feet above the branch, and hits himself against the window. I thought at first he was after spiders, but there is no sign of webs. He does four to five "hits" at a time and then flies off for a while, but is back again in one to two hours. I watched him the other morning from my garage door (opening the door did not scare him into flying off). He was staring up at the window very intently and did not move a muscle for at least two minutes. I then got the car out and drove away and he was still there. I checked when I got home, and there is a reflection of the gable and the roof beneath it from the unit facing mine. I have never seen a robin perched on the roof, and he only has to turn around and fly up there if he wants to. He appears to prefer to hit himself against my window five to six times a day, and he did this for at least a month!

This American Robin nested in an evergreen just outside one of the windows of The Kensington retirement home on busy Shelbourne Avenue. The residents of the suite had the opportunity to watch the entire process – from nest construction to the fledging of the three young. This photo, taken by the housekeeping superintendent, Gorden Wood, was provided by Cora Shaw.

Letters

To the *Victoria Naturalist*

The picture of the 'Bellybird' in Volume 61:2 is a Garbage Gobbler, probably the one found for some years in Beacon Hill Park by Dallas Road. Through much of the 1960s and into the 1970s, Gobblers were located beside most of our southern highways to collect the paper and other garbage that were being thrown out from cars. The idea, plan, design, and locations were by the late Chess Lyons, while part of the B.C. Parks Branch.

Yorke Edwards

A recent sighting of this now extremely rare creature. Twitchers take note: this one was seen lurking in the shrubs behind the Goldstream Nature House.
Photo: Darren Copley

Watch for Colour-banded Cooper's Hawks

A study on the ecology of Cooper's Hawks breeding in the urban environment of Greater Victoria has been underway since 1995. To date over 1,000 of these hawks have been banded at about 75 nest sites. You can greatly assist this research project by watching for and reporting observations of these banded hawks.

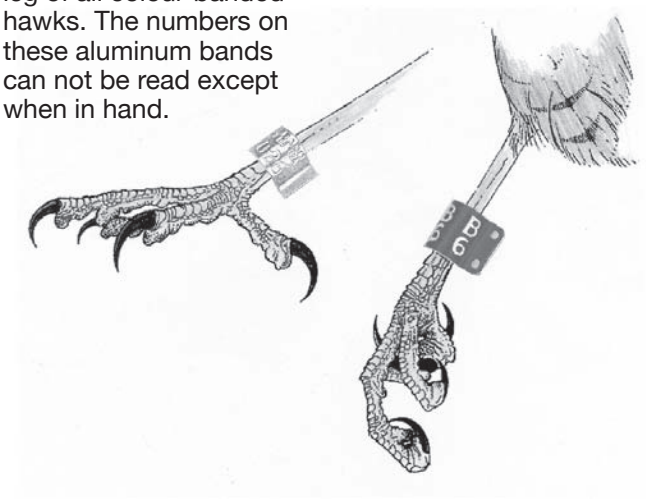
Colour-bands are uniquely coded with 2 vertical alpha-numeric characters (i.e. letter over number or letter over letter) and are placed on the left leg (see illustration). To provide ease of visibility, these codes are repeated 3 times around the circumference of the band. Bands can be read at a distance of about 20 m with binoculars or up to 75 m using a spotting scope. Red bands were placed on females and black bands were put on males. If you observe one of these marked hawks, please record the band colour and code, date and time, whether it was in adult or juvenile plumage, as well as the location. **Please report all sightings, even if you were unable to determine the band code.**

To date >2,000 observations of these marked birds have been reported in southwestern BC from as far away as Parksville on Vancouver Island and Delta on the mainland coast. A few recoveries have also been reported from Washington, Oregon, Nevada, and California. However, over 95% of year-round sightings come from the Greater Victoria and Saanich Peninsula areas. Many of these hawks were observed in the vicinity of backyard bird feeders.

Please report Cooper's Hawk observations to:

Andy Stewart, Wildlife Biologist, 3932 Telegraph Bay Road, Victoria, B.C. V8N 4H7
Phone: (250) 387-9780 or 477-1328 E-mail: andy.stewart@shaw.ca

U.S Fish and Wildlife bands are on the right leg of all colour-banded hawks. The numbers on these aluminum bands can not be read except when in hand.



This example colour-band would be recorded as "Red B over 6". Red bands signify it is a female and black bands indicate it is male. These bands are always on the left leg.

HAT Tricks

Habitat Acquisition Trust
Creating a Conservation Legacy

By Todd Carnahan, Habitat Acquisition Trust's Stewardship Coordinator

If the trees could speak…

In Lord of the Rings, the tree-like Ents got sick and tired of the way others were abusing the forests of Middle Earth. After extended deliberations, they decided to respond. In a less bellicose but equally surprising way, HAT is lending a voice to Victoria's vanishing Garry oak ecosystems. Our new mascot Garry Oakley has pulled up roots to stand up for his beleaguered brethren.

Thousands of residents saw kids hugging Garry at Fort Rodd Hill's Canada Day celebrations this summer. Known for his pithy commentary, Mr. Oakley leaves no resident bored. He is especially fond of encouraging small humans to plant acorns and to feed his roots with oak leaves.

On September 25th at 9:30 a.m., help Garry to clean up Colquitz Creek at Cuthbert Holmes Park. At noon there will be a salmon BBQ, music, fish tank, children's games and illustrious prizes. Contact HAT at 995-2428 for more information.

Office: 316-620 View St. Victoria
Mail: PO Box 8552 Victoria BC V8W 3S2
www.hat.bc.ca and
www.conservationconnection.bc.ca: your database of conservation organizations and events in the CRD.

Garry Oakley and Andy McKinnon. *Photo provided by the author*

BULLETIN BOARD

4th Annual Canada Taiwan Bird Fair: "Birds and Forests of Canada and Taiwan" Saturday, September 10 Vancouver Public Library, 350 W. Georgia St., Vancouver. 10:30 a.m.– 5 p.m; Opening ceremonies, slide presentations, videos, bird art, prizes, music, exhibits. Grand prizes: 2 tickets to Taiwan. Photo exhibit: "Birds of Canada and Taiwan", Aug. 31–Sept. 14 in Moat Gallery, Lower Level. For details, please see website: http://www.canadabirdfair.org.

The Goldstream Artshow (September 17 to October 10, 2005) *"The Nature of Island Artists"* is held at the Visitor Centre in Goldstream Provincial Park every second year and showcases artists from Vancouver Island and the Gulf Islands. Each exhibit, members of the Victoria Natural History Society have volunteered their time to make the show a success. These tireless efforts go towards supporting the salmon run school programs. If you can support this great cause, please leave a message at Goldstream (478-9414) for our volunteer Volunteer Coordinator, **Judith Parish**.

Are you going on one of the VNHS field trips? Willing to pick up a VNHS member in James Bay? If yes, then please telephone 384-7553. Thank you for your consideration.

CRD Parks To check out what field trips are going on at CRD parks, go to their web site:http://www.crd.bc.ca/parks/

Share your love of nature with school children and volunteer as a Nature Interpreter at Swan Lake Christmas Hill Nature Sanctuary. Training is provided. For more information contact Joan at 479-0211 or email: volunteer at swanlake.bc.ca

Bird Walks at Swan Lake There are regular guided bird walks at Swan Lake Nature Sanctuary on Wednesdays and Sundays. Meet at the main parking lot at 9:00 a.m.

CALENDAR OF EVENTS

REGULAR MEETINGS are generally held September-April on the following days. **Board of Directors**: the first Tuesday of each month (directors' meetings are held at Swan Lake Nature Sanctuary at 7:30 p.m.); **Natural History Presentations**: the second Tuesday at 7:30 p.m., in Murray and Anne Fraser 159, University of Victoria; **Botany Night**: the third Tuesday, 7:30 p.m., Swan Lake Nature Centre; **Birders' Night**: the fourth Wednesday, 7:30 p.m., Murray and Anne Fraser 159, University of Victoria. **Marine Night**: the last Monday, 7:30 p.m., Swan Lake Nature Centre. Locations are given in the calendar listings. Telephone the VNHS Events Tape at 479-2054 for further information and updates. The VNHS Calendar also appears on the Internet at: http://www.vicnhs.bc.ca, and is updated regularly.

SEPTEMBER

Saturday, September 3

FIELD TRIP

Birding the Victoria Shoreline

Marie O'Shaughnessy (598-9680) will lead this search for migrant shorebirds. We will be stopping at Cattle Point, the end of Bowker, Oak Bay Marina, Clover Point, and the Ogden Point Breakwater. Meet at Cattle Point at 7:30 a.m.

Sunday, September 4

FIELD TRIP

Shorebirding from Victoria to Sooke

Meet at the Helmcken Park and Ride at 7:30 a.m. to car pool. We will be going to Esquimalt Lagoon, Albert Head Lagoon, Witty's Lagoon, Ayum Creek, and Whiffen Spit. Bring a lunch. Call **Rick Schortinghuis** at 652-3326 if you need more information.

Sunday, September 11

FIELD TRIP

Birding Viaduct Flats

There should be good variety of shorebirds, waterfowl, and other migrants. Meet at the intersection of Viaduct Avenue and Interurban Road at 8:00 a.m. Leader TBA.

Sunday, September 11

YOUNG NATURALISTS' OUTING

The Great Shoreline Clean Up at Island View Beach

Join us in participating in the Great Shoreline Clean Up. During this annual international event, people all over the world get out to explore and take care of shorelines in their communities. We will walk the length of the beach (about 1.5 km) combining our clean up with a guided beach-and-bird walk. Bring binoculars and work gloves if you have them. Meeting Place: Main parking area at the foot of Island View Road. 10:00 a.m. Registration: Please call **Susanna** at 213-6871 if you wish to participate

Tuesday, September 13

NATURAL HISTORY PRESENTATION

Butterfield Park Restoration

Butterfield Park was the home of the Butterfield family from the early 1900's. Most of the elements of their settlement still remain, including 3 heritage buildings and the remains of the flower and bulb gardens, which were beautifully developed by the family. **Jenny Hyndman** of the Saanich Heritage Commission and the volunteer co-coordinator of the restoration, will speak about the project now underway to restore the gardens of the park, uncovering the hidden treasures that have been temporarily lost to invasive species, and about the history of the property. Everyone welcome. Bring your coffee cup and a friend. 7:30 p.m., Fraser 159, University of Victoria.

Saturday September 17 and Sunday September 18

VICTORIA'S MONTHLY BUTTERFLY COUNT

We are always looking for keen-eyed volunteers, so get out your field guide. Call **James Miskelly** (count coordinator) at 477-0490.

Saturday, September 17 - Monday, October 10

EVENT

"The Nature of Island Artists" Artshow

A biennial artshow featuring amazing art by Vancouver Island and Gulf Island artists, held at the Goldstream Park Nature House. Open daily 9-4:30 p.m. Contact the Goldstream Park Nature House at 478-9414 for more info.

Tuesday, September 20

BOTANY NIGHT

"Georgia On My Mind ..."

Sherry Kirkvold will talk about plants of Georgia and the Caucasus. Swan Lake Nature House, 7:30 p.m. Everyone welcome.

Sunday, September 25

FIELD TRIP

Fall Colour in the Jordan River Bogs

We always go to the bogs high above Jordan River to see the flowers but forget about the other colorful and tasty season. There are eight different *Vacciniums* (huckleberries, blueberries and so on) plus cranberries to get acquainted with. The berries should be ripe and the leaves in their fall finery. There are also many other plants to enjoy. Although it may be sunny, be prepared for cooler temperatures due to higher elevation, and it may be rainy. Bring high gum boots (hiking boots are not adequate). Meet at the Helmcken Park and Ride at 9:00 a.m. to car-pool. Four-wheel-drive not required but good clearance is necessary. Bring lunch, snacks and plenty to drink for this all-day outing. No pets please. Call **Agnes** at 721-0634 for more information.

Sunday, September 25

FIELD TRIP

Pelagic Birding on the M.V. Coho

Join us on this trip on the *M.V. Coho* on a sailing across the Strait of Juan de Fuca and back. The crossing takes 1½ hours and this is the best opportunity to see pelagic bird species (shearwaters, fulmars, phalaropes) usually found further out to sea. We will be birding from the bow of the boat, so dress warmly. Bring a lunch and meet at the Black Ball Ferry terminal in the Inner Harbour at 10:00 a.m. for the 10:30 sailing. Allow plenty of time for parking. Ferry cost is $18.00 (US) $24.80 (CAN) return. You should have two pieces of ID (at least one with a photo) for Customs. We'll

return on the 12:45 p.m. sailing. Leader is **Ed Pellizzon**: 881-1476.

****Monday, September 26****Note new location!

MARINE NIGHT

A Trophic Cascade: The Role of Salmon and Bears in Forest Biodiversity

Dr. Tom Reimchen will summarize some recent findings from the Salmon Forest Research Group, University of Victoria. Studies have shown that salmon nutrients transferred by bears from streams to surrounding forests benefit, directly and indirectly, a wide diversity of forest biota, including mosses, shrubs, trees, invertebrates, and songbirds. Growth rate, species diversity and numbers of individuals respond positively to increased salmon abundance. He will discuss the conservation implications of historical declines in salmon abundance. I guarantee you will benefit directly from this interesting topic. Room 157, Fraser Building, UVic, 7:30 p.m. Everyone welcome.

Wednesday, September 28

BIRDERS' NIGHT

High Seas to High Sierra: Birds and Botany of Baja California

For the past 15 winters **Bryan Gates**, our Birders' Night host, has visited and worked in Baja California, Mexico. He will take us from the spectacular beaches and islands of the Gulf of California to almost 5,000 feet above sea level in the Sierra de La Laguna, the highest mountains in the southern peninsula. Birds, plants, and geology of this desert community will be featured. Everyone welcome. 7:30 p.m., Fraser 159, UVic. Bring a friend and your coffee cup.

OCTOBER

Sunday, October 2

FIELD TRIP

Birding at Whiffen Spit, Sooke

In recent years Lapland Longspurs, a Sharp-tailed Sandpiper and a Ruff have stopped at this migrant trap in Sooke. Meet your leader (TBA) at 9:00 a.m. in the parking lot at the foot of Whiffen Spit Rd.

Sunday, October 9

FIELD TRIP

Mosses and Lichens in Thetis Lake Park

Join **Gerry Ansell** as he shows us the many different mosses and lichens that make this Park special. You are welcome even if you'd just like to learn some more about the other plants, as Gerry can also enlighten you on those as well. He knows his birds too, so it should be fun and informative. Meet at the main parking lot at 10:00 a.m. Parking is free in October. No pets please. Call **Agnes** at 721-0634 for more information.

Tuesday, October 11

NATURAL HISTORY PRESENTATION

The Geology of Southern Vancouver Island

Victorian-born **Chris Yorath** worked for the Geological Survey of Canada at the Survey's Pacific Geoscience Centre and he has authored several books on geology, including *Where Terranes Collide, How Old Is That Mountain?* and *A Measure of Value*. His latest book, *Geology of Southern Vancouver Island*, has just been republished in an expanded version and is geared to geologists and amateur naturalists alike. Join us for an overview of our region's geology with this noted expert. Everyone welcome. Bring your coffee cup and a friend. 7:30 p.m., Fraser 159, University of Victoria.

Sunday, October 16

EVENT

Goldstream Salmon Run 5km Family Fun Run

A 5 km family fun run to kick-off the start of the salmon run and to raise money for salmon run school programs at the Goldstream. You don't have to actually **run** the route, which winds through the Goldstream Provincial Park Campground, and dogs are welcome if on a leash! Call the Goldstream Park Nature House at 478-9414 for more information.

Sunday, October 16

FIELD TRIP

Beacon Hill Park Trees and Birds

Join the Friends of Beacon Hill Park in an autumn walk around the Park, checking out the birds and enjoying the fall colour while learning about the native and exotic trees in the Park. Understand why the Heritage Tree Society has designated Beacon Hill Park as a Heritage Tree Area. You'll get to know where the largest tree of each native species is located and enjoy the excellent bird habitat at the same time. Meet at the main parking lot in the center of the Park near the playground at 8:00 a.m. Bring a drink and a snack. No pets please. Call **Agnes** at 721-0634 for more information.

Tuesday, October 18

BOTANY NIGHT

Wilhelm Suksdorf and his Falcon Valley

Follow the steps of an eccentric botanist (Wilhelm Suksdorf, I mean!) and learn more about Vancouver Island rare plants. Swan Lake Nature House, 7:30 p.m. Everyone welcome.

Wednesday, October 26

BIRDERS' NIGHT

Birds and Critters of Florida

Suzanne Huot lived and photographed in Florida, but has recently moved to North Saanich where she continues her exciting career as a photographer. Suzanne will present a selection of her excellent slides that will entice us to visit Florida and help us to identify some of the birds and other animals of that state. Everyone welcome. 7:30 p.m., Fraser 159, UVic. Bring a friend and your coffee cup.

Sunday, October 30

FIELD TRIP

Pelagic Birding on the M.V. Coho

Join **David Allinson** for this trip on the *M.V. Coho* on a sailing across the Strait of Juan de Fuca and back. The crossing takes 1½ hours and this is the best opportunity to see pelagic bird species (shearwaters, fulmars, phalaropes) usually found further out to sea. We will be birding from the bow of the boat, so dress warmly. Bring a lunch and meet at the Black Ball Ferry terminal in the Inner Harbour at 10:00 a.m. for the 10:30 sailing. Allow plenty of time for parking). Ferry cost is $18.00 (US) $24.80 (CAN) return. You should have two pieces of ID (at least one with a photo) for Customs. We'll return on the 1:45 p.m. sailing.

****Monday, October 31****Note new location!

MARINE NIGHT

Lugworms to Shovelhead Worms, and Some in Between

Kelly Sendall, Collections Manager of Fish, Invertebrates, Reptiles, and Amphibians at the Royal BC Museum, is also working toward a Masters degree at UVic on the classification of a family of polychaete worms. Tonight he will describe everything you could possibly want to know about the wonderful and diverse world of marine worms. This is not a Halloween joke! But it will be a treat. Room 157 – Fraser Building, UVic. 7:30 p.m. Everyone welcome.

The Victoria NATURALIST

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Maples and Sword Fern **Acrylic Painting by Mark Hobson**

The Nature of Island Artists

September 17 - October 10, 2005

Goldstream Provincial Park Visitor Centre
Victoria, B.C.

VICTORIA NATURAL HISTORY SOCIETY

Goldstream Nature House

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