

Pacific Great Blue Heron Facts

Physiology / Morphology

- Herons are members of the Ciconiiformes, which includes herons, egrets, and bitterns. The existence of herons is believed to date to the Cenozoic age, approximately 25 million years ago; North American fossil records of great blue herons date back 1.8 million years.
- Unlike most birds, the herons' neck vertebrae are of uneven lengths; the sixth vertebra is longer than the rest and articulates differently, allowing displacement of the bird's gullet around the vertebrae to swallow large prey. This adaptation also allows the herons to retract their heads in the characteristic "S" shape commonly seen in flight, and to "coil" their necks for greater thrust when striking at prey.
- Herons have specialized areas of delicate feathers, which they rub with their bills to create "powder down." The birds comb the crumbled filaments through their feathers using their third toe, which is flattened and serrated for this purpose, to clean their plumage of slime from their prey.
- Heron chicks' eyes start out grey but turn bright yellow in adulthood.
- From birth to two years, Great Blue Herons moult, or replace old feathers with new, four times. During the first year, juveniles have grey crowns and grey wings flecked with brown, and they lack plumes. Adult Great Blue Herons show brighter colours during the breeding season, moult some plumes in summer, and change to duller colours in winter.
- The bills of non-breeding birds have a yellow underside and grey topside, which may change to a bright orange colour during breeding season. Their legs, normally a greenish-yellow, may turn brighter yellow during the early breeding season.
- Just like humans, the great blue herons breeding behaviour is dictated by hormones. Territorial behaviour is guided by testosterone in the beginning of the season, and incubating behaviour by prolactin later on. As in every season, we may see some latecomers to the colony this year. These may be young

herons who have waited for the testosterone to wear off in the older herons, that they may build their nests in peace

- Despite their impressive size, Great Blue Herons weigh only 5 to 6 pounds thanks in part to their hollow bones—a feature all birds share.
- Great Blue Herons live long lives, some as long as 17 years.
- In flight Great Blue Herons average about 40 kpm, their maximum flight speed can approach 55 kph.

Breeding Behavior

- The birds sometimes nest alone, but often do so in colonies consisting of a dozen to several hundred pairs. Scientists do not know precisely how herons choose whether to be sociable. It seems that advantages to colonial behaviour include better defense of nests and greater chance of discovering mobile schools of fish: once one heron finds a good foraging spot, others may follow it to the same location.
- Larger heron chicks may kill the smaller ones. Sibling rivalry often develops among young herons, so it's normal to see this. During food shortages, the older chicks may be the only ones to survive. On good years, all the chicks will survive.
- Normally bald eagles are one of the great blue herons' fiercest predators, yet roughly 70% of all nests in the Fraser Valley and Lower Mainland are within 200 m of an active bald eagle nest (Jones et al., 2012). Herons may actually benefit from nesting in close proximity to bald eagle nests. Recently published research focused on heron colonies in the Fraser Valley and Lower Mainland shows a strong correlation between nesting success and association with nearby bald eagles (Jones et al., 2012).
- Great Blue Herons often reuse a nest, adding sticks to it each year. The male brings sticks and the female works them into the nest. Older nests can be recognized by their large size.

Feeding Behaviour

- Great Blue Herons congregate at fish hatcheries, creating potential problems for the fish farmers. A study found that herons ate mostly diseased fish that would

have died shortly anyway. Sick fish spent more time near the surface of the water where they were more vulnerable to the herons.

- Great Blue Herons can hunt day and night thanks to a high percentage of rod-type photoreceptors in their eyes that improve their night vision.
- The Great Blue Heron can swallow a fish many times wider than its narrow neck.
- Herons look for food anytime there is enough light. Studies suggest that cloudy weather is ideal for the birds (and fishermen) to look for fish.
- In catching fish, the Great Blue Heron grabs smaller fish between the two mandibles of its bill; with a quick strike it stabs the larger fish.
- In the Pacific Northwest, eelgrass beds are especially important foraging sites for the Great Blue Heron.
- In the nineteenth century herons and egrets were hunted for their plumes. These beautiful feathers were popular decorations for women's hats. Some heron species were severely depleted by hunting, which was outlawed in the early twentieth century.

Sources:

- Hinterland Who's Who <http://www.hww.ca/en/species/birds/great-blue-heron.html>
- Cornell Lab of Ornithology http://www.allaboutbirds.org/guide/Great_Blue_Heron/lifehistory
- Seattle Audubon Society <http://www.seattleaudubon.org/sas/LearnAboutBirds/GreatBlueHeron/Facts.aspx>