Survey of House Swift and Barn Swallow Nests in Hong Kong

2006 Report

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Swift and Swallow Research Group

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Approved Charitable Institution of a Public Character

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(in aphetically order)

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SURVEY OF HOUSE SWIFT AND BARN SWALLOW NESTS IN HONG KONG

2006 REPORT

Summary

937 House Swift (HS) nests and 329 Barn Swallow (BS) nests were recorded in 2006. 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. Unfortunately, two cases of HS nest destruction involving some 30 nests were noted in 2006 and both cases were happened in Yuen Long area. However, the BS nest counts in common sites were more or less stable at some 280 nests in both year 2005 and 2006. 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). The top-10 sites for HS nest counts in sum contributed 97.5% 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 74.4% 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). In 2005, 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 (Swift and Swallow Research Group, 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 (Swift and Swallow Research Group, 2009c).

3. 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

4. Study area: The number of study sites was further expanded from 44 sites in last year (2005) to 47 selected sites where there were 16 study sites in Hong Kong Island, 11 sites in Kowloon and 21 sites in New Territories (Table 1). It is believed that around 80% urban area of Hong Kong Island, 50% urban area of Kowloon and most new town areas of New Territories with casual HS and BS sighting record were covered in this study.

5. Study period: The survey was carried out in between April and July 2006 that the time falls within the breeding season of both House Swift and Barn Swallow in Hong Kong.

6. 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 2006.

Results and Discussion

House Swift

7. Counts of House Swift nest: Totally 937 HS nests were recorded at 48 study sites in 2006 (Table 1). Among these 48 sites, only 16 sites had record of HS nests in 2006, 1 site less than year 2005 (Table 1). .

8. 4 HS nests were found at 2 sites in Hong Kong Island in 2006, slightly better than 0 count in 2005 (Table 1). 173 HS nests were noted at 5 sites of Kowloon in 2006 that

the counts were 10.8% (or 21 nests) less than year 2005 (Table 1). However, the dropping of counts was mainly due to incapable of accessing the back of ex-North Kowloon Magistracy building where several tens HS nests were recorded in previous year. Similar to year 2005, Sham Shui Po area contributed the largest portion of HS nest counts (i.e. 76.3% or 132 nests) in Kowloon (Table 1). In New Territories and Islands, 760 HS nests were found at 9 sites in 2006 that the counts showed 7.6% (or 54 nests) higher than that in 2005 (Table 1).

Table 1. Survey of House Swift (HS) and Barn Swallow (BS) nests in 2006.

Survey Sites	HS nest counts		BS nest counts	
	2005 [a]	**2006 [b]**	2005 [a]	**2006 [b]**
Hong Kong Island (16 sites)				
Aberdeen	0	**0**	0	**0**
Causeway bay	0	**0**	7	**7**
Central District	0	**0**	0	**0**
Chai Wan	0	**0**	7	**10**
Kennedy Town	0	**0**	10	**0**
North Point	0	**0**	18	**1**
Quarry Bay	0	**0**	0	**2**
Sai Wan	0	**0**	0	**0**
Shau Kei Wan	0	**0**	5	**0**
Shek O	0	**0**	0	**0**
Sheung Wan	0	**0**	4	**0**
Stanley	0	**0**	3	**0**
Tai Hang	No data	**0**	No data	**0**
Tai Tam Harbour	0	**0**	3	**0**
Wan Chai	0	**2**	1	**2**
Wong Chuk Hang	0	**2**	3	**2**
Subtotal of HK Island	0	**4**	61	**24**
Kowloon (11 sites)				
Cheung Sha Wan	3	**0**	13	**16**
Diamond Hill	4	**11**	4	**2**
Ho Man Tin	0	**0**	0	**0**
Hung Hom	0	**0**	No data	**2**
Kwun Tong	18	**20**	0	**1**
Mong Kok	0	**0**	1	**4**
Sham Shui Po	152	**132**	64	**83**
Tai Kwok Tsui	1	**0**	4	**4**

To Kwa Wan & Kowloon City	7	**1**	5	**21**
Tsim Sha Tsui	9	**9**	10	**7**
Yau Ma Tei	0	**0**	0	**2**
Subtotal of Kowloon	194	**173**	101	**142**
New Territories & Islands (21 sites)				
Cheung Chau	0	**0**	39	**36**
CUHK	237	**272**	0	**0**
Fan Leng Town (Luen Wo Hui)	46	**44**	1	**1**
Fan Leng Wai	No data	**No data**	No data	**15**
Fung Yuen Village	0	**0**	6	**8***
Kwai Chung	22	**54**	0	**0**
Lamma Island	No data	**0**	No data	**3**
Mai Po Village	No data	**0**	No data	**28**
Mui Wo	6	**10***	11	**11***
Peng Chau	0	**0**	4	**1**
Sai Kung Town	0	**0**	0	**0**
Sha Tau Kok	16	**No data**	0	**No data**
Sheung Shui Town (Shek Wu Hui)	115	**92**	1	**0**
Tai O	0	**0**	6	**6**
Tai Po Market	60	**60***	4	**4**
Tai Wai Town	No data	**0**	No data	**1**
Tap Mun	0	**0**	4	**5**
Tseung Kwan O	1	**3**	13	**12**
Tsing Yi	24	**0**	7	**6**
Tsuen Wan	0	**6**	4	**13**
Tung Chung	0	**0**	9	**4**
Yuen Long Town	179	**219**	12	**9**
Subtotal of NT & Islands	706	**760**	121	**163**
Subtotal of common sites	884	**937**	283	**282**
Total	900	**937**	283	**329**

a, Anon, 2009c

b, the present study

*, adjustment or correction made

9. Comparing the HS nest counts in common study sites between year 2005 and 2006, it was noted that the HS nest counts increased 6.0% (or 53 nests) from 884 nests in 2005 to 937 nests in 2006 (Anon, 2009c; Table 1). The increasing of HS nest counts was mainly contributed by increasing of nest counts at CUHK, Kwai Chung, and Yuen Long Town (Table 1). On the other hand, at Tsing Yi, the HS nest counts had a significant drop from 24 nests in 2005 to 0 nest in 2006 due to blockage of nest access to swifts (Table 1).

10. Distribution of HS nests: Table 2 summaries the distribution of HS nests in Hong Kong. Compared with the case in 2005 (Anon, 2009c), the distribution was more or less the same in 2006. It was noted that Kowloon hosted 18.5% HS nests in 2006 (vs. 21.6% in 2005) and New Territories including other islands host 81.1% HS nests in 2006 (vs. 78.4% in 2005), but only 0.4% HS nest was found in Hong Kong Island (vs. 0% in 2005) (Table 2).

Table 2. Distribution of HS and BS nests in 2006.

Distribution	HS		BS	
	Counts	%	Counts	%
Hong Kong Island	4	0.4	24	7.3
Kowloon	173	18.5	142	43.2
New Territories and Islands	760	81.1	163	49.5
Total	**937**	**100**	**329**	**100**

11. Sites with highest HS nest counts: Table 3 showed the top-10 sites with highest HS nest counts. Similar to year 2005, the aggregated nest counts (913 nests) of these top-10 sites contributed 97.5% of total counts in 2006 (vs. 96.6% in 2005). However, 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 2005, the top 5 sites contributed more than 80% of total HS nests in 2006.

Table 3. Top 10 sites with highest HS nest counts in 2006.

Top 10 sites	Counts	% of total	Aggregated %
1. CUHK (New Territories)	272	29.0	29.0
2. Yuen Long Town (New Territories)	219	23.4	52.4
3. Sham Shui Po (Kowloon)	132	14.1	66.5
4. Sheung Shui Town (New Territories)	92	9.8	76.3
5. Tai Po Market (New Territories)	60	6.4	82.7
6. Kwai Chung (New Territories)	54	5.8	88.5
7. Fan Leng Town (New Territories)	44	4.7	93.2
8. Kwun Tong (Kowloon)	20	2.1	95.3
9. Diamond Hill (Kowloon)	11	1.2	96.5
10. Tsim Sha Tsui (Kowloon)	9	1.0	97.5
Total of top 10 =	**913**	**97.5**	

12. Colonies with highest HS nest counts: Similar to the situations in year 2004 and 2005, in 2006, the University Library (大學圖書館) of CUHK also hosted the largest colony of HS that some 260 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 some 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 30 nests were noted on the eaves of building.

13. Incidences of HS nest destruction: At least two cases of HS nest destruction were noted in 2006 and both cases were happened in Yuen Long area. The first case was happened at No. 96 Castle Peak Road, also known as an outlet of DBS Bank (星展銀行). It was noted that some 10 HS nests were removed due to reconstruction of eave, but we have no detail on the date of nest destruction (Figure 1). The second case was happened at No. 51 Fou Tsoi Street (阜財街), Yuen Long Town. Due to the scare of avian influenza, some 20 HS nests were removed by a cleansing worker on 15 June 2006, resulting in 8 swifts died and 58 swifts got injury.

(a)

(b)

(c)

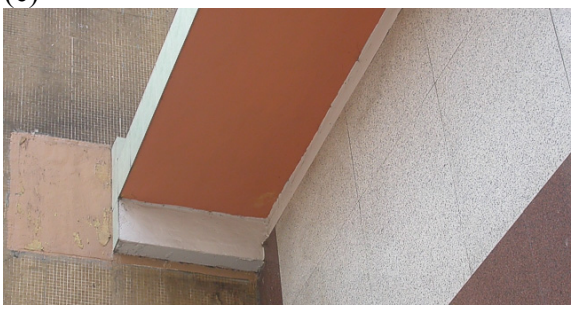

Figure 1. Case of HS nest destruction. (a) A cluster of some 10 HS nests was noted in 2004 (photo by Dominic Chan). (b) No. 96 Castle Peak Road, also known as an outlet of DBS Bank (photo by S.T. Tsim). (c) In 2006, it was noted that the HS nests were removed and the eave had been reconstructed (photo by S.T. Tsim).

Barn Swallow

14. Counts of Barn Swallow nest: Totally 329 BS nests were recorded at 48 study sites in 2006 (Table 1). Among these 48 study sites, 33 sites have record of BS nests.

15. Comparing the BS nest counts in common study sites between year 2005 and 2006, it was noted that the BS nest counts were more or less stable at some 280 nests (Anon, 2009c; Table 1).

16. Distribution of BS nests: It was noted that Hong Kong Island hosted 24 nests or 7.3%, Kowloon hosted 142 nests or 43.2%, and New Territories including other islands hosted 163 nests or 49.5% in 2006 (Table 2). Compared with the results of year 2005 (Anon, 2009c), the BS nest counts in Hong Kong Island dropped significantly from 61 nests in 2005 to 24 nests in 2006 (Table 1). At the same time, the contribution of BS nests by Hong Kong Island was also dropped from 21.5% in 2005 to 7.3% in 2006 (Table 2).

17. BS nests in rural area: There are some one thousand villages (鄉村) or called “wai” (圍村) in rural area of Hong Kong. We note that many villages have varied number of BS nests. However, we could not visit all the villages by a limited number of surveyors.

Therefore, 3 village samples including Fan Leng Wai, Fung Yuen Village and Mai Po Village were surveyed in this study. We noted that the BS nest counts in these villages varied from 8 to 28 (Table 1), hence we suspected only a very small portion of BS nests were counted in this study. In other words, a very large portion of BS nests saying several thousand nests would be scattered in the villages in rural area, but they were not counted in the study.

18. Sites with highest BS nest counts: Among the 48 study sites, 33 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 74.4% (or 245 nests) of total counts in 2006 (vs. 70.4% in 2005). In the list of top-10 sites, there were only 1 site in Hong Kong Island, 3 sites in Kowloon and 6 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 50% of total BS nests.

Table 4. Top 10 sites with highest BS nest counts in 2006.

Top 10 sites	Counts	% of total	Aggregated %
1. Sham Shui Po (Kowloon)	83	25.2	25.2
2. Cheung Chau (New Territories)	36	10.9	36.1
3. Mai Po Village (New Territories)	28	8.5	44.6
4. To Kwa Wan & Kowloon City (Kowloon)	21	6.4	51
5. Cheung Sha Wan (Kowloon)	16	4.9	55.9
6. Fan Leng Wai (New Territories)	15	4.6	60.5
7. Tsuen Wan (New Territories)	13	4	64.5
8. Tseng Kwan O (New Territories)	12	3.6	68.1
9. Mui Wo (New Territories)	11	3.3	71.4
10. Chai Wan (Hong Kong Island)	10	3	74.4
Total of top 10 =	**245**	**74.4**	

19. 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

20. 937 House Swift (HS) nests and 329 Barn Swallow (BS) nests were recorded in 2006. 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. Unfortunately, two cases of HS nest destruction involving some 30 nests were noted in 2006 and both cases were happened in Yuen Long area. However, BS nest counts in common sites were more or less stable at some 280 nests in both year 2005 and 2006. 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). The top-10 sites for HS nest counts in sum contributed 97.5% 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 74.4% of total counts.

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