

Survey of House Swift and Barn Swallow Nests in Hong Kong

2007 Report



Submitted by
Swift and Swallow Research Group

to the **Hong Kong Bird Watching Society Ltd.**
Approved Charitable Institution of a Public Character

July 2009

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This publication should be cited as

Anon, 2009. 2007 Report: Survey of House Swift and Barn Swallow Nests in Hong Kong. Report by
Swift and Swallow Research Group to the Hong Kong Bird Watching Society Ltd.

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SURVEY OF HOUSE SWIFT AND BARN SWALLOW NESTS IN HONG KONG

2007 REPORT

Summary

932 House Swift (HS) nests and 438 Barn Swallow (BS) nests were recorded in 2007. Comparing the HS nest counts in common study sites between year 2006 and 2007, it was noted that HS nest counts were decreased by 3.6% (or 34 nests) from 937 nests in 2006 to 903 nests in 2007. However, BS nest counts in common sites were increased by 11.9% (or 39 nests) from 329 nests in 2006 to 368 nests in 2007. 19.4% HS nests (or 181 nests) distributed in Kowloon and 80.0% (or 746 nests) distributed in New Territories, but only 0.4% (or 4 nests) in Hong Kong Island. Unlike the case of HS, Hong Kong Island hosted 13.0% BS nests (or 57 nests), Kowloon hosted 29.0% (or 127 nests), and New Territories including other islands hosted 58.0% BS nests (or 254 nests). The top-10 sites for HS nest counts in sum contributed 94.9% of total counts, suggesting local HS nests were highly concentrated in these 10 sites. On the other hand, distribution of BS nests is relatively scattered that the aggregated BS nest counts of top-10 sites contributed 63.7% of total counts.

Introduction

1. House Swift (*Apus nipalensis*) and Barn Swallow (*Hirundo nistica*) are aerial insect feeders classified into Family Apodidae and Hirundinidae respectively (Monroe and Sibley, 1993). In Hong Kong, House Swifts (HS) are common residents and abundant spring migrants, and Barn Swallows (BS) are common summer visitors and abundant spring migrants (Carey *et. al.*, 2001). Both House Swift and Barn Swallow are breeding locally and their habitats especially breeding sites are highly associated with urban and sub-urban environment. Typically their nests are built under the eaves and beams of man-made structure (del Hoyo *et. al.*, 1999).
2. In 2003, 456 House Swift nests and 5 Barn Swallow nests were recorded at 5 study sites (Anon, 2009a). In 2004, 727 House Swift nests and 54 Barn Swallow nests were recorded at 7 study sites (Anon, 2009b).
3. In 2005, the number of study sites was largely expanded to 44 sites. 900 House Swift (HS) nests and 283 Barn Swallow (BS) nests were recorded at 44 study sites (Anon,

2009c). 21.6% HS nests distributed in Kowloon and 78.4% distributed in New Territories, but none in Hong Kong Island (Anon, 2009c). Unlike the case of HS, Hong Kong Island hosted 21.5% BS nests, Kowloon hosted 35.7%, and New Territories including other islands hosted 42.8% BS nests (Anon, 2009c).

4. In 2006, 937 House Swift (HS) nests and 329 Barn Swallow (BS) nests were recorded in 48 sites (Anon, 2009d). When comparing the HS nest counts in common study sites between year 2005 and 2006, it was noted that the HS nest counts were increased by 6.0% (or 53 nests) from 884 nests in 2005 to 937 nests in 2006. However, the BS nest counts in common sites were more or less stable at some 280 nests in both years. 18.5% HS nests (or 173 nests) distributed in Kowloon and 81.1% (or 730 nests) distributed in New Territories, but only 0.4% (or 4 nests) in Hong Kong Island. Unlike the case of HS, Hong Kong Island hosted 7.3% BS nests (or 24 nests), Kowloon hosted 43.2% (or 142 nests), and New Territories including other islands hosted 49.5% BS nests (or 163 nests).
5. The objective of this study is to collect baseline information of House Swift and Barn Swallow nests and their nest distribution in Hong Kong.

Methodology

6. Study area: The number of study sites was further expanded from 48 sites in last year (2006) to 55 selected sites that there were 18 study sites in Hong Kong Island, 11 sites in Kowloon and 26 sites in New Territories and islands (Table 1).
7. Study period: The survey was carried out in between April and July 2007 that the time falls within the breeding season of both House Swift and Barn Swallow in Hong Kong.
8. Nest counting: The surveyors walked through the streets in the assigned study area, watching on every street and every building, and recorded any swift or swallow nest including active and abandoned nest on there. The present of bird droppings and observation of birds flying “in and out” the nest are the important indicators to determine whether the nest is active or not. Counting of nest number was assisted by using binocular. The nest counts presented in this study represent the number of active nests in 2007.

Results and Discussion

House Swift

9. Counts of House Swift nest: Totally 932 HS nests were recorded at 55 study sites in 2007 (Table 1). Among these 52 sites, only 16 sites had record of HS nests in 2008 that the number of site with HS nest record was same as year 2006 (Table 1).
10. 5 HS nests were found at one site (i.e. Wan Chai) in Hong Kong Island in 2007, and the nest counts were more or less the same as the counts in 2006 (Table 1). 181 HS nests were noted at 5 sites of Kowloon in 2007 that the counts were 4.6% (or 8 nests) higher than year 2006 (Table 1). It should be noted that the counts of Sham Shui Po was underestimated due to incapable of accessing the back of ex-North Kowloon Magistracy building where several tens HS nests were recorded in 2005. Similar to year 2006, in 2007, Sham Shui Po area contributed the largest portion of HS nest counts (i.e. 75.1% or 136 nests) in Kowloon (Table 1). In New Territories and Islands, 746 HS nests were found at 10 sites in 2007 that the counts showed 1.8% (or 14 nests) less than that in 2006 (Table 1).

Table 1. Survey of House Swift (HS) and Barn Swallow (BS) nests in 2007.

Survey Sites	HS		BS	
	2006 ^a	2007 ^b	2006 ^a	2007 ^b
<i>Hong Kong Island (18 sites)</i>				
Aberdeen	0	0	0	0
Causeway bay	0	0	7	9
Central District	0	0	0	0
Chai Wan	0	0	10	0
Happy Valley	No data	0	No data	8
Kennedy Town	0	0	0	0
North Point	0	0	1	6*
Quarry Bay	0	0	2	0
Sai Wan	0	0	0	0
Shau Kei Wan	0	0	0	12
Shek O	0	0	0	2
Sheung Wan	0	0	0	0
Siu Sai Wan	No data	0	No data	15
Stanley	0	0	0	0
Tai Hang	0	0	0	0
Tai Tam Harbour	0	0	0	0

Wan Chai	2	5	2	4
Wong Chuk Hang	2	0	2	1
Subtotal of HK Island	4	5	24	57
<i>Kowloon (11 sites)</i>				
Cheung Sha Wan	0	2	16	14
Diamond Hill	11	12	2	0
Ho Man Tin	0	0	0	0
Hung Hom	0	0	2	4
Kwun Tong	20	19	1	0
Mong Kok	0	0	4	0
Sham Shui Po	132	136	83	83
Tai Kwok Tsui	0	0	4	4*
To Kwa Wan & Kowloon City	1	0	21	12*
Tsim Sha Tsui	9	12	7	10
Yau Ma Tei	0	0	2	0
Subtotal of Kowloon	173	181	142	127
<i>New Territories & Islands (26 sites)</i>				
Cheung Chau	0	0	36	44
CUHK	272	243	0	0
Fan Leng Town (Luen Wo Hui)	44	44*	1	0
Fan Leng Wai	No data	3	15	21
Fung Yuen Village	0	0	8*	8*
Hok Tau Wai	No data	0	No data	2
Kwai Chung	54	43	0	0
Lai King	No data	26	No data	0
Lamma Island	0	0	3	3
Mai Po Village	0	0	28	28
Mui Wo	10*	10*	11*	14*
Peng Chau	0	0	1	13
Pui O	No data	0	No data	20
Sai Kung Town	0	0	0	0
Sha Kok Mei Village	No data	0	No data	17
Sheung Shui Town (Shek Wu Hui)	92	100	0	0
Tai O	0	0	6	17
Tai Po Market	60*	60*	4	4*
Tai Wai Town	0	0	1	0
Tap Mun	0	0	5	5

Tong Fuk & Cheung Sha	No data	0	No data	8
Tseung Kwan O	3	0	12	12*
Tsing Yi	0	0	6	6
Tsuen Wan	6	0	13	0
Tung Chung	0	1	4	12
Yuen Long Town	219	216	9	20
Subtotal of NT & Islands	760	746	163	254
Subtotal of common sites between years	937	903	329	368
Total	937	932	329	438

a, Anon, 2009d

b, the present study

*, adjustment or correction made

11. Comparing the HS nest counts in common study sites between year 2006 and 2007, it was noted that the HS nest counts slightly decreased 3.6% (or 34 nests) from 937 nests in 2006 to 903 nests in 2007 (Anon, 2009d; Table 1).
12. Distribution of HS nests: Table 2 summaries the distribution of HS nests in Hong Kong. Compared with the case in 2006 (Anon, 2009d), the distribution was more or less the same in 2007. It was noted that Kowloon hosted 19.4% HS nests in 2007 (vs. 18.5% in 2006) and New Territories including other islands host 80.0% HS nests in 2007 (vs. 81.1% in 2006), but only 0.5% HS nest was found in Hong Kong Island (vs. 0.4% in 2006) (Table 2).

Table 2. Distribution of HS and BS nests in 2007.

Distribution	HS		BS	
	Counts	%	Counts	%
Hong Kong Island	5	0.5	57	13.0
Kowloon	181	19.4	127	29.0
New Territories and Islands	746	80.0	254	58.0
Total	932	99.9	438	100.0

13. Sites with highest HS nest counts: Table 3 showed the top-10 sites with highest HS nest counts. The aggregated nest counts (913 nests) of these top-10 sites contributed

94.9% of total counts in 2007 (vs. 97.5% in 2006). Similar to year 2006, there were four sites from Kowloon getting into the top-10 list. The results indicated that HS nests was not evenly distributed, in fact, the nests were highly concentrated in the top-10 sites as shown in Table 3. Similar to the case in year 2006, the top 5 sites contributed more than 80% of total HS nests in 2007.

Table 3. Top 10 sites with highest HS nest counts in 2007.

Top 10 sites	Counts	% of total	Aggregated %
1. CUHK (New Territories)	243	26.1	26.1
2. Yuen Long Town (New Territories)	216	23.2	49.3
3. Sham Shui Po (Kowloon)	136	14.6	63.9
4. Sheung Shui Town (New Territories)	100	10.7	74.6
5. Tai Po Market (New Territories)	60	6.4	81.0
6. Fan Leng Town (New Territories)	44	4.7	85.7
7. Kwai Chung (New Territories)	43	4.6	90.3
8. Kwun Tong (Kowloon)	19	2	92.3
9. Diamond Hill (Kowloon)	12	1.3	93.6
10. Tsim Sha Tsui (Kowloon)	12	1.3	94.9
Total of top 10 =	885	94.9	

- Colonies with highest HS nest counts: Similar to the situations in year 2004 to 2006, in 2007, the University Library (大學圖書館) of CUHK also hosted the largest colony of HS that some 240 HS nests were noted on the eaves of library building. Second to the University Library, the ex-North Kowloon Magistracy building (前北九龍裁判法院) at Sham Shui Po (Kowloon) hosted the second largest colony of HS that not less than 120 nests were noted on the eaves of building. No. 81 Sun Fung Avenue (also known as HSBC outlet) at Sheung Shui Town hosted the third largest colony of HS that 37 nests were noted on the eaves of building.

Barn Swallow

- Counts of Barn Swallow nest: Totally 438 BS nests were recorded at 55 study sites in 2007 (Table 1). Among these 55 study sites, 32 sites have record of BS nests.
- Comparing the BS nest counts in common study sites between years 2006 and 2007, it was noted that the BS nest counts were increased 11.9% (or 39 nests) by from 329 nests in 2006 to 368 nests in 2007 (Anon, 2009d; Table 1).
- Distribution of BS nests: It was noted that Hong Kong Island hosted 57 nests or 13.0%,

Kowloon hosted 127 nests or 29.0%, and New Territories including other islands hosted 254 nests or 58.0% in 2006 (Table 2). Compared with the results of year 2006 (Anon, 2009d), the BS nest counts in Hong Kong Island were significantly increased 138% (or 33 nests) from 24 nests in 2006 to 57 nests in 2007 (Table 1). At the same time, the contribution of BS nests by Hong Kong Island was also increased from 7.3% in 2006 to 13.0% in 2007 (Table 2). It should be noted that the BS nest counts in Hong Kong Island in 2007 was more or less recovered to the level in 2005 (i.e. 61 nests) (Anon, 2009c).

16. BS nests in rural area: Further to our previous survey in villages, the Research Group had surveyed some more villages in rural area. These villages being surveyed are Fan Leng Wai, Fung Yuen Village, Hok Tau Wai, Mai Po Village, Pui O Village, Sha Kok Mei Village, Tong Fuk and Cheung Sha. We noted that the BS nest counts in these villages varied from 2 to 28 (Table 1), hence we suspected that a very large number of BS nests saying several thousand nests would be scattered in the villages in rural area.

17. Sites with highest BS nest counts: Among the 55 study sites, 32 sites have record of BS nests. Table 4 showed the top-10 sites with highest BS nest counts. It was noted that the aggregated nest counts of these top-10 sites contributed 63.7% (or 279 nests) of total counts in 2007 (vs. 74.4% in 2006). In the list of top-10 sites, there were only 1 site in Hong Kong Island, 2 sites in Kowloon and 7 sites in New Territories. Together with their overall distribution (Table 2), the results indicated that distribution of BS nests was relatively scattered. Unlike the case of HS, the top 5 sites contributed only some 45% of total BS nests.

Table 4. Top 10 sites with highest BS nest counts in 2007.

Top 10 sites	Counts	% of total	Aggregated %
1. Sham Shui Po (Kowloon)	83	18.9	18.9
2. Cheung Chau (New Territories)	44	10	28.9
3. Mai Po Village (New Territories)	28	6.4	35.3
4. Fan Leng Wai (New Territories)	21	4.8	40.1
5. Yuen Long Town (New Territories)	20	4.6	44.7
6. Pui O (New Territories)	20	4.6	49.3
7. Sha Kok Mei (New Territories)	17	3.9	53.2
8. Tai O (New Territories)	17	3.9	57.1
9. Siu Sai Wan (Hong Kong Island)	15	3.4	60.5
10. Cheung Sha Wan (Kowloon)	14	3.2	63.7
Total of top 10 =	279	63.7	

18. Site good in both HS and BS nest counts: When comparing the top-10 list of HS and BS nests (Table 2 & 4), it was found that only one site (i.e. Sham Shui Po) was overlapping. This indicated HS and BS utilize different areas for breeding in Hong Kong.

Conclusion

19. 932 House Swift (HS) nests and 438 Barn Swallow (BS) nests were recorded in 2007. When comparing the HS nest counts in common study sites between year 2006 and 2007, it was noted that the HS nest counts were decreased by 3.6% (or 34 nests) from 937 nests in 2006 to 903 nests in 2007. However, the BS nest counts in common sites were increased by 11.9% (or 39 nests) from 329 nests in 2006 to 368 nests in 2007. 19.4% HS nests (or 181 nests) distributed in Kowloon and 80.0% (or 746 nests) distributed in New Territories, but only 0.4% (or 4 nests) in Hong Kong Island. Unlike the case of HS, Hong Kong Island hosted 13.0% BS nests (or 57 nests), Kowloon hosted 29.0% (or 127 nests), and New Territories including other islands hosted 58.0% BS nests (or 254 nests). The top-10 sites for HS nest counts in sum contributed 94.9% of total counts, suggesting local HS nests were highly concentrated in these 10 sites. On the other hand, distribution of BS nests is relatively scattered that the aggregated BS nest counts of top-10 sites contributed 63.7% of total counts.

Acknowledgement

We wish to specially thank Mr. YIP Tai Wai for data entry, and we also wish to thank any person who gave assistance to our survey.

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