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Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme 2013 - 14

Egretry Counts in Hong Kong, with particular reference to the Mai Po Inner Deep Bay Ramsar Site

Summer 2013 Report

Submitted by
The Hong Kong Bird Watching Society

to Agriculture, Fisheries and Conservation Department,
Hong Kong SAR Government

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Waterbird Monitoring at the Mai Po Inner Deep Bay Ramsar Site 2013-14

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EGRETRY COUNTS IN HONG KONG, WITH PARTICULAR REFERENCE TO THE MAI PO INNER DEEP BAY RAMSAR SITE

SUMMER 2013 REPORT

Summary

In the 2013 breeding season (April to July 2013), a total of 259 nests of two ardeid species, the Little Egret (*Egretta garzetta*) and Chinese Pond Heron (*Ardeola bacchus*), were recorded in seven egretries (hereinafter referred to as 'colonies') in the Deep Bay area. The number of nests in this area accounted for 34.2% of the total number of nests in Hong Kong. The Chinese Pond Heron was the dominant species in the Deep Bay area, accounting for 62.0% of the total number of nests. There were a total of 758 nests in Hong Kong in 2013, with five species in 19 colonies. The Man Kam To Road colony had split to a new location or had extended part of the colony. Two colonies in Ngau Hom Shek and Ocean Park were abandoned. The colony in Lam Tsuen 2 was found to have moved 2.5 km away from the previous location. The Chinese Pond Heron (*Ardeola bacchus*, 35.8%) was the dominant species in Hong Kong, while the Eastern Cattle Egret (*Bubulcus coromandus*, 6.6%) was the least abundant breeding ardeid. Compared with the 2012 records (273 nests in the Deep Bay area and 852 nests in Hong Kong), there was a 10.6% and 11.0% decrease in the number of nests in the Deep Bay area and Hong Kong overall, respectively.

1. INTRODUCTION

Breeding activity is an important aspect of population dynamics. Nesting populations of colonial waterbirds are recorded as part of long-term monitoring studies in Mediterranean Europe (Tourenq *et al*. 2000), Australia (McKilligan 2001) and the United States (Gawlik *et al*. 1998). In East and Southeast Asia, long-term monitoring of breeding populations of colonial nesting ardeids has been conducted only in Hong Kong and Vietnam (Lansdown *et al*. 2000). Reporting on the number of nesting pairs of ardeids in Hong Kong started as early as 1958 by The Hong Kong Bird Watching Society (HKBWS), but was suspended from 1975 to 1989 (Young and Cha 1995). A review of the trend in the number of nests of five ardeid species between 1989 and 2004 and the influence of weather on this trend was published in 2006 (Wong and Young 2006). Following the establishment of the Mai Po Inner Deep Bay Ramsar Site, a long-term waterbird monitoring programme has been carried out since 1998, coordinated by the HKBWS and rendered by the Agriculture, Fisheries and Conservation Department (AFCD) of the Hong Kong SAR Government.

Under the Waterbird Monitoring Programme, egretry counts are conducted with a view to recording the population of tree-nesting ardeids in terms of the number of nests in the Deep Bay area and elsewhere in Hong Kong.

2. METHODS

Active and abandoned colonies identified in the past three years (2010, 2011 and 2012) were surveyed once a month between April and July 2013 (Table 1, Figure 1, Appendix 1). A nesting colony of egrets and herons is defined as an area in which more than one pair of these birds are recorded building nests, laying eggs and raising young. Active nests, determined by the presence of incubating adults or chicks, were counted directly from vantage points along the edge of a colony with the use of 10x binoculars or by the naked eye, depending on the proximity between the surveyor and the colony. In case nests were hidden in vegetation, making the counting difficult, their number was estimated. In this connection, landing locations were marked on a sketch and repeated landings around the same location were considered as on a nest. This methodology was adopted for the Little Green Island, A Chau and Sha Chau colonies, where most of the nests were hidden in vegetation. As each colony was surveyed at least once a month, the highest count of the number of nests of each species was used for the egretry count. In addition to the number of nests, the nesting substratum was examined in most of the colonies that were accessible.

Both existing colonies and new nesting sites were monitored. The new nesting sites were identified by personal observations of the surveyors or through information provided by birdwatchers, the general public or the AFCD. A nesting site was considered to be a new nesting colony if it was at least 500 m away from an existing colony, since the lowest foraging range of a colony is usually about 500 m (L. C. Wong, unpublished data). Combining breeding birds in locations within 500 m could avoid having to define too many small nesting sites in the same area.

3. RESULTS and DISCUSSION

3.1 Breeding population in the 2013 breeding season

A total of 758 nests were recorded in 19 colonies in Hong Kong (Table 1, Figure 1, Appendix 2). The names of the various species of egrets and herons were in accordance with the annotated checklist of birds of Hong Kong (Hong Kong Bird Watching Society, 2013). Highlights of the egretry counts in the 2013 breeding season were as follows:

- The colony in Mai Po Village was the largest in Hong Kong, with 146 nests, about 19.3% of the total number of nests in Hong Kong. The coverage of the egretry had also extended to the road junction of Castle Peak Road – Mai Po Section and Tam Kon Chau Road to the west and near an organic farm to the east.
- The Lam Tsuen colony in Ping Long had moved to a new location near San Uk Pai, which was about 2.5 km northeast of the original location. The new location was named the Lam Tsuen 2 colony. The nesting substrate was a clump of bamboo. The reason for the relocation was that the bamboo in the abandoned site had become wilted and unsuitable for nesting.
- The Ngau Hom Shek, Pak Lai 2, Tai Shue Wan (Ocean Park) and Lam Tsuen colonies were abandoned.
- There were 80 nests in the Ho Sheung Heung colony, a 63.3% increase over that of the 49 nests counted in the previous year.
- There were 77 nests in the Tai Po Market colony, a decrease of 37.9% from the corresponding number in the previous year (i.e. 124 nests).
- After the removal of bamboo trees and other mature trees in the area of the Man Kam To Road colony in June 2012, the original colony split into two groups: one shifted to a roadside woodland along Man Kam Road, adjacent to the original location, while the other moved to a banyan tree about 450 m southwest of the original location, adjacent to a mitigation pond and an open storage facility. The tree itself was about 12 m high.
- The Yeung Chau colony was abandoned again this year. In order to search for possible new colonies in Tolo Harbour, a survey of nearby areas in Plover Cove was conducted in April, but there was no positive finding.
- Regarding the Tai Po Market colony, there was a minor shift of about 20 m to the east. During the monitoring exercise, the Water Supplies Department was engaged in roadside works underneath the colony, causing a certain disturbance to the nesting

ardeids. When the case was reported to the relevant government departments, the work was suspended until the end of the 2013 breeding season.

Table 1. Number of nests at surveyed colonies in Hong Kong in 2013

	Great Egret	Little Egret	Black-crowned Night Heron	Chinese Pond Heron	Eastern Cattle Egret	Total	%	Rank
Deep Bay area								
1. Mai Po Village		21		125		146	19.3	1
2. Mai Po Lung Village				12		12	1.6	15
3. Tung Shing Lane		34		21		55	7.3	6
4. Ngau Hom Sha		1		3		4	0.5	17
5. Pak Nai		13				13	1.7	14
6. San Sang Sun Tsuen		8		7		15	2.0	12
7. Sha Kiu Village		14				14	1.8	13
Elsewhere in the New Territories								
8. Ho Sheung Heung		29		12	39	80	10.6	3
9. Man Kam To Road		1		19		20	2.6	10
10. Ping Che				11		11	1.5	16
11. A Chau*	37	2	20		6	65	8.6	5
12. Tai Po Market	21	27	27	1	1	77	10.2	4
13. Lam Tsuen 2				11		11	1.5	16
14. Ha Che		3		42		45	5.9	8
15. Tai Tong				2		2	0.3	18
16. Tuen Mun		19				19	2.5	11
17. Penfold Park	20	10	14	5	1	50	6.6	7
18. Sha Chau*	3	40	40			83	10.9	2
Hong Kong Island								
19. Little Green Island*	2	18	13		3	36	4.7	9
Total	**83**	**240**	**114**	**271**	**50**	**758**	**100.0**	
%	**10.9**	**31.7**	**15.0**	**35.8**	**6.6**	**100.0**		

Note: * Nests at A Chau, Sha Chau and Little Green Island were built within dense tree canopies and often out of sight. The number of nests might have been underestimated.

The highest number of nests was recorded in the Mai Po Village colony (146 nests, 19.3% of total nests in Hong Kong), which contained the highest number of Chinese Pond Herons (125 nests, 46.1% of the total number of nests of this species). The lowest number

of nests was recorded in the Tai Tong colony (2 nests, 0.3% of total nests in Hong Kong). The second largest colony was the Sha Chau colony (83 nests, 10.9% of the total nests in Hong Kong), which supported the highest number of nests of Black-crowned Night Herons (*Nycticorax nycticorax*, 40 nests, 35.1% of the total number of nests of this species) and Little Egrets (40 nests, 16.7% of total number of Little Egret nests). The third largest colony was in Ho Sheung Heung (80 nests, 10.6% of the total nests in Hong Kong), which supported the highest number of nests of Eastern Cattle Egrets (39 nests, 78.0% of the total number of nests of this species). The A Chau colony supported the highest number of nests of Great Egrets (*Ardea alba*, 37 nests, 44.6% of the total number of nests of this species).

In terms of the number of nests, the Chinese Pond Heron and Little Egret (Chinese Pond Heron: 271 nests, 35.8% of the total number of nests; Little Egret: 240 nests, 31.7% of the total number of nests) were the two most abundant and widespread species, while the Eastern Cattle Egret was the least numerous (50 nests, 6.6%). The Little Egret was recorded in 15 colonies and the Chinese Pond Heron was recorded in 13 colonies.

3.2 Colonies in the Deep Bay area

A total of 259 nests in 7 colonies were recorded in the Deep Bay area in the 2013 breeding season (Table 2), comprising 34.2% of the total number of nests in Hong Kong. There were only two ardeid species, the Little Egret and Chinese Pond Heron, nesting in the Deep Bay area. The Chinese Pond Heron was the dominant species, with 62.0% of the total number of nests in the Deep Bay area. The colony at Ngau Hom Shek, which set a breeding record in 2012, was abandoned this year.

A summary of the number of nests of five ardeid species recorded in the Deep Bay area in the last decade (i.e. from 2004 to 2013) is shown in Table 3. There were a small number of nests of Great Egret recorded in the Deep Bay area until 2006. The last pair of Eastern Cattle Egrets breeding in the Deep Bay area was recorded in Tung Shing Lane in 2009. The last breeding record of Black-crowned Night Heron in the Deep Bay area was reported in 2002 (Anon, 2012). Except for the high counts in 2005, 2006 and 2009, the number of nests of Chinese Pond Heron fluctuated between 130 and 200. Although the number of nests was the highest in 2006 and lowest in 2010, the fluctuating trend was similar to that of the total number of nests in Hong Kong during that 10-year period (Figure 2).

Table 2. Relative importance of the Deep Bay colonies comparing to the other colonies in Hong Kong in 2013. (Colonies in the Deep Bay area include Mai Po Village, Mai Po Lung Village, Tung Shing Lane, Ngau Hom Sha, Pak Nai, San Sang Sun Tsuen, Sha Kiu Village)

Species	No. of nests in Deep Bay	No. of nests in Hong Kong	Deep Bay nests as % of all nests in Hong Kong
Great Egret	0	83	0%
Little Egret	91	240	37.9%
Black-crowned Night Heron	0	114	0%
Chinese Pond Heron	168	271	62.0%
Eastern Cattle Egret	0	50	0%
Total	259	758	34.2%

Table 3. Number of nests recorded at the Deep Bay from 2004 to 2013

	Great Egrets	Little Egret	Black-crowned Night Heron	Chinese Pond Heron	Eastern Cattle Egret	Total no. of nests in Deep Bay
2004	0	100	0	133	9	242
2005	0	126	0	203	4	333
2006	3	165	0	235	3	406
2007	0	119	0	152	4	275
2008	0	96	0	137	1	234
2009	0	95	0	212	1	308
2010	0	85	0	163	0	248
2011	0	133	0	154	0	287
2012	0	97	0	176	0	273
2013	0	91	0	168	0	259

3.3 Comparison of the number of nests with records of the previous year

The decrease in the nesting population in the 2013 breeding season was due mainly to a significant drop in the number of nests recorded in colonies in Tai Po Market and A Chau, 47 nests and 24 nests, respectively, from that of the previous year. The nesting colonies in Tai Shue Wan (Ocean Park), Lam Tsuen, Ngau Hom Shek and Pak Lai 2 also had a reduction in the number of nests: 14, 13, 1 and 12, respectively. A decrease in nest numbers in other nesting colonies was also noted: Tung Shing Lane (-11 nests), Sha Chau (-10), Mai Po Village (-8), Man Kam To Road (-7), Penfold Park (-7), Tuen Mun (-3), Little Green Island (-3), Ping Che (-2), Tai Tong (-2), Ngau Hom Sha (-2) and Sha Kiu Village (-1). These changes resulted in an overall reduction of 167 nests.

One new colony was discovered in Lam Tsuen 2, which added 11 nests. The number of nests in some colonies increased: in Ho Sheung Heung (+31), Pak Nai (+13), Ha Che (+10) and San Sang Sun Tsuen (+8). This led to an increase of 73 nests in total.

In comparison with the number of nests in the 2012 breeding season, there were more nests of Eastern Cattle Egret, Black-crowned Night Heron and Chinese Pond Heron in 2013, while there were fewer nests of Great Egret and Little Egret. The reason for the change in population for other ardeid species is not known, as no significant change in the condition of feeding habitats was observed during the egretry survey. The changes might be related to the availability of nesting substrate or human disturbance.

Table 4. Comparison on the number of nests in 2013 with records of the preceding breeding season

	2012	2013	Percentage change (%)
Great Egret	141	83	-41.1%
Little Egret	315	240	-23.8%
Black-crowned Night Heron	106	114	+7.5%
Chinese Pond Heron	263	271	+3.0%
Eastern Cattle Egret	27	50	+85.2%
Sub-total in Deep Bay	273	244	-10.6%
Total in Hong Kong	852	758	-11.0%

3.4 Nesting substrates

Bamboo was the main nesting substrate for egrets and herons nesting in the north and northwest New Territories. It was used in 11 out of the 19 colonies (Table 5). Birds in the Penfold Park colony built their nests in Banyan trees (*Ficus microcarpa*). The exotic tree *Acacia auriculiformis* was used by ardeids for nesting in the Tuen Mun colony. Most nests in Mai Po Village were found in Chinese Hackberry (*Celtis sinensis*). The majority of nests in the A Chau colony were built in Cuban Bast (*Hibiscus tiliaceus*).

Table 5. Plant species utilized by ardeids as nesting substrates in 2013

Site	Site	Bamboo	Tree species	Remarks
1	Mai Po Village	+	*Albizia lebbeck* *Aleurites moluccana* *Celtis sinensis* *Ficus microcarpa* *Melia azedarach*	Part of the tree species identification was provided by AFCD
2	Mai Po Lung Village	+	*Litchi chinensis* *Dimocarpus longan*	
3	Tung Shing Lane	+	*Litchi chinensis* *Dimocarpus longan* *Celtis sinensis*	
4	Ngau Hom Sha	+		
5	Pak Nai	+		
6	San Sang Sun Tsuen	+		
7	Sha Kiu Village	+		
8	Ho Sheung Heung	+		
9	Man Kam To Road	+	*Celtis sinensis* *Callistemon viminalis* *Ficus microcarpa* *Senna siamea*	
10	Ping Che	+		
11	A Chau		*Hibiscus tiliaceus* *Mallotus paniculatus*	
12	Tai Po Market		*Ficus variegata* *Macaranga tanarius*	
13	Lam Tsuen 2	+		
14	Ha Che		*Celtis sinensis*	
15	Tai Tong	+		
16	Tuen Mun		*Acacia auriculiformis*[1]	
17	Penfold Park		*Ficus microcarpa*	
18	Sha Chau			No plant survey was conducted
19	Little Green Island			No plant survey was conducted

[1] : Previously identified as *Lagerstroemia speciosa*

3.5 Training workshop for ardeid nesting colony monitoring

A training workshop was conducted during the breeding season on 27 April 2013. A total of 14 participants joined the workshop and also the following practical sessions on nest survey in the Tung Shing Lane and Mai Po Village colonies. It is recommended that similar workshops be conducted in the future.

4. CONCLUSION

In 2013, a total of 758 nests of five species in 19 colonies were recorded in Hong Kong, including 259 nests of two species in 7 colonies in the Deep Bay area. Compared to the results in 2012, there was a 10.6% and an 11.0% decrease in the number of nests in Deep Bay area and Hong Kong overall, respectively. The Mai Po Village egretry expanded in coverage, and the Man Kam To Road colony was found to have split into two parts within the defined range of 500 m in June. Four colonies, namely Ngau Hom Shek, Pak Lai 2, Lam Tsuen and Tai Shue Wan (Ocean Park) were abandoned, while a new colony at Lam Tsuen was found (i.e. Lam Tsuen 2). The reason for the changes in nest numbers is still not fully understood, though it might be related to the availability of nesting substrate or human disturbance.

5. ACKNOWLEDGEMENTS

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Figures

The Hong Kong Bird Watching Society

Agriculture, Fisheries and Conservation Department

Figure 1. Location of colonies in Hong Kong in 2013 (The enclosed is the Deep Bay Area)

1	Mai Po Village	2	Mai Po Lung Village	3	Tung Shing Lane
4	Ngau Hom Sha	5	Pak Nai	6	San Sang Sun Tsuen
7	Sha Kiu Village	8	Ho Sheung Heung	9	Man Kam To Road
10	Ping Che	11	A Chau	12	Tai Po Market
13	Lam Tsuen 2	14	Ha Che	15	Tai Tong
16	Tuen Mun	17	Penfold Park	18	Sha Chau
19	Little Green Island				

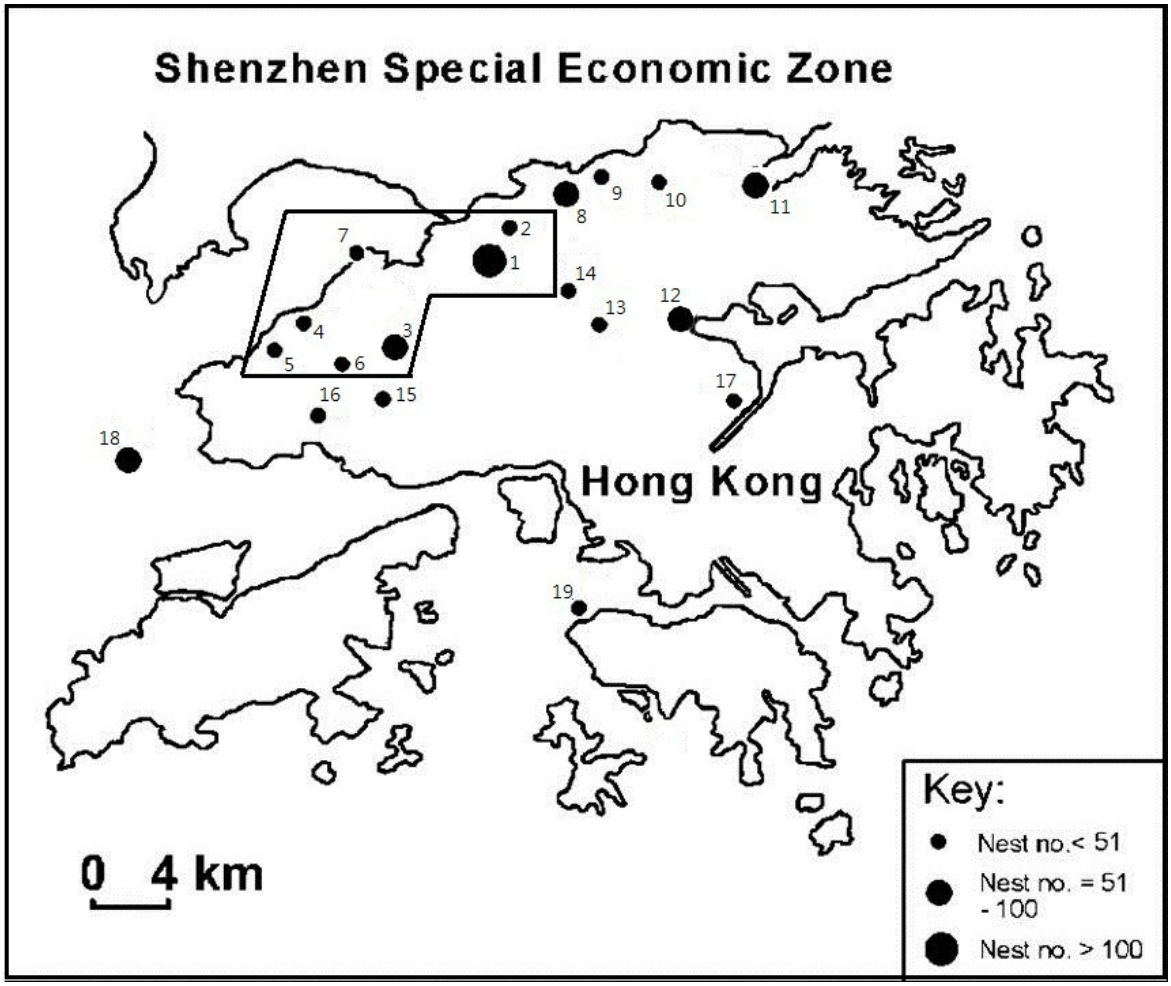
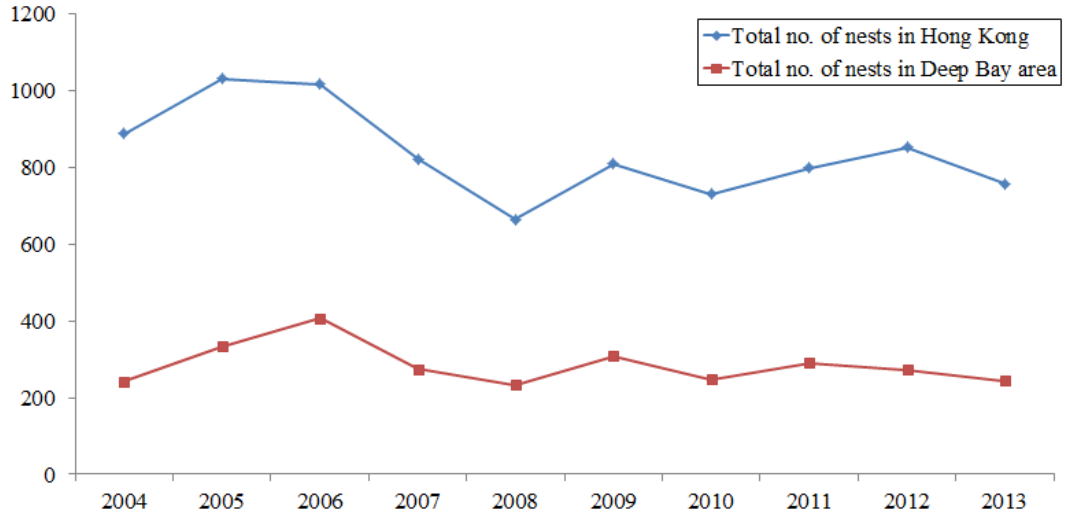


Figure 2. Total number of ardeid nests in Hong Kong with reference to the number of nests in the Deep Bay area from 2004 to 2013.



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Appendices

The Hong Kong Bird Watching Society

Agriculture, Fisheries and Conservation Department

Appendix 1. Survey date(s) of nesting colonies and additional sites in 2013

Colony	Date
Active colonies	
1. Mai Po Village*	20 April, 17 May, 9 June, 13 July
2. Mai Po Lung Village*	20 April, 17 May, 9 June, 13 July
3. Tung Shing Lane*	20 April, 17 May, 9 June, 13 July
4. Ngau Hom Sha*	20 April, 17 May, 9 June, 13 July
5. Pak Nai *	20 April, 17 May, 9 June, 13 July
6. San Sang Sun Tsuen*	20 April, 17May, 9 June, 13 July
7. Sha Kiu Village*	20 April, 17May, 9 June, 13 July
8. Ho Sheung Heung	20 April, 17 May, 9 June, 13 July
9. Man Kam To Road	28 April, 19 May, 15 June, 13 July
10. Ping Che	28 April, 19 May, 15 June, 13 July
11. A Chau	28 April, 11 May, 8 & 15 June, 13 July
12. Tai Po Market	28 April, 19 May, 15 June, 13 July
13. Lam Tsuen 2	28 April, 19 May, 15 June, 13 July
14. Ha Che	17 April, 19 May, 15 June, 13 July
15. Tai Tong	20 April, 17 May, 9 June, 13 July
16. Tuen Mun	26 April, 27 May, 24 June, 26 July
17. Penfold Park	30 April, 19 May, 15 June, 13 July
18. Sha Chau	13 April, 11May, 8 June, 8 July
19. Little Green Island	23 April, 27 May, 17 June, 30 July
Additional sites	
20. Tam Kon Chau*	20 April, 17 May, 9 June, 13 July
21. Shuen Wan	15 June,
22. Yeung Chau	28 April, 19 May, 15 June, 13 July
23. Pak Nai 2*	20 April, 17 May, 9 June, 13 July
24. Ngau Hom Shek*	20 April, 17May, 9 June, 13 July
25. Lam Tsuen	28 April, 19 May, 15 June, 13 July
26. Tai Shue Wan (Ocean Park)	13 April, 11 May, 16 June, 20 July

* within the Deep Bay area

Appendix 2. Number of nests recorded in each count of the 19 colonies in 2013

Appendix 2.1. Mai Po Village

	20 Apr	17 May	9 June	13 July	**Max**
Little Egret	16	**21**	17	18	**21**
Chinese Pond Heron	88	**125**	113	68	**125**
Total	104	146	130	86	**146**

Appendix 2.2. Mai Po Lung Village

	20 Apr	17 May	9 June	13 July	**Max**
Chinese Pond Heron	2	**12**	1	2	**12**
Total	2	12	1	2	**12**

Appendix 2.3. Tung Shing Lane

	20 Apr	17 May	9 June	13 July	**Max**
Little Egret	11	**34**	30	26	**34**
Chinese Pond Heron	**21**	20	16	12	**21**
Total	32	54	46	38	**55**

Appendix 2.4. Ngau Hom Sha

	20 Apr	17 May	9 June	13 July	**Max**
Little Egret	**1**	0	0	0	**1**
Chinese Pond Heron	1	**3**	2	0	**3**
Total	2	3	2	0	**4**

Appendix 2.5. Pak Nai

	20 Apr	17 May	9 June	13 July	**Max**
Little Egret	**13**	4	2	0	**13**
Total	13	4	2	0	**13**

Appendix 2.6. San Sang Sun Tsuen

	20 Apr	17 May	9 June	13 July	**Max**
Little Egret	**8**	4	1	4	**8**
Chinese Pond Heron	3	**7**	**7**	6	**7**
Total	11	11	8	11	**15**

Appendix 2.7. Sha Kiu Village, Tsim Bei Tsui, Yuen Long

	20 Apr	17 May	9 June	13 July	**Max**
Little Egret	**14**	7	0	0	**14**
Total	14	7	0	0	**14**

Appendix 2.8. Ho Sheung Heung

	20 Apr	17 May	9 June	13 July	**Max**
Little Egret	26	17	**29**	6	**29**
Eastern Cattle Egret	15	**39**	18	7	**39**
Chinese Pond Heron	1	**12**	9	9	**12**
Total	42	68	56	22	**80**

Appendix 2.9. Man Kam To Road

	28 Apr	19 May	15 June	13 July	**Max**
Little Egret	0	0	0	**1**	**1**
Chinese Pond Heron	9	11	12	**19**	**19**
Total	9	11	12	19	**20**

Appendix 2.10. Ping Che

	28 Apr	19 May	15 June	13 July	**Max**
Chinese Pond Heron	7	**11**	10	6	**11**
Total	7	11	10	6	**11**

Appendix 2.11. A Chau

	13 Apr	11 May	8 & 15 June	13 July	**Max**
Great Egret	27	**37**	25	3	**37**
Little Egret	0	0	**2**	0	**2**
Eastern Cattle Egret	0	**6**	5	1	**6**
Black-crowned Night Heron	0	3	**20**	2	**20**
Total	27	46	52	6	**65**

Appendix 2.12. Tai Po Market (Wan Tau Kok Lane)

	28 Apr	19 May	15 June	13 July	**Max**
Great Egret	17	**21**	14	4	**21**
Little Egret	21	**27**	17	18	**27**
Eastern Cattle Egret	0	0	0	**1**	**1**
Black-crowned Night Heron	19	**27**	15	22	**27**
Chinese Pond Heron	**1**	0	0	0	**1**
Total	58	75	46	45	**77**

Appendix 2.13. Lam Tsuen 2

	28 Apr	19 May	15 June	13 July	**Max**
Chinese Pond Heron	8	**11**	6	**11**	**11**
Total	8	11	6	11	**11**

Appendix 2.14. Ha Che

	28 Apr	19 May	15 June	13 July	**Max**
Little Egret	1	**3**	1	1	**3**
Chinese Pond Heron	30	**42**	33	10	**42**
Total	31	45	34	11	**45**

Appendix 2.15. Tai Tong

	20 Apr	17 May	9 June	13 July	**Max**
Chinese Pond Heron	0	0	0	**2**	**2**
Total	0	0	0	2	**2**

Appendix 2.16. Tuen Mun

	26 Apr	27 May	24 June	26 July	**Max**
Little Egret	**19**	13	10	10	**19**
Total	19	13	10	10	**19**

Appendix 2.17. Penfold Park

	30 Apr	19 May	15 June	13 July	**Max**
Great Egret	8	**20**	7	0	**20**
Little Egret	2	**10**	5	3	**10**
Black-crowned Night Heron	4	11	**14**	4	**14**
Chinese Pond Heron	2	2	**5**	0	**5**
Eastern Cattle Egret	0	**1**	0	**1**	**1**
Total	16	44	31	8	**50**

Appendix 2.18. Sha Chau

	13 Apr	11 May	8 June	8 July	**Max**
Great Egret	2	**3**	2	0	**3**
Little Egret	34	**40**	15	10	**40**
Black-crowned Night Heron	31	**40**	10	5	**40**
Total	67	83	27	15	**83**

Appendix 2.19. Little Green Island

	23 Apr	27 May	17 June	30 July	**Max**
Great Egret	**2**	1	0	0	**2**
Little Egret	14	**18**	7	0	**18**
Black-crowned Night Heron	**13**	6	0	0	**13**
Eastern Cattle Egret	**3**	0	0	0	**3**
Total	32	25	7	0	**36**