

# Stanley Park Bald Eagle Nest Update 2019

## 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 2019, twelve Bald Eagle nests were active at different times (Figure 1). This year, one new nest was built, five Bald Eagle couples were active at their nests in the Park, and three of these nesting pairs were successful. Five eaglets were born and four survived to successfully fledge (Table 1).

From March 2019 to August 2019 every active nest was surveyed at least twice 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:

- Meghan Cooling – SPES Conservation Technician
- Brian Chmielewski – SPES Volunteer
- Kendra Runnalls – SPES Volunteer

- Clemency Magen – SPES Volunteer
- Nicole Delapierre – SPES Volunteer
- Dean Sinnett – Naturalist (surveys the Cathedral Trail nest)

In this report we detail the 2019 Bald Eagle nests and compare data with preceding years, excluding 2015 due to lack of data.



**Figure 1.** Bald Eagle nest locations throughout Stanley Park from 2004 to 2019, with their status in 2019. B: Brockton; C: Cathedral; D: Dining Pavilion; L: Lees; M1-M5: Merilees 1-5; P1-P3: Pipeline 1-3

**Table 1.** Incubation, number of eaglets, and number of fledglings per active nest in 2019

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

## Active Nests in 2019

### Dining Pavilion (Malkin Bowl)

Tree species: Douglas fir

Coordinates: UTM zone 10N, 490342, 5460700

Location description: Just east of Malkin Bowl (Figure 2)

Nest productivity: Successful, 1 eaglet



**Figure 2.** Left: View of Dining Pavilion bald eagle nest from northwest, standing in the Pavilion Garden (Photo: Ariane Comeau, SPES staff, 2017). Right: Our first view of both eaglets, taken on May 6, 2019 through a scope from the SPES Office (Photo by Dannie Piezas, SPES staff, 2019).

This year the couple at the Dining Pavilion nest had two eaglets. These were the first eaglets in this nest since 2016. The adults were first seen incubating in late March and the eaglets were first spotted at the beginning of May when they were approximately 3 - 4 weeks old. Sadly, only one of these eaglets fledged successfully. The other eaglet was found dead under the nest and appears to have been killed falling from the nest at 12 weeks old (mid-July). We are awaiting a report from O.W.L. about what may have caused this. This is the second time eaglets from this nest have fallen since SPES started monitoring the nest. In 2016 both eaglets from that nest had to be rescued by O.W.L. after flight failure (one of these was later released back into Stanley Park by O.W.L.). The surviving eaglet from the 2019 brood fledged successfully at the end of July. The last time it was seen it flew in a beautiful loop above the Malkin Bowl garden before returning to the nest tree.

## 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 (Figure 3)



This is a new nest that was noticed at the end of last year by a SPES volunteer. A pair of eagles was seen perched around and in this nest frequently in March and May. However, it is unclear if any incubation of eggs took place. Though an eagle was seen sitting in the nest several times, it often flew away during the observation period and was not replaced by its mate. Usually one eagle will sit on the nest almost continuously for the 35 day incubation period, while the other hunts for food or guards the nest. This nest also appears unusually small for a Bald Eagle nest, though this may just be because it is new. Bald Eagles add to their nests every year, and old Bald Eagle nests are some of the largest nests in the world. The couple at Lees nest may be the same that was observed perching on the forked cedar tree on Rawlings Trail last year. It was suspected at the time that there was another nest in the area.

**Figure 3.** View of Lees nest, in severely leaning Douglas fir, looking west across Stanley Park Drive from Lees Trail (Photo: Meghan Cooling, SPES staff, 2019).



#### 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 (Figure 4)

Nest productivity: Successful, 1 eaglet



Early in season, while the deciduous trees are still bare, the Merilees 4 nest is usually viewed from a spot across from the Hollow Tree. We believed this nest had fallen in late February because we could no longer see it, so stopped monitoring it. However, one of our volunteers spotted this nest, with an eaglet in it, in early July! It appears that the current nest was built a few metres higher than the old one. This nest was not used last year, and it was speculated that the couple from the new Merilees 5 nest, which is only 600 m away, would not allow the Merilees 4 pair to nest, as they were too close. Apparently this is not a problem, as both these pairs successfully raised young. The Merilees 4 eaglet appeared younger than the other eaglets from 2019, and didn't fledge until the second week of August, several weeks after the eaglets from other nests.

**Figure 4.** View of Merilees 4 nest from Merilees Trail, looking south, just south of where trail meets with Siwash Rock Trail (Photo: Meghan Cooling, SPES staff, 2019).

## 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: Successful, 2 eaglets



**Figure 5.** Left: Merilees 5 nest from viewpoint in front of Prospect Point Picnic area (Photo: Meghan Cooling, SPES Staff, 2019). Top right: One of the Merilees 5 pair keeping an eye on the nest from atop a neighbouring tree (Photo: Michael Seear, 2019). Bottom right: The two Merilees 5 eaglets at approximately 9 weeks old. The eaglet on the left is exercising its wings in preparation for flight (Photo: Michael Seear, 2019).

The Merilees 5 nest had a second successful season this year. As in previous years, this couple laid their eggs at the beginning of March, almost a full month earlier than any other Park eagles. The chicks likely hatched in early April, but they were not seen until May 4, when they were approximately 5 - 6 weeks old. By this time their gray hatchling fuzz (see Figure 2) was already been replaced by brown feathers. By the end of June these eaglets were regularly seen perched outside of the nest in various locations on the nest tree. The larger eaglet (seen flapping its wings in Figure 4) fledged on July 8 and the smaller eaglet one week later on July 15. Another feature

that makes this pair of Bald Eagles unique, aside from laying their eggs early, is that they have been building their nest in western hemlock trees! Western hemlocks are not as sturdy as Douglas firs or western red cedars, and their nest has fallen and been rebuilt in different hemlocks three times since SPES has been monitoring them (Merilees 2, Merilees 3, Merilees 5).

### **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: Failed



**Figure 6.** View of Pipeline Road 3 bald eagle nest from west, standing by Pipeline Road (Photo: Meghan Cooling, SPES Staff, 2019).

As happened last year, this couple was observed working on the nest beginning in early March, and were often seen perched in the vicinity throughout April and May. However, no incubation was ever observed, and no eaglets were produced. This nest was built in 2017.



## Inactive nests

### Cathedral Trail

Tree species: Douglas fir

Coordinates: UTM zone 10N, 489507, 5460638

Location description: At the junction of Bridal, Lees, and Cathedral trails (Figure 7)

Nest productivity: Inactive



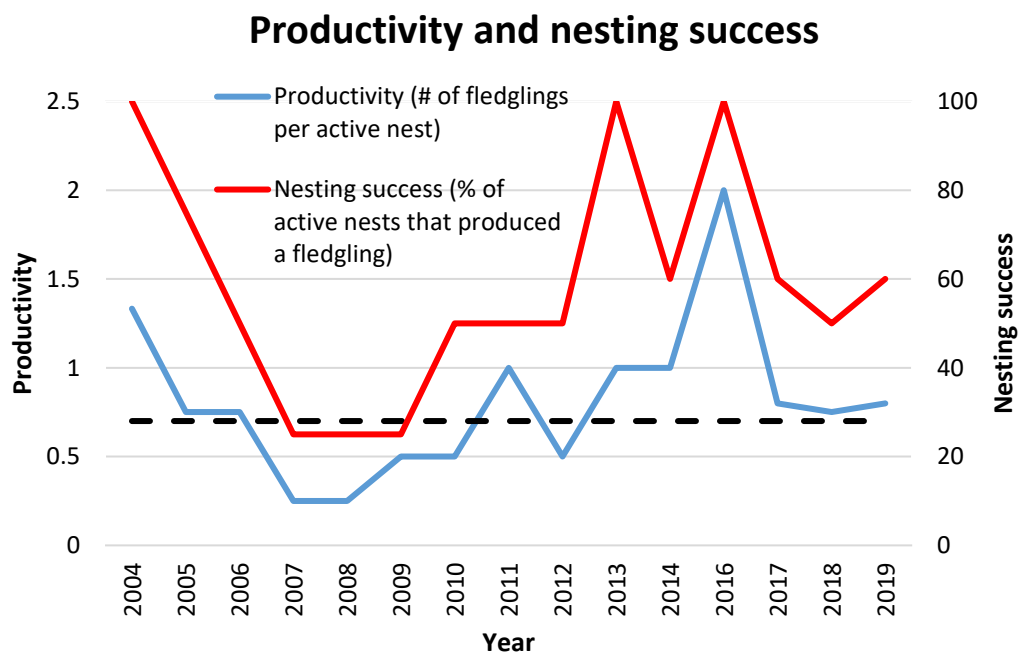
For the first time since the Stanley Park Ecology Society began surveying the eagles in the Park, this nest was not active. The Sinnett family, who monitor this nest with a scope from their home, confirmed that there was no attempt at egg-laying this year. Bald Eagles often build “alternate” nests, which they will use if their primary nest is disturbed, or becomes infested with mites. Mite infestations are a common problem for Bald Eagles, and the eagles will not use the infested nest for several years to allow the infestation to die down. It is possible that is what has happened in the Cathedral nest this year. If this is the case, we do not know which nest the Cathedral couple are using, assuming they are still in the Park. Merilees 4 nest is a possibility.

**Figure 7.** Cathedral nest as viewed from Bridle Trail, the inset shows a close-up of the nest (Photos: Meghan Cooling, SPES Staff, 2019).



## Comparison with previous years

In the Broken Islands of Vancouver Island, eagle populations are only considered sustainable when more than 0.7 young are produced per nest per year (Pendergast 2004). According to this number, the nests in Stanley Park from 2007 to 2012 were not sustainable, with the exception of 2011, but have been sustainable since 2013 (Figure 8). Figure 8 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. Figure 9 shows the total number of nests observed, active nests, successful nests and number of fledglings per year in the Park. Table 3 indicates the date of Bald Eagle nesting events in 2019.

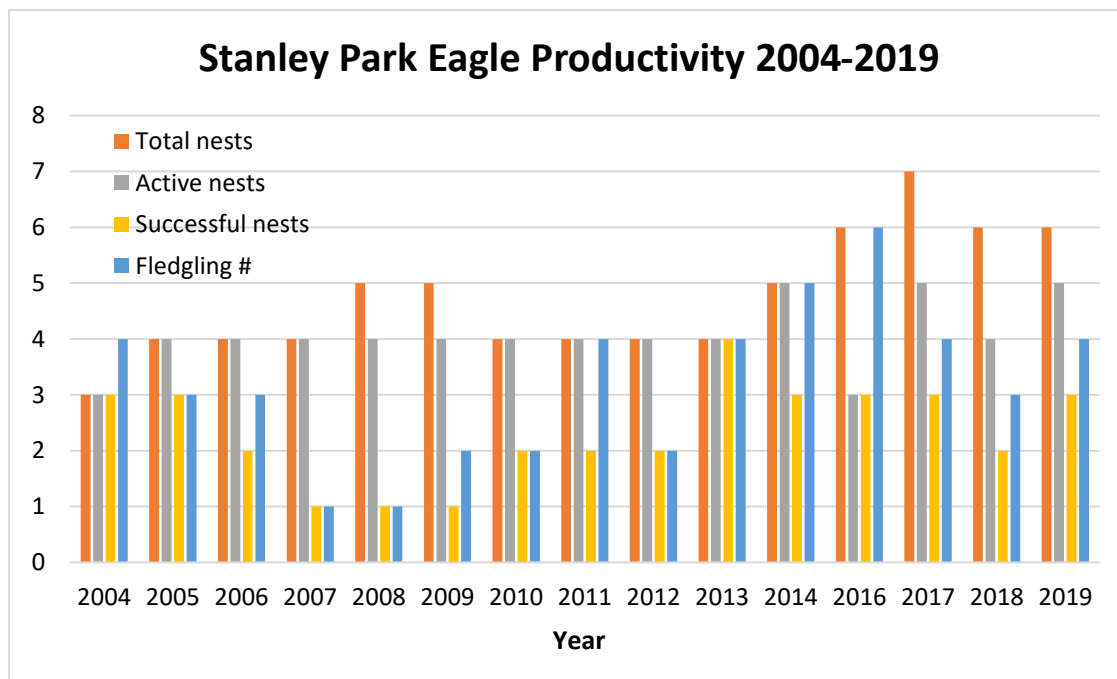


**Figure 8.** Productivity and nesting success of Bald Eagles in Stanley Park from 2004 to 2019 (excluding 2015). Bald Eagle populations are considered sustainable if the number of fledglings per nest observed is over 0.7 (dashed black line) (Pendergast 2004).

**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 Nests	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Pipeline Road	1	1	1	1	0	0										
Pipeline Road 2							0	3	1							
Pipeline Road 3														0*	0	0
Dining Pavilion	2	1	2	0	0	0						1	2	0	0	1
Brockton							1	0	1	1	1					
Cathedral	1	0	0	0	0	0	0	1	0	1	2	?	2	2	1	
Merilees 1		1	0							1	2					
Merilees 2				0									2			
Merilees 3					1	2	1	0	0					1		
Merilees 4										1	0	?	?	1		1
Merilees 5															2	2
Lees																0

\*In 2017, an eaglet was heard in the Pipeline Road 3 nest but we don't believe it survived.



**Figure 9.** The number of total nests, active nests, successful nests, and number of fledglings each year.

**Table 3.** Bald Eagle nest event dates in 2019. The dates are as close as possible to the event dates, but are not exact due to lack of daily observations.

Bald Eagle nests	Adult first seen inside nest	Adult first seen incubating	Adult last seen incubating	Hatching date	Eaglet first heard/seen	Eaglet least heard/seen
Dining Pavilion	2019-01-30	2019-03-20	2019-05-04	~ 2019-04-17	2019-05-06	2019-07-24
Lees	2019-03-09	2019-03-16	n/a	n/a	n/a	n/a
Merilees 4	n/a	n/a	n/a	n/a	2019-07-04	2019-08-07
Merilees 5	2019-02-26	2018-03-01	2018-04-10	~ 2019-04-09	2019-05-04	2019-07-08 (1); 2019-07-15 (2)
Pipeline Road 3	2019-03-02	n/a	n/a	n/a	n/a	n/a

In 2019:

Adult incubating starting in March

Hatching in April / early May

Eaglets last seen July / early August

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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

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](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.

### Stanley Park Eagle and Heron Nests 2019

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