

Contract Ref.: AFCD/SQ/43/15/C

**Mai Po Inner Deep Bay Ramsar Site
Waterbird Monitoring Programme
2015 - 16**

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

Summer 2016 Report



Submitted by
The Hong Kong Bird Watching Society

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

November 2016



Printed on Recycled Paper

Contract Ref.: AFCD/SQ/43/15/C
Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme 2015-16

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 and CHEUNG MOK, Jose Alberto
Egret Research Group,
The Hong Kong Bird Watching Society

Copyright

The project is part of the
“Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme 2015-16” of
Agriculture, Fisheries and Conservation Department,
Hong Kong SAR Government.
All the data shall be the property of the Government with full copyright

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

This publication should be cited as

Anon, 2016. Summer 2016 Report: Egretty Counts in Hong Kong with particular reference to the Mai Po Inner Deep Bay Ramsar Site. Report by The Hong Kong Bird Watching Society to the Agriculture, Fisheries and Conservation Department, Hong Kong Special Administrative Region Government.

TABLE OF CONTENTS

REPORT

| | |
|--|----|
| Summary..... | 4 |
| 1. Introduction | 4 |
| 2. Methods | 4 |
| 3. Results and Discussion..... | 5 |
| 3.1 Breeding population in the 2016 breeding season..... | 5 |
| 3.2 Colonies in the Deep Bay area..... | 7 |
| 3.3 Comparison of the number of nests with records of the previous year..... | 9 |
| 3.4 Nesting substrates | 10 |
| 3.5 Training workshop for ardeid nesting colony monitoring | 11 |
| 4. Conclusion..... | 11 |
| 5. Acknowledgements | 12 |
| 6. References..... | 12 |

TABLES

| | | |
|----------|---|----|
| Table 1. | Number of nests at surveyed colonies in Hong Kong in 2016..... | 6 |
| Table 2. | Relative importance of the Deep Bay colonies compared to the other colonies in Hong Kong in 2016..... | 8 |
| Table 3. | Number of nests recorded in the Deep Bay from 2007 to 2016..... | 8 |
| Table 4. | Comparison of the number of nests in Hong Kong in 2015 and 2016 | 9 |
| Table 5. | Comparison of the number of nests of individual colonies in 2015 and 2016..... | 9 |
| Table 6. | Plant species utilized by ardeids as nesting substrates in 2016 | 10 |

FIGURES

| | | |
|-----------|--|----|
| Figure 1. | Location of egretries in Hong Kong in 2016 | 14 |
| Figure 2. | Ten-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 2007 to 2016 | 15 |

APPENDICES

| | | |
|-------------|--|----|
| Appendix 1. | Survey date(s) of nesting colonies and additional sites in 2016 | 17 |
| Appendix 2. | Number of nests recorded in each monthly count at the 23 colonies in 2016..... | 18 |

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

SUMMER 2016 REPORT

Summary

In the 2016 breeding season (April to July), a total of 620 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 (*Bubulcus coromandus*), were recorded in ten egrettries (hereinafter referred to as 'colonies') in the Deep Bay area. The number of nests in this area accounted for 49.7% of the total number of nests in Hong Kong. The Chinese Pond Heron was the dominant species in the Deep Bay area, accounting for 73.0% of the total number of nests in this area. A total of 1,248 nests of the five species in 23 colonies were recorded in Hong Kong in 2016. The Chinese Pond Heron (32.6%) was the dominant species in Hong Kong, while the Eastern Cattle Egret (3.4%) was the least abundant one. Compared with the 2015 records (802 nests in the Deep Bay area and 1,418 nests in Hong Kong), there was a 22.7% and 12.0% decrease in the number of nests recorded in the Deep Bay area and Hong Kong, respectively. The decreases may be due to the natural fluctuation of the number of breeding ardeids as the peak number of nests in recent years was recorded in 2015. The number of nests recorded in 2016 was the second highest in recent years.

1 INTRODUCTION

Following the establishment of the Mai Po Inner Deep Bay Ramsar Site, a long-term Waterbird Monitoring Programme has been carried out since 1998. The programme is coordinated by the Hong Kong Bird Watching Society (HKBWS) with support from the Agriculture, Fisheries and Conservation Department (AFCD) of the Hong Kong SAR Government. Under the Waterbird Monitoring Programme, egrettry 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. This report presents the results of the egrettry count between April and July 2016. 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 (2013 – 2015) were surveyed once per month between April and July 2016 (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 naked eye, depending on the proximity of the surveyor to the colony. In cases where the nests were hidden in vegetation which made the counting difficult, their numbers were estimated. In this connection, 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 colonies on Little Green Island, A Chau, Sha Chau and Ma Wan, where most of the nests were hidden in vegetation. 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 egret. 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, 2016).

Both existing colonies and new nesting sites, if any, were monitored. In the past years, 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 would be considered as a new nesting colony if it was more than 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 2016 breeding season

A total of 1,248 nests were recorded in 23 colonies in Hong Kong (Table 1, Figure 1, Appendix 2). All colonies active in 2015 were found to be active in 2016. No new colonies were found. Highlights of the present breeding season are as follows:

- The colony at Mai Po Village was the largest in Hong Kong, with 202 nests, about 16.2% of the total number of nests in Hong Kong.
- Abandoned colonies at Tam Kon Chau, Pak Nai and Ngau Hom Sha were visited but no breeding activities were recorded.
- Apart from the bamboo cluster used in previous years, the Lam Tsuen 2 colony extended to a nearby tree, *Celtis sinensis*. In addition, dieback of part of the bamboo cluster was observed.
- Nesting birds did not use a *Celtis sinensis* tree which was used for nesting in the past at the Ha Che colony this year. The concerned tree appeared to be unhealthy.
- At the Sha Kiu village colony, the southern part was abandoned and the western part reduced in size.
- The Tung Shing Lane colony extended to a few trees to the east.
- As photographers were observed inside the Tai Po Market colony in 2015, AFCD had stepped up patrols and installed signs to remind the public not

to disturb breeding birds and the Highways Department had locked the maintenance access. Nevertheless, photographers were seen taking photos along a maintenance access of a slope inside the colony on 8 and 9 May (3 persons) and 19 May (2 persons). No adult ardeids were observed returning to their nests when photographers were present. Some areas around the locations where the photographers were seen were abandoned by the birds in May, while the rest of the area was still used by breeding ardeids. The boundary of the Tai Po Market colony was different between April and May. In May, it shifted westward and extended to three trees adjacent to Kwong Fuk Road, while some nesting areas in April along a maintenance access were abandoned.

The largest colony in Hong Kong was the Mai Po Village colony (202 nests, 16.2% of total number of nests recorded in Hong Kong), which supported the highest number of nests of Chinese Pond Heron (130 nests, 31.9% of the total number of nests of this species) and Little Egret (72 nests, 18.3% of the total number of Little Egret nests) in Hong Kong. The second largest colony was the Tai Po Market colony (151 nests, 12.1% of the total number of nests in Hong Kong), which supported the highest number of nests of Black-crowned Night Heron (58 nests, 31.5% of the total number of nests of this species in Hong Kong). The third largest colony was the Mai Po Lung Village colony (84 nests, 6.7% of the total number of nests in Hong Kong). The lowest number of nests was recorded at the San Sang San Tsuen colony (5 nests, 0.4% of the total number of nests in Hong Kong). The Ho Sheung Heung colony supported the highest number of nests of Eastern Cattle Egret (27 nests, 62.8% of the total number of nests of this species). The highest number of nests of Great Egret was found at the A Chau colony (67 nests, 30.3% of the total number of nests of this species).

Table 1. Number of nests at surveyed colonies in Hong Kong in 2016.

| | Great Egret | Little Egret | Black-crowned Night Heron | Chinese Pond Heron | Eastern Cattle Egret | Total | % | Rank |
|----------------------------------|-------------|--------------|---------------------------|--------------------|----------------------|-------|------|------|
| Deep Bay area | | | | | | | | |
| 1. Mai Po Village | | 72 | | 130 | | 202 | 16.2 | 1 |
| 2. Mai Po Marshes Nature Reserve | 54 | 11 | 9 | | 5 | 79 | 6.3 | 6 |
| 3. Mai Po Lung Village | | 16 | | 68 | | 84 | 6.7 | 3 |
| 4. Tung Shing Lane | | 20 | | 41 | | 61 | 4.9 | 10 |
| 5. Ngau Hom Shek | | 2 | | 9 | | 11 | 0.9 | 20 |
| 6. Tsim Bei Tsui | 46 | 2 | 18 | | 3 | 69 | 5.5 | 8 |
| 7. Pak Nai 2 | | 9 | | 2 | | 11 | 0.9 | 20 |
| 8. Shenzhen Bay Bridge | | 13 | | 5 | | 18 | 1.4 | 18 |

| | Great Egret | Little Egret | Black-crowned Night Heron | Chinese Pond Heron | Eastern Cattle Egret | Total | % | Rank |
|----------------------------------|-------------|--------------|---------------------------|--------------------|----------------------|-------|-------|------|
| 9. Sha Kiu Village | | 39 | | 41 | | 80 | 6.4 | 5 |
| 10.San Sang San Tsuen | | 4 | | 1 | | 5 | 0.4 | 23 |
| Elsewhere in the New Territories | | | | | | | | |
| 11.Ho Sheung Heung | | 18 | | 12 | 27 | 57 | 4.6 | 11 |
| 12.Man Kam To Road | | 8 | | 33 | | 41 | 3.3 | 12 |
| 13.Ping Che | | | | 7 | | 7 | 0.6 | 22 |
| 14.A Chau* | 67 | 2 | 14 | | | 83 | 6.7 | 4 |
| 15.Tai Tong (Pak Sha Tsuen) | | 12 | | 13 | 5 | 30 | 2.4 | 13 |
| 16.Ha Che | | 2 | | 21 | | 23 | 1.8 | 16 |
| 17.Lam Tsuen 2 | | | | 17 | | 17 | 1.4 | 19 |
| 18.Tai Po Market | 22 | 68 | 58 | | 3 | 151 | 12.1 | 2 |
| 19.Tuen Mun | | 30 | | | | 30 | 2.4 | 13 |
| 20.Penfold Park | 22 | 24 | 23 | 7 | | 76 | 6.1 | 7 |
| 21.Sha Chau* | 2 | 12 | 14 | | | 28 | 2.2 | 15 |
| 22.Ma Wan* | 2 | 20 | 40 | | | 62 | 5.0 | 9 |
| Hong Kong Island | | | | | | | | |
| 23.Little Green Island* | 6 | 9 | 8 | | | 23 | 1.8 | 16 |
| Total | 221 | 393 | 184 | 407 | 43 | 1,248 | 100.0 | |
| % | 17.7 | 31.5 | 14.7 | 32.6 | 3.4 | 100.0 | | |

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

Regarding the number of nests recorded, Chinese Pond Heron was the most abundant (407 nests, 32.6% of the total number of nests) and the second most widespread species (15 out of 23 colonies). The Little Egret was the second most abundant (393 nest, 31.5%) and most widespread species (21 colonies). The Eastern Cattle Egret was the least abundant (43 nests, 3.4%) and most restricted species (5 colonies).

3.2 Colonies in the Deep Bay area

A total of 620 nests of five ardeid species were recorded in ten colonies within the Deep Bay area in the 2016 breeding season (Table 2). This was the second highest number recorded since the present monitoring was commenced in 1998. The number of nests in the Deep Bay area accounted for 49.7% of the total number of nests in Hong Kong. The Deep Bay colonies supported the majority

of breeding Great Egrets, Little Egrets and Chinese Pond Herons, in terms of the number of nests. The Chinese Pond Heron was the dominant species, accounted for 47.9% of the total number of nests in the Deep Bay area.

Table 2. Relative importance of the Deep Bay colonies compared to the other colonies in Hong Kong in 2016. (Colonies in the Deep Bay area include Mai Po Village, Mai Po Marshes Nature Reserve, Mai Po Lung Village, Tsim Bei Tsui, Tung Shing Lane, Ngau Hom Shek, Pak Nai 2, Shenzhen Bay Bridge, Sha Kiu Village and San Sang San Tsuen)

| 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 | 100 | 221 | 45.2% |
| Little Egret | 188 | 393 | 47.8% |
| Black-crowned Night Heron | 27 | 184 | 14.7% |
| Chinese Pond Heron | 297 | 407 | 73.0% |
| Eastern Cattle Egret | 8 | 43 | 18.6% |
| Total | 620 | 1,248 | 49.7% |

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 2007 to 2016) is shown in Table 3. For the second consecutive year, all five ardeid species bred in the Deep Bay area. The number of nests of Chinese Pond Heron reached a new height, with two nests more than last year. For the other species, though the numbers of nests decreased from the peak counts in 2015, the numbers recorded were the second/third highest during the last decade.

Table 3. Number of nests recorded in the Deep Bay area from 2007 to 2016.

| | Great Egret | Little Egret | Black-crowned Night Heron | Chinese Pond Heron | Eastern Cattle Egret | Total no. of nests in Deep Bay |
|------|-------------|--------------|---------------------------|--------------------|----------------------|--------------------------------|
| 2007 | | 119 | | 152 | 4 | 275 |
| 2008 | | 96 | | 137 | 1 | 234 |
| 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 |

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

When compared with the results in 2015, all species had a less number of nests in Hong Kong in 2016 (Table 4). The Chinese Pond Herons showed a slight decrease (0.5%) while the Great Egret had the greatest percentage decrease (21.9%). The reason for the decline in the number of nests is not well understood. Nevertheless, the numbers of nests of all species in 2016, except Eastern Cattle Egret, were the second highest records in the last decade. As the peak count of nests was recorded in 2015 since the monitoring was commenced, it is likely that the decline is due to natural fluctuation.

Table 4. Comparison of the number of nests in Hong Kong in 2015 and 2016.

| | 2015 | 2016 | Percentage change (%) |
|---------------------------|-------|-------|-----------------------|
| Great Egret | 283 | 221 | -21.9 |
| Little Egret | 458 | 393 | -14.2 |
| Black-crowned Night Heron | 214 | 184 | -14.0 |
| Chinese Pond Heron | 409 | 407 | -0.5 |
| Eastern Cattle Egret | 54 | 43 | -20.4 |
| Sub-total in Deep Bay | 802 | 620 | -22.7 |
| Total in Hong Kong | 1,418 | 1,248 | -12.0 |

Regarding individual colonies, there were 11 colonies with more nests recorded in 2016 than in 2015. Meanwhile, 12 colonies had fewer nests recorded in 2016 than in 2015 (Table 5). A sharp decrease was noted in the Mai Po Marshes Nature Reserve colony (decrease in 61.3%). The reason of this decrease is not known but human disturbance is not likely to be a factor as the trees where the ardeids nested were intact.

Table 5. Comparison of the number of nests of individual colonies in 2015 and 2016.

| | 2015 | 2016 | % change | | 2015 | 2016 | % change |
|---------------------|------|------|----------|-----------------------------|------|------|----------|
| Mai Po Village | 236 | 202 | -14 | Man Kam To Road | 31 | 41 | +32 |
| Mai Po Marshes NR | 204 | 79 | -61 | Ping Che | 6 | 7 | +17 |
| Mai Po Lung Village | 73 | 84 | +15 | A Chau | 66 | 83 | +26 |
| Tung Shing Lane | 77 | 61 | -21 | Tai Tong (Pak Sha Tsuen) | 34 | 30 | -12 |
| Ngau Hom Shek | 8 | 11 | +38 | Ha Che | 24 | 23 | -4 |
| Tsim Bei Tsui | 57 | 69 | +21 | Lam Tsuen 2 | 24 | 17 | -29 |
| Pak Nai 2 | 7 | 11 | +57 | Tai Po Market | 152 | 151 | -1 |
| Shenzhen Bay Bridge | 30 | 18 | -40 | Tuen Mun | 21 | 30 | +43 |
| Sha Kiu Village | 106 | 80 | -25 | Penfold Park | 64 | 76 | +19 |
| San Sang San Tsuen | 4 | 5 | +25 | Little Green Island | 30 | 23 | -23 |

| | 2015 | 2016 | % change | | 2015 | 2016 | % change |
|-----------------|------|------|----------|----------|------|------|----------|
| Ho Sheung Heung | 74 | 57 | -23 | Sha Chau | 42 | 28 | -33 |
| | | | | Ma Wan | 48 | 62 | +29 |

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 13 out of the 23 colonies (Table 5). The mangrove species, *Kandelia obovata*, was the main nesting substrate of the colonies at Mai Po Marshes Nature Reserve and Tsim Bei Tsui in Deep Bay. 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*). The majority of nests in the A Chau colony were built on mangrove (*Kandelia obovata*) and Cuban Bast (*Hibiscus tiliaceus*).

Table 6. Plant species utilized by ardeids as nesting substrates in 2016.

| Site | Site | Bamboo | Tree species | Remarks |
|------|-------------------------------|--------|--|---------|
| 1 | Mai Po Village | + | <i>Albizia lebbek</i> <i>Aleurites moluccana</i> <i>Celtis sinensis</i> <i>Ficus microcarpa</i> <i>Melia azedarach</i> | |
| 2 | Mai Po Marshes Nature Reserve | | <i>Kandelia obovata</i> | |
| 3 | Mai Po Lung Village | + | <i>Ficus microcarpa</i> <i>Litchi chinensis</i> <i>Dimocarpus longan</i> | |
| 4 | Tung Shing Lane | + | <i>Litchi chinensis</i> <i>Dimocarpus longan</i> <i>Celtis sinensis</i> | |
| 5 | Ngau Hom Shek | + | | |
| 6 | Tsim Bei Tsui | | <i>Kandelia obovata</i> | |
| 7 | Pak Nai 2 | + | | |
| 8 | Shenzhen Bay Bridge | + | | |
| 9 | Sha Kiu Village | + | <i>Celtis sinensis</i> | |
| 10 | San Sang San Tsuen | + | | |
| 11 | Ho Sheung Heung | + | | |
| 12 | Man Kam To Road | + | <i>Celtis sinensis</i> <i>Callistemon viminalis</i> | |

| Site | Site | Bamboo | Tree species | Remarks |
|------|-----------------------------|--------|---|-------------------------|
| | | | <i>Ficus microcarpa</i> <i>Senna siamea</i> | |
| 13 | Ping Che | + | | |
| 14 | A Chau | | <i>Hibiscus tiliaceus</i> <i>Kandelia obovata</i> | |
| 15 | Tai Tong (Pak Sha Tsuen) | + | | |
| 16 | Ha Che | | <i>Ficus microcarpa</i> | |
| 17 | Lam Tsuen 2 | + | <i>Celtis sinensis</i> | |
| 18 | Tai Po Market | | <i>Ficus variegata</i> <i>Macaranga tanarius</i> <i>Celtis siensis</i> <i>Mangifera indica</i> | |
| 19 | Tuen Mun | | <i>Acacia auriculiformis</i> | |
| 20 | Penfold Park | | <i>Ficus microcarpa</i> | |
| 21 | Sha Chau | | | No observation was made |
| 22 | Ma Wan | | | No observation was made |
| 23 | Little Green Island | | | No observation was made |

3.5 Training workshop for ardeid nesting colony monitoring

A training workshop was conducted during the breeding season on 24 April 2016. A total of 18 participants joined the workshop and the practical sessions on nests counting in the Tung Shing Lane and Mai Po Village colonies (Figure 5).

4. CONCLUSION

In 2016, a total of 1,248 nests of five ardeid species in 23 colonies were recorded in Hong Kong, including 620 nests of five species in ten colonies in the Deep Bay area. All colonies that were active in 2015 remained active in 2016. Compared with the results in 2015, the number of nests in Deep Bay area and Hong Kong overall decreased by 22.7% and 12.0%, respectively. The reason for the decline in 2016 is not understood but it could be a natural fluctuation as the

peak number of nests was recorded in 2015 since the monitoring was commenced in 1998.

5. ACKNOWLEDGEMENTS

We would like to thank Chung Yun Tak, Austin Ng, Rachel Poon, and Stanley Chan who assisted in the survey. Gratitude is also expressed to the landowner (Mrs Cheng) next to the Ha Che colony for allowing us to conduct the survey at her property. We would also like to thank Marine Parks Division of AFCD for the arrangement of vessel for the surveys at Sha Chau. Last but not least, we would like to thank the HKBWS office staff for taking care the administration of this survey.

6. REFERENCES

- Hong Kong Bird Watching Society, 2016. 'HK_List_2016-04-18.pdf' [online]. Available from:<http://www.hkbws.org.hk/BBS/attachment.php?aid=2637826378> [Accessed 4 August 2016].
- Wong, L.C. and L Young. 2006. Nest Numbers of Five Ardeids in Hong Kong, South China, 1989-2004: Does Weather Affect The Trend? *Waterbirds* 29: 61-68
- Young, L. and M.W. Cha. 1995. The history and status of egretries in Hong Kong with notes on those in the Pearl River delta, Guangdong, China. *Hong Kong Bird Report* 1994: 196-215.

Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme

**Summer 2016 Report:
Egretty 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 egrettries in Hong Kong in 2016

(The enclosed area is the Deep Bay Area)

- | | | |
|-------------------|------------------------|-------------------|
| 1 Mai Po Village | 2 Mai Po Marshes | 3 Mai Po Lung |
| | Nature Reserve | Village |
| 4 Tung Shing Lane | 5 Ngau Hom Shek | 6 Tsim Bei Tsui |
| 7 Pak Nai 2 | 8 Shenzhen Bay Bridge | 9 Sha Kiu Village |
| | (Tin Hau Temple) | |
| 10 San Sang San | 11 Ho Sheung Heung | 12 Man Kam To |
| | Tsuen | Road |
| 13 Ping Che | 14 A Chau | 15 Tai Tong |
| | | (Pak Sha Tsuen) |
| 16 Ha Che | 17 Lam Tsuen 2 | 18 Tai Po Market |
| 19 Tuen Mun | 20 Penfold Park | 21 Sha Chau |
| 22 Ma Wan | 23 Little Green Island | |

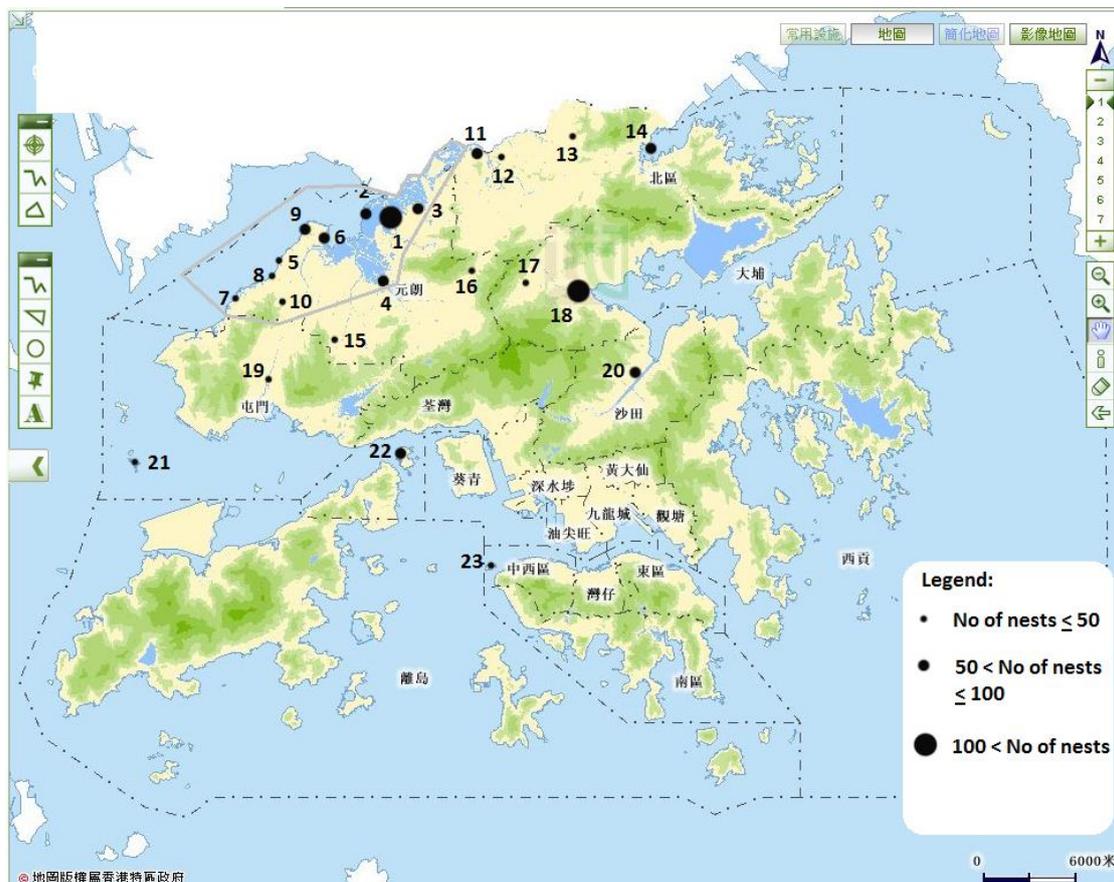
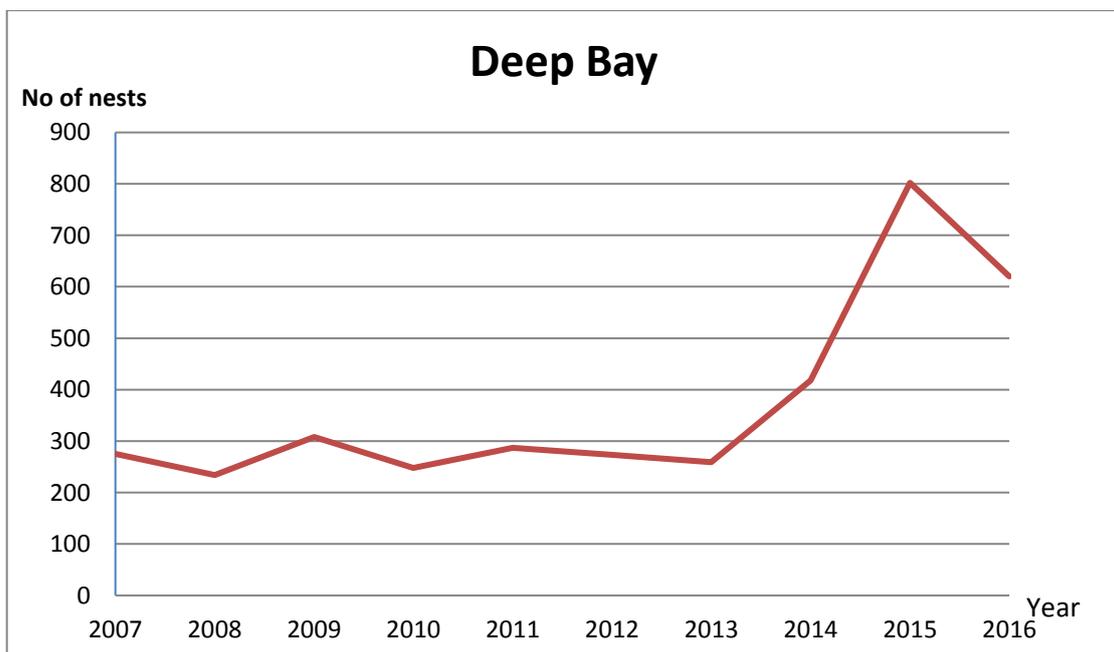
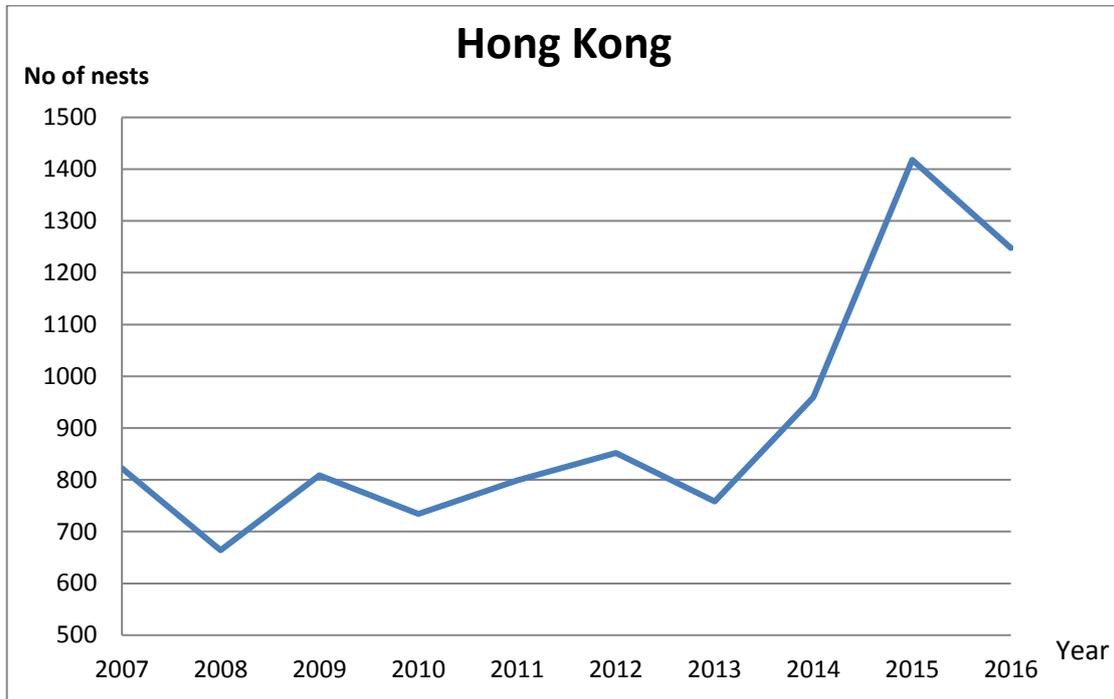


Figure 2. Ten-year summary of the total number of ardeid nests in Hong Kong with reference to the number of nests in the Deep Bay area from 2007 to 2016.



**Mai Po Inner Deep Bay Ramsar Site
Waterbird Monitoring Programme**

**Summer 2016 Report:
Egretty Counts in Hong Kong with
particular reference to the Mai Po Inner
Deep Bay Ramsar Site**

Appendices



The Hong Kong Bird Watching Society



Agriculture, Fisheries and Conservation
Department

Appendix 1. Survey date(s) of nesting colonies and additional sites in 2016.

| Colony | Date |
|-----------------------------------|--|
| Active colonies | |
| 1. Mai Po Village* | 16 April, 14 May, 9 June, 17 July |
| 2. Mai Po Marshes Nature Reserve* | 16 Apr, 14 May, 9 June, 17 July |
| 3. Mai Po Lung Village* | 16 April, 14 May, 9 June, 17 July |
| 4. Tung Shing Lane* | 17 April, 15 May, 9 June, 3 July |
| 5. Ngau Hom Shek* | 17 April, 15 May, 9 June, 3 July |
| 6. Tsim Bei Tsui* | 16 April, 14 May, 9 June, 17 July |
| 7. Pak Nai 2* | 17 April, 15 May, 9 June, 3 July |
| 8. Shenzhen Bay Bridge* | 17 April, 15 May, 9 June, 3 July |
| 9. Sha Kiu Village* | 16 April, 14 May, 9 June, 17 July |
| 10. San Sang San Tsuen* | 26 April, 15 May, 9 June, 3 July |
| 11. Ho Sheung Heung | 16 April, 14 May, 9 June, 17 July |
| 12. Man Kam To Road | 16 April, 14 May, 9 June, 17 July |
| 13. Ping Che | 17 April, 21 May, 18 June, 9 July |
| 14. A Chau | 9 April, 7 and 21 May, 18 June, 9 July |
| 15. Tai Tong (Pak Sha Tsuen) | 17 April, 15 May, 9 June, 3 July |
| 16. Ha Che | 17 April, 21 May, 18 June, 9 July |
| 17. Lam Tsuen 2 | 17 April, 21 May, 18 June, 9 July |
| 18. Tai Po Market | 17 April, 21 May, 18 June, 9 July |
| 19. Tuen Mun | 19 April, 22 May, 21 June, 19 July |
| 20. Penfold Park | 17 April, 21 May, 18 June, 9 July |
| 21. Sha Chau | 21 April, 20 May, 10 June, 22 July |
| 22. Ma Wan | 16 April, 21 May, 18 June, 9 July |
| 23. Little Green Island | 30 April, 15 May, 21 June, 23 July |
| Additional sites | |
| 24. Tam Kon Chau* | 16 April |
| 25. Ngau Hom Sha* | 17 April, 15 May, 9 June, 3 July |
| 26. Pak Nai * | 17 April, 15 May, 9 June, 3 July |

* within the Deep Bay area

Appendix 2. Number of nests recorded in each monthly count at the 23 colonies in 2016.

Appendix 2.1. Mai Po Village

| | 16 April | 14 May | 9 June | 17 July | Max |
|--------------------|----------|------------|--------|---------|------------|
| Little Egret | 55 | 72 | 47 | 45 | 72 |
| Chinese Pond Heron | 84 | 130 | 114 | 67 | 130 |
| Total | 139 | 202 | 161 | 112 | 202 |

Appendix 2.2. Mai Po Marshes Nature Reserve

| | 16 April | 14 May | 9 June | 17 July | Max |
|---------------------------|----------|-----------|-----------|---------|-----------|
| Great Egret | 47 | 37 | 54 | 16 | 54 |
| Little Egret | 8 | 11 | 6 | 3 | 11 |
| Black-crowned Night Heron | | 1 | 9 | 4 | 9 |
| Eastern Cattle Egret | | 3 | 5 | 5 | 5 |
| Total | 55 | 52 | 74 | 28 | 79 |

Appendix 2.3. Mai Po Lung Village

| | 16 April | 14 May | 9 June | 17 July | Max |
|--------------------|----------|--------|-----------|---------|-----------|
| Little Egret | 4 | 10 | 16 | 9 | 16 |
| Chinese Pond Heron | 16 | 61 | 68 | 43 | 68 |
| Total | 20 | 71 | 84 | 52 | 84 |

Appendix 2.4. Tung Shing Lane

| | 17 April | 15 May | 9 June | 3 July | Max |
|--------------------|----------|-----------|-----------|--------|-----------|
| Little Egret | 18 | 20 | 16 | 17 | 20 |
| Chinese Pond Heron | 12 | 36 | 41 | 18 | 41 |
| Total | 30 | 56 | 57 | 35 | 61 |

Appendix 2.5. Ngau Hom Shek

| | 17 April | 15 May | 9 June | 3 July | Max |
|--------------------|----------|----------|----------|--------|-----------|
| Little Egret | | 2 | 2 | | 2 |
| Chinese Pond Heron | 2 | 3 | 9 | 8 | 9 |
| Total | 2 | 5 | 11 | 8 | 11 |

Appendix 2.6. Tsim Bei Tsui

| | 16 April | 14 May | 9 June | 17 July | Max |
|---------------------------|-----------|----------|-----------|---------|-----------|
| Great Egret | 46 | 43 | 35 | 8 | 46 |
| Little Egret | 1 | 2 | 2 | 1 | 2 |
| Black-crowned Night Heron | 7 | 7 | 18 | 5 | 18 |
| Eastern Cattle Egret | 1 | 3 | | | 3 |
| Total | 55 | 55 | 55 | 14 | 69 |

Appendix 2.7. Pak Nai 2

| | 17 April | 15 May | 9 June | 3 July | Max |
|--------------------|----------|--------|--------|--------|-----|
| Little Egret | 9 | 4 | 4 | 5 | 9 |
| Chinese Pond Heron | | | 2 | | 2 |
| Total | 9 | 4 | 6 | 5 | 11 |

Appendix 2.8. Shenzhen Bay Bridge

| | 17 April | 15 May | 9 June | 3 July | Max |
|--------------------|----------|--------|--------|--------|-----|
| Little Egret | 7 | 10 | 13 | 2 | 13 |
| Chinese Pond Heron | 4 | 3 | 5 | 2 | 5 |
| Total | 11 | 13 | 18 | 4 | 18 |

Appendix 2.9. Sha Kiu Village

| | 16 April | 14 May | 9 June | 17 July | Max |
|--------------------|----------|--------|--------|---------|-----|
| Little Egret | 24 | 39 | 32 | 3 | 39 |
| Chinese Pond Heron | 4 | 41 | 22 | 6 | 41 |
| Total | 28 | 80 | 54 | 9 | 80 |

Appendix 2.10. San Sang San Tsuen

| | 26 April | 15 May | 9 June | 3 July | Max |
|--------------------|----------|--------|--------|--------|-----|
| Little Egret | 3 | 3 | 4 | 1 | 4 |
| Chinese Pond Heron | | | 1 | 1 | 1 |
| Total | 3 | 3 | 5 | 2 | 5 |

Appendix 2.11. Ho Sheung Heung

| | 16 April | 14 May | 9 June | 17 July | Max |
|----------------------|----------|--------|--------|---------|-----|
| Little Egret | 14 | 18 | 13 | 6 | 18 |
| Chinese Pond Heron | 1 | 12 | 12 | 2 | 12 |
| Eastern Cattle Egret | 22 | 27 | 26 | 3 | 27 |
| Total | 37 | 57 | 51 | 11 | 57 |

Appendix 2.12. Man Kam To Road

| | 16 April | 14 May | 9 June | 17 July | Max |
|--------------------|----------|--------|--------|---------|-----|
| Little Egret | 2 | 8 | 8 | 2 | 8 |
| Chinese Pond Heron | 11 | 30 | 33 | 19 | 33 |
| Total | 13 | 38 | 41 | 21 | 41 |

Appendix 2.13. Ping Che

| | 17 April | 21 May | 18 June | 9 July | Max |
|--------------------|----------|--------|---------|--------|-----|
| Chinese Pond Heron | 4 | 6 | 7 | 5 | 7 |
| Total | 4 | 6 | 7 | 5 | 7 |

Appendix 2.14. A Chau

| | 9 April | 7 & 21 May | 18 June | 9 July | Max |
|---------------------------|---------|------------|---------|--------|-----|
| Great Egret | 67 | 54 | 14 | 1 | 67 |
| Little Egret | | 1 | 2 | 1 | 2 |
| Black-crowned Night Heron | 2 | 14 | 10 | | 14 |
| Total | 69 | 69 | 26 | 2 | 83 |

Appendix 2.15. Tai Tong (Pak Sha Tsuen)

| | 17 April | 15 May | 9 June | 3 July | Max |
|----------------------|----------|--------|--------|--------|-----|
| Little Egret | 12 | 6 | | | 12 |
| Chinese Pond Heron | 5 | 6 | 11 | 13 | 13 |
| Eastern Cattle Egret | 5 | 2 | 4 | 2 | 5 |
| Total | 22 | 14 | 15 | 15 | 30 |

Appendix 2.16. Ha Che

| | 17 April | 21 May | 18 June | 9 July | Max |
|--------------------|----------|--------|---------|--------|-----|
| Little Egret | | 1 | 2 | 1 | 2 |
| Chinese Pond Heron | 11 | 18 | 20 | 21 | 21 |
| Total | 11 | 19 | 22 | 22 | 23 |

Appendix 2.17. Lam Tsuen 2

| | 17 April | 21 May | 18 June | 9 July | Max |
|--------------------|----------|--------|---------|--------|-----|
| Chinese Pond Heron | 5 | 17 | 13 | 2 | 17 |
| Total | 5 | 17 | 13 | 2 | 17 |

Appendix 2.18. Tai Po Market

| | 17 April | 21 May | 18 June | 9 July | Max |
|---------------------------|----------|--------|---------|--------|-----|
| Great Egret | 22 | 17 | 22 | 10 | 22 |
| Little Egret | 61 | 53 | 68 | 32 | 68 |
| Black-crowned Night Heron | 49 | 58 | 48 | 32 | 58 |
| Eastern Cattle Egret | | 2 | 3 | 1 | 3 |
| Total | 132 | 130 | 141 | 75 | 151 |

Appendix 2.19. Tuen Mun

| | 19 April | 22 May | 21 June | 19 July | Max |
|--------------|----------|--------|---------|---------|-----|
| Little Egret | 15 | 18 | 30 | 5 | 30 |
| Total | 15 | 18 | 30 | 5 | 30 |

Appendix 2.20. Penfold Park

| | 17 April | 21 May | 18 June | 9 July | Max |
|---------------------------|-----------|-----------|-----------|--------|-----------|
| Great Egret | 22 | 17 | 17 | 6 | 22 |
| Little Egret | 8 | 16 | 24 | 5 | 24 |
| Black-crowned Night Heron | 8 | 23 | 17 | 5 | 23 |
| Chinese Pond Heron | 1 | 3 | 7 | 4 | 7 |
| Total | 39 | 59 | 65 | 20 | 76 |

Appendix 2.21. Sha Chau

| | 21 April | 20 May | 10 June | 22 July | Max |
|---------------------------|-----------|--------|----------|---------|-----------|
| Great Egret | 1 | 1 | 2 | | 2 |
| Little Egret | 12 | 10 | 7 | | 12 |
| Black-crowned Night Heron | 14 | 1 | 2 | | 14 |
| Total | 27 | 12 | 11 | No Nest | 28 |

Appendix 2.22. Ma Wan

| | 16 April | 21 May | 18 June | 9 July | Max |
|---------------------------|-----------|-----------|----------|--------|-----------|
| Great Egret | 1 | 2 | 2 | 2 | 2 |
| Little Egret | 20 | 20 | 15 | 10 | 20 |
| Black-crowned Night Heron | 30 | 40 | 5 | | 40 |
| Total | 51 | 62 | 22 | 12 | 62 |

Appendix 2.23. Little Green Island

| | 30 April | 15 May | 21 June | 23 July | Max |
|---------------------------|----------|----------|----------|---------|-----------|
| Great Egret | 6 | 6 | | 1 | 6 |
| Little Egret | 2 | 6 | 9 | 3 | 9 |
| Black-crowned Night Heron | 2 | 2 | 8 | | 8 |
| Total | 10 | 14 | 17 | 4 | 23 |