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The Victoria NATURALIST

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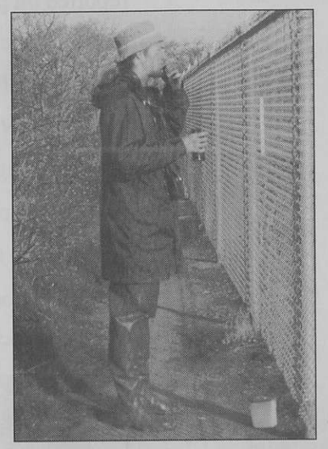
OUR COVER

The Sandhill Crane, *Grus canadensis,* proudly adorning our cover for this issue of the *Victoria Naturalist* was photographed by David Allinson. David lead the field trip to Boundary Bay as reported on page 6 and identified the Sandhill Crane as one of the 80 species of birds observed. This issue of the *Victoria Naturalist* takes us from Arizona to Victoria. Our members are traveling and reporting on cactus, on birds and mammals. An article on the Smith Reservoir brings back to Victoria the need for concerns about our neighborhoods.

Smith Hill Reservoir: an Urban Waterfowl Oasis

By Malcolm Coupe

Just blocks north of the city centre, in a quiet neighbourhood of Victoria, is a small promontory with the unexciting name of Smith Hill. The north and west slopes, forming Summit Park, are covered with native Garry oaks and wildflowers, mixed with the scourges of the colonists: broom and blackberrry. Houses, gardens and a relatively new condominium development cover the south and east slopes. The top of Smith Hill is a wonderful place to stand and watch the sun set over the city, with the wind in your face, a view of the ocean, the sight of swallows and bats swooping and diving, the gentle quacking of mallards in the background.



Malcolm making verbal recordings on birds in the reservoir. *Photo*: Jeneen Karch

What's this? Waterfowl are about the last thing one would expect to find on any peak, and a peak so close to downtown, well this is truly surprising. It is what's on top of the hill that is the biggest surprise: a square, football field-sized, concrete-lined body of water, fenced off from any intruders, with the water level fifteen feet below the level of the peak. This is Smith Hill Reservoir, built on the hill early in the century to provide high pressure water to Victoria but long since decomissioned once the city's demand increased. It still holds open water to a substantial depth.

And where you find water, you will often find ducks. The reservoir holds little food value for waterfowl — just mayflies and muck for buffleheads to root in, but it is an excellent roosting area for overwintering waterfowl. Why? It offers a sheltered, predator-free body of water close to feeding areas. The barbed wire fencing keeps out human intruders and pets while the sunken water level probably reduces exposure to winter winds.

I first heard of the reservoir in March 1997 from Michael McNall, the acting curator for birds at the Royal BC Museum. At the time, I was conducting an Honours thesis investigating the winter pairing behaviors of mergansers in the Lower Mainland. I told Michael that I was having difficulty with my sample size of Hooded Mergansers. This is a sparsely distributed species over much of its range; I was seeing so few birds that I wondered how representative my data might be of the behavior of the species as a whole. Michael told me to go to the reservoir, "There's often 150 Hooded Mergansers roosting there in an evening," he said. I found that hard to believe, but I have since found out that Victoria is the world capital for this species, at least during winter. The Victoria Christmas Bird Count of "Hoodies" is the highest anywhere.

Hooded Mergansers are perhaps the most handsome of our resident waterfowl. Their pure white hoods, trimmed with black, are very distinctive and when held erect attract the eye like a magnet. The very sight of a Hoodie evokes a feeling of joy and excitement in even the most experienced birder.

Bellrose in his book *Ducks, Geese and Swans of North America* estimated that there are between 2000 and 4000 Hooded Mergansers breeding in British Columbia. The Hooded Merganser population at Smith Hill Reservoir in Summit Park is therefore rather significant since it represents about 10 to 20% of the province's breeding population and consequently over 20% of the province's wintering population.

The Hooded Merganser breeds throughout the southern half of British Columbia. It is interesting to note that over 80% of the Hooded nest records sent into the Royal British Columbia Museum came from nest boxes. In its natural habitat mergansers nest in tree cavities, usually in wet marshy areas that are not easily accessible to humans. The high nest box percentage is therefore not surprising as they are easier to monitor. Unfortunately many cavity nesting bird populations are declining — largely due to the lack of old, decaying trees suitable for easy cavity excavation. In spite of the loss of these valuable "wildlife trees" it is encouraging to know that Hoodies take readily to artificial nest sites.

I returned to Victoria last fall to continue my study, visiting the reservoir once every two weeks, and observing the arrival and departure of Hooded Mergansers in late evening and early morning. A preliminary analysis of my data showed that Michael's estimate of the number of Hooded Mergansers using the reservoir had actually been a conservative one. My highest count so far is 317 on one mid-December morning. From the directions of departure and arrival, I suspect that these birds feed in marine habitats off Victoria and in the harbour.

While the Hooded Merganser is the most common species seen on the reservoir, several other species of waterbirds use the area. Mallards, American Widgeon, Bufflehead, and Glaucous-winged Gull were all regular sightings during my observations. Less common sightings included Lesser Scaup, Northern Shoveler, Northern Pintail, Eurasian Widgeon, and Belted Kingfisher. Locals have also seen Harlequin Duck and Wood Duck. At night, the reservoir can become really packed as hundreds of waterbirds are crammed into this small space. The raucous quacking of the Mallards, the unearthly croaking of the Mergansers, the whistle of the Widgeons — all unite to overwhelm the listener. But if a birder comes searching next morning, to see what can be seen, the only sight might be a party of gulls, splashing the salt from their wings.

The top of Smith Hill is a wonderful place to stand and watch the sun set over the city, with the wind in your face, a view of the ocean, the sight of swallows and bats swooping and diving, and the gentle quacking of mallards in the background.

Smith Hill Reservoir is owned by the Capital Regional District water branch, formerly the Greater Victoria Water District, and has no protected status unlike Summit Park which wraps around the north and west slopes and is owned by the City of Victoria. The fierce opposition of local residents and self-appointed protectors of Garry oak meadow prevented the development of a tennis club in the footprint of the reservoir in 1994. Though the CRD claimed at the time that the reservoir was written into its 20 year plan and not for sale, it was also willing to negotiate with city officials and tennis club supporters on a long term lease. Its future remains unclear.

The Friends of Summit Park Society was formed in 1994 over the alarm created by the tennis club proposal and it has been working ever since to raise awareness of the rare, endangered remnant of Garry oak meadow habitat that is Summit Park. Wildflower species are there in varying abundance. The yellow Montane violet is to be found in the park but virtually no where else on the Island. Members of the Friends want to see the Smith Hill reservoir added to the park as a buffer and because of its unique role in supporting local and migrating bird populations.

From what I and local naturalists have seen, it is clear that the reservoir deserves protection, both for its value as a roost site for so many hundreds of waterfowl, and as the crown of Smith Hill.

MALCOLM COUPE, *assisted by* MICHAEL MCNALL, *Friends of Summit Park*

Birding Boundary Bay

By David Allinson

On February 21st of this year, I was joined by eight birders for a birding blitz of Boundary Bay in Delta. Last year's VNHS Boundary Bay trip enjoyed 67 species and great looks at record numbers of Snowy Owls as a highlight.

Despite strong winds and showers, this year's trip produced 80 species, including four owls.

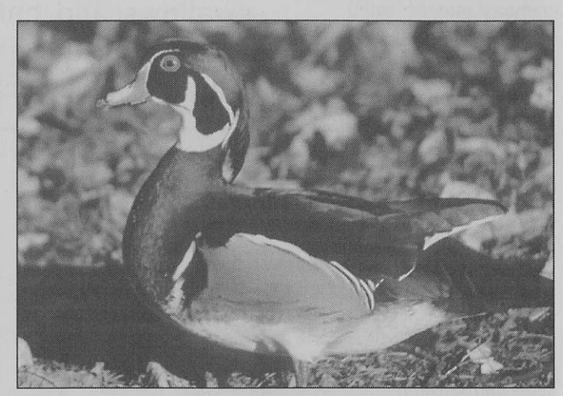
A wind storm had backed up ferry traffic, but luckily everyone in our group managed to make it onto the 7:00 a.m. sailing to Vancouver. Our first stop on the other side was at the base of the Tsawwassen jetty, where we were able to locate an obliging overwintering Willet. Large numbers of waterfowl were seen in the bay between Roberts Bank and the Tsawwassen jetty, including about a hundred Brant.

An added bonus was a Red-tailed Hawk perched beneath its nest at the edge of the Tsawwassen Forest. It soon became apparent that due to the strong winds I would need to change our planned stops along the exposed sections of Boundary Bay. Nevertheless, we braved a short walk along the foreshore dyke at the foot of 64th Street. In fields on both sides of 64th Street, we observed Trumpeter Swans as well as a hovering Rough-legged Hawk up close. The dyke itself proved a tad bracing and a squall shortened our stay there. However, we spied large flocks of whirling Dunlin and Black-bellied Plover, a half-dozen Eurasian Wigeon, and got a brief glimpse of a Peregrine Falcon. We returned to our vehicles just as the squall arrived.

I decided to take the group to one more stop at Boundary Bay before heading to the George C. Reifel Migratory Bird Sanctuary for the afternoon. Reifel at least offered shelter and more tree cover. I enticed the birders to help me find Long-eared Owls that usually winter in hawthorn trees near the Boundary Bay airport. For about 30 minutes we searched in vain for the owls, but found a dozen fresh owl pellets and whitewash indicating owl roost sites. As a humorous aside, a Townsend's Vole almost ran over one our participants feet while we were looking for the owls.

I was just getting ready to give up when I decided to check some promising looking bushes near our parked vehicles. In fact, I found a roosting pair of Long-eared Owls right beside my vehicle! The birds were flushed and flew out over our heads. Careful not to harass the birds, we were eventually able to view one of them out in the open for terrific looks through my spotting scope.

Buoyed by our success, we worked our way west through Ladner to the Reifel Sanctuary. Even though it was a weekend, the sanctuary was not crowded, no doubt due to the weather. Reifel provided us "luxury" in a warming hut while we had our lunch. Afterwards, we relied on detailed directions to two Northern Saw-whet Owl roost sites along the east trail. We found both birds, although they were partially obscured by branches and fir needles as they slept. Now the pressure was on! We'd found two owl species, could we find more?! As we made our way around the rest of the sanctuary, a Violet-green Swallow, a harbinger of spring, flew through my scope's field of view whileI was scanning a field. We also observed some of the sanctuary's specialities such as Black-crowned Night-Heron, Wood Duck, Snow Geese, and many other duck species.



Wood duck at the Reifel sanctuary. *Photo*: David Allinson

I continued to find owl pellets (but no owls) under promising-looking trees near the main parking lot as tame (yet wild) Sandhill Cranes strutted about.

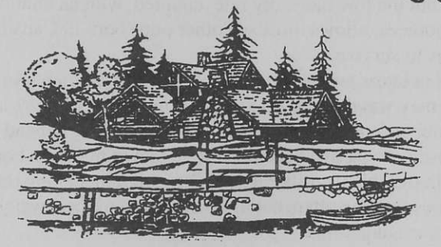
As light begins to fade by mid-afternoon at this time of year, we pressed on from the Reifel Sanctuary to bird other sections of Delta. I chose to take our small group to a farm near Brunswick Point which had produced Barn Owl on past Christmas Bird Counts I've participated in. Unfortunately, we were denied access and told that the owls were no longer using the barn anyway. As we worked our way along back roads, a Short-eared Owl flew in front of our cars and perched just long enough for some of us to enjoy scope views before it flew off no doubt to hunt Townsend's Voles. Now we had three owls, could we get to four? On our way back to the ferries, as we drove past an abandoned barn, I decided to take a chance. Lo and behold, we were blessed with a single Barn Owl roosting in the rafters straight above our heads temporarily illuminated by my flashlight.

Our group's small size, enthusiasm, and patience with my changes to the itinerary made this a very enjoyable day of birding for me. However, perhaps our most surprising miss for the day was that no Northern Shrike were sighted. For interest, I have included a trip list of bird species, but part of our group also saw a coyote by the highway for another highlight. This was the eighth birding field trip to Vancouver I've led, and I fully intend to arrange others in the future. Look for a "fall" shorebird trip in August to Iona Island in this issue's Calendar of Events.

DAVID ALLINSON *is past-president of the Victoria Natural History Society. His particular birding interests are with both the diurnal and nocturnal birds-of-prey as well as neotropical passerine migration.*

February 21, 1998 Bird Trip List — 80 species

Red-throated Loon
Pacific Loon
Common Loon
Horned Grebe
Red-necked Grebe
Western Grebe
Double-crested Cormorant
Brandt's Cormorant
Pelagic Cormorant
Great Blue Heron
Black-crowned Night-Heron
Trumpeter Swan
Snow Goose
Brant
Canada Goose
Wood Duck
Green-winged Teal
Mallard
Northern Pintail
Northern Shoveler
Gadwall
Eurasian Wigeon
American Wigeon
Canvasback
Greater Scaup
Lesser Scaup
Oldsquaw
Surf Scoter
White-winged Scoter
Common Goldeneye
Bufflehead
Hooded Merganser
Common Merganser
Red-breasted Merganser
Bald Eagle
Northern Harrier
Cooper's Hawk
Red-tailed Hawk
Rough-legged Hawk
Peregrine Falcon
Ring-necked Pheasant
American Coot
Sandhill Crane
Black-bellied Plover
Killdeer
Willet
Dunlin
Mew Gull
Thayer's Gull
Glaucous-winged Gull
Common Murre
Pigeon Guillemot
Rock Dove
Barn Owl
Long-eared Owl
Short-eared Owl
Northern Saw-whet Owl
Belted Kingfisher
Northern Flicker
Pileated Woodpecker
Violet-green Swallow
Northwestern Crow
Common Raven
Black-capped Chickadee
Bewick's Wren
Winter Wren
Marsh Wren
Golden-crowned Kinglet
American Robin
European Starling
Spotted Towhee
Fox Sparrow
Song Sparrow
Golden-crowned Sparrow
White-crowned Sparrow
Dark-eyed Junco
Red-winged Blackbird
Brewer's Blackbird
House Finch
House Sparrow



The Return of a "Keystone Predator"

By Jane Watson

The sea otter is back. A shy little marine mammal, the otter was once common all along the northeast Pacific rim, ranging from cold upwelled regions of Baja, Mexico to northern Japan. Conservative estimates suggest that prior to 1800, there were over 300,000 sea otters in the coastal waters of the North Pacific. But sea otters were highly valued for their pelts, and an intensive fur trade which lasted from the mid-1700's until their protection in 1911 reduced the worldwide population to fewer than 2,000 animals. In Canadian waters, the last known sea otter was shot in 1919.

Federal, provincial and state governments from Canada and the U.S. reintroduced sea otters to a remote portion of the west coast of Vancouver Island from 1969-1972. With little human intervention, the population has grown and spread at a rate of about 18% per year. In 1996 there were over 1,500 individuals, and the Canadian sea otter population was downlisted from endangered to threatened on Canada's list of species at risk.

This success is not unique. Reintroduced populations in Washington State and Southeast Alaska have also done well. Sea otters are fortunate in that they have few natural predators. Killer whales will prey on sea otters but appear to prefer blubber-laden seals, porpoises and dolphins. Bald eagles also take sea otters, often providing their offspring with sea otter pups.

Starvation is the greatest source of mortality in sea otter populations which have grown beyond the capacity of their habitat to support them. Female sea otters have one pup per year, but the low mortality rate, coupled with an abundance of resources, allows most sea other pups born in Canadian waters to survive.

Sea otters are the smallest of marine mammals. An adult male may weigh up to 40 kg. Sea otters lack the thick layer of blubber found in most marine mammals and depend upon a dense fur coat and high metabolic rate to maintain body heat in the chilly north Pacific. Their high metabolic rate requires that sea otters eat up to one-third of their weight in food each day.

In British Columbia, sea otters act as a "keystone predator", a species that exerts a strong influence on the nearshore community, affecting its structure and biological diversity. In particular, sea otters feed on herbivorous invertebrates, such as sea urchins, which graze intensely on seaweed and soft-bodied invertebrates. In B.C., sea otters appear to be the only non-human predator capable of controlling urchin populations. When sea otters were removed from the ecosystem 100 year ago, urchin populations increased and kelp forests along rocky coastlines declined, a profound ecological change that went largely unnoticed or recorded.

Sea otter. *Photo:* Glen Moores

In areas with sea otters, urchin grazing restricts seaweed to inaccessible areas which are shallow and wave swept or have unstable substrate. Over the last ten years biologists have documented dramatic changes associated with the return of sea otters. As sea otters re-inhabit their historical range, urchins disappear and kelp forests grow. Kelp in turn affects the ecosystem, in creasing nearshore productivity, providing particles of kelp for detritus-based food webs, creating habitat for adult and juvenile fish, and altering water currents which affects invertebrate settlement and even reduces coastal erosion.

Sea otters represent a valuable reminder of the interdependency of ecosystems. With continued non-intervention, and in the absence of environmental problems, the prospects for the sea otter should continue to look promising.

JANE WATSON *is a biology instructor at Malaspina University College in Nanaimo, B.C. This article was originally published in* Recovery — A Canadian Wildlife Service.

The Unsung Heroes of Ayum Creek

By Calvin Sandborn

The local press treated David Anderson like a conquering hero the day that he put the Ayum Creek fundraising campaign over the top. And rightfully so. The new park is the linchpin of the 25 km Sea-to-Sea Greenbelt that will stretch from Butchart Gardens to Sooke Basin.

But the media missed the most interesting story about Ayum Creek. It's the story of how the community land trust movement — a movement that has saved millions of acres of land across North America — has finally arrived in Victoria. It's the story of the many ordinary people that went to extraordinary lengths to establish the CRD's latest park.

In brief, it's the story of how two grassroots groups —the Habitat Acquisition Trust and the Society for the Protection of Ayum Creek — mobilized 800 donors to give approximately $200,000 towards the purchase price. And how those groups used the moral authority created by such donations to build a coalition of government partners to provide the rest of the price.

These are the true heroes of Ayum Creek:

- When she read a newspaper article about Ayum Creek, Nancy's interest was piqued. Her parents had taken Nancy swimming at the Creek estuary more than sixty years ago, setting a pattern of ocean swimming that she continues to this day. Stirred by memories and a love of nature, she gave $5000 towards the preservation of Ayum Creek.
- The Barber-Starkey family long owned and enjoyed a vacation property near Parksville. When the Nature Trust of BC helped save the nearby Englishman River estuary a few years ago, the family pledged that when they sold their own land, that they would set aside 10% of the price for land conservation efforts. Most of that money went to Ayum Creek. Joe, the father, explains, "We consider this to be a 'thank you' for all the enjoyment that the outdoors and wild things have given to us. We want others to enjoy those things too."
- Two Sooke schools raised hundreds of dollars and donated art work and another school is establishing a Junior Streamkeepers group to help restore the Park area. Miles away from Ayum Creek, Gordon Head Elementary School raised almost $400 to purchase the Ayum and McFadden Creek lands.
- A senior citizen explains that a youngster was born into his family at precisely the same time as he himself had a near-fatal accident. He has always told himself that he was saved so that he could look after this child. He states, "I figured that the best way I could help her and her generation is to help Ayum Creek." He donated $10,000, and has worked many long hours in enhancing habitat at the Creek. It's his gift to one of the most precious people in his life.
- At the urging of their conservation-minded daughter, the owners of Sooke Harbour House restaurant donated a gourmet dinner for 120 people. Others donated live music, and design and printing services for the event — which raised more than $15,000.
- Robert Bateman agreed to be the featured speaker at the above dinner. When organizers later wrote offering to cover his traveling expenses, he and his wife Birgit declined — instead sending back a $10,000 cheque for the cause.
- Third-grader Brendan Campbell-Moore emptied his piggy bank, and gave all he had to the Ayum Creek campaign. Marshall Pulhan contributed his hard-earned money from his newspaper route.
- At the other end of the spectrum, Mountain Equipment Co-op is a business with a conservation conscience. Having already helped buy Jedediah Island and Comox's McDonald Wood Park, the Co-op decided to jump-start the Ayum Creek campaign. It gave $30,000 and challenged other businesses to do likewise. Canada Trust rose to the challenge, with substantial donations. *Monday Magazine* provided two full page ads for the price of one.
- The Juan de Fuca Ramblers walking club got blisters on their feet — but no holes in their souls — when they walked 32 km. Their walkathon raised $2000. In similar efforts, other volunteers ran an art show, and a musical cabaret night. Three experts raised $12,000 for the land trust by volunteering to lead naturalist tours to Arizona and Texas.
- Another modest senior gave $5,000 to the campaign. When asked why, she stated simply, "Wilderness has been my greatest pleasure in life."
- A Sooke woman gave nearly a tenth of her annual income from her home-based business to the Ayum Creek project. She explains that she believes in the principle of "tithing", and that the act of giving enriches her life in every way.
- A number of people looked to the past, donating money in memory of lost loved ones. Yet others are looking to the future — and have promised bequests for future land trustprojects.

In sum, the community clearly owes David Anderson thanks for his efforts to save the Creek. But senior governments need to go further — they need to systematically encourage efforts like the Ayum Creek campaign.

Governments should follow the US lead, and start a "Challenge Grant" program for land trusts. Such programs offer to match every dollar raised by the community with a government dollar. Land trusts can then attract more donors, with the promise that every dollar donated really provides two dollars for the cause. Experience has shown that such programs are a powerful incentive for grassroots efforts like the one we just saw at Ayum Creek.

And wouldn't that be great for nature — and for our community?

CALVIN SANDBORN *is a Victoria lawyer, and a volunteer director with the Habitat Acquisition Trust.*

Volunteer in Paradise

By Aziza Cooper

As I sat at a picnic table in the warm dusk eating a delicious meal of Mexican food, I glimpsed the silver of September's new moon in a sapphire sky. While deer begged for scraps and skunks as fat as little black-and-white bowling balls trotted through the grass nearby, I laughed and joked with my fellow volunteers. SWRS was a paradise and I was glad to be there.

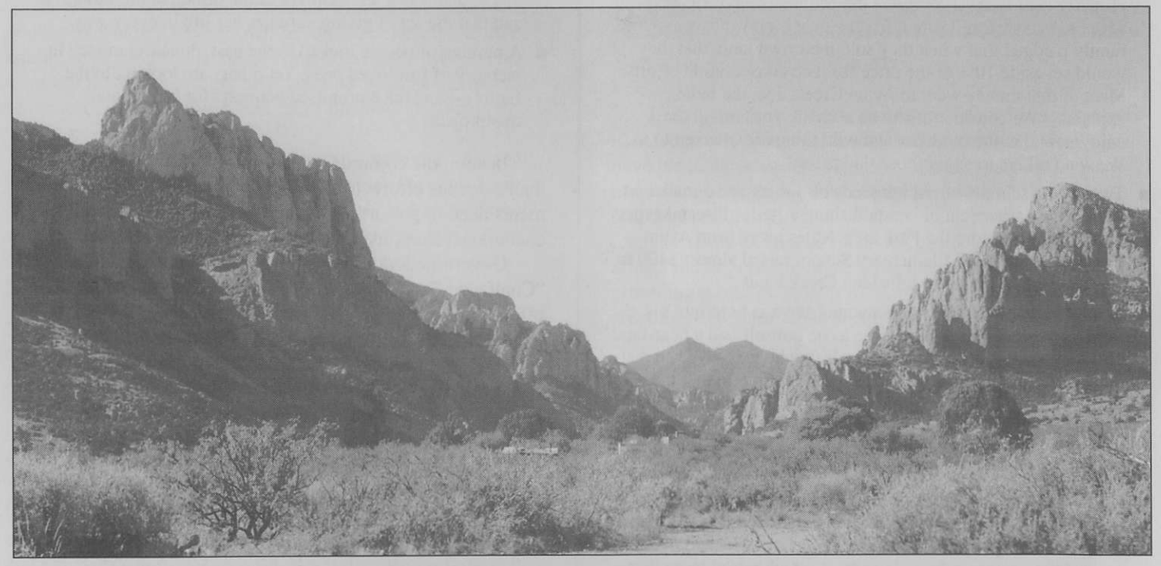
A typical day for me at the Southwestern Research Station could include: up and out at 6 a.m. to look for Trogons in Cave Creek (10 minutes drive down the valley); breakfast, then station chores of laundry, cleaning cabins or cooking; driving down to the open desert to track Horned Toads, or observing tiny hatchling lizards in enclosures near the station; an afternoon swim in the spring-fed pool; lunch and dinner with irresistible calories; birding excursions anytime during the day, and constantly hearing the clicks and whirring of Blue-throated and Magnificent Hummingbirds at the Station feeders. Evenings were often filled with more research activity, music-making or videos.

But which day was typical, with such a variety of events and activities? Resident scientists with fascinating multi-year projects, my fellow-roommate with the tarantula, a visiting biology class that mist-netted bats, exploring the Crystal Cave, hikes in the magnificent country surrounding us, romances constantly in bloom among the volunteers, and my birding delights: lifers and close-ups of spectacular birds.

In August 1996 I drove from Victoria to southern Arizona. I had been accepted as a volunteer for a 2-month stay at the Southwestern Research Station (SWRS) of the American Museum of Natural History. The station is well known to birders and other travellers to the Chiricahua Moun-tains since it is located in an area unique in North America, where the birds of the Mexican mountains reach their northern limit and mingle with many birds familiar to Canadians. Southern Arizona is famous for its Elegant Trogons, many gorgeous hummingbirds and strays from Mexico.

SWRS is a former "ranch" in a valley bottom, surrounded by coral-pink mountains patched with bright yellow-green lichen. The scenery alone would make this a world-class tourist destination, but the wild flora and fauna also delight the scientist and birder. Geology, history, outdoor recreation and just plain basking in the sun are also pleasant and rewarding. At 5400 feet elevation, the summer days are hot but the nights pleasantly cool. Winters can bring snow, and the Station is quiet from November to about March. Desert sun is intense, and late summer brings heavy rains, turning dirt roads to mud and inducing cactus flowers to bloom.

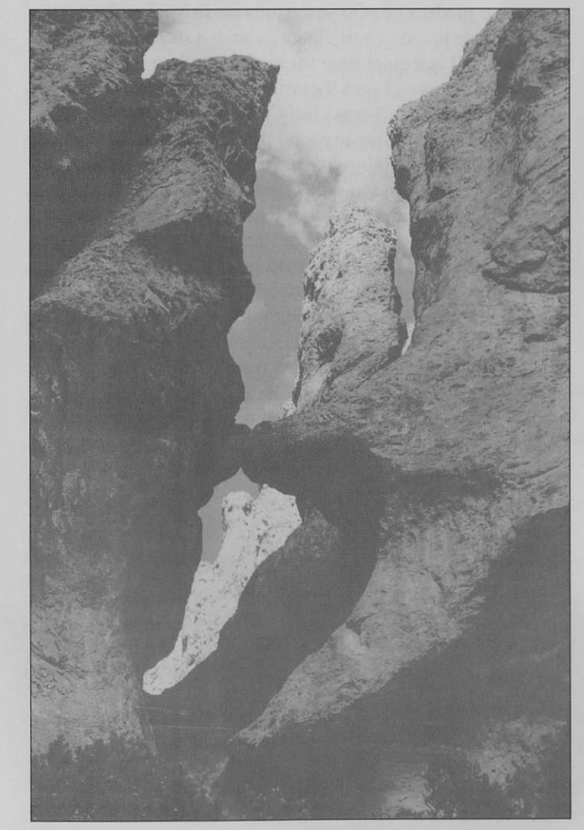
SWRS is a research facility for scientists, who may locate their field research in mountains up to 10,000 foot elevation



Looking from the desert up Cave Creek Canyon towrds SWRS. *Photos*: Aziza Cooper

or Chihuahuan desert at 3-4000'. One hour's drive separates these extremes, which span 5 life-zones. In 1996, about 40 research projects were in progress at SWRS, mostly in the spring and summer. Subjects researched ranged from a study of the mycoflora of the Chiricahaus to the role of plumage contrast in the foraging of Painted Redstarts. Entomology, herpetology, botany, ecology and ornithology were all represented.

SWRS also offers reasonably-priced accommodation and meals for travellers interested in natural history, whether scientists or not (space permitting). Conditions are not luxurious, but are pleasant and clean. The food is excellent. A small permanent staff is joined by volunteers who divide their time between 24 hours per week of maintenance and housekeeping chores and an equal amount of time either assisting scientists with their research or conducting their own projects. Most of the volunteers are biology students and in the fall of 1996 included one British, one Canadian (me), two Germans, as well as 3-4 Americans. Spring and summer are busier times for research and visitors, and a greater number of volunteers is required. Women outnumbered men, and all were in their 20's, except me. I was also a non-student, although experienced in field research on birds and herptiles. I had spent 10 days birding in Arizona in 1993, including a night at SWRS, and was eager to stay longer this time.



Eroded arch in Cave Creek Canyon

Deserts are full of creepy-crawlies and visitors must be alert for close encounters with venomous beasts. Snakes like the rocky slopes next to creek-beds, and I almost stepped on a Rock Rattlesnake on one of my birding hikes. Its high-pitched rattle sounded more like a hiss. Luckily it was content to be left alone. Some species can be aggressive, but I never met them close up. Other snakes were seen on roads, live or more often, dead. I collected one road-killed Mojave Rattlesnake, skinned it, boiled it to loosen the fibres and cleaned the vertebrae. A necklace of silver, turquoise and snake bones makes a lovely present! The skin was tanned by a local craftswoman and shows the black diamond pattern against a golden-brown background.

Wade Sherbrooke, the Director of SWRS, has studied the Texas Horned Toad for nearly 25 years. Horned toads are fearsome looking, relatively harmless, and like many herptiles, their population appears to be in decline. Early on, Wade heard stories of these toads squirting blood from their eyes as a defence mechanism. You might think: whoever heard of such a silly myth? Wade now has a video of a fox and a toad in a staged encounter. He assures his viewers that the toad was unharmed. The fox grabs the toad and starts to chew, then suddenly spits out the toad and makes horrible faces while gagging and sticking out its tongue. Wade himself has occasionally been hit with sprays of toad-blood. An unanswered question is: Why is this blood so unpalatable, if predators normally eat Horned Toads (which they do)? The research continues. Wade has captured several toads and glued radio transmitters to their backs. He has moved them several miles from where they were found near Portal, Arizona and hopes to discover further information about their movements, behaviour and life history. I helped in the tracking using the radio receiver and the antennae, following the beeps through the cactus. At maximum volume, the beeping tells you you've found your toad — now just try to see it! This 4 inch dinosauric beast can be invisible in the open on the desert floor, or it may have buried itself. After circling the spot, you may give up and measure distances without actually seeing the animal.

Any paradise includes a snake or two, and they are hazards as well as study subjects. The rock retaining walls at the station can harbour rattlesnakes, and a sign on the dining room bulletin board says "Report all snakes sighted at the Station!" Wade and his wife, Emily, have two small sons and the rock walls are uncomfortably close to their residence. During the two months I was there, I didn't see any snakes among the Station buildings. However, many lizards live on the outside walls and are interesting to watch as they chase each other around the buildings.

Making beds and gathering up dirty linen was not one of the more rewarding chores. Working in the kitchen was more fun, because the cook, Lori, was a character. One of her former jobs was chef in a whorehouse in Nevada. Cooking for scientists couldn't be more strange than that, could it? Other chores included painting outdoor woodwork, the annual window-washing of all the cabins, and, my favourite, gathering wild grass-seed for sowing on the Station grounds.

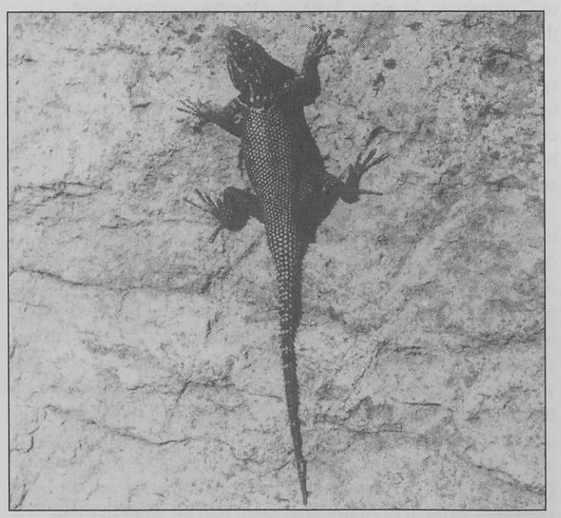
As well as Wade's Horned Toad research, I worked on Vishnu Manteuffel's *Sceloporus virgatus* lizard research. Vishnu was doing research for graduate studies at the University of Miami and his fieldwork in Arizona involved hatching out 200 lizards in the lab at the Station, colour-marking them for recognition of individuals, and releasing them into outdoor enclosures. He would then note dispersal patterns as they were collected from buckets set in the ground along the enclosure fence lines. I assisted by watching individuals for half-hour periods, noting feeding strikes, movements and interactions. 'Pushups', where the lizard bobs its whole body up and down, and head-bobs are territorial displays: "Here I am; this is my space." I saw one or two fights, where two of the little animals became a whirling blur for a second. *Sceloporus* lizards, despite their ubiquity and ease of observation, have never been the subject of dispersal pattern or behavioural studies.

Each volunteer brought their unique capabilities to this ephemeral community. My roommate, Sue, had a passion for spiders and found a fellow arachnologist nearby in Portal. She made a collection of the local spiders, but when she encountered a big, black tarantula down in the desert she couldn't bear to kill it, and instead brought it back. It lived in a plastic box on a table in our cabin for weeks. Luckily, my childhood spider-phobia has almost vanished.

Karen was making an insect collection while baby-sitting Wade and Emily's two boys. Janna painted lovely watercolours of butterflies. Jana and Sue hiked with me to see the rock-paintings and bats in a cave high up in the valley walls. Five of us drove over the mountains to see the Chiricahua National Monument, famous for its eroded towers and maze of canyons. All of us constantly traded jokes, riddles and our life stories over the picnic tables.

The Crystal Cave (one of five Crystal Caves in Arizona) has been terribly vandalized by former 'explorers'. Every rock wall in Portal and even the U.S. Forest Service cabin walls and chimney have large chunks of crystal-bearing quartz smashed from the cave. But the eerie beauty underground is still to be found. We collected the key to the iron gate at the mouth of the cave, put on our hard hats and made sure we had lots of flashlights and batteries. We spent several hours down in the depths and saw wonderful formations of quartz and calcite. Did you know that a calcite-coated wall will glow slightly in pitch-dark after a camera flash has lit it up? Or was it our imaginations?

What wonderful birds I saw and even began to take for granted. I went out birding for a day with a local bird guide, David Jasper. Dave showed me his stake-out spots for various species including Harris's Hawk, Black-Chinned Sparrow and Bendire's Thrasher. Whiskered Screech-Owl was another gift from Dave, when I accompanied an owling trip he led for the class from the University of Arizona. Elegant Trogons are summer residents of Cave Creek Canyon, as many thousands of birders know. I saw them, male, female and juvenile, together and separately on a dozen occasions that fall. Painted Redstart, Phainopepla, Cactus Wren, Scaled Quail, Crissal Thrasher and Strickland's Woodpecker were all normal birds on my day-list. Acorn Woodpeckers' clown faces winked at us from the power poles in the Station parking lot. Every Mexican Jay (Gray-breasted Jay) near the Station wore coloured bands; the product of a 20-year study on helpers at the nest. I would have loved to participate in such a study on birds. However, fall is a quiet time for bird studies, so I went birding on my own. From Victoria to Arizona, through the drive onwards to the Texas Gulf Coast, and back to Victoria, I saw 34 lifers, increasing my total for North America to 514.



Sceloporus jarrovi climbing on the canyon wall.

Some of my favourite memories: the glorious sycamores of Cave Creek turning to red and orange; a family of Coatimundis trotting across the road in Cave Creek Canyon, mother in front and three kids in single file; gingerly walking past a small herd of Javelina (wild pigs); the gorgeous red Fox Squirrels at the Station; two encounters with Grey Fox, and mercifully, no encounters with bears; Geronimo's war-shield and the bison head in the Station's main building; picking ripe, sweet pomegranates from an abandoned orchard; taking photos of migrant butterflies; swimming laps in the pool while the titmice flitted in branches overhead; so many fun times with the volunteers; Emily's performance for the Talent Night: tying a shoelace with her toes; the view from Portal: magnificent gateway into the mountains; sunshine and shadow, wind and storm changing the look of the pink mountains around the Station.

SWRS is ongoing and so is the volunteer program. I wholeheartedly urge anyone with interests in science and nature to visit or volunteer. If you have as good a time as I did, you'll remember it all your life.

Incidentally, the town of Paradise, Arizona is just 10 miles from SWRS!

Further reading: *Sky Island* (1967) by W.F. Heald, the ranch's former owner, tells of the SWRS property before the AMNH bought it in 1955. For information about visiting or volunteering, write to: Director, Southwestern Research Station, Portal, Arizona 85632, U.S.A. Telephone: 520-558-2396. E-mail: swrs@amnh.org Web site: http://research.amnh.org/swrs/

A Rare Find

By Carrina Maslovat

In North America, cacti are associated with wide open spaces, roadrunners and coyotes falling into canyons with large anvils not far behind. But, right in our own backyard, we have a cacti that is as dramatic as the saguaros of the Loony Toons in its own small way.

Last month, my friend and incredible naturalist, Marilyn Lambert offered me the opportunity to go on a botanical hunt to find B.C.'s native cactus, the brittle prickly-pear (*Opuntia Fragilis*). I had seen photos of it in plant books but had never seen it in the wild. At one time, this cactus was more widely distributed with populations at Cattle Point. They have now disappeared and the cactus is scattered in a few dry locations on the east coast of Vancouver Island and on a few of the Gulf Islands, with larger populations in the Okanagan.

Loaded into her zodiacs with me were my partner, Chris, Marilyn and her trusty yellow lab sidekick, Abby. Well equipped with field guides and a gourmet lunch, we zoomed off on a flat sea with a stunning view of Mount Baker to guide us.

We pulled up and delicately scampered over the rock outcrops. Abby, who knew where we left the lunch, waited patiently close to the boat. I was keeping my eyes peeled but I still walked right past the first cacti clump nestled in hollows in the rocky outcrop. The segments were tiny pear shapes: 5-8 cm in diameter and covered in spines about 2 cm long. Once I saw them, they were everywhere stretching in mats up to 1 m wide. I felt transported to another landscape and had to look up at the Garry oaks to prove to myself I was still on the west coast.

Opuntia Fragius. Photo: Carrina Maslovat

We enjoyed a leisurely lunch as the waves lapped at the shore and felt truly spoiled to live in such an incredible corner of the world. Reluctantly, we headed back to the bustle of the city, well armed with the spiny image of the cactus and promises to return to catch the big yellow blooms at the end of May.

CARRINA MASLOVAT *is co-owner of Woodland Native Plant Nursery (478-6084) located in Metchosin.*

Welcome to New Members

APRIL

M. Hamersley
of Craigiewood
is interested in Sea Ducks

A.J. Karch
of Summit Avenue
likes birds, oaks and wildflowers

Kaye and Joan Riecken
of Cambridge Street

Luke and Lorna Vulliamy
of McNair Street
interests are the Natural World — flora and fauna — hiking, camping, canoeing, etc.

M. Moilliet
of Vallis Place

Evelyn Hamilton
of Collinson Street
is interested in botany and natural history

Erica Hargreave
of Pendene Place
likes marine/ethnobotany

Maureen Dunsmuir
of Blanshard Street

MAY

Brenda Beckwith
of Seaview Road

Carrina Maslovat
of Happy Valley Road
is interested in botany

Fran Spencer
of Foul Bay Road

Mimi Beaulieu
of Humber Road
likes hiking, wildflowers, native plants and birding

Susanne Douglas and family
are interested in bird identification and migration patterns and botany

Lisa and Warren Drinnan
of Cooperidge Drive
like birds

Jean MacDonald
of Esquimalt Road

Catherine Fryer
Victoria, cfryer@pacificcoast.net

Hat Tricks

A Report on the VNHS Habitat Acquisition Trust Foundation

By Jeff Stone

One of HAT's less visible roles is to work with landowners who desire to place a conservation covenant on their property. Conservation covenants are an important tool for the protection of habitat on private lands in British Columbia. They are a cost effective mechanism that enables habitat to be protected without the purchase of a property. A prime role for HAT in the Capital Regional District will be to act as a holder of covenants for private lands as well as public lands such as Ayum Creek. Recent initiatives include developing a working relationship with Central Saanich for assisting them with their covenanting needs and being involved with the Southwest Saltspring Conservation Partnership. At the end of this article, we have some answers to commonly asked questions about conservation covenants.

In June, HAT sent a letter to the VNHS Board of Directors indicating the desire to modify HAT's bylaws concerning membership and the nomination of the Board of Directors. The HAT Board would like to see the membership opened to all individuals and organizations and that the HAT Board be nominated and elected from the membership. Our prime reason for such a change (from the current VNHS appointment of members and nomination of HAT directors) is to create a greater feeling of belonging and control by individuals like yourself. There are also some practical reasons for the changes related to licenses for raffles and our ability to market HAT. Hopefully by our next annual general meeting we will have such changes in place.

With respect to our next AGM to be held September 9th, we are looking for 2 or 3 individuals who are interested in serving on the HAT Board of Directors. We are also interested in hearing from individuals who feel that they can contribute in an official advisory role (particularly from a fund raising perspective) and from individuals willing to volunteer time to help us out on various projects. If you are interested please contact the HAT office at 995-2HAT or Jeff Stone at 370-2449. Further information is also available at our web site http://victoria.tc.ca/Environment/HAT.

Jan Garnett recently has had to resign as a HAT director due to potential conflicts with her now full-time position with The Nature Conservancy of Canada. Jan has put a tremendous amount of work into HAT ever since she and Bruce Whittington approached the VNHS Board of Directors about establishing a trust for raising funds for habitat. Jan will be missed in her official capacity but we are sure that she won't need to be dragged in to help.

Finally, I would like to put out a small plea/reminder that although HAT runs primarily on the good work of its volunteers, we do require monies to initiate acquisition projects as well as funds for covenanting and land stewardship projects. As a young organization we have not yet had the opportunity to accumulate any financial reserves or benefit from any large donations or bequests. We have had to rely on small fund raising initiatives which take time and energy. Prior to our next major acquisition project, we realize, based on the Ayum Creek fund raising campaign, that we require about $30,000 just to start a fund raising campaign (i.e., enough money to pay for option payments plus to have money to advertise). You may have noticed a lull in the Ayum Creek campaign last summer/early fall. This was not planned. It occurred because our limited resources (i.e., we had about $17,000 at the start) were tied up in past and upcoming option payments and most commitments were pledges towards the purchase rather than donations to the fund raising campaign. Luckily, the Sooke Harbour House dinner and several donations such as that from the VNHS provided needed cash for further fund raising.

Are our Natural Resources Important to You?

The Habitat Acquisition Trust (HAT) is looking for individuals willing to assist in the protection of natural areas on southern Vancouver Island and the Gulf Islands. There are a variety of ways you can become involved.

Board of Directors: Each year, 2 or 3 new directors are elected at our Annual General Meeting (September, 1998). Directors serve a 3-year term. Directors are responsible for the development of HAT.

Advisory Role: We would like to develop an advisory board of individuals with technical expertise or knowledge/involvement with different segments of the community

General Volunteer: We need volunteers from time to time to perform general duties (e.g., office work, field work, fund raising) as well as to take on larger roles.

If you would like to help or for further information, please contact: Jeff Stone, President, HAT, P.O. Box 8552, Victoria BC V8W 3S2. Office 250-995-2428 (messages). Evenings: 250-370-2449. email: yg582@victoria.tc.ca http://victoria.tc.ca/Environment/HAT

Conservation Covenants

What is a conservation covenant?

A conservation covenant is a written agreement that a landowner registers on the land title to conserve the land or attributes of the land (e.g., habitat). This agreement is then legally binding not only on the present landowner but also on future owners.

Who enforces a conservation covenant?

A conservation covenant is made in agreement with a second party such as the VNHS Habitat Acquisition Trust Foundation. The second party then has the right to ensure that the landowner (current and future) complies with the conservation covenant. The covenant holder is usually an organization rather than an individual as the covenant is expected to apply forever and an organization is more likely to exist in the future.

How is a conservation covenant enforced?

Ideally, the landowner is aware of the details of the conservation covenant registered on their property and the landowner willingly abides by the terms of the covenant. However, if the landowner does fail to comply, the holder of the covenant (e.g., HAT.) could act upon the terms of non-compliance that were placed in the covenant or where necessary they could apply to the court to enforce the covenant.

Have conservation covenants been around long?

It was not until July 1994 that BC legislation allowed landowners to grant a conservation covenant to any person other than a government body. With the passage of Bill 28, the Land Title Amendment Act, 1994 landowners were given a legal tool that enables them to protect the environmental values of "their" land forever.

What can be conserved?

Conservation covenants can be used to protect many different values. These include natural, environmental, historical, cultural, and architectural. Under natural and environmental, you can offer protection to the entire natural state of your property or to selected attributes (e.g., a forested buffer zone to protect the stream flowing through your property)

How detailed do covenants have to be?

The details in covenants will vary from covenant to covenant. How much detail is involved will be up to the landowner at the time the covenant is placed on the property. The covenant should contain sufficient detail that enables the covenant holder to adequately enforce the original intent of the covenant. In the several covenants in which HAT has been involved the amount of detail has varied. A covenant such as that placed on the Ayum Creek acquisition had fewer details than the covenant that we are finalizing on the Meridith property. The Ayum Creek property had less detail because the property was being treated as a whole and the land was designated as natural area park with a known future landowner (i.e., CRD Parks). Private land conservation covenants often have greater detail to deal with some usage of the land.

Can I use the resources on my land?

Conservation covenants should be individually tailored to fit the conservation needs and the needs of the landowner who has decided to place a conservation covenant on the land. In some cases, within a covenanted area this may include resource extraction. For example, a landowner may desire to maintain the forested nature of his property but to cut 1 tree a year for personal firewood. Clauses to enable this use could be included within a covenant.

Who will hold the covenant?

The landowner should select an organization that is willing to support the values that they wish to see protected. It is important that the covenant holder be expected to exist in the future, and has the resources to monitor and enforce the covenant. HAT recognizes these expectations and is purposely planning to have the resources in place to support a large number of covenants. In many cases, it may be desirable that there be more than 1 holder of the covenant. A typical example might be a larger organization or municipality (e.g., The Land Conservancy of BC or The Nature Conservancy of Canada) and a local conservation organization (e.g., HAT) It should be noted that in some cases an organization might not be willing to take on the responsibilities of a covenant if asked to do so. HAT is being fairly selective on the properties that it will covenant to ensure that we are using our limited time and dollar resources to their best use.

What will it cost the land owner and HAT?

Prior to committing to a conservation covenant both the landowner and the potential covenant holder should assess how the covenant will impact them. In general, conservation covenants are an inexpensive means to protect the natural values of a land indefinitely. However, there are several direct and indirect costs that must be considered. Direct costs may include legal fees associated with writing the covenant, legal survey fees if the covenant applies only to portions of the property, and potentially appraisal costs. Indirect costs may relate to changes in property values as the result of the covenant (see tax implications below).

As a general policy, HAT expects that a landowner who approaches us will pick up the larger items associated with the cost of establishing a covenant (e.g., personal legal costs, surveying costs) while HAT absorbs incidental costs associated with its involvement (e.g., site visit, photocopies) in the covenanting process. Future costs associated with each covenant (e.g., administration and monitoring of covenant, potential legal costs to enforce the covenant) also exist. Currently, HAT has not set a policy with respect to these future costs (e.g., if we require a small trust be established by the landowner) though we are rearranging our books to put aside monies now to cover these future costs.

Does the value of my land change?

A general perception is that the value of the land will decrease when restrictions that prevent future development are placed upon it. However, it is also known that land values increase around protected parklands. In most cases, it will be fairly obvious whether an increase or decrease will occur.

What are the tax implications?

There are several tax (income and property) considerations with the placement of a conservation covenant. The landowner should understand how the transfer of rights may be a taxable capital gain and how it may affect their income tax. Placement of a conservation covenant may also be a recognized charitable donation. Under property taxes, the owner should be aware how a change in the assessed value (if any) of the property will affect their taxes.

Can a conservation covenant be bought?

A conservation covenant is a contract. As such, money can be exchanged for the purchase of the rights. Similarly, the value of a conservation covenant can be considered a charitable donation. The value of a conservation covenant is the difference between the assessed value of the land without the covenant and with the covenant.

Is there written information about conservation covenants

A good document to read for further information and from which most of the above information was obtained is "Leaving a Living Legacy: Using Conservation Covenants" by W.J. Andrews and D. Loukidelis (1996) of the West Coast Environmental Law Research Foundation (1001-207 West Hastings Street, Vancouver, BC V6B 1H7 1-800-330-WCEL) This document can also be viewed at http://vcn.bc.ca/wcel/wcelpub/10362/10362.html

Recent Changes in Placement, and Common and Scientific Names, of Birds Occurring in British Columbia

By R. Wayne Campbell

Every few years a group of professional ornithologists, comprising the Committee on Classification and Nomenclature, review scientific studies of birds in North America. Their findings, which consider the differences in morphology, vocalizations, habitat preferences, interbreeding, and migration patterns, result in updates to the official list of North American birds published by the American Ornithologists' Union known as the *Check-List of North American Birds*. This large book lists changes in placement and scientific names of birds in North America because of generic allocation, DNA-DNA hybridization studies, changes in common names to conform with international standards, newly described species, changes resulting from splitting from extralimital forms, and also corrects spelling for birds.

The last major check-list (sixth edition) appeared in 1983 and the seventh edition is scheduled for publication in 1997. Meanwhile, "supplements" are issued frequently to keep us informed of recent changes. The forty-first supplement has just been published in the ornithological journal *The Auk* and includes the following changes that affect the names, placement, and taxonomic order of birds in British Columbia.

FORMER	NEW
Short-tailed Albatross *(Diomedea albatrus)*	Black-footed Albatross *(Phoebastria nigripes)*
Black- footed Albatross *(Diomedea nigripes)*	Laysan Albatross *(Phoebastria immutabilis)*
Laysan Albatross *(Diomedea immutabilis)*	Short-tailed Albatross *(Phoebastria albatrus)*
Family Cathartidae (American Vultures) removed from the order Falconiformes (Diurnal Birds of Prey)	Family Cathartidae inserted in suborder Ciconiae (Storks) of the order Ciconiiformes (Bitterns, Herons, Egrets, Ibises, and Storks) following family Ciconiidae (Storks)
Falcated Teal *(Anas falcata)*	Falcated Duck *(Anas falcata)*
Spruce Grouse *(Dendragapus canadensis)*	Spruce Grouse *(Falcipennis canadensis)*
Check-list order of grouse	**Check-list order of grouse**
Spruce Grouse	Ruffed Grouse
Blue Grouse	Sage Grouse
Willow Ptarmigan	Spruce Grouse
Rock Ptarmigan	Blue Grouse
White-tailed Ptarmigan	Willow Ptarmigan
Ruffed Grouse	Rock Ptarmigan
Sage Grouse	White-tailed Ptarmigan
Sharp-tailed Grouse	Sharp-tailed Grouse
Family Phasianidae (Partridges, Grouse, Ptarmigan, Turkeys, Bobwhites and Quail)	Family Phasianidae (Partridge, Grouse, Ptarmigan, and Turkey). All New World Quail and Bobwhites raised to family Odontophoridae and follow family Phasianidae in check-list order.
American Golden-Plover *(Pluvialis dominicus)*	American Golden-Plover *(Pluvialis dominica)*
Check-list order	**Check-list order**
Pomarine Jaeger	South Polar Skua
Parasitic Jaeger	Pomarine Jaeger
Long-tailed Jaeger	Parasitic Jaeger
South Polar Skua	Long-tailed Jaeger
Parakeet Auklet *(Cyclorrhynchus psittacula)*	Parakeet Auklet *(Aethia psittacula)*
Olive-sided Flycatcher *(Contopus borealis)*	Olive-sided Flycatcher *(Contopus cooperi)*
Check-list order for families of Passeriformes	**Check-list order for families of Passeriformes**
Tyrannidae (Tyrant Flycatchers)	Tyrannidae
Alaudidae (Larks)	Laniidae
Hirundinidae (Swallows)	Vireoniidae
Corvidae (Jays, Magpies, Crows)	Corvidae
Paridae (Titmice)	Alaudidae
Aegithalidae (Bushtits)	Hirundinidae
Sittidae (Nuthatches)	Paridae
Certhiidae (Creepers)	Aegithalidae
Troglodytidae (Wrens)	Sittidae
Cinclidae (Dippers)	Certhiidae
	Troglodytidae
	Cinclidae
Muscicapidae (Kinglets, Bluebirds, Thrushes and Allies)	Regulidae (Kinglets)
	Muscicapidae (Bluebirds, Thrushes and Allies)
Mimidae (Mockingbird, Thrashers and Allies)	Mimidae (Mockingbird, Thrashers and Allies)
Motacillidae (Wagtails and Pipits)	Prunellidae (Accentors)
Bombycillidae (Waxwings)	Motacillidae
Laniidae (True Shrikes)	Bombycillidae
Sturnidae (Starlings)	Parulidae (Wood-Warblers)
Vireonidae (Vireos)	Thraupidae (Tanagers)
Emberizidae (Wood-Warblers, Sparrows, Blackbirds and Allies)	Cardinalidae (Grosbeaks and Allies)
	Emberizidae (Towhees,
Fringillidae	Sparrows, Longspurs,
Passeridae	Buntings and Allies)
	Icteridae (Bobolink, Blackbirds,
	Grackles, Orioles and Allies)
	Fringillidae
	Passeridae
Black-capped Chickadee *(Parus atricapillus)*	Black-capped Chickadee *(Poecile atricapillus)*
Mountain Chickadee *(Parus gambeli)*	Mountain Chickadee *(Poecile gambeli)*
Boreal Chickadee *(Parus hudsonicus)*	Boreal Chickadee *(Poecile hudsonicus)*
Chestnut-backed Chickadee *(Parus rufescens)*	Chestnut-backed Chickadee *(Poecile rufescens)*
Check-list order	**Check-list order**
Black-capped Chickadee	Black-capped Chickadee
Mountain Chickadee	Mountain Chickadee
Boreal Chickadee	Chestnut-backed Chickadee
Chestnut-backed Chickadee	Boreal Chickadee
Family Muscicapidae (Kinglets, Bluebirds, Thrushes, and Allies)	Family Muscicapidae (Bluebirds, Thrushes, and Allies). The kinglets, genus *Regulus*, now have the rank of family (*Regulidae*) and follow the Family Cinclidae (Dippers) in check-list order.
Check-list order	**Check-list order**
Family Laniidae (Shrikes)	Family Mimidae (Mockingbirds,
Family Sturnidae (Starlings)	Thrashers, and Allies)
Family Vireonidae (Vireos)	Family Sturnidae (Starlings)
	Family Motacillidae (Wagtails and Pipits)
Solitary Vireo (all B.C.) *(Vireo solitarius)*	Blue-headedVireo (NE B.C.) *(Vireo solitarius)*
	Cassin's Vireo (S B.C.) *(Vireo cassinii)*
Family Emberizidae (Wood-Warblers, Tanagers, Sparrows, Blackbirds, and Allies)	Family Parulidae (Wood-Warblers)
	Family Thraupidae (Tanagers)
	Family Emberizidae (Emberizids)
	Family Cardinalidae (Grosbeaks and Allies)
	Family Icteridae (Icterids)
Check-list order	**Check-list order**
White-throated Sparrow	White-throated Sparrow
Golden-crowned Sparrow	Harris' Sparrow
White-crowned Sparrow	White-crowned Sparrow
Harris' Sparrow	Golden-crowned Sparrow
Check-list order	**Check-list order**
Great-tailed Grackle	Common Grackle
Common Grackle	Great-tailed Grackle

The original article appeared in *B.C. Birding*, December, 1997

Book Review

By David Allinson

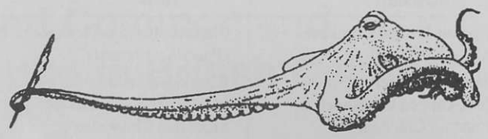
The Butterflies of Canada, by Ross A. Layberry, Peter W. Hall, and J. Donald Lafontaine. University of Toronto Press, 1998. 280 pages, 32 colour plates, maps.

I find it increasingly difficult to limit my interest in natural history solely to birds. One invariably begins to look for other life forms to study, and soon other aspects of nature become of interest. For example, many birders now count themselves as closet butterfly-watchers. The Victoria Natural History Society's own monthly butterfly counts (coordinated by Jeff Gaskin) reveals the increasing interest in enjoying and monitoring butterflies. Threats to our locally sensitive Garry oak habitat have helped to push butterfly conservation into the mainstream. However, I have always bemoaned the fact that a comprehensive Canadian reference or field guide on butterflies was unavailable. Most welcome then is *The Butterflies of Canada*. This brand new publication from the University of Toronto Press is a very thorough compilation of the natural history and identification of Canada's 293 recognized Lepidoptera species.

Aptly described as a "labour of love for the authors", the material is founded in part on 90,000 database records from the Canadian National Insect Collection in Ottawa. With each species description a detailed distribution map is included. I'm hoping the detailed range maps will help me eliminate some identification problems I've experienced with similar species. The descriptions themselves suggest areas for further study by both amateurs and professionals where information is lacking or limited. For example, little is known about the larval stage of a local skipper species, the Propertius Duskywing, which relies on the threatened Garry oak as a foodplant. My only quibble here is that some of the descriptions are limited for some species and more detailed for others. However, this is understandable considering both the scope of the book, and the lack of available knowledge for some species. Introductory chapters include information on butterfly conservation, gardening, distribution, observation, as well as their taxonomy and systematics. A handy checklist in the appendix will help track one's sightings.

However, the best part of the book for me lies in its excellent colour plates. Twenty plates are dedicated to the different families, one for immature stages, and ten more for regional or habitat types. The production quality of John T. Fowler's photo plates brings the sheer beauty and diversity of Canadian butterflies to life. For example, the Hesperiidae (skippers) side-by-side on three plates reveals both their frustrating similarities as well as their subtle structural differences. Finally, local naturalists will recognize the names of Crispin Guppy, Jon Shepard, and Rob Cannings among the list of acknowledgments of regional experts. *The Butterflies of Canada* is at once a field guide, a butterfly life history reference, a coffee table book, a source for encouraging further study, and perhaps a benchmark for other future natural history publications. Both casual and serious naturalists will enjoy this book as an addition to their ever-growing libraries.

Pacific Octopus



By Pamela Thuringer

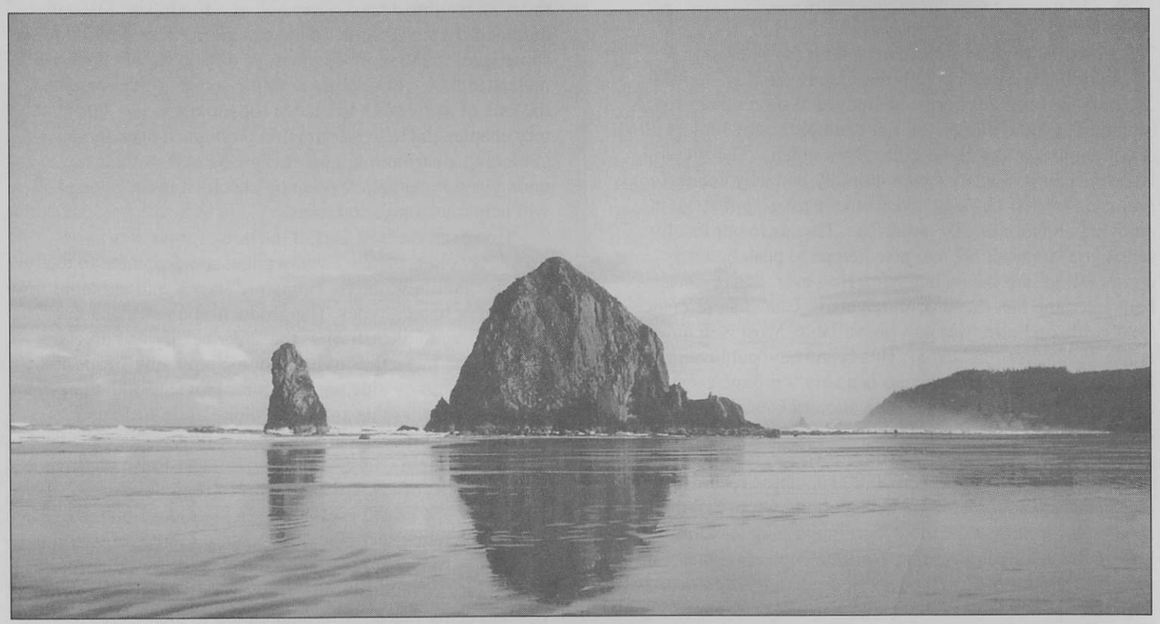
It's hard to imagine that rugged, breathtaking shorelines, "characterized" by jutting bedrock and expansive sand beaches as beautiful and stunning as the west coast of British Columbia exist — but they do — on the Oregon Coast. I had occasion to spend several weekends in the north west corner of the state recently and in doing so became familiar with Cannon Beach and its associated naturalist attraction, Haystack Rock.

Towering 235 ft above the beach, the rocky reefs of Haystack Rock and the surrounding "Needles" provide habitat for an abundance of intertidal life. Consistent with coastal B.C., the upwelling of cold nutrient filled offshore waters contribute directly to the rich algal and invertebrate components of the intertidal. Many of the same species of red, brown and green algae found in our nearshore coastal waters were evident clinging to the hard substrate of the tide pounded pinnacles. Numerous invertebrates, typical of high exposure shorelines, provided thick carpets of life from the lowest exposed elevations to the highest splash zone. Large Acorn (some with a basal diameter of 10 cm) and goose neck barnacles along with California mussels (15-20 cm length) occupied every rock face and crevasse touched by the powerful ebb and flow of the saltwater; with the dense beds of mussels providing the plentiful orche sea star with a seemly endless source of food.

Complimenting the magnificent presence of life in the intertidal region of Haystack rock are the colonies of nesting seabirds high above. Tufted puffins, Pigeon Guillemots and Pelagic Cormorants all occupy different nesting habitats on the rock during the spring and summer months. Having never seen one of the former seabirds in their natural habitat, I was fortunate to observe several tufted puffins flying overhead from their nests on the grassy northeast slope of the rock. Due to the small size of their wings relative to their weight, tufted puffins choose to nest on the windward sides of coastal cliffs and therefore it is not always possible to actually catch a glimpse of one from the beach.

While I was immersed in the beauty of the Oregon coastline, I was also reminded that accessibility resulting from the onset of low daytime tides, brings with it the risk of lost perspective. Amidst the joy of experiencing west coast marine life, we must all remember to both admire and respect what we are most fortunate to behold.

PAMELA THURINGER *is a marine biologist working with a local environmental consulting firm.*



Haystack Rock, Cannon Beach, Oregon. *Photo:* Pam Thuringer

CALENDAR OF EVENTS

REMINDER: most of the regular meetings of the VNHS are not held during the summer months. The Natural History Presentations are now finished but will continue again in September. **REGULAR MEETINGS** are generally held on the following days. **Board of Directors:** the first Tuesday of each month; **Natural History Presentations** (formally known as the General Members Meeting): the second Tuesday of each month; **Botany Night:** the third Tuesday of each month **Parks and Conservation Committee Meeting:** the third Wednesday of each month; **Birders' Night:** the fourth Wednesday of each month; **Marine Night**: the last Monday of each month. Locations are given in the calendar listings. Telephone the VNHS Events Tape at 479-2054 for further information and updates.

JULY EVENTS

Saturday and Sunday, July 11 and 12

Hurricane Ridge

This trip, a VNHS tradition, is timed to catch the peak of the alpine wildflowers on Hurricane Ridge in Washington's Olympic National Park. Bird from the ferry, and look for high-elevation species in the mountains. There are facilities in the park, but a lunch and something to drink is suggested. Meet at the Black Ball Ferry terminal in the Inner Harbour at 6:00 a.m. for the 6:15 sailing of the M. V. Coho. Ferry cost is $13.50 US (about $20.00 CDN) return, and it is a good idea to have some ID with you. Cost of the charter bus to the ridge is about $15.00. We'll return on the 5:15 p.m. sailing. **Darren** and **Claudia Copley** are leading on Saturday, and on Sunday it's **Barbara Begg** and **Carrina Maslovat**. These trips always fill, so reserve your spot by calling The Field-Naturalist at 388-4174. *VNHS members will be given priority.*

Saturday, July 18

Freshwater Adventures

Join naturalist **Clint Abbott** of the Freshwater Ecocentre in Duncan for an exploration of life in and around fresh water. Insects in their various stages, birds such as Wood Ducks and Green Herons, and amphibians will all be on the agenda for the day. The Ecocentre will also be open if you want to extend your outing. It's a good opportunity to bring a picnic lunch. Meet at the Helmcken Park and Ride at 9:15 a.m.,or at the Freshwater Ecocentre at 10:00 a.m. Turn east off the Trans-Canada Highway at Trunk Road in Duncan (Chevron station) and follow blue signs to the Ecocentre. Info: 250-746-6722.

Sunday, July 19

Birding Mandarte and Sidney Islands

We'll travel by chartered boat to the large seabird nesting colony on Mandarte Island. Gulls, Pigeon Guillemots, and three species of cormorants will all be seen there, and there is a slim chance of seeing one of the few Tufted Puffins that hang on in these waters. The boat drops us at Sidney Island, to take in the first southbound shorebirds. We can return on any scheduled Sidney Island Ferry sailing. Bring a lunch and something to drink. Water on Sidney Island is safe but not special. Meet at the ferry dock at the foot of Beacon Avenue in Sidney by 8:00 a.m. sharp. There is easy parking at Second and Bevan Cost is $10.00 per person *plus* $4.50 for the return ferry from Sidney Island. Space on the boat is limited, so please reserve your place by calling The Field-Naturalist at 388-4174. *Priority to VNHS members.*

Saturday, July 25

A Summer Serpent Saturday

Gowlland Tod Provincial Park has become known as a good spot for reptiles. Join graduate student **Lynn Norman** for a herpetological hunt. There is a good chance of seeing native Northern Alligator Lizards, introduced European Wall Lizards, and at least one of our three species of garter snakes. The trip will last about two hours and involves a short hike. Meet at 9:30 a.m. at the trail entrance, on Wallace Drive just south of Benvenuto in Brentwood Bay.

AUGUST EVENTS

Saturday, August 8

Life's a Beach

RBCM marine biologist **Phil Lambert** leads this exploration at low tide in Bamberton Provincial Park on Saanich Inlet. Using a beach seine, he'll bring an amazing assortment of marine life in close for a good look, and talk about their natural history. Meet at Helmcken Park and Ride at 10:30 a.m., or 11:00 a.m. at the change rooms in the park — north end of the Malahat. The program takes about 2 hrs.

Sunday, August 9

Birding around Mandarte Island and on Sidney Island

See July 19 entry for details. Leader **Bruce Whittington**.

Sunday, August 16

Iona Island Shorebird Migration

Venture with **David Allinson** to Iona Island near the Vancouver International Airport for the southward shorebird migration spectacle. Iona Island's bird checklist stands at a remarkable total of 299 with a whopping 49 shorebird species. Some of the rarities recorded include Snowy Plover, Red-necked Stint, Little Stint, Curlew Sandpiper, and a very famous Spoon-billed Sandpiper in 1978. Western and Least Sandpipers should also be present in good numbers as the tide rises throughout the morning. Other highlights should be Yellow-headed Blackbird, Ruddy Duck, and Peregrine Falcon. In particular, we will tour the scenic (!) sewage treatment plant ponds as well as sections of the GVRD park itself located at the mouth of the Fraser River. This is a full-day trip, and we will be catching the 6:00 a.m. ferry to Vancouver. Car-pooling should keep our expenses under $40 round-trip. Contact David Allinson (***evenings only***) at 478-0493 for more details and to register.

Saturday, August 22

Birding Cowichan Bay with Derrick Marven

The shorebirds should be on the move,and Cowichan Bay is one of the better spots on southern Vancouver Island. This is also an opportunity to check on the breeding success of the local population of threatened Purple Martins. Meet at the Helmcken Park and Ride at 7:45 a.m., or the Cowichan Bay Dock Road at 8:30 a.m.

The Victoria NATURALIST

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