STANLEY PARK ECOLOGY SOCIETY

Stanley Park Bald Eagle Nest Update 2021

Overview

Stanley Park Ecology Society (SPES) has been monitoring Bald Eagle (*Haliaeetus leucocephalus*) nests in Stanley Park since 2004 following the Wildlife Tree Stewardship (WITS) protocol.

Bald Eagles are highly territorial and repeatedly return to the same nest, so the number of established couples and successful fledglings provide insights into eagle productivity, competition and the capacity of the Park to support Bald Eagles. This monitoring also allows SPES to apply best-management practices, and inform the timing for Park operations and other activities (Appendix 1). Where available, Bald Eagles prefer to use large conifers for nesting. They build their nests near the trunk, high up in the tree, but below the crown. A site with an unimpeded view of the surroundings is especially desirable. Most Bald Eagle nests are found within 300 m of a water body. In Stanley Park, many of the Bald Eagle nests have been reused throughout the years, with some falling and others being built. It is difficult to identify individual adult eagles by their morphology, so we are not certain for how long a given nest is being used by the same individuals. However, one Bald Eagle pair lays their eggs on a consistent date year after year, which may indicate the same couple is using a nest again.

From 2004 to 2021, thirteen Bald Eagle nests were active at different times (Figure 1). This year five Bald Eagle couples were active at their nests in the Park, and two of these nesting pairs were successful. Three eaglets hatched and all survived to successfully fledge (Table 1).

From January 2021 to August 2021 every active nest was surveyed at least once a week. The Dining Pavilion nest was monitored more often since the SPES staff could make observations from their office. The Cathedral Trail nest was also monitored more often by Dean Sinnett, surveying the nest

with a scope from his home downtown. The people that surveyed the eagle nests regularly this year were:

- Olga Lansdorp – SPES Conservation Technician
- Nicole Delapierre – SPES Volunteer
- Dean Sinnett – Naturalist (surveys the Cathedral Trail nest)

In this report we detail the 2021 Bald Eagle nests and compare data with preceding years.

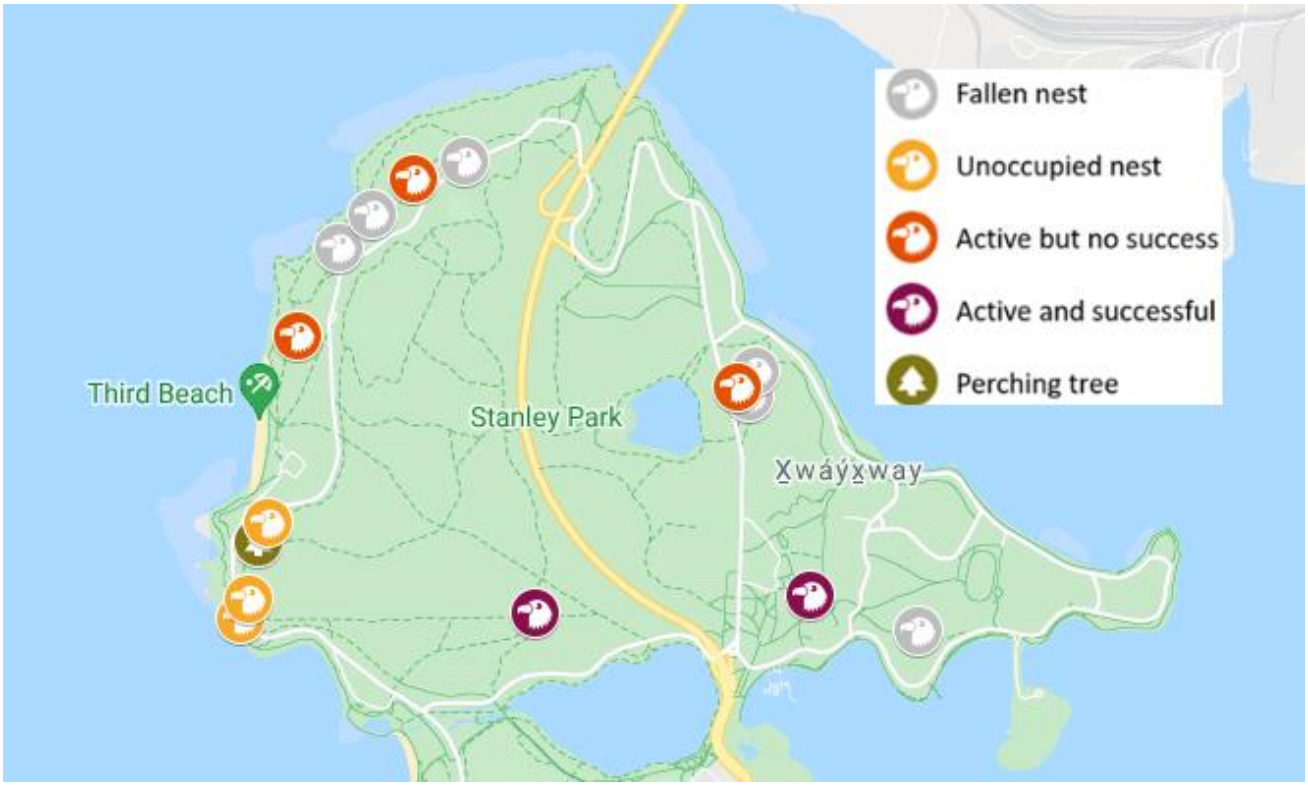

Figure 1. Bald Eagle nest locations throughout Stanley Park from 2004 to 2021, with their status in 2021.

Table 1. Incubation, number of eaglets, and number of fledglings per active nest in 2021

Active Nests	Incubation	Eaglets	Fledglings
Cathedral	Yes	2	2
Dining Pavilion	Yes	1	1
Merilees 4	No	0	0
Merilees 5	No	0	0
Pipeline Road 3	No	0	0

Active Nests in 2021

Cathedral Trail

Tree species: Douglas fir

Coordinates: UTM zone 10N, 489507, 5460638

Location description: At the junction of Bridal, Lees, and Cathedral trails (Figure 2)

Nest productivity: Successful, 2 eaglets

Figure 2. An adult bald eagle circling its nest on Cathedral Trail (Photo by Michael Schmidt).

The Cathedral nest is the oldest and largest Bald Eagle nest in the Park. The nesting pair successfully raised two chicks last year, and this year as well. Dean Sinnett and his family monitor this eagle nest with a scope from their home. The first evidence that the chicks had hatched was from May 4, 2021, when an adult eagle was looking down at the nest, and by May 21 two chicks were visible in the nest. One of the chicks was first observed perching at the edge of the nest on June 26, and both

chicks were jumping and flapping their wings on July 17. Shortly after that the chicks were both observed on branches near the nest, occasionally flapping their wings and vocalizing. One chick fledged around July 24, and one stayed near the nest until approximately August 12, after which it, too, fledged.

Dining Pavilion (Malkin Bowl)

Tree species: Douglas fir

Coordinates: UTM zone 10N, 490342, 5460700

Location description: Just east of Malkin Bowl (Figure 3)

Nest productivity: Successful, 1 eaglet

Figure 3. Malkin Bowl nest from below, with the single chick's head visible peaking above the branches (Photo: Michael Seear, 2021).

This year the couple at the Dining Pavilion nest had one eaglet that successfully fledged. Last year there were two eaglets, both of which successfully fledged. In 2019 one of the eaglets died falling from the nest and in 2016 both chicks fell from the nest, though one was later released by O.W.L. back into the Park. We suspect that is the same pair that used the Dining Pavilion nest last year, since the timing of egg laying and hatching is similar (hatched in late April both years). The single eaglet was first seen on May 7, and it first perched on the rim of the nest on June 17. In early July the eaglet was spotted on and off near the nest, and was seen the last time on July 18, perched high in the nesting tree.

Merilees 4

Tree species: Douglas fir, leaning sharply
UTM: zone 10N, 488721, 5461526
Location description: On east side of Merilees Trail, south of where the trail meets with Siwash Rock Trail
Nest productivity: Active but no success

There was activity at this nest in January this year; the eagles were vocal and in the vicinity of the nest. A bird was seen perching on the nest several times in March and April, once as a couple on April 17 when one bird was perched on the nest and one right above the nest. Despite these early signs of activity, there were no chicks produced at this nest this year. Last year the couple nesting at Merilee's 4 produced one chick.

Merilees 5

Tree Species: Western hemlock
Coordinates: UTM zone 10N, 489090.5, 5462019.9
Location Description: Tree by Park Drive road, in front of fire hydrant, North of Prospect Point Picnic Area (Figure 5)
Nest productivity: Active but no success

There were eagles in the vicinity of the Merilee's 5 nest this, including perched on a snag about 50 meters south of the nest. However, no chicks were produced at this nest this year. Eagles at this location produced chicks in 2018 and 2019, but not in 2020 or this year.

Pipeline Road 3

Tree species: Douglas fir
Coordinates: UTM zone 10N, 490115.5, 5461364.5
Location description: East side of Pipeline Road, between Tisdall Walk and Ravine Trail, between two snags (Figure 6)
Nest productivity: Active but no success

Despite multiple instances of viewing adult eagles close to the nest, this year the pair did not produce any chicks at Pipeline Road nest. The nest was built in 2017 and successfully raised an eaglet in 2020, however this year no eaglets were seen or heard.

Inactive nests

Lees

Tree species: Douglas fir, leaning sharply
Coordinates: UTM zone 10N, 488537, 5460629
Location description: Across Stanley Park Drive from the western entrance to Lees Trail

This unusually small nest was discovered at the end of 2018. A couple was seen periodically sitting in the nest during 2019, but no eaglets were observed. This year the nest was not worked on, and is now in considerable disrepair. Interestingly, two additional small nests were noticed in the area in July (named Rawlings 1 and 2 in Figure 1). We hypothesize that these nests were built by this couple. Building practice nests is typical of young Bald Eagle couples, and it will be interesting to see if one of these nests becomes permanent next year.

Comparison with previous years

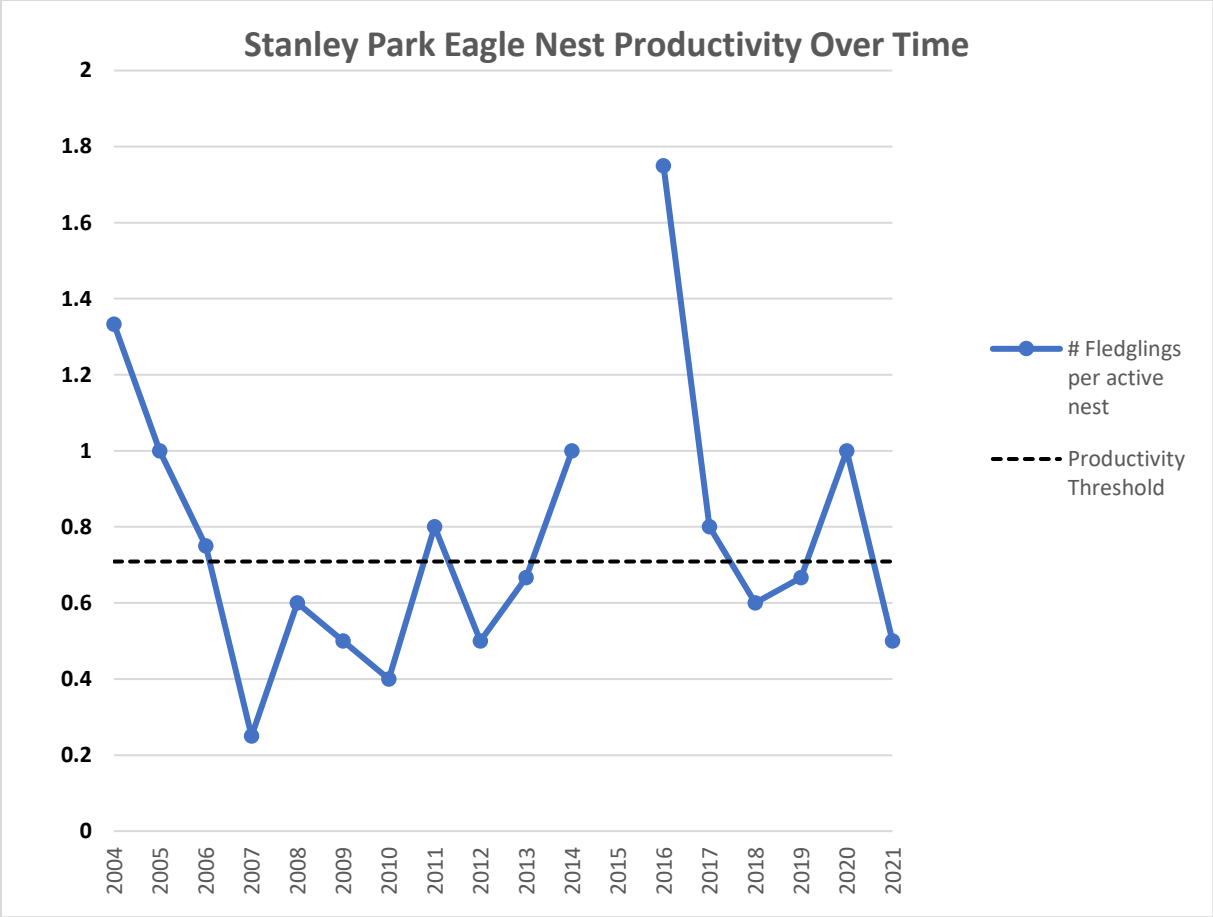

Figure 4. Productivity and nesting success of Bald Eagles in Stanley Park from 2004 to 2020 (excluding 2015). Bald Eagle populations are considered sustainable if the number of fledglings per active nest observed is over 0.7 (dashed black line) (Pendergast 2004).

In the Broken Islands of Vancouver Island, eagle populations are considered sustainable when more than 0.7 young are produced per nest per year (Pendergast 2004). Since 2004 an average of 0.83 eaglets were produced per active nest, indicating that the eagle population in Stanley Park is sustainable (Figure 4). Figure 4 also shows the nesting success of the Bald Eagles in Stanley Park over the years. Table 2 shows which nests were active every year, and how many eaglets successfully fledged from each nest. As SPES continues or work monitoring the eagle nests of Stanley Park, it is our hope that our detailed data set will continue to increase understanding and respect for Bald Eagles.

Table 2. Productivity expressed by the number of fledglings per active nest throughout the years. The grey cells indicate the active nests for each year.

Bald Eagle Nest	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Brockton							1	0	1	1	1							
Cathedral	1	0	0	0	0	0	0	1	1	2	2		2	2	1		2	2
D. Pavilion	2	1	2	0	0	0						2	1	0	0	1	2	1
Lees																0		0
Merilees 1		1	0							1	2							
Merilees 2				0									2					
Merilees 3					1	2	1	0	0					1				
Merilees 4										1	0			1		1	1	0
Merilees 5															2	2	0	0
Pipeline 1	1	1	1	1	0	0												
Pipeline 2							0	3	1	0								
Pipeline 3														0	0	0	1	0

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Bald Eagle nests and the trees they reside in are protected under Section 34 of the Wildlife Act. If you have concerns about the safety of a nest in your area, please contact your regional BC Ministry of Environment office.

References

Hancock Wildlife Foundation. Accessed here: https://hancockwildlife.org/hancock-wildlife-reference/bald-eagle-biology/bald-eagle-nesting-season/

Pendergast, C. 2004. Bald Eagle Occupancy and Productivity Surveys on Vancouver Island. Accessed here: http://www.env.gov.bc.ca/wildlife/wsi/reports/4198_WSI_4198_RPT.PDF

Appendix 1: Buffer map for Vancouver Park Board

This map, which provides a 200 m around eagle and heron nests, is used to guide best-practices for Park operations, film crews, etc.