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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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COVER PHOTO: *Efferia benedictii*, a very common species of Robber Fly (Family Asilidae) found in the Thompson Okanagan region. Robber flies can be identified by the fact that their head is “all eyes” – perfect for their predatory lifestyle. If you participate in next year’s Meadowlark Festival (p. 16) perhaps you’ll see one. *Photo*: Darren Copley

If you’ve renewed or become a new member in the last little while, and you have email, you have experienced the Society’s latest innovation – paperless receipts. This is only a small step in lessening our ecological footprint (how’s that for a pun!), but every choice makes a difference. Between that and purchasing your membership online via credit card, a few more trees are left standing.

Since I have been involved with the magazine there has been a request to receive *The Naturalist* via email to save additional trees. At the time, this request generated discussion but little action. It isn’t an impossibility, it just requires a shift in the way we do things “round ‘ere”. I’ve looked at other online publications and there are advantages, for example the opportunity to “publish” images in colour without paying the cost. And speaking of cost – the portion of dues used for printing and mailing the magazine could be dedicated to conservation initiatives.

There are also disadvantages. Not everyone has email, or wants to be sent large files, or even attachments. Perhaps if we moved to an online format, interest in the magazine and the Society in general would wane and there will be one less opportunity for nature lovers to indulge their passion.

In a recent conversation with a septuagenarian, I was told that paper communication was fast becoming a thing of the past and anything we are interested in could be “googled”. His words. Is this a sign that things really are shifting? Don’t hesitate to call or email me with your thoughts and suggestions on this topic.

Claudia

Erratum: In the last issue a candystick plant (*Allotropia virgata*) was incorrectly labeled “orchid” (p.17), when it is actually a member of the heather family (Ericaceae). It is also one of those bizarre mycoheterotrophs that Bryce Kendrick taught us about in his article in Volume 63 Issue 4 of *The Victoria Naturalist* (Jan/Feb 2007): a plant without chlorophyll that instead derives the sugar and nutrients it needs from the nearby fungi in association with conifers.

Become a Pollination Canada Partner – Canada’s Largest Volunteer Study of Pollinating Insects!

By Valérie Girard, Communications Coordinator for Seeds of Diversity Canada

Editors’ Note: Your board has agreed that the VNHS should be a part of this important program, so we are now a participating organization. Observation information is available on their website: www.pollinationcanada.ca.

Did you know that 70% of our food crops need insects for pollination? Did you know that most wild plants, and small animals that eat seeds, could not survive without them? Not only bees and butterflies; there are more than 1,000 species of pollinating insects in Canada! Unfortunately, these beneficial insects are under pressure from loss of habitat, loss of food sources, disease, and pesticides. As insect populations are threatened, so are the fruit and vegetable produce, and the wild ecosystems that depend on these pollinators.

Pollinators need your help.

A new “citizen science” program now allows the Canadian public to participate in a nationwide survey of pollinators. ***We are inviting you, as part of a small group of selected organisations, to join us to deliver this monitoring program to the public.*** This is an ideal way to educate and engage your members and visitors in a wide variety of settings (anywhere that wild or cultivated flowers grow), and to make a difference.

The Pollination Canada Program

Quite simply, without pollinators, our world would look entirely different and would not be able support the number of people that it currently does. Alarming, there is a widespread lack of appreciation and knowledge about native bee species and other pollinators.

The Pollination Canada program educates people about the important role of pollinating insects, and the need to conserve their habitats. We also provide information and tools for educators, who can conduct programs to groups of various ages and interests.

The heart of the program is actual **monitoring** of insect populations and diversity. By observing pollinators in gardens, local parks, along country roads, basically anywhere flowers are growing, and then sending in these observations, Pollination Canada participants help scientists to better understand the crucial relationships between pollinators, ecosystems, plant diversity, and human activity. This information is needed now, so that steps can be taken to preserve pollinator populations.

All of our training material, including the Observer’s Kit, is easily downloadable from our website at www.pollinationcanada.ca.



Become a Pollination Canada Partner!

By taking the pollination protection challenge and becoming a Pollination Canada Partner, your organization will become part of a network of educational, agricultural, and environmental institutions across Canada who lead the way in pollinator education and conservation.

As a Pollination Canada Partner, you will:

- Receive free program and training materials for your staff, volunteers, members, and visitors;
- Receive free educational materials for you to copy and use;
- Receive a subscription to our Pollination Canada e-newsletter;
- Be listed on our web site as a Pollination Canada Partner, and;
- Be entitled to use the Pollination Canada Partner name and logo on your promotional and fundraising materials, and partner lists.

We are asking you to:

- Offer Pollination Canada promotional brochures to interested members and visitors;
- Tell your staff, volunteers, and members about the program and how to learn more;
- Help interested people to access Pollination Canada training materials and forms;
- Integrate pollinator education into your programs, where possible and practical, and;
- Encourage your staff, volunteers, members, and visitors to participate in the Pollination Canada Monitoring Program.

Winner of the 2007 Victoria Natural History Society Science Fair Award

By Harvey Williams

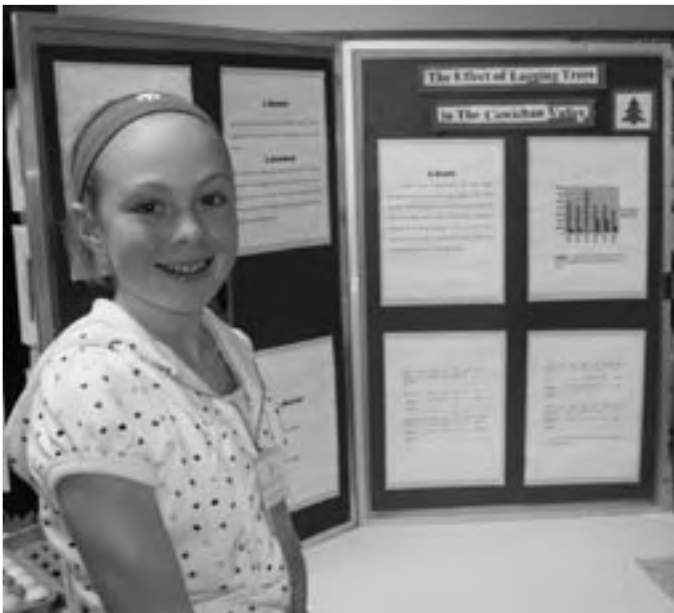
Charlotte Wilson, a Grade 7 student at Mt. Prevost Middle School in Duncan, won the VNHS award this past April at the 45th Annual Vancouver Island Regional Science Fair. Her project was “The Effect of Logging Trees in the Cowichan Valley”. She compared the number of windfalls in strips of standing trees left along the highway with clearcuts behind them with similar strips of standing trees that were not backed by clearcuts. Needless to say, the results were dramatic. The number of downed trees with clearcuts behind them far exceeded those backed by standing trees.

This award, created by the former VNHS Green Spaces Project, is given out annually. The theme is “Conservation and Sustainability of the Natural Environment”. Topics include: human impacts on the natural environment such as biodiversity (species and ecosystem diversity), loss of natural habitat, pollution, climate change; and how people’s attitudes and behaviours affect the natural environment, and effective ways to change attitudes and behaviours that affect the natural environment. There are two award categories:

Senior (Grades 10-12) – one award of \$200 to the student and one award of \$200 to the sponsoring teacher to be used in support of conservation education.

Junior (Grades 8-9) – one award of \$150 to the student and one award of \$150 to the sponsoring teacher to be used in support of conservation education.

For more information check out the link: <http://web.uvic.ca/%7Evirsf/>



Charlotte Wilson. Photo provided by author

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Consuming Nature

By Clare Aries

Perspective is everything

Our view of the natural world reveals as much about ourselves as it does nature. At one time, human societies could not separate themselves from the vital connection they had with the natural world; they relied on nature for life. Over time, this knowledge has been distorted. Present-day western society seems to view natural resources primarily as economic opportunity, rather than as a provider of vital resources (such as water, food, and shelter). Consumerism is the dominant national pastime, and urban areas specialise in promoting this trend. Victoria is no exception.

The War on Nature

When the World Wildlife Fund asked art historian Kenneth Clark to write a book on animals in art, it did not seem to him at the time to constitute a subject. Yet as he weaved the threads of western culture together, he saw stories in the images that spoke of many relationships man had, and still has, with nature. Sacred and symbolic nature, harmony of

humans and nature, fear of nature, the art of observing nature, the beauty and energy of nature, the sacrifice and destruction of nature. Clark recognised that the industrial revolution was responsible for launching the largest war humanity has waged in the 20th century: industrial progress versus the natural world. The pace at which we now extract resources, and the number of people we extract resources for, leaves the natural environment with little time to regain its balance.

Prosperity Breeds Apathy

We are extremely privileged in Victoria to have the freedom to make a variety of lifestyle choices. We are affluent and well educated compared with many human societies around the globe. However, despite our fortune and knowledge, we increasingly show a disconnection between excess of lifestyle, and destruction of the natural environment. The diversity of life in our region has diminished, biological communities are unravelling, and biogeochemical cycles are out of balance. Nature in Victoria is fragmented at best, and shrinking with our demand for increasing prosperity. It seems that we no longer appreciate the value of nature's services beyond the perception of them representing a set of commodities.

Victoria Has a Global Footprint

The geographical range of a common greater Victorian is global: we claw our resources from some of the most biologically diverse ecosystems of British Columbia, the rest of Canada, industrialised China, Japan, USA, Mexico, Australia,



Photo: Clare Aries

Europe, etc. Our region on the south Island is growing rapidly. People are flocking here from all over the world. We are consuming more of the planet's resources than ever before, and for what? Plastic bags, tissues, disposable stir sticks, polystyrene coffee cups, junk mail (more than half the items we consume are non-vital luxury products). I realize we cannot stop Victoria from growing, but we can promote the wonder of life without packaging it in plastic for purchase, needing a Hummer in order to explore it, or draining the grid to see it.

Boycot Mercenary Industries

Many of us at some point in time have spontaneously purchased something, either because of marketing ploys, or to gain economic status, even though we didn't need it. Unfortunately, in order to make profit, industrial progress depends on participants willing to endlessly consume. The more products we invest in, the greater the demand on our environment to provide raw materials. How and what we consume reveals that we are making choices that do not consider nature, we find ourselves willingly participating in degrading habitat and driving loss of species. We need to question retailers and manufacturers about where the goods we buy come from. Ask whether these products really benefit us or the environment, and most of all, we need to ask ourselves: Do I really need this product?

Save Money; Invest in Life

What do we really need to live? For the past two years, my partner and I had been living in a five hundred square foot cabin without electricity or running water. The experience brought to my attention how excessive and wasteful the current western lifestyle can be. We traded money for time, scaling down our possessions, and only investing in the necessities of life. We used our time to observe our natural surroundings and it enabled us to discover far more exciting dramas, and far more humorous sketches than a TV could ever provide (it was the ultimate reality show). The secret lives of bald eagles, river otters, seabirds, nudibranchs, ospreys, racoons, red squirrels, and many others, unfolded in our presence. Each one adopted us into their community, and we gratefully joined.

Energy

We soon found no hardship living without electrical appliances, a fridge, oven, hairdryer, iron, coffee grinder, microwave, vacuum cleaner, printer, scanner, etc., etc.

The 500 ft² house was quicker to clean, cheaper to heat, and easier to maintain. I'm not proposing we all need to be this extreme, but I'm not dissuading it either. For certain, we can all scale-down a little; after all, as economist E.F. Schumacher states, "Small is beautiful". And I have to admit, that as much as I loved the extra-long sleeping hours of the winter, some electric lights would have been nice just to see whether I was cutting off the end of a carrot, or the end of my finger.

Water

The next resource we will go to war over is so precious when it is clean, yet we squander it daily. We could have piped water to our cabin, but we chose to feel the weight of every drop as we carried it down 96 steps in the sun, rain, sleet, and snow. Though during the winter months it was easy to collect rainwater for drinking, cooking, and cleaning, and there is little doubt that washing in rainwater beats the feel of chlorine. For perspective, if we each saved two litres of water a day, we could save 365 million litres of water a year. I have seen sprinklers throughout this region watering lawns when it is raining. I see many gardens that do not nurture native plants already adapted to our climate, or grow vegetables for food (Victoria has no more than three days' worth of food security in the event of an earthquake!). If Tofino can run out of water, Victoria can also.

Waste

When you trade money for time you waste nothing. Food was never wasted; peelings and other vegetable matter were recycled on the compost heap. We were forced to consider the amount of waste we produced, and where it would end up, as there are only so many times a day you wish to walk up and down 96 steps (at least it saved on a membership to the gym). We had to carry any waste back up the stairs, which helped as a deterrent in creating it: we reused jars, boxes, bottles, and bags. The most satisfying method of waste disposal was in composting our own! Build your own bog with the 'Humanure Handbook', its safe to use on the garden after just two years.

This productive method of human waste disposal would relieve the pressure on sewage systems in greater Victoria. The act is inexpensive, and ecologically responsible. It may even make you think twice about what you put into your body!

There's no doubt that we love nature, we watch it with delight, we study its habits with ever-increasing curiosity; but we also destroy it out of greed. We can greatly reduce energy consumption, habitat loss, and contamination simply by choosing to reduce the amount we consume. When we do consume we need to invest in companies closer to home who value the health of their local community environment. To be clear, it is not a question of giving up food, warmth, or the occasional beer on your deck. Rather, it is about altering our perspective of how we see nature. We need to understand that nature seeks a balance; we cannot continue to take from nature with out giving back. Given the chance nature will provide food, clean water and soil, and foster biodiversity far more economically and more creatively than technology. After all, it has been maintaining ecosystem integrity well before humans were a twinkle in Mother Nature's eye.

Tidepool Naturalists – Learn Your Fishes

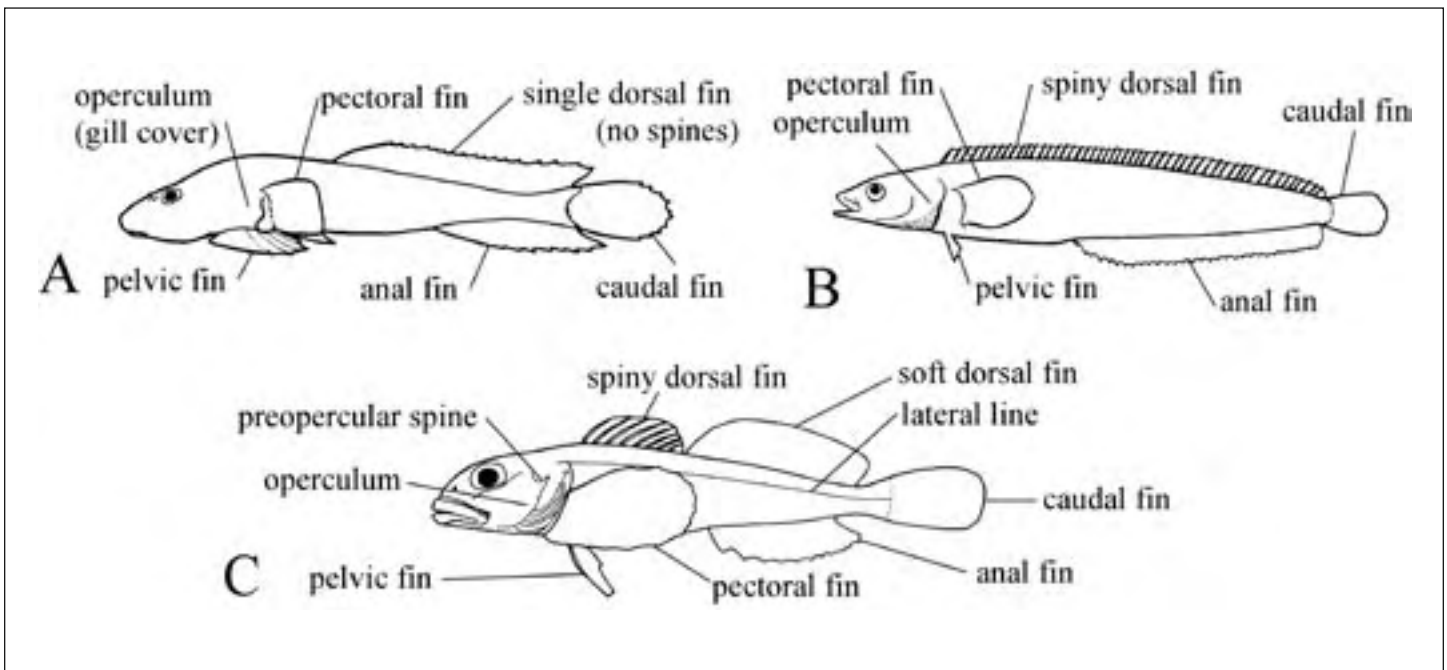
By Gavin Hanke, Curator of Vertebrate Zoology, Royal BC Museum

One of the first things I did after arriving in Victoria was to go down the seashore and look through tidepools. I can spend hours on a sunny day watching tidepool life (tides permitting). As a child in England, tidepools were a source of amusement during holidays, and also along the Oregon coast when I was in Grade 6. Imagine, a childhood mostly spent on the Canadian prairies, and then getting to explore the seashore. What a treat.

Even during my graduate school years, I visited family in Victoria and spent hours after dark at low tide collecting fishes off Willows Beach for the research collection at the University of Manitoba. Now as the Curator of Vertebrate Zoology at the Royal BC Museum, I can hike along the coastline of Vancouver Island, collect fishes from tidepools and call it ‘a day at the office’. However, it troubles me to continually hear people say that they have seen *a fish* in a tidepool, and they leave its identity in such vague terms. Fishes are not that hard to identify, and there are many species to discover in BC’s tidepools. So I thought that an article describing some common species would be useful, and who knows, perhaps it will get a few more folks diving deeper to discover the world beneath the waves.

Fish anatomy is diverse and strange compared to other vertebrates, but fortunately, most of the fish families that we find in tidepools are easily recognizable. Fish-watchers only need to have a basic knowledge of fish structure to recognize fish families, and only slightly more information to identify most species. This basic understanding of fish structure helps speed species identification, just as knowledge of bird silhouettes and bird calls can help identify diminutive feathered theropods. Some species-level differences require detailed knowledge of anatomy and are based on picky (and subtle?) details that anyone can master, but commonly these require more reference literature and access to a dissecting microscope (or at least a good hand lens and a small fish tank).

The best field guide to tidepool fishes in BC is Lamb and Edgell’s (1986) *Coastal Fishes of the Pacific Northwest*. The book is packed with information and colour photographs. A newer guide (Lamb and Handby 2005) is far less portable, and is geared more to marine algae and invertebrates, but the book does contain some nice new fish photographs.



Line drawings of a representative (A) **clingfish**, (B) **prickleback**, and (C) a **sculpin** with a variety of structures labelled to help with species identifications; line drawings after Nelson 2006.

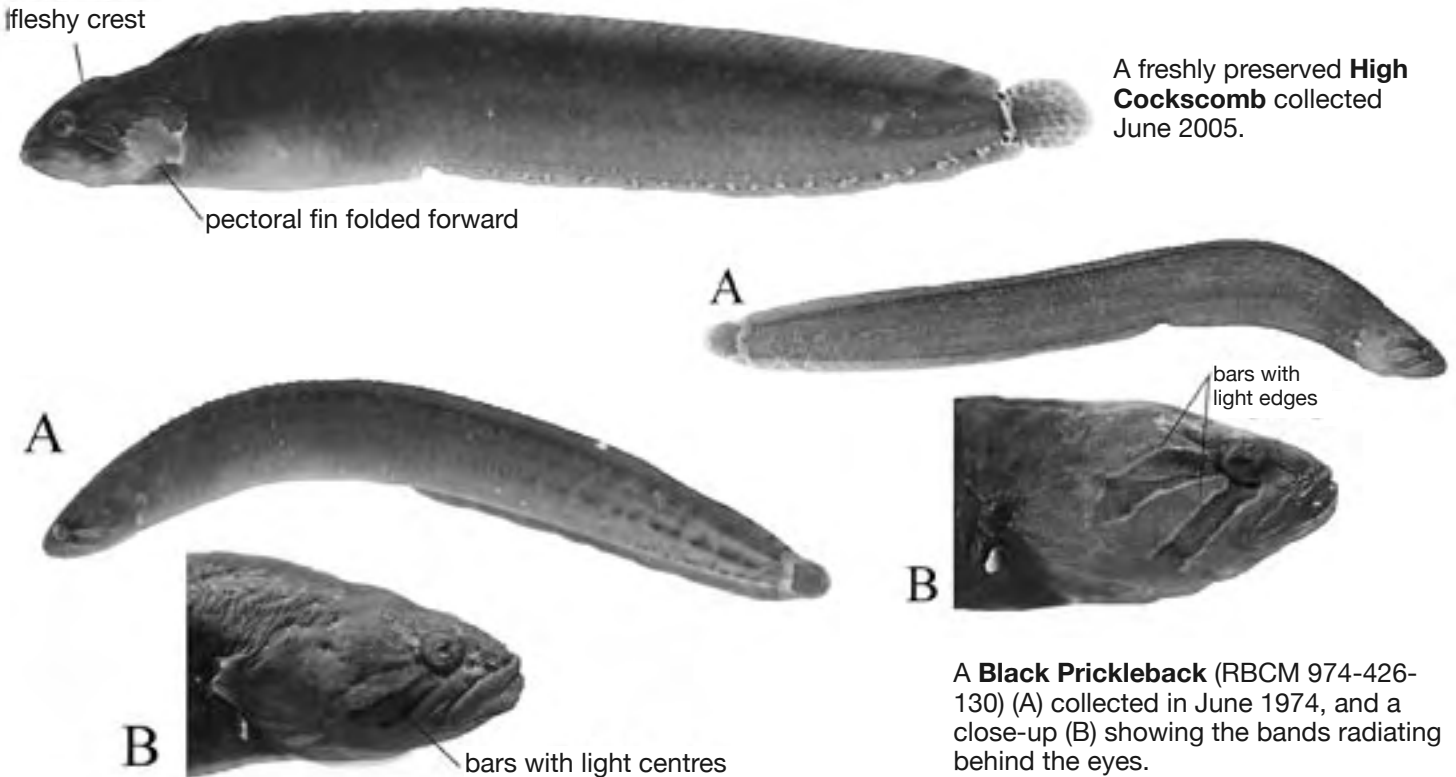
Pricklebacks (Stichaeidae)

Pricklebacks are superficially eel-like in shape, but unlike eels, pricklebacks have fin-spines, and their dorsal fin-spines are their namesake feature; the number of dorsal fin spines varies with species. Pricklebacks can be distinguished from gunnells (detailed later), which they resemble in overall shape, by the fact that the anal fin of a prickleback extends at least half the length of the body. In gunnells, this fin usually is less than half the body length. Pricklebacks are common in cavities under rocks exposed at low tide, and in tidepools with rocky bottoms or with shell and barnacle debris. Both pricklebacks and gunnells are extremely slimy and hard to grab by hand, even when out of water. Even small rocks may shelter a number of these fishes as long as there is space beneath, and enough moisture to allow stranded fishes to stay cool and breathe. British Columbia tidepools commonly have the following pricklebacks:

High Cockscomb (*Anoplarchus purpurescens*): This species is distinguished by the shape of the fleshy crest on the head, its 36-40 anal fin spines, and its tail, which is distinct from the trailing ends of the dorsal and anal fins. High Cockscombs usually are dark brown, purple-brown, to grey, and may have a mottled pattern; breeding males have orange in the dorsal fin, but individuals with an entirely orange body are known. These slippery fish can grow to about 20 cm, and can produce antifreeze in the winter to survive while the tide is out.

Rock Prickleback (*Xiphister mucosus*): Rock Pricklebacks lack the fleshy crest of the High Cockscomb, and their body is mottled with black and olive green-yellow or greenish-grey colouration. Their heads are robust, the body tapers to a compressed tail base, and the dorsal fin begins fairly close behind the gill openings. Rock Pricklebacks have wide dark bars with lighter centres radiating from the eye over the cheek/gill cover. The pectoral fins are tiny, and Rock Pricklebacks lack anal fin-spines and pelvic fins. Rock Pricklebacks and the similar looking Black Prickleback are common in weedy shallows and under rocks exposed at low tide. The largest Rock Prickleback I have caught was in knee-deep water and only its head was exposed to betray its position. Rock Pricklebacks reach 58 cm in length.

Black Prickleback (*Xiphister atropurpureus*): The Black Prickleback looks much like the Rock Prickleback, except the bands that radiate away from its eyes have distinct light margins, and the dorsal fin begins well behind the gill openings. They range from blackish to brown and even a red-brown colour depending on diet. The tail of the Black Prickleback also has a distinct vertical pale to white bar at its base. Black Pricklebacks reach 30 cm in total length and can be found with Rock Pricklebacks under the same rocky shelter at low tide.



A freshly preserved **High Cockscomb** collected June 2005.

A **Black Prickleback** (RBCM 974-426-130) (A) collected in June 1974, and a close-up (B) showing the bands radiating behind the eyes.

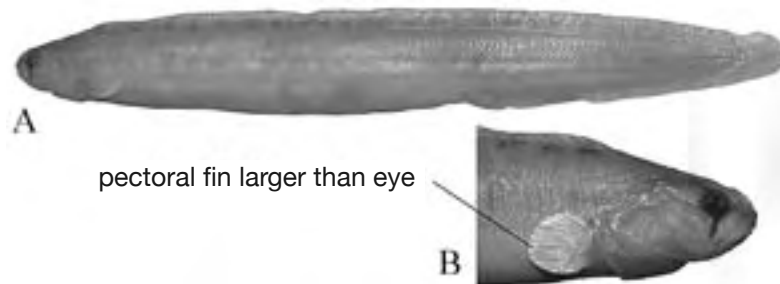
A freshly preserved **Rock Prickleback** collected June 2005 (A), and a close-up of RBCM 978-00168-005 (B), collected June 1978, to show the bands radiating behind the eyes.

Photos: Gavin Hanke

Gunnels (Pholidae)

As mentioned above, gunnels are eel-like in shape, and the anal fin extends less than half the length of a gunnel's body. Gunnels also have fin-spines in the dorsal as well as the anal fin, a feature that some pricklebacks lack. The colour of gunnels is directly related to their diet of seaweed or invertebrate prey. Like pricklebacks, gunnels are very tough to grasp with bare hands because of their writhing behaviour and slimy skin. Three common gunnels in British Columbia's tidepools and rocky beaches include:

Penpoint Gunnel (*Apodichthys flavidus*): Penpoint Gunnels have a fine dark bar extending back from the eye, and may have fine light or dark spots along the mid-flank. They also have a large anal fin spine that is V-shaped in cross section, and extends beyond the rays of the anal fin. The pectoral fin of the Penpoint Gunnel is far larger than the eye and well over twice the size of that of a similarly sized Rockweed Gunnel, and pelvic fins are absent. Their colouration varies depending on depth and light, with green individuals in shallow water and brown to red ones in deeper water. In summer they inhabit areas with dense growth of marine algae, and retreat to rocky habitat in winter as algae dies. Penpoint Gunnels reach 46 cm.



pectoral fin larger than eye

A **Penpoint Gunnel** (A) caught in July 1978 (RBCM 978-236-12), and (B) a close up photo of a second specimen showing the size of the pectoral fin relative to the eye.

Rockweed Gunnel (*Apodichthys fucorum*): The Rockweed Gunnel has low dorsal and anal fins, and the first two anal fin spines are stout. The pectoral fins are minute, almost the same size or smaller than the eye; pelvic fins are absent. The body is uniformly coloured and the exact colour (green, yellow, or red) depends on what the fish happens to eat. Look for Rockweed Gunnels around rocks that are covered with marine algae and under large pieces of algae on the beach at low tide. Rockweed Gunnels reach 23 cm.

Crescent Gunnel (*Pholis laeta*): Crescent Gunnels are distinctive with their white dorsal fin spots edged in black. The rest of the body is olive to orange. They also have tiny stubby pelvic fins below the gills. Crescent Gunnels are found around cover, from marine algae to trash (cans, bottles), and I have watched them climb eelgrass leaves like a snake. On open sandy beaches, Crescent Gunnels may be found where there is sparse algae growth or shells, which provide cover. They reach 25 cm.



tiny pectoral fin

A **Rockweed Gunnel** (A) caught in May 1981 (RBCM 986-123-11), and (B) a close up photo of a specimen from Gibraltar Island, August 1973 (RBCM 973-128-18) showing the tiny pectoral fin.



pectoral fin

tiny pectoral fin

A freshly preserved **Crescent Gunnel** from the north coast, June 2005.

Snailfishes (Liparidae)

Most snailfishes inhabit deep water, but there are a few species that are found in shallow waters and find their way into tidepools low in the intertidal zone. Snailfishes, like gobies and clingfish, have a highly modified pelvic girdle. In most snailfishes, the pelvic girdle forms an adhesive disk, which allows the fish to hold position as waves wash against the shoreline.

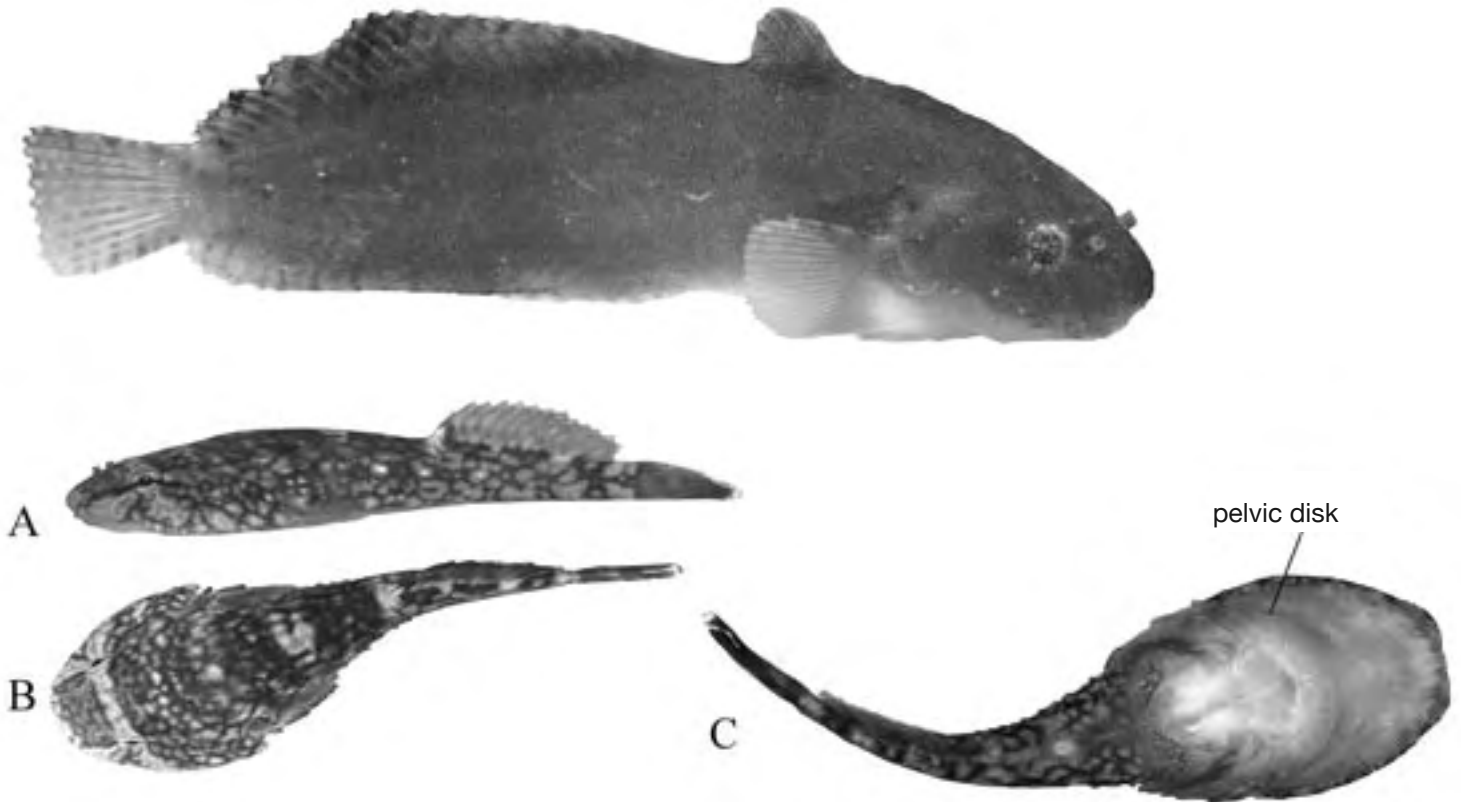
Tidepool Snailfish (*Liparis florae*): Tidepool Snailfish can be found low in the intertidal zone, and every one I have collected has been attached to kelp (e.g., *Laminaria* sp.) or other broad-bladed marine algae, but they also attach to the underside of rocks. They are superficially tadpole-shaped, lack a lateral line on the body, and range in colour from tan, olive, red-brown, purplish, through bright yellow. They rest with the tail curled around toward the head, but are quick to release and swim away if disturbed. Snailfishes have very delicate skin so handle them only if absolutely necessary.

A photograph of a live **Tidepool Snailfish** collected from the underside of a blade of kelp, June 2005.

Clingfish (Gobiesocidae)

There are two species of clingfish in British Columbia, one is slender and has small adhesive disk, and the other is broad, depressed in shape and has an adhesive disk almost as wide as the head. Clingfishes attach to kelp, other broad-bladed macroalgae (sea-weed), and to rocks, and can hold position as waves crash on shore. The pelvic disks of snailfish and clingfish evolved independently, convergently, and are, in my opinion, among the most amazing fin modifications (as interesting as the adhesive organ of remoras and the lures used by anglerfishes, which are formed from their spiny dorsal fin, as well as bird and bat wings, and our arms, which evolved from the pectoral fins of lobe-finned fishes).

Northern Clingfish (*Gobiesox maeandricus*): The head of the Northern Clingfish is broad and flattened, and almost looks like it was made specifically to accommodate the pelvic disk. Their colouration varies from dark olive to grey green, and even to pink, red-brown and yellow. The lighter background colouration is interrupted by fine darker, net-like markings. The suction power of the pelvic disk is amazing, and you must be careful to slide the fish sideways rather than simply trying to pull the fish off rocks. Look for Northern Clingfish under rocks low in the intertidal zone. They reach 17 cm in total length.



Lateral (A), dorsal (B), and ventral views (C) of a live **Northern Clingfish**, June 2005.

Gobies (Gobiidae)

Most goby species are tropical, but there are three species in British Columbia. Gobies are easily distinguished from other fishes because their fused pelvic fins form a funnel-shaped structure. The fused pelvic fins seem to act as a stand to elevate the fish off the bottom when resting, and can have a weak suction-cup function.

Blackeye Goby (*Rhinogobiops nicholsii*): Blackeye Gobies have variable colouration from a mottled pattern to a more plain, even background tan colour. They also may take on an orange to pink colouration and have some yellow in the fins; the spiny dorsal fin is tipped with black. Blackeye Gobies are not common in tidepools, but the occasional fish may get trapped very low in the intertidal zone as the tide recedes. These aggressive fishes have even been known to display to intruding divers, but it is unlikely that one trapped in a tidepool would show such behaviour. Blackeye Gobies grow to about 15 cm, and are hermaphrodites; young Blackeye Gobies are females and change to males when older and larger.



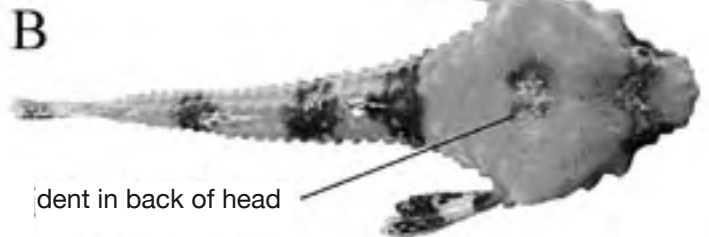
A photograph taken by J. Cosgrove of a live **Blackeye Goby**.

Poachers (Agonidae)

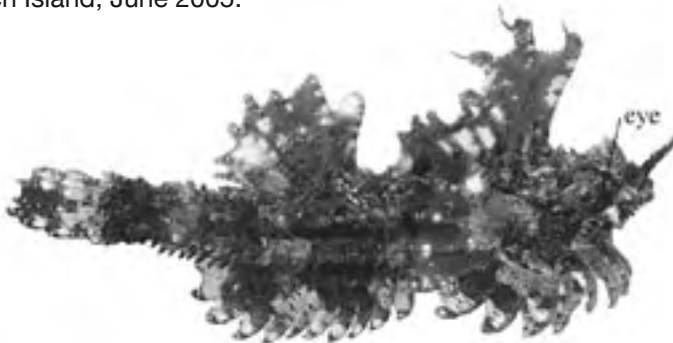
Poachers have body armour consisting of bony scutes. In most species this forms a plate-like skin, whereas the Kelp Poacher looks more like seaweed and its armour is not obvious. Most poachers are inhabitants of subtidal waters, but the two species mentioned here occasionally can be found in tidepools, low in the intertidal zone.

Rockhead (*Bothragonus swani*): Rockheads look more like a chunk of sponge than a fish, and they even have a deep dent behind the head which appears like a large pore (which also is characteristic of many sponges). They range from bright red or orange to tan, and grey-white and are cryptic despite their bright colouration. The fins of a Rockhead are small and instead of swimming, they crawl along the bottom most of the time; they can swim in bursts to escape predators, but are easily caught by hand. Look carefully for them in tidepools with a gravel bottom, and in crevices. The only one that I have caught had to move before I realized it was even present. Trophy Rockheads reach about 9 cm in length.

Kelp Poacher (*Agonomalus mozinoi*): Kelp Poachers look more like something you'd expect from a tropical reef than something from the North Pacific. Their fins are large and leaf-like, and fleshy tabs (cirri) obscure the outline of the body, making this fish look like a piece of seaweed. They range from bright wine-red to orange and yellow, with varying amounts of grey and brown mottling. The two Kelp Poachers I have caught were both hiding in a clump of red algae in a large tidepool very low in the intertidal zone. I kept them in a small aquarium for photography and instead of swimming, they just rolled back and forth like a detached piece of seaweed. Kelp poachers reach about 9 cm.



Lateral (A) and dorsal views (B) of a live **Rockhead** from Trutch Island, June 2005.



One of two **Kelp Poachers** caught by hand in a large tidepool on Trutch Island, June 2005.

Sculpins (Cottidae)

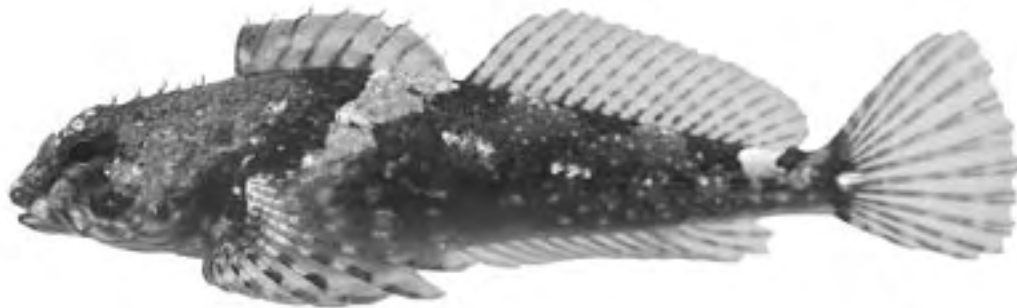
Our sculpins range from the large Cabezon (*Scorpaenichthys marmoratus*) to tiny forms inhabiting tidepools. Most sculpins, including freshwater species, have the classic tadpole-like shape, with a large bulbous head, tapering body, and enlarged fan-like pectoral fins. Most sculpins have large mouths, spines on their head and on their gill covers, and are voracious predators.

Tidepool Sculpins (*Oligocottus maculosus*): Tidepool Sculpins are the most common fish in British Columbia's tidepools. They range throughout the intertidal zone, and are tolerant of a wide range of temperatures and salinity; hundreds can be found in larger pools. These sculpins also get stranded on beaches under marine algae as the tide recedes, and can breathe air for several hours as long as they stay moist and cool. Tidepool Sculpins can have a mottled grey, red-brown, to green colouration, and may have prominent pale bands running obliquely down the body. They can grow to 9 cm and are well known for their ability to return to their home territory if moved.

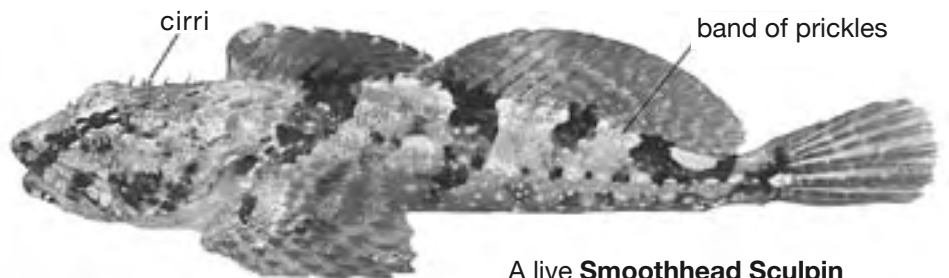
Smoothhead Sculpin (*Artedius lateralis*): This sculpin gets to about 14 cm, and has a band of abrasive prickles down the back reaching to the end of the soft dorsal fin. The head is slightly depressed, and has a series of fine, finger-like cirri.

The back is yellow, olive to brown, with 6 dark saddles and the belly is pale. The lateral line also has a series of embedded scales along its length, and the cheek has a two-pronged spine which is covered by skin. The specimen in this photograph was caught in a large, gravel-bottomed tidepool, low in the intertidal zone.

Pacific Staghorn Sculpin (*Leptocottus armatus*): This sculpin is not likely to be found in tidepools, but they are so commonly seen by beachcombers along sandy beaches, eel-grass beds, and even in river estuaries, that I thought they should be included. Staghorn sculpins grow to about 48 cm, and most of us see them only after we have ventured too close and the fish shoots off towards deeper water. The head is slightly depressed, and the pectoral fins are large and have a series of alternating light and dark bands. The trailing half of the spiny dorsal fin has a dark patch, and otherwise, the fish is finely mottled olive grey-green, to pale tan on the back, to creamy white on the belly. The name Staghorn Sculpin refers to the three-pronged, antler-like preopercular spine on the gill cover. The first Staghorn Sculpin I ever caught accidentally swam into my sandal and I was able to grab it with my toes – but I suggest trying a small seine net or hook and line as a more effective way to catch these fast, nervous fish.



One of many **Tidepool Sculpins** collected along the north coast in June 2005.



A live **Pacific Staghorn Sculpin** collected by using a beach seine, June 2005.

A live **Smoothhead Sculpin** caught on Trutch Island, June 2005.



How to catch and view fishes safely

Most fishes that we see in tidepools are viewed from above because of the very nature of tide pools, but the fish really come to life if viewed from the side, as you would see them in an aquarium. However, no one wants to carry around a glass or acrylic/plexi-glass viewing tank every time they go for a walk. Instead, a really light-weight temporary aquarium can be as simple as a clear plastic bag. Put plenty of water in the bag. Fishes can be enjoyed for a few minutes and then released unharmed.

Some of our coastal fishes are fairly slow and can be caught by hand. Try herding sculpins to the shallow edge of a tidepool, and then cup the fish in your hand. Pricklebacks and gunnels are really tough to catch by hand as they wriggle wildly and are extremely slippery. Pricklebacks and gunnels are best caught with a dipnet. Snailfishes and Northern Clingfish can be gently plucked off kelp or rocks; they should be moved side-to-side or forward and backwards to loosen them from rocks. Don't pull straight away from the rock, you may harm the fish. At the slowest end of the spectrum, the Grunt Sculpin, Kelp Poacher, Pacific Spiny Lumpsucker, and the Rockhead can be caught by hand with ease.

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To catch faster fishes, any simple dipnet from a pet shop will work; I tend to use one hand to herd fishes towards a waiting dipnet rather than flailing around with the dipnet itself. This technique is easy on the tidepool and its inhabitants and also minimizes the risk of the dipnet snagging on rocks and barnacles. I find that a net with a 10-15 cm opening is the best size. Larger nets get cumbersome in small spaces, and fish can easily avoid smaller nets. Try to avoid catching too much gravel and debris in the net because a struggling fish can do damage to itself on barnacle and shell fragments and gravel.

Submersible digital cameras also now are readily available and these provide a high-tech solution to fish viewing. You may be able to buy a simple underwater housing for your own pocket digital camera (you can find underwater cases for many brands of "point and shoot" and SLR digital cameras on the internet). For tidepool photography, any underwater case or camera will work because depth and lighting is not limiting, but if you think that you'd like to do underwater photography while snorkelling or diving, it would be better to do a bit more research into underwater photography and invest in some decent equipment.

Low tides in June can be great for fish-watching. Many of our most interesting tidepool fishes are found in the lowest parts of the intertidal zone. You will only have a short time to search lower-most pools before the ocean spits you back up the shore, but considering that we all are pisces by heritage why not embrace your inner fish, return to the sea, and immerse yourself in tidepool life this summer.

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City Harvest

By Paula Sobie

We knew what we wanted to do: eat more locally, eat more seasonally, and live more sustainably. And with my partner Martin and I both recently completing degrees in environmental education and communication at Royal Roads University, we had a strong predilection for work in that sphere, but we didn't want to do just anything. Since we are parents of a young family, we really wanted work that allowed us to spend as much time as possible with our kids; and after both having outdoor jobs in the past, we thought that being able to work outside again would be ideal. Furthermore, more important than overflowing bank accounts to us is work that we really believe in and in which we feel like we are contributing meaningfully to our community. It was from these aspirations that our business City Harvest began early in 2007.

City Harvest is an urban agriculture business based in Victoria, and our mission is to grow food for the community on urban ground and to educate citizens regarding the importance of a strong local food system for our health and security. For a trade of some of our harvest throughout the year, we acquire urban space (typically from willing homeowners who have yard space to spare), and put in gardens and produce vegetables, which are then sold locally through a variety of means. At this point our farm is made up of plots in 10 yards, yet we are still looking for more space. City Harvest is relying on SPIN (Small Plot Intensive) Farming methodology to guide our practice. SPIN is a great fit for our business because it was developed with the sub-acre farm in mind. While there are several distinguishing characteristics of a SPIN Farming operation, some of the more noteworthy points include:

- Intensive relay cropping practices, wherein a single bed can potentially have several crops grown in a relay throughout a year.
- Application of organic growing methods. We feel that it is our responsibility as growers to maintain the health of our environment. Our aim is to restore, maintain, and enhance ecological harmony and diversity in our community.
- Balancing production between high-value and lower value crops to produce a steady revenue stream.

While this is a new concept for some people, farming in the city makes perfect sense in many ways. Less and less rural land is available for farmers, and the land that is available is extremely expensive to purchase. Furthermore, with urban sprawl, land left for agricultural purposes is getting further away from the population base needing the food. By growing food in the city, we are significantly reducing the amount of fossil fuels used to transport food and it is being produced in very close proximity to the people who will



Photos: Paula Sobie

eat it. We also really like the fact that vegetable gardens in people's yards seem to act as a conversation starter and in this way, the work we are doing builds community in our city. Lastly, we are contributing to the health of the people of Victoria by increasing the supply of fresh foods, and to the health of our environment by utilizing organic methods in our practice.

The response to our business has been incredible for us; there are many people who see their involvement with City Harvest as a great way they can personally address climate change and work towards a more food secure future for Vancouver Island, not to mention eat more locally and healthily. The homeowners participating share in our excitement at watching seeds sprout and take root, and are enjoying seeing their yards grow food to feed people. If you would like to learn more about what we do, please contact me at paula@cityharvest.ca or call City Harvest at 250.370.7471.

VNHS Members Attend Tenth Annual Meadowlark Festival

By David Riedel

Birders from Vancouver Island, the Lower Mainland and other regions flocked to BC's southern interior May 17–21 for the Meadowlark Festival, held annually in the Okanagan and Similkameen valleys. VNHS members Agnes Lynn and I attended several of the 88 events, taking in the flora and fauna (including 112 bird species) in settings of breathtaking beauty.

Organized by the Okanagan Similkameen Conservation Alliance, the Festival is a celebration of the wildlife and the unique mosaic of diverse, rare, and fragile ecosystems in the south Okanagan and lower Similkameen. Four very different types of habitat exist in close proximity: coniferous forests, arid grasslands, wetlands and rocky cliffs. Together, they support one-third of provincially red-listed species in British Columbia.

There were too many highlights for this brief article, but here are a few:

- Guided hikes with traditional knowledge keepers and biologists brought us to nesting sites of Yellow-breasted

Chats on the Penticton Band Locatee Lands, the Osoyoos Reserve and the Okanagan River near its outflow at Osoyoos Lake. We saw the flight displays of four male chats and heard at least two others. Only 51 pairs still breed in the region, due to loss of riparian habitat.

- On another hike in the Lehman Conservation Area (The Land Conservancy) on Anarchist Mountain, we watched and heard Williamson's Sapsuckers at two nesting sites in an old-growth Western Larch forest. Consulting wildlife biologist Les Gyug discussed the behaviour of these rare and fascinating woodpeckers.
- Along the back roads, in Ponderosa Pine forests and on grasslands, all under the hot Okanagan sun, we found: Long-billed Curlew, Black-chinned Hummingbird, Calliope Hummingbird, Lewis's Woodpecker, White-throated Swift, Pygmy Nuthatch, Say's Phoebe, Canyon Wren, Rock Wren, Mountain Bluebird, Western Bluebird, Lark Sparrow, Lazuli Bunting, Cassin's Finch and, of course, Western Meadowlark, amongst many other birds.



Spotted Lake between Osoyoos and Keremeos. *Photo: Claudia Copley*



Red-necked Grebe on Okanagan Lake. *Photo: Agnes Lynn*

- On Okanagan Lake, we watched a pair of Red-necked Grebes nesting ten feet from the shore – in the boat lane-way of the Penticton Marina!
- Agnes also enjoyed a birding van tour to Penticton-area birding hot spots with naturalist Laure Neish, an evening of owling with Chris Charlesworth and a lesson regarding water management issues for Okanagan Lake while enjoying a cruise aboard the *Casabella Princess*. Meanwhile, I observed the latest technology for insect population control in the agricultural sector: better nest boxes, designed to attract species such as Western Bluebird and Tree Swallow and to improve the survival rate of nestlings.

The keynote speaker at this year's fundraising dinner was biologist and author Dick Cannings, who launched his new book, *An Enchantment of Birds: Memories from a Birder's Life*. Cannings, who grew up on the West Bench of Penticton and now lives in Naramata, spoke of the dramatic decline of many grassland species, including the Western Meadowlark, whose numbers have been halved during the last thirty years.

We saw how the desert-like antelope-brush ecosystem (also known as shrub-steppe grasslands) is one of the four most critically endangered ecosystems in Canada. Urban encroachment, agriculture, industry and invasive plants have conspired to leave only 9% of this ecosystem relatively undisturbed.

One of BC's most endangered rivers, the Okanagan, is threatened by channelization, irrigation, urban encroachment and the construction of dams and weirs. The dikes that control the Okanagan River have created land for urban, residential, agricultural and industrial development, but have also eliminated over 90% of the wetlands along the river.

Increasing awareness and the hard work of many professionals and volunteers have resulted in some conservation

success stories in the valleys. Examples are protection of some significant wild areas, the re-flooding of oxbows along the lower Okanagan River and the establishment of many successful bluebird nest box trails.

The large two-legged mammals of the Okanagan-Similkameen (*Homo sapiens*) tend to find suitable habitat in valley bottoms, along shorelines and on grasslands. The way we have done so has caused enormous pressure on the ecology of the region.

We must share these ecosystems with other organisms. We are part of the biosphere, not above it. Our science, technology and economics are ultimately subservient to nature, not its masters. We have ignored this too long, to our own disservice and that of future generations. We cannot exist without the trees, flowers, birds and insects; without them, we would perish.

The wonderful, melodious song of the Western Meadowlark heralds the arrival of spring in the Okanagan and Similkameen valleys. Let us hope that many future generations will be blessed by the music of the grasslands, and let us work toward that aim.

David Riedel has travelled to the Okanagan-Similkameen seven of the last eight years, including five Meadowlark Festivals. For information on wildlife-viewing and hiking in the region, phone Dave at 386-0402, or email riddler1963@hotmail.com

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You Can't Throw Away This Viewing Platform

By Darren Copley

One of my biggest frustrations is the fact that we are now living in a disposable society. One example that I use all of the time is with cordless power tools. Most companies now make it cheaper (or comparable) to buy a new drill and battery pack, than it is to replace the batteries themselves. And of course, there is no option for fixing the batteries. My other big frustration is building things twice, because the usually more expensive, but more durable product was overlooked for the less expensive, usually more polluting option. A good example here is a metal roof versus asphalt shingles. So when I was asked to help on the viewing platform project at Viaduct Flats, it only made sense to me that the materials would last a “lifetime”, with as little impact as possible to the environment after they are in place.

The idea for this structure was made possible when the Victoria Natural History Society received a very generous bequest from the estate of Anne Adamson, a long-standing member of the Society. The board of the VNHS, at our annual brainstorming retreat, decided on how best to use these funds, and one of the projects was the viewing platform (others included the schools project and scholarship increases). I was handed this project because my family comes from a construction background, and apparently this would help with “getting things done”. A local general contractor and VNHS member, Blake Waters, initially helped with getting the platform designed after a site meeting with

all of the parties involved: the Horticultural Centre of the Pacific, Saanich staff, and VNHS board members.

Having the construction connection did help, as my Dad suggested we try to get the Construction Association of Victoria to help out. A meeting was set with then-president Wayne Pye and the group's board and it was decided that they'd take this project on as a “members' project” and oversee the entire thing. Companies involved included: **Harjim Industrial Services Ltd., Pye Construction Ltd., Copley Brothers Construction, HD Form Construction, Associated Formwork Rental, Namdor Reinforcing Steel, West Rock Construction, Accutemp, National Concrete Accessories, Butler Bros. Supplies Ltd., and Independent Concrete Ltd.** The painting (and probably a little birding) was completed by Ed Pellizzon, our painter president. All of the building materials and labour (approximately \$35,000!) were supplied by the companies mentioned at no cost to the VNHS, so the only expenses were for the engineering. The **District of Saanich** provided a \$2,000 grant to help offset these costs.

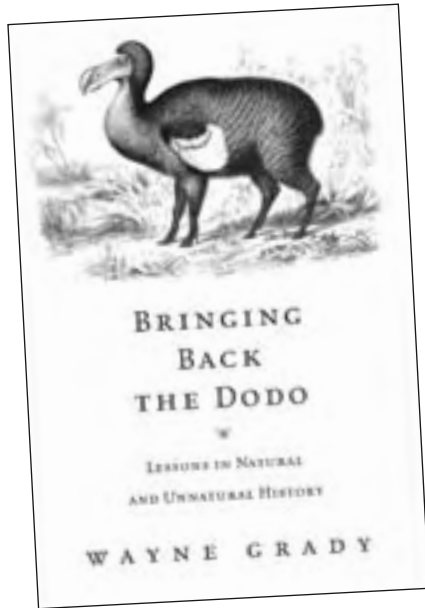
Viaduct Flats is a very special place for viewing wildlife, but it will continue to be under pressure as our population increases. One of the goals of this platform was to ensure that naturalists and photographers do their part to protect this important ecosystem by keeping out of the riparian zones when viewing the wildlife. By working with the

Horticultural Centre of the Pacific and the District of Saanich, the VNHS, as part of the Viaduct Flats Management Committee, has a role in the future of this area. Work is being done to find a water level that maintains suitable habitat for as many different species as possible, remembering that there is more out there than just birds. A balance will be sought between keeping the area in front of the platform free of trees, while encouraging other areas fill in with native riparian vegetation. With the help of our members, we can ensure this area continues to be a healthy wetland even longer than the life-expectancy of our newest viewing platform – and that's a long time!

P.S. The design will be made available upon request through our website, as we are often asked for “good” viewing platform designs from other groups. Spread the word.



Viaduct Flats viewing platform. *Photo: Darren Copley*



Bringing Back the Dodo *Lessons in Natural and Unnatural History*

By Wayne Grady
McLelland & Stewart Ltd.,
Toronto (2006)

Review by Ann Nightingale

I received this book as a gift and, having never heard of Wayne Grady, had no idea of what to expect when I opened the cover. *Bringing Back the Dodo* is a compilation of essays by the author of nine books including *The Dinosaur Project*, *The Quiet Limit of the World*, and *Tree: A Life Story*, the last co-authored by David Suzuki. Grady was a regular contributor to the magazine *Explore*, and his *Biologic* column was the foundation for the essays in *Bringing Back the Dodo*.

Grady's essays ponder the human role in nature, and nature's role in the human. Wide-ranging topics, from why humans prefer sub-tropical foods to the death of the last Crested Mynahs in Vancouver, delve into the human condition and our effect on the environment in which we live, and its effect on us.

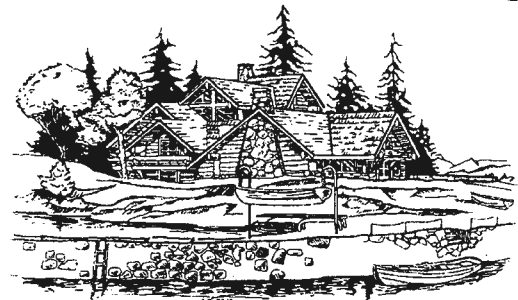
I quickly found myself enchanted by this book. Grady's writing style is very readable, and the essays are a nice format for the transition from waking to sleeping. I looked forward to going to bed each night just so that I could read another. Grady addresses the difficult topics, such as the ownership of genetically engineered crops and animals, and

the ones that we rarely ponder, such as the role of parasites in nature. He takes us for long walks through the past, and makes us wonder about our future, frequently introducing humour into the mix. He makes us think about ethical dilemmas such as whether we should we bring back extinct species when (not if) technology makes this possible.

I found *Bringing Back the Dodo* insightful, entertaining, and incredibly thought provoking. I would highly recommend it to any naturalist who likes to challenge their brain once in a while.



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The Goldstream Artshow – On Again!

“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. The exhibit aims to increase public awareness of the importance of conserving natural areas through the use of a medium that is accessible to all: art. More than one hundred artists participate in the show, with a diverse array of styles and media. The Visitor Centre itself provides a spectacular venue, but it is the beautiful artwork that really transforms it. Previous contributing artists have included such well-known names as Fenwick Lansdowne, Robert Bateman, Mark Hobson, Art Vickers, Mark Nyhof, Lissa Calvert, Sue Coleman and Ron Carwardine

Each exhibit, members of the Victoria Natural History Society have volunteered their time to make the show a success. If you can support this great cause, please leave a message at Goldstream (478-9414) for our volunteer Volunteer Coordinator, Judith Parish. If you have helped out in past years then Judith will be contacting you directly. Some key volunteers are needed to help out with advertising/promotions, sponsorship, and the wine and cheese opening night, etc., but for the most part we welcome assistance in staffing the exhibit. This involves providing a presence to

September 15
to October 8, 2007

prevent theft/damage, helping to sell raffle tickets, and showing people how to enter a bid in the silent auction and where to put their “People’s Choice” ballot. If you have participated before you know that what volunteering really provides is a great opportunity to see the exhibit!

As in previous exhibits, artwork is for sale outright or by silent auction, with proceeds helping to keep the Centre open for education programs. During the show there are artists demonstrating their skills, as well as showcasing more of their pieces, so pick up a schedule to find out when your favourite artist will be in attendance.

All volunteers are invited to the wine and cheese opening, which provides a sneak preview as well another chance to say hello to the artists. Join in the fun!



The Goldstream Visitor Centre transformed into an art gallery. *Photos: Adam Taylor*

HAT Tricks

Student Finds Fertilizers in Bog Water



By Todd Carnahan and Geoff Huber, Outreach Coordinator, Habitat Acquisition Trust

Travis Nagy is a Camosun College Environmental Technology student who sampled water and sediments in the Rithet's Bog Conservation Area from February to April. He was investigating the presence of possible contaminants from storm drains and surface flows that drain the highly-paved watershed. By following water sampling protocols established by the Rithet's Bog Conservation Society in 2003, the data can be compared to flag possible trends in contamination and general water quality.

Mr. Nagy's investigation is part of HAT's award-winning Good Neighbours Outreach Program in the Rithet's Bog watershed. We have already started sharing the information with residents around the bog with ideas on how to improve water quality for salmon and other aquatic life.

While Travis found overall good results, he made several recommendations to residents regarding the following findings. Aluminum and mercury were found in sediments near storm drain outfalls at very low levels. Possible sources of these metals may be motor traffic on roads draining to the Bog. Ammonia and phosphorus (nutrient) levels were also

higher than would naturally occur. The ammonia and phosphorus found in samples may be from petrochemical fertilizers used by area residents on lawns and gardens.

There are not easy and simple solutions for the aluminum and mercury found, other than to stop driving. But for reducing the levels of ammonia and phosphorus in storm water run-off, there are many different solutions and most of which will end up saving the property owners money and time. One example is top dressing turf in the spring with an inch of compost as better for your lawn and salmon than pesticide-laden fertilizer sprays because it creates healthy soil from a resource in your own backyard (clippings and leaves). Another solution to avoid nutrient contamination is for responsible dog walkers to always "scoop for salmon" and thus prevent nutrients from entering waterways and saving the costly bylaw infraction costs.

If you live in the Broadmead area and would like to know how you can garden for salmon, please call the HATline (995-2428) or send us an email hatmail@hat.bc.ca.

10% OFF scopes & binoculars for VNHS members
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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 Building, Room 159, University of Victoria; **Botany Night:** the third Tuesday, 7:30 p.m., Swan Lake Nature House; **Birders' Night:** the fourth Wednesday, 7:30 p.m., Murray and Anne Fraser Building, Room 159, University of Victoria. **Marine Night:** the last Monday, 7:30 p.m., in Murray and Anne Fraser Building, Room 159, University of Victoria. 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.

JULY

Friday, July 13 – Sunday, July 15

OVERNIGHT TRIP

Mount Washington Weekend

By July, botanizing opportunities are limited around Victoria so we must gain elevation to continue to enjoy the wildflowers. Tentative plans are to arrive on the mountain late Friday and stay in a condo up there, get up early on Saturday morning and hike around looking at flowers all day Saturday, stay overnight Saturday and continue the botanizing until Sunday afternoon, returning home late Sunday. Potential plans include a trip around Paradise Meadows, perhaps a trip up the chair lift, maybe meandering around the top and walking down on one of the trails or potentially exploring the Lake Helen MacKenzie-Battleship Lake loop. Due to variable conditions, actual route is not chosen until the day. Some strenuous hiking may be involved but at a leisurely pace. Call **Agnes** at 721-0634 or preferably email her (thelynns@shaw.ca) for more information or to register by Friday July 6 at the latest. Trip limited to first 20 people submitting their \$50.00 deposit for accommodation.

Saturday, July 21 and Sunday, July 22

VICTORIA BUTTERFLY COUNT

We are always looking for keen eyed volunteers, so get out your field guides. Call **James Miskelly** (count coordinator) at 477-0490 if you would like to help out.

Sunday, July 22

FIELD TRIP

Discovery Island & Chain Islands Ecological Reserve Bird-watchers Kayak Tour

Once home to First Nations people and lighthouse keepers, Discovery Island is now a Provincial Marine Park. A Mecca for sea kayakers and nature enthusiasts, the area presents many opportunities for viewing wildlife and many birds. You may sight Bald Eagles, Oystercatchers, Harlequin Ducks, sandpipers, and cormorants. By kayak we are able to see the numerous sea birds that nest and feed in and around these shores such as the Pigeon Guillemot, Rhinoceros Auklet, and the Common Murre. The tour will also explore the nearby Chain Islands which are protected bird sanctuaries and seal rookeries. You will also learn about the area's natural history. Cost: \$85.95 – five-hour guided tour. Maximum 12 people/tour. We will be out on the water for five hours so please pack a lunch and some snacks. Be prepared for the day's weather, be able to layer up or down while on the water. Suggested gear: Sunglasses, sun hat, sun screen, footwear you can get wet, windbreaker, toque, binoculars, lunch, snacks and lots of liquid to drink. For more information or to register: Phone: 361-9365 or toll free: 1-877-921-9365 or email: lindsay@pacificapaddle.com.

Sunday, July 29

FIELD TRIP

Birding Sidney Island

We will travel by chartered boat to the large seabird-nesting colony on Mandarte Island to observe the nesting birds from the boat. Glaucous-winged Gulls, Pigeon Guillemots, Pelagic and Double-crested Cormorants can be found nesting there. The boat drops us off at Sidney Island for some birding of the first southbound shorebirds. You can return on any scheduled Sidney Island Ferry sailing. Bring a lunch and something to drink. Cost is \$24.00 per person (includes the return ferry fare from Sidney Island). Meet at the ferry dock at the foot of Beacon Avenue in Sidney at 7:30 a.m. sharp. Reserve your spot early (by July 14, we need 20 people) by calling **Rick Schortinghuis** at 652-3326. Leader TBA.

AUGUST

Sunday, August 5

FIELD TRIP

Hurricane Ridge

This trip, a VNHS tradition, is timed to catch the beautiful summer alpine flowers 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 are highly recommended. Be prepared for cold temperatures and/or rain, also wear sturdy hiking boots. Meet at the Black Ball ferry terminal in the Inner Harbour at 5:45 a.m. (allow time to park) for the 6:10 sailing of the M.V. Coho. Ferry cost is \$25.50 (CDN) return. You will require two pieces of ID (one with a picture) for going through customs. Cost of the charter bus and entry to the park is \$32.00 (CDN). We will return on the 5:15 sailing from Port Angeles (90 minute crossing time). There is room for 22 participants plus the two leaders. This trip always fills, so reserve early by calling the Goldstream Park Nature House at 478-9414. VNHS members will be given a priority. Leaders are **Rick Schortinghuis** and **Agnes Lynn**. Call Rick at 652-3326 if you need more information.

Sunday, August 12

FIELD TRIP

Discovery Island & Chain Islands Ecological Reserve Bird-watchers Kayak Tour

Once home to First Nations people and lighthouse keepers, Discovery Island is now a Provincial Marine Park. A Mecca for sea kayakers and nature enthusiasts, the area presents many opportunities for viewing wildlife and many birds. You may sight Bald Eagles, Oystercatchers, Harlequin Ducks, sandpipers, and cormorants. By kayak we are able to see the numerous sea

birds that nest and feed in and around these shores such as the Pigeon Guillemot, Rhinoceros Auklet, and the Common Murre. The tour will also explore the nearby Chain Islands which are protected bird sanctuaries and seal rookeries. You will also learn about the area's natural history. Cost: \$85.95 – five-hour guided tour. Maximum 12 people/tour. We will be out on the water for five hours so please pack a lunch and some snacks. Be prepared for the day's weather, be able to layer up or down while on the water. Suggested gear: Sunglasses, sun hat, sun screen, footwear you can get wet, windbreaker, toque, binoculars, lunch, snacks and lots of liquid to drink. For more information or to register: Phone: 361-9365 or toll free: 1-877-921-9365 or email: lindsay@pacificapaddle.com.

Saturday, August 18 and Sunday, August 19

VICTORIA BUTTERFLY COUNT

We are always looking for keen-eyed volunteers, so get out your field guide. Call James Miskelly (count coordinator) at 477-0490 if you would like to help out.

Sunday, August 19

FIELD TRIP

Tufted Puffins, Sea Otters and Archaeological Museum

Join us for a field trip on the Olympic Peninsula to Cape Flattery and the First Nations Cultural Center. Cape Flattery is the most northern point on the west coast of the continental United States and is one of the closest locations to Victoria where you will see Tufted Puffins. Islands off the point are home to thousands of seabirds throughout the year. In 1970 tidal erosion uncovered an ancient whaling village at Ozette, parts of which had been covered by mudslides hundreds of years ago. The artifacts that were subsequently found have now classified Ozette as one of

the most significant archaeological discoveries ever made in North America! In 1979 the cultural and research center opened to the public in order to share this great archaeological find. Meet at the Black Ball Ferry terminal at 5:45 a.m. (allow time to park) for the 6:10 sailing of the M.V. Coho. Ferry cost is \$25.50 (CDN) return. You will require two pieces of ID (one with a picture) for going through customs. Cost of the charter bus, lunch and entry to the museum is \$59.00 (CDN). We will return to Victoria on the 9:30 p.m. sailing (90 minute crossing time). Bring a snack and something to drink; we will have dinner in Port Angeles. There is room for 22 participants plus two leaders. This trip always fills, so reserve your spot early by calling the Goldstream Park Nature House at 478-9414. Leaders are **Rick Schortinghuis** and TBA. Call Rick at 652-3326 if you need more information.

Saturday, August 25

FIELD TRIP

Birding the Victoria Shoreline for Shorebirds

Marie O'Shaughnessy (598-9680) leads this search for migrant shorebirds. She 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 am.

Sunday, August 26

FIELD TRIP

Shorebirding from Victoria to Sooke

Meet at Helmken 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.

BULLETIN BOARD

Wanted

Portable birdsong recording equipment in good condition for my son. Kathryn, 382-1652 kathryn.harcourt@telus.net)

Saturday Birding Group

Meet opposite the entrance to Beaver Lake Park on Elk Lake Drive (between Haliburton and Royal Oak) at 7:00 a.m. April-June, 8:00 a.m July-March. Birding location will be decided at the meeting point. For more information, call **Rick Schortinghuis** at 652-3326.

Year-round Tuesday morning birding group

Meet at the foot of Bowker Ave. at 9:00 a.m. Birding activities take place at various locations around Greater Victoria. For information, contact **Bill Dancer** (721-5273) or dcdancer@shaw.ca.

Welcome to New VNHS Members

Our Society grew by 15 new members since the last issue. The following agreed to have their names published in our "welcome" column:

Christine Scotnicki
First Nations, botany

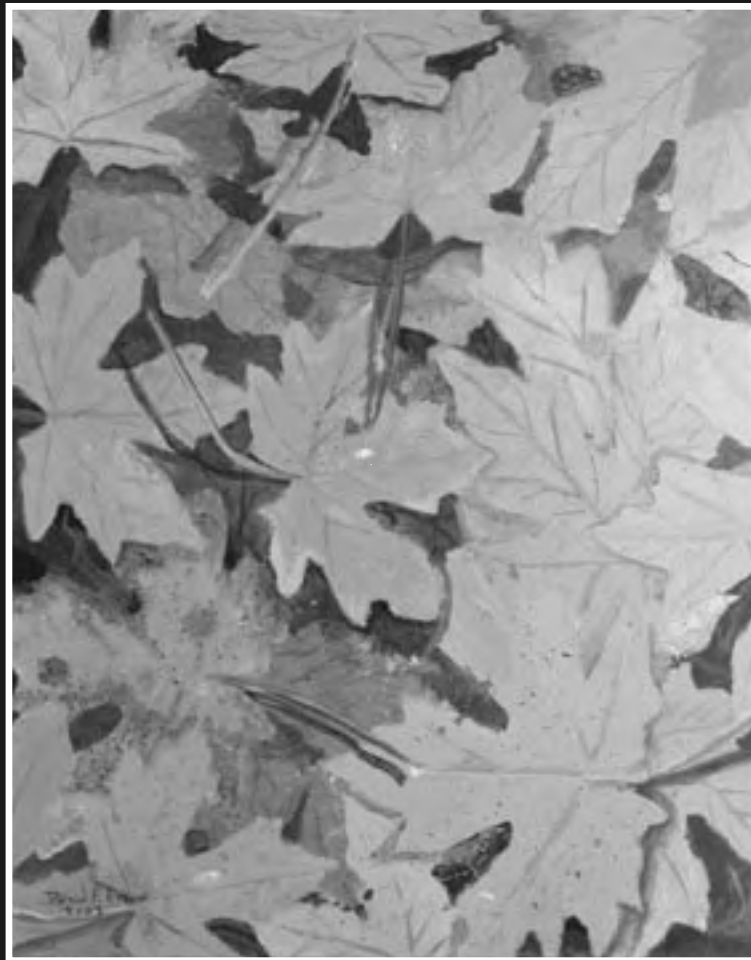
Leanne Brown
Shelbourne Street
Birding, wildflowers, alpine areas

Magnus Bein
Lam Circle
birds

Kimberley and George Sirk
Avebury Avenue
birds

Dea Lloyd
birds, wildlife

Blair Loveday
Hollydene Place
birds



1.8/m² acrylic painting by David Fraser

The Nature of Island Artists

September 15 - October 8, 2007

Goldstream Provincial Park Visitor Centre, Victoria, B.C.
For information: www.naturehouse.ca, or 478-9414