(*Fannini* subspecies—*Ardea herodias fannini*)

by Christianne Wilhelmson

Even in the dreariest days of winter, it's hard not to see how lucky we are to live in a place with such amazing natural beauty. The most remarkable part is how we don't have to go very far to encounter animals that are wondrous, no matter how many times we see them. Whether you're running through Vanier Park in Vancouver or walking the beach on Salt Spring Island, you've likely encountered one such animal whose uniqueness makes you feel like you've stepped back in time: the Pacific Great Blue Heron.

 Looking more like a Pteranodon than a modern bird, this animal with the slow movements and awkward takeoff is a common feature on our coast. Coastal herons don't migrate and tend to keep their distance from those that do, and this isolation has resulted in subtle changes in the way they look (darker feathers), to the degree that they are now considered one of five recognized great blue heron subspecies.

Though great blue herons are found in many parts of North America, 80% of BC's coastal subspecies lives in the Georgia Basin, in the same area that 80% of British Columbians call home. With so many people and birds sharing the same space, it's not surprising that this subspecies is "Blue listed" (vulnerable) in BC, and listed as "special concern" by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

As of 1997, there were an estimated 4000 pairs of great blue herons on our coast. Though the numbers declined by 9.4% between 1969 and 2000, and some populations

have disappeared from the Sunshine Coast and are decreasing on Central Vancouver Island, the overall population is considered stable.

All great blue herons have a long neck with a sharp bill, rounded wings and feathers on the chest, belly and back. Adults are distinguished by white feathers on their head, a jet black eye strip and long yellow legs. They have grey-blue feathers on their backs and wings, and a black and white underside.

Males are generally 5 to 15% larger than females but otherwise look the same. Unique facial markings make it possible to differentiate individual herons, and you can tell when mating season is arriving as the upper bill becomes a brighter yellow-orange.

Using their distinctive flying style, with necks folded back against their bodies, great blue herons return to their nesting colonies every February and March. Fifty percent of the colonies in Georgia Strait were abandoned between 1987 and 1992. Today nearly half of the population gathers in just five large breeding sites: Point Roberts, UBC, Chilliwack, Mary Hill/Alouette Lake, and McFadden Creek (Saltspring Island). The rest of the population nests singly or in smaller colonies along the BC coast, southeastern Vancouver Island, the southern Gulf Islands and the Fraser Lowlands.

Large colonies can be used for many years, while smaller colonies tend to be abandoned after a short period. Colonies range from a few birds to over a hundred, though most have less than ten nests. Birds nest mostly in deciduous trees, but can also be found in coniferous and mixed woodlands, always within 3 to 8 km of their foraging area. Nests are about one meter in diameter and 20 to 50 m above the ground, and are built from sticks, twigs, bark and evergreen boughs.

In March or April, females will lay from 3 to 5 pale blue eggs and for the next 25 to 29 days, both male and female incubate them. Young herons start life at only 50g but within two months, they reach their adult weight of 2 to 2.5 kg and are ready to leave the nest in all their brown feathered beauty (though they won't become adults for another two years). Great blue herons live up to 10 years on average, even as long as 18 years, but fewer than 20% survive their first year.

If you've seen a great blue heron stalking along a tidal mud flat, shallow beach, slow-moving slough, marshy lake, irrigation ditch or agricultural field, you've seen a heron looking for food. Docks and bull kelp can also serve as platforms for their hunt. Herons quietly survey the water and shore for anything they can swallow. Though fish are their favourite staple, they will eat reptiles, amphibians, insects, and small mammals—whole— spitting out only the fur!

Though the population is stable, they are very sensitive to environmental contamination and this can lead to breeding failure. Studies of these birds have given us a much better understanding of how pollution of habitatimpacts wildlife—and conversely, with time and a drastic reduction in discharge of pollutants, how wildlife can recover from toxic contamination.

Since the late 1970s, eggs from a colony near UBC have been studied for PCBs (polychlorinated biphenyls) and DDE (dichlorodiphenyldichloroethylene), and researchers have found that the level of toxins has declined by 85%. Remarkably though, the chemicals are still present, despite both PCBs and DDE (a breakdown product of DDT) having been banned in Canada in the 1970s. But because they take a long time to break down, and continue to leak from old landfill sites and arrive airborne from distance sources, these chemicals will cycle through the food chain for years to come.

Researchers also found large concentrations of dioxins and furans in great blue herons in the past, but these have dramatically declined since pulp mills started reducing their use of chlorine bleach, wood preservatives and antisapstains. The news is not all good, however. Chemicals found in flame retardants (PBDE) are now being found in herons, and the amount has increased almost 200-fold between 1982 and 2000. PBDE has similar chemical properties as PCBs and DDT, so may threaten breeding success in years to come.

Great Blue Herons, like many animals that live in the Georgia Basin, are feeling the pressure of human population growth. Herons are very sensitive to activity near their nests, in particular early in the nesting season. Though they can get used to day-to-day human activity, novel noises (e.g. sudden blasts of horns, dynamite or chain saws) can

cause the birds leave their nests, making the young vulnerable to predators such as eagles. If the noise persists, it's possible that colonies will abandon their site completely.

There is much that can be done to better protect this species. Biologist Ross Vennesland has recommended a zoning system around each colony during nesting season (February to August). The "quiet zone" would extend 165 m from the outer edge of the colony; in remote regions, it would be out of bounds for people, while in populated areas, people could carry on with their normal activity but sudden, loud activities would be restricted. The "limited activity" zone would extend out another 35 meters from the quiet zone, and allow no sudden loud activity.

A number of efforts are underway among agencies and conservation groups. The Heron Stewardship Program (supported by the Canadian Wildlife Service, BC Ministry of Water Land and Air Protection and Wild Bird Trust of BC) has been created to reduce human impact on nesting colonies and important feeding areas. With the assistance of Waterbird Watch Collective, Wild Bird Trust and Islands Trust Fund, the Heron Stewardship Program has bought 5.07 hectares of land supporting BC's largest heron colony (125 nests), at McFadden Creek on Saltspring Island.

On the other side of the Strait, the Chilliwack Great Blue Heron Nature Reserve was officially opened in 2002 with the support of the City of Chilliwack, the Rotary Club, First Nations, provincial and federal governments, and environmental organizations. This Reserve on the Vedder River protects 132 hectares of lowland forest that currently supports 100 pairs of nesting herons.

These are positive steps to ensure that that this frequent reminder of the beauty in our midst will have a safe place to live for years to come.

WHAT CAN YOU DO?

- **Avoid active nesting colonies**; don't go within 300 meters of any nesting site.
- Whether you're walking, paddling or boating, **avoid approaching herons.** These birds are working hard to gather their food and any approach will alarm them enough to fly away noisily, wasting valuable energy.

- **Report any nesting colonies** you find (contact your local BC Ministry of Environment office).