

Nesting Bald Eagles in the City of Vancouver 2007



Vanier Park Eagles

Photo Mark T. White

In Cooperation With:



URBAN EAGLES

Bald eagles (*Haliaeetus leucocephalus*) are a well-liked animal within our community. Their large size and impressive hunting techniques help them capture the interest of people from all walks of life. In Vancouver we are lucky to have an abundance of nesting pairs. Through urban eagles, people are given the opportunity to become familiar with the life cycle and daily habits of a large raptor that is much less accessible in the wild.



Photo Peter Woods

Although eagles are not an endangered species in BC, their populations reached critical levels in other parts of Canada and the United States in the past. Their rise in abundance since the 1970's followed the banning of harmful pesticides such as DDT and the elimination of bounty hunting. Since then eagles have become increasingly abundant across North America and they have expanded their range to include traditional nesting areas; even if that means nesting in the heart of downtown Vancouver.

Last year there were 18 eagle nests monitored in Vancouver by Stanley Park Ecology Society (SPES) staff and volunteers. There are an estimated 200 nesting pairs in the greater Vancouver area (Hancock 2006) and an estimated 15 000 adult birds in BC (Davies 1985). The following table outlines the nesting activity that has been recorded in Vancouver to date.

Table 1: Bald Eagle nesting activity in the City of Vancouver (2003-2007)

Eagle Pair	2003		2004		2005		2006		2007	
	Active	Fledges	Active	Fledges	Active	Fledges	Active	Fledges	Active	Fledges
Strathcona Park	yes	1	yes	0	yes	1	yes	1	yes	0
Pipeline Road	no records		yes	1	yes	1	yes	1	yes	1
Dining Pavilion	no records		yes	2	yes	1	yes	2	yes	0
Cathedral Trail	no records		yes	1	yes	0	yes	0	yes	0
Vanier Park	no records		yes	0	yes	2	yes	2	yes	0
Jericho	no records				yes	2	yes	2	yes*	0
Merilees Trail	no records				yes	1	yes	0	yes*	0
Burrardview Park	no records				yes	1	yes	?	nest gone	
Pandora St.	no records				yes	1	yes	3	yes	1
Kerrisdale	no records				yes	2	yes	1	yes	0
Imperial Dr.	no records						no	0	no	0
Musqueam Creek	no records						yes	2	yes	1+
Tower Beach	no records						no	0	no	0
Westbrook	no records						yes	1	yes	0
SW Marine Dr.	no records								yes	1
Southlands	no records								no	0
Monument	no records								yes	1+
Hastings	new nest								yes	1

In 2007 one new nest was built at the corner of Hastings and Renfrew, and one nest was abandoned in Burrardview Park. The Merilees Trail pair and the Jericho pair moved nesting locations in 2007.

URBAN EAGLE NESTING RESULTS

Eagle pairs often build more than one nest (up to four) in their territory. However, eagles will usually use one of those nests for several years in a row. It is quite likely that some of the nests in our monitoring program are alternate nests. For example no nesting activity has been observed at the Imperial Dr. nest and Towers Beach nest in Pacific Spirit Park in the past two years, despite eagle pairs being seen using the nest trees as perching sites.



Bald eagles are often harassed by crows but they also eat them Photo by Martin Passchier

We monitored more nests than ever in 2007, but the overall nesting success was very poor. Table 2 illustrates the nesting success observed by SPES from 2004 - 2007. Although the total number of nests monitored (our sample size) increased in 2007, it is apparent that it was a particularly bad year for bald eagles nesting in Vancouver. Although 14 nests were active, less than half of these produced fledglings. At least 11 chicks hatched, but only 6 survived. At two highly public and well-loved nests (Vanier and Jericho) 2 week-old and 6 week-old nestlings died unexpectedly. Another fledgling died at the Hastings nest although its sibling survived.

Table 2: Nesting statistics for bald eagles nesting in Vancouver (2004-2007)

	2004	2005	2006	2007
Total number of nests observed	5	9	13	18
Total number of active nests	5	9	12	14
Total number of fledges produced	4	12	15	6
Number of fledges per successful nest	1.33	1.33	1.56	1.00
Nesting success (Number of active nests that were successful)	60%	100%	75%	46%

The average productivity (number of fledges per successful nest) for bald eagles in BC was reported to be 1.4-1.7 in 1994 (Blood and Anweiler, MWLAP report, 1994). The productivity rate in Vancouver was well below this average (at 1.0) in 2007. It is still unclear why some of the nestlings died unexpectedly and no necropsies were possible to help solve the mystery. It is concerning since most nestling mortality occurs in the first week or two after hatching and not so late in the season. It is possible that the nestlings were sick or were poisoned accidentally by contaminated food brought by the parents. The low nest success rate of the eagles in Vancouver may also be related to the wind storms in the winter prior to the breeding season, as some populations of eagles have been known to suffer setbacks from natural events like severe storms (Elliott, Moul, and Cheng 1998). At least two nests were destroyed in the winter storms, but those pairs quickly rebuilt nearby. Although 2007 was not a great year for Vancouver's eagles, it is likely that 2008 will see more success. Urban bald eagles are well adapted to using the resources in the area and eagles in the Lower Mainland seem to have more offspring than eagles in remote areas.

Figure 1 below shows the activity of all the Vancouver nests in 2007.
 A more detailed explanation of each nests activity follows:

Table 3: Activity at 18 bald eagle nests monitored in Vancouver in 2007.

Nest	Activity early in season	Activity later in season	Chicks hatched	Chicks fledged
Dining Pavilion	Y	Y	0	0
Cathedral Trail	Y	Y	?	0
Pipeline Road	Y	Y	1+	1
Merilees Trail	Y	Y	0	0
Burrardview Park	N	N	0	0
Hastings	Y	Y	2	1
Imperial Dr.	Y	N	0	0
Jericho	Y	Y	2	0
Kerrisdale	Y	Y	?	0
Monument	Y	Y	1+	1+
Musqueam Creek	Y	Y	1+	1+
Pandora St.	Y	Y	1	1
Southlands	Y	N	0	0
Strathcona Park	Y	N	0	0
SW Marine Dr.	Y	Y	1+	1
Tower Beach	Y	Y	0	0
Vanier Park	Y	Y	2	0
Westbrook	Y	Y	0	0
Totals	Active nests (14)		11+	6+

STANLEY PARK NESTS

Cathedral Trail

This nest is one of the oldest and largest nests in the park. The nest is at least 60m high in an old growth Douglas-fir tree and therefore is very hard to observe. This year we were able to monitor activity at the nest from the rooftop of an apartment building in the West End. Although the eagles were seen perched on the nest tree early in the season, it is unlikely that they produced any offspring in 2007.

Dining Pavilion

Although this pair of eagles produced fledglings in each of the previous three years, no chicks were hatched in 2007. This pair was monitored closely as their nest is in an open public area and is visible from the SPES office. Through our daily observations and with additional views from a newly installed web-cam, we were able to see this pair courting, fixing up the nest, and mating. It is unclear what prevented the pair from laying eggs, but they continue to use this nest site.

Pipeline Road

This is another of the oldest and largest nests in Stanley Park. The Pipeline pair produced the only known fledgling in the park in 2007. Although trees had fallen all around their nest site during the previous winter, they suffered few other disturbances. Incidentally, their nest is much more visible now.



Merilees trail eagle rebuilding the nest lost in winter windstorms.

Merilees Trail

The Merilees nest was one of the most intensely monitored nests in 2007 as it was the subject of much public attention following the December 16th 2006 windstorm. The eagles' nest tree fell during the storm and within weeks they relocated to an old nest site in an exposed, decayed tree in the middle of the largest blowdown area in the park. The pair began rebuilding the nest in early January while being watched by many people who stopped along the road to see their highly visible activities. They were also monitored by the biologists who were hired by the Vancouver Park Board after the storm. Although this pair built a large nest and were observed sitting in it and mating, it is believed that they did not lay eggs in 2007

PACIFIC SPIRIT PARK NESTS

Imperial Dr. and Tower Beach

These nests are currently thought to be secondary nests for eagles that have territories in the area.

Monument

This nest is very hard to see because it is in an old growth fir tree hanging over a cliff. This pair did produce at least one offspring that survived to fledge.

Westbrook

Although this nest was successful in 2006, no offspring were produced in 2007.



Westbrook bald eagle nest

NESTS ON PUBLIC LANDS

Burrardview Park

This nest was partially destroyed during the December 16th 2006 windstorm. Although the eagles attempted rebuild it, they eventually gave up and abandoned the nest. The nest was subsequently dismantled either by the elements or by eagles and no longer exists.

Strathcona Park

Although this nest has been very successful in the past, the eagle pair did not spend much time here this year. One possibility for them leaving may be that in previous years chicks that were ready to fledge fell out of the nest. These chicks were taken to wildlife rehabilitation facilities.

Jericho Park

This nest is well monitored by many people who spend long hours observing their highly visible nest. In early April the eagles began incubating their eggs. The eggs hatched a month later and two chicks were raised successfully to about 6 weeks of age. At that time both chicks died unexpectedly. Strangely enough, the female eagle was seen eating one of the deceased young. The bodies were not recovered for necropsy.



Jericho Park family Photo by Mark T. White

Vanier Park

This large nest is in a highly public area and is monitored by several people from different vantage points. This pair hatched two chicks in 2007, but unfortunately both died at about two weeks of age.

Hastings St.

This nest was newly built in 2007. It is possible that this pair either came from the inactive Burrardview Park or Strathcona Park nests, but they could also be a new pair of eagles. The eagles took advantage of the nearby Hastings Park sanctuary by picking up pond grass and large branches for nesting material. This nest produced two chicks, only one of which survived.



Pandora street eaglet almost ready to fledge.

NESTS ON PRIVATE LANDS

Kerrisdale and Southlands

These nests were active early in the season but no viable young were produced.

Pandora St.

This nest was successful again this year. The loud chick and adults were admired by many members of the local community. This nest has been very successful in past years as well.

Musqueam Creek and SW Marine Dr.

These nests produced at least one fledgling each this year.

Bald Eagle Nests in Vancouver 2007



Nests in Vancouver

- | | |
|---------------------|--------------------|
| 1) Merilees Trail | 10) Imperial (PAC) |
| 2) Pipeline Road | 11) Kerrisdale |
| 3) Cathedral Trail | 12) Musqueam Creek |
| 4) Dining Pavilion | 13) Tower Beach |
| 5) Jericho | 14) Westbrook |
| 6) Vanier Park | 15) Monument (PAC) |
| 7) Strathcona Park | 16) Hastings St. |
| 8) Burrardview Park | 17) Southlands |
| 9) Pandora St | 18) SW Marine Dr. |

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For more information on bald eagle nests in Vancouver or to see reports and updates from past years, please see our website at:

www.stanleyparkecology.ca