Overview

The 2018 Stanley Park great blue heron colony nesting season is complete. This season was marked early on by significant eagle predation on the heron eggs. However, the herons double clutched, produced a second round of eggs, and successfully raised those chicks. In the end, the success of the colony aligned more with average success rates through previous years compared to the lower numbers of 2017.

Introduction

Thanks to the Vancouver Park Board’s Heron Cam (building on last year’s successful Heron Cam launch), Stanley Park Ecology Society heron monitors were able to get a closer look at several nests and watch them on a more regular basis. The data collected for this year’s report came from weekly Heron Cam observations, 9 rooftop surveys, and 3 ground surveys.
Just like last year, winter persisted well into March this year causing a bit of a delay to the start of the breeding season compared to previous years. The first few adult males returned to the colony on March 3rd. However, with more winter weather, these birds left for about a week. As the weather warmed and the snow melted, the herons finally returned to the nests and started roosting overnight in the colony on March 12th.

With the later start to the breeding season, the birds quickly paired up and started mating. The first eggs were spotted in the nests using the Vancouver Park Board’s Heron Cam on March 28th.

First eggs in Tree B — Photo: Heron Cam / Vancouver Park Board

**Raccoon Predator Guards**

In 2010, Stanley Park Ecology Society (SPES) installed bands of new metal flashing around the base of the colony trees to protect the herons from raccoon predation. The flashing continues to be successful, as once again, we did not witness any raccoon attacks during our surveys. With support from the Vancouver Park Board, we changed out some of the old flashing, and installed new bands as needed to allow the trees to continue to grow.

**Nest Surveys**

In 2018, the ground surveys counted 104 nests in the trees of the colony area. 85 of these were determined to be active nests by noting the presence of an adult heron either in the nest or nearby (within one meter). The rooftop surveys identified a
sample of 40 nests to monitor for the season. These nests were chosen because they were visible from the roof all season, even after leaves filled out in the tree canopy. We started by counting every nest we could, and were left with the 40 remaining nests as the trees leafed out. The nest productivity and fledgling numbers from these 40 nests is assumed to be indicative of the entire colony and the 2018 numbers are based on this data.

Bald Eagle predation event in Tree E — Photo: Heron Cam / Vancouver Park Board

There is definitely a sampling bias regarding our sample nests chosen. The nests chosen were not random, they were selected because we could view and gather data from the nearby rooftop. There is a real possibility that these nests that are located in our view are also the nests that are the most accessible for eagle predation. This may negatively skew the results of nesting success and productivity.

Rooftop surveys were conducted on: March 6, March 20, April 10, April 24, May 15, May 25, June 5, June 26, and July 10. To determine the number of successful fledglings, we used the number of heron chicks visible in our sample from the July 10th count. This is the last data point before the chicks started to fledge; actually, during this count we witnessed two chicks fly away from the colony. The birds were quite large and developed at this time and this is when eagle attacks dropped off. While it is impossible to know for certain if all of the 46 chicks counted on July 10th lived to fledge, it is the best data point available for these calculations.
Results

The percent of successful nests (defined as a nest that raises a chick to the fledgling stage) was higher than 2017. In our sample, 60% (24 of the 40) nests produced fledglings (see Figure 1). This success rate is close to the 10 year average of 69%. We believe that many of the failed nests can be attributed to bald eagle predation events.

![Productivity and Nest Success of the Stanley Park Heron Colony](image)

*Figure 1: Productivity and nest success of the Stanley Park great blue heron colony 2007-2018.*

Productivity (defined as the number of fledges per successful nest) rebounded to 1.92 fledges. In our sample of 40 nests, 24 nests successfully yielded 46 fledglings (see Figure 1). Again, this is a return to near the 10 year average of 2.06 chicks per successful nest.

We believe that this year’s return to normal amounts of productivity and nest success is due to decreased bald eagle predation events compared to 2017. Early in the nesting season, we witnessed daily eagle attacks on the colony while the herons were incubating their eggs. However, the raids stopped for about 4 weeks, then only resumed after the chicks hatched, but at a lower rate than in 2017. While not necessarily directly related, in Stanley Park there were only two successful bald eagle nests this year compared with 4 successful nests in 2017. Whatever the reason for the year to year changes, the amount of change is too small to be statistically significant.

At the beginning of the season there were a total of 104 nests in the trees. However, the number of active nests remained constant at around 85. This is lower than the
most productive times for the colony, but also consistent with the observations of the last few years. Based on the monitoring data, we estimate the colony produced a total of 98 fledglings (see figure 2). This is estimated by comparing our sample of nests surveyed to the total number of nests in the colony. In 2018, our sample of 40 nests yielded 46 fledglings (an average of 1.15 fledglings per nest). This average multiplied by 85 active nests results in an estimated 98 fledglings.

![Active Nests and Estimated Fledges of the Stanley Park Heron Colony](image)

**Figure 2: Active Nests and Fledges for the Stanley Park great blue heron colony (2000-2018).**

**Outreach and the Heron Cam**

The Vancouver Park Board Heron Cam allowed the story of the herons to be broadcast to a larger audience. The web camera was active 24/7 from March until breeding season ended in late July. The web page allowed viewers to control the camera for short periods of time by scrolling through different pre-defined views, and directed them to an ‘ask an expert’ email service for answering questions about the herons. New views were added and changed during the breeding season as trees leafed out and blocked some nests from view. A time-lapse feature on the Heron Cam allowed viewers to watch a recap of the day’s action during the dark hours.

New for this year, Stanley Park Ecology Society—with support from the Vancouver Park Board—offered live, in-person, weekly interpretation at the colony. We directly engaged with over 400 people. People loved how SPES and VPB supported and promoted the colony with this education service. Visitors enjoyed looking through the
scope at the herons, handling taxidermy specimens, and learning about these wonderful birds. It was a fantastic way to engage the public, promote awareness of this species at risk, and share all the hard work that goes into conserving these birds.

SPES also led five Discovery Walks focused on the heron colony: three during our Earth Day celebration and two in June. We also wrote and sent out monthly heron colony updates throughout the breeding season. Each of these newsletters now goes out to over 560 recipients. We are thrilled to have so many people interested in the herons.

Thanks

We would like to thank our volunteers for their efforts in counting great blue herons throughout the year—in all kinds of weather. Without their help, the data for this report would not exist.

Thank you to the Vancouver Park Board for their support of the great blue heron colony with the Heron Cam and website: https://vancouver.ca/parks-recreation-culture/heron-cam.aspx. These tools allow thousands of people from all over the world to connect with nature and view these magnificent birds.

Heartfelt thanks to all the people who adopted a heron nest for the 2018 season. These contributions go directly towards monitoring the herons and raising awareness about this species at risk.

Lastly, we are grateful for everyone who comes out to the colony to enjoy and learn about these birds, and reads these updates. We wish the herons well, and await their return in 2018!
Heron Colony Nest Map as Recorded on April 19, 2018
(*higher counts recorded later)