

Archipelago

winter 99

news, views, reviews and interviews on island community and conservation



Volume 3, Number 1

MYSTERIOUS VISITOR

by Stefani Paine

On an island where most residents are acutely aware of their surroundings, including the comings and goings of their neighbours, it is almost inconceivable that a rare and famous visitor could pass by the island virtually unnoticed. But it happened. The event is all the more remarkable given that the stranger was some 35 to 50 feet long and weighed up to 45 tons.

On August 8th last summer, Stefan Brunhoff, a Vancouver architect, sat on a bluff at the north end of Retreat Cove working on a water colour painting. His concentration broke when he heard...

a particular swooshing sound of a whale blowing. . . . [I] looked up and saw the whale coming directly towards me halfway between the island and where I sat. I first thought it was an orca. When it came up I realized it was not an orca -- it had extraordinarily long, arm-like side flippers, dappled white and hardly any fin. I dropped my paintbrush and grabbed my camera.

Afterwards, Mr Brunhoff recalled the encounter:

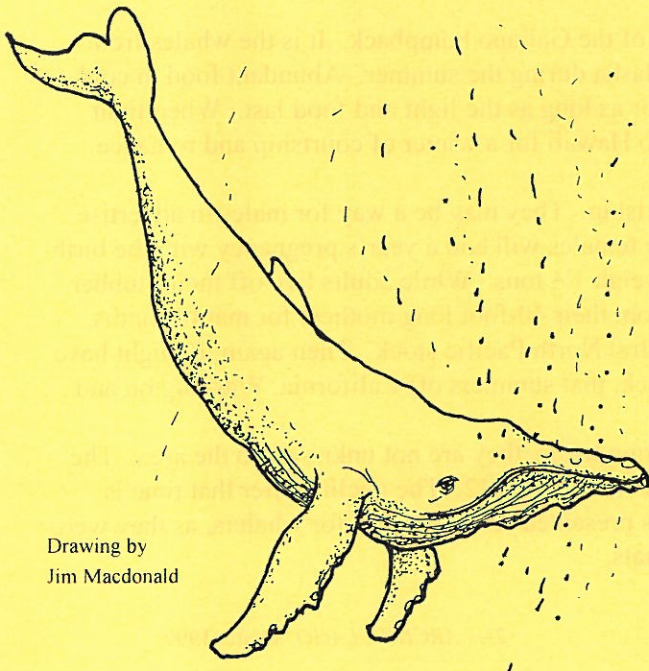
The photo was shot with a conventional 50mm lens when the whale surfaced right under where I was sitting. It was very close in and travelling quite slowly; a kayaker could quite easily keep up with it. I shot the photo -- it was the last frame on my film. Just before it disappeared around the bluff, its tail went up into the air and down it went.

Clearly this was not a killer whale, but what could it be? A logical guess would be that the whale was either a grey whale or a minke whale, as both species are known to frequent the Strait of Georgia. However, a close look at the Brunhoff photograph reveals this not to be the case. The fleshy, step-like knob in front of the small dorsal fin provides the first clue. However, it is the disproportionately long and wing-like pectoral fins, glowing from beneath the rippled surface, that confirm the whale's identity. It is, without doubt, a humpback whale.

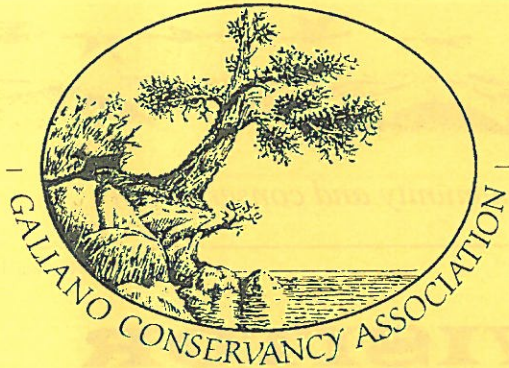
Anyone who has vacationed in Hawaii will be familiar with pictures of humpback whales. Photographs often show humpback's breaching sideways in a perfect arc above the water's surface. Invariably, their long, narrow, scalloped-edged fins are curving gracefully outward. Alaska cruise ship travellers will have seen the same whale pictured on their brochures. Hawaii! Alaska! And now Galiano! Whatever was that humpback doing in Trincomali Channel?

Humpback whales belong to a group of whales known as baleen whales. The term "baleen" refers to the hundreds of horny strips that hang like vertical Venetian blinds from the whale's upper jaw. Whales use the baleen to catch their food: baleen is to a whale what a seine net is to a fisherman. The strips of baleen

Continued on page 2



Drawing by
Jim Macdonald



ARCHIPELAGO is published quarterly by the Galiano Conservancy Association in the interests of pooling knowledge, encouraging respect and inspiring affection for our natural heritage and for each other.

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Submissions, reactions, illustrations and poetry are welcomed for publication at the editors' discretion. Opinions expressed herein are not necessarily those of the publisher.

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are thin, flexible and made of a material akin to that of our fingernails. While the outer edge of the baleen is smooth, the inner edge is frayed; as the frayed edges overlap, they function like a sieve.

The whale feeds by swimming, mouth open, through dense patches of floating plankton or tiny schooling fishes. This giant front-end loader scoops up everything. Huge pleats beneath the whale's jaw expand like an enormous balloon to accommodate the engulfed food and sea water.

But the whale does not swallow this enormous mouthful. First it needs to get rid of the seawater, but keep the food. To do this, the whale pushes its huge tongue up and forward towards the roof of its mouth and the inner surface of the baleen plates. In so doing, it forces the seawater out of its mouth through the mat of overlapping baleen. The whale's tongue traps food on the inner surface of the baleen, and then licks it off and swallows. You can practice your baleen technique by pushing a mouthful of water (or soup) out between your teeth.

Except for the sperm whale, all the large whale species have baleen and feed in a similar fashion. The kind of food to be strained does affect the particular baleen design. For example, the Arctic bowhead whale has a mouthful of 600 baleen plates, some measuring 15 feet in length. It uses these huge combs to capture tons of tiny organisms, ranging in size from that of a housefly to a grasshopper. Our Galiano humpback whale has about 300 two-foot long, stiff baleen plates adapted for fishing on shrimp-like euphausiids and small fish.

Humpback whales are great travellers, wintering in one location and summering in another. Their time and energy focuses on two important activities: eating and reproduction. Food and sex, though, typically do not occur in the same locale.

Researchers are working to sort out whale movements so that, among other things, they avoid counting the same whales twice when assembling population numbers. They have identified a number of groups, or stocks, in both the Atlantic and Pacific Oceans.

Two such groups are of interest when we consider the origins of the Galiano humpback. It is the whales from the Central North Pacific stock that cruise ship travellers see in Alaska during the summer. Abundant food in cold northern waters draws humpbacks and other whales to the north for as long as the light and food last. When light levels decline in the fall and food falls off, the humpbacks move to Hawaii for a winter of courtship and romance. This is when the whales sing.

The famous songs of the humpback whale likely relate to courtship. They may be a way for males to advertise their presence and prowess. While the gents are serenading, some females will end a year's pregnancy with the birth of a single calf. The new arrivals will be about 15 feet long and weigh 1½ tons. While adults live off their blubber reserves, food is not a problem for calves since they will suckle from their 40-foot long mothers for many months.

Our Galiano humpback might have been a stray from this Central North Pacific stock. Then again, it might have been part of another stock, known as the Eastern North Pacific stock, that summers off California, Washington and Oregon, and winters in Mexico.

Though humpback whales are a rare sight in the Strait of Georgia today, they are not unknown to the area. The Royal British Columbia Museum has records of sightings between 1929 and 1942. The decline after that time is attributed to commercial whaling on this coast. Humpback whales presented an easy target for whalers, as they were slow swimmers and accessible in their preference for coastal habitats.

In response to a world-wide decline in humpback whales, the International Whaling Commission declared all humpback stocks protected in 1966. Less than 10 years later, in 1975, the United States declared the humpback whale an endangered species, when only an estimated 60 humpback whales remained along the coast of southeastern Alaska.

There is no way of knowing how many humpback whales swam in the world's oceans before whaling began, but estimates put the number in the hundreds of thousands. And what about today? Some published reports estimate current numbers at between 4,000 and 6,000 world wide. But whatever the number, what is important to know is the direction that the numbers are going -- is the population increasing or declining?

The Galiano humpback was a rare and wonderful sighting. We, of the islands, are so very fortunate that someone was there to see and record the event. Who was this whale? What was it doing? Where was it going? Is its presence a good sign, a sign that whales long absent from the area are returning? Or is it a bad sign, an indication that food is disappearing from traditional feeding areas, the result of pollution or over-fishing, and that whales must travel farther in search of diminishing resources? Or could it be that the Galiano Humpback was simply a young adult marching (or rather swimming) to his own drummer, enjoying a detour and doing a little sightseeing?

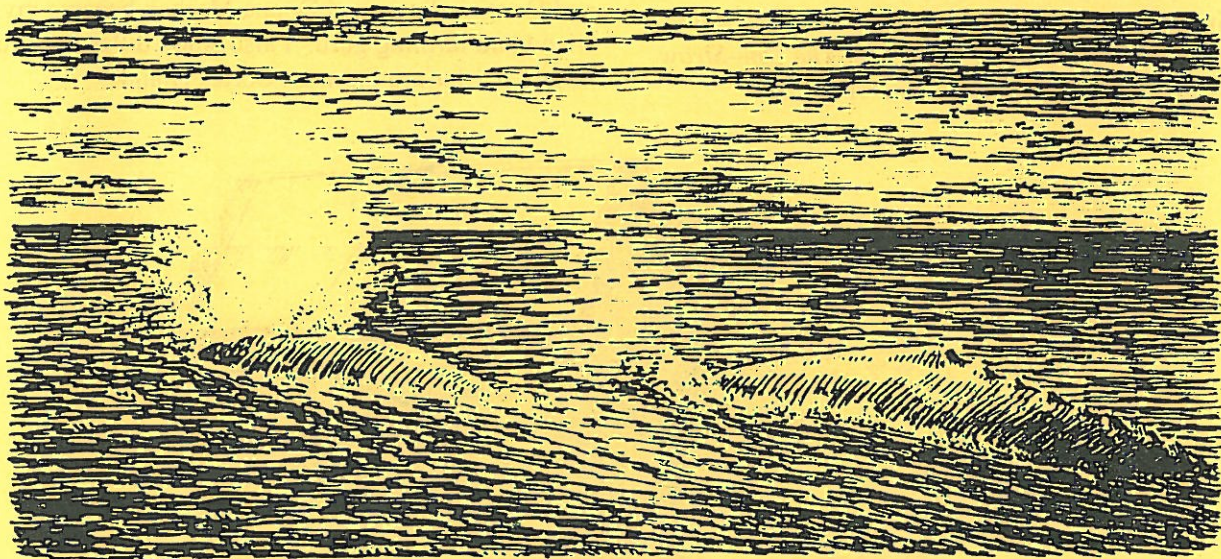
In the heyday of commercial whaling, there were no petroleum products, flexible steel, or plastics. Factories shaped the long thin baleen from the northern whales into corset stays, petticoat hoops and furniture springs. Known as whalebone, this baleen has nothing to do with a whale's bones!

Whatever the circumstances that brought this whale to our island, we should keep our eyes, ears and minds open, because animals are a special kind of messenger. Their movements and activities are the most honest and accurate gauge we have of the health or distress of our environment.

Animals are worth watching, not only for the enormous pleasure to be gained from observing wildlife in its natural habitat, but for what they might be telling us if we stop, record and reflect on what we are seeing.



View Stefan Brunhoff's stunning photograph of this magnificent visitor at the Conservancy office.



RN 91

Intaglio by Ronaldo Norden, 1991

The Wild Garden at Greenfrog Farm

by Rose Longini

Two bald eagles perched without moving on the branch of a cedar snag at the pond when I arrived at this place for the first time. The place had been left uninhabited and untended after the death of the previous owners, and the fields, orchards, and woods exuded mystery and abundance. The presence of eagles -- laughing at the lake or circling above me over the garden -- is always a living link to the life that was here before me.

The names associated with this place are Dyer, Jackson, Hardie, Morgan, Shields, Head, and then Charles Groth and Elizabeth Georgeson, who homesteaded in 1882. Before that, the people who left traces of their presence at Montague Harbour 6,000 years ago probably walked a half hour through the woods to find fresh water and edible plants on this land. And the raven who visits can still be called by her local Penelakut name, "Spaal! Spaal!"

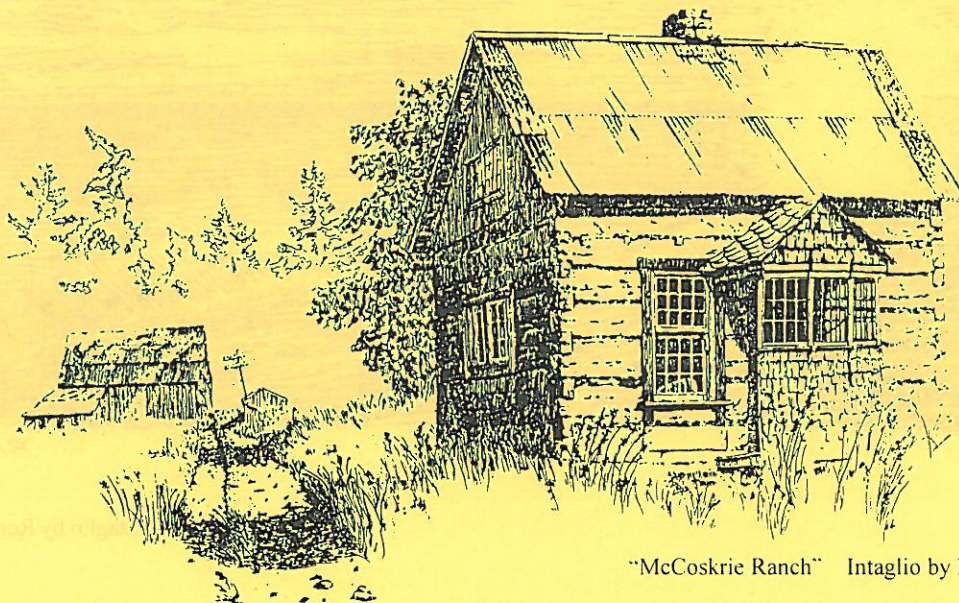
At first sight of the big pasture with its spectacle across the valley of the rock bluffs of Montague Hill, I decided to build a large house there. A land appraiser had told me that the soil was excellent, but I did not yet understand the value of a cleared field with excellent soil. Later, when I wanted to bring those pastures into food production, I was thankful that the plans to build a house on the field had failed. Instead, I renovated the two small houses that already existed, and found that they suited all my needs.

With lots of certainties about what I did not want to do, I began to grow food. I had read *The One-Straw Revolution*, by Masanobu Fukuoka, with great

enthusiasm. Fukuoka's message is: Co-operate with nature, observe one's own unique conditions, and use common sense -- that is, all of one's senses. He calls his principles the "do-nothing" method of farming. He suggests that people do a lot of unnecessary work and should frequently ask, *How about not doing this or that? The ultimate goal of farming, he says, is not the growing of crops, but the cultivation and perfection of human beings. To be here, caring for a small field, in full possession of the freedom and plenitude of each day, every day -- this must have been the original way of agriculture.*

Near his farm in southern Japan, Fukuoka had observed rice thriving in an abandoned plot. He then began growing food as it would grow without human invention or intervention. He broadcast rice seed as it might fall to the ground naturally; he returned the rice stalks to the field for soil nutriment, and alternated winter grains with the rice crop. He obtained higher yields than his neighbour, who tilled and fertilized his field.

Another influence on my thinking was the international movement concerned with sustainable methods of living and farming called Permaculture (permanent agriculture). It teaches that planting a diversity of species and study of ancient ways of farming are a remedy for the destructive effects of monoculture and agri-business. In 1990, Barbara Moore showed a Permaculture videotape at the school, and the seven women who attended formed a group who visited each one's garden. We went to see Hans and Donna's farm, and Donna Marben became my friend and farming guru. I also studied Permaculture design at Linnaea Farm on Cortes Island.



"McCoskrie Ranch" Intaglio by Ronaldo Norden, 1976

I wanted to grow the foods that are the basis of the macrobiotic diet that I eat: grains/ beans/ squash (called by the Aztecs “the three sisters”), greens and root vegetables, garlic. I began by making the least possible impact. I had read that in the tropical jungle, beans are grown by scattering (“broadcasting”) seeds, then cutting down jungle foliage, and leaving it to lie on top of the beans. In my first year, I broadcast beans onto the site of the old garden and scythed down grass on top of them. Later I found one bean seed that had germinated, and then lost track of it.

In the second year, I hand-dug circles in the sod and imitated the Aztec pattern: corn in the centre of a mound, beans around the corn to grow up the cornstalks and provide nitrogen for the corn; and squash on the perimeter of the circle to make a living mulch with its leaves. In that way, I grew some miniature vegetables. I had not yet learned that southwest Indian corn does not thrive here, whereas Mandan flour corn (from the Dakotas) does very well and can be ground into a beautiful flour for bread.

In the third and fourth years, I hand-dug extensive beds on the contour of the garden and irrigated in trenches dug parallel to the beds. Thus, I began to grow fairly substantial amounts of food, but the old garden site, even though I had let half of it go wild, seemed depleted and too dry.

In the fifth year, I broke new ground in the fertile valley by roto-tilling. Irrigation is gravity-fed and periodically floods across the garden beds via trenches dug on the contour of the land. This is a simple low-technology design that economizes water, and the slope of the hill into the valley gives increased water pressure.

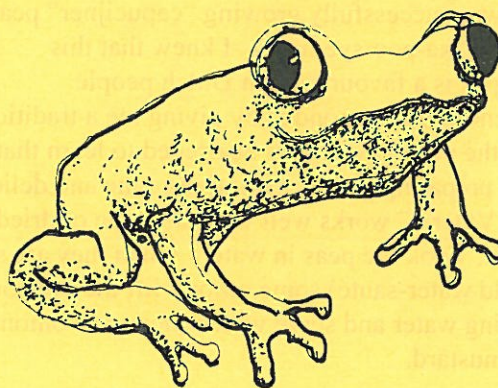
Deciding how much water to put on the garden, I err on the side of too little, preferring smaller, more intensely flavoured, more nutrient-rich vegetables to larger ones, which can be bland with too much water content. I suspect that too much water brings slugs and blights. Besides, I cannot forget that I am sharing a common source of water on this small, rocky island.

The irrigation trenches and beds take up only half the area of the garden; the other half is broadcast intensively with rye, Austrian pea, barley, quinoa, alfalfa, flax, radish, turnip, etc. That area indicates which foods can be grown without irrigation, and the intensive seeding will slowly change the area from predominantly grass to predominantly food.

In 1992, Greenfrog Farm became “certified organic” by Islands Organic Producers’ Association (I.O.P.A.). This is a way to exchange information

about food growing and selling, and a way to support the organic growers’ movement. I believe we have to provide an abundant alternative to food that has been pesticided, sprayed, irradiated, etc.

Becoming certified is also a way to make the community of Galiano aware that the maintenance of uncontaminated soil and water is an economic reality for growing good food. The healthy, mixed-species woods, wetlands and streams that surround my fields are dedicated to the present and future health of the farm and the island, and their diverse inhabitants.



Drawing by Jim Macdonald

In early July, the valley garden is a carpet of lush bean leaves, carrot tops, and masses of blossom: sky-blue flax, snow-white buckwheat, mauve radish, purple bean, yellow kale. The curving trenches that had ordered much of it have disappeared into the tangle, held together with plenty of blossoming weeds.

Weeds are part of the cycle of gardening, providing moisture for the germinating plants, a sheltering micro-climate as plants grow larger, and biomass to increase the tilth of the soil when they die. Dandelion and Lady’s Thumb, like fingers, work and aerate the soil. This year, I never got around to weeding the Lady’s Thumb out of one of my carrot beds, and the carrots there grew larger than those in the weeded beds.

In the autumn, there are beans of all colours drying in baskets in the sun, multi-hued corn and quinoa hanging from the rafters, and garlic hanging to cure in the shed. Then I hand-grind fresh grains for my bread. Beet tops, turnip greens, radish tops are dried and will be reconstituted in soups during the darkest winter, when garden greens are unavailable.

Nettle, dandelion, wild sorrel are better sources of magnesium and potassium than can be found in any drugstore.

Food is a multi-faceted joy: it is delicious; it is a daily preventive medicine; the body is exercised and restored in the garden; the soul is thrilled by fresh air, birdsong, the constantly changing forms and colours of the field. Preparing food, the dish is created as if for the first time each day, in response to what has been given.

Once, I found myself without warning in close quarters with my neighbour, Valerie van de Wint. There were just the two of us, and neither could escape. When she kindly asked after my health, I replied that I was well, and that I was successfully growing "capucijner" peas (pronounced "ka-poo-sye-nur"). I knew that this particular pea is a favourite with Dutch people.

She generously responded by giving me a traditional recipe for the peas. I was thus heartened to learn that her method of preparing peas is essentially sane and delicious. "Peas à la Valerie" works well with any type of dried bean or pea: cook the peas in water; when they are soft, fry (I would water-sauté) some onion; lift the peas out of their cooking water and serve with a mound of onions and some hot mustard.



When I noticed that the irrigation trenches would have to be shallower for the water to reach the smaller seedlings, I found it uncomfortable to dig a shallow trench with a 12" spade. So I kneeled down and burrowed, shoving soil from side to side, a bit like swimming in the freshly tilled soil.


To protect nut-tree seedlings from the deer, I made use of Scotch broom branches (deer will stay away from broom flower). By placing them round and round the seedling, I constructed a spiralling fence, feeling like a bird making a nest.

When I first tried to thresh the beans by placing them on the deck between two sheets and stomping on them, I understood immediately that the step needed a rhythm. It would need to be a dance -- the samba, perhaps? -- and when I caught a glimpse of myself in the mirroring deck window, my raucous laughter bounced off the Stockade Hill bluffs. Greenfrog teaches me to play, like the five-year-old who could not yet play like this.

For me "wild," means those places that are not exploited, possessed, claimed, tamed, altered, but just allowed to be in our midst. It is the source for the word "bewilderment," a state that we could enjoy more often. In the wild garden, it is often uncertain what is to be done next. Wilderness surrounds and permeates the garden.

The other day at lunch while drinking a tonic tea of Canadian Thistle just "weeded" from the garden, I was so absorbed in thought about an event that had occurred 2,000 miles away that I had become blind and deaf to everything around me. Then, at the edge of my perception, the shadow of an eagle wing swept the field and brought me back to this place.

When I try to count the layers of sound here -- many kinds of birdsong, insect buzz, leaf whisper, stream flow -- then the overpowering and relentless noise of airplane, chainsaw, diesel truck often intrudes. Those intrusions are increasing, and diesel fumes and smoke from slash burns sometimes these days hang in the cool evening woods.

I question whether those things that destroy our wilderness are normal, necessary, or inevitable. The wild places are disappearing fast on Galiano, and fading in the hearts of Galiano residents. But much of the time, I can still be right here in the breathing, silent moments of Greenfrog, utterly a part of it. 

Beginning a new series on...

COLLECTING AND USING RAINWATER

by *Dennis Olson*

In 1991 Gloria and I moved to Galiano. We had a partially completed house and a completed septic system, but we did not have a well. When we discovered the cost of having a well drilled, we decided to use rainwater as our source of water. As a confirmed do-it-yourself-er, I tried to figure out a system that would be economical and that I could make myself.

We got Fred Stevens to dig a cistern-sized excavation about two and a half feet deep. We had some used three-inch thick timbers and with these I built a box eight feet by twelve feet, and five feet high in the hole. Fred then backfilled around the box, piling the dirt up almost to the top of the walls. This made the container strong enough to withstand the push of the water from the inside.

We then lined the inside of the box with one-inch thick rigid insulation (also found second-hand) to create a smooth surface, and also to help keep the water cool. We bought a roll of extra heavy polyethylene, similar to the material builders use as a vapour barrier in houses. I draped this sheeting down into the box, stapling the edges to the top of the walls. I made a plywood cover, also lined with polyethylene, and a simple roof to keep out the rain. For about three hundred dollars we had a cistern that held approximately three thousand gallons of water.

From growing up on a farm, I knew that clean water keeps quite well in a cool dark cistern, so I decided that we should filter the water on its way into the cistern. We had a 16" by 20" plastic laundry tub which I cleaned, disinfected, and mounted on the wall of the house directly below a rainwater downspout. In the bottom of the tub, I put a layer of smooth beach pebbles that I had washed and also disinfected with household bleach. I covered the pebbles with a piece of landscape filter cloth from the lumberyard and then poured in a four-inch layer of filter sand from a swimming pool supply store.

The filter cloth kept the sand from washing out the bottom. The pebbles created a space under the cloth, so the water could drain away and out the bottom of the tub through a piece of plastic plumbing pipe and into the cistern.

I next built a small compartment between the house and the cistern and installed a pressure tank and pump. A small pump was adequate because it did not have to raise the water out of a well.

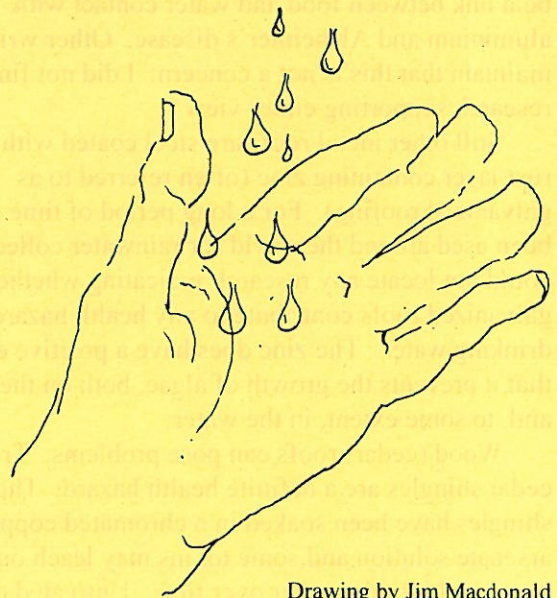
We now had a functioning water system for under one thousand dollars. We tested the water periodically to make sure it remained safe to drink. It also tasted great.



This account of our experience may make rainwater collection look like an ideal solution for water-strapped Gulf Islanders. After four years, however, we spent a considerable amount of money and had a well drilled. Why? There were a number of reasons. One problem was inadequate storage capacity. The biggest drawback was the amount of work it took to maintain the system and the ongoing concern about ensuring water purity.

It is certainly true that rainwater is a viable source of water for domestic use. It is also true, however, that rainwater collection is not necessarily cheap. Moreover, it is a system that requires consistent and careful maintenance, particularly if the water is to be used for drinking. Because of these factors, most people would choose a well, if they have that option. For homeowners whose wells are contaminated or who cannot find water, rainwater is a possible source of domestic water. Others may wish to find a supplementary system to reduce the volume of water pumped from a still-satisfactory ground water system. In any case, most important is the commitment to spend the required time and money on maintenance.

This article discusses topics concerning water collection and storage. While primarily directed to the individual who might wish to collect rainwater, some more general information addresses water storage and water purification.



Drawing by Jim Macdonald

SAND FILTER

FIBREGLASS LAUNDRY TUB WITH 1" OF WASHED PEBBLES IN BOTTOM COVERED WITH FILTER CLOTH & 4" OF FILTER SAND. PLACE ICE CREAM BUCKET LID DIRECTLY UNDER INCOMING WATER TO AVOID WATER WASHING A HOLE IN SAND.

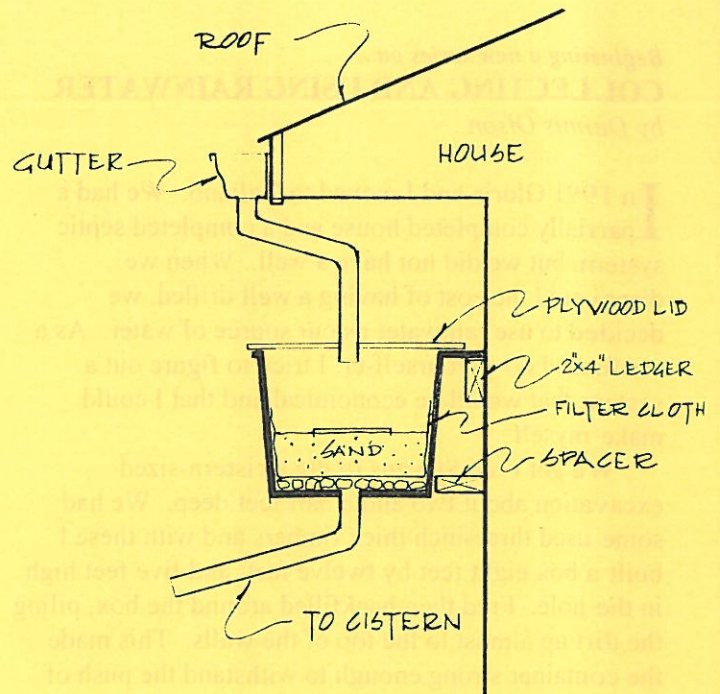
Part 1. Collecting Rainwater.

The most common way to collect rainwater is to save the water running off the roof of a house or other building. My mother simply set a tub below the eaves to catch rainwater for washing hair. It is a simple step further to install eavestroughs and a pipe to carry the water to a tank or cistern. If the water is destined for the garden, nothing more is required. If the collected water is for drinking, there are a number of other concerns. Air-borne pollution may be a problem. Drinking water must be free of unhealthy concentrations of particular minerals and trace elements. It must also be free of disease-causing bacteria, viruses and parasites. As well, leaves and other material in the water may affect the taste and promote the growth of algae.

An important consideration is the choice of roofing material. Generally regarded as the best is the standard metal roof, which is steel coated with an epoxy paint. The epoxy paint is quite stable and the surface is fairly easy to clean. Some metal roofs are aluminium. A few writers have suggested there may be a link between food and water contact with aluminium and Alzheimer's disease. Other writers maintain that this is not a concern. I did not find any research supporting either view.

Still other metal roofs are steel coated with an anti-rust layer containing zinc (often referred to as galvanized roofing). For a long period of time this has been used around the world for rainwater collection. I could not locate any research indicating whether galvanized roofs contribute to any health hazard in drinking water. The zinc does have a positive effect in that it prevents the growth of algae, both on the roof and, to some extent, in the water.

Wood (cedar) roofs can pose problems. Treated cedar shingles are a definite health hazard. These shingles have been soaked in a chromated copper arsenate solution and some toxins may leach out of the wood and into the water over time. Untreated cedar shingles may be better, but tannins and other



substances leach out of the wood and into the water, especially when the shingles are new. Older cedar shingles may be acceptable for collecting drinking water, but again I could not find any authoritative evidence.

Our own roof has asphalt (duroid) shingles. We were concerned that water running off asphalt shingles might not be fit to drink because of solvents or other toxic materials used in their manufacture. Again, we did not find any research or recommendations to guide us. We did take some comfort in the fact that B.C. Ministry of Health guidelines include the use of asphalt to seal around wells. Water tests showed no detected toxins or concentrations of trace elements, so we did drink the water. Over the four years the only negative effects I noted were weight gain, loss of energy, loss of memory and what Garrison Keillor referred to as "the diminution of the marital impulse." Humour aside, I still have not located any research evaluating the quality of water from asphalt roofs, so I can only say that we are not aware of any related health problems.

Apart from a roof, all that is needed to collect the water are the eavestroughs. These can be wood, aluminium or vinyl. Treated wood troughs should obviously be avoided. If you are concerned about the aluminium you can either use aluminium gutters that have an epoxy paint coating on the inside, or gutters made of vinyl. On the Gulf Islands a problem often arises with gutters collecting leaves and needles. If the collected water is for drinking, then you must clean the gutters regularly.

Part 2. Storage Systems.

Many islanders store water for one reason or another. There are a number of people on Galiano who collect and store rainwater for domestic use. Many others collect and store rainwater for use on a garden. Some also store water for use in emergencies. This might simply be some containers of water for use during a power failure or to have in the event of an earthquake or other emergency. In other instances, individuals may wish to store larger amounts of water either as a back-up supply in the case of a well failure, or for longer term use in the event of an emergency.

If the goal is simply to store some water for an emergency, then either used gallon jugs or used 45-gallon vinyl juice barrels are convenient and economical. The used juice barrels are advertised from time to time in newspaper want-ads. They need to be cleaned and rinsed thoroughly, but they do come with tight fitting covers for the openings.

The easiest way to acquire storage space for larger amounts of water is to buy a tank. Vinyl ones are the most economical. In the past John Sibbald provided many islanders with tanks; this service is now continued by Dave Gerlach. Galiano Trading Company is also a source for similar tanks. Stainless steel tanks are available and do have some advantages. They are long lasting and easy to clean, but their much higher cost puts them out of reach of most homeowners. If vinyl tanks are used to store rainwater for domestic use, it will probably be necessary to have more than one to make up the required capacity. This is not a disadvantage and is in fact preferable. If there is only one tank or cistern, it means that there is no water in storage at the times the tank is emptied for cleaning. If there are two tanks, one can be cleaned while the other is being drawn.

An above ground swimming pool makes a very economical water storage tank. These can often be

found second hand in the classifieds. They should not be used for drinking water because the vinyl has been treated to inhibit algae growth, and these toxins are slowly released into the water. They are acceptable for storage of water used for bathing, clothes washing, toilet, etc. They can also be used to store water for use on the garden. A roof should be constructed over them to help keep the water clean. A pool twenty feet in diameter and four feet high will hold almost eight thousand gallons of water.

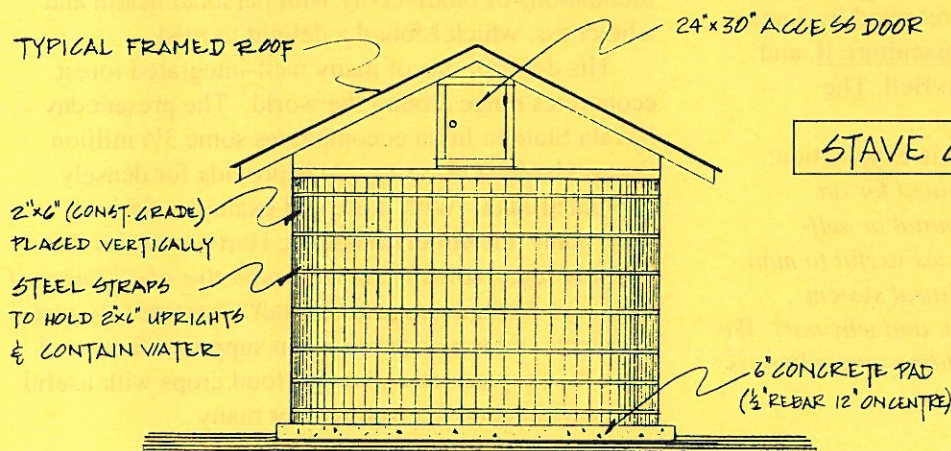
A number of people on Galiano have above ground cisterns constructed of lengths of 2" by 6" lumber placed vertically in a circle like a giant old-fashioned wooden barrel. Steel hoops are placed around the tank to hold the staves in place and to resist the outward push of the water. The tank can rest either on a bed of sand or a concrete platform.

A liner is placed inside the tank to make it waterproof and to keep the water clean. If the water is to be used for drinking, the liner must be made of agricultural grade material. This material is suitable for use with potable (drinking) water. Construction grade polyethylene (sold in rolls at the lumberyard for vapour barrier, etc.) is also acceptable for storing potable water and is very economical. Adhesives do not adhere to it and consequently it is very difficult to make seams. It does, however, come in twenty-foot wide rolls and can be simply draped down into smaller tanks.

A top should be made for the cistern to keep out mice and insects, and a roof should be constructed to keep off the rain. Tanks of this sort are economical if you can do at least some of the work yourself. There is a tank like this at the rear of St. Margaret's Church.



In the next issue: Part 3. Water Purification and Part 4. How Much Water Do You Need?



REVIEW:

Forest Gardening: Cultivating an Edible Landscape by Robert Hart. White River Junction, Vermont: Chelsea Green Publishing. 1996.
reviewed by Gary Moore

A map of the world that does not include Utopia is not worth glancing at.
-- Oscar Wilde

In an age of fast-increasing world population and likely diminishing resources upon which to live, humanity at the Millennium is challenged to adopt new ways of living and thinking. The planet will probably survive and recover from the relatively minor changes we have caused in the earth's equilibrium over these last few centuries. However, if we do not adjust ourselves, much of life on earth, including humans, is threatened.

Bad news is not hard to find. It becomes more and more difficult to remain complacent when it is so obvious that the world is in trouble. How did we get here? One of Permaculture's founders and a leading proponent, Bill Mollison, maintains, "Evil is just rigorously applied stupidity -- a refusal to know what you know." If the best way to counter evil is to further the good, then education and knowledge can indeed help to change the world. Where to begin? Perhaps, simply, with a good idea, as has Robert Hart in Forest Gardening: Cultivating an Edible Landscape.

A new way of thinking may indeed be arising out of necessity. Incorporating many good ideas from many disciplines, the art/science/study of Permaculture offers a framework for living that is based on common sense. Permaculture is NOT Bovine Growth Hormone, Terminator Seeds, Round-up Ready, Monoculture, the Multilateral Agreement on Investment, or Globalism. But what IS Permaculture? Our first references to a Permanent Agriculture, or Permanent Culture, are in the early work of Bill Mollison and David Holmgren, represented by some large works, Permaculture and Permaculture II, and also in a smaller volume by Graham Bell, The Permaculture Way.

Mollison and Holmgren offer this explanation: *Permaculture is a word we have coined for an integrated, evolving system of perennial or self-perpetuating plant and animal species useful to man. It is, in essence, a complete agricultural system. . . . Perhaps we see the Garden of Eden, and why not? We believe that a low-energy, high-yielding agriculture is possible for the whole world.*

A less formal but equally comprehensive classic is Forest Gardening by Robert Hart, a Shropshire gardener, teacher and writer. Recently reprinted and adapted to the North American context, Hart's book is a cornucopia of inter-related essays that present a comprehensive outlook and guide to personal action. It is a wonderful book that finds ready application here on the Gulf Islands.

Many among us are actually practicing old knowledge from a bygone era of self-sufficiency and local interdependence. These skills are becoming more and more valuable as our confidence in high-technology global systems is shaken by Storms-of-the-Century, El Niño, Monsanto, and Y2K.



On a small acreage in Shropshire, in an ancient landscape that he knows and describes intimately, Robert Hart and his brother have created what sounds like a visionary Shangri-La. Over many years, they have attempted *to create a model life-support system, which would enable a family or small community to achieve a considerable degree of self-sufficiency in basic necessities throughout the year, while enjoying health-giving exercise in a beautiful, unpolluted, and stimulating environment.* In a sensitive study of many global examples of permacultural living, Hart projects the possibilities of his own "Mini Forest" for *the evolution of an alternative, holistic world order.*

On page one of Chapter One, entitled "Towards a Forest Economy," Hart asserts convincingly, *The only basic and comprehensive answer to the colossal harm that our present industrial system is causing to the global environment . . . is to replace it with a sustainable system, geared largely to the non-polluting, life-enhancing products of the world.* Beginning with a description of his land and the Shropshire countryside, Hart gives an impression of this landscape over time, and how history is written there. In these early chapters, he interweaves the foundations of biodiversity with personal health and wholeness, which I found a delight to read.

His descriptions of many well-integrated forest economies range around the world. The present day Kerala State in India encompasses some 3½ million Forest Gardens. Homegardens provide for densely populated Java. With these and examples derived from many ancient civilizations, Hart concludes that *The forest garden is the most productive of all forms of land use.* Most average about half a hectare (1¼ acres) in extent, and this small area can support a family of up to 10 people. Inter-planting food crops with useful native plants and trees allows for many

useful plants to be grown in a “layered” forest garden with seven stories. Hart’s “ordered diversity” mimics a natural forest. At the same time, many economic uses of forest garden materials are possible.

Chapter by chapter, Robert Hart deals with practical challenges of design and maintenance of a forest garden complex; water considerations; companion planting; heavy uses of perennials and native plants; energy sources; and the importance of practicing a craft. One of Hart’s many sources is Gandhi, who founded his system of basic education on the practical experience of “learning through doing. It recognizes the organic connection between the fingers, the senses and the

mind, and the greater vitality and retentiveness of knowledge that is gained by doing things and making things than by merely reading books or listening to lectures.”

By sampling interesting world examples, Hart illustrates his points and builds a theory of permaculture, organic gardening and forest ecology that is readily transferable to our climate. This North American edition also includes an interesting appendix of temperate species which offers enlightenment by itself.

In the forward to this edition, Benjamin Watson writes, *anyone with a little imagination can picture their own home landscape as it is today and as it might look if planted with fruit trees, shrubs with edible berries, and perennial herbs and vegetables.*

And to round out his vision Hart concludes with a description of a vast interconnected network of forest gardens around the world. Indeed, he says, *many of us, however small our gardens and however limited our qualifications, can participate in this vital movement.*

In “Where Do We Go From Here?” he reasons, *It is less than 150 years since the Industrial Revolution began. . . . Before that time, humankind had satisfied almost all its basic needs direct from Mother Earth. . . . So there is no need to feel anxiety or regret about the imminent decline and fall of the Industrial Age, however many discomforts and dislocations it may involve.*

We can look forward to a new twist in the spiral of world progress, when much that is best in the past, such as many forms of traditional agri-forestry, are rediscovered and find new applications in the light of modern science, while being combined with what is best in modern technology, mainly in its ‘appropriate’ or ‘intermediate’ forms.

Given the natural bounty of our own Gulf Islands, a growing network of protected areas and the continued possibility of a Galiano Community Forest, we are challenged to find ways to co-operate and share for our mutual well-being. We have many resources at our disposal.

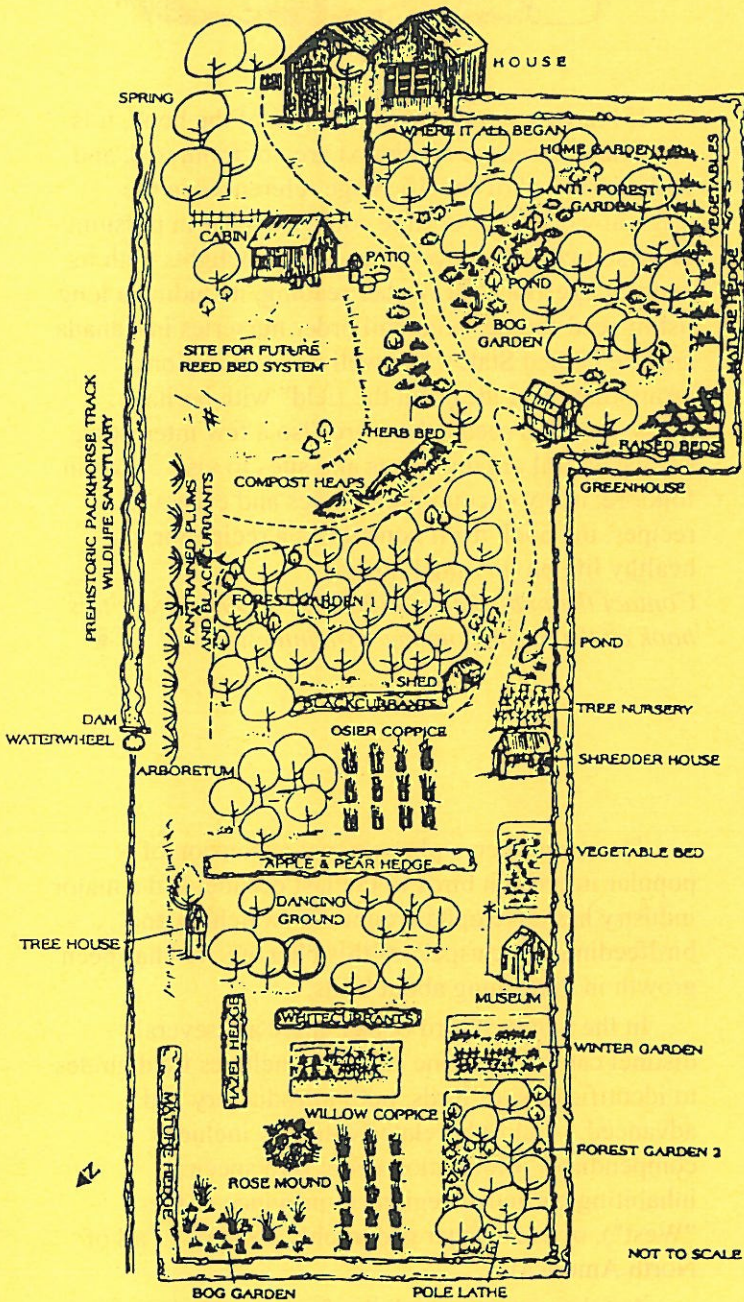
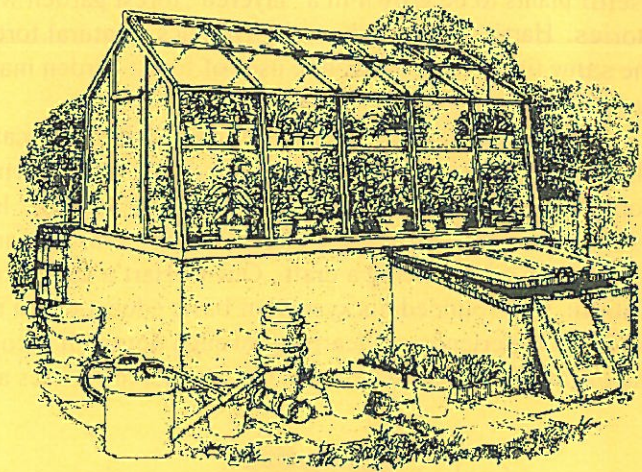


Illustration from *Forest Gardening* with permission

Consider our chances for self-sufficient, sustainable island life and economy in light of Hart's description of a little known phenomenon which took place in Sweden during World War 2. Finding itself isolated from external sources of supply, Sweden managed to achieve almost complete self-sufficiency, while maintaining a high standard of living, by extremely intelligent and creative application of its forest resources.

Factory complexes, powered by wood or wood products and centred on sawmills, turned out textiles, building materials, synthetic rubber, synthetic leather, paints, varnishes, soaps, adhesives, and other essential industrial goods, while a fair proportion of the nation's protein requirements was met by torula yeasts nurtured on wood sugar. While millions of Britons subsisted largely on Spam, one of the standard delicacies of the Swedes' wartime diet was "hamburger" made of cellulose-bif.

Motor vehicles of all kinds were adapted to run on wood generators. From the waste sulfite liquors of the pulp industry, 25 million gallons of ethyl alcohol were produced per year...as motor fuel. The old art of wood distillation was revived to supply motor lubricants. Tar and pitch distilleries supplied a wide range of industrial and even edible oils. By 1944 Sweden's forests were producing practically everything that the country had previously imported, except tea and coffee, and it was the only nation in Europe with higher food rations, warmer houses and more hot baths than in 1941.



If I have a single small criticism of the book, it is only that references in the text are not footnoted, and without the aid of specific page references in the original work, a lot of time could be spent in pursuing these sources. However, this edition delights with its many suggestions for further reading, including a long list of seed sources and mail order nurseries in Canada and the United States. As well as organizations promoting good ideas "in the field" with heritage fruits, nuts and seeds, there are also a few interesting permacultural organizations and sites to visit. Rich in folklore, many encouraging stories and even a few recipes, the book itself constitutes a recipe for a healthy life on this small planet.

Contact the publisher at (800) 639-4099 to order this book or the accompanying 45-minute video. 🐦

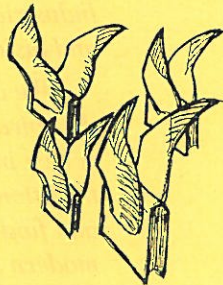
REVIEW:

A FLOCK OF BIRD BOOKS

by Mike Hoebel

In spite of their everyday familiarity, birds remain mysterious. They appear as potent symbols in the mythologies and folklore of all human cultures, both past and present. Although our modern society tries to rationalize the natural world into explainable boxes, there is something extraordinary about birds that keeps escaping and intriguing us.

How do they fly? Where do they go when they leave? How do they find their way back? Why are there so many different kinds? Why are they so colourful? What are they singing about, anyway? And, even more profoundly, what can we learn from them, what is the meaning of birds?



There has been a phenomenal expansion of popular interest in birds in the last decade, and a major industry has developed around birdwatching and birdfeeding. One aspect of this phenomenon has been growth in publishing about birds.

In the world of bird books, there are several distinct categories. One category includes field guides to identification of birds, both introductory and advanced. A closely related category includes compendia of information about bird species inhabiting particular regions (a province or the "West"), or even larger geographic areas (e.g., all of North America).

Another category includes basic ornithology books about bird biology, evolution, and ecology, written for

the non-academic audience. Yet another category includes all the "coffee table" books about birds -- gorgeous presentations about the colourful variety of birds and their natural habitats.

The focus for this review, and the first book discussed, is a book that does not fit neatly into any of the categories. Later, several other excellent bird books more typical of the categories will be briefly described.



Birdwatcher's Companion by Janann V. Jenner (1991, Mitchell Friedman Publishing Group), is a unique bird book. Although it is not a field guide to bird identification, this book successfully combines elements of an introductory ornithological text, a how-to guide to birdwatching, and a description of human-caused environmental degradation and its impact on wild birds. All this is presented in a beautifully designed, stunningly photographed, large format, coffee-table style publication of modest length (176 pages, including appendices).

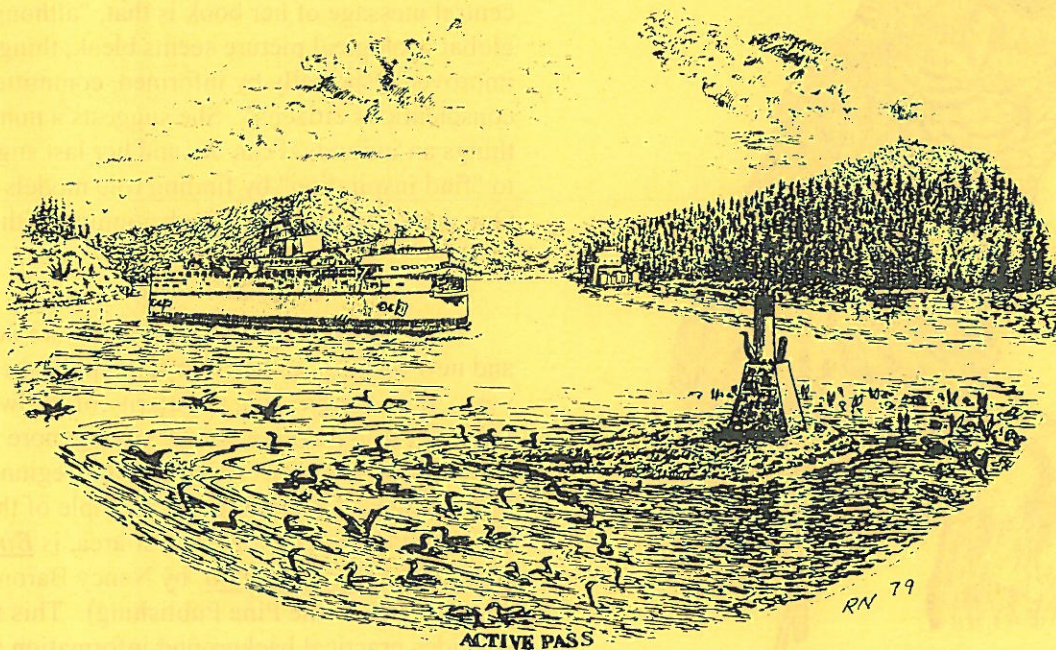
Jenner provides fascinating and concise overviews of a number of avian features. For example, she illustrates and describes the different types of bird feathers and their functions, and explains why birds spend so much time preening these amazing structures. They use their beaks to constantly zip together the "barbs" of feathers that become unhooked from each

other in flight, in order to maintain the extremely light but strong lifting structure of the flight feathers and the wings.

Birds also need to waterproof all their feathers by spreading oil from the preen gland located at the base of the tail, in order to preserve the insulating capacity of their outer covering. This is especially important in water birds, which is why it is so surprising that cormorants lack the preen oil gland. This is the reason cormorants can often be seen on pilings holding their wings out from their bodies -- they are drying them off in the air because otherwise the feathers would become soggy and useless.

Although we have a good understanding of the physics involved in flight, and know that individual feathers as well as wings themselves act as airfoils and create lift on both the wing's downstroke and the upstroke, Jenner notes that we don't completely understand how birds fly. Similarly, she describes the adaptation to preferred habitat and feeding behaviour that different wing shapes represent, and at the same time points out that we don't have a clear picture of how flight evolved in the first place. The uncertainty we have about even these most basic aspects of bird biomechanics and evolution just underscores the wonder we have about what birds are and how they work as flying systems.

There is much, much more in these pages. For example, did you know that birds are more efficient



"Collinson Reef" Intaglio by Ronaldo Norden, 1979

than mammals in extracting oxygen from air? This is due to the bird lung system -- incoming air is diverted from the lung first to one set of "air sacs" and then to another for a double extraction of oxygen. Combined with rapid breathing, this system allows birds to fly higher (and longer) than would otherwise be possible. And have you ever wondered about that bright red spot on the bill of adult gulls, including our familiar Glaucous-winged Gull? Gull chicks use it as a target and by pecking at it, they can induce the adult to regurgitate a meal for the chick.

The birdwatching equipment section of the book goes into considerable detail about the optics and selection of binoculars and how to use them for viewing birds. This is followed by a discussion of field guides and the importance of keeping detailed field notes, capped off by a description of birding through the seasons. Another section provides good advice about finding birds in different types of habitat, including the city. Birders should always check the "edges" where one habitat type meets another (e.g. woodland and meadow), because these are often the richest areas for birds. This how-to portion of the book also provides a concise discussion about birdfeeders and selecting foods to attract birds.



Barred Owl

Jenner's book concludes with a wide-ranging overview of the impact of humans on wild birds. She divides the threats to bird populations into two types -- those which are "easy fixes", at least in theory, and more intractable problems. Included in Jenner's easy fixes are reduction of chemical poisons in the environment (e.g. DDT, PCBs, and lead poisoning due to birdshot), banning introduction of aggressive alien species (e.g. starlings), and mitigating domestic cat predation on wildbirds. Jenner includes acid rain in her easy fix category, apparently because we know a lot about how to stop this environmental insult, and action is already being taken by governments to address it. Curiously, she also includes loss of wetland habitat among the easy fixes, even though the world has lost half of its wetlands to development already.

Although some would disagree that the threats in Jenner's first category are easily fixable, there would be little disagreement about what she terms "the central ecological problem" -- the human population explosion. Jenner describes the resulting world-wide deforestation, global warming from emission of "greenhouse" gases, and severe threats to the planktonic base of the marine food chain caused by increased UV radiation resulting from chlorofluorocarbon (CFC) damage to the atmospheric ozone layer. Even here she finds reason for hope, in the international initiatives underway to reduce CFC use.

Jenner is clear about the overall trend towards decline in world bird populations, and laments the species that have been lost forever. Nevertheless, the central message of her book is that, "although the global ecological picture seems bleak, things can be improved, especially by informed, committed, conscientious citizens". She suggests a number of things an individual can do, and her last suggestion is to "find inspiration" by finding role models to emulate. One would not go wrong by beginning with Jenner herself.

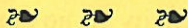


Field guides to bird identification are numerous, and new ones, or new editions, are published each year. With the growing popularity of birdwatching some of these field guides are getting more technical, while others are clearly aimed at the beginning birdwatcher. A superb recent example of the latter type, written specifically for our area, is *Birds of Coastal British Columbia* by Nancy Baron and John Acorn (1997, Lone Pine Publishing). This field guide provides practical background information about birdwatching and selection of equipment, but its real

strength lies in its bright illustrations of about 200 species, accompanied by more information and interesting facts about each species than is normally found in field guides.

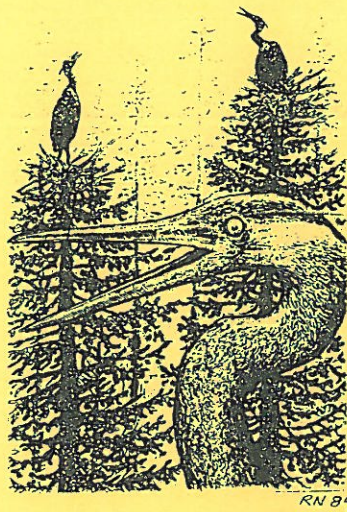
For example, we learn that North America's largest wintering population of Pacific Loons is found in the southern part of the Strait of Georgia, with many congregating in Active Pass. Fully 90% of the world's population of Barrow's Goldeneye winters along the B.C. coast, again with Galiano waters being a favourite hangout. Galiano Islanders are familiar with the whistling sound made by the wings of these ducks as they fly overhead. Goldeneye, like other attractive overwintering ducks such as Buffleheads, shift to a completely different habitat during the summer and nest in tree holes along the shores of inland lakes.

Other fascinating tidbits about locally familiar birds are interspersed throughout this guide. For example, the closed-wing aerial dive (stoop) speed of a Peregrine Falcon attacking another bird can exceed 250 kilometers per hour. Also, Belted Kingfishers teach their young to dive for food by dropping dead fish in the water; early arriving Tree Swallows will eat seeds and berries if insects haven't yet emerged; and Rufous Hummingbirds will associate with Red-breasted Sapsuckers in order to tap the ringed sap holes made by the latter species (as will our most common warbler, the Orange-Crowned). The Common Raven, the world's largest songbird and a daily presence on Galiano, mates for life.



An example of a book written expressly as a companion to field identification guides is *The Birder's Handbook* by Paul R. Ehrlich, David S. Dobkin, and Darryl Wheye (1988, Simon & Schuster). This thick paperback contains an amazing amount of biological data about 650 bird species that nest in North America, using small print, symbols and abbreviations to cram it all into the book's 785 pages. For each species, information is provided about nest type and location, nest building, breeding behaviour, egg type and incubation, diet and feeding of young, and conservation status.

A feature designed to break up the condensed data about individual species is a series of dozens of short essays about bird biology, behaviour, ecology, and conservation interspersed throughout and cross-



referenced to each other and to the species accounts. Adding to the value of this book is a comprehensive bibliography, and as is necessary in a book of this type, a detailed and clear index.



A more recent book, designed to be a companion to the well-known Peterson field guide series, is *Lives of North American Birds* by Kenn Kaufman (1996, Houghton Mifflin). This 675-page hardcover reference work covers all the species that the

Handbook does, and more. Like the Ehrlich book, Kaufman's is not intended to be carried into the field. Bird families are characterized succinctly. A very good photograph, plus a small range map, accompanies each species' life history. Summaries describe habitat, diet, behaviour, nesting, migration, and conservation status of each species. This highly readable book is very well-laid out.



For serious birders seeking detailed information about distribution, seasonal occurrence, and nesting records of British Columbia bird species, nothing can compare to the three-volume *The Birds of British Columbia* by R. Wayne Campbell, Neil K. Dawe, Ian McTaggart-Cowan, John M. Cooper, Gary W. Kaiser, Michael C. E. McNall, and G.E. John Smith (Vol. I, 1990; Vol. II, 1990; Vol. III, 1996; UBC Press). A fourth and final volume of this magnificent series is expected in 1999.

These reference volumes are large format and heavy, each running about 700 pages. Full page distribution maps document each species, as well as photographs of selected species and their habitats, and numerous data tables and graphs. Exhaustively detailed information describes each species' range, breeding status, and the frequency with which it has been observed at different times of the year.

Most of the observational data was collected by birdwatchers, rather than professional biologists, which demonstrates the importance of amateur naturalists. Participation throughout the province in events such as the annual Christmas bird counts (including Galiano) provide such vital records. B.C. birders are very fortunate to have this extraordinary series about bird life in our province. 🐦

These books can be found in the Conservancy library. A grant from the Galiano Island Parks and Recreation Commission will add to the birders' collection.

REVIEW:

SPELL OF THE SENSUOUS by David Abram

Vintage Books, 1996.

reviewed by Rose Longini

David Abram holds a doctorate in philosophy and is also a sleight-of-hand magician. He has received prestigious fellowships to live and trade magic with indigenous peoples of Asia and the Americas. His writing is a praiseworthy balance of clearly stated scholarship and poetically expressed understanding.

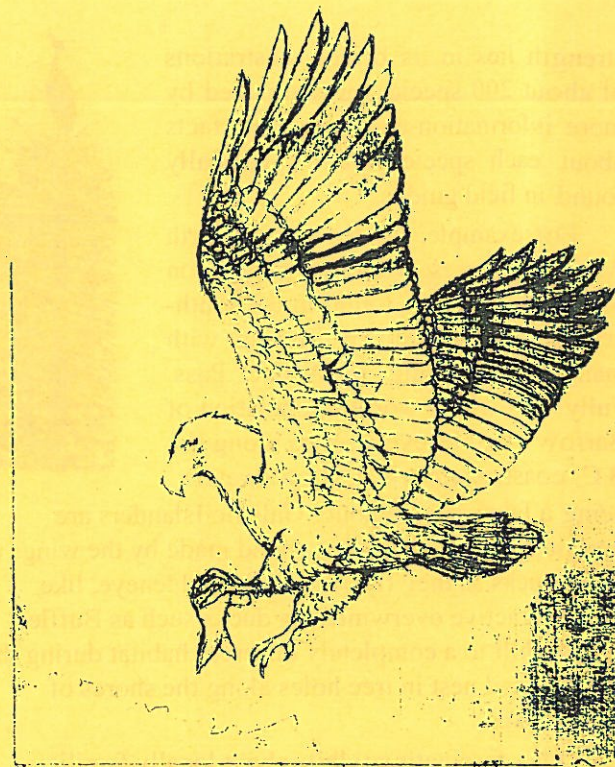
The stated intention of this book is to provide helpful concepts for environmental activists, and to dispel the indifference among the academic community to the current gulf that exists between modern humans and the rest of nature. James Hillman comments on the dust jacket, *I know of no work more valuable for shifting our thinking and feeling about the place of humans in the world.*

Abram asks us to trace our alienation from nature: *If human discourse is experienced by indigenous, oral peoples to be participant with the speech of birds, of wolves, and even of the wind, how could it ever have become severed from that vaster life? How could we ever have become so deaf to these other voices that non-human nature now seems to stand mute and dumb, devoid of any meaning besides that which we choose to give it? . . . How can we account for our culture's experience of other animals as senseless automata, or of trees as purely fodder for lumber mills?* Some suggest that human nature is exploitive, but Abram writes about long-established cultures that have lived in harmony and reverence with other species.

The chapter headings seem exotic at first, but we discover that they refer to our common and familiar experience: The Ecology of Magic; Philosophy on the Way to Ecology; The Flesh of Language; Animism and the Alphabet; In the Landscape of Language; Time, Space, and the Eclipse of the Earth; The Forgetting and Remembering of the Air; Coda: Turning Inside Out. Let's look into some of Abram's reflections.

In the first chapter, Abram explores the traditions of the medicine people of rural Asia as an "ecology of magic." They live at the edge of human community and practice their rituals and prayer to ensure that the relation between human society and the larger society of natural beings is balanced and reciprocal.

The village must never take more than it returns. The shaman has a broad and deep awareness of the landscape, that is *the living dream that we share with*



Drawing in preparation for clay sculpture by Ronaldo Norden

the soaring hawk, the spider, and the stone silently sprouting lichens on its coarse surface. The medicine person cannot fill this role without long exposure to wild nature.

Seeking the reason for our modern habit of treating each other and the rest of nature as "objects" to be manipulated at will, Abram turns to philosophy for clues. He gives an account of the startling observations of the phenomenologist philosophers Husserl, Heidegger, and Merleau-Ponty, who argue that what we call "objectivity" is no more than a majority opinion. They saw a world of "subjects," each relating with its environment from its own point of view and unique experience of life. They concluded that anyone who does not recognize this "subjectivity" of a tree, an animal, a wife, a child, is either unable or unwilling to fully perceive other organisms.

Abram's discussion of the connection between language and "place" is extensive and varied. For the Australian aboriginal, land and language are inseparable. In the aboriginal "storylines," place is all-important; every feature of the place is part of the story. But we have been **displaced**, and some modern stories are set without a place at all. The motif of exile in the Bible suggests to Abram that the sense of displacement, of being always in exile, is the state of alphabetic literacy.

The air was once considered a sacred presence. In Genesis, God breathed air into Adam; the Hebrew word "neshemah" means both "breath" and "soul." For the Navajo, the Winds are the expression of the inexhaustible mystery; the individual's personal Wind participates with the invisible Wind all around. In our western culture, however, the "psyche" (Greek word meaning both "breath" and "soul") is considered immaterial, isolated, trapped within the human body. This is the condition Abram calls "forgetting the air."

The meaning of the book's title emerges: Language arises from our human perception and participation with the world. On the whole, indigenous peoples and our ancestors were able to directly perceive what they saw, heard, felt, smelled, tasted. By contrast, we moderns cast a spell of preconceptions and concepts -- derived largely from written language -- on the world.

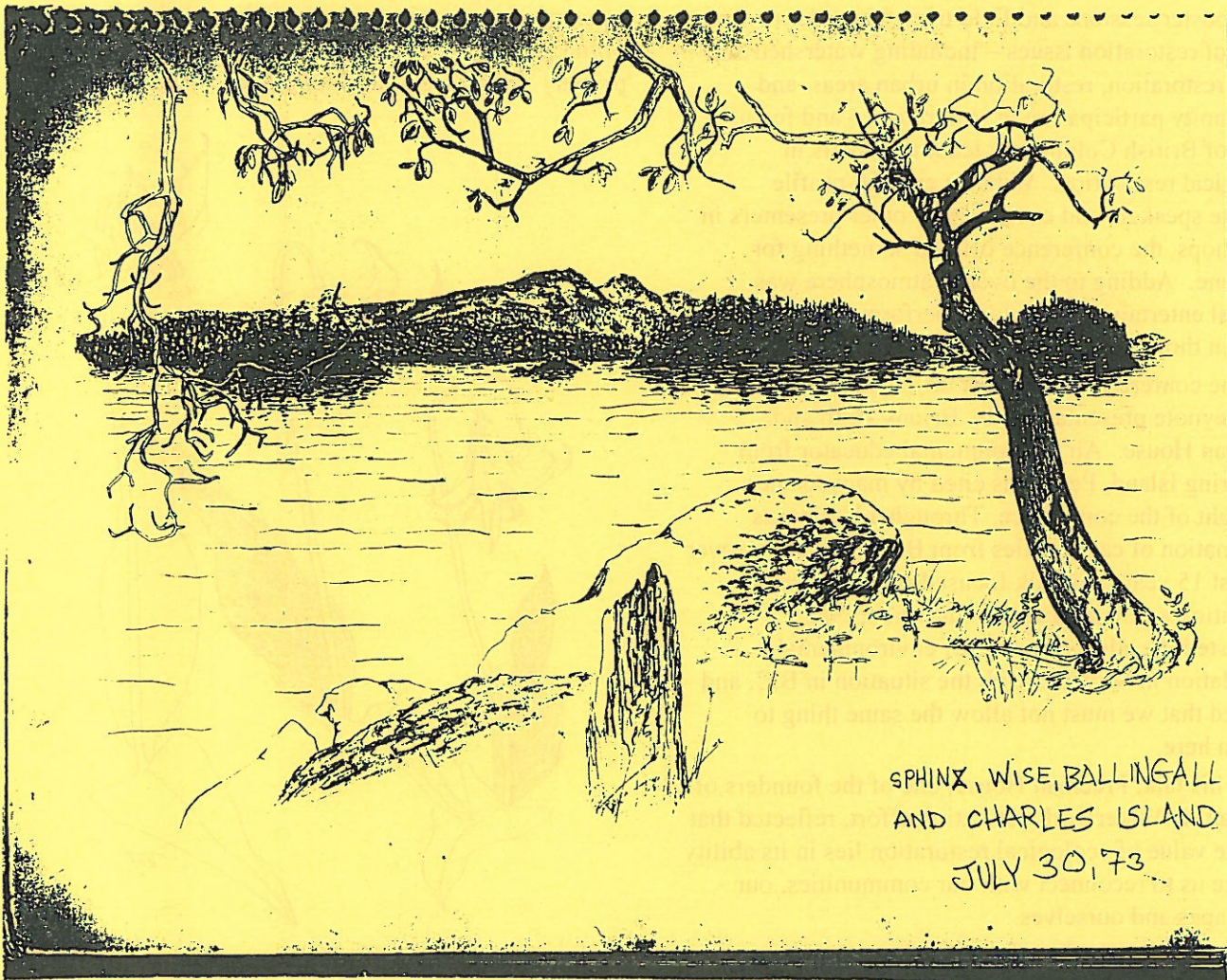
Abram does not suggest that we return to pre-alphabetic life. Rather he hopes that we will complete

a cycle by remembering our ancient knowledge and appreciate the implications and limitations of our modern technologies. When we recognize the depth of our inner connection with the terrain that surrounds us, we begin to turn "inside out."

This book is rich with examples of aboriginal and ancient ways of living and speaking. Relevant discussions about the history and development of language and philosophy provide important clues to the continuity and significance of our modern concepts. Abram offers a very plausible explanation of why we abuse our earth and ourselves.

From the book's final page, I circled back to the beginning and reflected on the poem by Gary Snyder on the dedication page:

*As the crickets' soft hum is to us
so are we to the trees
as are they
to the rocks and the hills.*



Pencil drawing by Ronaldo Norden, 1973

REPORT:

B.C.'s First Ecological Restoration Conference

by Jodi Klippenstine, Brian Egan and Kathi Cooperman

In early November, over 400 people from across British Columbia converged on Victoria for the first provincial conference on ecological restoration. The primary purpose of the "Helping the Land Heal" conference was to bring people together to share ideas and information on the state of ecological restoration in British Columbia.

Designed to attract a broad cross-section of citizens interested in restoration, the "Helping the Land Heal" conference drew a large and diverse group of delegates from conservation organizations, community groups, First Nations, government, and industry, as well as students and consultants. Interest in the conference was so high that the event was completely sold out before the end of October and many people were turned away.

The conference offered four days of workshops, talks, poster sessions and field trips focused on a wide range of restoration issues – including watershed and forest restoration, restoration in urban areas, and community participation in restoration – and featured many of British Columbia's leading experts in ecological restoration. With seven high-profile keynote speakers and over seventy other presenters in workshops, the conference offered something for everyone. Adding to the overall atmosphere was musical entertainment by local performer Holly Arntzen throughout the conference.

The conference kicked off on Thursday evening with keynote presentations by Briony Penn and Freeman House. An environmental educator from Saltspring Island, Penn was cited by many as the highlight of the conference. Through a humorous examination of case studies from Britain and B.C. over the past 15 years, her talk focused on the value of restoration as environmental education. She contrasted the advanced state of environmental degradation in Scotland with the situation in B.C. and stressed that we must not allow the same thing to happen here.

In his talk, Freeman House, one of the founders of the Mattole Watershed restoration effort, reflected that the true value of ecological restoration lies in its ability to force us to reconnect with our communities, our landscapes and ourselves.

Richard Hebda, Faculty Coordinator of the Restoration of Natural Systems Program, University of

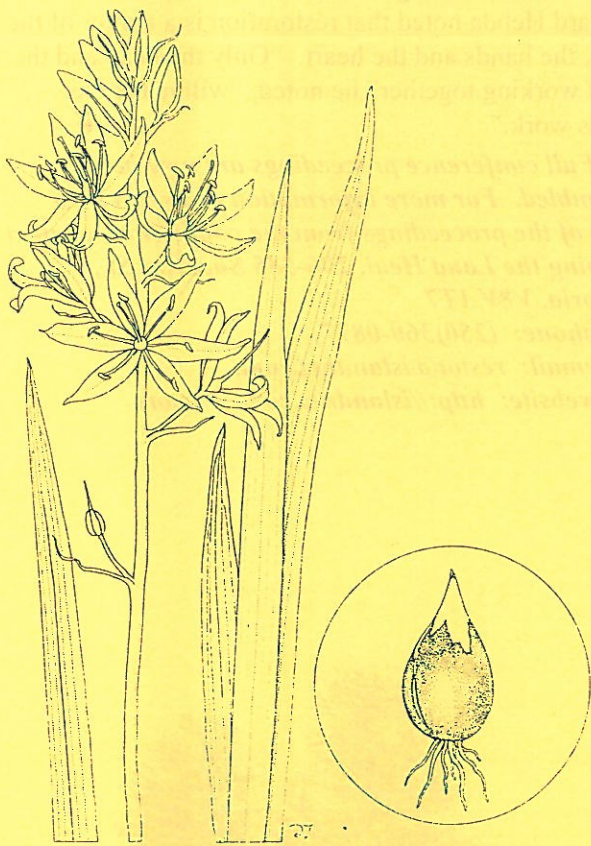
Victoria, and Nancy Turner, Professor of the School of Environmental Studies, University of Victoria, collaborated in skillfully chairing this conference. In his opening address, Richard Hebda emphasized the urgency for people to take action now, working together to gain the information and training, "we need to develop our understanding and vision to help the land heal."

Nancy Turner, on the other hand, spoke for Mary Thomas, an 81-year old elder of the Shuswap Nation who was recipient of the Seacology Foundation's "Indigenous Conservationist of the Year" award for 1997 and who regrettably was ill. Nancy told of how Mary Thomas had witnessed great changes in the land, waters, people, animals and plants. Mary has inspired many restoration initiatives through her knowledge, deep caring and her concern for the "young people."

On Friday morning, Herb Hammond provided an excellent overview of restoration issues in the province and encouraged delegates to take a critical look at the concept of restoration. Hammond emphasized that the initial prevention of environmental degradation is of primary importance; it is simply too difficult and



Fawn Lilies Drawing by Diana Thompson



Camas Drawing by Diana Thompson

expensive to restore damaged ecosystems. In suggesting that we have much to learn from British Columbia's First Peoples, he urged that we approach restoration with both our hearts and our minds. For Hammond, one of the dangers of restoration occurs when successive generations inherit degraded ecosystems and come to see these conditions as "normal." This disconnection from natural systems leaves people reluctant to act, opting rather for more research.

On Friday afternoon and Saturday morning, the conference broke up into five concurrent sessions. These focused on the conference's major topics: perspectives on ecological restoration, watershed restoration, forest restoration, restoration in urban areas, and community involvement in restoration.

During these sessions, over 70 speakers from a wide range of backgrounds addressed topical restoration issues and discussed various restoration techniques. Some of the topics addressed included: restoration of forest soils, restoration and environmental education, restoration and community economic development, restoration and global climate change, the use of fire in restoration, restoration of

grasslands, the use of traditional ecological knowledge in restoration, and restoration of riparian and wetland systems.

On Saturday afternoon, delegates reassembled to hear internationally-renowned conservationist Reed Noss, President-Elect of the Society for Conservation Biology, speak on the need to consider broad spatial and time scales when carrying out restoration work. Noss noted that many restoration projects are undertaken at the grassroots level, from the bottom up. While he viewed this trend as positive, he stressed the importance of integrating local-level and small-scale restoration projects into a larger conservation context.

Observing that restoration is a key aspect of conservation, Noss drew attention to the need to maintain healthy landscapes; including maintaining the natural diversity of ecosystem types, species and ecological processes. He also noted the importance of creating protected areas, buffers, and connectivity across the landscape and observed that restoration can play a role in all of these aspects of conservation.

Just prior to the closing session, Shuswap Elder Mary Thomas recovered her strength to speak to the gathering about land degradation. She described herself as one of the elders who experienced the beautiful times, when rivers ran clean and full of fish and traditional food plants and animals were plentiful. Now, she observed, the birds, fish, and plants are almost all gone and the rivers are reduced to a trickle. She expressed deep concern for the young people who are inheriting this diminished natural heritage and she wondered what kind of future they will find.

Restoration work is not fixing beautiful machinery; replacing stolen parts, adding fresh lubricants, cobbling and welding and rewiring. It is accepting an abandoned responsibility. It is a humble and often joyful mending of biological ties, with a hope clearly recognized, that working from this foundation we might, too, begin to mend human society.

Barry Lopez, 1991

The conference concluded with the identification of a number of key issues, and recommendations. Among them are the need to prevent environmental degradation in the first place (so as to reduce the need for restoration) and the importance of recognizing restoration as not simply a technical procedure but also as a social process. Other recommendations were to improve regulation and legislation to prevent mismanagement. Environmental regulations, such as the Forest Practices Code, and legislation must be enforced. Many speakers and delegates observed that by healing the land we would also heal our communities and ourselves.

In his concluding remarks, conference Co-Chair Richard Hebda noted that restoration is a matter of the head, the hands and the heart. "Only the head and the heart working together" he noted, "will make the hands work." ☺

Full conference proceedings are now being assembled. For more information or to receive a copy of the proceedings from the conference, contact Helping the Land Heal, 206-545 Superior St., Victoria, V8V 1T7

phone: (250)360-0877

email: restor@islandnet.com.

website: <http://islandnet.com/~restore>

REPORT:

Trust Council Observer

by Linda Millard

The quarterly Trust Council Meetings (held in September on North Pender Island and in December in Victoria) both had strong transborder elements. The three member San Juan County Commission, along with some of their planning staff, attended each Council meeting. Also invited were government officials from Washington State and the Province of B.C., the governments of Canada and the United States. In Victoria the Regional District Directors representing Trust Islands were also present.

Presentations on Pender addressed Marine Protected Areas and Natural Area Protection tax initiatives on both sides of the border. Later, small groups met to formulate lists of effective actions to tackle island environmental and planning problems which could be undertaken locally by communities and local governments. Many concerns but also lots of good ideas were generated based on known successful projects. There is no doubt that both sides of the border had much to share and learn from the other.

The Victoria meeting included a session at which the San Juan County Board of Commissioners and the Islands Trust Council signed a Transborder Island Agreement. As stated in the Islands Trust News Release, *This agreement is the first time local governments on the Pacific Coast of North American have reached across an international boundary to make a formal commitment to share information and develop joint policies and initiatives.*



This signing was followed by a working session where priorities for action were discussed, including: Transborder Marine Protected areas along with local voluntary "no take zones" for fishing; escorts for tanker traffic; community issues such as affordable housing, Community Economic Development and community values; a secretariat to coordinate transboundary cooperation; and the issue of small craft sewage discharge into marine waters.

As stated in the Islands Trust News Release, *These* [priority action plans] *will help San Juan County and the Islands Trust to make a difference in maintaining the quality of life in island communities and marine environment in the face of tremendous development growth pressures. The population in and around these islands is expected to increase from 6 to 8.5 million by 2010.* Cooperation across the international boundary by these two local governments with very similar problems should benefit the Trust Islands, Trustees and Trust staff.

Unfortunately, the Local Trust Committee Group Work Program Review Session at the Victoria Trust Council meeting was not nearly as upbeat or optimistic about meeting planning needs on the community level as were the transboundary sessions.

This session featured remarks by the new Manager of Local Planning Services, Wayne Quinn, on his aims for the next 12 months: small group sessions between Regional Planning Coordinators (RPC) and the Trustees for the islands they coordinated; and finally a wrap-up session with reports on discussions by each RPC and a review of process.

From the group I sat in on and the reports by the RPC's, I observed a degree of frustration among both planning staff and trustees about the volume of work to be done and the rate at which it is getting done. Trustees continually seek more planning help to get old projects and applications processed, and new Official Community Plans and Land Use Bylaws into place. At the same time, many Trustees are reluctant to vote more money for those resources for fear of taxpayer hostility. Ironically, it is the ratepayer groups who complain most about the slowness with which applications and planning processes proceed.

With the tremendous population and resource extraction pressures on these Islands under special mandate, how will those pressures be met without sufficient and creative planning support? Do taxpayers really not understand that if they want high quality, efficient planning and application service, they will have to support those needs with taxes? Many communities feel burned out from numerous meetings and while waiting for planning action; are they willing to fight and pay for good planning, as they do for a good education for their children?

Comments to Archipelago on these questions are most welcome.

LEST WE FORGET...

February 7, 1991

RE: GALIANO ISLAND: PROPERTY FOR SALE

I am pleased to inform you that MacMillan Bloedel is now offering its Galiano holdings for sale. Because all our lots are offered essentially on a "first come, first served" basis, we would urge you to not postpone your decision to buy.

If you make an offer to MacMillan Bloedel to purchase one (or more) of its lots a properly completed Disclosure Statement Receipt must accompany the offer. All persons signing the offer as purchaser must also sign the Disclosure Statement Receipt for that offer.

Attached to this letter are copies of three proposed amendments to the by-laws of Galiano Island. These proposed amendments, if adopted, will prohibit residential use of MacMillan Bloedel's land.

Needless to say, we are very distressed by these proposed by-law amendments. If you share our displeasure, we suggest you pass your comments to this effect along to the Islands Trust, the Minister of Municipal Affairs, and to your local MLA.

Sincerely, yours,

MacMillan Bloedel Limited

Gary Kadatz

Manager, Land Sales and Development

Attached to this letter (edited for brevity) is the Disclosure Statement that includes a legal description of the properties, easements, and permitted land uses according to bylaw. Amendments to the Disclosure Statement were regularly issued to keep pace with bylaw enactment and the litigation launched by MacMillan Bloedel in its persistent, but unsuccessful, attempt to overturn Galiano's Forest zone bylaws.



Pen and Ink Drawing by Ronaldo Norden, 1995

Editorially speaking...

Strength through Diversity

When it comes to topics like property rights, public good, zoning bylaws, fair profit, community benefit and appropriate development, I can hardly imagine a discussion without controversy. While dissent remains an essential ingredient of democracy, raging conflict rarely produces successful public policy.

As we state opinions about issues that are important to us, each of us likes to think that we have first listened and then been fair in our assertions. But generalizations do creep in. We may be more apt to focus on the bad than the good, fearing the contagion of the bad. It is easy to cut swaths through the community by throwing epithets at those with whom we disagree. The danger is that we will muzzle democracy.

Fortunately, public discourse is continuing. More voices are heard. Here, an ally withdraws from a formal manifesto; there, a timid tongue finds its own words. "Us" and "them" blur. Soon it is apparent that every person has a particular history and vision. The cheap shot rattles to the ground missing all targets. Diversity is reality.

A resolution of political differences will probably not be simple if it is to be good. A holistic strategy for the landscape can only result from a plan that admits to at least as much complexity and mystery in nature as in

humanity. And the longer our vision, the closer we will come to that elusive goal "sustainability."

Sometimes we appear to be caught between two competing philosophies of life: one reflective and risk-avoiding; the other speculative and risk-taking. Where resources are scarce or when systems are complex, laying wagers seems especially perilous.

MacBlo's disclosure statement advised every prospective purchaser of its forest land that an unstable regulatory future lay ahead. While democracy is notorious for its inefficiency, few buyers may have imagined that uncertainty would last so long on Galiano.

The Islands Trustees have presented a vision and planning framework for our beloved Galiano to continue as a forested island. The plan will undergo further refining in years to come. Can we not now commit to a course that endows future generations with a place as least as worthy of safekeeping, and as complex, as we find it now? ☺

-- Carolyn Canfield

Note to Readers: Acts Three and Four of "The Tempest" will appear in a future issue of *Archipelago*.

From the Editor's In-basket...

To *Archipelago*, Thought this might be enlightening for some land "owners.". -- Shirlene Raines

"Ownership of Land in Canada" from a current UBC Faculty of Commerce real estate text:

An absolute ownership of land does not exist in Canada. In the context of land, ownership involves control of the right to use land and control of the decision to transfer all or a portion of these rights to others. In Canada the only owner of land is the Crown (i.e., the federal and provincial governments).

The Crown has the right to compel individuals to give up all of their rights in land without compensation if it wishes, although compensation is almost universally provided for by statutes. In other words the Crown can evict anyone from land if it chooses; this power is contained in statutes of expropriation and property taxation.

Further the Crown can determine how land is to be used through building codes and land use zoning. Thus, in a strict legal sense, land ownership is vested in the Crown, with private individuals only holding certain rights granted at the discretion of the Crown.

The Trouble with Islands

Reprinted by permission,
from *The Economist*, September 20, 1997

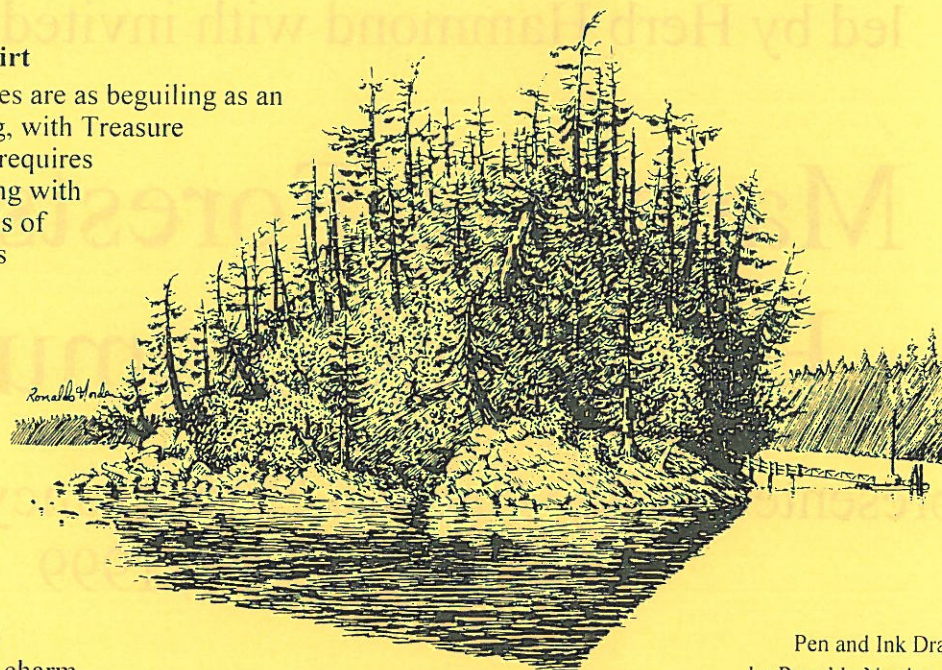
Beware the expression sea-girt

For many people, few places are as beguiling as an island. The affair starts young, with Treasure Island. Soon the imagination requires romance, which blossoms along with the bougainvillea on the atolls of the South Pacific. Next comes the exotic, Zanzibar, or the unspoilt, Fair Isle, or a mixture of the two -- the Galapagos, the Seychelles. If you are not content to let your imagination do the wandering, go off and have fun in Coney Island. Lose your inhibitions in Ibiza, or Phuket. Discover the excitement of Hong Kong, the charm of Mykonos, the simplicity of the Hebrides. Get away from it all, like Bill Clinton, on Martha's Vineyard. The people will welcome you. They are always friendly.

Islands are never nasty: they are sun-drenched, or sceptred, or holy. Even Robben Island and Alcatraz are tourist attractions. Mafia-ridden Sicily has its melancholy allure. Desert islands may have no people, but they inevitably have an endless supply of pineapples and coconuts and fresh fish to grill on the beach beneath the setting sun. If, like Gauguin, you pick the right one, you may even find Paradise.

Islanders sometimes see things a bit differently. It's true that they tend to be friendly: people have to learn to rub along with each other if escape is difficult and circumstances hostile. They often are. The weather can be vile. Hurricanes are unpleasant anywhere: on an island, help is unlikely to be close at hand. It can be just as elusive when the local volcano goes up.


Even when the weather is benign, island life has its drawbacks. No traffic jams in the Scillies, but no easy way of taking your driving test either. No smog in Shetland, just the odd tanker on the rocks. Long summer nights in the Lofoten Islands, no mid-winter daylight at all. Local produce is fine, but everything that comes by boat or plane is expensive. And don't break your leg or have a heart attack or miscarry: the nearest hospital is countless nautical miles away.



Pen and Ink Drawing
by Ronaldo Norden, 1985

And then there are the visitors. Those who come for a short holiday may be all right, though they tend to think they are doing you a huge favour by bringing news of civilisation. The ones to beware of are those who stay. They fall into two categories, the back-to-nature types and the plain nutcases. The former, the simple-lifers, arrive in summer with high ideals, but soon discover the delights of social security when winter winds blow their crops away. The nutcases bring their dysfunctional families, and diseases like the measles that the local population has no immunity to.

Oh, for the wings of a seagull

The worst kind of nutcase, however, is the one who buys the island. He is a close relation of the loony press magnate and believes that islands are like newspapers, to be treated as playthings. He may have an improvement scheme in mind, but he usually tires of it when he finds out how much it will cost; that there is no pier because the winter seas always wash away the one that was built last summer; and anyway that the people at one end of the island think the new one should be close to them, whereas the people at the other end think they should have it. Both lots of islanders know what their landlord soon discovers: that what makes islands attractive also makes them hell. They are surrounded by water. 

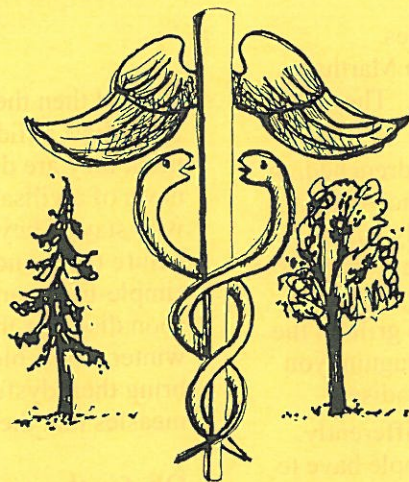
ANNOUNCING A WORKSHOP

led by Herb Hammond with invited specialists

Managing Forests for a Healthy Community

presented by the Galiano Conservancy Association
February 26-27, 1999

everyone welcome
OPEN PUBLIC TALK
Friday, February 26
7:30 pm
South Community Hall
admission free



by pre-registration only
WORKING SESSIONS
Friday and Saturday
February 26 and 27
limited enrolment
no attendance fee

Participating organizations include the Galiano School, the Galiano Island Forest Association, and the Galiano Health Care Society

Those wishing to attend the Working Sessions should pre-register with the Galiano Conservancy Association.

Phone/fax (250) 539-2424 or email galiano_conservancy@gulfislands.com

Financial Support for this Workshop is provided by the Community Animation Program: Environment Canada, Health Canada