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Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme 2017 - 18

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

Summer 2018 Report

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The Hong Kong Bird Watching Society

to Agriculture, Fisheries and Conservation Department,
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Waterbird Monitoring at the Mai Po Inner Deep Bay Ramsar Site 2017-18

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

SUMMER 2018 REPORT

Summary

In the 2018 breeding season (April to July), a total of 505 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 nine egretries (hereinafter referred to as 'colonies') in the Deep Bay area. The number of nests in this area accounted for 47% of the total number of nests in Hong Kong. The Chinese Pond Heron was the dominant species in the Deep Bay area, accounting for 51% of the total number of nests in this area. A total of 1,082 nests of the above-mentioned five species in 21 colonies were recorded in Hong Kong in 2018. The Little Egret (41%) was the dominant species in Hong Kong, while the Eastern Cattle Egret (3%) was the least abundant one. Compared with the 2017 records (537 nests in the Deep Bay area and 1,245 nests in Hong Kong), there was a 6% and 13% decrease in the number of nests recorded in the Deep Bay area and Hong Kong, respectively. The decreases may be due to the dry weather in April and May. Colonies at Tsim Bei Tsui, Lam Tsuen 2, Little Green Island and The Chinese University of Hong Kong were abandoned in 2018 while colony at Kowloon Park was 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 2018. 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 (2015 - 2017) were surveyed once per month between April and July 2018 (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. 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. In case nests were hidden in vegetation which made the counting difficult, their numbers were estimated. In this cases, landing locations were marked on a sketch and repeated landings around the same location were considered as a nest. This methodology was adopted for the Sha Chau, A Chau, Mai Po mangrove and Ma Wan colonies, where most of the nests were hidden in 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. 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, 2017).

Both existing and new nesting colonies, if any, were monitored. New nesting colonies were identified by personal observations of the surveyors or through information provided by birdwatchers, the general public or the AFCD. 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.

3. RESULTS and DISCUSSION

3.1 Breeding population in the 2018 breeding season

A total of 1,082 nests were recorded in 21 colonies in Hong Kong (Table 1, Figure 1, Appendix 2). A colony at Kowloon Park was first included in the monitoring this year. Colonies at Tsim Bei Tsui, Lam Tsuen 2, The Chinese University of Hong Kong and Little Green Island were abandoned. Highlights of the present breeding season were as follows:

- The colony at Mai Po Village was the largest in Hong Kong, with 222 nests, about 20.5% of the total number of nests in Hong Kong.

- A colony of Black-crowned Night Herons at Kowloon Park was first included in the monitoring. It was first recorded in 2017 by consultant and was situated adjacent to the Bird Lake. It had the second highest number of nest of Black-crowned Night Heron and was the only colony with only this species breeding.

- Abandonment of colonies at Tsim Bei Tsui, Lam Tsuen 2, the Chinese University of Hong Kong and Little Green Island was noted. At the first three sites, the vegetation was intact and nearby areas were undisturbed. No vandalism was noted at these colonies. The abandonment may be a natural event. At the Little Green Island colony, coastal vegetation was found wilting in April and May. This may be associated with the dry weather this year and may be related to the abandonment of the colony.

- At the Ha Che colony, active nests were seen until May but the nests were abandoned in June. This may suggest that the site condition may not be favour to their breeding, though obvious changes were not observed.

- Similar abandonment of nests at A Chau was observed. Active nests were seen until mid-May, but nest abandonment was noted and only one nest was still active in late May. No disturbance or obvious change in the vegetation was observed.

- Abandoned colonies in previous years at Mai Po Nature Reserve, Tam Kon Chau, Pak Nai and Ngau Hom Sha were visited, but no breeding activities were recorded.

- Although the Little Green Island colony was abandoned, it is suspected that the original population may have relocated to nearby colonies. If the three colonies in the "western harbour" are considered as a single population (2017: Sha Chau, Ma Wan and Little Green Island; 2018: Sha Chau, Ma Wan and Kowloon Park), the total numbers of nests at this area in 2017 and 2018 were similar (2017: 155 nests; 2018: 161 nests).

- Some of the bamboo at the Ngau Hom Shek were removed before the breeding season while dumping was found at the Ping Che colony during the breeding season. Nevertheless, both colonies were still found to be active throughout the breeding season.

The largest colony in Hong Kong was the Mai Po Village colony (222 nests, 20.5% of total nests recorded in Hong Kong), which supported the highest number of nests of Chinese Pond Herons (123 nests, 38.1% of the total number of nests of this species) and Little Egrets (99 nests, 22.0% of the total number of Little Egret nests) in Hong Kong. The second largest colony was the Tai Po Market colony (195 nests, 18.0% of the total number of nests in Hong Kong), which supported the highest number of nests of Great Egrets (36 nests, 36.7% of the total number of nests of this species in Hong Kong), and Black-crowned Night Herons (82 nests, 44.6% of the total number of nests of this species in Hong Kong). The third largest colony was the Tung Shing Lane colony (84 nests, 7.8% of the total number of nests in Hong Kong). The lowest number of nests was recorded at the San Sang San Tsuen colony (1 nest, 0.1% of the total

number of nests in Hong Kong). The Ho Sheung Heung colony supported the highest number of nests of Eastern Cattle Egrets (22 nests, 78.6% of the total number of nests of this species).

Regarding the number of nests recorded, the Little Egret was the most abundant (449 nests, 41.5% of the total number of nests), and widespread species (16 out of 21 colonies). The Eastern Cattle Egret was the least abundant (28 nests, 2.6%) and most restricted species (3 out of 21 colonies).

Table 1. The number of nests at surveyed colonies in Hong Kong in 2018.

	Great Egret	Little Egret	Black-crowned Night Heron	Chinese Pond Heron	Eastern Cattle Egret	Total	%	Rank
Deep Bay area								
1. Mai Po Village		99		123		222	20.5	1
2. Mai Po Lung Village		14		53		67	6.2	6
3. Tung Shing Lane		49		35		84	7.8	3
4. Ngau Hom Shek		1		18		19	1.8	15
5. Pak Nai 2		17		1		18	1.7	16
6. Shenzhen Bay Bridge		22		5		27	2.5	12
7. Sha Kiu Village		7		20		27	2.5	12
8. San Sang San Tsuen				1		1	0.1	21
9. Mai Po mangrove*	13	21	4		2	40	3.7	8
Elsewhere in the New Territories								
10. Ho Sheung Heung		10		5	22	37	3.4	10
11. Man Kam To Road		15		24		39	3.6	9
12. Ping Che				9		9	0.8	20
13. Tai Tong (Pak Sha Tsuen)		3		5	4	12	1.1	19
14. Tai Po Market	36	77	82			195	18.0	2
15. Tuen Mun		20				20	1.8	14
16. Penfold Park	22	26	16	9		73	6.7	5
17. A Chau*	16					16	1.5	17
18.. Sha Chau*	8	49	25			82	7.6	4
19. Ma Wan*	3	19	9			31	2.9	11
20. Ha Che				15		15	1.4	18
Kowloon								
21. Kowloon Park			48			48	4.4	7

	Great Egret	Little Egret	Black-crowned Night Heron	Chinese Pond Heron	Eastern Cattle Egret	Total	%	Rank
Total	98	449	184	323	28	1,082	**100**	
%	9.1	41.5	17.0	29.9	2.6	**100**		

Note: * Some nests at the Mai Po mangrove, A Chau, Sha Chau, and Ma Wan were found in dense vegetation and may have been overlooked. The number of nests might have been underestimated.

3.2 Colonies in the Deep Bay area

A total of 505 nests of five ardeid species was recorded in nine colonies within the Deep Bay area in the 2018 breeding season (Table 2). The Eastern Cattle Egret bred again in Deep Bay. Despite there is a 6.0% decline in the total number of nests in Deep Bay between 2017 and 2018, the 2018 breeding season still had the fourth highest number of nests recorded since 2009 (Table 3). The number of nests in the Deep Bay area comprised 46.7% of the total number of nests in Hong Kong. The Deep Bay colonies supported the majority of breeding Little Egrets (51.2%) and Chinese Pond Herons (79.3%), in terms of the number of nests. The Chinese Pond Heron was the dominant species, with 50.7% 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 2018. (Colonies in the Deep Bay area include Mai Po Village, Mai Po Lung Village, Tung Shing Lane, Ngau Hom Shek, Pak Nai 2, Shenzhen Bay Bridge, Sha Kiu Village, San Sang San Tsuen and the Mai Po Mangrove)

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	13	98	13.3%
Little Egret	230	449	51.2%
Black-crowned Night Heron	4	184	2.2%
Chinese Pond Heron	256	323	79.3%
Eastern Cattle Egret	2	28	7.1%
Total	505	1,082	46.7%

A summary of the number of nests of the five ardeid species recorded in the Deep Bay area in the last decade (i.e. from 2009 to 2018) is shown in Table 3. Compared with last year, the number of nest of Great Egret, Black-crowned Night Heron and Chinese Pond Heron declined. Meanwhile, the number of nests of Little Egret increased 21% and Eastern Cattle Egret bred again in Deep

Bay after its absence in 2017. A sharp decline in Great Egrets was noted due to the abandonment of the Tsim Bei Tsui colony. In general, there is a 6% decrease in the total number of nests in Deep Bay.

Table 3. Number of nests recorded in the Deep Bay area from 2009 to 2018.

	Great Egret	Little Egret	Black-crowned Night Heron	Chinese Pond Heron	Eastern Cattle Egret	Total no. of nests in Deep Bay
2009		95		212	1	308
2010		85		163		248
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

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

When compared with the results in the whole of Hong Kong in 2017, all species showed a decline, except a minor increase in the Little Egret (Table 4). A sharp decline in the Great Egret was noted. The decline in the number of nests of four ardeid species is not well understood, given the key feeding habitats of these species, i.e. wetlands, were largely intact. However, the weather during the early breeding season was dry. This may affect the abundance of nests.

Table 4. A comparison of the number of nests in Hong Kong in 2017 and 2018.

	2017	2018	Percentage change (%)
Great Egret	184	98	-46.7
Little Egret	442	449	1.6
Black-crowned Night Heron	203	184	-9.4
Chinese Pond Heron	383	323	-15.7
Eastern Cattle Egret	33	28	-15.2
Sub-total in Deep Bay	537	505	-6.0
Total in Hong Kong	1245	1082	-13.1

When comparing the number of nests in individual colonies between 2017 and 2018, 7 colonies had more nests in 2017, while 12 colonies had fewer nests and one had the same number of nests (Table 5). Three colonies were abandoned. The change in size of the colony at Kowloon Park is not known as the colony

was only discovered late in the breeding season in 2017. A sharp increase was noted at Sha Chau, while a sharp decline was noted at A Chau. It is suspected relocation of breeding birds in-between nearby colonies might have occurred, for instance Sha Kiu Village and Shenzhen Bay Bridge, of which their total number of nests are the same between 2017 and 2018.

Table 5. A comparison of the number of nests of individual colony between 2017 and 2018 (N.A.: Not applicable)

	2017	2018	Change (%)		2017	2018	Change (%)
Mai Po Village	239	222	-7.1	Ping Che	13	9	-30.8
Mai Po Lung Village	55	67	21.8	A Chau	87	16	-81.6
Tung Shing Lane	82	84	2.4	Ha Che	22	15	-31.8
Ngau Hom Shek	18	19	5.6	Lam Tsuen 2	5	-	-100.0
Tsim Bei Tsui	19	-	-100.0	Tai Po Market	217	195	-10.1
Pak Nai 2	20	18	-10.0	Tuen Mun	17	20	17.6
Shenzhen Bay Bridge	20	27	35.0	Penfold Park	74	73	-1.4
Sha Kiu Village	34	27	-20.6	Little Green Island	80	-	-100.0
San Sang San Tsuen	1	1	0.0	Sha Chau	34	82	+141.2
Mai Po Mangrove	49	40	-18.4	Ma Wan	41	31	-24.4
Ho Sheung Heung	58	37	-36.2	The Chinese			
Tai Tong (Pak Sha Tsuen)	20	12	-40.0	University of Hong Kong	8	0	-100.0
Man Kam To Road	32	39	21.9	Kowloon Park	#	48	N.A.

Nests present

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 8 out of the 21 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 colony built their nests on Banyan trees (*Ficus microcarpa*). 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*). Large Ficus trees at Kowloon Park were used by Black-crowned Night Herons as nesting substrates.

Table 6. Plant species utilized by ardeids as nesting substrates in 2018

Site	Site	Bamboo	Tree species	Remarks
1	Mai Po Village	+	*Albizia lebbeck* *Aleurites moluccana* *Celtis sinensis* *Ficus microcarpa* *Melia azedarach*	

Site	Site	Bamboo	Tree species	Remarks
2	Mai Po Lung Village		*Ficus microcarpa* *Litchi chinensis* *Dimocarpus longan*	
3	Tung Shing Lane		*Litchi chinensis* *Dimocarpus longan* *Celtis sinensis*	
4	Ngau Hom Shek	+		
5	Pak Nai 2	+		
6	Shenzhen Bay Bridge	+		
7	Sha Kiu Village		*Celtis sinensis*	
8	San Sang San Tsuen	+		
9	Mai Po mangrove		*Kandelia obovata*	
10	Ho Sheung Heung	+	*Cleistocalyx nervosum* *Litchi chinensis* *Dimocarpus longan* *Sterculia nobilis*	
11	Man Kam To Road		*Acacia auriculiformis* *Bischofia javanica* *Ficus microcarpa* *Ficus virens* *Leucaena leucocephala* *Senna siamea*	
12	Ping Che	+		
13	A Chau		*Kandelia obovata*	
14	Tai Tong (Pak Sha Tsuen)	+		
15	Tai Po Market		*Ficus variegata* *Macaranga tanarius* *Celtis siensis* *Mangifera indica*	
16	Ha Che		*Ficus microcarpa*	
17	Tuen Mun		*Acacia auriculiformis*	
18	Penfold Park		*Ficus microcarpa*	

Site	Site	Bamboo	Tree species	Remarks
19	Sha Chau			No observation was made
20	Ma Wan			No observation was made
21	Kowloon Park		*Ficus microcarpa* *Ficus binnendijkii*	

3.5 Decline in the number of nests at A Chau

The A Chau colony was once the largest in Hong Kong in the 2000s. In recent years, only Great Egrets, Little Egrets and Black-crowned Night Herons bred there. It was also once the key breeding site of Eastern Cattle Egrets. The number of nests of this colony dropped to only 16 nests in 2018. The reason of the long term decline is not known as the nearby wetlands are rather undisturbed. However, the quality of some of the wetland habitats around the colony may have declined due to a lack of management. The Luk Keng marsh is one of the 12 priority sites for enhanced conservation under the new nature conservation policy. Management agreement programme may be conducted if opportunity arises.

3.6 Abrupt abandonment of nests at A Chau and Ha Che

It should be noted that the colonies at A Chau and Ha Che appeared to be abandoned by the ardeids abruptly during the breeding season. The reason for this is not known and no drastic change in the habitat or vandalism was observed around the colonies. This abandonment is not quite usual in Hong Kong.

3.7 Colony at Tai Po Market

Despite some of trees used by the ardeids for nesting at the Tai Po Market colony were pruned during the breeding season in 2017, the colony was still used for breeding in 2018. Though the number of nests was less than that in 2017, it was still the second highest number since the colony was found to be active. In addition, it was observed that ardeids were still breeding in mid-September at this colony after this monitoring programme has completed.

4. CONCLUSION

In 2018, a total of 1,082 nests of five species in 21 colonies was recorded in Hong Kong, including 505 nests of five species in nine colonies in the Deep Bay area. Three colonies were abandoned and one colony was first included in the monitoring. When compared to the results in 2017, there was a 6% and 13% decrease in the number of nests in Deep Bay area and Hong Kong, respectively.

The decrease in the number of nests in 2018 is not understood but it could be associated with the dry weather during the early breeding season.

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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 2018 (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	Pak Nai 2 (Tin Hau Temple)	6	Shenzhen Bay Bridge
7	Sha Kiu Village	8	San Sang San Tsuen	9	Mai Po Mangrove
10	Ho Sheung Heung	11	Man Kam To Road	12	Ping Che
13	Tai Tong (Pak Sha Tsuen)	14	Tai Po Market	15	Tuen Mun
16	Penfold Park	17	A Chau	18	Sha Chau
19	Ma Wan	20	Ha Che	21	Kowloon Park

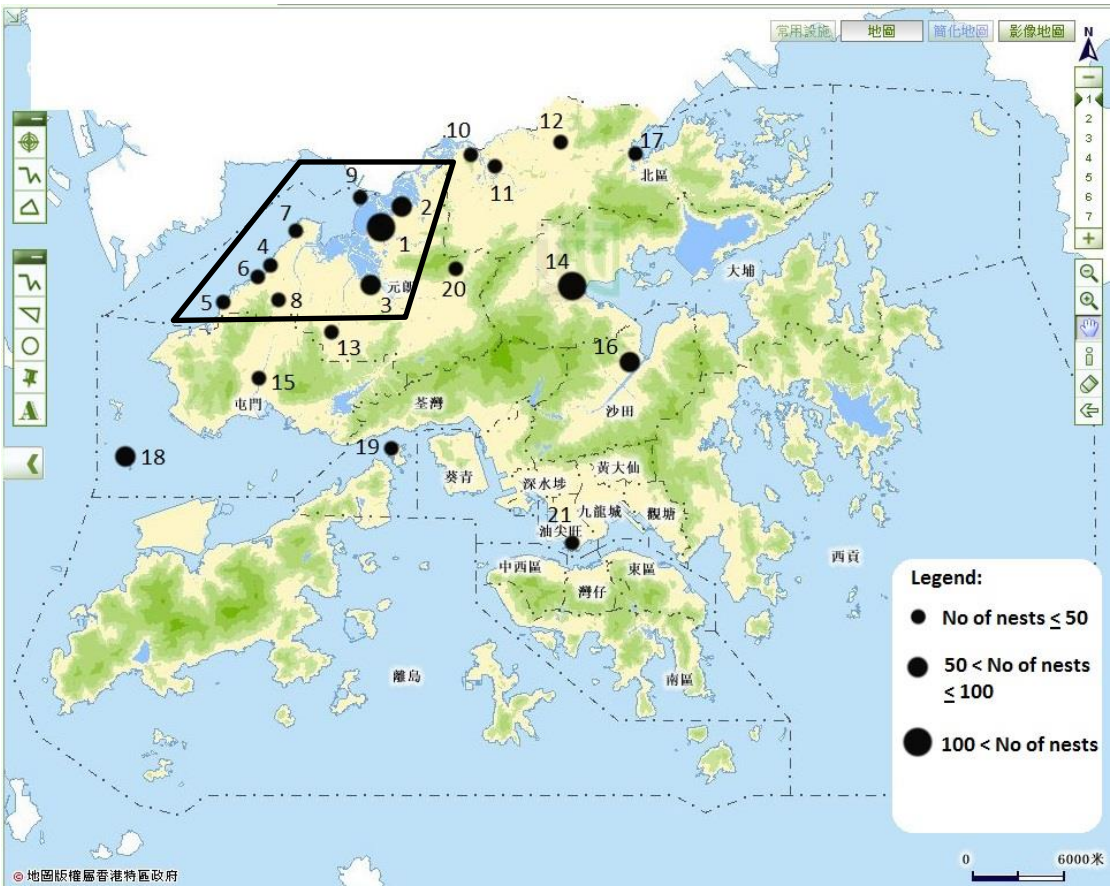
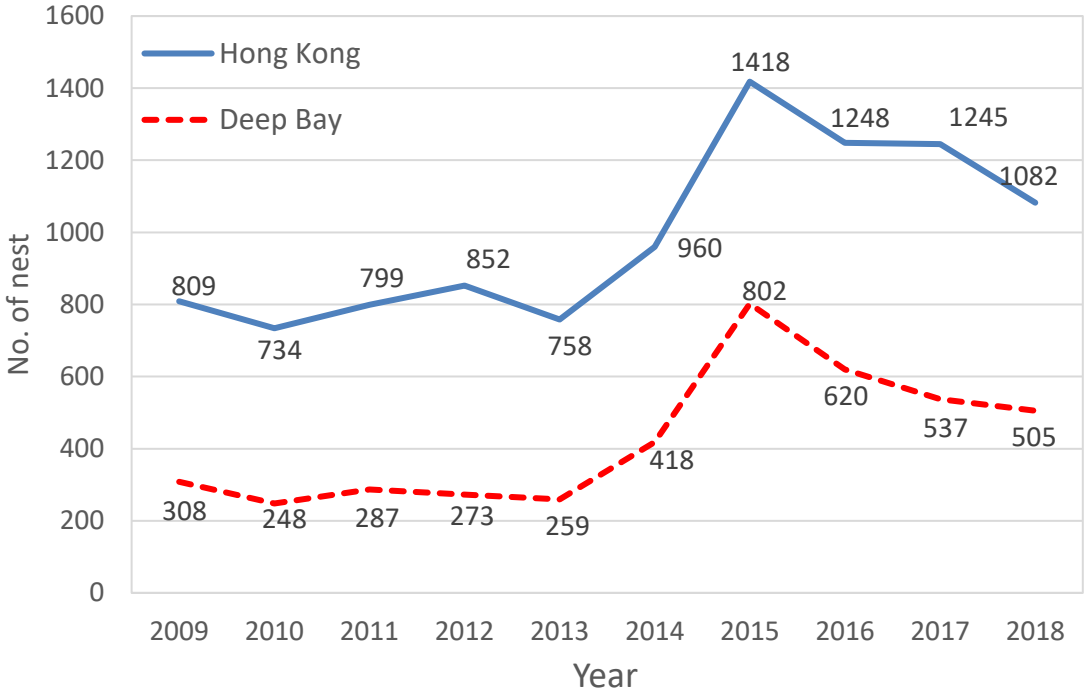


Figure 2. 10-year summary of the total number of ardeid nests in Hong Kong with reference to the number of nests in the Deep Bay area from 2009 to 2018.



Appendix 1. Survey date(s) of nesting colonies and additional sites in 2018.

Colony	Date
Active colonies	
1. Mai Po Village*	29 April, 19 May, 10 June, 7 July
2. Mai Po Lung Village*	29 April, 13 May, 17 June, 8 July
3. Tung Shing Lane*	29 April, 13 May, 17 June, 8 July
4. Ngau Hom Shek*	29 April, 19 May, 10 June, 7 July
5. Pak Nai 2*	29 April, 19 May, 10 June, 7 July
6. Shenzhen Bay Bridge*	29 April, 19 May, 10 June, 7 July
7. Sha Kiu Village*	29 April, 19 May, 10 June, 7 July
8. San Sang San Tsuen*	29 April, 13 May, 17 June, 8 July
9. Mai Po Mangrove*	29 April, 19 May, 10 June, 7 July
10. Ho Sheung Heung	29 April, 13 May, 17 June, 8 July
11. Man Kam To Road	29 April, 13 May, 17 June, 8 July
12. Ping Che	21 April, 19 May, 10 June, 7 July
13. Tai Tong (Pak Sha Tsuen)	29 April, 13 May, 17 June, 8 July
14. Tai Po Market	21 April, 19 May, 10 June, 7 July
15. Tuen Mun	14 April, 19 May, 22 June, 28 July
16. Penfold Park	25 April, 19 May, 23 June, 7 July
17. A Chau	21 April, 19 May, 10 June, 7 July
18. Sha Chau	14 April, 19 May, 22 June, 28 July
19. Ma Wan	23 April, 22 May, 29 June, 21 July
20. Ha Che	21 April, 19 May, 10 June, 7 July
21. Kowloon Park	21 April, 19 May, 25 June, 9 July
Previously active/additional sites	
22. Tsim Bei Tsui*	29 April, 19 May, 10 June, 7 July
23. Lam Tsuen 2	21 April, 19 May, 10 June, 7 July
24. Little Green Island	22 April, 23 May, 23 June, 28 July
25. Ngau Hom Sha*	29 April
26. Tam Kon Chau*	29 April

27.	Mai Po Marshes Nature Reserve*	29 April, 19 May, 10 June, 7 July
28.	Pak Nai*	29 April, 19 May, 10 June, 7 July
29.	The Chinese University of Hong Kong	21 April, 19 May, 10 June, 7 July
30.	Ting Kok	21 April, 19 May
31.	Fanling Golf Course	29 April
32.	Lamma ex-quarry	4 May

* within the Deep Bay area

Appendix 2. The number of nests recorded in each monthly count of the 21 colonies in 2018

Appendix 2.1. Mai Po Village

	29 April	19 May	10 June	7 July	**Max**
Little Egret	**99**	84	45	27	**99**
Chinese Pond Heron	49	**123**	101	75	**123**
Total	148	207	146	102	**222**

Appendix 2.2 Mai Po Lung Village

	29 April	13 May	17 June	8 July	**Max**
Little Egret	1	13	**14**	12	**14**
Chinese Pond Heron	**53**	38	40	36	**53**
Total	54	51	54	48	**67**

Appendix 2.3 Tung Shing Lane

	29 April	13 May	17 June	8 July	**Max**
Little Egret	**49**	34	18	11	**49**
Chinese Pond Heron	28	**35**	24	27	**35**
Total	77	69	42	38	**84**

Appendix 2.4 Ngau Hom Shek

	29 April	19 May	10 June	7 July	**Max**
Little Egret			**1**		**1**
Chinese Pond Heron	18	**11**	9		**18**
Total	18	11	10	nil	**19**

Appendix 2.5 Pak Nai 2

	29 April	19 May	10 June	7 July	**Max**
Little Egret	**17**	6	4		**17**
Chinese Pond Heron	**1**				**1**
Total	18	6	4	nil	**18**

Appendix 2.6 Shenzhen Bay Bridge

	29 April	19 May	10 June	7 July	**Max**
Little Egret	21	**22**	7	4	**22**
Chinese Pond Heron	5	**5**	2	4	**5**
Total	26	27	9	8	**27**

Appendix 2.7 Sha Kiu Village

	29 April	19 May	10 June	7 July	**Max**
Little Egret	**7**	4	6	2	**7**
Chinese Pond Heron	18	**20**	7	2	**20**
Total	25	24	13	4	**27**

Appendix 2.8 San Sang San Tsuen

	29 April	13 May	17 June	8 July	**Max**
Chinese Pond Heron	1				**1**
Total	1	nil	nil	nil	**1**

Appendix 2.9 Mai Po Mangrove

	29 April	19 May	10 June	7 July	**Max**
Great Egret	9	4	**13**	8	**13**
Little Egret	18	16	**21**	17	**21**
Black-crowned Night Heron	**4**	3	2		**4**
Eastern Cattle Egret	1	**2**	**2**	1	**2**
Total	32	25	38	26	**40**

Appendix 2.10 Ho Sheung Heung

	29 April	13 May	17 June	8 July	**Max**
Little Egret	4	**10**	7	2	**10**
Chinese Pond Heron	1		1	**5**	**5**
Eastern Cattle Egret	**22**	18	12	7	**22**
Total	27	28	20	14	**37**

Appendix 2.11 Man Kam To Road

	29 April	13 May	17 June	8 July	**Max**
Little Egret	**15**	6	5	7	**15**
Chinese Pond Heron	**24**	20	18	14	**24**
Total	39	26	23	21	**39**

Appendix 2.12 Ping Che

	21 April	19 May	10 June	7 July	**Max**
Chinese Pond Heron	2	7	8	**9**	**9**
Total	2	7	8	9	**9**

Appendix 2.13 Tai Tong (Pak Sha Tsuen)

	29 April	13 May	17 June	8 July	**Max**
Little Egret	**3**	1	2		**3**
Chinese Pond Heron	1	3	**5**	2	**5**
Eastern Cattle Egret	1	3	**4**	2	**4**
Total	5	7	11	4	**12**

Appendix 2.14. Tai Po Market

	21 April	19 May	10 June	7 July	**Max**
Great Egret	**36**	17	12	13	**36**
Little Egret	54	**77**	69	45	**77**
Black-crowned Night Heron	**82**	76	62	71	**82**
Total	172	170	143	129	**195**

Appendix 2.15. Tuen Mun

	14 April	19 May	22 June	28 July	**Max**
Little Egret	17	**20**	8	1	**20**
Total	17	20	8	1	**20**

Appendix 2.16. Penfold Park

	25 April	19 May	23 June	7 July	**Max**
Great Egret	15	17	6	**22**	**22**
Little Egret	23	21	25	**26**	**26**
Black-crowned Night Heron	15	**16**	10	5	**16**
Chinese Pond Heron	2	6	4	**9**	**9**
Eastern Cattle Egret		+			**Nil**
Total	55	60	45	62	**73**

Appendix 2.17 A Chau (*: only one nest was active in May and June, suggesting nest abandonment of active nests after the April count)

	21 April	19 May	10 June	7 July	**Max**
Great Egret	**16***	1	1		**16***
Total	16	1	1	nil	**16**

Appendix 2.18. Sha Chau

	14 April	19 May	22 June	28 July	**Max**
Great Egret	**8**	6	3		**8**
Little Egret	**49**	34	11	8	**49**
Black-crowned Night Heron	**25**	11	6	5	**25**
Total	82	51	20	13	**82**

Appendix 2.19. Ma Wan

	23 April	22 May	29 June	21 July	**Max**
Great Egret	**3**	2			**3**
Little Egret	7	**19**	7	2	**19**
Black-crowned Night Heron	**9**	8	**7**	4	**9**
Total	19	29	14	6	**31**

Appendix 2.20. Ha Che (* No bird was seen in June and July, possibly site abandonment)

	21 April	19 May	10 June	7 July	**Max**
Little Egret	+				**Nil**
Chinese Pond Heron	2	**15***			**15***
Total	2	15	nil	nil	**15**

Appendix 2.21. Kowloon Park

	21 April	19 May	25 June	9 July	**Max**
Black-crowned Night Heron	**48**	47	30		**48**
Total	48	47	30	nil	**48**