Contract Ref.: AFCD/SQ/289/18/C

Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme 2019 - 20

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

Summer 2020 Report

HKBWS
香港觀鳥會

Submitted by
The Hong Kong Bird Watching Society

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

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Waterbird Count Coordinator
YU Yat Tung
The Hong Kong Bird Watching Society

Report Writing and Data Contributors
Captain L.C. WONG, TAM Yip Shing, Josephine Y.P. WONG,
Luke, C.K. WOO, Louis, C. L. FUNG, CHEUNG MOK, Jose Alberto, Ching Yuen HO and Stanley K. W. Chan
Egret Research Group,
The Hong Kong Bird Watching Society

Report is available for public information at
Agriculture, Fisheries and Conservation Department
Hong Kong SAR Government
7/F, Cheung Sha Wan Government Offices
303 Cheung Sha Wan Road
Kowloon, Hong Kong
Email: mailbox@afcd.gov.hk Website: www.afcd.gov.hk

and

The Hong Kong Bird Watching Society
7C, V Ga Building, 532 Castle Peak Road
Lai Chi Kwok, Kowloon, Hong Kong
E-mail: hkbws@hkbws.org.hk Website: www.hkbws.org.hk

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TABLE OF CONTENTS

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

TABLES

FIGURES

APPENDICES

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

SUMMER 2020 REPORT

Summary

In the 2020 breeding season (April to July), a total of 1,940 nests of five ardeid species, i.e. the Great Egret (*Ardea alba*), Little Egret (*Egretta garzetta*), Black-crowned Night Heron (*Nycticorax nycticorax*), Chinese Pond Heron (*Ardeola bacchus*) and Eastern Cattle Egret (*Bulbulcus coromandus*), were recorded in 23 egretries (hereinafter referred to as 'colonies') in Hong Kong. The Great Egret (41.4%) was the dominant species breeding in Hong Kong, while the Eastern Cattle Egret (3.9%) was the least abundant one. A total of 1,256 nests of the above-mentioned five species in eight colonies were recorded in the Deep Bay area in 2020. The number of nests in this area accounted for 64.7% of the total number of nests in Hong Kong. The Great Egret was the dominant species in the Deep Bay area, accounting for 53.3% of the total number of nests in this area. Compared with the 2019 records (1,081 nests in the Deep Bay area and 1,633 nests in Hong Kong), there was a 16.2% and 18.8% increase in the number of nests recorded in the Deep Bay area and Hong Kong, respectively. The increases were mainly due to the better estimation of nest abundance at the Mai Po Mangrove colony, which was the largest colony in Hong Kong in 2020, in terms of nest abundance. Colonies at Pak Nai 2 and Tai Tong (Pak Sha Tsuen) were abandoned in this year, while new colonies at Discovery Bay, North District Park and Hung Hom were first included in this monitoring.

1. INTRODUCTION

Following the establishment of the Mai Po Inner Deep Bay Ramsar Site, a long-term waterbird monitoring programme has been carrying out since 1998. The programme is coordinated by the Hong Kong Bird Watching Society (HKBWS) and is currently a commissioned study of the Agriculture, Fisheries and Conservation Department (AFCD) of the Hong Kong SAR Government. Under the Waterbird Monitoring Programme, egretry counts are conducted with an aim to record the population of tree-nesting ardeids, in terms of the number of nests in the Deep Bay area and elsewhere in Hong Kong. The present report documents the results of the egretry count between April and July 2020. A review of the nesting ardeids in Hong Kong between the 1950s and 1990s can be found in Young and Cha (1995), while the trends and their relationship with weather was documented in Wong and Young (2006).

2. METHODS

Active and abandoned colonies identified in the past three years (2017 - 2019) were surveyed once per month between April and July 2020 (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. Colonies shrinking in size as compared to previous years with only one nest were also included. Any new nesting colonies, identified by personal observations of the

surveyors or through information provided by birdwatchers, the general public or AFCD, were also monitored. A nesting site would be considered as 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.

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 8-10x binoculars or by the naked eye, depending on the proximity between the surveyor and the colony. If nests were located deep inside the vegetation making them difficult to be counted, their numbers were estimated. Estimation was made by marking the landing locations on a sketch and repeated landings around the same location were considered as a nest. This methodology was adopted for the Sha Chau, Little Green Island, A Chau, Mai Po mangrove and Ma Wan colonies, where most of the nests were deep inside the vegetation. Estimation of nests based on the position of newly fledged chicks was also used during the latter part of breeding season. As the colony at the Mai Po mangrove is very remote, it was counted from a vantage point which was 2.5 km away from the colony at Tsim Bei Tsui. To supplement, aerial photos of this colony were also taken once a month with drone (DJI Mavic Pro Platinum/Mavic 2 Zoom) by AFCD. The altitude of the drone was over 30m asl and the duration of flight was kept to a minimum to avoid any disturbance to breeding birds. The reaction of the ardeids to the drone was monitored throughout the process. No sign of disturbance induced by the drone was observed during all surveys. Aerial photos were used to identify and estimate the number of nests. The highest count of the number of nests of a particular species recorded during the survey period was taken as the number of nests of that species of the egretry. In addition to the number of nests, the nesting substratum was examined in most of the colonies that were accessible. Nomenclature of egrets and herons follows the annotated checklist of birds of Hong Kong (Hong Kong Bird Watching Society, 2020).

3. RESULTS and DISCUSSION

3.1 Breeding population in the 2020 breeding season

A total of 1,940 nests were recorded in 23 colonies in Hong Kong in 2020 (Table 1, Figure 1, Appendix 2). Colonies at Discovery Bay, North District Park and Hung Hom were first included in the monitoring this year. Colonies at Pak Nai 2, and Tai Tong (Pak Sha Tsuen) were abandoned. Highlights of the present breeding season were as follows:

- The Mai Po mangrove colony was the largest in Hong Kong, with 757 nests, about 39.0% of the total number of nests in Hong Kong. This colony split to two sub-colonies in 2019 but it combined into a single one this breeding season.

- Small colonies of Black-crowned Night Herons were first reported at Discovery Bay and Hung Hom in April, while a bigger colony of this species was first found at North District Park in June.

- Abandonment of the colony at Tai Tong (Pak Sha Tusen) might be associated with nearby site formation as reported last year (Section 3.8 in Anon. 2020), while the reason of abandonment at Pak Nai 2 is not well understood as change of site condition was not observed.

- Nest abandonment at A Chau during the breeding season was observed in this year as in 2018 and 2019. Nesting activities (incubation) were seen on 9 May and fewer nests were counted on 16 May. Complete abandonment was found on 20 May.

- Colonies abandoned before 2017 at Mai Po Nature Reserve, Tam Kon Chau, Pak Nai and Ngau Hom Sha and Ting Kok and Lo Wu, where suspected breeding activities was reported, were visited. No breeding activity was recorded at these sites.

The largest colony in Hong Kong was the Mai Po mangrove colony (757 nests, 39% of total nests recorded in Hong Kong). In this colony, the dominant species was the Great Egret (670 nests, 83.4% of the total number of nests of this species in Hong Kong), but Little Egrets, Black-crowned Night Herons and Eastern Cattle Egrets were also present. This colony was also the stronghold of Eastern Cattle Egrets in Hong Kong (73 nests, 96.1% of the total number of nests of this species in Hong Kong). The second largest colony was the Tai Po Market colony (267 nests, 13.8% of the total number of nests in Hong Kong). This colony supported the highest number of nests of Little Egrets (128 nests, 30.3% of the total number of nests of this species in Hong Kong), and Black-crowned Night Herons (85 nests, 34.4% of the total number of nests of this species in Hong Kong). The third largest colony was the Mai Po Lung Village colony (160 nests, 8.2% of the total number of nests in Hong Kong). The Shan Pui River colony supported the largest abundance of nests of Chinese Pond Herons (129 nests, 32.9% of the total number of nests of this species). The lowest number of nests was recorded at the Sha Kiu Village colony and the Hung Hom colony (3 nests each, 0.2% of the total number of nests in Hong Kong).

Regarding the number of nests recorded for each species, the Great Egret was the most abundant (803 nests, 41.4% of the total number of nests). The most widespread species was Little Egret (15 out of 23 colonies). The Eastern Cattle Egret was the least abundant (76 nests, 3.9%) and most restrictedly distributed species (2 out of 23 colonies).

Table 1. The number of nests at surveyed colonies in Hong Kong in 2020.

	Great Egret	Little Egret	Black-crowned Night Heron	Chinese Pond Heron	Eastern Cattle Egret	Total	%	Rank
Deep Bay area								
1. Mai Po Village		70		43		113	5.8	5
2. Mai Po Lung Village		34		126		160	8.2	3
3. Tung Shing Lane		16		20		36	1.9	10
4. Ngau Hom Shek		10		13		23	1.2	15
5. Shenzhen Bay Bridge		22		3		25	1.3	14
6. Sha Kiu Village		3				3	0.2	22
7. Mai Po mangrove	670	4	10		73	757	39.0	1
8. Shan Pui River		10		129		139	7.2	4
Elsewhere in the New Territories								
9. Ho Sheung Heung				6	3	9	0.5	17
10. Man Kam To Road		21		29		50	2.6	8
11. Ping Che				9		9	0.5	17
12. Tai Po Market	54	128	85			267	13.8	2
13. Tuen Mun		9				9	0.5	17
14. Penfold Park	30	32	23	6		91	4.7	6
15. A Chau*	16					16	0.8	16
16.. Sha Chau*	21	38	25			84	4.3	7
17.Ma Wan*	9	9	9			27	1.4	13
18. Ha Che				8		8	0.4	20
19. Discovery Bay			6			6	0.3	21
20. North District Park			29			29	1.5	12
Kowloon								
21. Kowloon Park			36			36	1.9	10
22. Hung Hom			3			3	0.2	22
Hong Kong Island								
23. Little Green Island*	3	16	21			40	2.1	9
Total	803	422	247	392	76	**1,940**	**100**	
%	41.4	21.8	12.7	20.2	3.9	**100**		

Note: * Some nests at the A Chau, Sha Chau, Ma Wan and Little Green Island were found in dense vegetation. The number of nests might have been underestimated.

3.2 Colonies in the Deep Bay area

A total of 1,256 nests of five ardeid species was recorded in eight colonies within the Deep Bay area in the 2020 breeding season (Table 2). The 2020 count was the highest one in the last decade and there was a 16.2% increase in the number of nests when compared with 2019 (Table 3). Such increase was contributed by the better quality of photos of the Mai Po mangrove colony taken by drone with enhanced protocol this year. Besides, counts of the colony were taken during the whole breeding season this year, while photos of lower resolution were only taken in May last year. Therefore, the peak count of nests could be better estimated this year. The number of nests in the Deep Bay area was about two third of the total number of nests in Hong Kong. The Deep Bay colonies supported the majority of breeding Great Egrets (83.4%), Chinese Pond Herons (85.2%) and Eastern Cattle Egrets (96.1%), in terms of the number of nests. The Great Egret was the dominant species, with 53.3% of the total number of nests, in the Deep Bay area.

Table 2. The relative importance of the Deep Bay colonies compared to the other colonies in Hong Kong in 2020.

(Colonies in the Deep Bay area included Mai Po Village, Mai Po Lung Village, Tung Shing Lane, Ngau Hom Shek, Shenzhen Bay Bridge, Sha Kiu Village, Mai Po Mangrove and Shan Pui River)

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	670	803	83.4
Little Egret	169	422	40.0
Black-crowned Night Heron	10	247	4.0
Chinese Pond Heron	334	392	85.2
Eastern Cattle Egret	73	76	96.1
Total	1,256	1,940	64.7

A summary of the number of nests of the five ardeid species breeding in the Deep Bay area in the last decade (i.e. from 2011 to 2020) is shown in Table 3. After a dramatic increase in 2019, a further increase in the nest abundance in 2020 was noted, probably due to the better estimation of the Mai Po mangrove colony. The nest abundance of Great Egret and Eastern Cattle Egret peaked in this year as their nests at the Mai Po Mangrove colony could be identified to species level. In the previous year, they were regarded as "unidentified nests" collectively.

Table 3. Number of nests recorded in the Deep Bay area from 2011 to 2020.

	Great Egret	Little Egret	Black-crowned Night Heron	Chinese Pond Heron	Eastern Cattle Egret	Unidentified	Total no. of nests in Deep Bay
2011		133		154			287
2012		97		176			273
2013		91		168			259
2014	1	190		227			418
2015	163	260	72	295	12		802
2016	100	188	27	297	8		620
2017	42	190	6	299			537
2018	13	230	4	256	2		505
2019	6	230	2	299	4	540	1,081
2020	670	169	10	334	73		1,256

3.3 A comparison of the number of nests with records of the previous year

The number of nests of Great Egret and Eastern Cattle Egret in Hong Kong increased dramatically from that of 2019 (Table 4) due to the enhanced identification of nests as stated in 3.2 above. The number of nests of Black-crowned Night Heron also showed remarkable increase with the discovery of three new colonies of this species, and a general increase in the number of nests at the colonies at Kowloon Park, Tai Po Market, Little Green Island and Sha Chau. The numbers for Chinese Pond Heron and Little Egret exhibited a minor change and may be a natural fluctuation.

Table 4. A comparison of the number of nests in Hong Kong in 2019 and 2020.

	2019	2020	Percentage change (%)
Great Egret	107	803	650.5
Little Egret	435	422	-3.0
Black-crowned Night Heron	172	247	43.6
Chinese Pond Heron	355	392	10.4
Eastern Cattle Egret	24	76	216.7
Unidentified nests	540	-	NA
Sub-total in Deep Bay	1,081	1,256	16.2
Total in Hong Kong	1,633	1,940	18.8

When comparing the number of nests in individual colonies between 2019 and 2020, nine colonies had more nests and 11 colonies had fewer nests in 2020 than 2019 (Table 5). Colonies at Pak Nai 2 and Tai Tong (Pak Sha Tsuen) were abandoned, while three

colonies (i.e. Discovery Bay, North District Park and Hung Hom) were first discovered. An increase in number of nests at Mai Po Lung Village was noted, while a decline was noted at Mai Po Village. It is suspected that breeding birds might have moved in-between these two colonies given their close proximity. Two colonies in Tolo Harbour (i.e. Tai Po Market and Penfold Park) also showed an increase in number of nests, which may indicate presence of favourable condition(s) in this region of Hong Kong. The abandonment of Pak Nai 2 and the sharp decline in Sha Kiu Village may indicate the conditions in Outer Deep Bay may not be favour to breeding this year. Alternatively, there is a possibility that the breeding birds may relocate and bred at the Mai Po mangrove colony. A decline of the condition of the trees at Mai Po Village, Sha Kiu Village and Tung Shing Lane after Typhoon Mangkhut, which hit Hong Kong after the breeding season in 2018, might contribute to the continuous decrease in number of nests observed in these colonies in 2019 and 2020.

Table 5. A comparison of the number of nests of individual colony between 2019 and 2020. (N.A.: Not applicable)

	2019	2020	Change (%)		2019	2020	Change (%)
Mai Po Village	159	113	-28.9	Ping Che	11	9	-18.2
Mai Po Lung Village	109	160	46.8	Tai Po Market	206	267	29.6
Tung Shing Lane	65	36	-44.6	Tuen Mun	14	9	-35.7
Ngau Hom Shek	27	23	-14.8	Penfold Park	77	91	18.2
Pak Nai 2	23	-	NA	A Chau	21	16	-23.8
Shenzhen Bay Bridge	30	25	-16.7	Sha Chau	53	84	58.5
Sha Kiu Village	20	3	-85.0	Ma Wan	44	27	-38.6
Mai Po Mangrove	557	757	35.9	Ha Che	1	8	700.0
Shan Pui River	91	139	52.7	Discovery Bay	-	6	NA
Ho Sheung Heung	21	9	-57.1	North District Park	-	29	NA
Man Kam To Road	62	50	-19.4	Kowloon Park	26	36	38.5
Tai Tong (Pak Sha Tsuen)	1	-	NA	Hung Hom	-	3	NA
				Little Green Island	15	40	166.7

3.4 Nesting substrates

Bamboo was the key nesting substrate for egrets and herons nesting in the north and northwest New Territories. Although it is less commonly used in recent years, it was still used in 6 out of the 23 colonies (Table 5). The mangrove species, *Kandelia obovata*, was the main nesting substrate of the Mai Po Mangrove and A Chau colonies. Birds at the Penfold Park, Shan Pui River, Ha Che and Hung Hom colonies built their nests on Banyan trees (*Ficus microcarpa*). Large Ficus trees at Kowloon Park were used by Black-crowned Night Herons as nesting substrates. The exotic tree *Acacia auriculiformis* was used as nesting substrate by ardeids in the Tuen Mun colony. Most nests in Mai Po Village were built on Chinese Hackberry (*Celtis sinensis*) and Banyan Tree (*Ficus microcarpa*). The coastal tree, *Hibiscus tiliaces*, was used at the new colony

at Discovery Bay while other exotic trees were the key substratum of the new colony at North District Park.

Table 6. Plant species utilized by ardeids as nesting substrates in 2020.

Site	Site	Bamboo	Tree species	Remarks
1	Mai Po Village	+	*Albizia lebbeck* *Aleurites moluccana* *Celtis sinensis* *Dimocarpus longan* *Ficus microcarpa* *Melaleuca cajuputi* subsp. *cumingiana* *Melia azedarach*	
2	Mai Po Lung Village		*Ficus benjamina* *Ficus microcarpa* *Ficus virens* *Litchi chinensis* *Melaleuca leucadendra*	
3	Tung Shing Lane	+	*Celtis sinensis* *Dimocarpus longan* *Ficus microcarpa* *Macaranga tanarius var. tomentosa* *Melia azedarach*	
4	Ngau Hom Shek	+		
5	Shenzhen Bay Bridge	+		
6	Sha Kiu Village		*Celtis sinensis*	
7	Mai Po Mangrove		*Kandelia obovata*	
8	Shan Pui River		*Ficus microcarpa*	
9	Ho Sheung Heung	+	*Cleistocalyx nervosum* *Dimocarpus longan* *Sterculia nobilis*	
10	Man Kam To Road		*Acacia auriculiformis* *Bischofia javanica* *Callistemon viminalis* *Celtis sinensis* *Ficus microcarpa* *Ficus virens* *Senna siamea*	
11	Ping Che	+		
12	Tai Po Market		*Ficus variegata*	

			Macaranga tanarius *Celtis siensis* *Mangifera indica*	
13	Tuen Mun		*Acacia auriculiformis*	
14	Penfold Park		*Ficus microcarpa*	
15	A Chau		*Kandelia obovata*	
16	Sha Chau			No observation was made
17	Ma Wan			No observation was made
18	Ha Che		*Ficus microcarpa*	
19	Discovery Bay		*Hibiscus tiliaceus*	
20	North District Park		*Taxodium distichum* *Schefflera actinophylla*	
21	Kowloon Park		*Ficus microcarpa* *Ficus binnendijkii*	
22	Hung Hom		*Ficus microcarpa*	
23	Little Green Island			No observation was made

3.5 Nest abandonment at A Chau

The A Chau colony was once the largest in Hong Kong in the 2000s. Similar to the breeding seasons in 2018 and 2019, nest abandonment was noted this year around mid-May. Vandalism due to human disturbance (e.g. collection of eggs) could be excluded as no sign of disturbance to the vegetation was observed and eggs were still found in some of the nests in aerial photos taken last year and this year. As wetland feeding habitats are still present around the nesting colony, the abandonment may be related to food availability or pollution. In order to understand the root cause of abandonment, more in-depth study would be needed.

3.6 Enhanced communication among government departments for tree works at nesting colonies

Since the tree pruning incident at the Tai Po Market colony during the breeding season in 2016, communication among government departments for tree works at egretries was enhanced. Whenever tree works is needed at or near any breeding colonies, comment from AFCD (and sometimes also from HKBWS) would be sought. For example, tree works at Tai Po Market colony was adjusted and scheduled to

avoid disturbance to the breeding birds after a joint site meeting of AFCD, HKBWS and Leisure and Cultural Services Department before the breeding season in 2020.

4. CONCLUSION

In 2020, a total of 1,940 nests of five species in 23 colonies were recorded in Hong Kong, including 1,256 nests of five species in eight colonies in the Deep Bay area. Two colonies (Pak Nai 2 and Tai Tong – Pak Sha Tsuen) in the Northwest New Territories were abandoned and three new colonies at Discovery Bay, North District Park and Hung Hom were first included in the monitoring. When compared to the results in 2019, there was a 16.2% and 18.8% increase in the number of nests in Deep Bay area and Hong Kong, respectively. These figures are recent peaks in this decade due to the present of a large colony at coastal mangroves near Mai Po, which is dominated by Greats Egrets.

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Summer 2020 Report: Egretry Counts in Hong Kong with particular reference to the Mai Po Inner Deep Bay Ramsar Site

Figures

The Hong Kong Bird Watching Society

Agriculture, Fisheries and Conservation Department

Figure 1. Location of nesting colonies (egretries) in Hong Kong in 2020.
(The enclosed is the Deep Bay colonies)

1	Mai Po Village	2	Mai Po Lung Village	3	Tung Shing Lane
4	Ngau Hom Shek	5	Shenzhen Bay Bridge	6	Sha Kiu Village
7	Mai Po Mangrove	8	Shan Pui River	9	Ho Sheung Heung
10	Man Kam To Road	11	Ping Che	12	Tai Po Market
13	Tuen Mun	14	Penfold Park	15	A Chau
16	Sha Chau	17	Ma Wan	18	Ha Che
19	Discovery Bay	20	North District Park	21	Kowloon Park
22.	Hung Hom	23	Little Green Island		

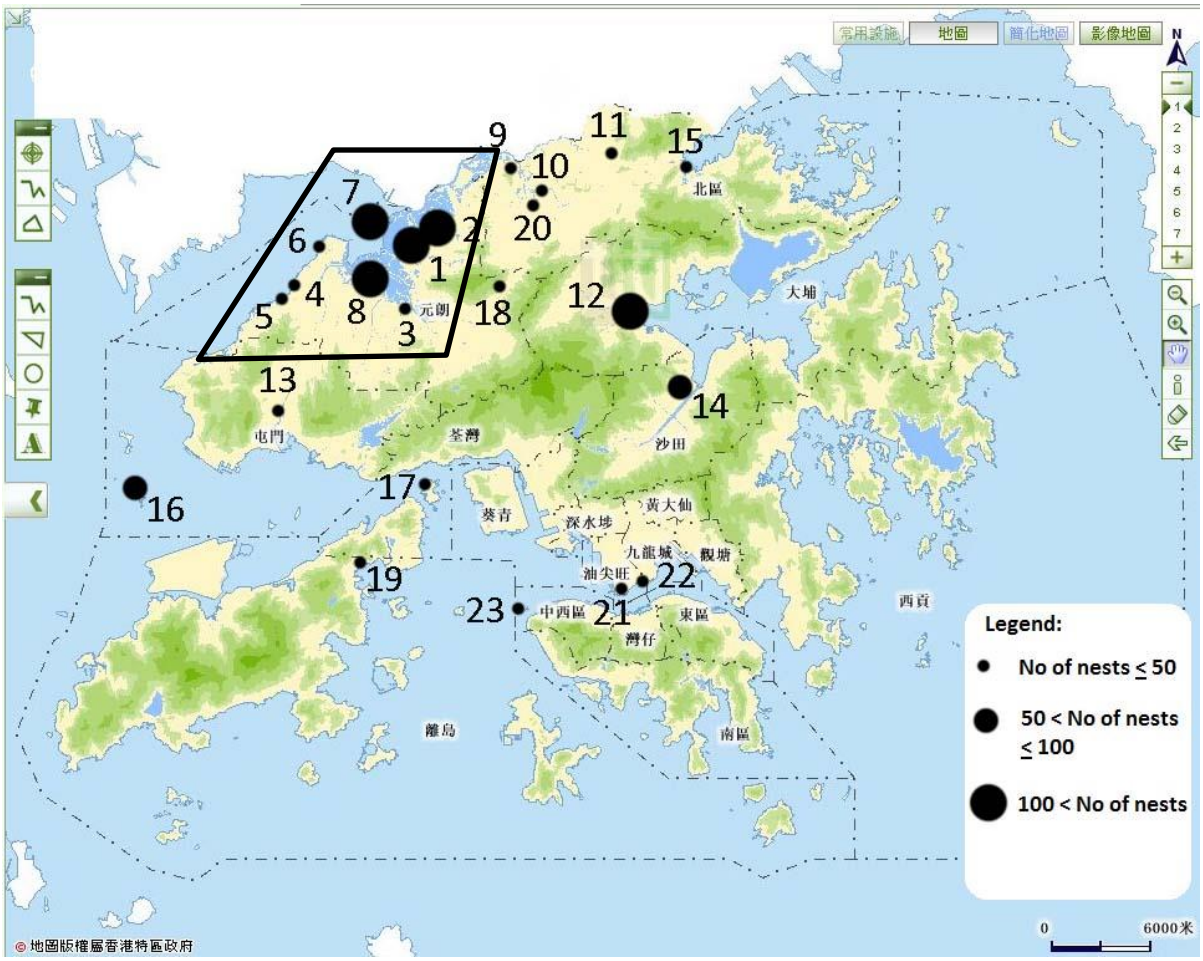
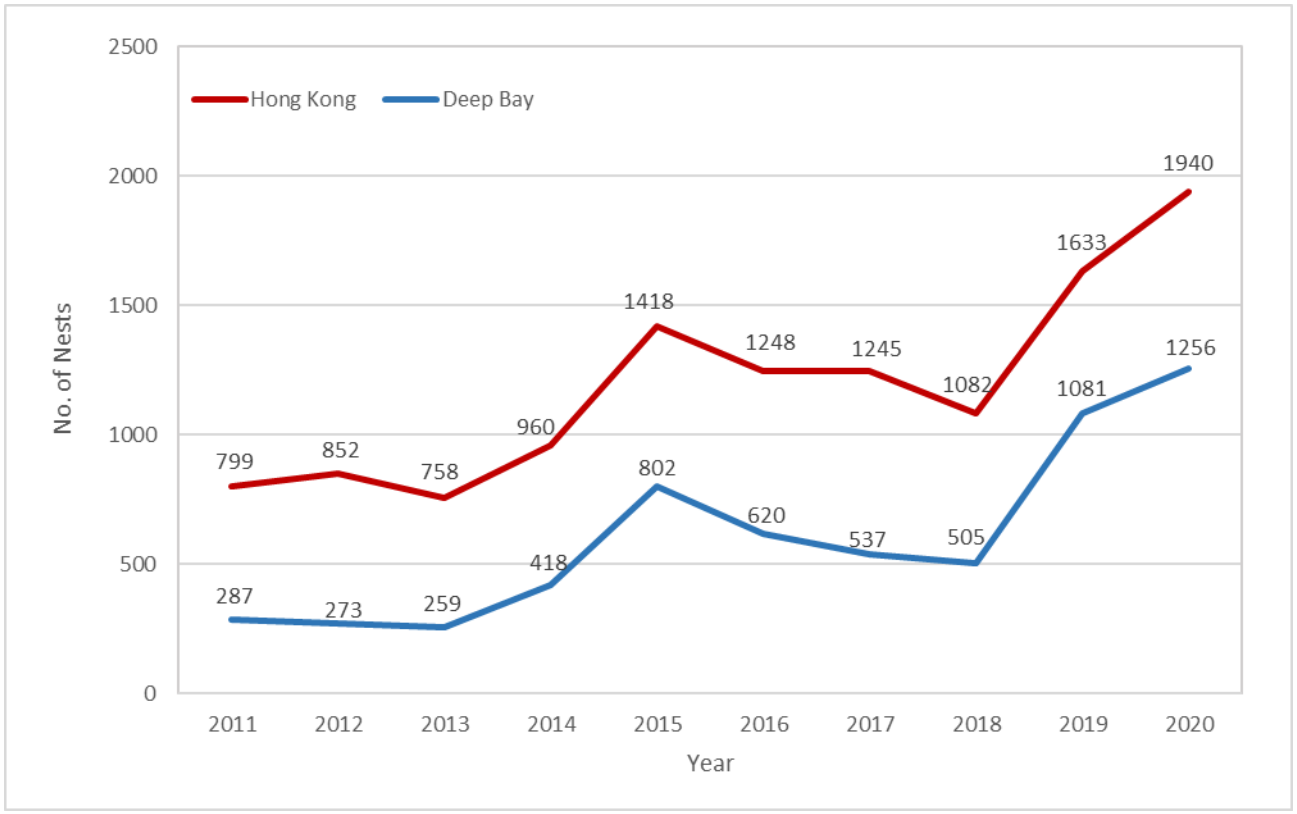


Figure 2. Total number of ardeid nests in Hong Kong with reference to the number of nests in the Deep Bay area from 2011 to 2020.



Appendix 1. Survey date(s) of nesting colonies and additional sites in 2020.

Colony	Date
Active colonies	
1. Mai Po Village*	19 Apr, 17 May, 20 Jun, 4 Jul
2. Mai Po Lung Village*	19 Apr, 17 May, 21 Jun, 5 Jul
3. Tung Shing Lane*	19 Apr, 17 May, 21 Jun, 5 Jul
4. Ngau Hom Shek*	19 Apr, 17 May, 20 Jun, 4 Jul
5. Shenzhen Bay Bridge*	19 Apr, 17 May, 20 Jun, 4 Jul
6. Sha Kiu Village*	19 Apr, 17 May, 20 Jun, 4 Jul
7. Mai Po Mangrove*	
Field counts	19 Apr, 17 May, 20 Jun, 4 Jul
Aerial photos	21 Apr, 11 May, 18 Jun, 14 Jul
8. Shan Pui River*	19 Apr, 17 May, 21 Jun, 5 Jul
9. Ho Sheung Heung	19 Apr, 17 May, 21 Jun, 5 Jul
10. Man Kam To Road	19 Apr, 17 May, 21 Jun, 5 Jul
11. Ping Che	18 Apr, 16 May, 20 Jun, 4 Jul
12. Tai Po Market	18 Apr, 16 May, 20 Jun, 4 Jul
13. Tuen Mun	26 Apr, 16 May, 13 Jun, 7 Jul
14. Penfold Park	18 Apr, 16 May, 20 Jun, 4 Jul
15. A Chau	18 Apr, 16 May, 20 Jun, 4 Jul
16. Sha Chau	26 Apr, 16 May, 19 Jun, 7 Jul
17. Ma Wan	25 Apr, 31 May, 23 Jun, 7 Jul
18. Ha Che	18 Apr, 16 May, 20 Jun, 4 Jul
19. Discovery Bay	10 Apr, 31 May, 23 Jun, 7 Jul
20. North District Park#	23 Jun, 4 Jul
21. Kowloon Park	23 Apr, 11 May, 19 Jun, 13 Jul
22. Hung Hom	23 Apr, 11 May, 19 Jun, 13 Jul
23. Little Green Island	24 Apr, 26 May, 18 Jun, 10 Jul
Previously active/additional sites	
24. Pak Nai 2*	19 Apr, 17 May, 20 Jun, 4 Jul
25. Tai Tong (Pak Sha Tsuen)	19 Apr, 17 May, 21 Jun, 5 Jul

26.	Tsim Bei Tsui*	19 Apr, 17 May, 20 Jun, 4 Jul
27.	Lam Tsuen 2	18 Apr, 16 May, 20 Jun, 4 Jul
28.	Ngau Hom Sha*	19 Apr
29.	Tam Kon Chau*	19 Apr
30.	Mai Po Marshes Nature Reserve*	19 Apr, 17 May, 20 Jun, 4 Jul
31.	The Chinese University of Hong Kong	27 Apr, 16 May, 19 Jun, 7 Jul
32.	San Sang San Tsuen*	19 Apr, 17 May, 21 Jun, 5 Jul
33.	Lo Wu	19 Apr
34.	Ting Kok	16 May

Remarks:

* within the Deep Bay area

#: first reported in June

Appendix 2. The number of nests recorded in each monthly count of the 23 colonies in 2020.

Appendix 2.1 Mai Po Village

	19 Apr	17 May	20 Jun	4 Jul	**Max**
Little Egret	55	**70**	15	12	**70**
Chinese Pond Heron	17	**43**	18	14	**43**
Total	72	113	33	26	**113**

Appendix 2.2 Mai Po Lung Village

	19 Apr	17 May	21 Jun	5 Jul	**Max**
Little Egret	11	**34**	23	33	**34**
Chinese Pond Heron	51	**126**	104	103	**126**
Total	62	160	127	136	**160**

Appendix 2.3 Tung Shing Lane

	19 Apr	17 May	21 Jun	5 Jul	**Max**
Little Egret	6	**16**	10	13	**16**
Chinese Pond Heron	2	13	13	**20**	**20**
Total	8	29	23	33	**36**

Appendix 2.4 Ngau Hom Shek

	19 Apr	17 May	20 Jun	4 Jul	**Max**
Little Egret	7	8	**10**	**10**	**10**
Chinese Pond Heron	5	12	**13**	**13**	**13**
Total	12	20	23	23	**23**

Appendix 2.5 Shenzhen Bay Bridge

	19 Apr	17 May	20 Jun	4 Jul	**Max**
Little Egret	20	**22**	4	5	**22**
Chinese Pond Heron	1	**3**	2	1	**3**
Total	21	25	6	6	**25**

Appendix 2.6 Sha Kiu Village

	19 Apr	17 May	20 Jun	4 Jul	**Max**
Little Egret	**3**	1			**3**
Total	3	1	nil	nil	**3**

Appendix 2.7.1 Mai Po Mangrove – field count.

	19 Apr	17 May	20 Jun	4 Jul	**Max**
Great Egret	12	**30**	12	24	**30**
Little Egret	2	2	2	**3**	**3**
Black-crowned Night Heron		1		**3**	**3**
Eastern Cattle Egret		7	5	**9**	**9**
Total	14	40	19	39	**45**

Appendix 2.7.2 Mai Po Mangrove – aerial photo. As the maximum count of this method is higher than the field one, it is used in the maximum count.

	21 Apr	11 May	18 Jun	14 Jul	**Max**
Great Egret	625	**670**	292	64	**670**
Little Egret	**4**	**4**	3	1	**4**
Black-crowned Night Heron	3	**10**	2	2	**10**
Eastern Cattle Egret	8	29	**73**	12	**73**
Total	640	713	370	79	**757**

Appendix 2.8 Shan Pui River

	19 Apr	17 May	21 Jun	5 Jul	**Max**
Little Egret		**10**			**10**
Chinese Pond Heron	29	**129**	113	40	**129**
Total	29	139	113	40	**139**

Appendix 2.9 Ho Sheung Heung

	19 Apr	17 May	21 Jun	5 Jul	**Max**
Chinese Pond Heron		3	**6**	3	**6**
Eastern Cattle Egret	2	**3**	**3**		**3**
Total	2	6	9	3	**9**

Appendix 2.10 Man Kam To Road

	19 Apr	17 May	21 Jun	5 Jul	**Max**
Little Egret	14	**21**	**21**	9	**21**
Chinese Pond Heron	6	27	**29**	15	**29**
Total	20	48	50	24	**50**

Appendix 2.11 Ping Che

	18 Apr	16 May	20 Jun	4 Jul	**Max**
Chinese Pond Heron	4	**9**	8	4	**9**
Total	4	**9**	8	4	**9**

Appendix 2.12 Tai Po Market

	18 Apr	16 May	20 Jun	4 Jul	**Max**
Great Egret	31	**54**	24	23	**54**
Little Egret	109	**128**	116	63	**128**
Black-crowned Night Heron	59	**85**	60	73	**85**
Total	199	267	200	159	**267**

Appendix 2.13 Tuen Mun

	26 Apr	16 May	13 Jun	7 Jul	**Max**
Little Egret	**9**	8	5		**9**
Total	9	8	5	nil	**9**

Appendix 2.14 Penfold Park

	18 Apr	16 May	20 Jun	4 Jul	**Max**
Great Egret	20	**30**	12	7	**30**
Little Egret	22	**32**	11	6	**32**
Black-crowned Night Heron	**23**	22	14	17	**23**
Chinese Pond Heron	1	**6**	5	2	**6**
Total	66	90	42	32	**91**

Appendix 2.15 A Chau (*: No bird and nest were found after mid-May, suggesting nest abandonment of active nests after the May count)

	18 Apr	16 May	20 Jun	4 Jul	**Max**
Great Egret	**16**	5			**16**
Total	16	5	nil	nil	**16**

Appendix 2.16 Sha Chau

	26 Apr	16 May	19 Jun	7 Jul	**Max**
Great Egret	**21**	9	1		**21**
Little Egret	**38**	13	3	5	**38**
Black-crowned Night Heron	**25**	13	1	3	**25**
Total	84	35	5	8	**84**

Appendix 2.17 Ma Wan

	25 Apr	31 May	23 Jun	7 Jul	**Max**
Great Egret	3	**9**	2		**9**
Little Egret	6	**9**	4	4	**9**
Black-crowned Night Heron	3	**9**	2	3	**9**
Total	12	27	8	7	**27**

Appendix 2.18 Ha Che

	18 Apr	16 May	20 Jun	4 Jul	**Max**
Chinese Pond Heron	3	3	**8**	5	**8**
Total	3	3	8	5	**8**

Appendix 2.19 Discovery Bay, Lantau.

	10 Apr	31 May	23 Jun	7 Jul	**Max**
Black-crowned Night Heron	**6**				**6**
Total	6	nil	nil	nil	**6**

Appendix 2.20 North District Park. This colony was first reported in June

	23 Jun	4 Jul	**Max**
Black-crowned Night Heron	27	**29**	**29**
Total	27	29	**29**

Appendix 2.21 Kowloon Park

	23 Apr	11 May	19 Jun	13 Jul	**Max**
Black-crowned Night Heron	32	**36**			**36**
Total	32	36	nil	nil	**36**

Appendix 2.22 Hung Hom

	23 Apr	11 May	19 Jun	13 Jul	**Max**
Black-crowned Night Heron	**3**	2			**3**
Total	3	2	nil	nil	**3**

Appendix 2.23 Little Green Island

	24 Apr	26 May	18 Jun	10 Jul	**Max**
Great Egret		**3**	1	2	**3**
Little Egret	15	**16**	7	6	**16**
Black-crowned Night Heron	10	**21**	1	3	**21**
Total	25	40	9	11	**40**