Survey of House Swift and Barn Swallow Nests in Hong Kong

2005 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. 2005 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

2005 REPORT

Summary

900 House Swift nests and 283 Barn Swallow nests were recorded in 2005. When comparing the HS nest counts in common study sites between year 2004 and 2005, it was noted that the HS nest counts dropped 12.4% (or 90 nests) from 727 nests in 2004 to 637 nests in 2005. The dropping of HS nest counts was mainly contributed by significant dropping of nest counts at Tai Po Market and Yuen Long Town. However, BS nest counts were more or less stable at some 50 nests in both year 2004 and 2005. In this survey, 21.6% HS nests distributed in Kowloon and 78.4% distributed in New Territories, but none in Hong Kong Island. 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. The top-10 sites for HS nest counts in sum contributed 96.6% of total counts, suggesting HS nests were highly concentrated in these sites. On the other hand, distribution of BS nests is relatively scattered that the aggregated BS nest counts of top-10 sites contributed 70.4% 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).

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 largely expanded from 7 sites in last year (2004) to 44 selected sites where there were 15 study sites in Hong Kong Island, 11 sites in Kowloon and 18 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 2005 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 2005.

Results and Discussion

House Swift

7. Counts of House Swift nest: Totally 900 HS nests were recorded at 44 study sites in 2005 (Table 1). Among these 44 sites, only 17 sites had record of HS nests. It was noted that none HS nest was found in Hong Kong Island in 2005 (Table 1). 194 HS nests were noted in 7 sites of Kowloon that Sham Shui Po area contributed 78% HS nest counts (i.e. 152 nests) of Kowloon (Table 1). In New Territories and Islands, 706 HS nests were found in 10 sites (Table 1).

Table 1. Survey of House Swift (HS) and Barn Swallow (BS) nests in 2005.

Survey Sites	HS nest counts		BS nest counts	
	2004 [a]	**2005 [b]**	2004 [a]	**2005 [b]**
Hong Kong Island (15 sites)				
Aberdeen	No data	**0**	No data	**0**
Causeway Bay	No data	**0**	No data	**7**
Central District	No data	**0**	No data	**0**
Chai Wan	No data	**0**	No data	**7**
Kennedy Town	No data	**0**	No data	**10**
North Point	No data	**0**	No data	**18**
Quarry Bay	No data	**0**	No data	**0**
Sai Wan	No data	**0**	No data	**0**
Shau Kei Wan	No data	**0**	No data	**5**
Shek O	No data	**0**	No data	**0**
Sheung Wan	No data	**0**	No data	**4**
Stanley	No data	**0**	No data	**3**
Tai Tam Harbour	No data	**0**	No data	**3**
Wan Chai	No data	**0**	No data	**1**
Wong Chuk Hang	No data	**0**	No data	**3**
Subtotal of HK Island	No data	**0**	No data	**61**
Kowloon (11 sites)				
Cheung Sha Wan	No data	**3**	No data	**13**
Diamond Hill	No data	**4**	No data	**4**
Ho Man Tin	No data	**0**	No data	**0**
Hung Hom	No data	**0**	No data	**No data**
Kwun Tong	No data	**18**	No data	**0**
Mong Kok	No data	**0**	No data	**1**
Sham Shui Po	No data	**152**	No data	**64**
Tai Kwok Tsui	No data	**1**	No data	**4**
To Kwa Wan & Kowloon City	No data	**7**	No data	**5**
Tsim Sha Tsui	No data	**9**	No data	**10**
Yau Ma Tei	No data	**0**	No data	**0**
Subtotal of Kowloon	No data	**194**	No data	**101**
New Territories & Islands (18 sites)				
Cheung Chau	0	**0**	30	**39**
CUHK	191	**237**	0	**0**
Fan Leng Town (Luen Wo Hui)	41	**46**	0	**1**

Fung Yuen Village	No data	**0**	No data	**6**
Kwai Chung	No data	**22**	No data	**0**
Mui Wo	No data	**6**	No data	**11**
Peng Chau	No data	**0**	No data	**4**
Sai Kung Town	0	**0**	7	**0**
Sha Tau Kok	No data	**16**	No data	**0**
Sheung Shui Town (Shek Wu Hui)	104	**115**	0	**1**
Tai O	No data	**0**	No data	**6**
Tai Po Market	119	**60**	13	**4**
Tap Mun	No data	**0**	No data	**4**
Tseung Kwan O	No data	**1**	No data	**13**
Tsing Yi	No data	**24**	No data	**7**
Tsuen Wan	No data	**0**	No data	**4**
Tung Chung	No data	**0**	No data	**9**
Yuen Long Town	272	**179**	4	**12**
Subtotal of NT & Islands	727	**706**	54	**121**
Subtotal of 7 common sites	727	**637**	54	**57**
Total	727	**900**	54	**283**

a, Anon, 2009b

b, the present study

8. When comparing the HS nest counts in 7 common study sites (including Cheung Chau, CUHK, Fan Leng Town, Sai Kung Town, Sheung Shui Town, Tai Po Market and Yuen Long Town) between year 2004 and 2005, it was noted that the HS nest counts dropped 12.4% (or 90 nests) from 727 nests in 2004 to 637 nests in 2005 (Anon, 2009b; Table 1). The dropping of HS nest counts was mainly contributed by significant dropping of nest counts at Tai Po Market and Yuen Long Town (Table 1). At Tai Po Market, the HS nest counts in 2005 (i.e. 60 nests) had 59 nests less than that in 2004 (i.e. 119 nests) (Table 1). On the other hand, at Yuen Long Town, the HS nest counts in 2005 (i.e. 179 nests) have 93 nests less than that in 2004 (i.e. 272 nests) (Table 1).

9. It was noted that some study sites showed pretty stable and even a slightly increase in HS nest counts between year 2004 and 2005. For example the HS nest counts in Fan Leng Town and Sheung Shui Town stabled at some 40 and 110 counts, respectively, in both years 2004 and 2005 (Table 1). On the other hand, the HS nest counts in CUHK

showed a slightly increase from some 190 nests in 2004 to 230 nests in 2005 (Table 1).

10. Distribution of HS nests: Table 2 summaries the distribution of HS nests in Hong Kong. It was noted that Kowloon hosted 21.6% HS nests and New Territories including other islands host 78.4% HS nests in 2005, but none HS nest was found in Hong Kong Island (Table 2).

Table 2. Distribution of HS and BS nests in Hong Kong.

Distribution	HS		BS	
	Counts	%	Counts	%
Hong Kong Island	0	0	61	21.5
Kowloon	194	21.6	101	35.7
New Territories and Islands	706	78.4	121	42.8
Total	**900**	**100**	**283**	**100**

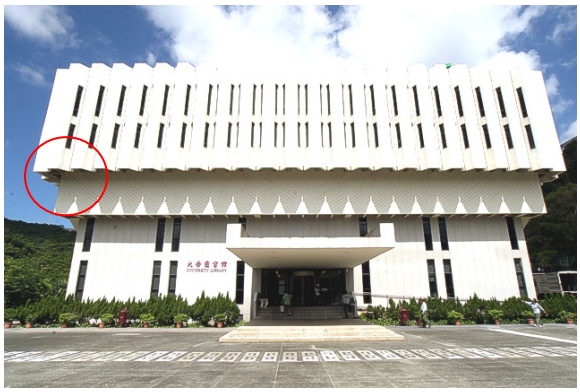
11. Sites with highest HS nest counts: Table 3 showed the top 10 sites with highest HS nest counts. It was noted that the aggregated nest counts (869 nests) of these top-10 sites contributed 96.6% of total counts (900 nests) in 2005. All these top sites except Sham Shui Po are located in New Territories. The results indicated that HS nests was not evenly distributed in Hong Kong, in fact, the nests were highly concentrated in the top-10 sites as shown in Table 3. Indeed, the top 5 sites contributed more than 80% of total HS nests.

Table 3. Top 10 sites with highest HS nest counts in 2005.

Top 10 sites	Counts	% of total	Aggregated %
1. CUHK (New Territories)	237	26.3	26.3
2. Yuen Long Town (New Territories)	179	19.9	46.2
3. Sham Shui Po (Kowloon)	152	16.9	63.1
4. Sheung Shui Town (New Territories)	115	12.8	75.9
5. Tai Po Market (New Territories)	60	6.7	82.6
6. Fan Leng Town (New Territories)	46	5.1	87.7
7. Tsing Yi (New Territories)	24	2.7	90.4
8. Kwai Chung (New Territories)	22	2.4	92.8
9. Kwun Tong (Kowloon)	18	2	94.8
10. Sha Tau Kok (New Territories)	16	1.8	96.6
Total of top 10 =	**869**	**96.6**	

12. Colonies with highest HS nest counts: Similar to the situations in 2004, in 2005, the University Library (大學圖書館) of CUHK hosted the largest colony of HS that some 221 HS nests were noted on the eaves of north, east and south facade of the building (Figure 1a & 1b). Second to the University Library, the building of ex-North Kowloon Magistracy (前北九龍裁判法院) at Sham Shui Po (Kowloon) hosted the second largest colony of HS that some 140 nests were noted on the eaves of building (Figure 1c & 1d). No. 81 Sun Fung Avenue (also known as HSBC outlet) at Sheung Shui Town hosted the third largest colony of HS that 43 nests were noted on the eaves of building (Figure 1e).

(a)



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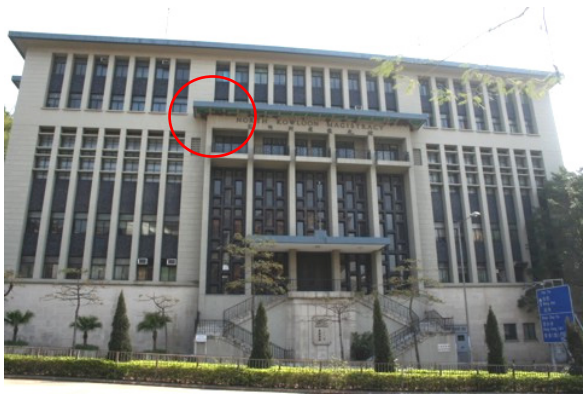
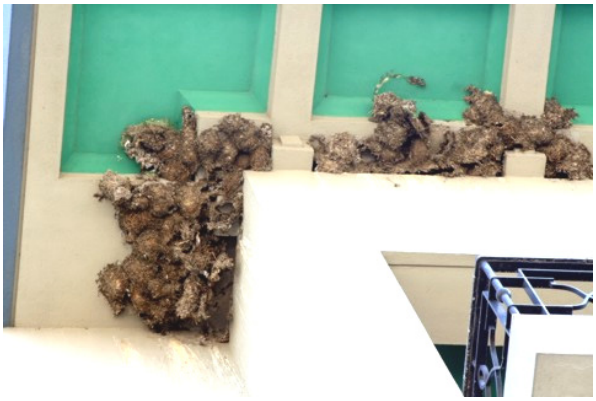


(c)



(d)

(e)

Figure 1. Top House Swift colonies in Hong Kong. (a) University Library of CUHK. (b) Cluster of HS nests under an eave of University Library. (c) The building of ex-North Kowloon Magistracy. (d) Cluster of HS nests under the eaves of ex-North Kowloon Magistracy building. (e) HSBC outlet on San Fung Avenue, at Sheung Shui Town [photo (a), (b) & (e) by ST Tsim; photo (c) & (d) by HS Wong]

Barn Swallow

13. Counts of Barn Swallow nest: Totally 283 BS nests were recorded at 44 study sites in 2005 (Table 1). Among these 44 study sites, 30 sites have record of BS nests. 61 BS nests were found in Hong Kong Island, 101 BS nests in Kowloon and 121 BS nests in New Territories and islands (Table 1).

14. When comparing the BS nest counts in 7 common study sites between year 2004 and 2005, it was noted that BS nest counts were more or less stable at some 50 nests (Anon, 2009b; Table 1).

15. Distribution of BS nests: It was noted that Hong Kong Island hosted 21.5% BS nests, Kowloon hosted 35.7%, and New Territories including other islands hosted 42.8% BS nests in 2005 (Table 2). It should be aware that we believe only a small portion of BS nests were counted in this study; in other words, another very large portion of BS nests saying up to number of thousand nests should be scattered in the villages in rural area and they were not counted in this study (Carey *et. al.*, 2001).

16. Sites with highest BS nest counts: Among the 44 study sites, 30 of them 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 (199 nests) of these top-10 sites contributed 70.4% of total counts (283 nests) in 2005. In the list of top-10 sites, there were 2 sites in Hong

Kong Island, 3 sites in Kowloon and 5 sites in New Territories. Together with their overall distribution (Table 2), the results indicated that distribution of BS nests was relatively scattered in Hong Kong, Kowloon and New Territories. Unlike the case of HS, the top 5 sites contributed only 50% of total BS nests.

Table 4. Top 10 sites with highest BS nest counts in 2005.

Top 10 sites	Counts	% of total	Aggregated %
1. Sham Shui Po (Kowloon)	64	22.6	22.6
2. Cheung Chau (New Territories)	39	13.8	36.4
3. North Point (Hong Kong Island)	18	6.4	42.8
4. Cheung Sha Wan (Kowloon)	13	4.6	47.4
5. Tseung Kwan O (New Territories)	13	4.6	52.0
6. Yuen Long Town (New Territories)	12	4.2	56.2
7. Mui Wo (New Territories)	11	3.9	60.1
8. Kennedy Town (Hong Kong Island)	10	3.5	63.6
9. Tsim Sha Tsui (Kowloon)	10	3.6	67.2
10. Tung Chung (New Territories)	9	3.2	70.4
Total of top 10 =	**199**	**70.4**	

17. The sites 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 a few sites were overlapping. This indicated HS and BS utilize different areas for breeding in Hong Kong. HS prefers nesting at new towns in New Territories, but it is not the case in BS. Only Sham Shui Po (12.8% HS; 22.6% BS) and Yuen Long Town (19.9% HS; 4.2% BS) were listed in the top 10 sites of both HS and BS nest (Table 2 and 4), indicating the importance of these two sites for both HS and BS breeding.

Conclusion

18. 900 House Swift (HS) nests and 283 Barn Swallow (BS) nests were recorded in 2005. Comparing the HS nest counts in common study sites between year 2004 and 2005, it was noted that the HS nest counts dropped 12.4% (or 90 nests) from 727 nests in 2004 to 637 nests in 2005. The dropping of HS nest counts was mainly contributed by significant dropping of nest counts at Tai Po Market and Yuen Long Town. However, the BS nest counts were more or less stable at some 50 nests in both years. 21.6% HS nests distributed in Kowloon and 78.4% distributed in New Territories, but none in Hong

Kong Island. 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. The top-10 sites for HS nest counts in sum contributed 96.6% of total counts, suggesting 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 70.4% of total counts.

Acknowledgement

We wish to specially thank Mr. YIP Tai Wai for data entry, and we wish to thank all people who have assisted the nest counting in voluntary basis.

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