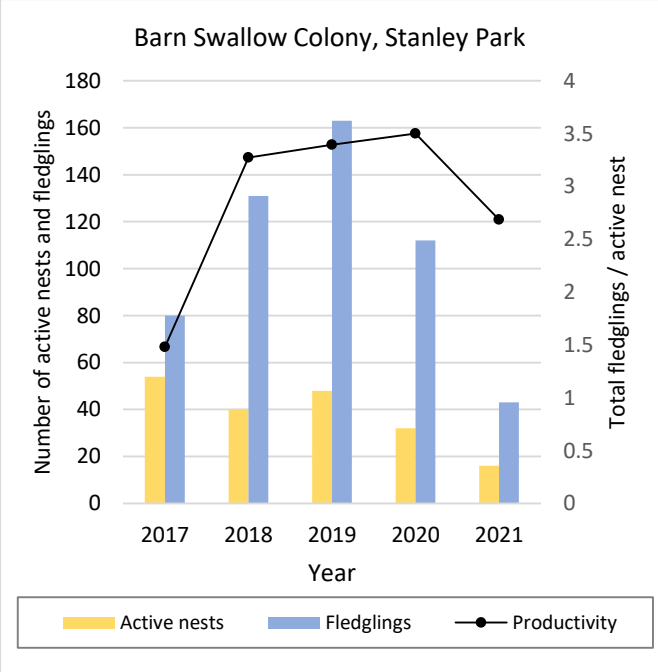
STANLEY PARK ECOLOGY SOCIETY

Wildlife that Breed in Stanley Park: Highlights of the 2021 Season

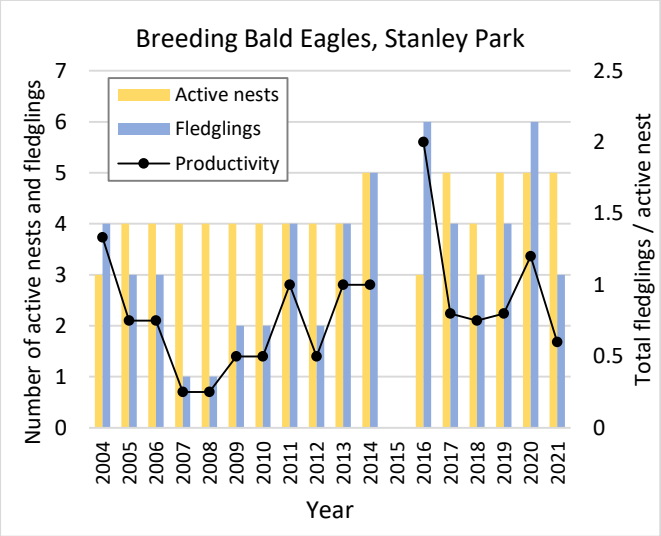
A great diversity of life makes its home in Stanley Park, particularly during the summer months. For most temperate species, the abundance of resources available during the warmer part of the year means much of Stanley Park's wildlife have their young in the summer. Mating and courtship can happen at any time of year, for example in Bald Eagles which can start mating as early as October upon returning from the North. This report covers a selection of the wildlife breeding in the Park, for which we have more detailed information. We can detect the presence of many species, such as breeding songbirds, and in some cases we regularly monitor nests (as in the case of Barn Swallows, Great Blue Herons, and Bald Eagles), or monitor the presence and quantity of individuals present (as for beavers and roosting bats). Data is collected with the help of many volunteers, which helps us paint a picture of the current state of breeding wildlife in the Park, enabling us to keep track of changes as the climate changes and as human impacts in the Park continue.

43 Barn Swallows hatched in 2021, the lowest count since monitoring began

Barn Swallows (*Hirundo rustica*) are songbirds belonging to a group of rapidly declining birds known as aerial insectivores. Their name comes from their characteristic of feeding on insects while in the air. Since detailed monitoring began in 2017, the number of chicks produced in Stanley Park has varied between 80 in 2017 and 163 in 2019. However, this year (2021) there were a total of 43 barn swallow chicks, coming from 16 nests. Because the population seems to fluctuate from year to year, we cannot determine if the population is declining in general or if this was just a low year; however, a decline in populations would be in line with the aerial insectivore population trend, which is in a steep decline of 59% between 1970 and 2020 (Berzins 2020). Also, the extreme heat event in late June/early July of this year may have decreased nesting success.



Three Bald Eagle chicks in 2021



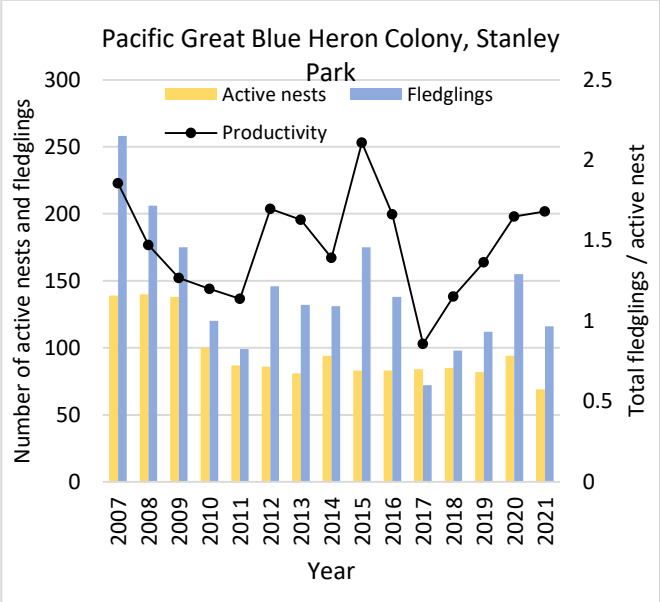
Bald eagle pairs separate during migration, then re-unite for the breeding season, forming the same breeding pair year after year. Eagles' diet consists mostly of fish but also garbage, carrion, mammals, gulls and waterfowl. Eagles can be scavengers (eating dead animals) and pirates (stealing food from others) as well as hunters (catching live prey).

In Stanley Park, five bald eagle couples were active in 2021 and two couples produced chicks; one nest produced one chick, and one nest produced two chicks. The total number of chicks counted in Stanley Park since monitoring began in 2004 ranged from 1 chick in 2007 and 2008, to a high of 6 chicks in 2016 and 2020. The number of nests per square kilometer is higher in Stanley Park than in less urbanized environments. One possible explanation for this is that eagles are more limited by nesting locations than by food availability in Vancouver, so birds are still able to acquire enough food even when their breeding densities are high.

Volunteer Tulika Bose surveys near Merilee's, scanning for evidence of eagle activity. (Photo by Olga Lansdorp)

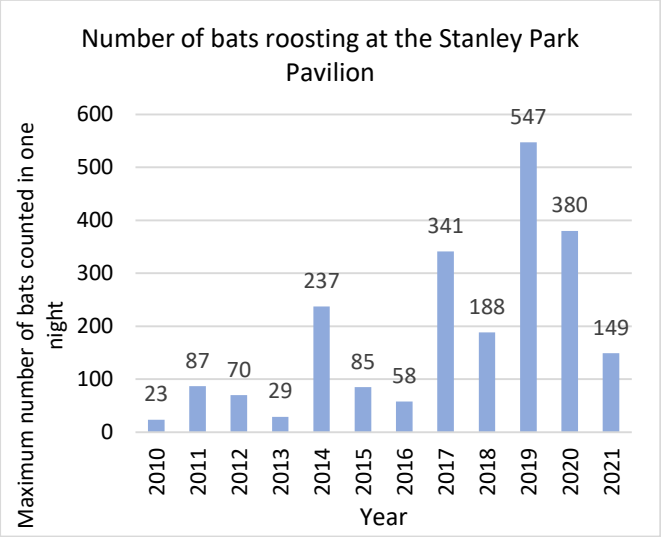
69 Pacific Great Blue Heron nests in 2021

Pacific Great Blue Herons (*Ardea herodias fannini*) usually nest far away from human activity, but Stanley Park has hosted a heron colony near the Park Board Office since 2001, where there is plenty of foot traffic. People love to watch these nests during the spring and summer, both in person and via the City of Vancouver's Heron Cam, which captures many exciting moments of courtship, mating, nest building, incubation, care for the young and fledging. In 2021 there were 69 active nests and an estimated 116 young, fewer total nestlings than last year and a similar number of chicks per nest (about 1.7 chicks per nest). The first heron sighted in the trees was on February 17, 2021, and the first chicks were recorded on April 21, 2021.



Two young herons in a nest. (Photo by Martin Passchier)

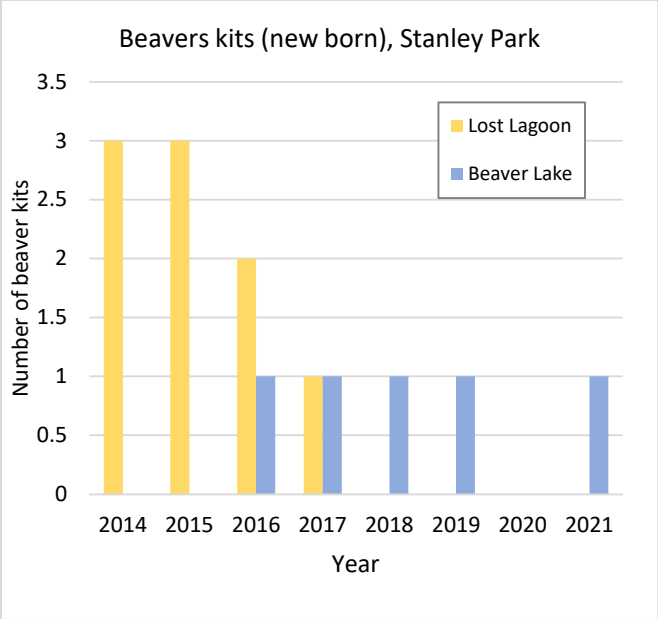
Bats roost in different locations throughout the season



There are at least five species of bats that use Stanley Park during the late spring and summer months, including Yuma myotis (*Myotis yumanensis)*, California myotis (*Myotis californicus*), little brown myotis (*Myotis lucifugus*), big brown bats (*Eptesicus fuscus*), and silver-haired bats (*Lasionycteris noctivagans*). Bats arrive at their summer roost site pregnant, and give birth to their young in the late spring. They form maternity roosts, where sisters, aunts, grandmothers and other related bats sleep during the day and leave their young at night while they go out and forage. The Stanley Park Pavilion has a maternity roost with more than 100 individual bats; populations are counted every two weeks in the summer months. This year the maximum number counted was on May 26, with 149 bats counted emerging from the SPES office building. We submit our data to the BC Community Bat Program. SPES put up 12 bat boxes, and there were six instances of bats sleeping in the boxes this year, with one to two bats in active boxes. To check the bat boxes, we look up at the bat boxes from below and shine a strong flashlight, looking for small furry bats between the slats.

Several bat boxes, installed in Stanley Park in 2019, are visible in this photo. (Photo by Ariane Comeau)

Beaver-on-beaver aggression in Beaver Lake leaves us wondering



This year we observed two beavers at Lost Lagoon and four at Beaver Lake. There have not been kits (new born beavers) in Lost Lagoon since 2017; perhaps the mating pair living there is no longer able to produce kits. Interestingly, we noted several instances of aggression between beavers in Beaver Lake. A larger beaver seemed to be chasing a smaller beaver, perhaps trying to bite it. Research indicates that beavers are rarely if ever aggressive to members of their own family (Mayer et al 2020), raising the possibility that one of the beavers came from somewhere else. In the winter of 2020-2021, beavers constructed a second lodge on the western shores of Beaver Lake; possibly the beaver family constructed the second lodge to move further from the major construction that was taking place for the new Beaver Lake outflow. However, the beaver aggression suggests that perhaps the new lodge was constructed by a beaver new to the area. In the end our observations were inconclusive, but highlight some interesting possibilities.

Photo of an adult beaver in front of the lodge at Beaver Lake during an August 17th, 2021 survey. (Photo by Claudia Kowalski)

Many breeding birds in the Park

A local biologist who has worked in remote coastal forests let us know that the bird diversity we have in Stanley Park is similar to what they have observed in more remote, intact ecosystems in coastal British Columbia, which is exciting as it points to Stanley Park's ability to function as bird habitat. Many birds make their nests, lay eggs, and raise young year after year in Stanley Park. SPES surveys breeding birds through point counts, where the observers stay still and silent for five minutes, recording any birds they see or hear during that time. We observed a total of 34 species in Stanley Park's forests this year, shown on the table below.

2021 Species Detected	
American Crow	Pacific Wren
American Robin	Pine Siskin
Anna's Hummingbird	Pileated Woodpecker
Bald Eagle	Pacific-slope Flycatcher
Black-headed Grosbeak	Red-breasted Nuthatch
Brown Creeper	Red-breasted Sapsucker
Blay-throated Gray Warbler	Red Crossbill
Canada Goose	Song Sparrow
Chestnut-backed Chickadee	Spotted Towhee
Common Yellowthroat	Swainson's Thrush
Dark-eyed Junco	Townsend's Warbler
Great Blue Heron	Warbling Vireo
Golden-crowned Kinglet	Western Tanager
Glaucous-winged Gull	Western Wood-Pewee
Hutton's Vireo	Wilson's Warbler
Northern Saw-whet Owl	Yellow Warbler
Orange-crowned Warbler	Yellow-rumped Warbler

Yellow Warbler, one of the birds that breeds in Stanley Park. (Photo by Frank Lin)

The wildlife surveys we conduct contribute to a deeper understanding of the wildlife activities, including breeding, within Stanley Park. From the survey data, we are able to assess the ecological integrity of a variety of ecosystems within the Park; we completed a large-scale assessment of Stanley Park recently, publishing the State of the Park Report for the Ecological Integrity of Stanley Park 2020 (SOPEI) in October of 2020. While COVID-19 slowed down some SPES work, monitoring continued with over ten different types of wildlife surveys active throughout the year.

Thank you to all survey volunteers and donors for their passion and generosity.

If you would like more information on how to get involved, learn about the volunteer opportunities or to make a donation, please reach out to vols@stanleyparkecology.ca or visit www.stanleyparkecology.ca

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References

Berzins, L. 2020. Conservation and Outreach Priorities for Conserving Aerial Insectivore Populations in Canada: Report from March 2020 Aerial Insectivore Workshop in Saskatoon, SK.

Mayer, M., C. A. Estalella, S. K. Windsels & F. N. Rosell. 2020. Landscape structure and population density affect intraspecific aggression in beavers. Ecology and Evolution (10:13883–13894).

Several young Barn Swallows in a nest, likely moments before their parent returns with a mouth full of food (insects). (Photo by Erika Hyde)