

Watershed connections

Welcome

to the sixth issue of *Watershed Connections*, a volunteer publication for the Tod Creek watershed.

The purpose of *Watershed Connections* is to connect the community and provide information that will assist watershed residents to live and work in an ecologically sustainable manner, in harmony with the watershed environment.

Watershed Connections is produced by members of the "Friends of Tod Creek Watershed" stewardship group, with articles contributed by watershed residents.

A PDF version is available.

This issue of *Watershed Connections* attempts to present a brief overview of past and present land use and provide some suggestions to protect and restore the integrity and biodiversity of the Tod Creek watershed.

Advances in technology during the past few decades have resulted in the entire Earth undergoing rapid ecological change, the most obvious of which is caused by human land use. Satellite images show rapid decreases in land cover due to deforestation and development. Locally, old timers who have lived here since birth note significant changes in the watershed: many more buildings; increased traffic; less biodiversity; destroyed and degraded wetlands; and pollution in Prospect Lake which a few decades ago was pure enough to drink. Regardless of the harsh impact of human land use, I remain hopeful that the negative changes

of the last few decades can be reversed so that fish return to the streams and lakes and people live as good stewards of the land.

Brief history of land use

The area became ice free about 13,000 years ago and went through several series of vegetation change. By the time the native people arrived the land and waters were probably abundant with plants, animals, birds and fish.

The Saanich people, part of the Salish Nation, lived in harmony with the land. Their population and way of living was sustainable. In a recent interview, John Elliott, a member of the Saanich Nation and a language and culture teacher at the Lau, Welnew Tribal School on West Saanich Road described the life of his ancestors. Their village was at Brentwood Bay where they were able to find a variety of food close to home. In addition, they would hunt in the upland areas, periodically burning the ground cover in order to encourage browsing material for deer. Dating for these burns is recorded in sediment core samples taken from Prospect and Durrance Lakes (David Huntley and Charlotte Bowman, 1999). The Saanich people gathered berries, plants, and medicinal herbs. Camas bulbs, their main source of carbohydrate, were traded up and down the coast. One of the best areas for digging camas was where the Garden Gate Estates is now located.

Continued on page 2



BC Archives #1-26781

The size of these salmon caught in Brentwood Bay in 1947 demonstrates how we have depleted the environment.

We invite comments and submissions from members of the community. Please contact us at 479-1956 or email wconnections@shaw.ca.

We are very grateful to the following businesses and individuals whose generous contributions made this issue of *Watershed Connections* possible: Vancity Credit Union; Geoff McLean, Re/Max Camosun; Mary-Wynne Ashford & Russell Davidson, Gordana Lazarevich, Allan Davies, Robert Oldfield, Marilyn Tomlinson, Jeremy Gye, Kelly Beaman, Bill & Bianca Message, Russell & Diane Moore.

In addition, Ron DePol and Lorne Ebell gave us the funds left in the account from the discontinued Tod Creek Enhancement Society. The Municipality of Saanich helped with the distribution.



Blue grouse flourished by the inlet until blasting for lime at Butcharts discouraged their breeding.

Tod Creek was a bathing stream and people cleansed themselves in the cold water while offering up a prayer.

JOHN ELLIOTT,
SAANICH NATION

Above: Blue Grouse.
Photo: Bruce Whittington

"We must consider ourselves to be the custodians of the watershed. The lives of those who live in it, as well as many others, are directly influenced by its wellbeing, for which we as residents are almost entirely responsible."

GIFF CALVERT, 1996

Certainly things have changed in John Elliott's lifetime. He reminisced about the waters that teemed with fish when he was a child. Tod Inlet was a favourite area for clam digging. Blue grouse flourished by the inlet until blasting for lime at Butcharts discouraged their breeding. Until then, the village women would easily collect blue grouse by picking them up, hitting them on the head with a stick and then placing them in a basket.

Tod Inlet was also a sacred site and John Elliott feels that his people lost so much of the land because they failed to explain the spiritual aspects. Surrounding lakes were sacred sites where young men were sent to fast until they received a vision to guide their future. Tod Creek was a bathing stream and people cleansed themselves in the cold water while offering up a prayer.

John recalled cod fishing with his father fifty years ago. "We would start at Hagan Creek but always caught enough cod before we reached Henderson Point and so never needed to turn the corner into the Saanich Inlet — a big disappointment for a young boy."

The Saanich Nation had a sustainable lifestyle, but major changes began when James Douglas, Chief Factor of the Hudson's Bay Company, chose Victoria for settlement in 1842. It wasn't long before pioneers began to move out of Victoria in order to claim surrounding land. Land was logged, and by the 1860s, farms in the watershed were providing produce for the young city of Victoria.

One industrious farmer, On Hing, arrived during the 1858 gold rush. On his 89 acres on the southeast side of Prospect Lake he produced fruit, vegetables and chickens. Some of the original apple trees can still be seen in the Echo Drive area. On Hing died in 1914, and his sons subdivided 39 acres of the property.

The Tod Creek watershed was a popular area for sportsmen from the city. The hillsides abounded with game. In 1867, the *Colonist* reported that six fishermen, out for a day's fishing, had caught 180 trout.

However, access was limited and when a sawmill was established at the end of Sawmill Road (today's Meadowbrook Road) in 1907, there were still very few settlers. This changed when the B.C. Electric Railway (Interurban) was completed in 1913. Summer cottages were built beside Prospect Lake, often constructed by Jack Whitehead's father who recalled the exteriors being built with 10 to 12 inch unfinished planks from Sawmill Road. A few of these cottages are still standing, but many have been replaced by homes with much bigger footprints. Sadly, much of the natural lakeshore that served to filter pollutants and provide habitat for wildlife has now been replaced with rock walls and landscaping. This eliminates aquatic species and leads to erosion; oxygen starved, weed choked, and polluted water; slime balls and algae blooms. This damage can be reversed (see page 11).

Future land use

Thanks to the Urban Containment Boundary Tod Creek watershed has remained rural. The last 100 years have taken their toll but we still have remnants of its former glory. It is one of the reasons John and I placed a conservation covenant on seven of our ten acres. We decided on the terms for an agreement which was accepted by Habitat Acquisition Trust. We want the natural landscape within the covenant to remain untouched by ourselves and subsequent owners so that native flowers will continue to bloom in the woods and on the rocky bluffs, and animals, reptiles, amphibians and birds will have a small sanctuary. We feel fortunate to be able to protect a little piece of paradise and leave some green space in perpetuity.

It is not too late to reverse some of the damage caused by human development, and there are several stewardship groups on the Saanich peninsula who are working to restore the land and waters of this remarkable place. With care and goodwill we can all learn to be stewards of the land and leave a legacy for the generations that follow us.

— SHELAGH LEVEY, EDITOR

Wildfires in Our Watershed

A wisp of smoke to the southwest of Maltby Lake where my cousin and I were swimming on a hot August afternoon in 1951 had my father very worried. With no rain since May, and the woods tinder-dry, Dad and my older cousin hurried to the car and drove in the direction of the smoke. They met a Langford fire truck on Prospect Lake Road, also looking for the fire. Dad led them to Munn Road, and soon they were fighting a small roadside blaze. They had it down to less than an acre by the time they ran out of water; and when a water truck couldn't get past the traffic jam of onlookers, the fire took off, heading north. It was 10 days before the blaze was contained near Hartland Road, and for a 10-year-old boy this was a very exciting end to summer.

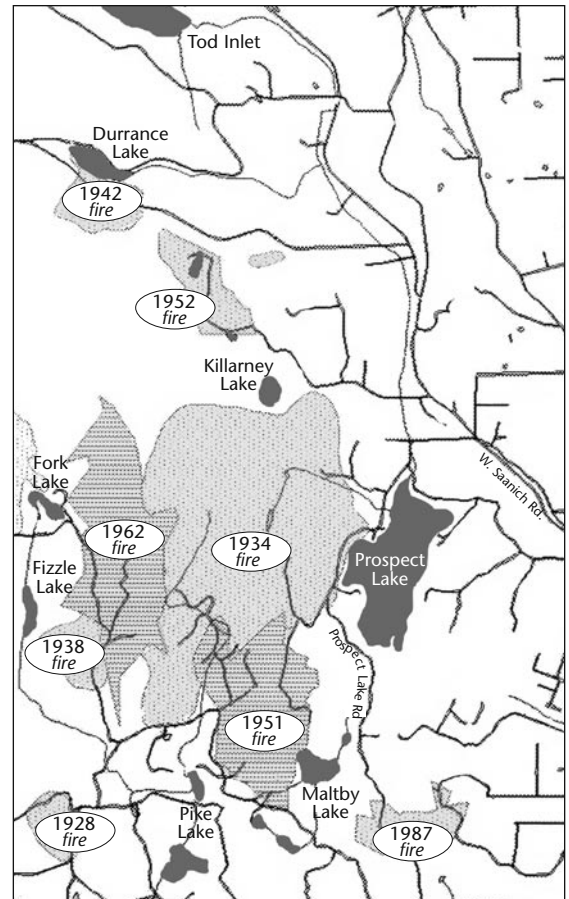
My job was to put out any sparks that landed on the cottage roof. Grandfather packed all the valuables in his car, ready to evacuate if the fire swept around the lake. Fortunately, the prevailing west wind did not blow, and the fire just brushed the north-west corner of the property. At one point it crowned, with blazing treetops leapfrogging the fire ahead. Firepumps ran day and night, lowering the lake by about two inches. A bulldozer was destroyed, as well as several thousand feet of firehose. Exhausted firemen camped in our meadow, and mother and grandmother sent lemonade and hot coffee across the lake to the men on the firelines.

This was one of the last wildfires to be fought without the assistance of airtankers. Fires near populated areas were fought only by manpower, while before the turn of the century most were left to run their course and burn themselves out. Homesteaders often protected their property with backfires. After a fire, horseloggers could harvest snags and had new access to previously inaccessible timber stands.

Wildfires are also beneficial to the forest ecosystem; first grasses come up, then fast-growing deciduous underbrush, including alder which by adding nitrogen to the soil

This map (adapted from a Canadian Forestry Service – Fire Research branch map) shows the extent of various wildfires fought by the B.C. Forest Service in our watershed vicinity, since mapping of wildfires began in 1919.

Anecdotal evidence describes a major fire in the Metchosin/Greater Victoria area in 1897. In 1868, there had been fires “up and down the coast, on the Gulf Islands, and on the outskirts of Victoria”.



both nourishes conifers and slows down the spread of root rot, an underground fungus which attacks Douglas-fir. Flames may scar the thick bark of large firs, but the inner wood is protected, and the tree survives. These veterans then cast the seeds that will eventually grow and push past the deciduous growth, overtaking it and shading it out until it reaches a climax forest, not unlike Cathedral Grove. The whole natural cycle takes about 200 years.

Today, wildfires have been all but eliminated; we attack them vigorously with airtankers, sophisticated technology, chemicals, etcetera, so that we are in fact creating a future problem by interfering in a messy, but natural part of the forest cycle. Scientists and foresters rarely agree on what logging prescriptions should be followed to best mimic the effects of wildfire. Most agree that controlled (but risky) burns or some forms of selective logging simulate one aspect of the forest's natural cycles pre-firefighting, and can create the firebreaks necessary to protect civilian populations from wildfire. — WOODY THOMSON



Fire scarring on a veteran Douglas-fir near Maltby Lake. (1897 fire?)

Killarney Lake

A 100-acre Addition to Mount Work Regional Park

Killarney Lake and the surrounding 100 acres have recently been acquired by the Capital Regional District for an addition to Mount Work Regional Park. This land rose above the ice approximately 13,000 radio carbon years ago. A quick look at the events that have affected Killarney Lake tells us something about the history of our watershed.

At the time of the last ice age the land was depressed under the great weight of the ice. The level of the sea was lower than it is today because so much of the water was locked in the ice. As the earth warmed and the ice melted, the land, freed of its burden, rose. The bare rock showed, and still shows, the marks of the grinding ice that scored its surface.

At the same time the sea, receiving the melt water, rose. Approximately 12,000 radio carbon years ago the ocean filled the Tod valley to a depth of 75 metres above its current level. Thus Prospect Lake at 47 metres was part of the marine environment. Killarney Lake and Heal Lake and upland landscapes above the 75 metre level were terrestrial. Slowly plants and then animals began to populate this new land. Killarney Lake in its sediments no doubt carries the story of these events. Heal, alas, can no longer tell us its story.

Longer ago than we can know people came to this land. The Saanich First Nation knew well the riches of the ocean and nearby uplands where they farmed camas and harvested healing herbs, caught grouse and fished trout from the streams. Small lakes, such as Killarney and Heal, were sacred sites. Young men would stay near them on their Vision Quest, an important ritual on the route to manhood. It is not hard to imagine a dark young man living and fasting on the edge of the Lake waiting for a spirit to visit and give him the strength to live his life. In the low lying areas near the lake are cedar trees, some of them showing the healed scars where bark was taken for weaving into baskets, clothing

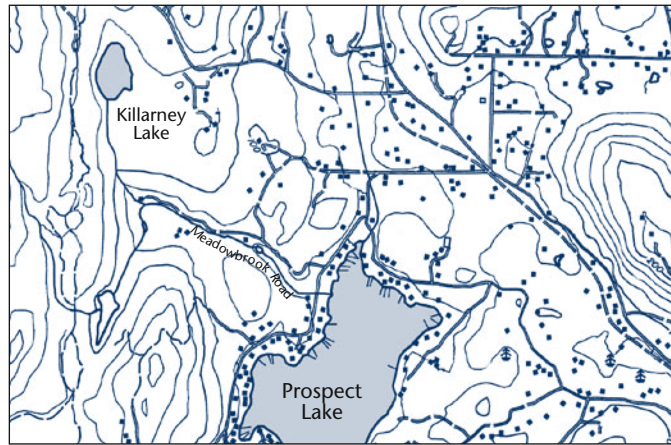


and blankets or for decorating masks used in big house ceremonies. The lake was a peaceful, beautiful and sacred spot.

Settlers began arriving in Victoria in the 1850s. The land was surveyed and farmers took up the arable land. By 1900 civilization was moving northward and our watershed was being taken over by these settlers. In 1900 a large forest fire raged through this area. A little digging on the side of Mount Work shows a deep blackened layer. The clearing of underbrush left by the fire made room for loggers to come in and cut the large old trees. Because all work was done by hand in those days, loggers stood on boards resting in slits cut into the trees. This raised them about ten feet, and thus they were able to avoid cutting through the wide base of the tree. The tall stumps with their springboard marks are testimony to this practice, and they are easy to pick out on the land around Killarney Lake. The peat bog at the end of Meadowbrook Road was dammed to form a millpond for the sawmill there. In fact, Meadowbrook Road was called Sawmill Road until sometime in the 1950s.



Above: a glimpse of Killarney Lake from rocky bluffs.
Below: "The Green Man" — a mossy stump along the trail.



Far left: Bernie Bowker recording the Killarney Lake trails by GPS.

More settlers came into this newly opened up land, and at the end of the First World War, the land around Killarney Lake was purchased by two friends, Mr. White and Mr. Shade. They built two houses and made a garden, introducing water lilies and yellow iris and building a stone wall along the muddy edge of the lake. Mr. Shade's house faced southwest, had a lovely veranda, a stone chimney which is still visible, and was sheathed in bark. In 1928, Herbert Shade decided that the place was too lovely to continue to be known as Mud Lake. In fact, he said that name was attached in error and properly belonged to the old millpond to the south. After some discussion the name Killarney was settled upon. Jack Whitehead remembers going up there in the 1930s. He says Mr. Shade had an outhouse with a window in the door. The window was painted over, but from the inside there was a picture of a woman peering in at the occupant. The outhouse was quite posh with a sand flush which was operated by pulling a chain. However, when the chain was pulled, it also blew a whistle letting everyone around know the job was finished. Mr. Shade built a monster out of barrels floating in the lake. No wonder Jack enjoyed going there.

In the early 1950s a second forest fire went through the area and this brought a second round of logging. By this time chain saws were the tool of choice, and the trees were cut much more quickly and closer to the ground. The shorter stumps left by this form of logging are

also in evidence on the land around Killarney Lake. At this time as well the nearby garbage dump was affecting the lake. Gulls and other birds brought tasty morsels to the lake, the run-off from the dump flowed freely down Upper Killarney Creek and the smell and noise of the dump were very apparent. A series of people lived in and around the cabins left by Mr. Shade and Mr. White and the loggers. This was probably the lowest point for Killarney Lake.

In 1962, the property was bought by the Chu family. Caretakers, first Paul Quinn and then Julius and Gloria Treigys, looked after the property. The trees began to grow covering the logging scars. The CRD took over the dump and turned it into a landfill, covering the raw garbage and cutting down on the flow of pollutants into Upper Killarney Creek. The lake slowly regained its peace and serenity. It has had years of peace in which to heal itself.

In December of 2003, the land was purchased by the CRD. Coupled with adjacent land formerly owned by Saanich, the area is a 100-acre addition to Mount Work Regional Park. Now as I walk up there listening to the ravens talking almost as intricately as their northern cousins, watching a pair of bald eagles in a snag by the lake, or smiling at a pair of double crested cormorants swimming with their noses in the air, I feel extremely lucky to be near the lake at this time in its history. The trees are bigger and thicker than they have been probably at any time in the last century; the wetlands have formed themselves in the contours left by the logging roads; the birds, deer, cougar and probably the odd black bear are at home. Let us hope that Killarney Lake will be left in peace to continue its restoration of itself. — MARY HAIG-BROWN



Killarney Lake trails

You can now walk through the new park at Killarney Lake. Park near the mailboxes at the corner of Meadowbrook Road and Prospect Lake Road. Walk up Meadowbrook to the gate at the end. Go through the gate and up the driveway. When you come to the fork in the road stay right for Killarney Lake or go left for the network of trails in Mt. Work-Hartland Mountain Bike Park.

MARY HAIG-BROWN *has been walking these lands for over 30 years and loves every square inch of them.*

Farmland in the Tod Creek Watershed

Land Use at Tod Flats

Tod Flats, the wetland area behind the Red Barn on West Saanich Road, is a valuable wildlife habitat. Every winter, the flats become a seasonal lake and a stop-over for trumpeter swans as well as other birds.

While the Tod Creek watershed is somewhat protected from development because of large rural properties and the goodwill of residents, there is very little official protection against pollution and habitat destruction on land within the Agricultural Land Reserve, which the flats are in. Industrial monocropping along with the requisite fertilizers and pesticides are harmful and have taken their toll on the water and soil along the creek. The annual flooding, from mid-November to early June each year, means the land cannot be ploughed until well after the growing season has started.

Ray Galey has grown potatoes there for several years. Before that, it was farmed for vegetables to be sold by the Red Barn Market. The land was originally farmed by the Sisters of Saint Ann who lived on the east side of Saanich Road. They grew produce and cut blocks of ice for St. Joseph's Hospital.

Of course, nature doesn't recognize zoning or property boundaries, and the flats are actually divided into a number of privately owned lots. Ian Fatt has recently bought the 22 acres that back onto the Red Barn Market including the barn on West Saanich Road, as well as some upland forest on the other side of the flats, and of course, part of Tod Creek. Most of this property is within the Agricultural Land Reserve and at this time it is not known what the new owner intends to do with the land.

— GRACIE MACDONALD

GRACIE MACDONALD is a partner in a local organic food business, and until recently, farmed a small acreage in the Tod Creek watershed.



Trumpeter Swans (*Cygnus buccinator*) at Tod Flats

After becoming almost extinct in North America by the end of the nineteenth century, trumpeter swans are now making a comeback. Approximately 3,000 of them nest in Alaska and winter on coastal lakes and rivers as far south as Vancouver Island.

Photos: Bruce Whittington



Five Years and Still Growing Strong: Farming at Feisty Field Organic Farm



Some of you might remember the fall and winter of 1998, when I started slowly turning the sod in the horses' pasture, just below the school yard on the south side of Prospect Lake Road. From these humble beginnings, Feisty Field Organic Farm has continued to grow. We have about 20 different crops year-round on our 3/4-acre plot.

Our produce is sold in Victoria where there is a huge demand for local certified organic food. I have teamed up with four other women growers who each farm a separate plot about the same size as ours. We have formed a co-op that we call Saanich Organics. Together we have a vegetable home-delivery service, and we sell to a dozen restaurants and three grocery stores. I'd love to sell more of our produce right from the farm, but selling through existing channels has been so easy, that I haven't made the effort. We did have tremendous support from the community for the tomato seedling sale last year. We plan to do another sale with all types of veggie seedlings this year.

The field that we rent is very low lying, so there are times of the year that Tod Creek is closer than we would like. I think the fact that the field floods is one of the most important reasons for farming organically, even though I was set upon organic ideals long before I came to Prospect Lake. I get a lot of questions about why we farm without chemicals, and how organic farming is different.

Conventional chemical farmers use water-soluble fertilizers to feed their plants. Organic

farmers use stable, water insoluble fertilizers like compost and rotted manure to feed their soil, which in turn feeds the plants. The organic method builds up fertility for the future and generates life-giving, black top soil. The former method burns up organic matter with harsh chemicals, leaving the soil lifeless and prone to erosion which pollutes waterways.

Conventional farmers use pesticides and herbicides to combat outbreaks on their farm. Organic farmers use balance and biodiversity to mimic nature. When the insects come, I recognize them as messengers who are telling me something on the farm is not in balance: either the irrigation system is not adjusted correctly, or I'm pushing the envelope on the growing season for a particular crop, or the soil fertility is too much or too little. Once I figure out the problem (and catch it early enough!) the insects leave on their own. I believe nature is a perfect system.

Organic farming on a small scale is a very challenging career, but I find a lot of satisfaction in giving my life to a cause so dear to me. I believe a locally based food system gives communities stability and connections to each other and to the land. On a global scale, more small farms means fewer mega-farms which are disruptive to life on every level. Moreover, I enjoy spending the seasons in touch with the land, eating great food and watching the everyday patterns of life around scenic Prospect Lake. — ROBIN TUNNICLIFFE

Contact Saanich Organics by phone at 544-4807 or email saanichorganics@telus.net.

Organic farming:

- Practices sustainable forms of farming.
- Helps to protect our air, soil, water and food supply from toxic chemicals.
- Builds and protects top soil.
- Produces, safe, nutritious and tasty food.
- Preserves biodiversity of plants and animals.
- Places emphasis on animal welfare.
- No GMOs.
- Protects the health of farm workers.
- Supports family farms and rural communities.

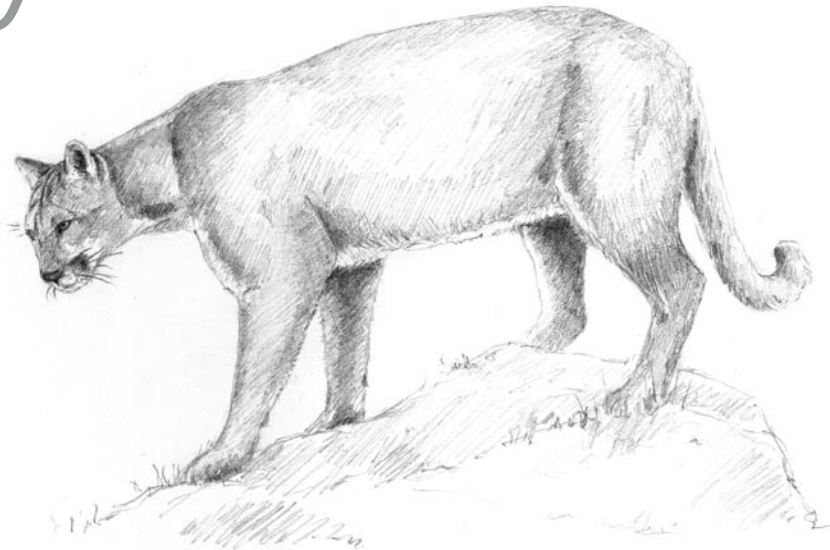
natural history

Changes to the Mammal Fauna of the Prospect Lake Watershed

Like most parts of the world, the species of mammals in our watershed are undergoing a period of rapid change. These changes are typical of changes in mammalian fauna the world over, and consist of two trends: the loss of large mammals and the gaining of introduced exotic species.

Of the species that have disappeared since the arrival of Europeans, the watershed has lost its largest mammal, and has nearly lost all three of the large predators. At 600 to 1000 kg, the Roosevelt Elk was the largest terrestrial mammal to inhabit the peninsula in historic times. Mammoths, Mastodons, Giant Bison and Helmeted Musk Ox were also found here, but much longer ago — a story for another time perhaps. A low elevation deer, Roosevelt Elk were harvested to extirpation on the peninsula early in the history of European settlement of the island. The three large predators found on this part of Vancouver Island are cougars, black bears and wolves. While all three probably regularly occur in the least populated parts of the watershed, they probably do not constitute viable populations, and rely on immigration from outside our area to maintain their occasional presence.

On the gains side, all of the new additions to our fauna have been from introduced species, intentionally or otherwise. The first of these introductions were probably Norwegian and Black Rats and House Mice, all unintentional introductions. Intentional introductions have been European Rabbits (ongoing and spreading rapidly), Cottontail Rabbits (1960s), and Muskrats (1920s). Grey Squirrels, introduced onto Vancouver Island in Metchosin in the 1960s have spread quickly, and by the late 1990s were abundant throughout the watershed. While no research work has been conducted to document the ecological changes that these new species are having on the watershed, there are undoubtedly changes.



Illustrations: Natalie Borden

Other changes are subtler. It seems likely that Blacktail Deer numbers are at historic highs on the Saanich Peninsula, likely the result of the removal of almost all the large predators, hunting bans and, more recently, the changes in deer behaviour towards dogs and traffic. The species is being seen with increasing frequency in suburban and even urban areas on southern Vancouver Island. Red Squirrels have declined markedly over the last twenty years in this area, a trend likely tied to the spread of the Grey Squirrel. After years of trapping, Beavers seem to be making a return to the area, with increasing numbers of locations reporting them.



Tomorrow, pay attention to what you see and where you go. Take note of the Grey Squirrel digging up your tulips and the rabbits on the lawn. Pay attention to the geographical features that commemorate species no longer present here: Elk Lake, Bear Hill, and Wolf Street. We are part of a constantly changing world.

— DAVID F. FRASER

DAVE FRASER lives on Goward Road and works as the Endangered Species Specialist in the Ministry of Water, Land and Air Protection.

Oldfield Garage: Improvements in Environmental Standards

The corner service station at West Saanich and Prospect Lake Road was started in 1934. My Uncle Basil (Barnie) Oldfield and father Brian Oldfield built it using mostly used wood from my grandfather's (Horace Jamor Oldfield) old barn and dug a pit 8-feet long, by 3-feet wide, and 4-feet deep so they could get under cars to work on them. Circa 1949, my uncle built what is now a body shop behind the gas station and went into designing and building mechanical marvels, which is another story in itself.

Their gas station stood until 1995, and it was a sad day indeed when we knocked it over (took about an hour) and then rebuilt what you see today. The old station stood and served for 60 years but was due for change and probably none too soon.

The original septic field stopped functioning in the fifties, got condemned in the sixties and replaced in the seventies by a 500-gallon holding tank which needed to be pumped out about once a month (more often if someone left the toilet running).

The roof started leaking in the seventies, got a blue tarp draped over it in the eighties that was held down by used tires which apparently was just for looks as it was never very effective. Rain water still poured into the office, I remember, as well as filled up the pit which became a wonderful mixture of grease, oil, anti-freeze and a periodic dead mouse. Bucketing or pumping this out along with cleaning and pressure washing the shop floor would send a slimy goo out and into the unchecked drains and ditches and eventually, I'm sure, Tod Creek.

The furnace gave up somewhere in the eighties. The washroom should have been outlawed in the seventies and the rear shop never did have a septic field that I'm aware of.

We made some improvements. The new building brought modern conveniences like heat and hot water, a grease/oil set of chambers that separates all the nasties out that get into the drains, hoists to replace the old pit, and a hydroxyl sewage treatment plant that

services both buildings with drinkable water as the end product, although I confess I have never tasted it. Daily product loss checks and weekly ground water checks keep a close eye on any potential problems with underground tanks which were put down new in 1995 and considered good for a minimum of 25 years.

We should be environmentally friendly for many years to come. — ROB OLDFIELD



Rob Oldfield continues to operate Oldfield Garage started by his father and uncle in 1934.

Conservation Covenants in the Tod Creek Watershed

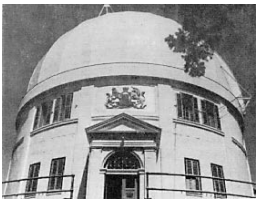
Protecting nature on private land is a challenge. Even if current landowners protect natural areas on their property, the next owners may have a different set of values that is unsympathetic to keeping natural areas on the land. So, how can we ensure long-term protection of nature in places where people live?

Enter conservation covenants. These are voluntary legal agreements between a landowner and a land trust organization like the Habitat Acquisition Trust (HAT). The terms of the agreement are designed to meet the landowner's needs and the conservation needs of the property. The covenant is registered on the land, and so remains with the land when it is sold or transferred, binding future owners to the agreement's terms.

Two families in the Tod Creek watershed have recognized the security of covenants for safeguarding the natural values of their properties. John and Shelagh Levey and Frances and Ric Hunter are in the final stages of completing their conservation covenants with HAT. The Leveys are protecting upland forests, rocky bluff and wetland, while the Hunters are protecting the lowland forest and shoreline wetlands of their property on Prospect Lake.

Far-sighted landowners like Ric and Frances and Shelagh and John are taking personal charge of protecting nature in their neighbourhood. Together these two properties help protect the function of Tod Creek watershed and provide habitat for the plants and animals that make this area their home. The Leveys and the Hunters realize that nature protection is important, not only to them, but to their community, now and in the future. Working in partnership with HAT, their wishes and the aims of HAT are becoming a reality.

— DON EASTMAN



Rare Plants on Little Saanich Mountain

The rare plant species recently found on Little Saanich Mountain... constitute an outstanding concentration of native biodiversity.

I am a (retired) astronomer at the Herzberg Institute of Astrophysics, which is part of the National Research Council of Canada (NRC). Since 1997 my workplace has been 238 m (781 ft) Little Saanich Mountain (LSM), the site of the Dominion Astrophysical Observatory. Over the 90 years that the Federal Government has owned the property, it has grown by successive small purchases to encompass 71.38 hectares (176.4 acres). Most of this land is inside the Tod Creek watershed.

Looking out my office windows, I see deer browsing in a large Garry-oak woodlands, a nationally endangered ecosystem, and in a Douglas-fir forest nearby, part of which appears to be undisturbed old-growth. Little Saanich Mountain is one of the larger tracts of land remaining in a near-natural state in Greater Victoria and on the Saanich Peninsula.

As I write this on the Ides of March, the wildflowers are already coming up on LSM. Some of the more common species here are shooting-stars, Menzies' larkspur (a.k.a. native delphiniums), camas, western buttercup, Pacific sanicle, and mouse-eared chickweed. My real interest, however, is in species much harder for the amateur wildflower fancier to notice.

Garry-oak communities and their vicinity form the habitat for an above-average number of plant species at risk. Last year and this, field surveys for plant species at risk were carried out on Little Saanich Mountain by two of the foremost rare-plant experts in this part of BC, Hans Roemer and Matt Fairbarns. Nine rare species were confirmed and mapped on the property, most of them being new records.

In summary, the rare plant species recently found on Little Saanich Mountain, together with the presence of one of the largest areas of Garry-oak ecosystem in the region and of

undisturbed old-growth Douglas-fir forest, constitute an outstanding concentration of native biodiversity. That said, some of the rare plants and the Garry-oak ecosystem as a whole are threatened by invasive, non-native shrubs. As steward of LSM, the National Research Council is beginning to address this problem in partnership with Natural Resources Canada, Parks Canada, the Department of National Defense, the Garry Oak Ecosystem Recovery Team, and the BC Conservation Data Centre.

— PAUL FELDMAN

This article has been edited for length. For a copy of Paul's full article and a list of the rare plants found on Little Saanich Mountain, please phone 479-5647 or email wconnections@shaw.ca. Paul Feldman can be contacted at paul.feldman@nrc.gc.ca



Eelgrass Transplants in Tod Inlet

Over 4,600 eelgrass plants have been transplanted under the waters of Tod Inlet since 2001. "Build it and they may come" is the philosophy of SeaChange Marine Conservation Society's volunteers, as they work hard to bring back fish habitat to Tod Inlet. For more information, you may contact us at seachange@shaw.ca.

Photo: Seachange

community report

Community support for purchase of Killarney Lake.

The Rural Saanich Local Area Plan (1981) says of Killarney Lake, "Both the Landscape and Habitat Survey (1976) and the Land Protection Analysis identify [this parcel] as Class Number 1 for conservation and protection". Letters of support from both the Prospect Lake Community Association and the Friends of Tod Creek Watershed added impetus to the discussions with landowner and CRD over the recent purchase of the property which reached a happy conclusion late last fall.



Whitehead Park

Saanich Parks department invited residents to provide input into a five-year park development plan. The first meeting was held at Prospect Lake Hall on February 25, 2004.

Stevens Road trail

Members from the Community Association and the Friends of Tod Creek watershed have been building a trail down the only right-of-way on the southeast section of Prospect Lake. You can access the trail at the chain link fence beside 256 Stevens Road. This is a rough trail and needs caution. At present there are two difficult rocks to negotiate but Saanich Parks department will soon be installing steps.

News from Saanich Environmental Services

Free, Free, Free! If you live next to a lake, stream, wetland, or other watercourse, you are eligible for a great book entitled *On The Living Edge* — Your handbook For Waterfront Living.

New, New, New! Available to all residents, a brochure outlining all the environmental bylaws, policies, development permit areas, etc. you will ever need to know as a resident of Saanich.

Video to Borrow! *The Living Shore, Best Management Practices for Shoreland Vegetation*. Univ. of Minnesota Extension Service. VHS, 16.5 min.

To obtain any of these, please call Carolyn MacDonald at 475-5494, ext.3477, Environmental Services, District of Saanich.



Opportunity to Naturalize your Shoreline

The hardening of our shorelines, mainly with retaining walls, causes habitat loss, transfers wave energy to your neighbours, and reduces water quality. If you are wondering how to remove your shoreline retaining wall without losing your property to erosion, this may be the opportunity you have been looking for. Team up with Saanich to hire the experts that can restore your waterfront. There are many funding opportunities for such a project that would lead the way and locally demonstrate how it can be done. Remember, funding grants have time constraints so let's get the ball rolling now!

For more information, call Adriane Pollard at 475-5494, ext.3556, Environmental Services, District of Saanich.



Hartland Wins "Best Landfill in BC" Award

Much has changed over the last two decades for Hartland landfill. Increased environmental awareness and innovations in technology have changed the way we manage our waste, culminating in Hartland winning the Best Landfill in BC award in 2003.

Up until 1892, Victoria dumped its garbage in James Bay. For the next 60 years, waste was incinerated and cast two miles out from Victoria's harbour. From the mid-50s to early 70s, most of our region's waste was taken to open dumps along Millstream Road and the Hartland site.

In 1975, the Capital Regional District (CRD) purchased the Hartland lands and 10 years later, took over direct responsibility for on-site operations. In 1987, a Solid Waste Management Plan was developed to safely and effectively manage the region's waste. It was revised in 1991 and again in 1995. — MICHELLE HARRIS



MICHELLE HARRIS is Education Coordinator for CRD Environmental Services

kid's corner

Dear Watershed Kids,

Here is an article written by Robin Jones about a school project at Tod Inlet Park.

Have you seen ugly litter along the roadsides in our watershed? It is sad to think some people don't care about messing up our planet but good to know that Robin and her fellow students at Bayside Middle School respect the environment.

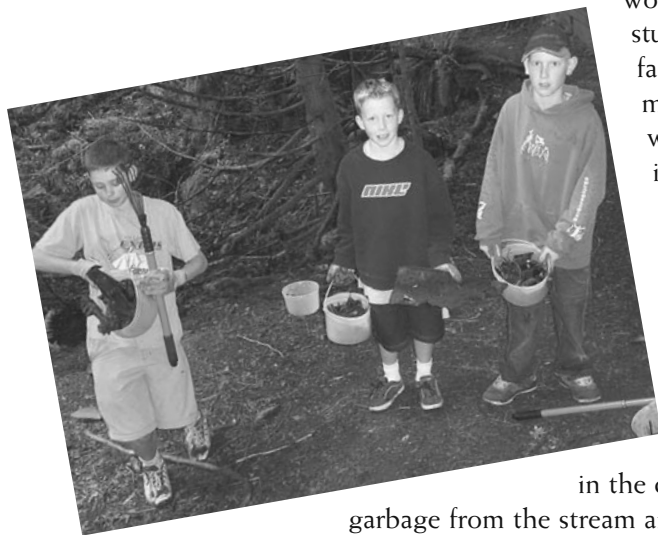
Your watershed friend, *Shelagh*



Kids Making a Difference

Stewardship at Tod Inlet

It was a crisp, sunny September as Mrs. Evan's new grade seven class tromped through the unique beauty of Gowlland Tod Park. They stopped often to observe the remains of a settlement that existed a long time ago. The sun streamed in through the leaves of the tall trees lining the well worn trails, the birds' conversations were drowned out by those of the students, and with the distant babble of the creek, it was hard not to fall in love with the peaceful park. The clusters of students left the main path to follow their teacher down a steep trail which wound its way down towards the creek. When the students reached to where it leveled out, they were surprised at what they saw. Glass mosaics lined the route and there was a rusty car swallowed by vegetation. There were kilograms of garbage making its way slowly down the bank, hidden partly by the rotting leaves and soil. There was an overwhelming contrast between the pure environment and the eye sore those before us left behind.



Top right: removing garbage from Gowlland Tod Provincial Park.

Above: Brentwood School pulling invasive ivy, March, 2004.

Photos: Laurel Evans

It was not hard to convince the grade sevens to do a class project, consisting of cleaning up this section of the park, to then give a chance for future classroom-raised salmon to survive in the creek. Though this project may only seem to involve the removal of garbage from the stream and surrounding areas, that is only skimming the surface. In order to understand the project each student researched a different relevant topic.

It took three trips down to the creek, with enthusiastic twelve-year olds and a few adults to remove a ton of garbage. Two trips took the garbage to Hartland landfill where it was recycled. Its value was estimated at only four dollars. At the landfill I watched bucket loads of glass, a wide variety of metal objects and even a old stove door, tossed into large recycling bins, finally ending up where they rightfully belonged.

Two years have passed since what, at the time seemed only to be a class project. Now thinking back to the project that taught me, along with my grade seven class, a unique lesson that only hands-on volunteering can teach: pride — pride of accomplishment and pride to be part of a great community and school. This took the unending positive encouragement of a great teacher, a hardworking class, and the financial support of Friends of the Environment and started something that hopefully will become a tradition for Bayside students to look forward to.

By Robin Jones

Robin is a student at Bayside Middle School.

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Special thanks to calligrapher and naturalist Arlene Yaworsky who designed our masthead, to Natalie Borden for her illustrations.

Opinions expressed in *Watershed Connections* should not be construed as being the consensus of the Friends of Tod Creek Watershed. Each article is the responsibility of the author.

An Invitation to Join the Friends of Tod Creek Watershed

The Friends of Tod Creek Watershed are a group of people who live in the area and come together for companionship and to engage in activities that benefit the watershed. Their mission statement is to protect and enhance the integrity and biodiversity of the watershed. Action groups are currently working on: well water safety, mapping, trail building, water quality monitoring, riparian planting and restoration. Everyone is welcome to join the group. Meetings are held on the first Wednesday of each month, September to June at Prospect Lake Community Hall, 5358 Sparton Road at 7:30 pm. For information, please phone 479-8801 or 479-5647.