

Tender Reference No. AFCD/SQ/23/08/C

**Mai Po Inner Deep Bay Ramsar Site  
Waterbird Monitoring Programme  
2008 - 2009**

**Shorebird Monitoring Report**



Submitted by  
The Hong Kong Bird Watching Society Ltd.  
Approved Charitable Institution of a Public Character  
to Agriculture, Fisheries and Conservation Department,  
Hong Kong SAR Government

July 2009



*This report is printed on recycled paper*

Tender Reference No. AFCD/SQ/23/08/C

**Waterbird Monitoring at the Mai Po Inner Deep Bay Ramsar Site**

---

**Waterbird Count Coordinator**

Yu Yat-tung

The Hong Kong Bird Watching Society Ltd.

**Data Contributors**

Yu Yat-tung, Shirley F.Y. Lam, Ying Hak-king

The Hong Kong Bird Watching Society Ltd.

**Copyright**

The project is part of the "Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme 2008-09" funded by Agriculture, Fisheries and Conservation Department, Hong Kong SAR Government (AFCD). All the data shall be the property of the Government with full copyright

**Report available for public information**

The Hong Kong Bird Watching Society Limited

14/F, Ruby Commercial Building, 480 Nathan Road,

Yau Ma Tei, Kowloon, Hong Kong

E-mail: [hkbws@hkbws.org.hk](mailto:hkbws@hkbws.org.hk) Website: [www.hkbws.org.hk](http://www.hkbws.org.hk)

And

Agriculture, Fisheries and Conservation Department

Hong Kong SAR Government

7/F, Cheung Sha Wan Government Offices

303 Cheung Sha Wan Road

Kowloon, Hong Kong

Website: [www.afcd.gov.hk](http://www.afcd.gov.hk)

**This publication should be cited as**

Anon. 2009. Shorebird Monitoring at the Mai Po Inner Deep bay Ramsar Site: 2008-09. Report by Hong Kong Bird Watching Society to the Agriculture, Fisheries and Conservation Department, Hong Kong Special Administrative Region Government.

## TABLE OF CONTENTS

### REPORT

1. Introduction.....	7
2. Methodology .....	7
3. Results .....	8
Autumn 2008	
Winter 2008-2009	
Spring 2009	
Summer 2009	
Aggregate numbers recorded	
Regionally important populations	
Globally threatened species	
Flagged shorebirds sightings	
Other observations	
4. Acknowledgements.....	16
5. References.....	17

### Tables

- Table 1. Peak counts of some shorebirds with a declining trend in recent springs.
- Table 2. Estimate of the minimum number of shorebirds utilizing Deep Bay during the 12-month period July 2008 to June 2009.
- Table 3. Species recorded in flyway/regional important numbers in the Deep Bay during July 2008 to June 2009.

### Map

- Map 1. Mai Po Nature Reserve

### APPENDIX 1

- Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in autumn 2008.

### APPENDIX 2

- Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in spring 2009.

### APPENDIX 3

- Figure 1. Total numbers of shorebirds at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 2. Counts of Black-winged Stilt at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 3. Counts of Pacific Golden Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 4. Counts of Kentish Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 5. Counts of Grey Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 6. Counts of Lesser Sand Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 7. Counts of Greater Sand Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 8. Counts of Black-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 9. Counts of Bar-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 10. Counts of Whimbrel at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 11. Counts of Eurasian Curlew at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 12. Counts of Spotted Redshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 13. Counts of Common Redshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 14. Counts of Marsh Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 15. Counts of Common Greenshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 16. Counts of Wood Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 17. Counts of Great Knot at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 18. Counts of Red Knot at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 19. Counts of Board-billed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2008.

Figure 20. Total numbers of shorebirds at Mai Po Inner Deep Bay Ramsar Site, spring 2009.

Figure 21. Counts of Pacific Golden Plover at Mai Po Inner Deep Bay Ramsar Site, spring 2009.

Figure 22. Counts of Lesser Sand Plover at Mai Po Inner Deep Bay Ramsar Site, spring 2009.

Figure 23. Counts of Greater Sand Plover at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 24. Counts of Black-tailed Godwit at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 25. Counts of Spotted Redshank at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 26. Counts of Common Redshank at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 27. Counts of Marsh Sandpiper at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 28. Counts of Common Greenshank at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 29. Counts of Terek Sandpiper at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 30. Counts of Grey-tailed Tattler at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 31. Counts of Ruddy Turnstone at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 32. Counts of Asian Dowitcher at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 33. Counts of Red Knot at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 34. Counts of Great Knot at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 35. Counts of Red-necked Stint at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 36. Counts of Sharp-tailed Sandpiper at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 37. Counts of Curlew Sandpiper at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

Figure 38. Counts of Broad-billed Sandpiper at Mai Po Inner Deep Bay Rasmars Site, spring 2009.

#### **APPENDIX 4**

Records of leg-flagged shorebirds in autumn 2008 and spring 2009.

---

# Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay

## 2008-09 Report

### *Report*



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

# MAI PO INNER DEEP BAY RAMSAR SITE WATERBIRD MONITORING PROGRAMME

---

Programme 2008/09

Shorebird Monitoring

July 2008 - June 2009

---

## Shorebird Monitoring: 2008-09 Report

### Introduction

Systematic, long-term monitoring of waterbirds in the Mai Po Inner Deep Bay Ramsar Site commenced in March 1998. Counts of shorebirds (also called waders) form one part of this programme, the other components being monthly counts of waterbirds and surveys of ardeid nesting colonies. This report concerns the shorebird monitoring component from July 2008 to June 2009. This project is a part of the tender project (contract tender reference no. AFCD/SQ/23/08/C), and is administered, coordinated and executed by the Hong Kong Bird Watching Society (HKBWS), and funded by the Agriculture, Fisheries and Conservation Department (AFCD).

### Methodology

Shorebirds mainly occur in Hong Kong during three periods: autumn and spring for migration, and the winter. This study aims to monitor shorebirds numbers in the Mai Po Inner Deep Bay Ramsar Site through the year. Frequency of survey is higher during the main passage period (late March to late May and July to late October) but less frequent during summer. Surveys in winter time (i.e. November to mid-March) are covered by the monthly waterbird count. The schedule of this shorebird monitoring programme is as follows:

- Spring: 22 March to 1 June: one count every block of three days
- Summer: 2 to 30 June: two counts per month
- Autumn: 1 July to 4 November: one count per week
- Winter: mid November to mid March: once count per month

The main survey site is the Mai Po Nature Reserve (Map 1) where counts are made either in the *gei wai* or from the three boardwalk birdwatching hides, depending on the height of the tide. In general, counting during the high tide period is conducted in the *gei wai* where suitable roosting areas on the reserve are provided as a result of

the management activities of WWF HK; these regular and generally rather stable roosting sites allow counts to be made with a relatively high degree of accuracy for many species. In contrast, counts are made from the boardwalk hides during mid tide periods where the shorebirds feed in the intertidal area. The counts are usually made using the following procedures:

- Count birds from the boardwalk hide during the rising tide, beginning at a tidal height of around 1.9m.
- Count birds roosting in MPNR using a bicycle (essential to complete the count during the time available).
- Count birds from the boardwalk hide during the falling tide until such a time as counting is no longer possible due to distance from the observer.

The equipment used consisted of 8x or 10x binoculars and a telescope with wide angle or 20-60x zoom eyepieces. Counting was carried out by HKBWS accredited surveyors experienced in bird counting and identification, in order to achieve a high degree of accuracy. All shorebirds present in the counting areas are counted for each species. If birds carrying leg flags for migration route studies are present, the details are also recorded, including the colour and position of the flags, the species, age and/or the extent of breeding plumage acquired.

## **Results**

Results of all shorebird counts are presented in full in Appendices 1 and 2. The numbers of selected species are illustrated graphically in Appendix 3.

### *Autumn 2008*

Shorebird numbers remained low in the first three weeks of July and the first influx was noted in the last week of July as the number recorded from 554 to 1,160 birds. Then numbers increased slowly in the course of August and the first week of September to a level of 2,000 to 2,300 birds. Subsequently large arrivals were noted in the second and third week of September and shorebird numbers increased to 4,170 individuals. From the second half of September to October, numbers showed some fluctuations and low numbers recorded in this period were probably caused by low high-tides causing some shorebirds to stay far away from the Mai Po Nature Reserve and the boardwalk hide. Two peaks were noted in this period: 5,199 birds on 30 September and 5,929 birds on 25 October. The latter figure is also a new high figure for shorebirds present in autumn in this part of the monitoring programme.

In autumn 2008 the most abundant shorebird species was Marsh Sandpiper *Tringa stagnatilis* with a peak count of 2,521 individuals on 16 October, which was also a new high figure for this species in autumn. The Marsh Sandpipers were remained numerous in October, indicating that many of these birds could also be wintering in Deep Bay. The second most abundant shorebird species was Common Greenshank *Tringa nebularia*, which peaked at 1,398 individuals on 30 September. The date of this peak count and the smaller numbers presented subsequently suggest that at least some of these birds are passage migrants and continued their southward migration after re-fuelling in Deep Bay.

Other shorebirds species considered to be passage migrants in the autumn 2008 comprised Pacific Golden Plover *Pluvialis fulva* (Figure 3), Lesser Sand Plover *C. mongolus* (Figure 6), Greater Sand Plover *C. leschenaultii* (Figure 7), Bar-tailed Godwit *Limosa lapponica* (Figure 9), Whimbrel *Numenius phaeopus* (Figure 10), Common Redshank (Figure 13), Wood Sandpiper (Figure 16), Great Knot *Calidris tenuirostris* (Figure 17), Red Knot *Calidris canutus* (Figure 18) and Broad-billed Sandpiper *Limicola falcinellus* (Figure 19).

In addition, some details of arrival of these wintering species are shown in the following figures:

- Black-tailed Godwit *Limosa limosa* - early September (Figure 8, c.f. September 2007, late September 2006, mid September 2005 and 2004, early September 2003, late August 2002).
- Eurasian Curlew *Numenius arquata* - September but numbers remained low throughout the autumn (Figure 11, c.f. September 2007, September to early October 2006, mid September 2005, 2004, 2003 and 2002)
- Spotted Redshank *Tringa erythropus* - late October though numbers were still low in late October (Figure 12, c.f. late October 2007 and 2006, mid October 2005, 2004, 2003, late September 2002).
- Marsh Sandpiper *Tringa stagnatilis* - mid-September (Figure 14, c.f. late September 2007, late September 2006, 2005, 2004, mid September 2003, early September 2002).

#### Winter 2008-2009

The sum of the peak counts of each shorebird species (also including unidentified shorebirds) during the winter i.e. November to March, constitutes the winter aggregate of shorebirds. This winter aggregate was 25,681 birds in the whole Deep

Bay area, which was a decrease of 5% from the previous winter but an increase of 15% above winter 2006-07. The five most numerous species in the mid-winter period were Pied Avocet *Recurvirostra avosetta* (13,061), Marsh Sandpiper (2,310), Common Greenshank (1,717), Dunlin *Calidrius alpina* (1,175) and Eurasian Curlew (1,065). The count of Pied Avocets is the second highest on record in the Deep Bay area, while the counts of Marsh Sandpiper and the Common Greenshank are new highs for the mid-winter period. Therefore the 2008-09 winter aggregate is one of the highest figures in recent years.

#### *Spring 2009*

Large numbers of Pied Avocets remained at Mai Po over the spring, and their numbers are excluded from the following analysis of other shorebird species in order to allow a more representative picture to emerge.

Shorebird numbers rose quickly from 2,397 birds in the third week of March to 6,822 birds at the end of March. Numbers increased further to 9,303 birds on 3 April and broke through the 10,000 boundary to reach 12,146 birds a week later. Shorebird numbers fell in the coming week to a range of 6,000-7,000 individuals, but, remarkably, climbed to a total of 14,677 birds and 15,925 birds on 18 and 22 April respectively. The latter figure is not only the highest count this spring, but also the new highest single count in this monitoring programme. The previous highest count is 15,149 in spring 2007. This new high figure was largely comprised of high numbers of newly-arrived Curlew Sandpipers (9,168 birds) and Black-tailed Godwits (1,407 birds).

Subsequently, the number of shorebirds dropped very rapidly, as only 6,711 birds were present on 25 April, further falling to 2,688 birds three days later. A second influx of passage shorebirds was noted on 7 May with a count of 5,195 birds. Number declined significantly afterwards as only 2,072 birds were present on 10 May, 1,778 birds on 18 May, 1,062 birds on 23 May and finally 592 birds on 30 May.

Although many shorebird numbers show large fluctuations year by year, some species seemingly have experienced a decreasing trend in recent years and table 1 shows figures of these species. The 2009 spring aggregate for all species increased by 28% from the previous year and so many of these declining shorebird species also increased in numbers compared to recent years. The increase of Red-necked Stint's peak count is almost four times the previous year, and this is also a new high figure for this species in Hong Kong. The increase in Curlew Sandpiper, the most numerous

spring passage shorebird species, is limited compared to the previous year but this year's peak count is also the second largest count of this species in Hong Kong as well. Species still decreasing in spring 2009 are Ruddy Turnstone, Red Knot and Sharp-tailed Sandpiper, but they are usually not present in large number in Mai Po and declines of these species would have limited impacts on the spring aggregate figure, though diversity of shorebirds at Mai Po could have been affected adversely.

Table 1. Peak counts of some shorebirds with a declining trend in recent springs.

Species	2009	2008	2007	2006	2005	2004	2003
Pacific Golden Plover <i>Pluvialis fulva</i>	288	67	160	219	54	221	358
Lesser Sand Plover <i>Charadrius mongolus</i>	85	78	179	35	30	59	115
Ruddy Turnstone <i>Arenaria interpres</i>	40	46	100	34	39	80	86
Red Knot <i>Calidris canutus</i>	19	52	144	16	5	120	62
Red-necked Stint <i>C. ruficollis</i>	2,700	733	2,239	1,478	1,909	2,239	2,302
Long-toed Stint <i>C. subminuta</i>	32	20	4	11	7	36	11
Sharp-tailed Sandpiper <i>C. acuminata</i>	22	86	175	68	41	300	231
Curlew Sandpiper <i>C. ferruginea</i>	9,168	9012	10,982	4,151	3,947	6,000	4,535
Total spring aggregate number	23,614	18,468	21,223	14,942	14,312	16,431	16,836

#### *Summer 2009*

High numbers of shorebird present in the spring could not give a boost to the numbers in summer (i.e. June). Instead, two counts in June could only provide relatively low figures as 154 and 104 birds presented at Mai Po, compared to figures of 354 and 175 birds in the previous summer. A count of 37 Black-winged Stilts was the largest flock among all shorebird species, but these involved mainly the summer breeding population, while a total of 29 Eurasian Curlews was the largest flock of non-breeding shorebird species.

#### *Aggregate numbers recorded*

The aggregate total number of shorebirds recorded in spring and autumn is derived by using the peak count for each species in each season. In an attempt to estimate a total number of shorebirds that utilized the Mai Po Inner Deep Bay Ramsar Site during the 12-month period from July 2008 to June 2009, the peak winter count (i.e. December to February) obtained during winter waterbird counts can also be added. However, it is not possible to rule out some overlap in individuals occurring in

different seasons; consequently, such records (marked with asterisks in table 2) are excluded from the calculation.

Table 2. Estimated minimum number of shorebirds utilizing the Mai Po Inner Deep Bay Ramsar Site during the 12-month period July 2008 to June 2009.

Year	2008	2008-09	2009	2008-09	2007-08	2006-07	2005-06
Species	autumn	winter	spring	Minimum	Minimum	Minimum	Minimum
Pheasant-tailed Jacana <i>Hydrophasianus chirurgus</i>	1	0	0	1	5	2	0
Greater Painted-snipe <i>Rostratula bengalensis</i>	2	0	2	4	2	4	6
Black-winged Stilt <i>Himantopus himantopus</i>	523	355	736	1614	670	468	495
Pied Avocet <i>Recurvirostra avocetta</i>	74*	13061	6893*	13061	16123	11957	5813
Oriental Pratincole <i>Glareola maldivarum</i>	0	0	3	3	9	8	26
Northern Lapwing <i>Vanellus vanellus</i>	0	0	0	0	0	0	2
Grey-headed Lapwing <i>V. cinereus</i>	1	0	0	1	4	6	11
Pacific Golden Plover <i>Pluvialis fulva</i>	43	400	288	731	642	270	236
Grey Plover <i>P. squatarola</i>	46*	582	32*	582	780	390	560
Little Ringed Plover <i>Charadrius dubius</i>	12	315	22	349	228	237	271
Kentish Plover <i>C. alexandrinus</i>	1381	975	857*	2356	1867	263	72
Lesser Sand Plover <i>C. mongolus</i>	33	1	85	119	85	193	41
Greater Sand Plover <i>C. leschenaultii</i>	490	0	305	795	383	369	349
Oriental Plover <i>C. veredus</i>	0	0	0	0	1	0	0
Black-tailed Godwit <i>Limosa limosa</i>	528*	780	1443	2223	1656	2352	1401
Bar-tailed Godwit <i>Limosa lapponica</i>	5	1	100	106	80	123	69
Little Curlew <i>Numenius minutes</i>	0	0	0	0	0	0	0
Whimbrel <i>Numenius phaeopus</i>	217	31	55	303	203	209	220
Eurasian Curlew <i>N. arquata</i>	182*	1065	107*	1065	1116	1049	1087
Far Eastern Curlew <i>N. madagascariensis</i>	1	2	15	18	23	8	5
Spotted Redshank <i>Tringa erythropus</i>	106	681	903	1690	1641	2390	1687
Common Redshank <i>T. totanus</i>	999	305	911	2215	2257	3160	2476
Marsh Sandpiper <i>T. stagnatilis</i>	2521*	2310*	3192	3192	3090	1662	2411
Common Greenshank <i>T. nebularia</i>	1398	1717	1251	4366	4493	4724	1997
Nordmann's Greenshank	0	1*	34	34	26	51	24

<i>T. guttifer</i>							
Green Sandpiper <i>T. ochropus</i>	1	30	0	31	34	42	35
Wood Sandpiper <i>T. glareola</i>	362	194	22	578	501	1008	706
Terek Sandpiper <i>Xenus cinereus</i>	98	0	502	600	571	619	617
Common Sandpiper <i>Actitis hypoleucos</i>	2	61	2	65	86	83	82
Grey-tailed Tattler <i>Heteroscelus brevipes</i>	28	0	160	188	26	32	19
Ruddy Turnstone <i>Arenaria interpres</i>	1	0	40	41	46	100	36
Red-necked Phalarope <i>Phalaropus lobatus</i>	1	0	6	7	34	2	5
Pintail/Swinhoe's Snipe <i>Gallinago stenura/megala</i>	2	0	1	3	12	15	3
Common Snipe <i>Gallinago gallinago</i>	1	4	0	5	28	38	40
Long-billed Dowitcher <i>Limnodromus scolopaceus</i>	1*	5	4*	5	3	3	4
Asian Dowitcher <i>Limnodromus semipalmatus</i>	25	0	113	138	441	138	50
Red Knot <i>Calidris canutus</i>	6	0	19	25	66	152	43
Great Knot <i>C. tenuirostris</i>	43	32	357	432	207	368	67
Sanderling <i>C. alba</i>	0	0	12	12	5	10	23
Red-necked Stint <i>C. ruficollis</i>	69	10	2700	2779	913	2422	2363
Little Stint <i>C. minuta</i>	0	0	6	6	2	3	4
Temminck's Stint <i>C. temminckii</i>	0	25	18	43	21	27	10
Long-toed Stint <i>C. subminuta</i>	10	3	32	45	28	9	15
Pectoral Sandpiper <i>C. melanotos</i>	0	0	0	0	1	0	0
Sharp-tailed Sandpiper <i>C. acuminata</i>	9	0	22	31	90	177	116
Dunlin <i>C. alpine</i>	255*	1175	2	1177	1800	93	2
Curlew Sandpiper <i>C. ferruginea</i>	286	0	9168	9454	9195	11143	4246
Spoon-billed Sandpiper <i>Eurynorhynchus pygmeus</i>	0	0	1	1	2	8	1
Broad-billed Sandpiper <i>Limicola falcinellus</i>	5	0	84	89	141	95	57
Ruff <i>Philomachus pugnax</i>	1	1	2	4	6	11	9
Tringa spp.	0	3870	0	3870	939	0	0
Small wader spp. (mainly Dunlin or Kentish Plover)	0	0	0	0	0	2150	5500
<b>NUMBER OF SPECIES</b>	40	28	42	46	48	46	46
<b>AGGREGATE SHOREBIRD SPECIES PEAK COUNT</b>	6162	25681	22614	54457	50582	48643	33312

Note: asterisks indicate that birds were recorded, but not thought to comprise different individuals to those in other seasons.

In the period of 2008-09 the all-year aggregate of shorebird is 54,457, an increase of 7.6% from the previous year. This aggregate is a new high for this programme. The sum of spring and autumn aggregates is 28,776, which is an increase of 23% from the previous year, while the winter aggregate decreased 6% from the previous year. New high counts of Marsh Sandpiper, Red-necked Stint in spring and large numbers of Pied Avocets and Curlew Sandpipers present in this twelve-month period largely contributed to the all-year aggregate being a new high.

Therefore, the ten most numerous species are Pied Avocet (13,061, 24% of the all-year aggregate), Curlew Sandpiper (9,454, 17.4%), Common Greenshank (4,366, 8.0%), Marsh Sandpiper (3,192, 5.9%), Red-necked Stint (2,779, 5.1%), Kentish Plover (2,356, 4.3%), Black-tailed Godwit (2,223, 4.1%), Common Redshank (2,215, 4.1%), Spotted Redshank (1,690, 3.1%) and Black-winged Stilt (1,614, 3.1%).

The total number of shorebirds using a given area during migration lies in the range of 3 – 4.5 times the peak daily count of passage shorebird species, as suggested by studies using marked birds in Morocco and Malaysia (Howes and Bakewell 1989). Similar studies are lacking in Hong Kong but using this information with the all-year aggregate at 28,776 the Deep Bay area might have supported in the range of 86,328 to 129,492 migrant shorebirds during 2008-09.

#### *Regionally important populations*

Reviews and estimates of the known shorebird population size and the 1% level of the flyway or regional population of all waterbird species that is criterion 3c for determining a wetland of international importance are listed in: Waterbird Population Estimates – Fourth Edition (Wetland International 2006). Significant proportions of the populations of some shorebirds species pass through the Mai Po Inner Deep Bay Ramsar site. These species are listed in table 3 with their flyway or regional population, numbers recorded in the Ramsar site and percentages of the flyway or regional during the course of July 2008 to June 2009.

Table 3. Species recorded in flyway/regional important numbers in the Deep Bay area during July 2008 to June 2009.

Species	Flyway/regional population	Number recorded	Percentage
Pied Avocet <i>Recurvirostra avosetta</i>	1,000 (1% level)	13,061	13%
Black-tailed Godwit <i>Limosa limosa</i>	160,000	2,223	1.3%
Eurasian Curlew <i>Numenius arquata</i>	35,000	1,065	3.0%
Spotted Redshank <i>Tringa erythropus</i>	1,000 (1% level)	1,690	1.7%
Common Redshank <i>Tringa totanus</i>	1,000 (1% level)	2,215	2.2%
Common Greenshank <i>Tringa nebularia</i>	1,000 (1% level)	4,366	4.4%
Nordmann's Greenshank <i>Tringa guttifer</i>	500-1,000	34	3-7%
Terek Sandpiper <i>Xenus cinereus</i>	50,000	600	1.2%
Curlew Sandpiper <i>Calidris ferruginea</i>	180,000	9,454	5.3%

#### *Globally threatened species*

With regard to species listed in BirdLife International (2000, 2004, 2009a, 2009b, 2009c), the following were recorded during July 2008 to June 2009 (population figures from Wetland International (2006)):

- Black-tailed Godwit: listed as Near-threatened, the population may have declined 30% over the last 15 years. In this study period a total of 2,223 individuals was reported and this figure constitutes 1.3% of the regional population. It also has increased by 34% from the same figure the previous year. The winter peak count was a total of 780 birds which is also a new high figure for this species in winter.
- Eurasian Curlew: listed as Near-threatened in 2008, its global trend is suspected to have decreased rapidly in the past 15 years or three generations. This year's peak count is 1,065 individuals in January, constituting 3.0% of the regional population. This species has a very stable wintering population of about 1,000 individuals in the Deep Bay area in recent years.
- Nordmann's Greenshank: listed as Endangered, the world population is estimated to be 500 to 1,000 individuals. One individual was recorded during the winter period and it may have remained till the spring. At least 30 adults and 4 first-year birds are estimated to have passed through in the spring 2009. This total of 34 birds constituted 3-7% of the world population. This was an increase of 40% from the total of 26 birds recorded in the previous spring.
- Asian Dowitcher: listed as Near-threatened, the world population is estimated

to be 23,000 individuals. There were peak counts of 25 and 113 birds in autumn 2008 and spring 2009 respectively, making the all-year aggregate of 138 individuals in this study period. It has decreased considerably by 69% from the previous year, but the spring peak count of 428 birds in 2008 spring is exceptional.

- Spoon-billed Sandpiper: listed as critically endangered in 2008, the world population is now estimated to be only 450 to 1,000 individuals. Only one individual was noted on two consecutive counting days, probably the same individual, in spring. Two were recorded in the previous year. This was another poor year for this species.

#### *Flagged shorebird sightings*

A total of 127 sightings of flagged shorebirds were reported from July 2008 to June 2009 in the Mai Po and Deep Bay area, a 25% increase from the previous year. The majority of records (82 or 65%) refer to local sightings, i.e. birds originally flagged at Mai Po. The commonest overseas sightings came from birds flagged in Victoria (orange flag, 18%) and the second was from northwest Australia (yellow flag, 14%), while one Greater Sand Plover was flagged at Shanghai, China. The most frequent reported species was Marsh Sandpiper with 24 sightings, all of which referred to birds flagged locally. This species stays in the Mai Po area over the winter and it is not surprising that there were more sightings. The Red-necked Stints came to the second with a total of 21 sightings. More information is listed in Appendix 4.

#### *Other observations*

This was a good year for shorebird numbers present in the Mai Po and Deep Bay area. Several figures comprised new highs, including single-day peak counts in autumn and spring, and the all-year aggregate. Marsh Sandpiper and Red-necked Stint both had a new high figure for Hong Kong this year and the number of the Curlew Sandpipers in spring 2009 was also the second highest. These indicate total abundance of shorebirds has increased in the period covered by this report. However, some species usually present in small numbers such as Ruddy Turnstone, Red Knot, Sharp-tailed Sandpiper and the critically endangered Spoon-billed Sandpiper have showed continuous declines of their numbers in recent years.

#### **Acknowledgements**

We would like to thank Bena Smith and staff at the WWF HK in Mai Po Nature Reserve for much help in habitat management to provide suitable shorebird roosting

areas. We also thank Geoff Carey for giving comments for the earlier draft of this report. We are also grateful to members of the Hong Kong Bird Watching Society for providing sightings of the colour-flagged shorebirds.

## References

**Anon. 2005.** Shorebird Monitoring at the Mai Po Inner Deep Bay Ramsar Site: 2004-05. Report by Hong Kong Bird Watching Society to the Agriculture, Fisheries and Conservation Department, Hong Kong Special Administrative Region Government.

**Anon. 2006.** Shorebird Monitoring at the Mai Po Inner Deep Bay Ramsar Site: 2005-06. Report by Hong Kong Bird Watching Society to the Agriculture, Fisheries and Conservation Department, Hong Kong Special Administrative Region Government.

**Anon. 2007.** Shorebird Monitoring at the Mai Po Inner Deep Bay Ramsar Site: 2006-07. Report by Hong Kong Bird Watching Society to the Agriculture, Fisheries and Conservation Department, Hong Kong Special Administrative Region Government.

**BirdLife International. 2000.** Threatened Birds of the World. Lynx Edicions and BirdLife International. Barcelona and Cambridge, UK.

**BirdLife International. 2004.** Threatened Birds of the World 2004. CD-ROM. Cambridge, UK: BirdLife International.

**BirdLife International. 2009a.** Species factsheet: *Limosa limosa*. Downloaded from <http://www.birdlife.org> on 30/6/2009.

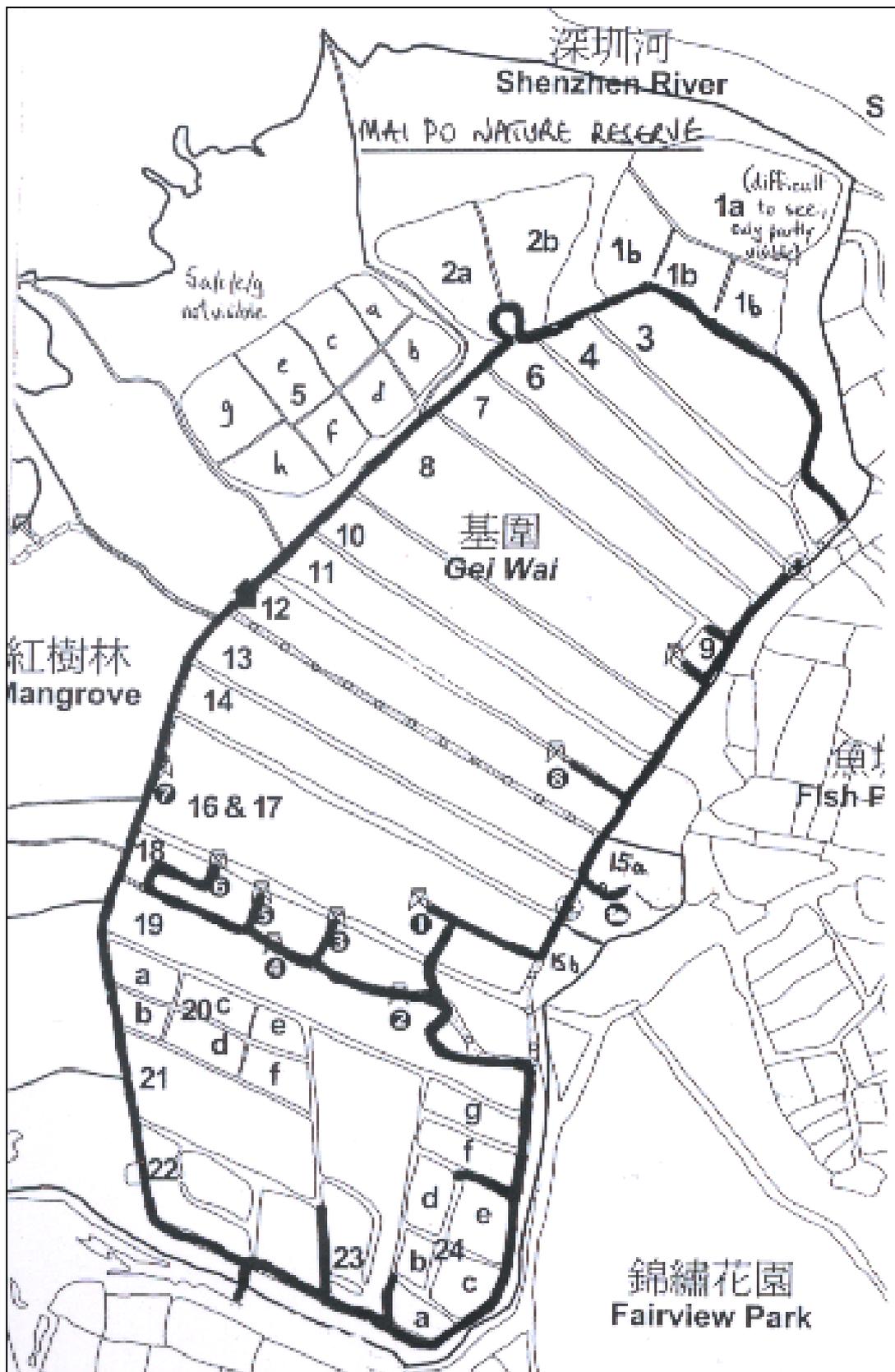
**BirdLife International. 2009b.** Species factsheet: *Numenius arquata*. Downloaded from <http://www.birdlife.org> on 30/6/2009.

**BirdLife International. 2009c.** Species factsheet: *Eurynorhynchus pygmeus*. Downloaded from <http://www.birdlife.org> on 30/6/2009.

**Howes, J and Bakewell, D. 1989.** Shorebird Studies Manual. AWB Publication No. 55. Kuala Lumpur.

**Wetland International. 2006.** Waterbird Population Estimates - Fourth Edition. Wetland International, Wageningen, The Netherlands.

Map 1. The Mai Po Nature Reserve - the study site of shorebird monitoring programme, 2008-09.





# Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay Ramsar Site

## 2008-09 Report

### ***Appendix 1***

Counts of shorebirds in the Mai Po Inner Deep Bay  
Ramsar Site in autumn 2008



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in autumn 2008

	1-7 Jul	8-14 Jul	15-21 Jul	22-28 Jul	29 - 4 Aug	5-11 Aug	12-18 Aug	19-25 Aug	26-1 Sep	2 - 8 Sep	9-15 Sep	16-22 Sep	23-29 Sep	30 - 6 Oct	7-13 Oct	14-20 Oct	21-27 Oct	28- 3 Nov
Pheasant-tailed Jacana	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Greater Painted-snipe	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Black-winged Stilt	6	2	0	3	0	0	12	23	63	214	179	78	178	227	80	319	523	87
Pied Avocet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	74	33
Oriental Pratincole	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Northern Lapwing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grey-headed Lapwing	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0
Pacific Golden Plover	0	0	0	1	0	0	0	0	12	5	0	0	0	2	4	1	43	28
Grey Plover	12	6	6	4	0	8	7	11	16	18	0	19	1	0	19	23	20	46
Common Ringed Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Little Ringed Plover	0	0	0	0	0	0	0	0	1	4	4	5	0	2	3	12	3	0
Kentish Plover	0	0	0	1	0	0	0	0	0	0	0	25	0	3	4	2	1381	540
Lesser Sand Plover	0	1	0	33	0	0	0	2	0	0	0	1	0	2	2	0	0	4
Greater Sand Plover	7	7	0	60	356	490	249	288	55	74	53	26	0	13	14	12	8	5
Oriental Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Black-tailed Godwit	11	9	12	13	11	48	53	145	4	255	260	329	230	430	426	528	493	88
Bar-tailed Godwit	1	2	3	5	2	0	0	0	3	0	3	2	1	0	1	0	2	0
Little Curlew	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Whimbrel	4	0	1	0	0	16	86	129	217	121	47	101	6	48	5	8	2	3
Eurasian Curlew	30	41	57	52	55	78	72	82	81	86	103	103	182	104	121	117	127	109
Far Eastern Curlew	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
Spotted Redshank	0	0	0	3	1	3	2	6	4	5	16	31	11	20	42	26	106	14
Common Redshank	40	43	272	999	620	438	303	300	521	277	295	181	258	351	323	238	273	247
Marsh Sandpiper	0	4	4	11	34	24	27	51	175	295	722	2002	1038	2521	1944	2521	1843	2280
Common Greenshank	0	31	150	231	540	484	534	820	710	540	868	1021	757	1398	871	858	632	484
Nordmann's Greenshank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Green Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Wood Sandpiper	0	0	7	122	0	77	45	105	362	188	298	195	157	34	159	59	112	0
Terek Sandpiper	54	78	40	9	98	32	8	35	79	27	23	12	1	4	6	1	1	0
Common Sandpiper	0	1	0	0	0	0	1	2	0	1	0	0	2	0	2	1	0	1
Grey-tailed Tattler	20	28	0	0	7	2	5	1	1	0	5	1	1	0	0	0	0	1
Ruddy Turnstone	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Red-necked Phalarope	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Pintail/Swinhoe's Snipe	0	0	0	0	0	0	0	0	1	2	2	2	1	2	1	0	1	0
Common Snipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
Long-billed Dowitcher	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0
Asian Dowitcher	0	0	2	0	0	5	4	25	7	2	0	1	0	0	0	1	0	0
Red Knot	0	0	0	0	0	0	0	1	0	0	3	3	4	3	3	3	6	5
Great Knot	0	0	0	0	0	0	0	3	1	2	43	28	7	18	9	2	2	7
Sanderling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Red-necked Stint	0	0	0	25	43	69	10	3	1	0	0	1	0	3	0	0	10	1
Little Stint	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Temminck's Stint	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Long-toed Stint	0	0	0	1	0	2	2	3	0	10	0	0	0	0	0	0	0	0
Pectoral Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sharp-tailed Sandpiper	0	0	0	0	0	1	1	1	2	0	0	0	0	9	2	1	2	1
Dunlin	0	0	0	0	0	0	0	0	0	0	0	2	0	3	0	0	255	90
Curlew Sandpiper	0	0	0	35	286	167	38	7	10	2	0	0	0	0	0	0	1	0
Spoon-billed Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Broad-billed Sandpiper	0	0	0	2	3	3	1	4	0	0	0	0	0	0	0	0	5	0
Ruff	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	0
Sand Plover sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Small wader sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Large <i>tringa</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	185	254	554	1610	2056	1948	1460	2050	2327	2129	2925	4170	2836	5199	4059	4736	5929	4074

---

# Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay Ramsar Site

## 2008-09 Report

### ***Appendix 2***

Counts of shorebirds in the Mai Po Inner Deep Bay  
Ramsar Site in spring 2009



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

## Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in spring 2009

	22-24 Mar.	25-27 Mar.	28-30 Mar.	31-2 Apr.	3-5 Apr.	6-8 Apr.	9-11 Apr.	12-14 Apr.	15-17 Apr.	18-20 Apr.	21-23 Apr.	24-26 Apr.	27-29 Apr.	30-2 May	3-5 May	6-8 May	9-11 May	12-14 May	15-17 May	18-20 May	21-23 May	24-26 May	27-29 May	30-1 Jun	2-15 Jun.	16-30 Jun.	
Pheasant-tailed Jacana	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Greater Painted-snipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0
Black-winged Stilt	0	74	256	736	37	506	48	68	313	22	20	53	32	54	27	64	119	60	78	48	41	51	104	65	37	18	
Pied Avocet	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Oriental Pratincole	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	2	1
Northern Lapwing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grey-headed Lapwing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pacific Golden Plover	0	10	1	0	2	3	0	46	6	22	288	4	0	1	1	2	0	3	0	1	1	0	0	0	0	1	
Grey Plover	1	25	32	0	24	20	14	16	22	15	15	5	7	10	8	9	14	13	0	13	15	21	8	5	5	3	
Common Ringed Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Little Ringed Plover	22	5	14	7	5	1	1	0	0	0	0	0	1	1	0	0	2	1	1	0	0	0	0	0	0	3	0
Kentish Plover	857	483	2	1	7	20	13	4	1	4	2	1	2	0	5	3	1	0	0	2	0	0	0	0	0	0	0
Lesser Sand Plover	2	9	2	1	10	14	85	32	10	83	10	3	2	3	31	19	11	13	18	38	0	7	6	7	0	0	
Greater Sand Plover	100	103	10	3	27	47	11	57	46	305	144	26	3	1	101	87	56	94	77	96	60	42	44	46	0	0	
Oriental Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Black-tailed Godwit	0	8	548	1211	1443	1060	1229	1188	1079	349	1407	1047	427	340	12	35	8	9	11	9	10	12	11	13	8	0	
Bar-tailed Godwit	0	11	11	16	20	73	100	68	18	7	5	3	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0
Little Curlew	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Whimbrel	0	0	0	0	0	1	2	12	20	14	18	30	19	55	20	12	20	18	17	14	7	0	11	26	18	25	
Eurasian Curlew	93	91	107	80	73	49	31	29	35	27	29	16	28	33	14	61	27	33	29	27	34	32	27	30	29	29	
Far Eastern Curlew	0	1	2	3	2	2	15	11	5	2	1	0	0	0	3	1	5	3	2	1	1	0	1	1	0	1	
Spotted Redshank	83	0	903	613	636	717	649	741	526	578	776	804	452	396	27	424	388	227	80	31	0	0	0	0	0	0	
Common Redshank	38	10	17	152	335	401	754	110	447	191	627	911	207	285	85	532	130	187	66	65	42	35	12	10	4	20	
Marsh Sandpiper	10	481	3075	3061	3053	2691	3192	3038	1920	1098	1186	724	237	165	4	6	0	0	0	0	4	0	0	0	0	0	
Common Greenshank	304	836	780	573	1070	865	680	673	1093	666	1020	1026	919	901	581	1251	721	408	248	123	41	4	2	1	15	0	
Nordmann's Greenshank	0	1	5	3	11	26	8	5	7	5	3	3	2	1	0	0	1	2	1	3	0	1	1	0	0	0	
Green Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood Sandpiper	0	0	20	4	2	20	1	3	22	0	2	16	12	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Terek Sandpiper	0	4	7	8	44	77	142	82	329	305	502	224	120	243	162	235	141	137	262	363	428	189	290	322	22	0	
Common Sandpiper	1	0	1	0	2	1	0	1	1	1	1	1	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0

Grey-tailed Tattler	0	0	0	0	0	0	1	2	0	10	24	7	2	11	160	7	2	1	3	5	1	0	0	0	0	0
Ruddy Turnstone	0	0	0	0	2	4	3	5	9	14	1	6	1	14	28	40	11	4	10	10	0	0	2	3	0	0
Red-necked Phalarope	0	0	0	0	5	0	2	0	4	1	4	0	0	0	1	0	0	0	6	1	0	0	0	0	0	
Pintail/Swinhoe's Snipe	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Common Snipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Long-billed Dowitcher	0	0	2	4	2	4	2	2	3	1	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	
Asian Dowitcher	0	0	0	0	2	7	3	5	10	26	22	11	90	113	21	51	15	2	2	1	0	1	2	3	0	
Red Knot	0	0	0	3	11	7	14	7	1	2	3	3	3	12	19	17	9	3	4	11	0	2	2	0	1	
Great Knot	12	46	36	326	357	295	228	207	58	35	20	11	6	8	5	16	5	6	0	22	80	70	81	38	6	
Sanderling	0	0	0	0	2	1	0	1	1	2	2	4	1	0	3	0	4	4	4	12	0	0	0	0	0	
Red-necked Stint	350	1309	53	0	60	1020	2700	114	120	2232	564	47	6	25	1570	938	180	288	357	826	100	33	0	0	0	
Little Stint	0	0	0	0	0	1	1	0	0	4	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
Temminck's Stint	18	0	0	0	7	3	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Long-toed Stint	0	0	0	0	0	1	5	0	14	27	32	0	4	0	2	0	0	0	0	0	0	0	0	0	0	
Pectoral Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sharp-tailed Sandpiper	0	0	0	3	3	3	22	5	2	5	6	2	2	0	4	11	12	3	12	4	0	2	1	2	0	
Dunlin	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Curlew Sandpiper	11	127	16	12	2008	519	2172	336	40	8538	9168	1677	78	69	939	1362	134	106	75	30	34	9	11	16	4	
Spoon-billed Sandpiper	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Broad-billed Sandpiper	0	10	4	0	39	4	13	2	4	84	19	44	2	0	39	11	56	34	19	21	10	0	1	2	0	
Ruff	0	0	1	1	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Small wader sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	150	0	0	0	0	
Large <i>tringa</i> sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1,902	3,646	5,905	6,822	9,303	8,463	12,146	6,871	6,167	14,677	15,925	6,711	2,668	2,745	3,875	5,195	2,072	1,660	1,382	1,778	1,062	511	618	592	154	104

---

# Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay Ramsar Site

2008-09 Report

## *Appendix 3*



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

Figure 1. Total number of shorebirds recorded at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

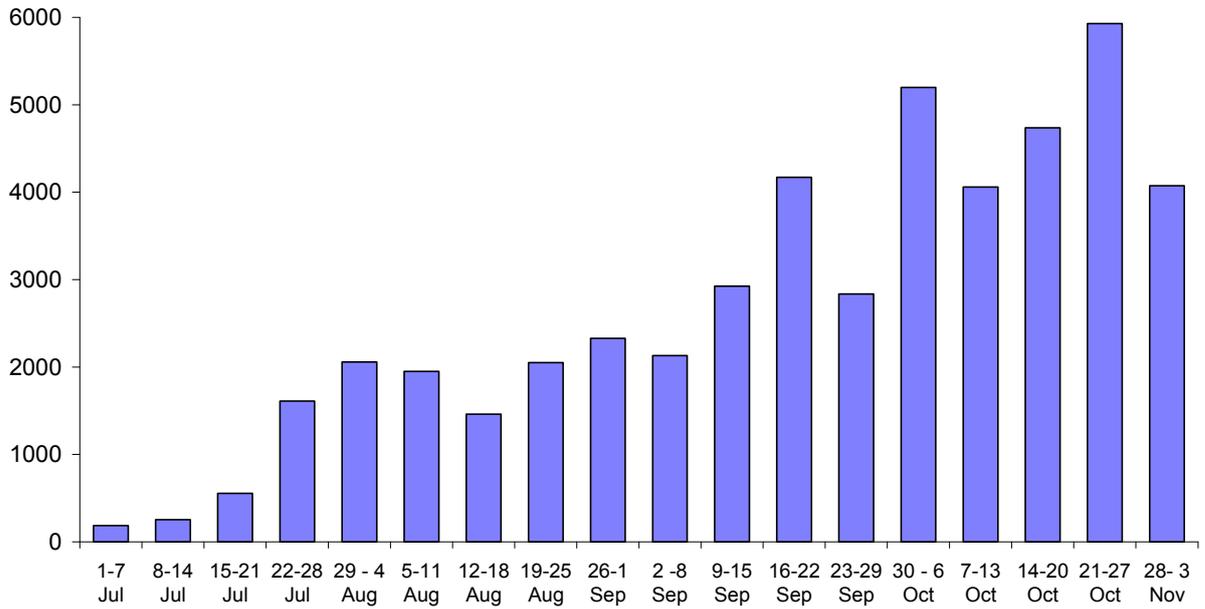


Figure 2. Counts of Black-winged Stilt at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

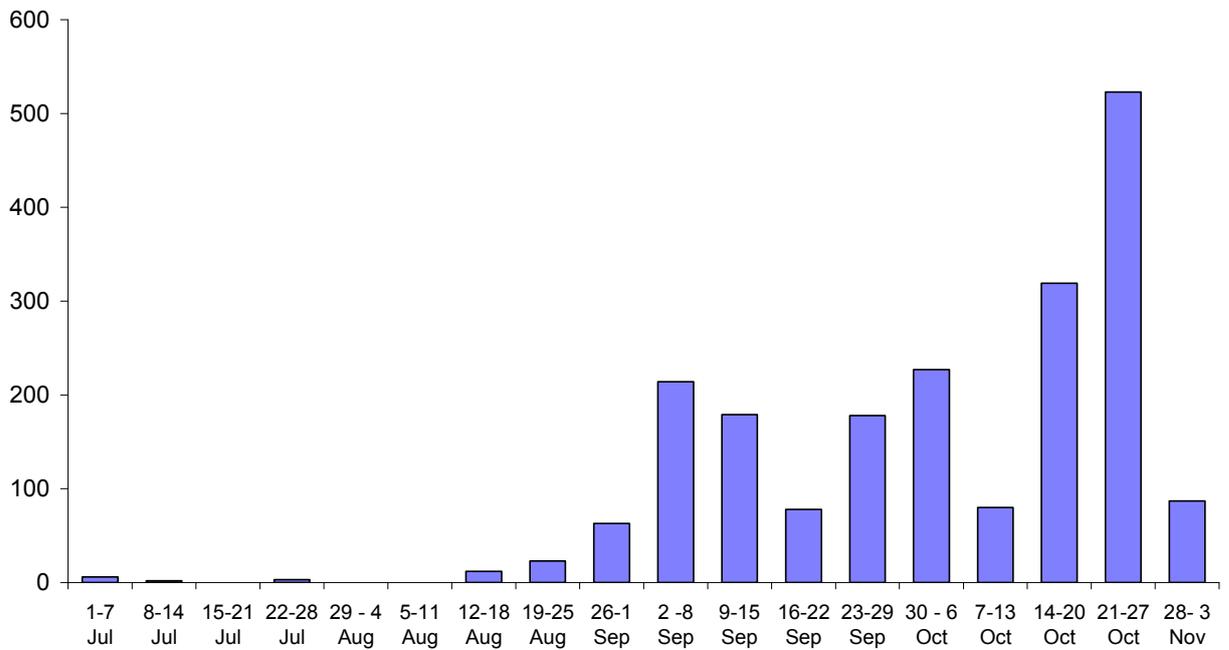


Figure 3. Counts of Pacific Golden Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

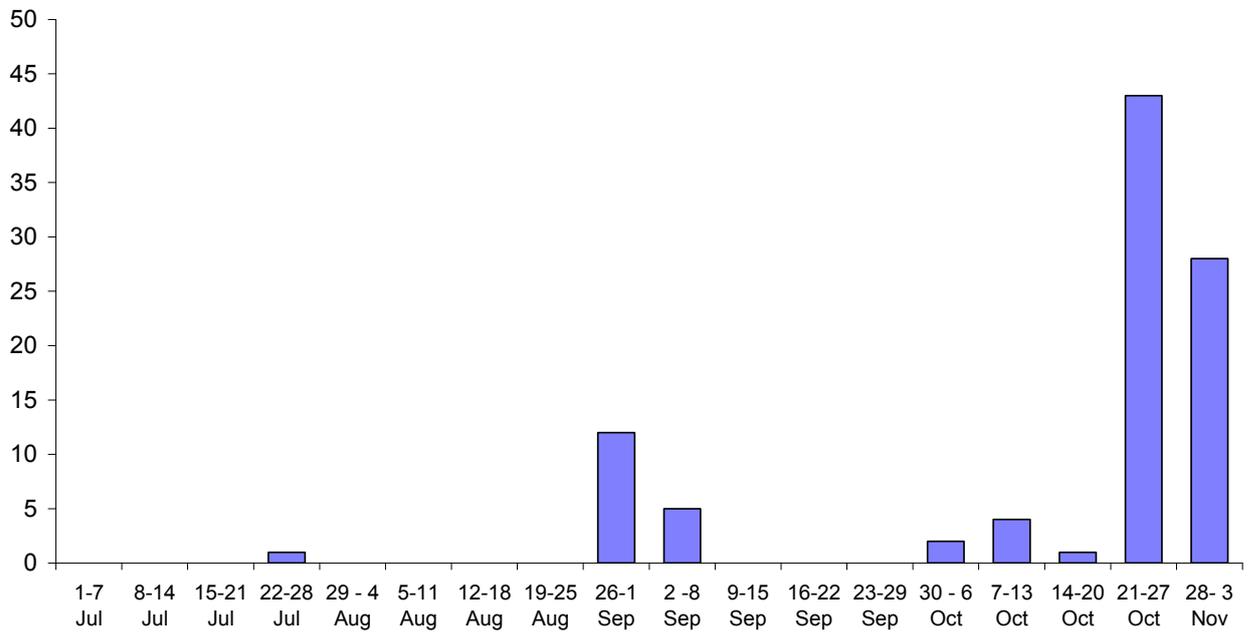


Figure 4. Counts of Kentish Plover at Mai Inner Deep Bay Ramsar Site, autumn 2008

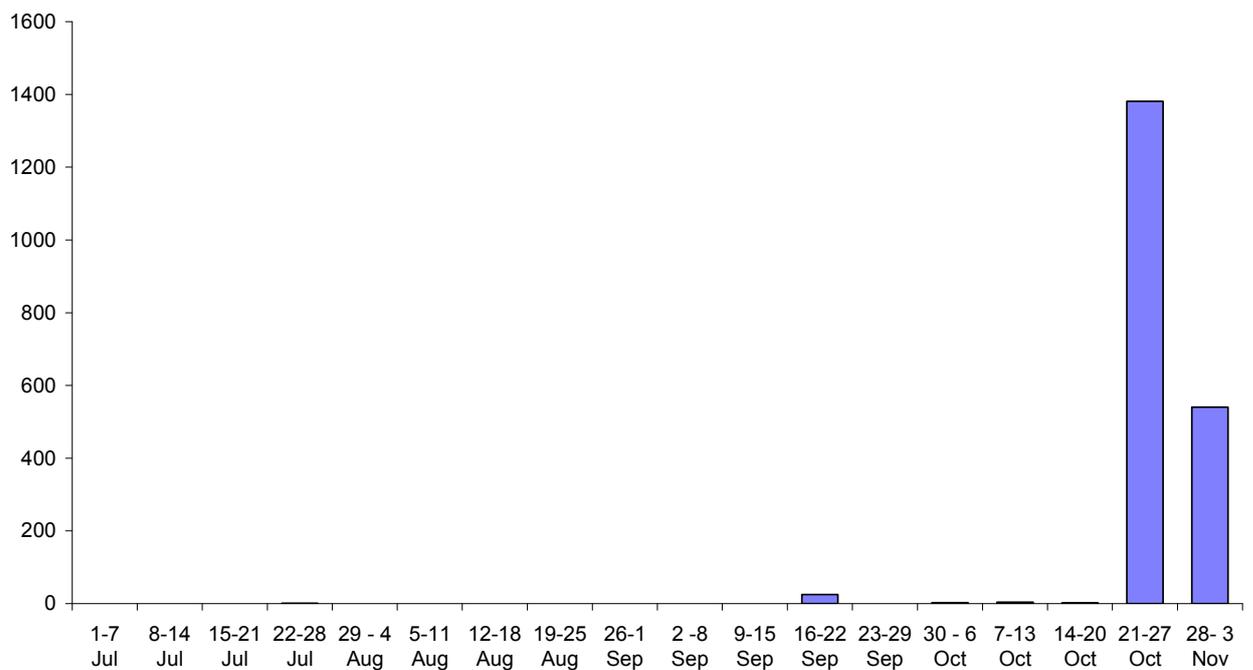


Figure 5. Counts of Grey Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

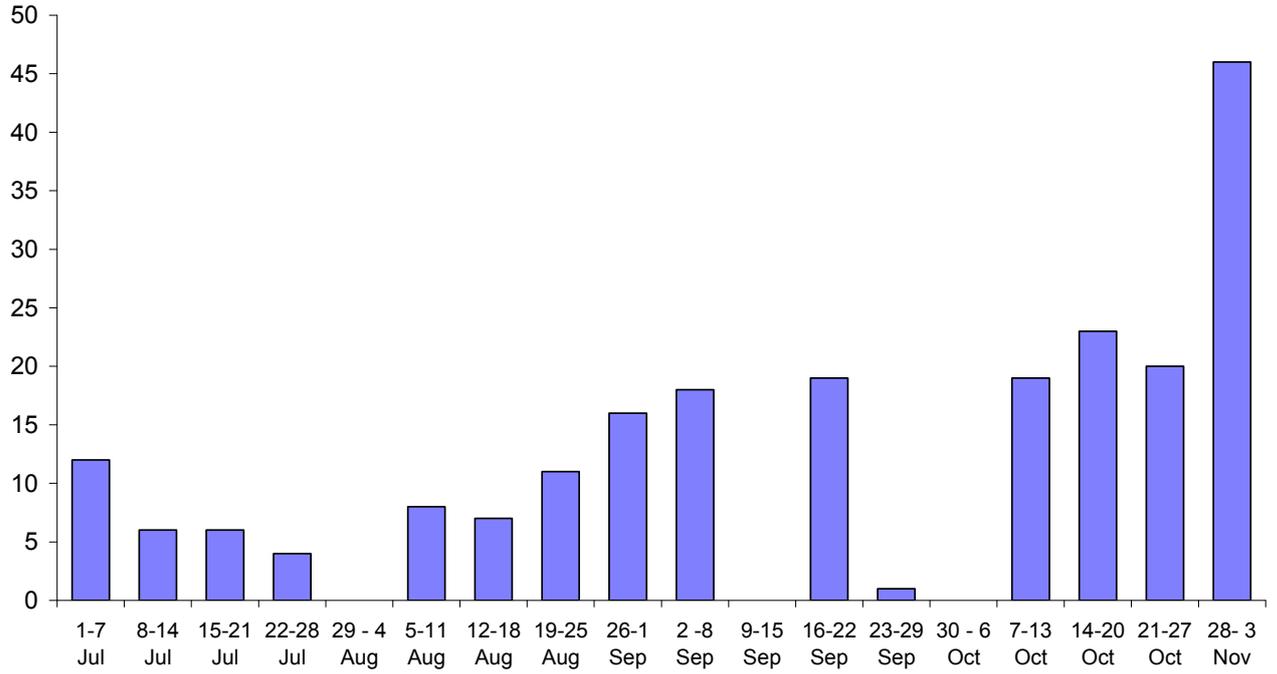


Figure 6. Counts of Lesser Sand Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

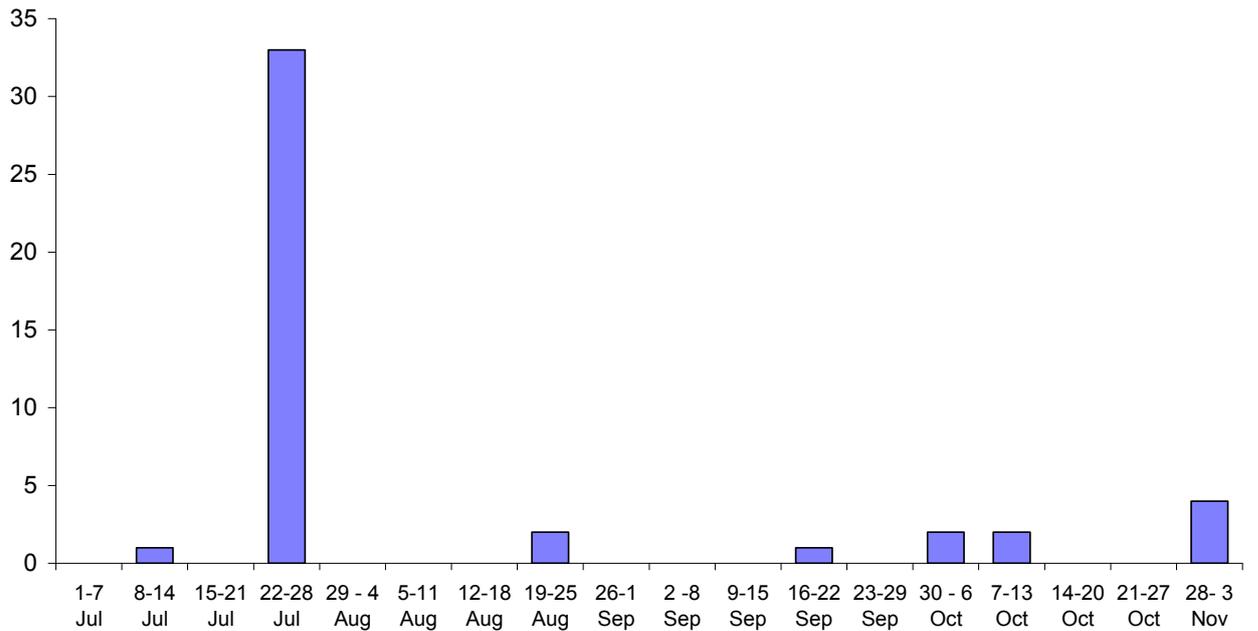


Figure 7. Counts of Greater Sand Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

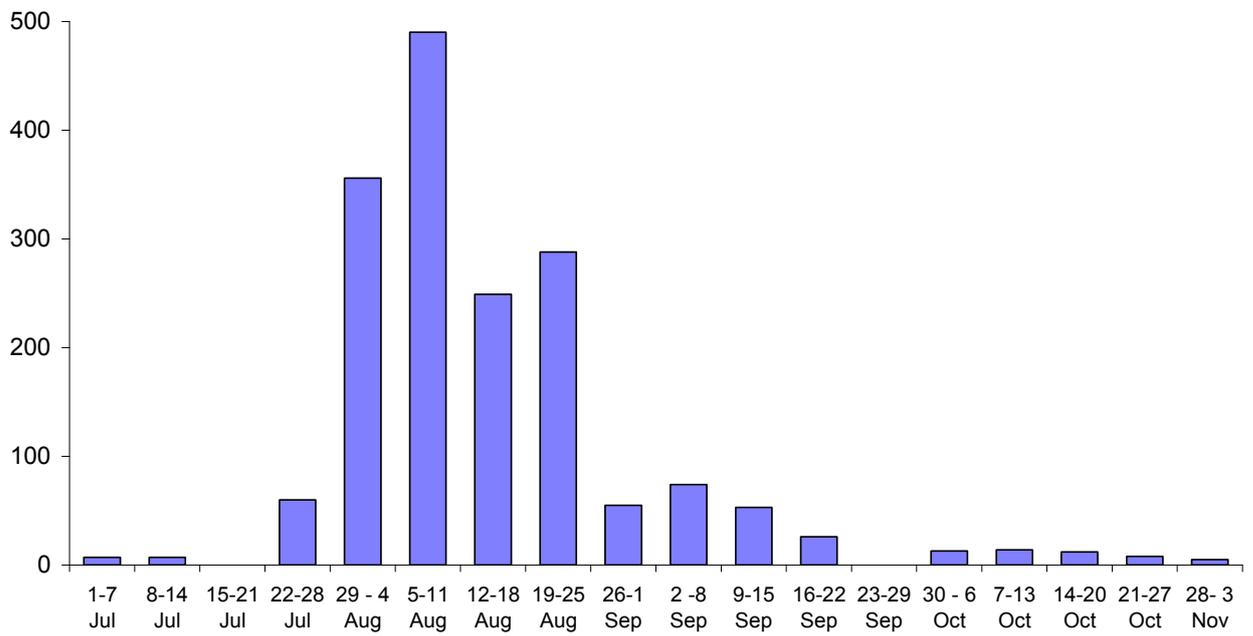


Figure 8. Counts of Black-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

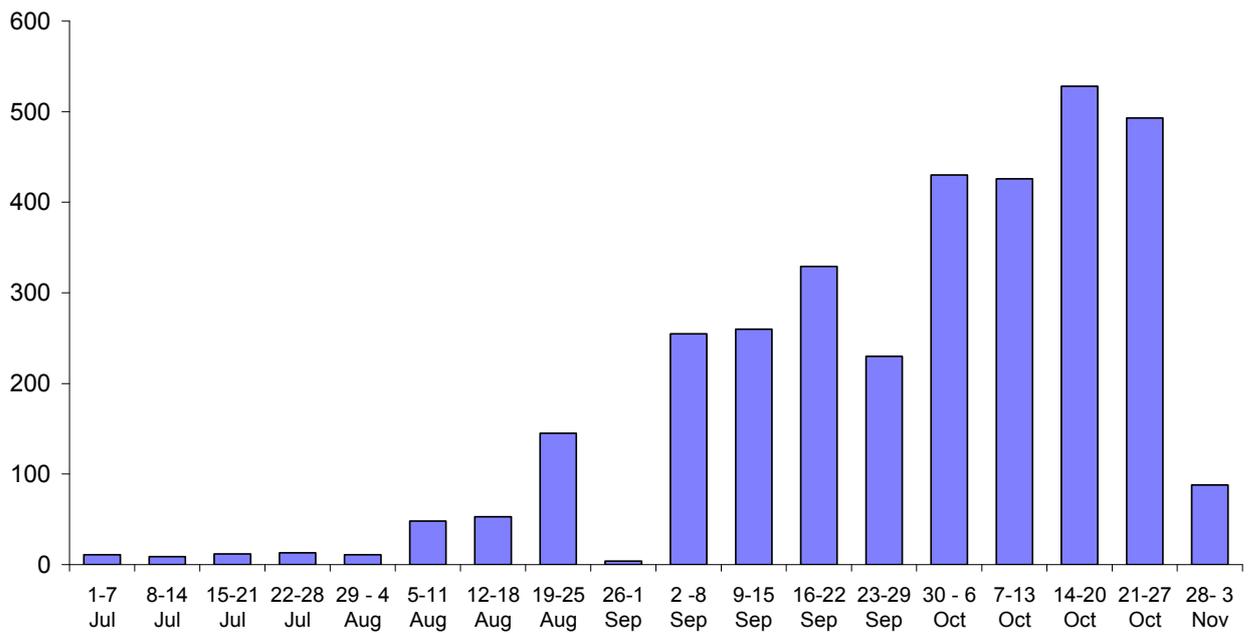


Figure 9. Counts of Bar-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

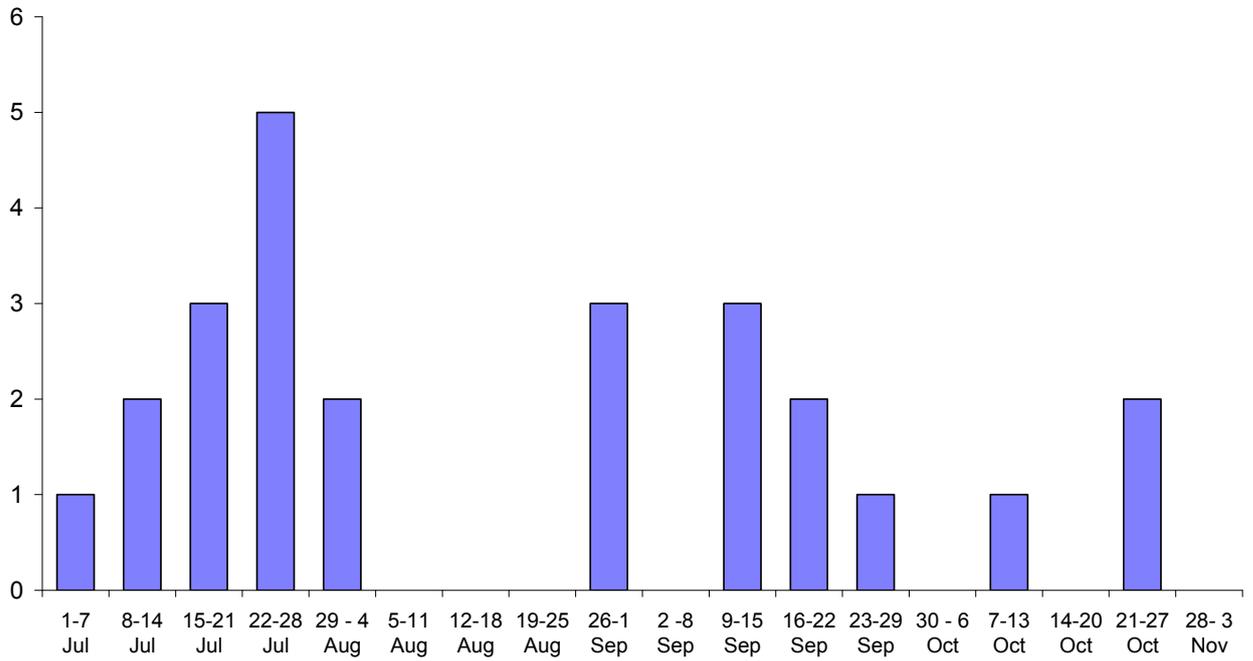


Figure 10. Counts of Whimbrel at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

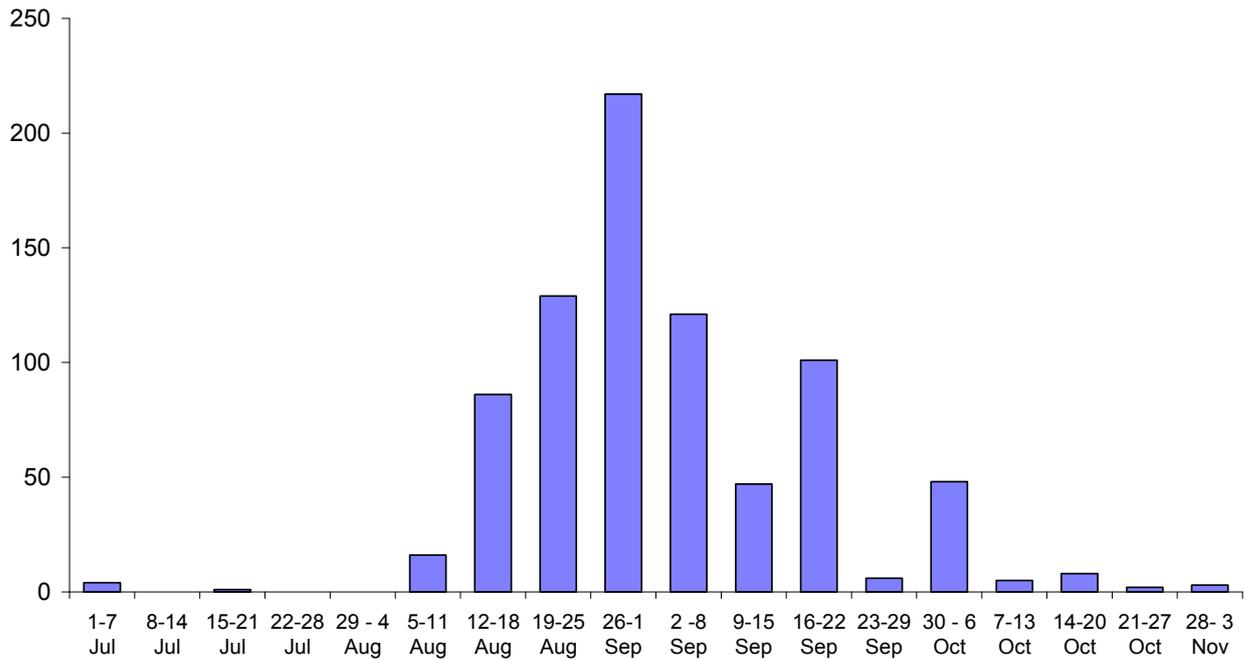


Figure 11. Counts of Eurasian Curlew at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

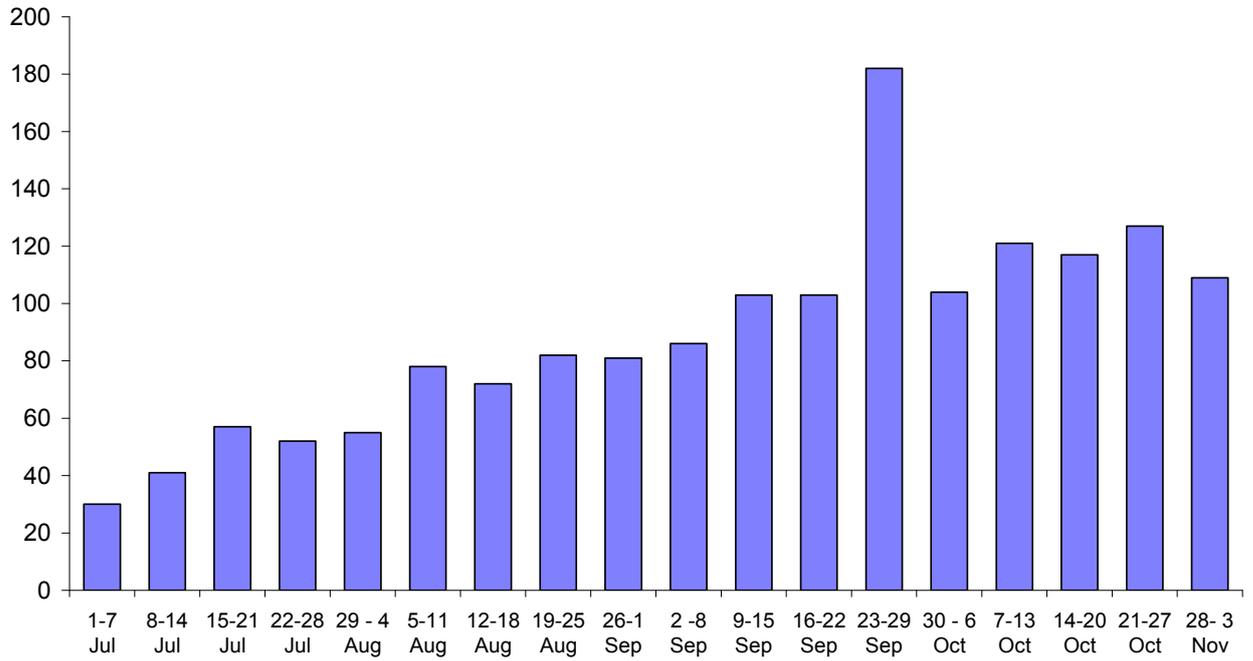


Figure 12. Counts of Spotted Redshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

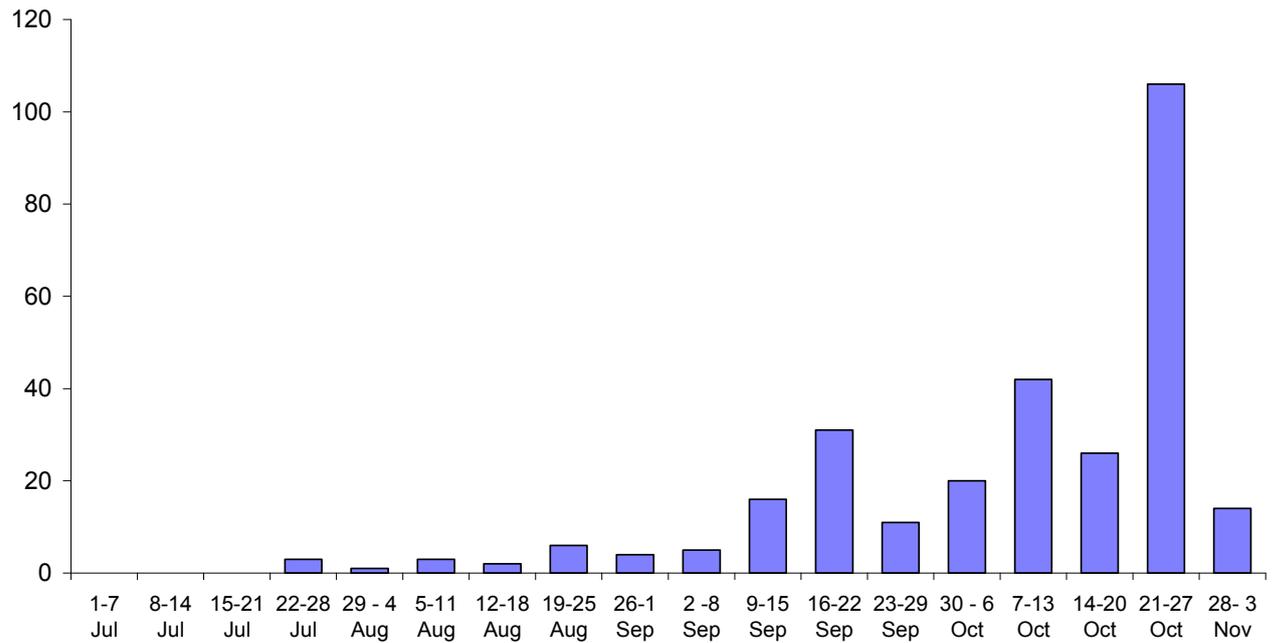


Figure 13. Counts of Common Redshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

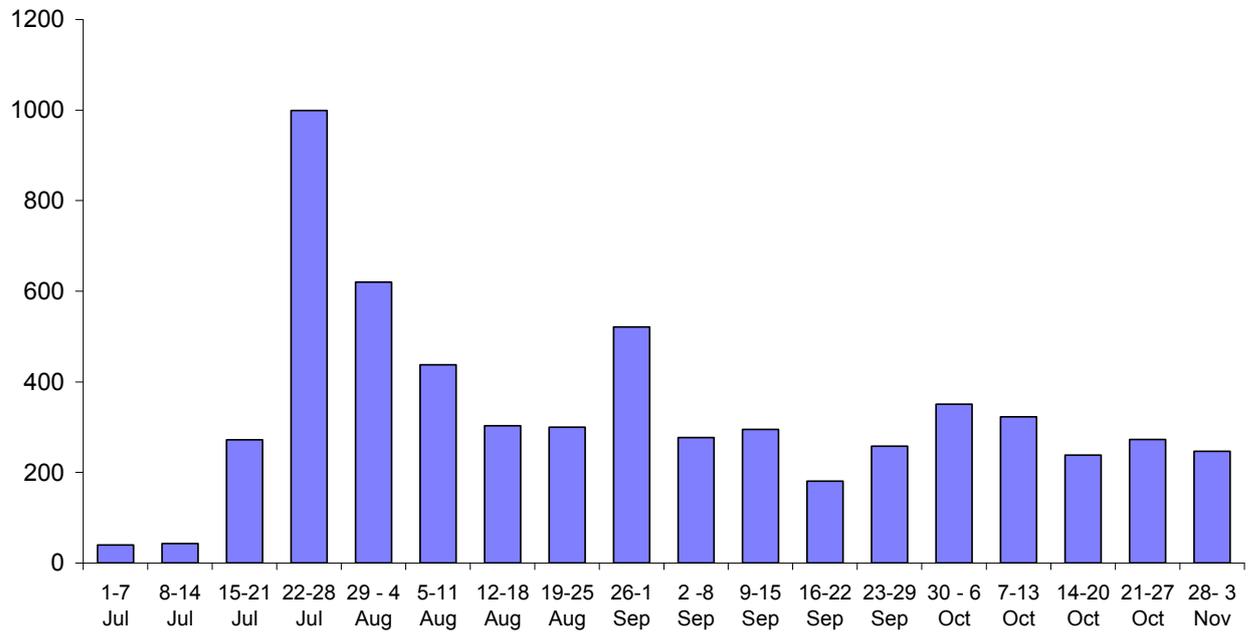


Figure 14. Counts of Marsh Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

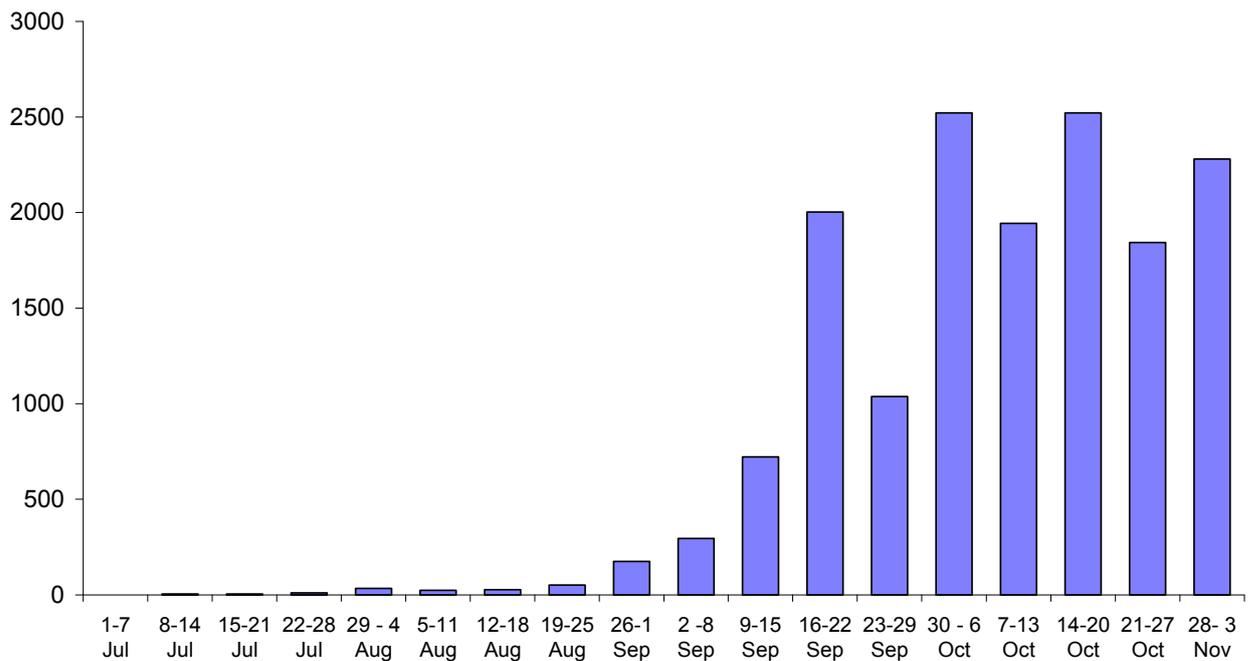


Figure 15. Counts of Common Greenshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

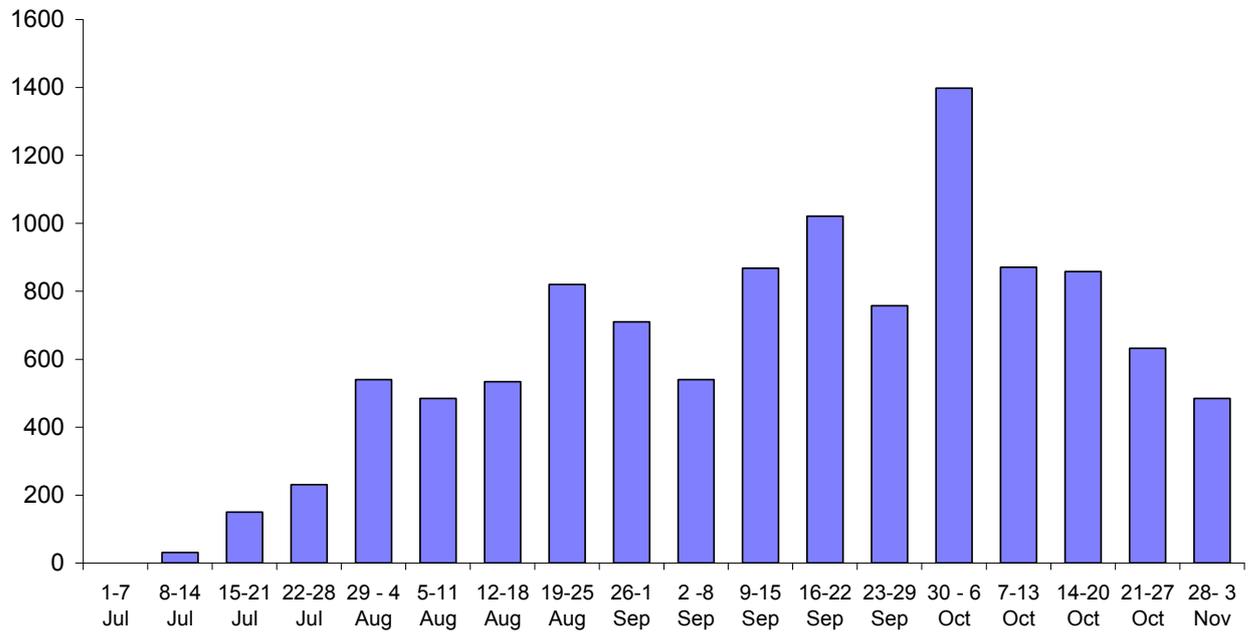


Figure 16. Counts of Wood Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

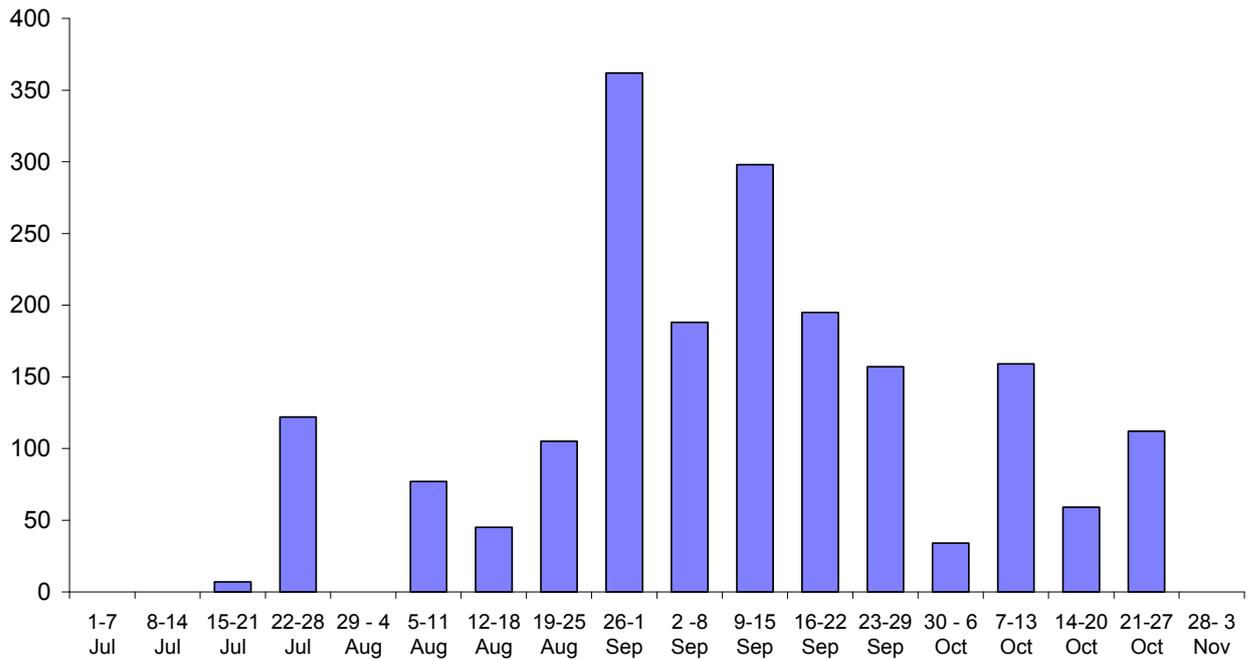


Figure 17. Counts of Great Knot at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

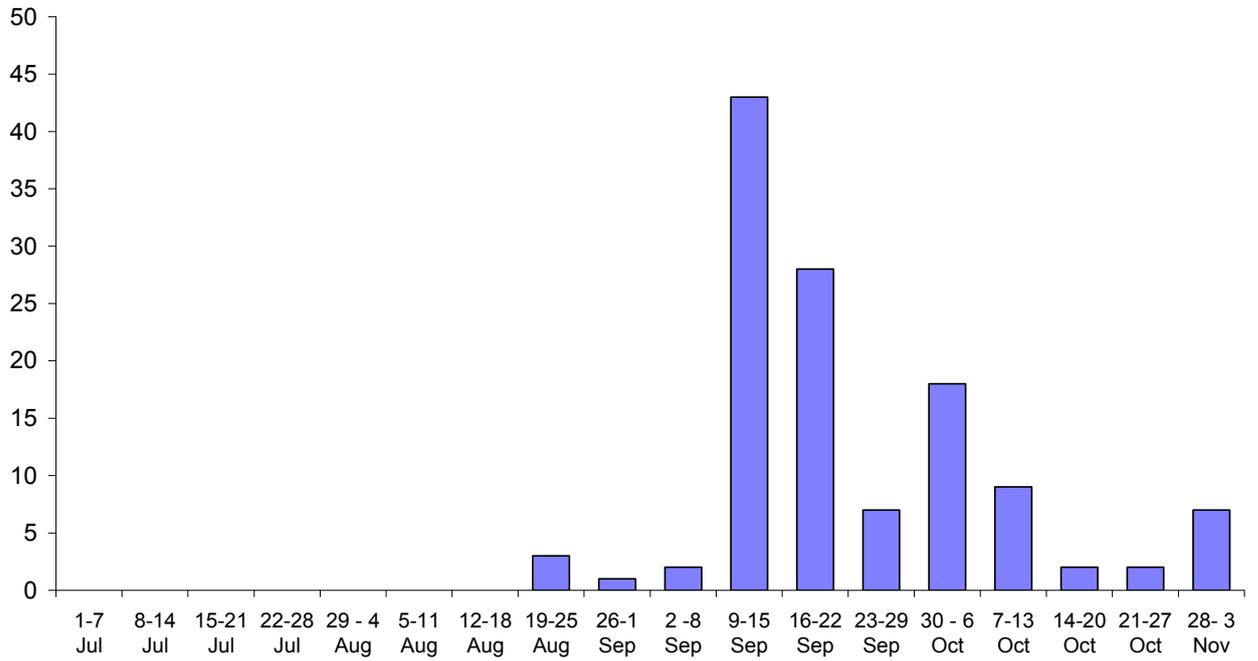


Figure 18. Counts of Red Knot at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

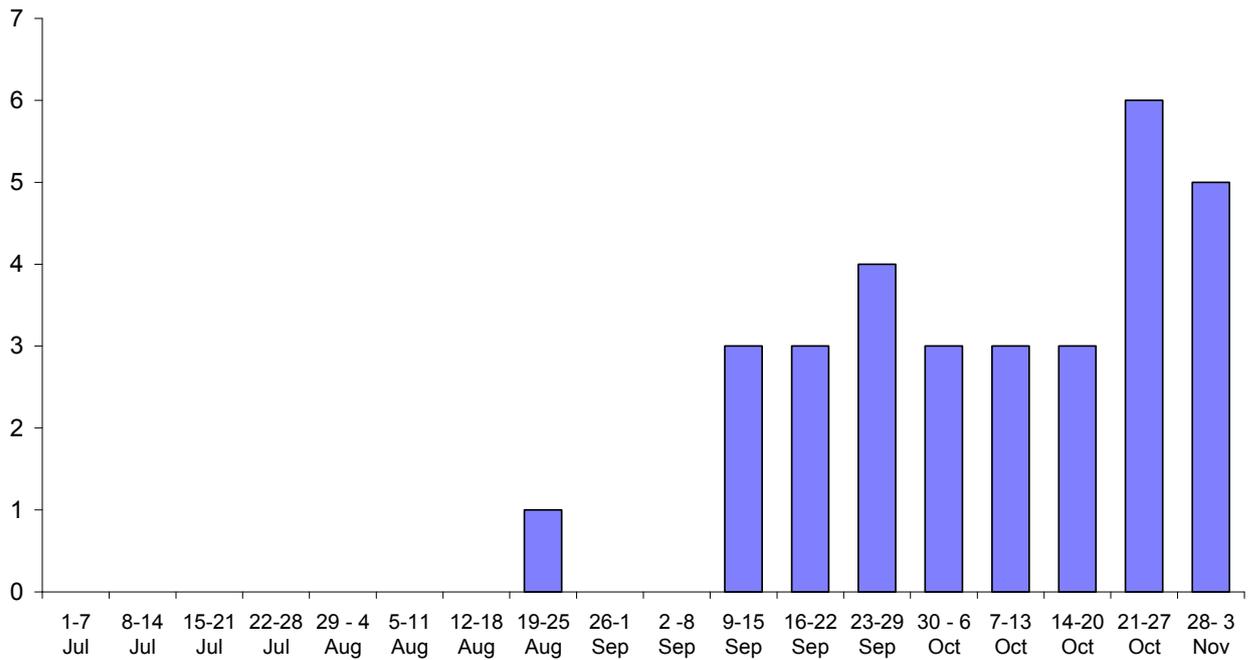


Figure 19. Counts of Broad-billed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2008

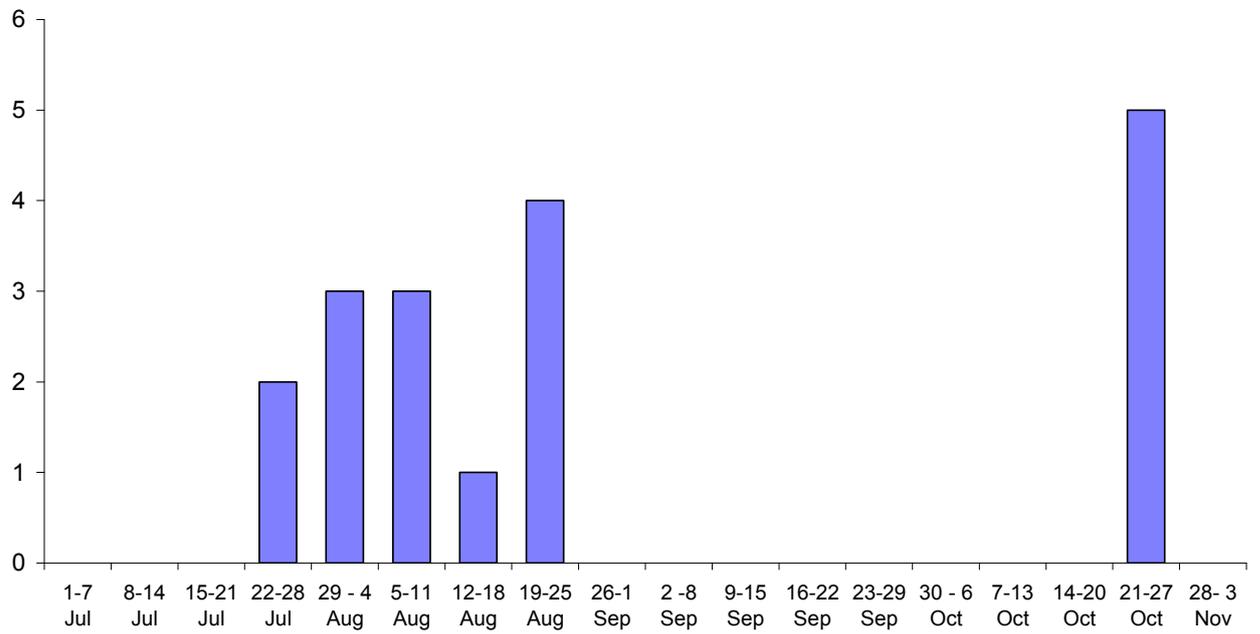


Figure 20. Total number of shorebirds recorded at Mai Po Inner Deep Bay, spring 2009

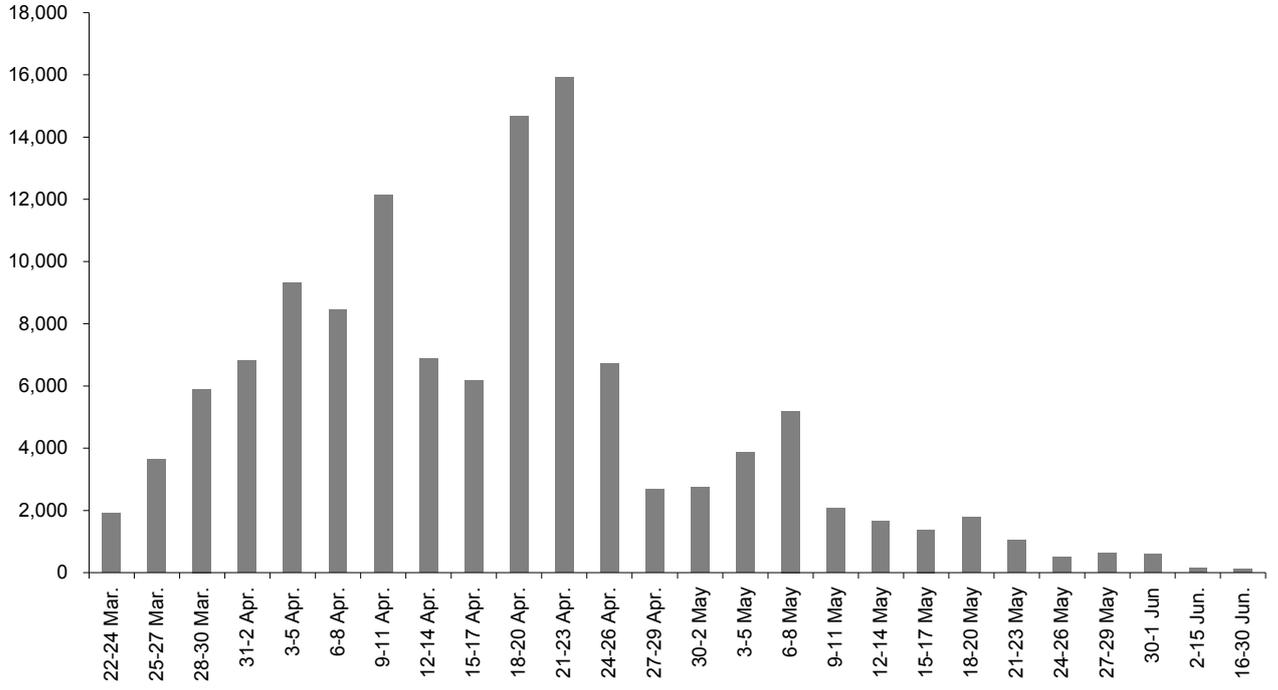


Figure 21. Counts of Pacific Golden Plover at Mai Po Inner Deep Bay Ramsar Site, spring 2009

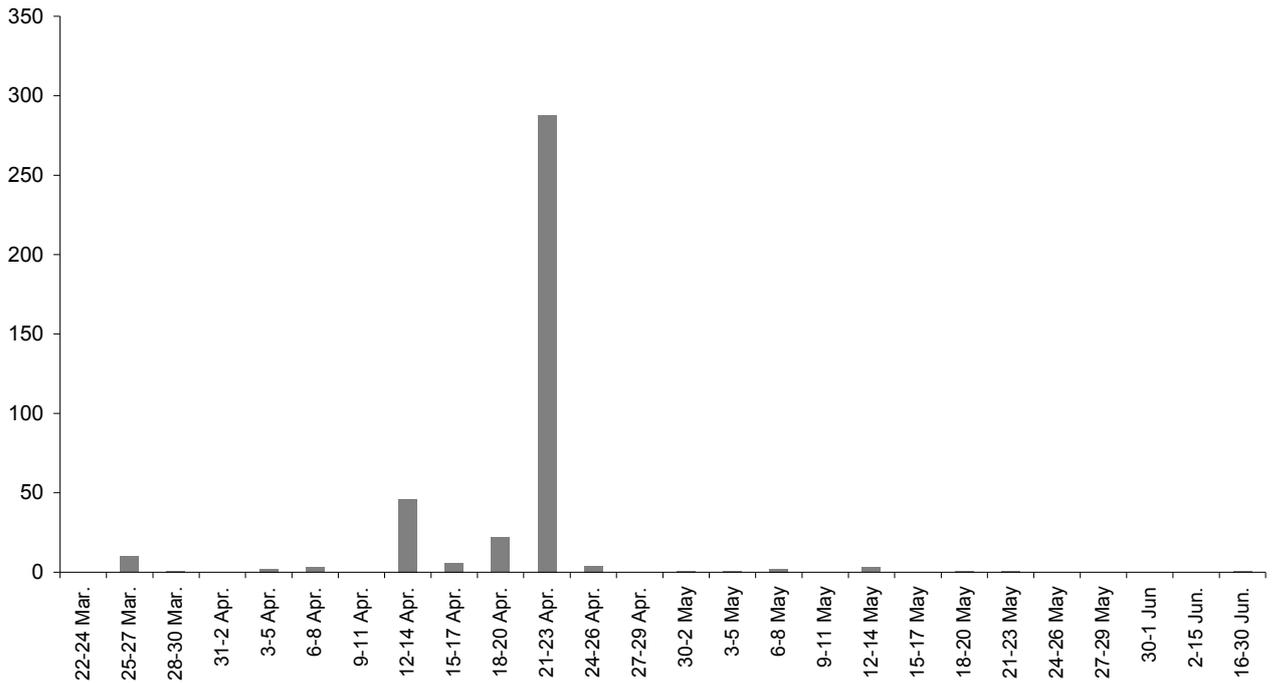


Figure 22. Counts of Lesser Sandplover at Mai Po Inner Deep Bay Ramsar Site, spring 2009

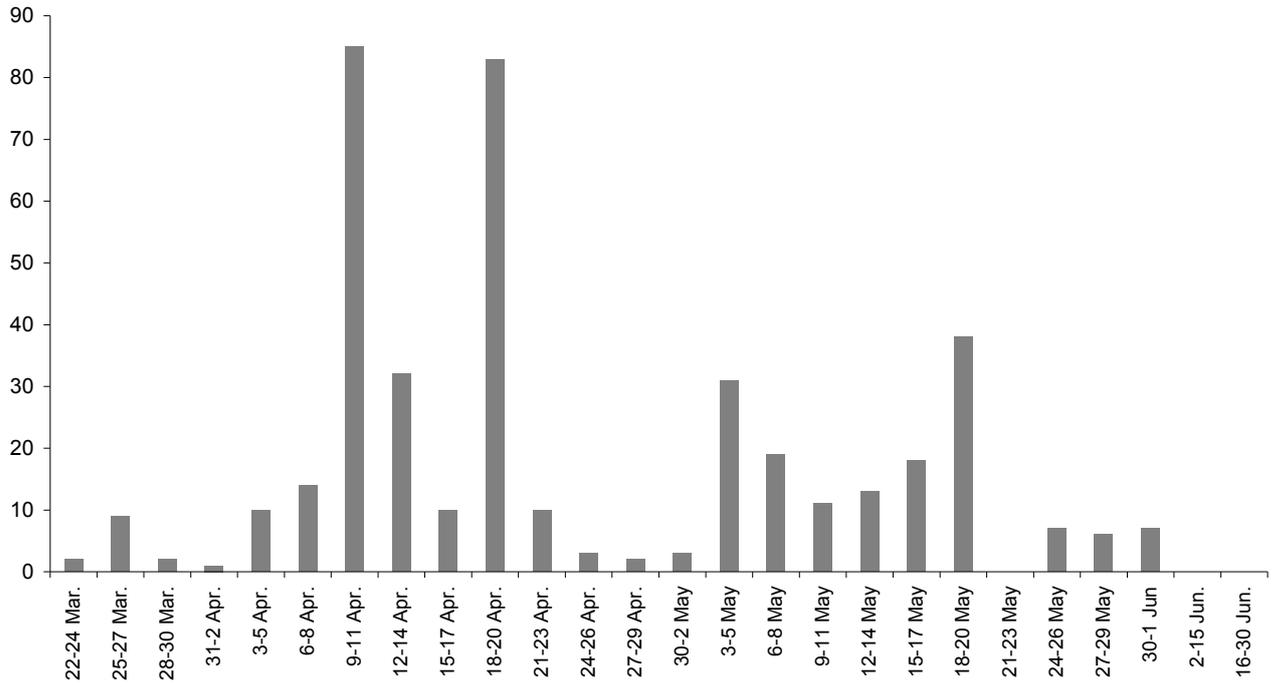


Figure 23. Counts of Greater Sandplover at Mai Po Inner Deep Bay Ramsar Site, spring 2009

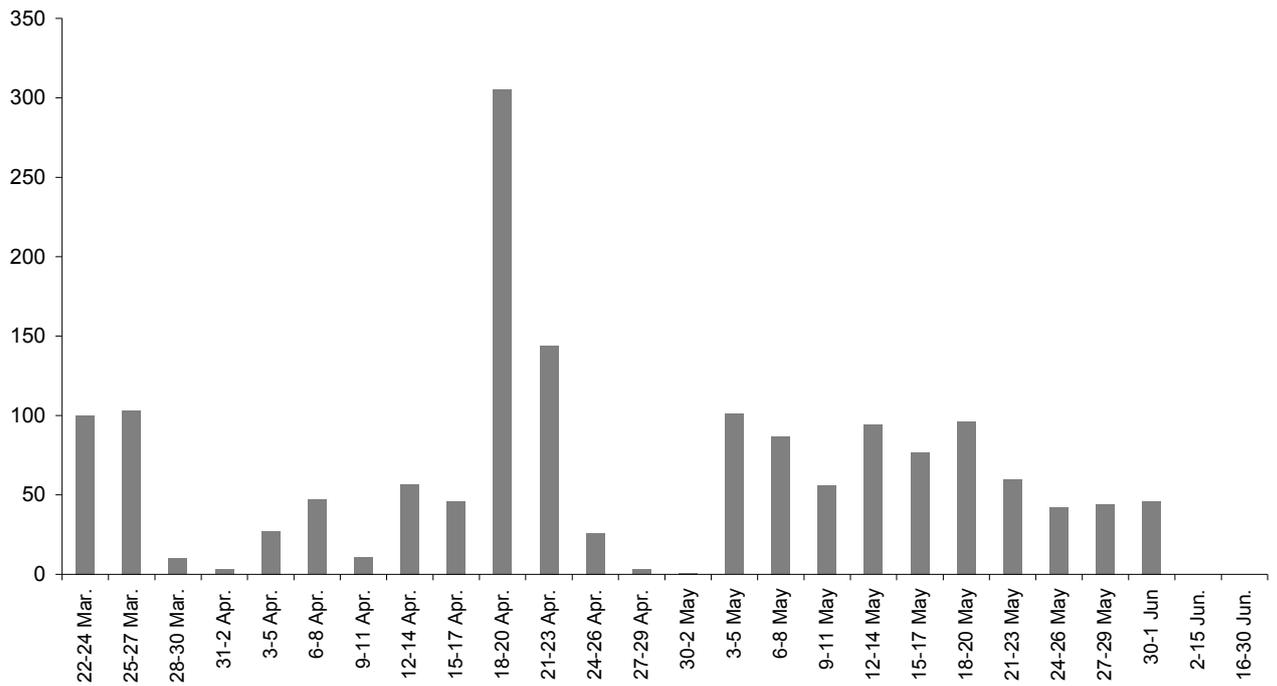


Figure 24. Counts of Black-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, spring 2009

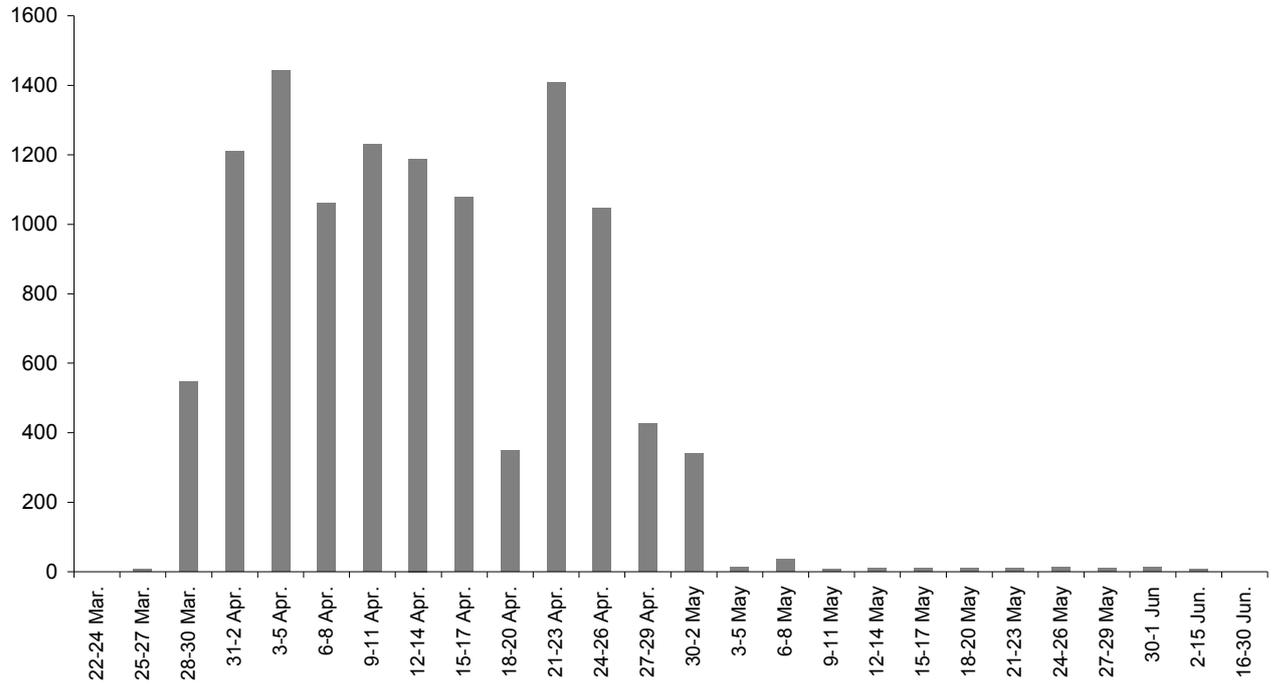


Figure 25. Counts of Spotted Redshank at Mai Po Inner Deep Bay Ramsar Site, spring 2009

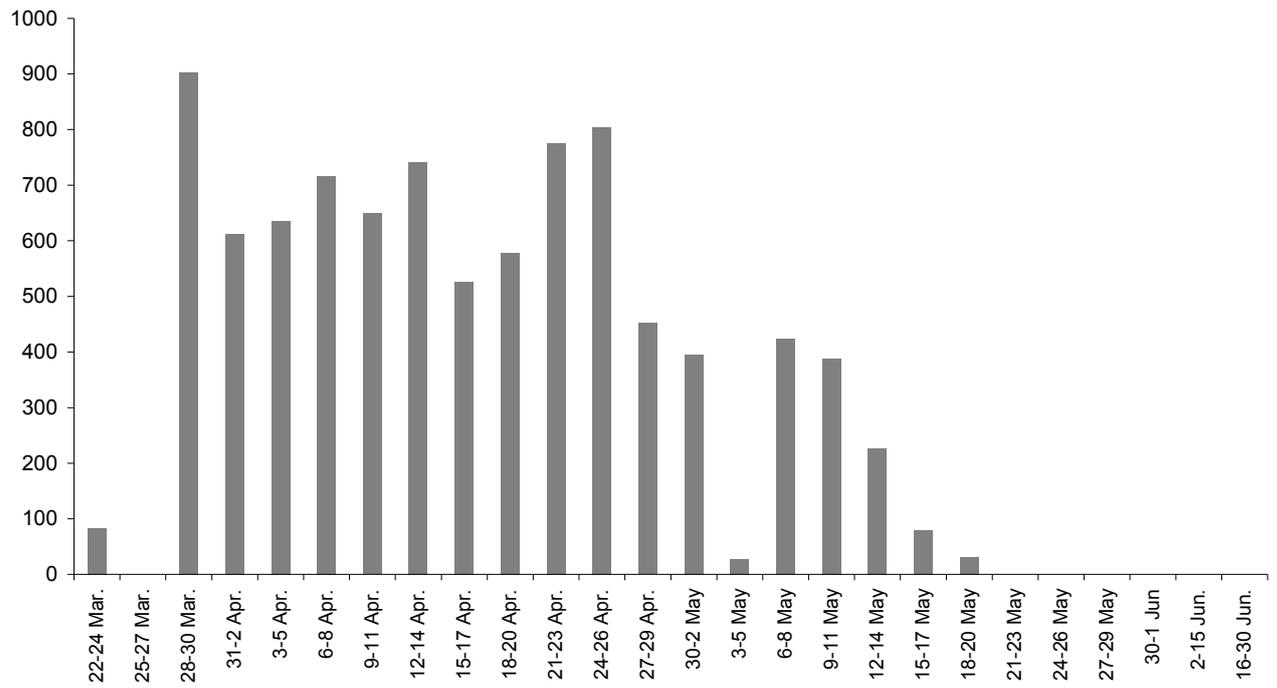


Figure 26. Counts of Common Redshank at Mai Po Inner Deep Bay Ramsar Site, spring 2009

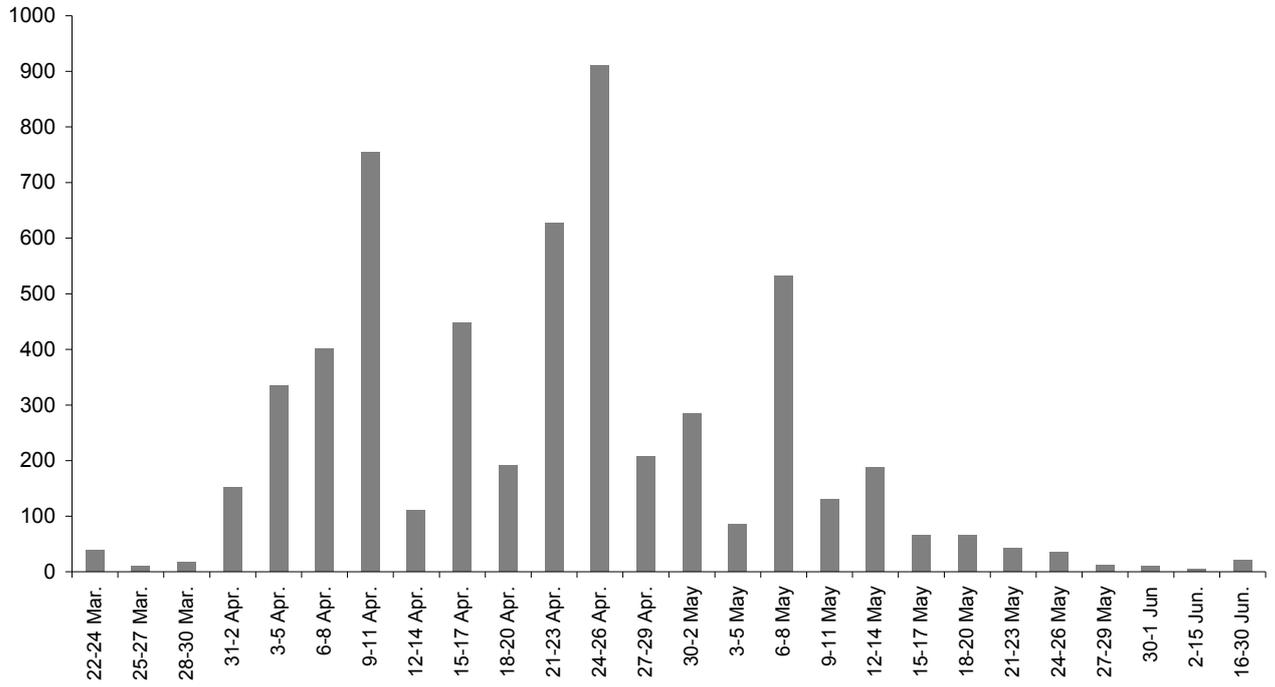


Figure 27. Counts of Marsh Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2009

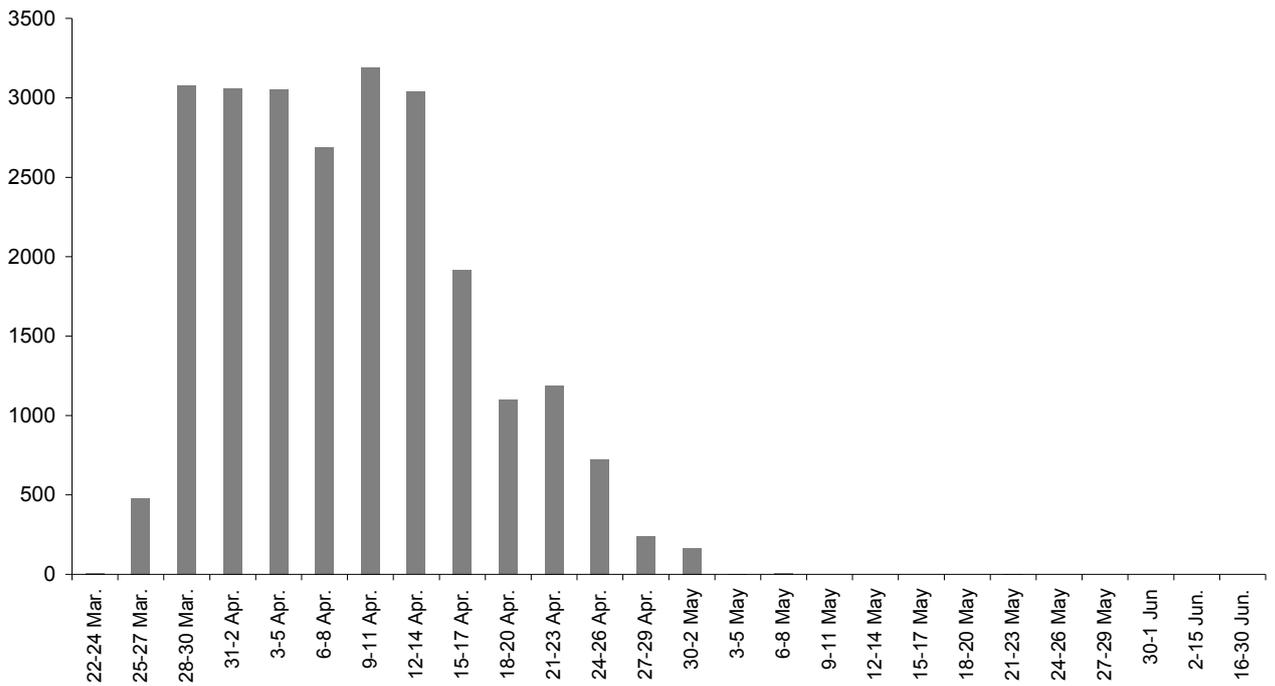


Figure 28. Counts of Common Greenshank at Mai Po Inner Deep Bay Ramsar Site, spring 2009

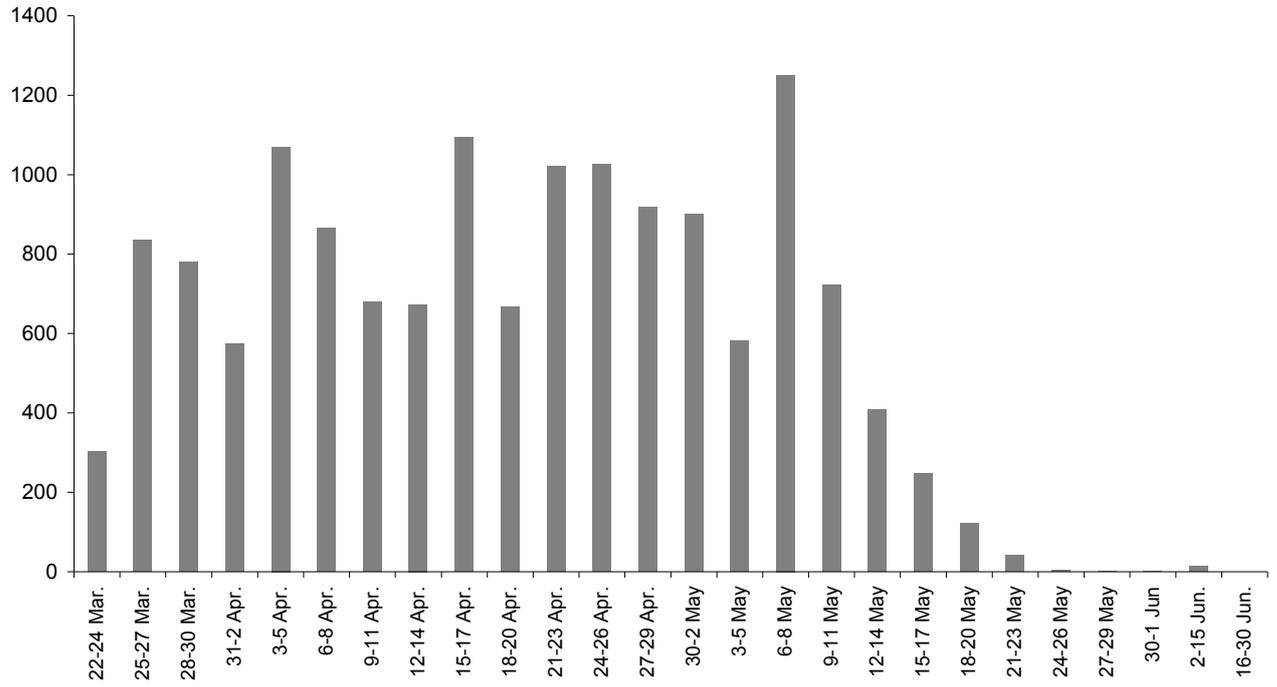


Figure 29. Counts of Terek Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2009

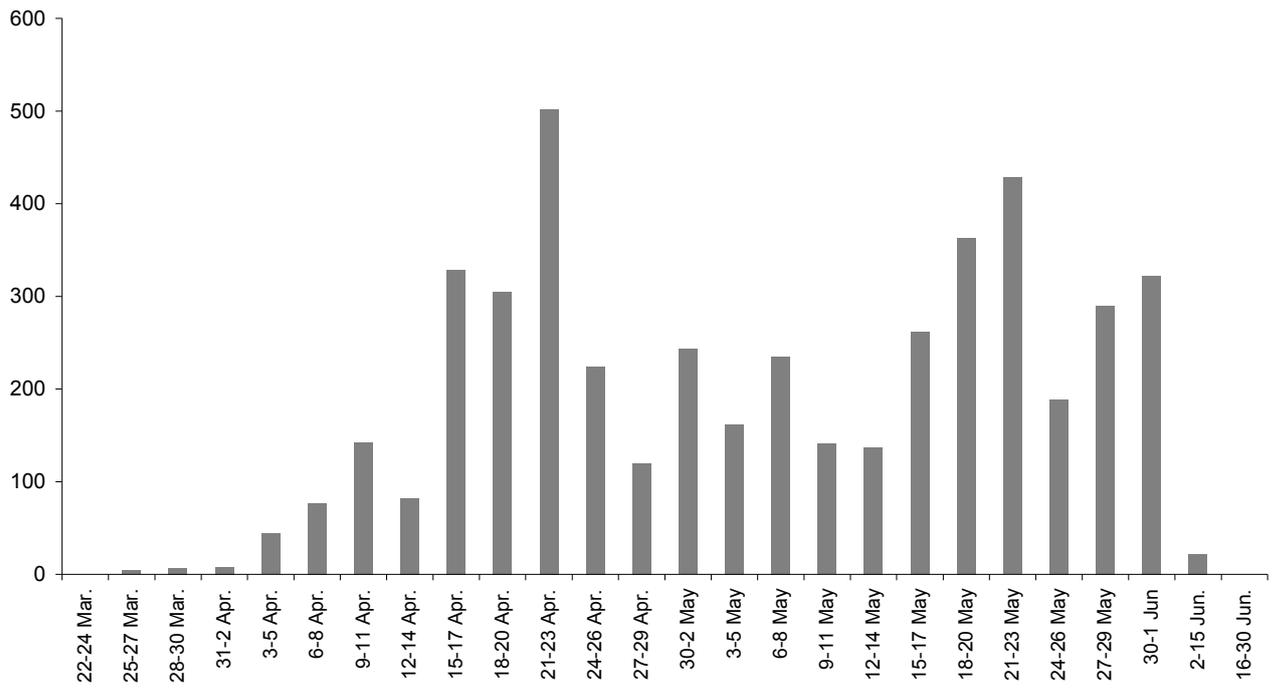


Figure 30. Counts of Grey-tailed Tattler at Mai Po Inner Deep Bay Ramsar Site, spring 2009

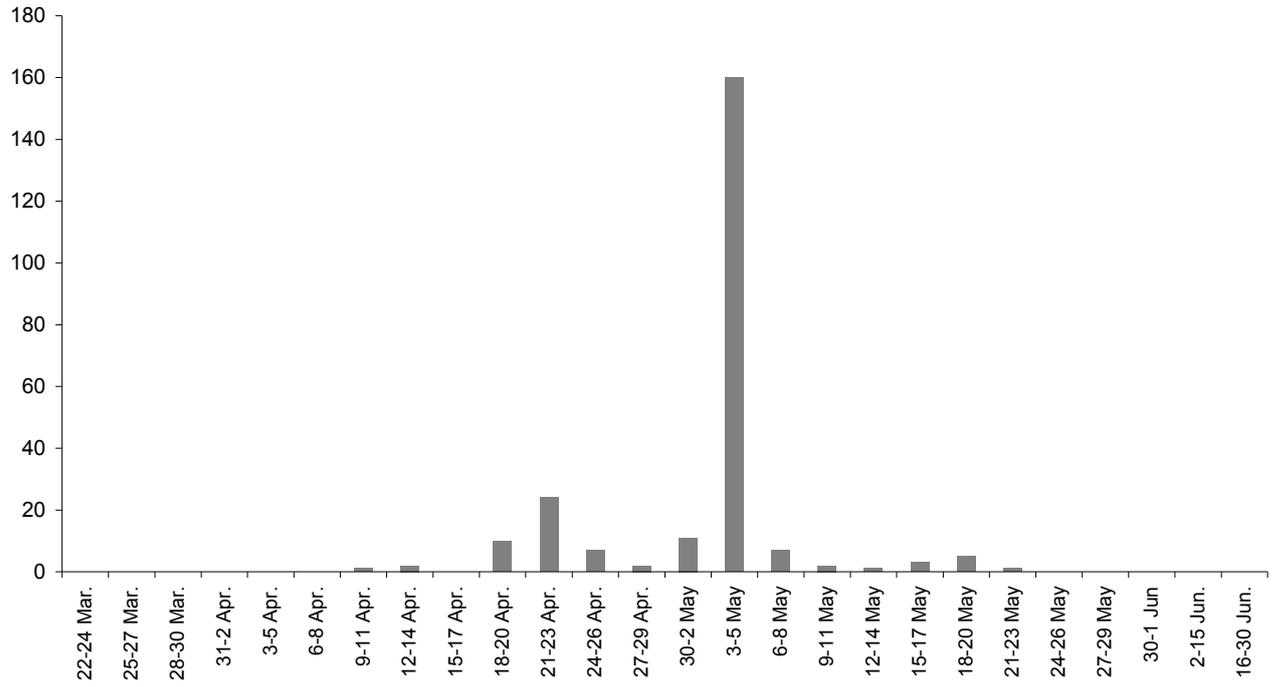


Figure 31. Counts of Ruddy Turnstone at Mai Po Inner Deep Bay Ramsar Site, spring 2009

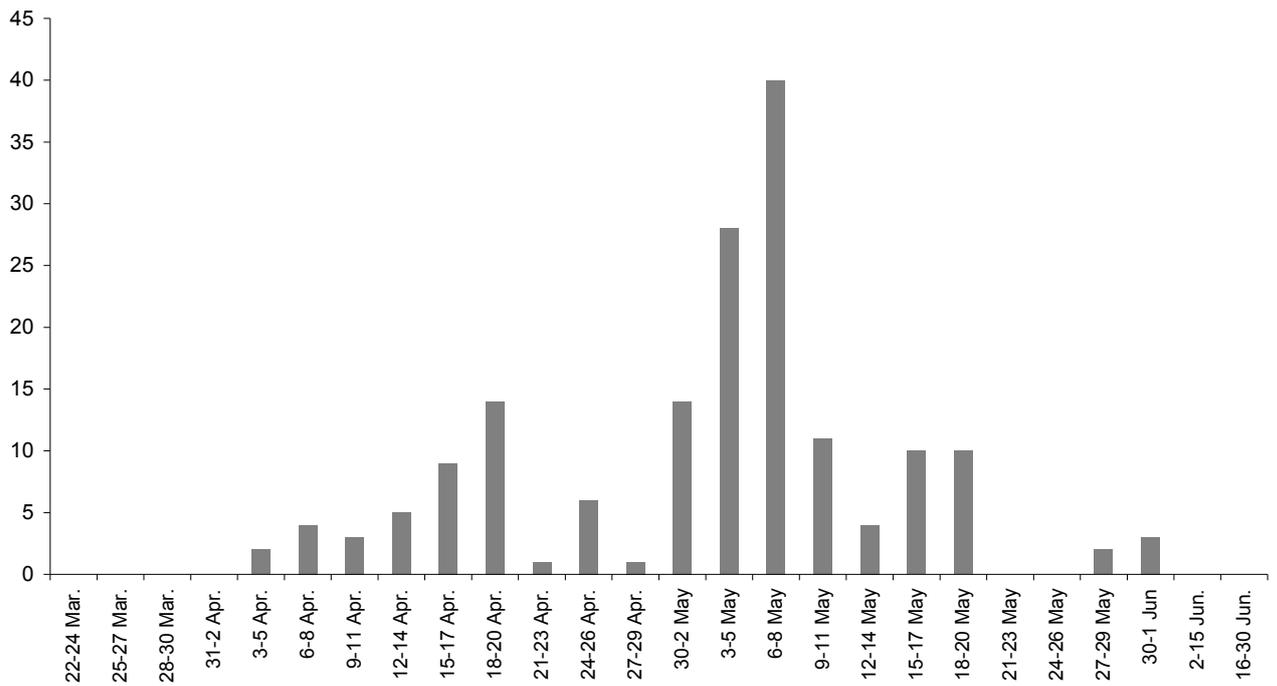


Figure 32. Counts of Asian Dowitcher at Mai Po Inner Deep Bay Ramsar Site, spring 2009

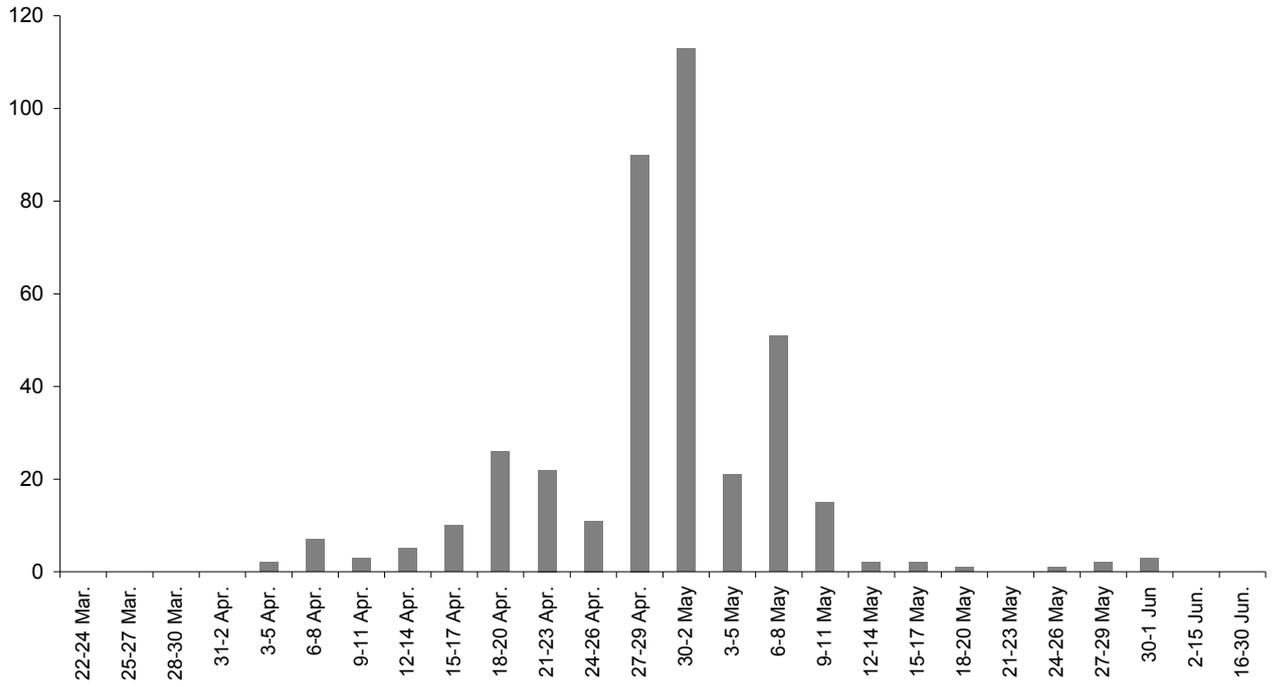


Figure 33. Counts of Red Knot at Mai Po Inner Deep Bay Ramsar Site, spring 2009

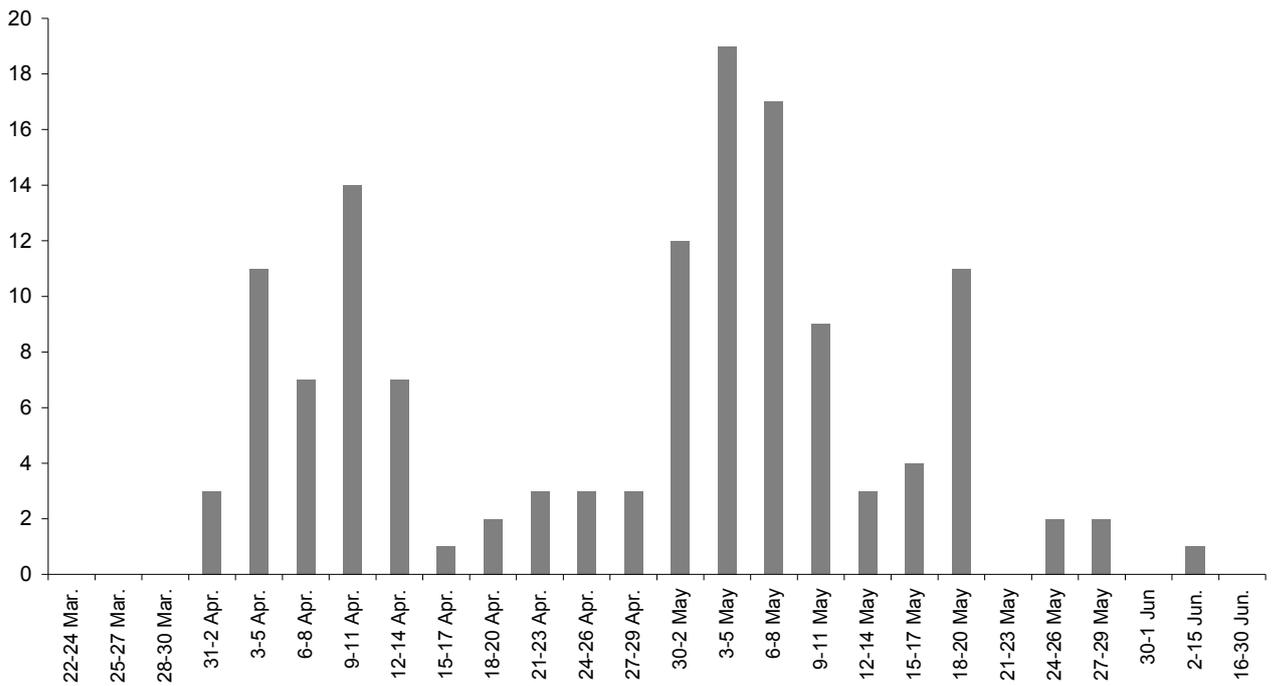


Figure 34. Counts of Great Knot at Mai Po Inner Deep Bay Ramsar Site, spring 2009

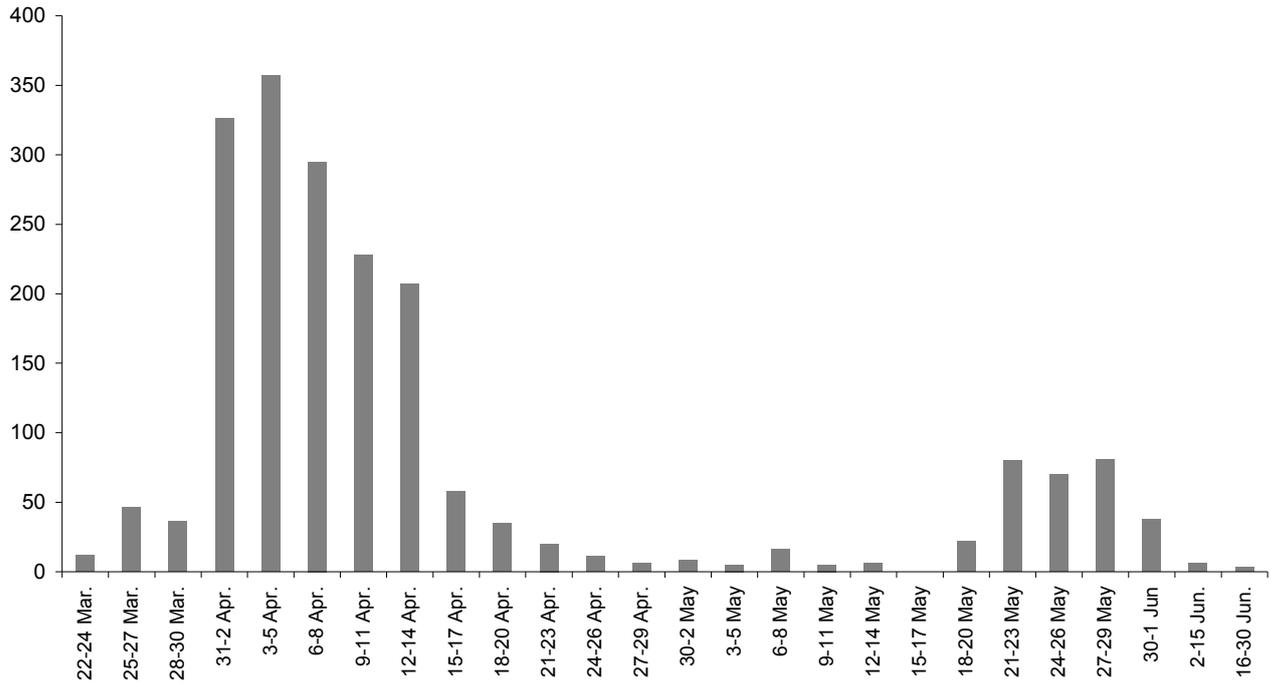


Figure 35. Counts of Red-necked Stint at Mai Po Inner Deep Bay Ramsar Site, spring 2009

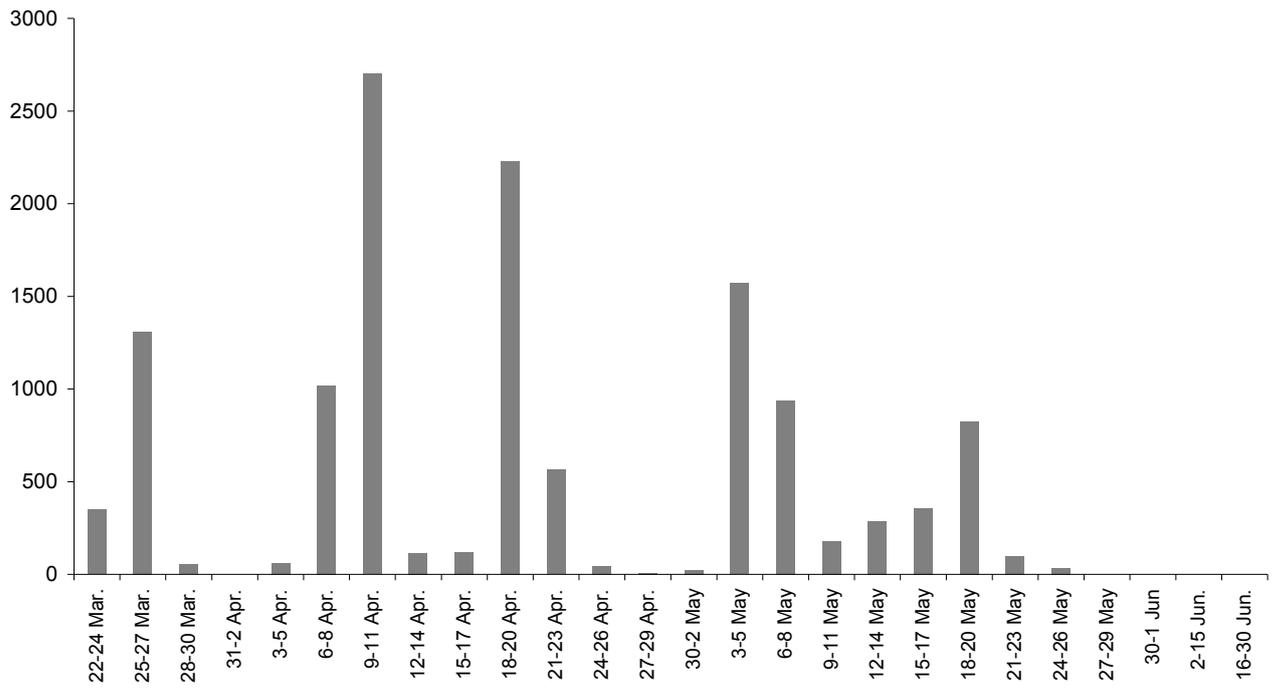


Figure 36. Counts of Sharp-tailed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2009

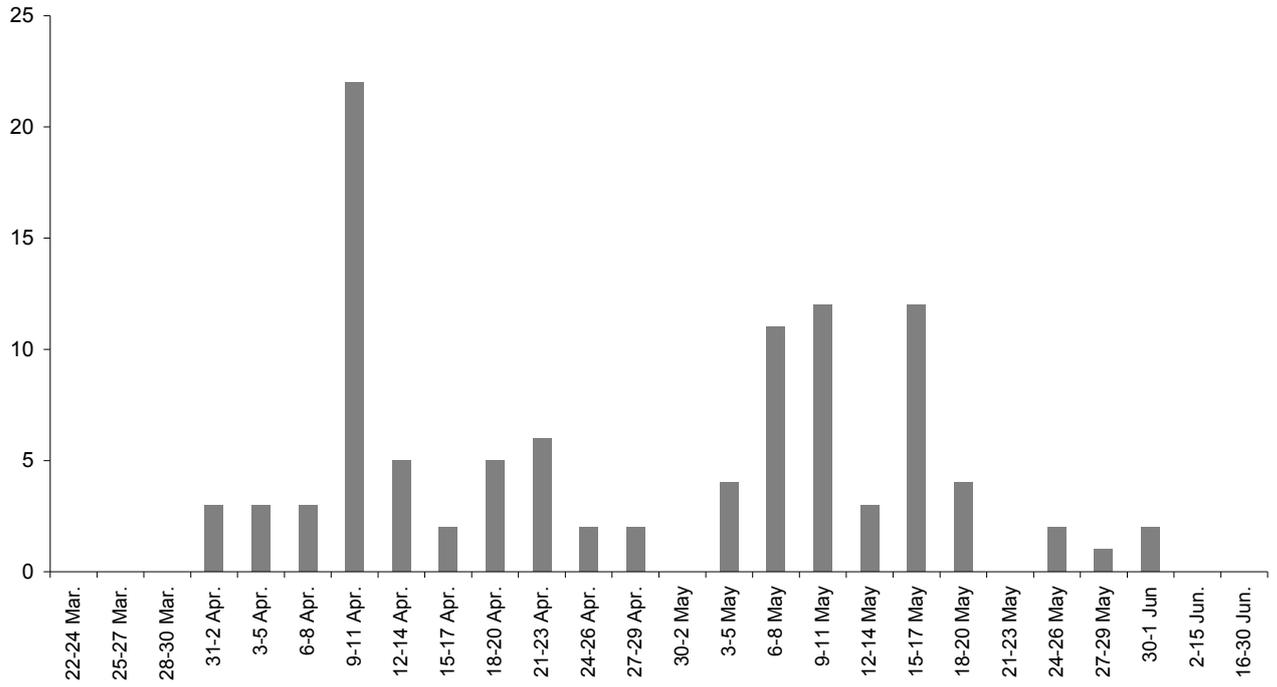


Figure 37. Counts of Curlew Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2009

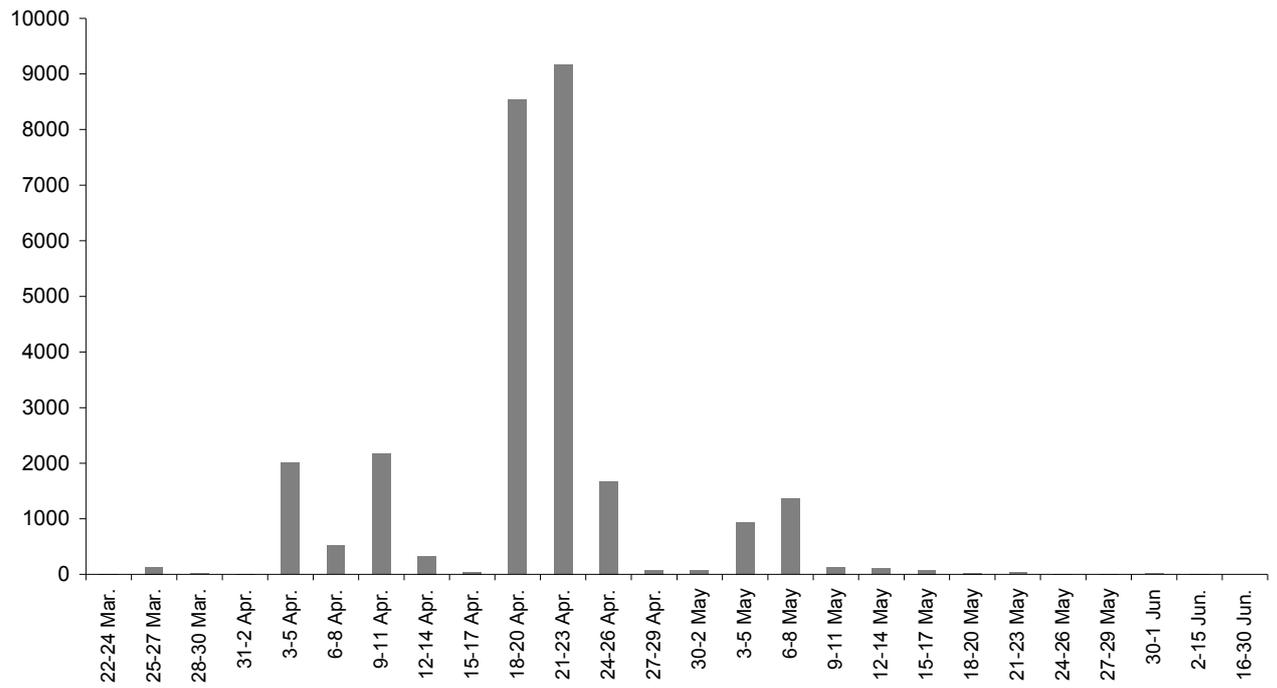
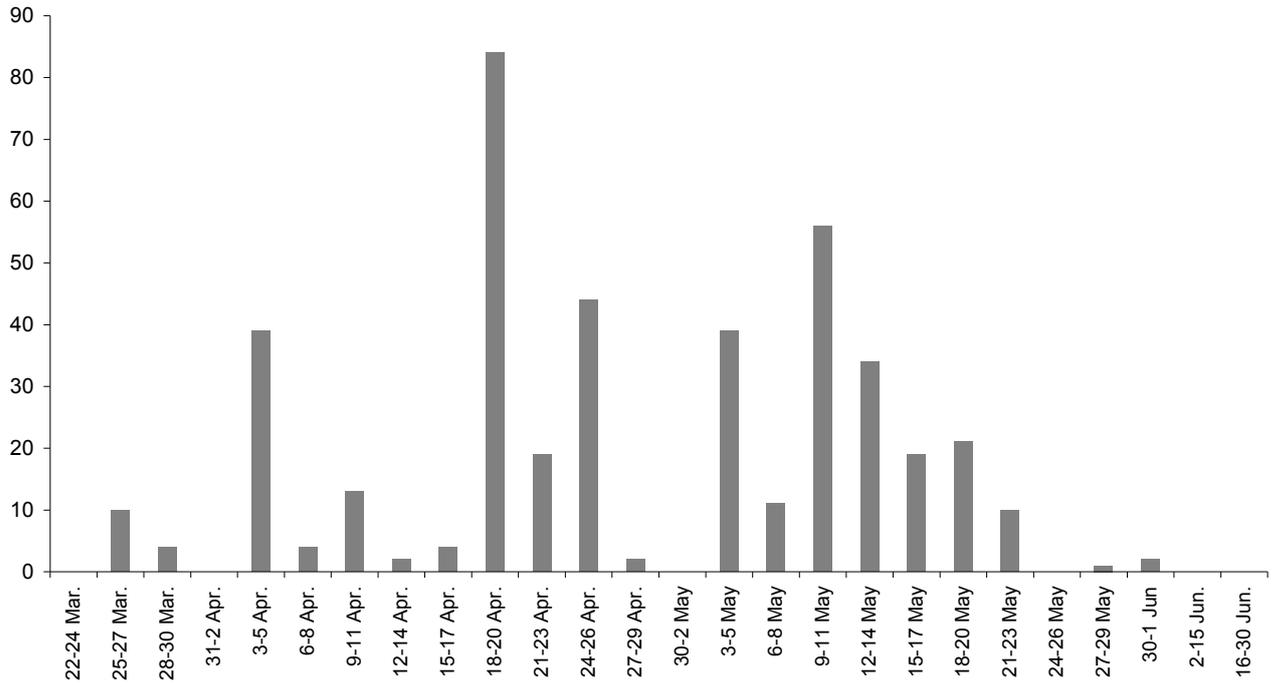


Figure 38. Counts of Broad-billed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2009



---

# Shorebird Monitoring at the Mai Po Marshes and Inner Deep Bay Ramsar Site

## 2008-09 Report

### ***Appendix 4***

Records of leg-flagged shorebirds in autumn 2008 and  
spring 2009



The Hong Kong Bird Watching Society Limited



Agriculture, Fisheries and Conservation Department

Records of leg-flagged shorebirds in autumn 2008 and spring 2009

Date	Observer	Species	Breeding plumage	Right Leg				Left Leg			
				Colour	Position	Colour	Position	Colour	Position	Colour	Position
31-Jul-08	Ying Hak King	Common Redshank	100	White	Above	Yellow	Below				
31-Jul-08	Ying Hak King	Common Redshank	100	White	Above	Yellow	Below				
31-Jul-08	Ying Hak King	Common Redshank	100	White	Above	Yellow	Below				
5-Aug-08	Ying Hak King	Red-necked Stint	50	Yellow	Above						
5-Aug-08	Ying Hak King	Curlew Sandpiper	75	White	Above	Yellow	Below				
5-Aug-08	Ying Hak King	Curlew Sandpiper	100	White	Above	Yellow	Below				
14-Aug-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
14-Aug-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
14-Aug-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
14-Aug-08	Yu Yat Tung	Whimbrel	0	White	Above	Yellow	Below				
20-Aug-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
28-Aug-08	Yu Yat Tung	Wood Sandpiper	0	White	Above	Yellow	Below				
28-Aug-08	Yu Yat Tung	Wood Sandpiper	0	White	Above	Yellow	Below				
28-Aug-08	Yu Yat Tung	Whimbrel	0	White	Above	Yellow	Below				
28-Aug-08	Yu Yat Tung	Grey Plover	0	White	Above	Yellow	Below				
12-Sep-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
12-Sep-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
12-Sep-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
12-Sep-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
12-Sep-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
12-Sep-08	Yu Yat Tung	Wood Sandpiper	Not observed	White	Above	Yellow	Below				
12-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
17-Sep-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
17-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
17-Sep-08	Yu Yat Tung	Black-tailed Godwit	0	White	Above	Yellow	Below				

25-Sep-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
25-Sep-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
25-Sep-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
25-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
25-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
25-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
25-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
25-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
25-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Black-tailed Godwit	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
30-Sep-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
12-Oct-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
12-Oct-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
12-Oct-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
12-Oct-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
12-Oct-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
12-Oct-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
16-Oct-08	Yu Yat Tung	Grey Plover	Not observed	White	Above	Yellow	Below				
16-Oct-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
16-Oct-08	Yu Yat Tung	Common Greenshank	Not observed	White	Above	Yellow	Below				
16-Oct-08	Yu Yat Tung	Black-tailed Godwit	Not observed	White	Above	Yellow	Below				
16-Oct-08	Yu Yat Tung	Black-tailed Godwit	Not observed	White	Above	Yellow	Below				

16-Oct-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
16-Oct-08	Yu Yat Tung	Grey Plover	Not observed	White	Above	Yellow	Below				
16-Oct-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
25-Oct-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
25-Oct-08	Yu Yat Tung	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				
25-Oct-08	Yu Yat Tung	Grey Plover	Not observed	White	Above	Yellow	Below				
25-Oct-08	Yu Yat Tung	Black-tailed Godwit	Not observed	White	Above	Yellow	Below				
25-Oct-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
30-Oct-08	Yu Yat Tung	Common Redshank	Not observed	White	Above	Yellow	Below				
30-Oct-08	Yu Yat Tung	Grey Plover	Not observed	White	Above	Yellow	Below				
25-Mar-09	Martin Hale	Marsh Sandpiper	75	White	Above	Yellow	Below				
25-Mar-09	Yu Yat Tung	Grey Plover	0	White	Above	Yellow	Below				
26-Mar-09	Martin Hale	Curlew Sandpiper	50	Orange	Above						
28-Mar-09	Yu Yat Tung	Grey Plover	0	White	Above	Yellow	Below				
28-Mar-09	Yu Yat Tung	Common Greenshank	0	White	Above	Yellow	Below				
28-Mar-09	Yu Yat Tung	Common Greenshank	0	White	Above	Yellow	Below				
31-Mar-09	Yu Yat Tung	Marsh Sandpiper	75	White	Above	Yellow	Below				
31-Mar-09	Yu Yat Tung	Great Knot	75	White	Above	Black	Below				
3-Apr-09	Yu Yat Tung	Grey Plover	0	White	Above	Yellow	Below				
3-Apr-09	Yu Yat Tung	Marsh Sandpiper	50	White	Above	Yellow	Below				
3-Apr-09	Yu Yat Tung	Great Knot	100	Yellow	Above	Orange	Below				
3-Apr-09	Yu Yat Tung	Great Knot	100	Yellow	Above						
3-Apr-09	Yu Yat Tung	Great Knot	100	Yellow	Above	(see note)					
3-Apr-09	Yu Yat Tung	Great Knot	100	Yellow	Above	(see note)					
3-Apr-09	Yu Yat Tung	Great Knot	100	Yellow	Above	(see note)					
3-Apr-09	Yu Yat Tung	Great Knot	100	Yellow	Above	(see note)					
8-Apr-09	David Diskin	Great Knot	Not observed	Yellow	Above	(see note)					
8-Apr-09	Neil Fifer	Great Knot	75	Yellow	Above	(see note)					
9-Apr-09	Neil Fifer	Great Knot	100	Yellow	Above	Red	Below (tarsus)	Orange	(on tarsus) above	Yellow	(on tarsus) below
10-Apr-09	Ying Hak King	Grey Plover	Not observed	White	Above	Yellow	Below				
10-Apr-09	Ying Hak King	Marsh Sandpiper	Not observed	White	Above	Yellow	Below				

10-Apr-09	Ying Hak King	Common Greenshank	Not observed	White	Above	Yellow	Below				
10-Apr-09	Ying Hak King	Great Knot	Not observed	Yellow	Above						
10-Apr-09	Ying Hak King	Great Knot	Not observed	Yellow	Above	(see note)					
10-Apr-09	Ying Hak King	Great Knot	Not observed	Yellow	Above	Red	Below				
10-Apr-09	Ying Hak King	Curlew Sandpiper	Not observed	Orange	Above						
16-Apr-09	Yu Yat Tung	Common Greenshank	50	White	Above	Yellow	Below				
16-Apr-09	Yu Yat Tung	Marsh Sandpiper	100	White	Above	Yellow	Below				
18-Apr-09	Yu Yat Tung	Lesser Sand Plover	25	White	Above	Yellow	Below				
18-Apr-09	Yu Yat Tung	Broad-billed Sandpiper	100	Yellow	Above						
18-Apr-09	Yu Yat Tung	Curlew Sandpiper	100	Yellow	Above						
18-Apr-09	Yu Yat Tung	Curlew Sandpiper	Not observed	Orange	Above						
18-Apr-09	Yu Yat Tung	Red-necked Stint	100	Yellow	Above						
18-Apr-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
18-Apr-09	Yu Yat Tung	Gull-billed Tern	100	Yellow	Below						
22-Apr-09	Yu Yat Tung	Curlew Sandpiper	100	White	Above	Yellow	Below				
22-Apr-09	Yu Yat Tung	Curlew Sandpiper	100	Yellow	Above						
22-Apr-09	Yu Yat Tung	Curlew Sandpiper	100	Orange	Above						
22-Apr-09	Yu Yat Tung	Marsh Sandpiper	100	White	Above	Yellow	Below				
22-Apr-09	Yu Yat Tung	Grey Plover	50	White	Above	Yellow	Below				
4-May-09	Yu Yat Tung	Red-necked Stint	75	Orange	Above						
4-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
4-May-09	Yu Yat Tung	Red-necked Stint	75	Yellow	Above						
5-May-09	Neil Fifer	Red-necked Stint	50	Yellow	Below						
7-May-09	Yu Yat Tung	Red-necked Stint	75	Orange	Above						
15-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
15-May-09	Yu Yat Tung	Red-necked Stint	50	Orange	Above						
15-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
18-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
18-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
18-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
18-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						

26-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
26-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
26-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
26-May-09	Yu Yat Tung	Red-necked Stint	100	Orange	Above						
28-May-09	Yu Yat Tung	Ruddy Turnstone	100	Orange	Above	Blue	below				
30-May-09	Yu Yat Tung	Ruddy Turnstone	100	Orange	Above	Blue	below				
30-May-09	Sam Chan	Greater Sand Plover	50	Black	Above	White	Below				
14-May-09	Neil Fifer	Curlew Sandpiper	50	Yellow	Above						
14-May-09	Neil Fifer	Red-necked Stint	Not observed	Orange	Above						
2-May-09	Bill Man	Red-necked Stint	50	Orange	Above						