
Stanley Park Heronry Monitoring Report 2007

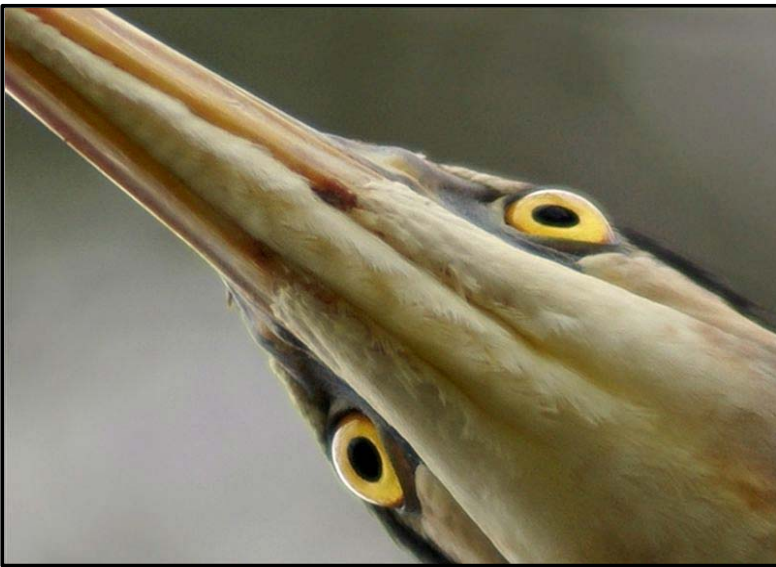


Photo by Martin Passchier

The colony produced a record number of nests, despite some lost during winter windstorms.

No bald eagle harassment was documented.

Prepared by:

STANLEY PARK
ECOLOGY SOCIETY

In Partnership With:



The Pacific Great Blue Heron

The Pacific great blue heron (*Ardea herodias fannini*) is a distinct subspecies that has evolved in the Pacific Northwest over thousands of years. Unlike other herons, Pacific great blue herons are year-round residents that take advantage of the temperate climate and food abundance on the coast. This species has become an icon of the BC landscape for nature enthusiasts and the general public alike because of its large size and preference for shoreline habitats. However, because of its prominence on the coast, heron health and survival is often taken for granted. These Pacific herons are not immune to the rapid development of the region and other changes to the local landscape. The Pacific great blue heron is a Blue Listed species in BC (a species of concern), but its status is currently under review. Although there is debate among scientists as to whether or not their numbers are truly in decline, it is being argued that their status should be raised to Red Listed (threatened or endangered).



Pacific great blue herons appear common because they inhabit the same areas that people do. In fact, 80% of the population is found in the Georgia Basin where two-thirds of British Columbians live. The Stanley Park heronry alone represents a significant proportion of the population. Although recent Pacific great blue heron population estimates vary, the Stanley Park nesting colony likely represents 10 to 15% of the total

breeding population. In 2007, a record number of 183 nests were documented and an estimated 350 successful fledglings. However, the majority of these birds will not live to their first breeding season in 2009.

New Developments to the Heron Monitoring Program

In 2007 SPES used a slightly more rigorous process to monitor the colony in order that provincial wildlife researchers could use the data that were collected. The colony was monitored from the ground (to count the total number of nests and trees) and from a nearby rooftop (to watch individual nests). The sample group was comprised of 28 nests which were monitored throughout the breeding season. Nests success (the proportion of successful nests) and fledgling success (# of fledglings per nest).were calculated using these data.

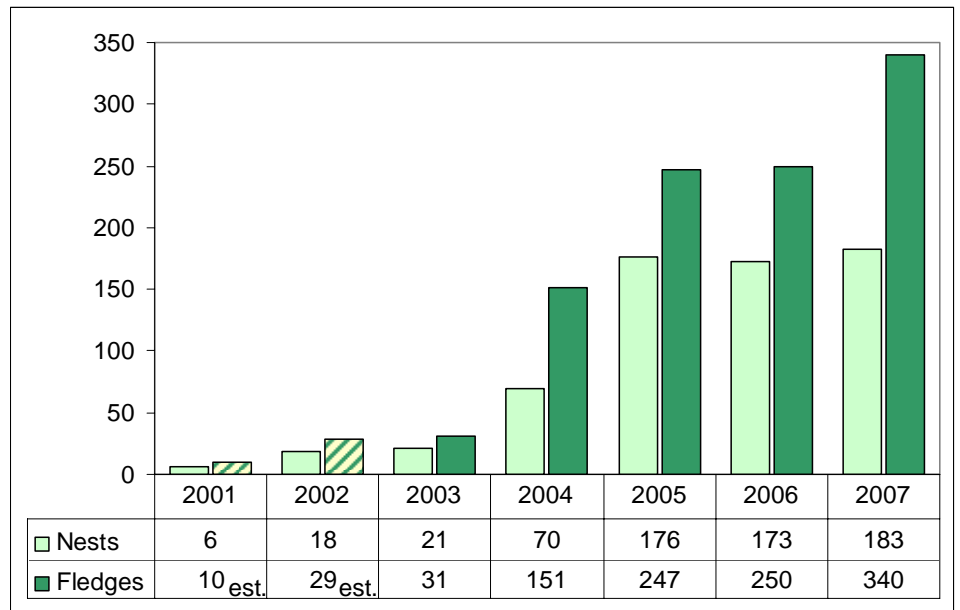


Figure 1: The total numbers of nests and fledglings in the Stanley Park great blue heron colony from 2001-2007. The number of fledges for 2001 and 2002 were estimated using the average proportion of fledges to nests found throughout other years.

Figure 1 shows the number of nests and fledglings (chicks that successfully leave the nest) over the past 7 years. The increased number of fledglings in 2007, compared to 2005 and 2006, is presumably not due to increased nesting success, but is more likely due to an improved ability to accurately estimate fledgling numbers. In 2007, a fledgling success rate of 1.85 fledglings per active nest was calculated from our sample. This number was used to estimate the overall number of fledglings in the colony. In past years, numbers of fledglings were based purely on counts of birds seen, even though late in the season a majority of the nests become obscured by leaves. The new methodology will likely produce more accurate results and allow for a better comparison of data between years.

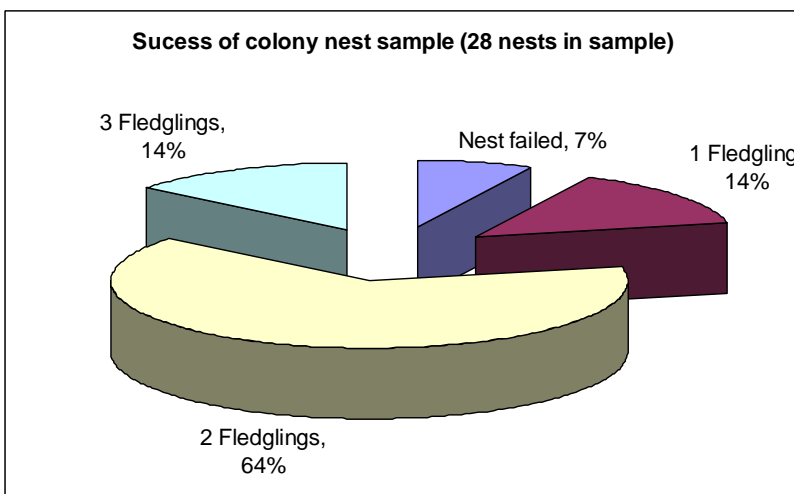


Figure 2: Nesting success of the 28 nests monitored throughout the 2007 season at the Stanley Park great blue heron colony.

Figure 2 illustrates the results for the sample of 28 nests. The 2007 Ministry of Environment heron report showed that nesting success for the Stanley Park colony (0.93) was slightly higher than the average of other colonies in the area (0.68). The higher nesting success in Stanley Park could be a result of the urban setting decreasing predation, or it could reflect the increased sampling effort at the colony. SPES volunteers and staff spent over 250 hours on site collecting data in 2007.

Observations of Note in 2007

- Courting herons were first observed on February 14, 2007; exactly one month later than last year.
- The herons nested in 24 trees in 2007; and one of these had not previously contained nests. The herons selected bigleaf maples, red oak, London plane, and western red cedar trees to build nests in.
- Some of the nests used in 2006 were blown out during the winter storms and were not available to birds returning in 2007. A nest count showed that up to 20 nests may have fallen during the storms.
- The Vancouver Park Board allowed fallen nests within the protective fencing (installed the previous year) to remain on the ground. The herons could often be seen salvaging twigs from these nests and other debris from under the colony.
- There were no documented bald eagle attacks on the heronry in 2006 or 2007. In 2005 the 8 documented attacks on the colony were thought to have been carried out by the same pair of adult bald eagles, who have a nest on the other side of Lost Lagoon. In 2007, despite the ongoing presence of eagles in the vicinity, no attacks were observed. There are six active bald eagle nests in close proximity to the Stanley Park heronry (see <http://www.stanleyparkecology.ca/programs/urbanWildlife/eagles/> for *Nesting bald eagle in the City of Vancouver* reports).
- At least 23 dead heron chicks were collected from underneath the heronry in 2007 (similar numbers to 2006), having either fallen or been pushed from the nests by their siblings. At least eight other chicks that injured themselves while falling from the trees were transferred to wildlife hospitals in 2007.
- SPES monitors observed a seemingly high incidence of siblicide in the colony in 2007, but data on the frequency of incidents of siblicide have not been documented in the past. Siblicide is defined as the death of a young animal as a result of infighting with siblings. Siblicide is common in large birds, and it is a way that certain species deal with fluctuations in the availability of food (i.e. in years of abundant food there are fewer incidents of siblicide) It is unclear whether or not food was less abundant this year than in the past, but since the new data collection techniques allow better comparison, documenting the relative occurrence of siblicide should be easier in the future.
- While great blue herons are normally easily disturbed by human activity, the herons of Stanley Park seem tolerant of the constant city noises. In 2007, the Vancouver Sun Run was re-routed in order that the herons would not be unduly disturbed. Although herons can become habituated to noise, novel disturbances (such as a marathon of 54,000



Photo by Martin Passchier



Photo by Martin Passchier

runners), or disturbances early in the season may still prompt them to abandon their nests. The herons were monitored (in 2006 and 2007) during the Celebration of Light Fireworks display, and while they seemed initially startled by the explosions, they did settle down eventually. (At least one chick fell from the nest and died during the fireworks display of 2006).

- The herons will likely return in late January or early February 2008 to begin nesting. At this time, the females will select a mate, and the pair will then either refurbish an existing nest or build a new one, lay and incubate eggs, and begin the arduous hunting and feeding process as their young grow and fledge.
- Heronries do not last forever. Permanent abandonment is the final part of a heronry's cycle and may occur as a gradual decline or as a sudden absence after many years of successful habitation. The most common reasons for abandonment include repeated predation of the nests, loss of habitat due to guano-trophy (destruction of the nesting site due to bird feces), or human disturbance. The Stanley Park Ecology Society is committed to educating the public to ensure that human impacts are minimized and the heronry can be enjoyed for many years to come.
- A very special thanks to Dalyce Epp, Maria Morlin and Holly Tandy for all of their work monitoring the heron colony in 2007. Although they came to the site to take careful notes on the colony, they often acted as ambassadors for this animal by talking to curious people passing by and by attending public events with SPES staff.



Recommendations

- Continue to follow the guidelines and recommendations outlined in the Stanley Park Heronry Management Plan
- Spend more time on the great blue heron feeding study (piloted in 2007) in order to gather a significant amount of data showing whether or not the herons travel to Richmond to feed.
- Provide more opportunities for education at the heronry site.

Be Sure to Check out the SPES **Adopt-a-nest** program for the 2008 season

Details are online at www.stanleyparkecology.ca or contact nests@stanleyparkecology.ca

Data in this report was collected by Dalyce Epp, Maria Morlin, Holly Tandy and Robyn Worcester

All photos were taken at the Stanley Park heronry in 2007 by Martin Passchier or Robyn Worcester

For further details or questions please contact Robyn Worcester, Conservation Manager with the Stanley Park Ecology Society at conservation@stanleyparkecology.ca or 604 681 9453

Stanley Park Heron Colony Nest Map 2007

