

Great Blue Herons - Sentinels Of Our Coast

by Connie Haist

It was a happy accident when I met Andrew B., the young biologist who was studying the effects of dioxins on Pacific great blue herons. Andrew went into heronries every week for two nesting seasons to gather up dead chicks and do autopsies on them. Unexpectedly, he found many heron chicks injured but still alive on the ground. Some had been attacked by eagles. Some were blown out during wind storms. Others were victims of attempted fratricide, which is when an older, larger chick pushes a younger, smaller sibling out of the nest. Once on the ground, the parents cannot continue to care for their chicks. Most of these baby herons had injuries from their falls that required medical or surgical treatment. Unfortunately, there was no programme to help them, so I volunteered to do the required veterinary work. I trained a wildlife rehabilitator at North Island Wildlife Recovery Association to do follow-up feeding and care. Using the skin of a dead heron, I made a hand puppet which was used to mimic a parent when feeding these impressionable chicks so they would not imprint on humans. The Pacific Biological Station gave us a continuous supply of fish to fuel these voracious nestlings. Thankfully, almost all of the chicks survived. Eighteen were able to be banded and released into the wild.

One ungainly, pin-feathered, two-week old heron chick, just learning to walk, was found sadly dragging a broken wing. By the time the fractured wing bones were repaired and healed and rehabilitation was complete, it was early August. I had decided to release this bird on Lasqueti Island. I watched with joy as the strong, beautiful young heron took flight, and gracefully glided across False Bay. I could imagine it in its second spring, transformed from a rusty-brown juvenile into a blue-grey adult garbed in elegant breeding plumage. I hoped it would find a mate, build a nest, rear chicks, and live out a full life of over 20 years. Knowing that only one quarter of fledged herons will survive their first winter, I sent out my heartfelt blessings with this bird.

The herons that we had helped over those two years belonged to a distinct subspecies, *Ardea herodias fannini*. Slightly smaller and darker than herons in the rest of North America, the Pacific great blue heron has evolved on our coast over many thousands of years. Indeed, it is the only great blue heron you will see along our shores. They are non-migratory, confined to coastal areas from S. Alaska to Puget Sound, and breed primarily around the Salish Sea. Herons are colonial nesting birds. While lower mainland flocks may reach 400 nesting pairs as in the Tsawassen colony, there are only about 500 nesting pairs on all of Vancouver Island. Nests are built in both coniferous and deciduous forests; a single tree may contain up to 17 nests. They tend to return to the same forest year after year, coating their nest trees and the ground below with their acrid, white excrement. One of the oldest large colonies in BC has been nesting in Stanley Park for nearly one hundred years.

Large heronries find safety in numbers and seem very tolerant of human disturbance. However, smaller nesting groups in more isolated areas, where the birds have not been habituated to people, seem the most susceptible to noise. Whole heronries have been abandoned when humans disturb their nesting areas at critical times. People walking near a small heronry can frighten adults off their nests, giving crows, ravens and bald eagles opportunities to come in and eat the



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unattended eggs and chicks. In fact, bald eagles are the primary predators of herons of all ages. Heron chicks are at great risk of predation when eagles are rearing hungry eaglets. To heighten this threat, the number of eagles around the Salish Sea has dramatically increased in recent years and continues to rise.

Typically, heronries are located within a few km. of eelgrass beds and estuaries, which are their primary spring and summer feeding grounds. Eelgrass beds form complex and highly productive, shallow intertidal and sub-tidal habitats which may contain over 50 different species of fish. Each pair of nesting adult herons requires 2000 calories of food every day to raise 2 or 3 chicks. (That's about the same number of calories an adult human requires daily.) Amazingly, within 60 days, a great blue heron grows from a 53 gm. naked hatchling to its full adult size, weighing over 2 kg., standing over 1 m. tall, with a wing span of 2 m. That's an astounding gain of 40 times its birth weight in 8 1/2 weeks! Gunnels, sticklebacks, sculpins, shiner perch, pipefish, tube-snout and starry flounder are their main prey species and these abound in intact eelgrass beds. Indeed, a successful heronry is a reflection of a healthy, seashore ecosystem.

Seashore development and associated human activities near eelgrass beds often degrade this fragile habitat. Degraded eelgrass beds have decreased productivity. With the loss of these high quality foraging areas, our beaches support fewer herons. Inevitably, with seashore development, we are also more likely to disturb herons while they are feeding. Each heron has a foraging territory. Boats, people and dogs on the beach, can unknowingly spook herons off their feeding territories and a chance to obtain essential calories is lost. In addition, land development along the seashore has removed much prime forest near eelgrass beds where herons prefer to nest. This pushes heronries further and further away from their feeding grounds. As a result, they must expend more energy to get to their food. All of these factors make it much tougher for herons to meet the caloric needs of a nest full of fast-growing chicks.

Great blue herons are exquisitely adapted to foraging in eelgrass beds and dealing with slimy fish. A small web between two of their four toes helps to keep the bird from sinking into soft mud bottoms. Fine serrations on their beak enable them to more easily handle slippery fish. 'Powder down' patches in their wing-pits give a continuous supply of powder to dry-clean fish slime off their beaks and feathers. (These unusual patches are seen in only one other family of bird, the parrot family!) The claw on their middle toe is modified to form a small comb which it uses for grooming and dispersing the powder.



Photos: previous page: heron and chicks; above Great Blue Heron - both by Trudy Chatwin

Unlike most birds, the heron's sixth neck vertebra is longer than the rest and articulates to allow its neck to form the "S" shape seen in flight. Because of this vertebra, they can "coil" their necks for greater thrust when striking at prey. The "S" also displaces the bird's oesophagus around the vertebrae and allows it to swallow large prey.

The eyes of herons have evolved to contain a large number of rod-type photoreceptors. These give them very good night vision, allowing them to forage 24 hours a day. Studies have shown that early in the nesting season, it is mostly female herons we see out on the beaches during the spring day-time low tides, while the male herons (slightly larger and with longer beaks than the females) sit on the nest. Then, the females take over the nest for the night while the males put their night vision to good use and forage until the next morning. As the chicks mature, they are left unattended for longer periods. Both parents must forage day and night to acquire enough calories to ensure reproductive success.

After the nesting season, as fall and winter tides return, adult and juvenile herons disperse and turn inland to forage in marshes and open fields. Here they catch voles, other small mammals, amphibians and reptiles.

Survival over winter is precarious for all wild creatures. In recent decades, as human populations flourish, we have drained and occupied many wetlands that previously supported numerous overwintering birds. As wetlands disappear, so do critical winter foraging habitats for herons.

Like the canary in the coal mine, Pacific great blue herons are sentinel birds and their health reflects the health of the whole ecosystem. Herons feel the pressure of the many human activities that have detrimental impacts on the Salish Sea ecosystem. For instance, years ago, studies found

that heron eggs accumulated toxic dioxins from pulp mill effluents entering the environment. The findings from these studies were instrumental in changing pulp mill practices. Thankfully, herons, humans and our environment are no longer exposed to these harmful chemicals.

In 2010, Pacific great blue herons became designated as a species of 'Special Concern' under the Species At Risk Act. Thankfully, they are now protected by both provincial and federal regulations, but the success of those protective measures requires the co-operation of everyone.

Here on Lasqueti, some of us have been monitoring a small heronry near China Cloud Bay. While these heron chicks seem to start out well, we have not had any young herons fledge from this colony during the past 3 years. We are fairly certain that there are other small heronries on Lasqueti. With your help, we hope to be able to map their locations in the coming seasons, so their success can be monitored. Please contact LINC if you have seen or heard nesting Great Blue Herons or know of a heronry on Lasqueti.

2017 Christmas Bird Count

by Sheila Ray

First a little history. In 1986 a group of Lasqueti birders got together for the first Christmas Bird Count. This was an informal count, not part of the international Audubon Count. That first year we counted 39 species of birds. A few years later we were up to 59 species. Not that there were more birds, we were becoming better birders.

In 2001, or 2002 we took the big step of becoming an official Audubon Count and sending our results in to be combined with counts all over North America. This year, the 118th Audubon Christmas Bird Count there was a total of 2,220 counts with 51,932,583 individual birds counted.

There have been many different people counting on Lasqueti's count over the years. Bruce Grant, Wendy Schneible, Peter Johnston, Sue Wheeler, Richard Bauer and myself were on the original count and have been pretty consistently on every count since then.

Each year we see between 59 to 67 species. This year was pretty average with a total of 63 species. There were some birds that are usually seen that were missing this year: Ring Necked Ducks, Pied Bill Grebes and Downy Woodpeckers. Marti Wendt can usually find Bewick's

Seen in Passing



Stellars and California Sea lions were both around the rocks off the Finnerty Islands on the Christmas Bird Count this year. (photo D. Grinnell)

Stellar Sea Lions are an uncommon sight near Lasqueti. They are listed as a species of Special Concern under the federal Species at Risk Act. "In BC, the Steller eats mainly forage fish, such as herring, hake, sandlance, salmon and sardines. They sometimes dive deeper to catch rockfish, flounder and skate, as well as squid and octopus." (Fisheries & Oceans Canada)



This Red-shafted Flicker was getting a little help during the winter storms from a bird feeder. Normally an ant eater, this species of woodpecker is distinguished from the Yellow-shafted Flicker found in other areas of BC.

Wrens and hear Virginia Rails, but not this year. The group I was with were excited to see a flock of 7 Pine Grosbeaks, which have only been seen on one other count. It was also nice to see a family of 4 Trumpeter Swans, 2 adults with their 2 young. There were a surprisingly large number of starlings seen, 80, a lot for Lasqueti, although not for downtown Nanaimo. In general the number of birds seemed lower. It will be interesting to compare our results with the results from other counts and other years. This can be done by going to the Audubon website: audubon.org/conservation/science/christmas-bird-count/

This is the last year that I will take on the role of compiler. I look forward to someone else stepping in and taking over the task. It would be nice to carry on the tradition.

Link to audio file about winter ducks feeding on forage fish: <https://beta.prx.org/stories/230678>

Salish View - Help Acquire This Gem!

How many of us have spent countless enjoyable hours hiking up Mt. Trematon, or going out to the Osland Reserve to see the increasing number and variety of birds on the lake, or hiked up to that wonderful view at the top of the cliffs there? These two Nature Reserves have been donated by far-seeing individuals who knew that protecting nature beyond its utility values was essential for the longevity of our beautiful island's wildlife and for the spiritual, recreational and purely enjoyable values we as humans get from them.

Now we have the opportunity to expand the protected areas at the south end, creating a larger ecological corridor for nature in a changing climate, and providing a third great hike up to a spectacular 270° view of the Salish Sea. Last time this opportunity happened, in 2007, we needed \$250k to match provincial money to purchase another property. Over 175 Lasquetians stepped up and donated \$130 k to make the Squitty Bay Park extension a reality!

Today we have the challenge of raising \$250 k yet again - in less than 10 months to create another Nature Reserve that will also provide a great recreational hike. We've got a good start! Now that spring is upon us, the urge to get out and enjoy nature and to welcome our part-time residents and all our friends is here.

Come join us in the many events we have planned to get people out to view the property for themselves, and to get together and have some fun, while we raise the needed money to acquire this 28 acre property forever!

March 31 - 11:00 am - guided hike up to Salish View

April 22 - 11:00 am LINC AGM and hike up to Salish View

June (tba) - Energy, Home & Garden tour

July (tba) - "Salish Views" Art Sale at the Arts Centre

August 12 - Dinner and Auction at the hall

September 2 - Squitty Bay Day



Help conserve wildlife and recreational areas! Donate via cheque, pledge, or on-line through [Canada Helps](https://www.canadahelps.org/). Contact linc@lasqueti.ca to arrange for a guided hike, to make a pledge, or to volunteer to help raise the needed funds at one of our events!



How to Provide Nesting Habitat for Native Songbirds

You know those little brown birds that take handouts at sidewalk cafes in cities? They're invasive English house sparrows (*Passer domesticus*). They haven't invaded Lasqueti yet, so here are a couple of tricks to make sure your bird houses won't allow house sparrows or starlings to displace native birds. Customize the entrance holes to either 1 1/8 inches in diameter, or use a specific oval shape that allows native swallows but blocks house sparrows.

See my article for all the details:

www.carolynmasson.com/articles/love-nests

Shoreline Restoration

LINC board members went to a meeting in January about a five year project led by SeaChange. Nikki Wright established this regional organization, and led a workshop on shorelines here last August during Squitty Bay Day. The following is information on this five year restoration project.

Site Selection in the Gulf Islands:

Maps referenced: commercial vessel anchorage sites, 2013 Gulf Islands eelgrass maps completed for the Islands Trust and Islands Trust Fund, shoreline sensitivity to sea level rise, potential forage fish spawning habitats, and for some islands, locations of anadromous streams

Site Selection Criteria (not all need to be present):

- Potential for marine riparian restoration
- Potential for eelgrass restoration
- Near a potential forage fish spawning site
- Connectivity between critical habitats
- First Nation values
- Existing limiting factors such as storm water drainage, anchorages, aquaculture sites
- Conservation unit designation
- Protection status
- Backshore activities – past, present or future
- Community capacity

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