Tender Reference No. AFCD/SQ/19/10

Mai Po Inner Deep Bay Ramsar Site Waterbird Monitoring Programme 2010 - 2011

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

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2010-11 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 2010/11	Shorebird Monitoring	July 2010 - June 2011

Shorebird Monitoring: 2010-11 Report

Introduction

A systematic long-term monitoring programme of waterbirds in the Mai Po Inner Deep Bay Ramsar Site has commenced in December 1997. Counts of shorebirds (also known waders) in migratory seasons comprised one major part of this programme, alongside other components like the monthly counts of waterbirds and surveys of ardeid nesting colonies. The Waterbird Monitoring Programme was administered and executed by the Hong Kong Bird Watching Society (HKBWS) under subvention from the Agriculture, Fisheries and Conservation Department (AFCD) from December 1998 to March 2004. Starting from April 2004, the Waterbird Monitoring Programme was arranged under service contracts funded by AFCD. This report focused on the results gathered from shorebird counts during migratory seasons from July 2010 to June 2011 under the tender reference number AFCD/SQ/19/10.

Methodology

Shorebirds mainly visit Hong Kong during migration in autumn and spring, some of them stay in Hong Kong throughout the winter. This study aimed at monitoring the fluctuation in shorebirds population numbers in the Mai Po Inner Deep Bay Ramsar Site throughout the year. The frequency of survey was higher during the main passage period, namely from late March to late May and from July to late October, but less frequent in the summer. Surveys in winter from November to mid-March were covered by the monthly waterbird count. The schedule of this shorebird monitoring programme was as follows:

- Autumn (1 July to 4 November 2010): one count per week;
- Winter (mid November 2010 to mid March 2011): one count per month;
- Spring (22 March to 1 June 2011): one count every block of three days;
- Summer (2 to 30 June 2011): two counts per month.

The main survey site was the Mai Po Marshes Nature Reserve (MPMNR) (Map 1)

where counts were made either in the *gei wais* or from one of the four bird watching hides at the boardwalk, depending on the tidal height. In general, counts were made in *gei wais* in MPMNR during the high tide period as the management initiatives put forward by the World Wide Fund For Nature Hong Kong (WWFHK) render permanent and suitable roosting sites for shorebirds. On the other hand, counts were made from the boardwalk hides during mid tide periods when the shorebirds feed in the intertidal area. The following procedures were adopted in the counting:

- Birds were counted from the boardwalk hides during the rising tide, starting at a tidal height of around 1.9m;
- Roosting birds were counted at *gei wais* in MPMNR;
- Birds were counted from the boardwalk hides during the falling tide until the time when the shorebirds were too far away from the observer making the count impossible.

The equipment used included 8x or 10x binoculars and a telescope with wide angle or 20-60x zoom eyepieces. Counting was carried out by HKBWS accredited waterbird surveyors who were experienced in bird counting and identification. All shorebirds present at the counting areas were identified to the species level. If shorebirds with leg flags were observed, details including species, colour and position of the leg-flags, age and/or the extent of breeding plumage were recorded, to provide additional information in identifying migration route or origin of the shorebird species (Appendix 4).

Results and discussion

The results of all shorebird counts are presented in details in Appendices 1 and 2, whereas the numbers of selected species are plotted on graphs in Appendix 3.

Autumn 2010

Shorebird number remained low with only a few hundred individuals recorded in the first three weeks of July. Their number increased quickly to over 1,700 individuals in the last week of July, subsequently to more than 2,000 individuals in the midst of August. Nevertheless, two counts with lower numbers were recorded in late August (28 August) and early September (6 September), probably due to disturbances caused by maintenance works carried out in the Scrape (i.e. Pond no. 16/17, Map 1) at low water level during the month. Thereafter, the shorebird numbers bounced back to over 3,000 individuals in late September and further up to 4,000 individuals in October, when the water level in Pond 11 was maintained at a

suitable depth for the roosting shorebirds. Shorebird numbers peaked at 4,580 individuals (of 17 species) on 22 October, but dropped slightly to 3,975 individuals on 3 November 2010. This autumn peak count showed a marginal increase of 2% from that of 4,493 individuals in 2009.

Marsh Sandpiper *Tringa stagnatilis*, Common Redshank *Tringa tetanus* and Common Greenshank *Tringa nebularia* were the three most abundant shorebird species recorded in autumn 2010, which reached the peak at 2,503 individuals on 22 October, 1,268 individuals on 22 July and 983 individuals on 22 October respectively. The big flocks of Marsh Sandpipers (Figure 14) and Common Greenshanks (Figure 15) included some wintering individuals, while the high number of Common Redshank were mainly on autumn passage because it used to be fewer numbers of Common Redshanks were recorded after July (Figure 13).

Other shorebirds species which were considered to be passage migrants in autumn 2010 included Pacific Golden Plover *Pluviallis 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), 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, during the shorebird count, the arrival dates of wintering species were also noted as appended below:

- Black-tailed Godwit *Limosa limosa* – late September (Figure 8, c.f. mid-September 2009, early September 2008, September 2007, late September 2006, mid-September 2005 and 2004, early September 2003, late August 2002).
- Eurasian Curlew *Numenius arquata* – late August (Figure 11, c.f. mid-August 2009, September 2008, September 2007, September to early October 2006, mid-September 2005, 2004, 2003 and 2002)
- Spotted Redshank *Tringa erythropus* – late October (Figure 12, c.f. mid-October 2009, late October 2008, 2007 and 2006, mid October 2005, 2004, 2003, late September 2002).
- Marsh Sandpiper *Tringa stagnatilis* – late September (Figure 14, c.f. late September 2009, mid-September 2008, late September 2007, late September 2006, 2005, 2004, mid-September 2003, early September 2002).

Winter 2010-2011

In the mid-winter period of December 2010 to February 2011, the winter aggregate in the Deep Bay area was 23,100 birds from 28 species (Table 2). It represented the sum of the peak counts of each shorebird species recorded during the period. This figure showed an 11% decrease when compared to the last winters' aggregate of 25,868 birds of 33 species. The five most abundant shorebird species in winter 2010-11 were Pied Avocet *Recurvirostra avosetta* (10,944 individuals), Marsh Sandpiper (2,884), Black-tailed Godwit (1,900), Eurasian Curlew (1,602) and Dunlin (1,470). When comparing these species with last winter's aggregate, the numbers of Pied Avocet, Kentish Plover *Charadrius alexandrinus* (4,328 in the previous winter), Marsh Sandpiper and Dunlin *Calidrius alpine* (2,500 in the previous winter) had decreased while the numbers of Pacific Golden Plover, Black-tailed Godwit and Eurasian Curlew had increased. It was noted that tidal height was an important factor which affected the results of the shorebird counts as the water level during high-tide period in daytime during winter was lower and less predictable than those in spring and autumn. This rendered shorebird counting from the boardwalk hides at the MPMNR more difficult.

Spring 2011

Shorebird numbers in spring 2011 started with a count of 5,559 individuals recorded on 22 March, including a total of 1,548 Curlew Sandpipers *Calidris ferruginea,* a species which usually reaches its peak count in late April (Figure 37). This suggested that their spring migration might have started earlier this year. The shorebird numbers fluctuated at around 4,000 and 6,000 individuals whereas there were two high counts of 9,482 (27 species) and 8,789 birds (26 species) recorded on 31 March and 6 April respectively (Figure 20). The former record was also the peak count for this spring, though 35% lower than the peak count recorded in spring 2010 (i.e. 14,559 individuals on 11 April 2010). Towards the mid and late April, the shorebird numbers further lowered to the range between 3,000 and 4,000 individuals. The shorebird numbers bounced back to a higher level in early May at 6,125 individuals (on 4 May), revealing the second major influx of shorebirds in this spring. The numbers then descended significantly to 2,325 individuals on 9 May and to 1,318 individuals on 15 May, then only 679 individuals on 24 May and finally 468 birds on 1 June, signaling the lapse of spring migration period.

Among all shorebird species recorded, Curlew Sandpiper was the most abundant in this spring with 5,794 individuals on 31 March. Nevertheless, the peak count for this spring was 38% less than the peak count of the previous year (i.e. 9,296 individuals) as counted around three weeks earlier. Red-necked Stint *Calidris ruficollis* was

another species recorded in high numbers during the spring migration and it also exhibited a similar pattern as Curlew Sandpiper with a sharp decline by 75% (Table 1). As a result of the decline in numbers of Curlew Sandpiper and Red-necked Stint, the overall peak count of shorebirds were lowered by 32% (16,187 individuals) from that of the previous spring (23,871 individuals). This spring aggregate was also the lowest in recent years. Table 1 provided more information of peak counts of some shorebird species and the spring aggregate since 2005. Figure 21 to 38 present number of shorebirds recorded in Spring 2011.

Table 1. Fluctuations in the peak counts of shorebirds during spring in recent years.

Species	2011	2010	2009	2008	2007	2006	2005
Pacific Golden Plover *Pluviallis fulva*	305	525	288	67	160	219	54
Lesser Sand Plover *Charadrius mongolus*	79	87	85	78	179	35	30
Ruddy Turnstone *Arenaria interpres*	34	30	40	46	100	34	39
Red Knot *Calidris canutus*	25	26	19	52	144	16	5
Red-necked Stint *C. ruficollis*	956	3,756	2,700	733	2,239	1,478	1,909
Long-toed Stint *C. subminuta*	59	28	32	20	4	11	7
Sharp-tailed Sandpiper *C. acuminate*	130	59	22	86	175	68	41
Curlew Sandpiper *C. ferruginea*	5,794	9,296	9,168	9012	10,982	4,151	3,947
Total spring aggregate number	16,187	23,871	23,614	18,468	21,223	14,942	14,312

Summer 2011

Shorebird numbers in summer 2011 (i.e. June 2011) were comparatively lower than those of other seasons. A total of 150 and 149 birds were recorded on 13th and 29th June 2011respectively, which were higher than that in the previous summer (100 individuals in June 2010). The breeding Black-winged Stilts *Himantopus himantopus* were the dominant species with 62 and 50 adult birds in both counts. Other migratory shorebird species were only recorded in smaller numbers as most of them had left the MPMNR in May to continue their northward migration journeys.

Aggregate numbers recorded

The aggregate total number of shorebirds recorded in spring and autumn were derived from the peak count for each species in each season. In an attempt to estimate the total number of shorebirds that utilised the Mai Po Inner Deep Bay Ramsar Site during the 12-month period from July 2010 to June 2011, the peak winter

count (i.e. December to February) obtained during winter waterbird counts was also included. Some shorebird individuals stayed in the wetlands for a prolonged period of time, so they might be subjected to repeated counts in different seasons. These counts were excluded from the calculation and marked with asterisks in Table 2.

Table 2. Estimated minimum number of shorebirds utilising the Mai Po Inner Deep Bay Ramsar Site during the 12-month period from July 2010 to June 2011.

Year	2010	2010-11	2011	2010-11	2009-10	2008-09	2007-08	2006-07
Species	**autumn**	**winter**	**spring**	**Minimum**	**Minimum**	**Minimum**	**Minimum**	**Minimum**
Pheasant-tailed Jacana *Hydrophasianus chirugus*	0	1	2	3	2	1	5	2
Greater Painted-snipe *Rostratula bengalensis*	1	0	3	4	3	4	2	4
Black-winged Stilt *Himantopus himantopus*	403*	542	359*	542	1703	1614	670	468
Pied Avocet *Recurvirostra avosetta*	256*	10944	7636*	10944	13883	13061	16123	11957
Oriental Pratincole *Glareola maldivarum*	0	0	6	6	4	3	9	8
Northern Lapwing *Vanellus vanellus*	0	0	0	0	0	0	0	0
Grey-headed Lapwing *V. cinereus*	1	1	0	2	0	1	4	6
Pacific Golden Plover *Pluviallis fulva*	55	782	305	1142	539	731	642	270
Grey Plover *P. squatarola*	18*	320	88*	320	637	582	780	390
Common Ringed Plover *Charadrius hiaticula*	0	0	0	0	1	0	0	0
Little Ringed Plover *C. dubius*	3	114	3	120	206	349	228	237
Kentish Plover *C. alexandrinus*	13*	720	253*	720	4328	2356	1867	263
Lesser Sand Plover *C.mongolus*	31	1	79	111	92	119	85	193
Greater Sand Plover *C.leschenaultii*	271	0	590	861	941	795	383	369
Oriental Plover *C. veredus*	0	0	0	0	0	0	1	0
Black-tailed Godwit *Limosa limosa*	615*	1900	1532	3432	2449	2223	1656	2352
Bar-tailed Godwit *Limosa lapponica*	11	0	9	20	55	106	80	123
Little Curlew *Numenius minutes*	0	0	0	0	0	0	0	0
Whimbrel *Numenius phaeopus*	237	29	33	299	188	303	203	209
Eurasian Curlew *N. arquata*	125*	1602	280*	1602	1075	1065	1116	1049
Far Eastern Curlew *N. madagascariensis*	1	0	4	5	22	18	23	8
Spotted Redshank *Tringa erythropus*	157*	160	463	623	990	1690	1641	2390
Common Redshank *T. totanus*	1268	90	219	1577	1473	2215	2257	3160
Marsh Sandpiper *T. stagnatilis*	2503*	2884*	3056	3056	3381	3192	3090	1662
Common Greenshank *T. nebularia*	983*	1149	1425	2574	3495	4366	4493	4724
Nordmann's Greenshank	1	1*	44	45	16	34	26	51

Year	2010	2010-11	2011	2010-11	2009-10	2008-09	2007-08	2006-07
Species	**autumn**	**winter**	**spring**	**Minimum**	**Minimum**	**Minimum**	**Minimum**	**Minimum**
T. guttifer								
Green Sandpiper *T. ochropus*	3	24	1	28	45	31	34	42
Wood Sandpiper *T. glareola*	169	201	198	568	364	578	501	1008
Terek Sandpiper *Xenus cinereus*	21	1	402	424	619	600	571	619
Common Sandpiper *Actitis hypoleucos*	5	88	3	96	123	65	86	83
Grey-tailed Tattler *Heteroscelus brevipes*	2	0	13	15	15	188	26	32
Ruddy Turnstone *Arenaria interpres*	0	0	34	34	30	41	46	100
Red-necked Phalarope *Phalaropus lobatus*	0	0	6	6	12	7	34	2
Pintail/Swinhoe's Snipe *Gallinago stenura/megala*	6	1	0	7	6	3	12	15
Common Snipe *Gallinago gallinago*	1	25	1	27	21	5	28	38
Long-billed Dowitcher *Limnodromus scolopaceus*	2	1*	4	6	3	5	3	3
Asian Dowitcher *Limnodromus semipalmatus*	14	0	68	82	194	138	441	138
Red Knot *Calidris canutus*	2	0	25	27	50	25	66	152
Great Knot *C. tenuirostris*	17	0	157	174	407	432	207	368
Sanderling *C. alba*	0	0	6	6	4	12	5	10
Red-necked Stint *C. ruficollis*	33	1	956	990	3861	2779	913	2422
Little Stint *C. minuta*	0	0	2	2	3	6	2	3
Temminck's Stint *C. temminckii*	0	47	4	51	53	43	21	27
Long-toed Stint *C. subminuta*	5	0	59	64	39	45	28	9
Pectoral Sandpiper *C. melanotos*	0	0	0	0	0	0	1	0
Sharp-tailed Sandpiper *C. acuminate*	1	0	130	131	59	31	90	177
Dunlin *C. alpine*	6	1470	2	1478	2500	1177	1800	93
Curlew Sandpiper *C. ferruginea*	95	0	5794	5889	9350	9454	9195	11143
Spoon-billed Sandpiper *Eurynorhynchus pygmeus*	0	0	4	4	1	1	2	8
Broad-billed Sandpiper *Limicola falcinellus*	6	0	95	101	55	89	141	95
Ruff *Philomachus pugnax*	1	1	3	5	3	4	6	11
Tringa spp.	0	6800*	0	0	0	3870	939	0
Small wader spp. (mainly Dunlin or Kentish Plover)	0	0	0	0	0	0	0	2150
NUMBER OF SPECIES	38	28	44	46	46	46	48	46
AGGREGATE SHOREBIRD SPECIES PEAK COUNT	7342	23100	16187	38223	53300	54457	50582	48643

Note: Figures with asterisks refer to counts of birds believed to be the same individuals across different seasons.

The all-year shorebird aggregate recorded in this period was 38,223, with a considerably decrease by 28% compared to the corresponding figure at 53,300 of the previous year. The decrease was obviously related to the declines of numbers of several common species including Pied Avocet, Kentish Plover, Red-necked Stint, Dunlin and Curlew Sandpiper which were recorded in lower numbers either in winter period or during the spring migration. In addition, there were increases in numbers for several species such as Pacific Golden Plover, Black-tailed Godwit and Eurasian Curlew compared to their counts of the previous year. On the other hand, the aggregate of spring and autumn migratory shorebird was only 23,529 individuals, i.e. 14% lower than the count in the previous year (i.e. 27,432).

The ten most abundant shorebird species recorded in this 12-month period (i.e. July 2010 – June 2011), in descending order, were: Pied Avocet (10,944, 28% of all-year aggregate), Curlew Sandpiper (5,889, 15%), Black-tailed Godwit (3,432, 8.8%), Marsh Sandpiper (3,056, 7.8%), Common Greenshank (2,574, 6.6%), Eurasian Curlew (1,602, 4.1%), Common Redshank (1,577, 4.0%), Dunlin (1,478, 3.8%), Pacific Golden Plover (1,142, 2.9%) and Red-necked Stint (990, 2.6%).

It is manifest that the peak count scored in a single day falls short of illustrating the total abundance of the shorebird utilising one area because rarely had the turnover in the numbers been studied before. Other studies using marked birds in Morocco and Malaysia (Howes and Bakewell 1989) suggested that the total number of shorebird using a given area during migration lies in the range of 3-4.5 times the peak daily count of passage shorebirds. By adopting this estimate and the aggregate figure of 23,529 in autumn and spring, the Deep Bay area might host a total of passage shorebird in the range of 70,587 and 105,081 during migratory season in 2010-11.

Regionally important populations

Estimates of the shorebird population and the 1% level of the flyway or regional population of all waterbird species was adapted from the information provided by Wetlands International (2006) and Li *et al*. (2009). Significant proportions of certain migratory shorebirds were found to utilise the Mai Po Inner Deep Bay Ramsar Site, as shown in Table 3 where the numbers recorded in the Ramsar Site and their percentages to the flyway or regional during the course of July 2010 to June 2011 are listed alongside their flyway or regional populations.

Table 3. Numbers of species recorded in Deep Bay area from July 2010 to June 2011 as compared to flyway/regional populations.

Species	Flyway/regional population	Number recorded	Percentage
Pied Avocet *Recurvirostra avosetta*	1,000 (1% level)	10,944	11%
Pacific Golden Plover	1,000 (1% level)	1,142	1.1%
Black-tailed Godwit *Limosa limosa*	160,000	3,432	2.1%
Eurasian Curlew *Numenius arquata*	35,000	1,602	4.5%
Common Redshank *Tringa totanus*	1,000 (1% level)	1,577	1.6%
Common Greenshank *Tringa nebularia*	1,000 (1% level)	2,574	2.5%
Nordmann's Greenshank *Tringa guttifer*	500-1,000	45	5-9%
Curlew Sandpiper *Calidris ferruginea*	180,000	5,889	3.3%

Noted: Numbers of Kentish Plover, Spotted Redshank and Terek Sandpiper recorded were over 1% flyway/regional population level in some previous years but not in 2010-2011.

Globally threatened species

With regard to species listed with conservation concern by BirdLife International (2000, 2004, 2011a, 2011b, 2011c, 2011d, 2011e, 2011f and 2010g), the following results were acquired during July 2010 to June 2011:

- Black-tailed Godwit: this species was first listed as Near-threatened in 2006 (BirdLife International 2011a) with a rapid decline at 30% of the population over the last 15 years. During the study period, a total of 3,432 individuals were recorded, of which a total of 1,900 were recorded at Futian National Nature Reserve, Shenzhen in February 2011 and a peak count of 1,532 individuals was recorded at MPMNR in spring. This total was a new high figure in the Deep Bay area, with a large increase of 40% from the previous year's same figure.

- Eurasian Curlew: this species was for the first time listed as Near-threatened in 2008 with a suspected rapid decline by 30% of its population during the past 15 years (BirdLife International 2011b). The peak count of this species was 1,602 individuals in January, with an immense increase of 50% from that in the previous year. This figure also symbolized a new high record of this species in the Deep Bay area and constituted 4.5% of the regional population (Wetlands International 2006, 2009).

- Far Eastern Curlew: this species was firstly listed as Vulnerable in 2010 by owing to a rapid population decline by more than 30% over the past 30 years

and a severe loss of its habitats (BirdLife International 2011c). A total of five individuals (four at spring, one at autumn) were recorded during 2010-2011, which was 74% lower than the count in the previous year of 19 individuals. This was a relatively low figure in recent years.

- Nordmann's Greenshank: this species was listed as Endangered attributable to its very small global population at 500 to 1,000 individuals (BirdLife International 2011d). A total of 38 adults and six first-year individuals were counted in the spring, whilst one individual was counted in the autumn and winter, resulting in an all-year total of 45 individuals. This figure was almost a triple of the total of 16 birds recorded in the previous year. This was a good year for this endangered species.

- Asian Dowitcher: this species was listed as Near-threatened owing to moderately small population at 23,000 mature individuals but still widespread throughout the region (BirdLife International 2011e). A total of 82 individuals (14 in autumn, 68 in spring) were counted in 2010-11, showing a sharp decline by 58% from the comparable figure of 194 individuals in the previous year. Hence, this was a poor year for this species.

- Great Knot: it was firstly listed as Vulnerable in 2010 due to the rapid decline in its population and habitat loss (BirdLife International 2011f). In 2010-11, a total of 174 individuals were counted including 17 individuals in autumn and 157 in the spring. This year's total embraced a dramatic decrease by 60% from the aggregate figure of the previous year. This was a poor year for this species.

- Spoon-billed Sandpiper: this species was listed as Critically Endangered and is facing an immediate risk of extinction in a view of a severe global population crash to only between 240 to 500 mature individuals in recent years due to hunting and habitat loss and this species is facing an immediate risk of extinction (BirdLife International 2011g). This species had been regular spring migrant in Hong Kong but very scarce in autumn. A total of four different individuals were counted in April 2011, but none was recorded in autumn 2010 and May 2011, the time when the first-year birds were usually seen. Only one was recorded in spring 2010.

Leg-flagged shorebird sightings

During the period between July 2010 and June 2011, a total of 115 leg-flagged

shorebirds were re-sighted through direct observations by shorebird count surveyors, reports from bird watchers and photographers, as well as information published in the Hong Kong Bird Watching Society webpage. This signified an increase of 32% compared to the total of the previous year. Of these re-sightings, a total of 54 birds (47% to total) were fitted with Hong Kong flags (colour combination being white flag above and yellow flag below) at MPMNR, whereas a total of 61 re-sightings (53%) of individuals with overseas flags were recorded in this period (Appendix 4).

Red-necked Stint made up the largest portion of re-sighting records with 25 counts (22% of total), followed by Common Redshanks with 24 counts (21%). In addition, 25 re-sightings (22%) were birds carrying a single yellow flag, suggesting their origin in northwestern Australia. Other interesting re-sighting records included the birds from Hokkaido of Japan (a Red-necked Stint), Yalu River of Liaoning, China (a Dunlin), Bohai of Hebei, China (two Curlew Sandpipers), Shanghai (a Red-necked Stint and two Terek Sandpipers), Taiwan (a Black-winged Stilt), Thailand (a Red-necked Stint) and Malaysia (a Grey-tailed Tattler); all these were rarely re-sighted in Hong Kong before. More details were provided in the Appendix 4.

Other observations

The overall aggregate figure of this year was lower than that of the two preceding years. The once most abundant wintering Pied Avocets of previous years were recorded in lower number, whereas the numbers of passage migrants Curlew Sandpiper and Red-necked Stint plummeted significantly. As low temperature persisted for a long period this winter, it had been envisaged that more waterbirds migrated to the Deep Bay area from the north. However, the chilly winter hardly brought more waterbirds (including shorebirds) to utilise the Deep Bay area in the winter. In addition, low numbers of shorebirds were observed in the Deep Bay area in the 2011 spring. According to the Hong Kong Observatory, the weather was sunny and dry in April and May 2011. It might facilitate shorebirds to expedite their northward migration journeys and shorten the time for stopover in Deep Bay area for rest and replenishment. Against the above, observations in some previous springs showed that more shorebirds were counted in MPMNR during adverse weather such as thunderstorms and typhoons, most notable case of which was the approach of typhoon Neoguri in April 2008 which brought a high number of Curlew Sandpipers at 9,012 individuals. However, no such adverse weather conditions were recorded in spring of 2011. The fine weather may have been one of the main factors accounting for the low numbers of shorebird present during the counting period for this spring.

Active management of MPMNR has provided suitable habitats for shorebirds. The decrease in shorebird numbers recorded during the study period might cast doubt on the importance or effectiveness of the habitat management regimes; instead, the low numbers were more closely related to the weather condition. Habitat management remains as a key element in waterbird (including migratory shorebirds) conservation that has become increasingly important for the survival of the shorebirds in the region amid the large-scale habitat destructions ongoing in many sites along the flyway in the region. For such reason, decreases were witnessed in Far Eastern Curlew population and Great Knot has become a globally threatened species in 2010 and the Spoon-billed Sandpiper is experiencing catastrophic population crash in recent years.

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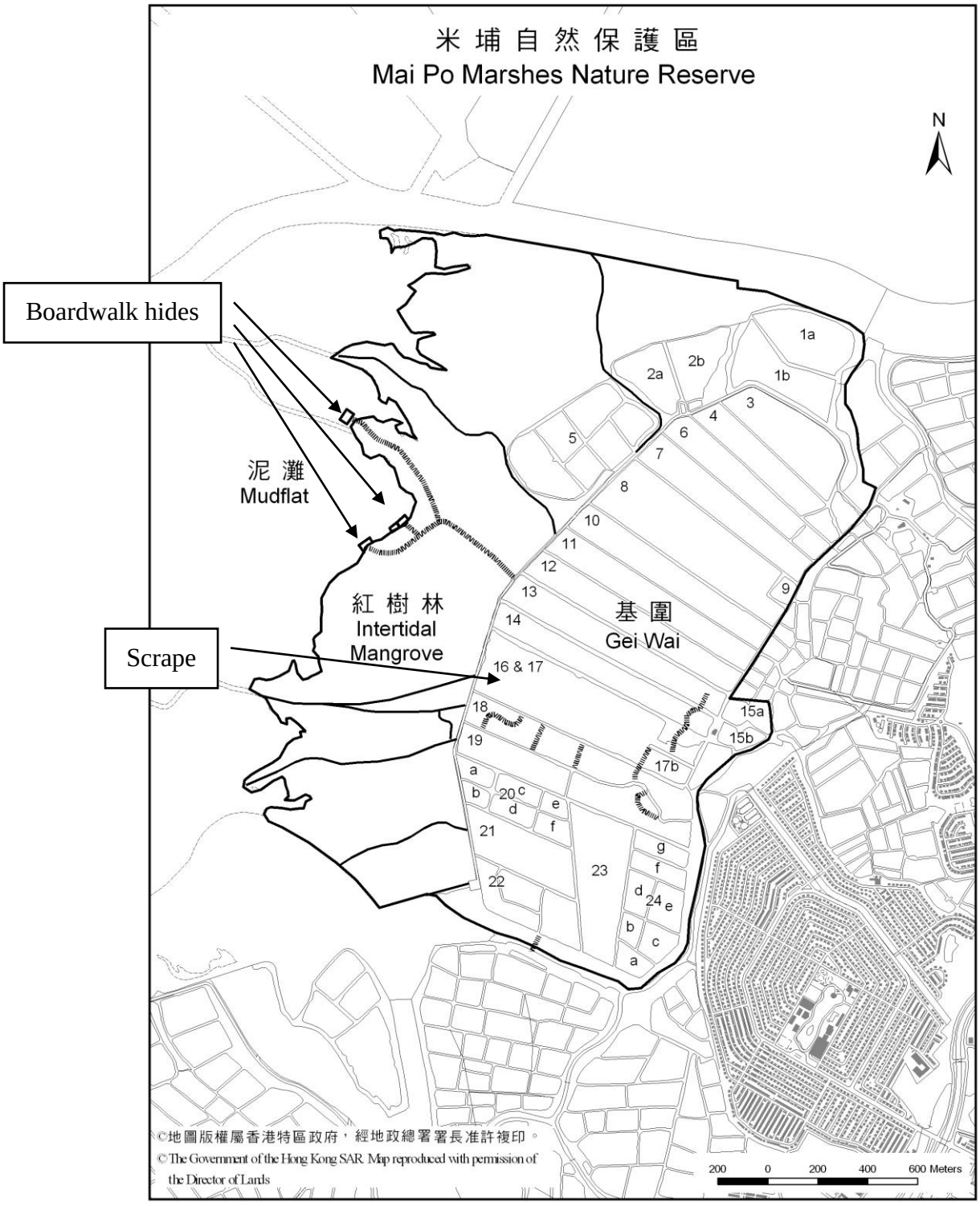
Map 1. The Mai Po Nature Reserve – the study site of shorebird monitoring programme, 2010-11.



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

2010-11 Report

Appendix 1

Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in autumn 2010

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 2010

	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	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	1	0	0	0	0	0	0	0	0	0	0	0	0
Black-winged Stilt	7	9	1	5	40	11	5	5	2	93	86	15	88	403	360	307	293	160
Pied Avocet	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	256
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	0	1	0	0	0
Pacific Golden Plover	0	0	0	0	0	0	0	55	2	0	0	0	4	0	0	0	0	0
Grey Plover	0	2	2	1	2	1	4	3	6	0	18	0	0	0	0	1	1	0
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	2	1	0	0	3	1	1	1	0	2	0	0	1	0	0	1	0
Kentish Plover	0	0	0	0	0	0	0	1	0	0	0	0	0	0	13	0	2	0
Lesser Sand Plover	0	0	2	0	25	31	17	16	0	0	4	0	0	0	0	0	0	0
Greater Sand Plover	12	12	32	0	135	107	271	243	100	10	36	3	6	0	1	0	0	0
Oriental Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Black-tailed Godwit	0	2	3	3	20	61	60	143	213	241	261	360	459	467	426	567	467	615
Bar-tailed Godwit	0	0	0	0	0	0	0	0	0	3	11	0	7	1	4	0	0	0
Little Curlew	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Whimbrel	5	10	8	11	20	8	101	237	56	135	195	4	18	1	27	1	1	1
Eurasian Curlew	10	12	19	25	112	60	65	68	84	70	62	79	77	106	95	102	98	125
Far Eastern Curlew	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Spotted Redshank	0	0	0	0	3	5	0	3	1	1	8	12	10	30	36	49	54	157
Common Redshank	23	116	353	1268	887	718	704	435	121	290	229	248	230	227	212	108	166	84
Marsh Sandpiper	0	3	9	14	10	13	33	107	57	170	492	662	1405	1680	1983	2266	2503	1606
Common Greenshank	45	110	196	296	621	784	771	928	443	809	905	858	736	883	795	752	983	967
Nordmann's Greenshank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Green Sandpiper	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	0	0
Wood Sandpiper	10	7	6	75	96	78	43	60	1	5	169	44	6	22	8	16	2	0
Terek Sandpiper	0	1	9	20	4	3	21	14	5	0	5	0	1	0	0	1	0	0
Common Sandpiper	0	0	0	0	5	0	1	2	4	0	0	0	0	0	1	0	0	0
Grey-tailed Tattler	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0

	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
Ruddy Turnstone	0	0	0	0	0	0	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	0	0	0	0	0	0
Pintail/Swinhoe's Snipe	0	0	0	0	0	0	0	0	0	0	6	3	0	1	0	0	0	0
Common Snipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Long-billed Dowitcher	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
Asian Dowitcher	0	0	0	0	0	5	2	3	3	1	14	3	9	2	1	0	0	0
Red Knot	0	0	0	0	0	1	0	0	0	0	0	2	1	0	0	0	0	0
Great Knot	0	0	0	0	0	2	1	0	2	1	17	12	5	5	5	6	3	0
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	0	3	27	24	28	4	0	33	0	5	0	0	0	0	0
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	0	5	0	0	2	0	0	2	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	0	0	0	0	0	0	0	0	0	0	0	0
Dunlin	0	0	0	0	0	0	0	0	0	0	0	1	6	5	2	0	3	1
Curlew Sandpiper	0	0	0	5	40	95	66	17	3	0	5	3	2	0	0	0	0	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	0	0	3	5	3	2	0	6	2	0	6	0	0	0	0
Ruff	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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 *tringa* sp.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total:	112	286	642	1725	2028	2018	2195	2376	1110	1832	2567	2311	3076	3841	3970	4176	4580	3975

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

2010-11 Report

Appendix 2

Counts of shorebirds in the Mai Po Inner Deep Bay Ramsar Site in spring 2011

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 2011

	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	1	0	0	2	0	0	0
Greater Painted-snipe	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	1	0	0	3	2
Black-winged Stilt	359	351	195	216	0	267	169	56	31	211	56	61	78	156	83	111	98	87	126	146	127	120	98	117	62	50
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	4	0
Oriental Pratincole	2	0	0	0	0	1	0	0	0	0	1	5	4	0	0	0	4	1	5	2	0	6	0	2	0	0
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
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
Pacific Golden Plover	24	17	74	177	20	224	278	305	0	103	4	6	5	11	34	207	26	9	6	2	1	0	1	1	0	0
Grey Plover	20	0	15	84	66	8	88	69	24	12	0	0	19	11	33	49	10	24	29	22	14	18	8	7	5	5
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
Little Ringed Plover	0	0	2	0	0	0	3	0	0	0	0	2	0	2	2	0	0	0	3	2	1	1	1	2	0	0
Kentish Plover	253	0	129	146	10	14	19	16	15	0	0	0	4	3	2	3	1	2	0	0	0	3	0	0	0	0
Lesser Sand Plover	0	0	0	19	11	27	2	16	79	2	5	0	40	31	40	51	14	34	23	19	13	5	12	5	0	0
Greater Sand Plover	2	1	10	158	242	22	33	109	590	6	18	4	280	66	125	103	58	81	81	72	42	58	28	19	0	3
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
Black-tailed Godwit	356	592	439	0	0	1249	1130	1043	234	1532	1118	1224	300	448	317	257	9	8	10	7	13	10	9	2	11	11
Bar-tailed Godwit	0	0	0	5	4	4	9	6	2	1	1	1	2	1	3	5	1	1	2	2	3	3	2	1	1	1
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
Whimbrel	1	1	0	0	0	0	1	4	1	1	4	9	27	10	23	33	14	23	33	22	27	30	24	27	22	25
Eurasian Curlew	252	242	280	110	87	0	53	23	33	34	39	45	9	29	41	37	36	30	28	36	33	31	30	36	26	34
Far Eastern Curlew	0	0	1	1	0	0	1	4	0	2	2	1	0	2	2	0	0	1	0	0	0	0	0	0	0	0
Spotted Redshank	76	175	139	174	16	175	217	180	77	167	252	184	3	440	463	432	288	92	80	1	0	0	0	0	0	0
Common Redshank	28	3	155	202	219	80	14	88	63	20	10	7	15	2	39	19	35	10	80	44	22	49	10	18	1	14
Marsh Sandpiper	1889	2378	2060	1099	994	3056	793	1270	653	690	307	90	60	55	75	51	10	0	2	8	2	2	2	3	0	0
Common Greenshank	610	650	1151	671	627	530	814	514	576	351	512	554	449	323	1189	1425	587	118	170	96	51	75	60	81	3	3
Nordmann's Greenshank	2	1	4	3	4	35	3	38	0	3	1	1	0	0	1	1	2	1	3	0	1	1	0	3	0	0
Green Sandpiper	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wood Sandpiper	2	2	8	1	0	94	76	198	30	22	43	142	6	55	59	24	74	0	1	0	1	0	0	0	0	0
Terek Sandpiper	0	0	1	28	5	10	9	54	346	8	27	79	402	2	12	21	6	16	35	16	10	17	13	27	3	0
Common Sandpiper	1	0	2	1	0	1	2	1	1	0	1	0	2	3	3	1	1	0	1	1	0	0	0	0	0	0
Grey-tailed Tattler	0	0	0	0	0	0	0	2	1	1	0	0	13	1	2	2	0	3	4	0	0	0	0	0	0	0
Ruddy Turnstone	0	0	0	1	0	2	0	1	9	0	0	0	34	3	6	11	6	2	5	0	0	0	0	0	0	0
Red-necked Phalarope	0	0	1	0	0	0	0	1	0	0	0	0	0	6	4	3	0	0	6	0	0	0	0	0	0	0
Pintail/Swinhoe's 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	0
Common Snipe	0	0	1	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	1	3	2	3	0	4	3	0	1	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Asian Dowitcher	0	0	0	0	0	0	1	0	4	12	17	35	12	68	21	11	4	0	2	2	4	4	0	0	0	1

Red Knot	0	0	0	0	0	0	1	0	2	1	0	0	6	25	6	20	12	22	5	2	5	3	0	2	0	0
Great Knot	0	0	157	98	111	88	75	34	10	3	4	0	5	6	11	12	10	6	12	38	19	23	38	48	7	0
Sanderling	0	0	0	1	1	1	0	3	6	0	0	0	3	2	2	5	1	1	3	1	0	0	1	0	0	0
Red-necked Stint	123	0	66	477	31	128	68	61	143	36	157	10	763	264	644	956	322	380	381	420	133	178	20	2	0	0
Little Stint	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Temminck's Stint	0	0	0	4	0	0	0	0	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	0	2	14	3	0	17	28	3	28	59	35	10	1	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	0
Sharp-tailed Sandpiper	0	0	2	0	0	1	2	3	2	5	12	13	10	45	130	63	45	10	6	9	12	6	7	2	0	0
Dunlin	1	0	0	2	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Curlew Sandpiper	1548	536	185	5794	3650	2746	140	1683	134	684	789	129	1667	677	2625	1550	609	120	141	80	42	33	79	83	2	0
Spoon-billed Sandpiper	0	0	0	1	0	0	0	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Broad-billed Sandpiper	9	1	2	6	18	20	7	14	49	1	18	0	28	80	69	95	32	17	32	10	1	2	0	0	0	0
Ruff	0	2	0	0	0	2	2	1	0	3	1	0	1	0	0	1	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	0	0	0	0	0	0
Large *tringa* 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	0
Total:	5,559	4,955	5,081	9,482	6,117	8,789	4,017	5,814	3,121	3,913	3,419	2,630	4,252	2,855	6,125	5,595	2,325	1,100	1,318	1,062	578	679	445	488	150	149

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

2010-11 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, autumn 2010

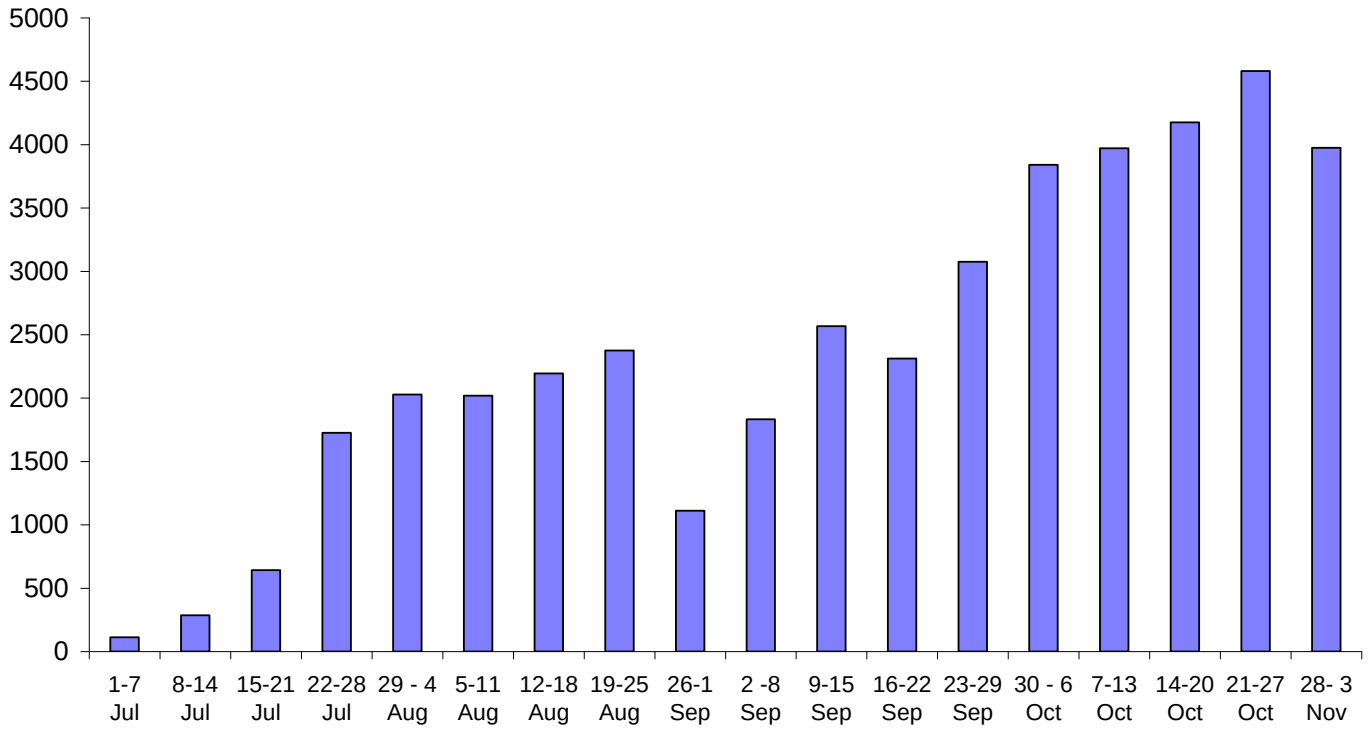


Figure 2. Counts of Black-winged Stilt at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

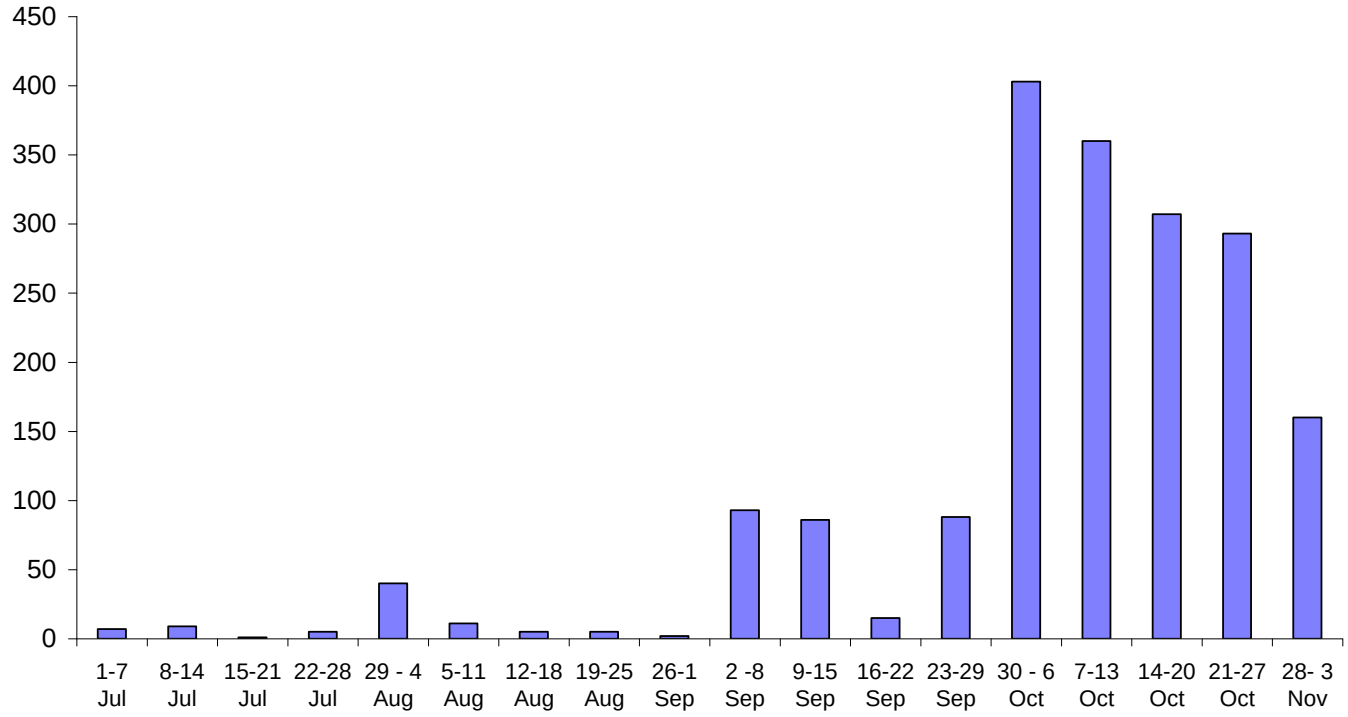


Figure 3. Counts of Pacific Golden Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

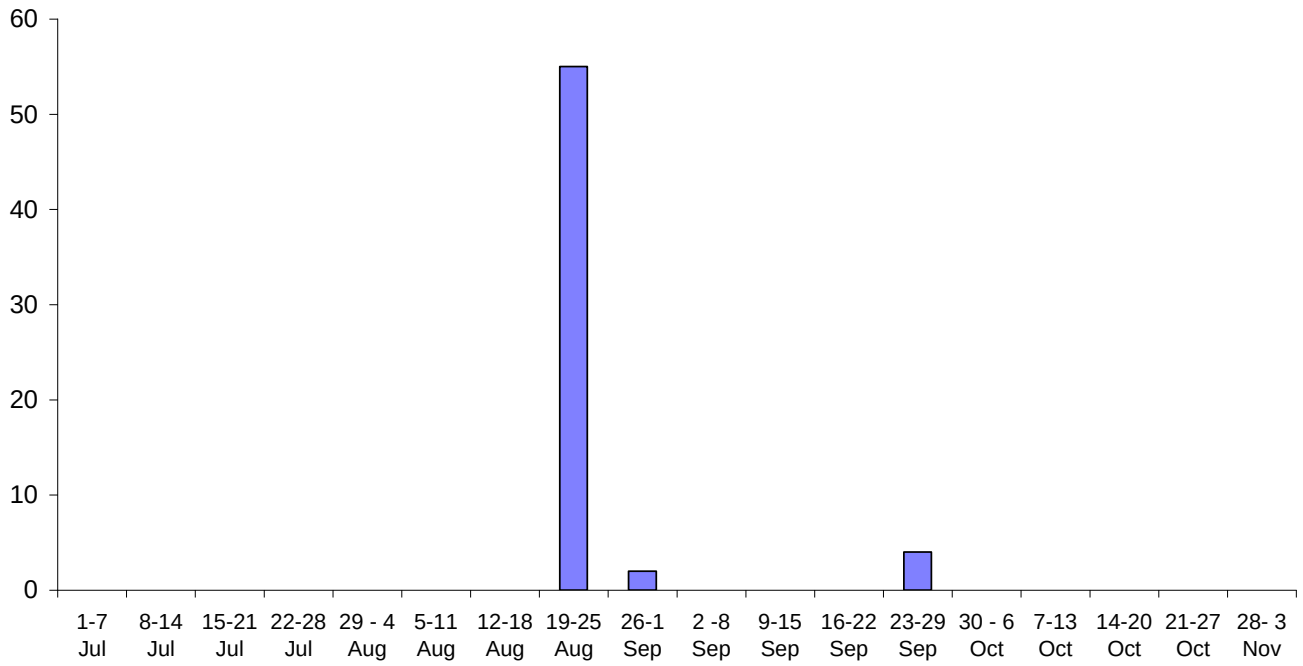


Figure 4. Counts of Kentish Plover at Mai Inner Deep Bay Ramsar Site, autumn 2010

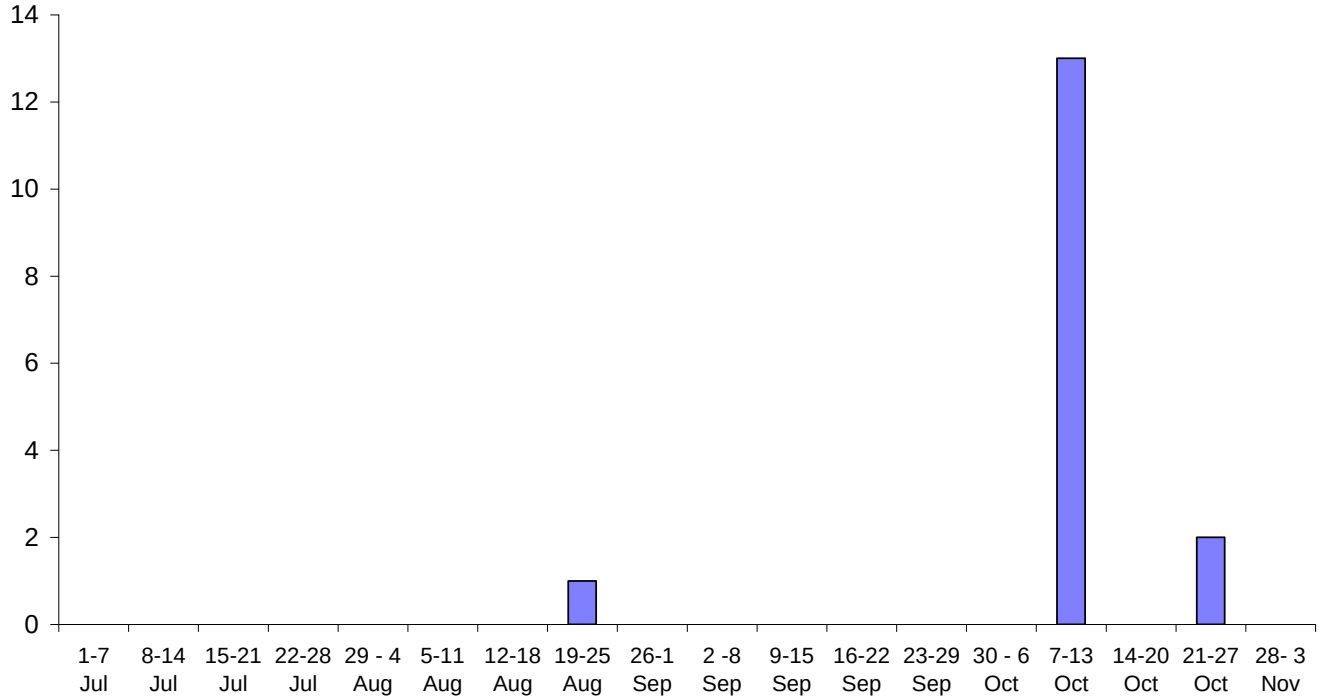


Figure 5. Counts of Grey Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

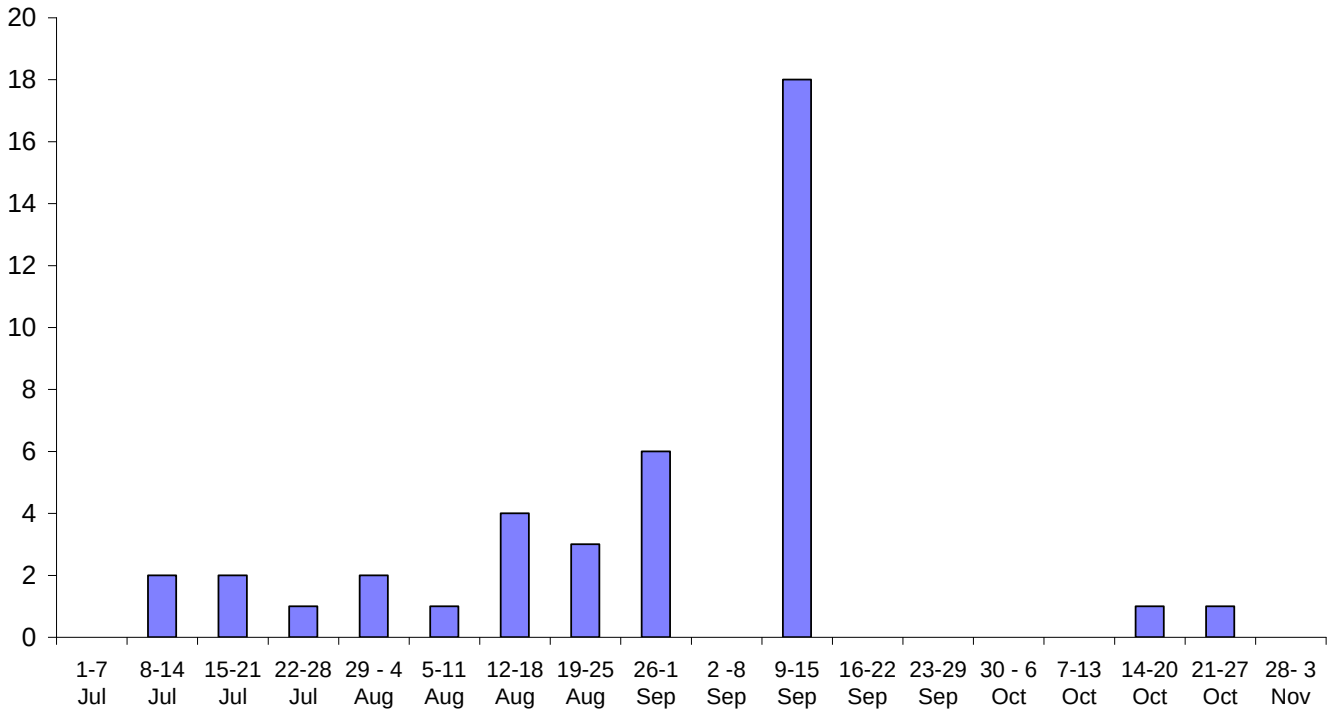


Figure 6. Counts of Lesser Sand Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

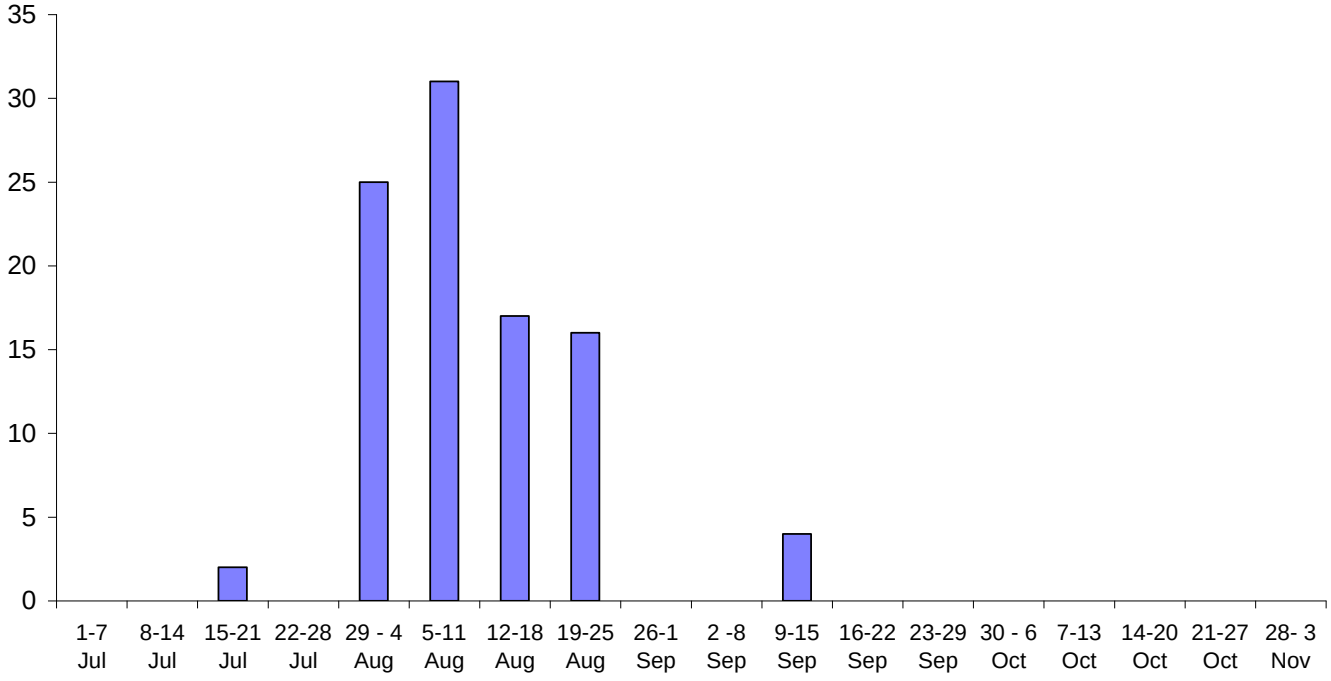


Figure 7. Counts of Greater Sand Plover at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

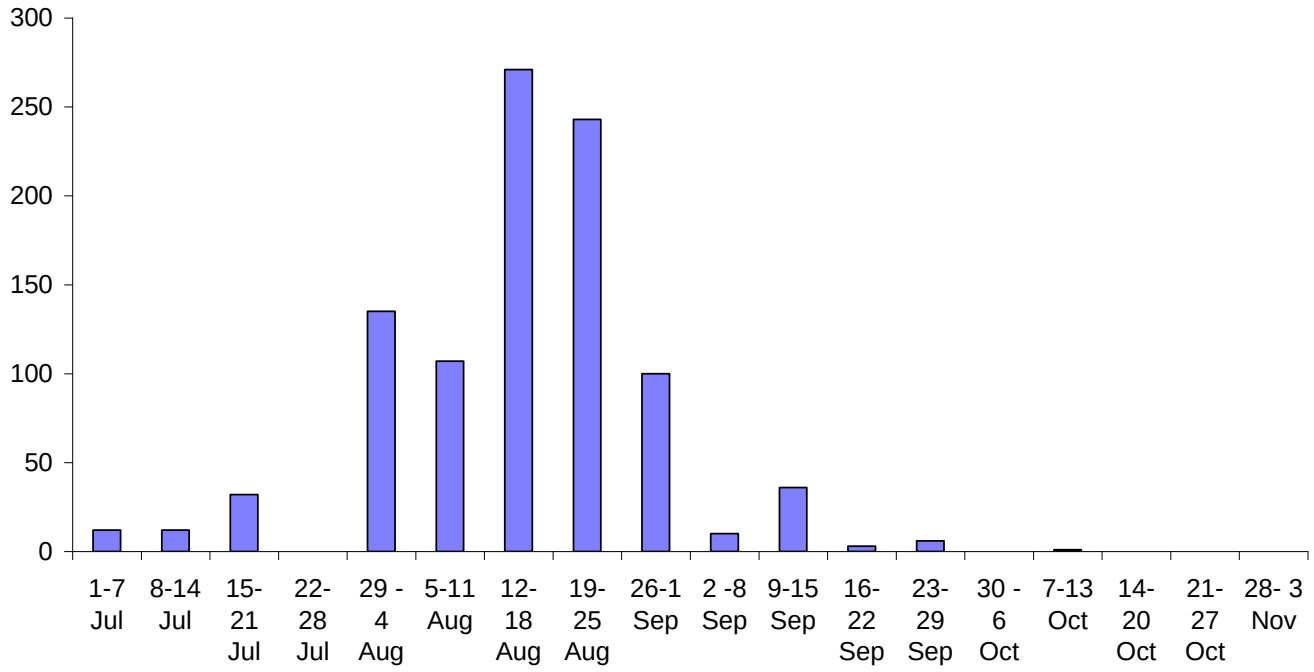


Figure 8. Counts of Black-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

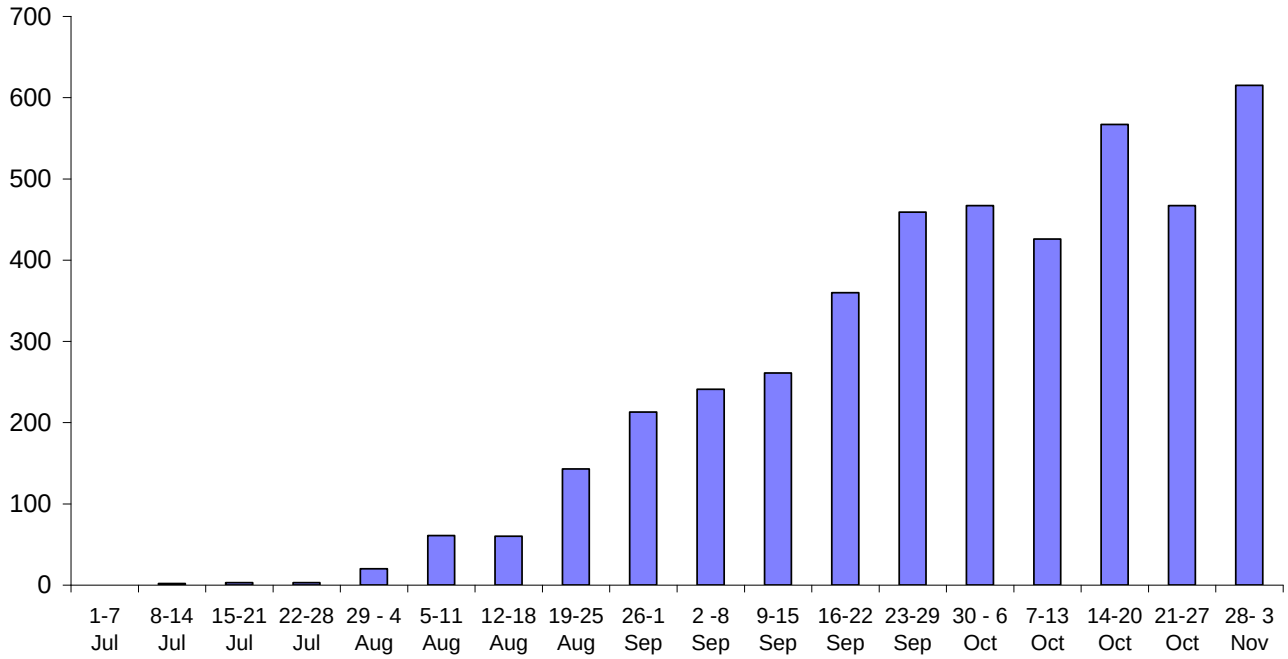


Figure 9. Counts of Bar-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

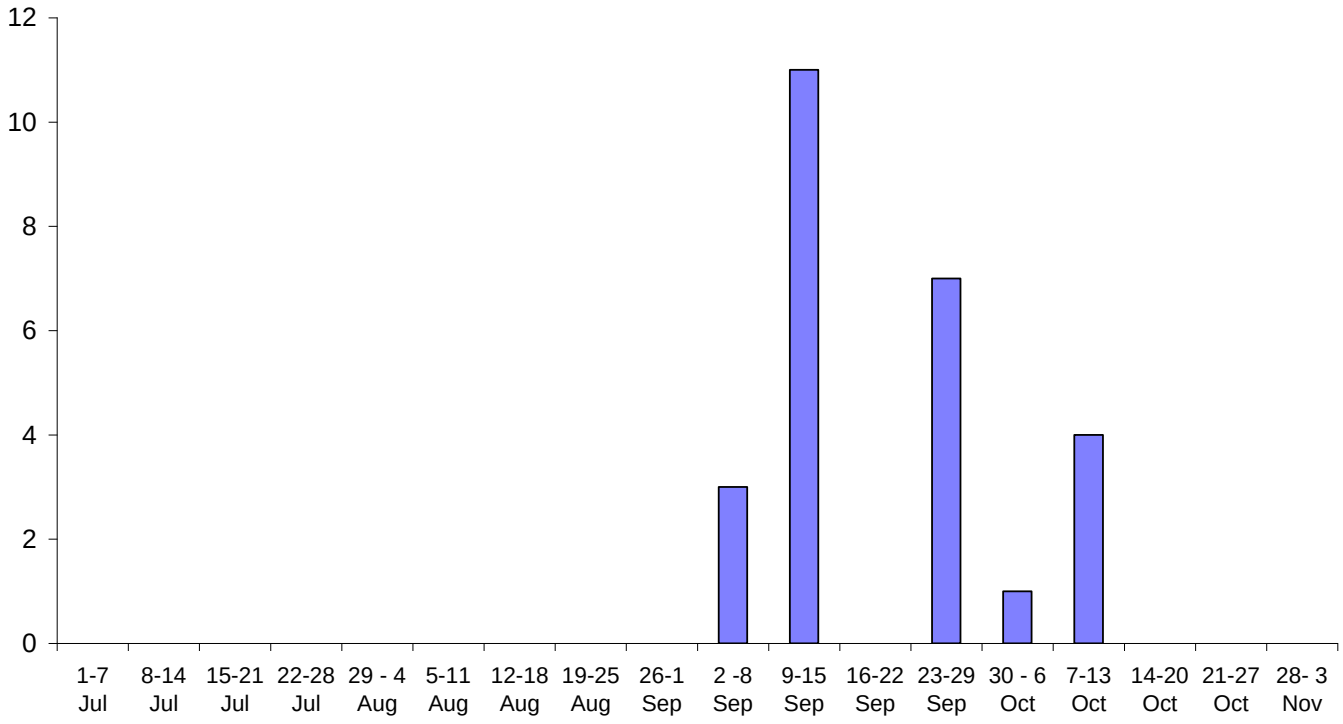


Figure 10. Counts of Whimbrel at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

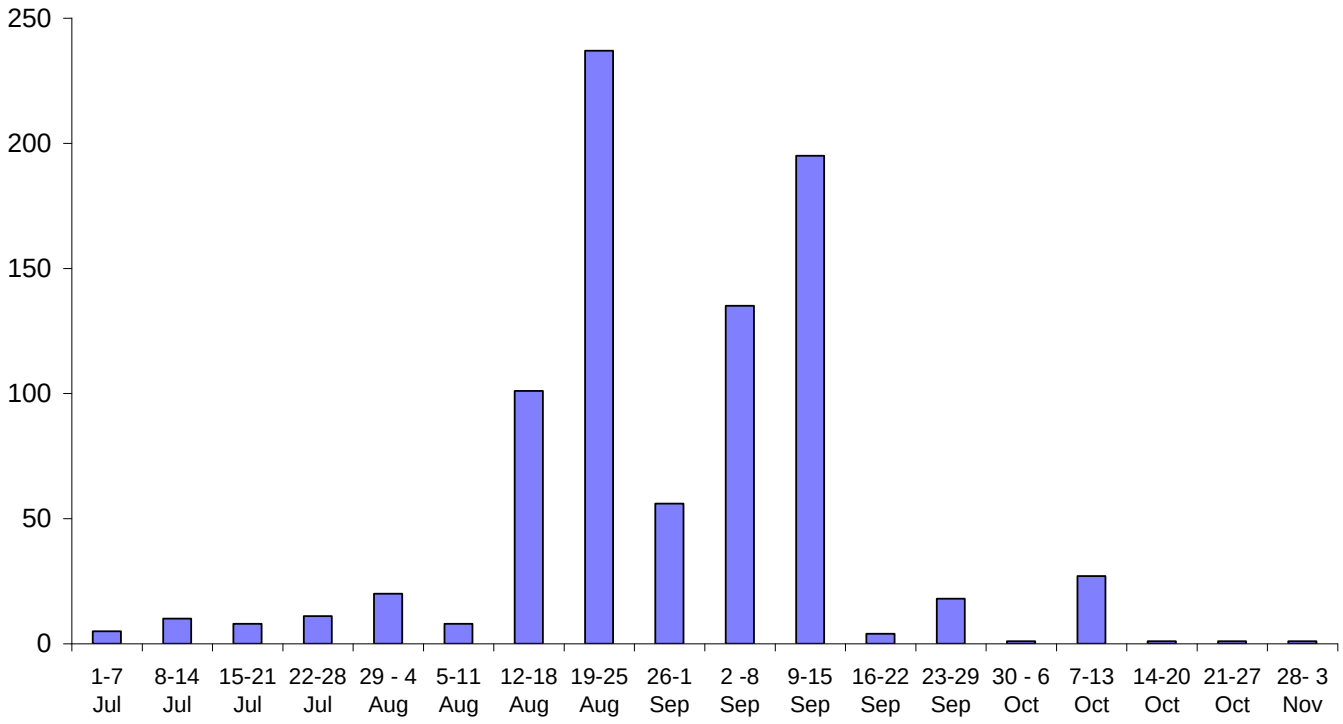


Figure 11. Counts of Eurasian Curlew at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

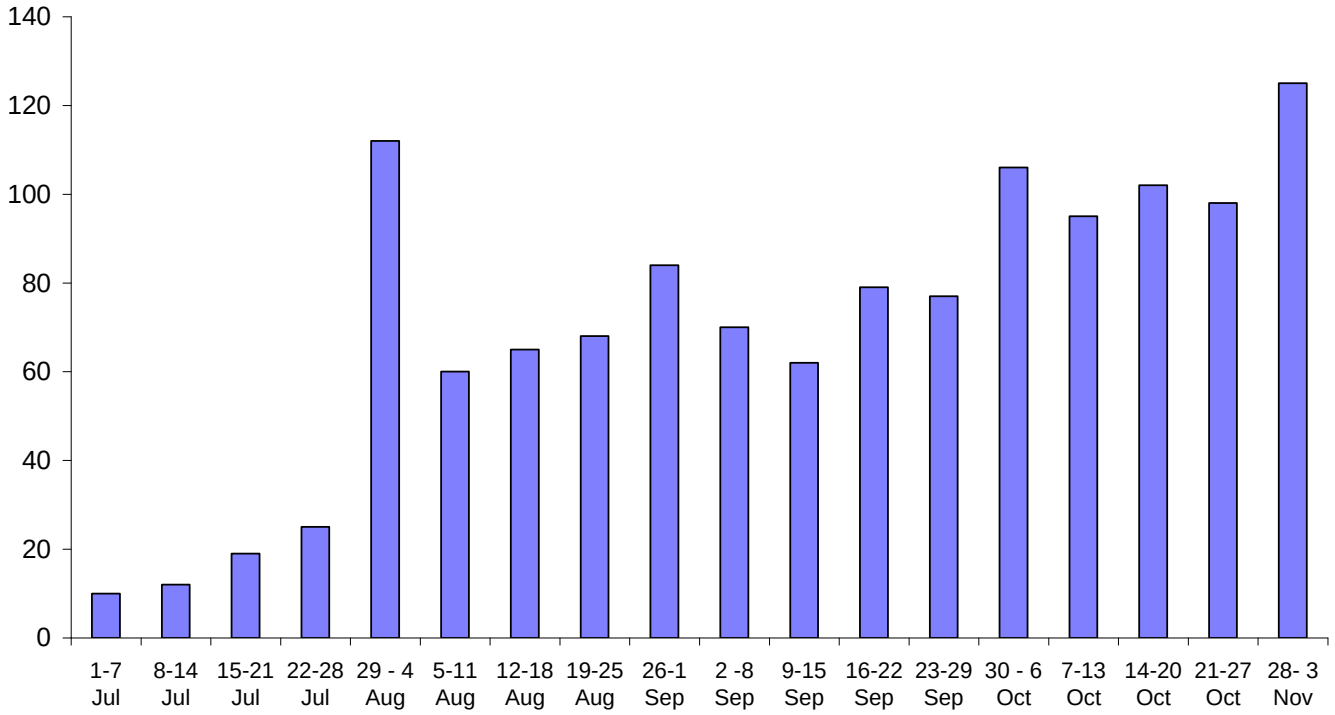


Figure 12. Counts of Spotted Redshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

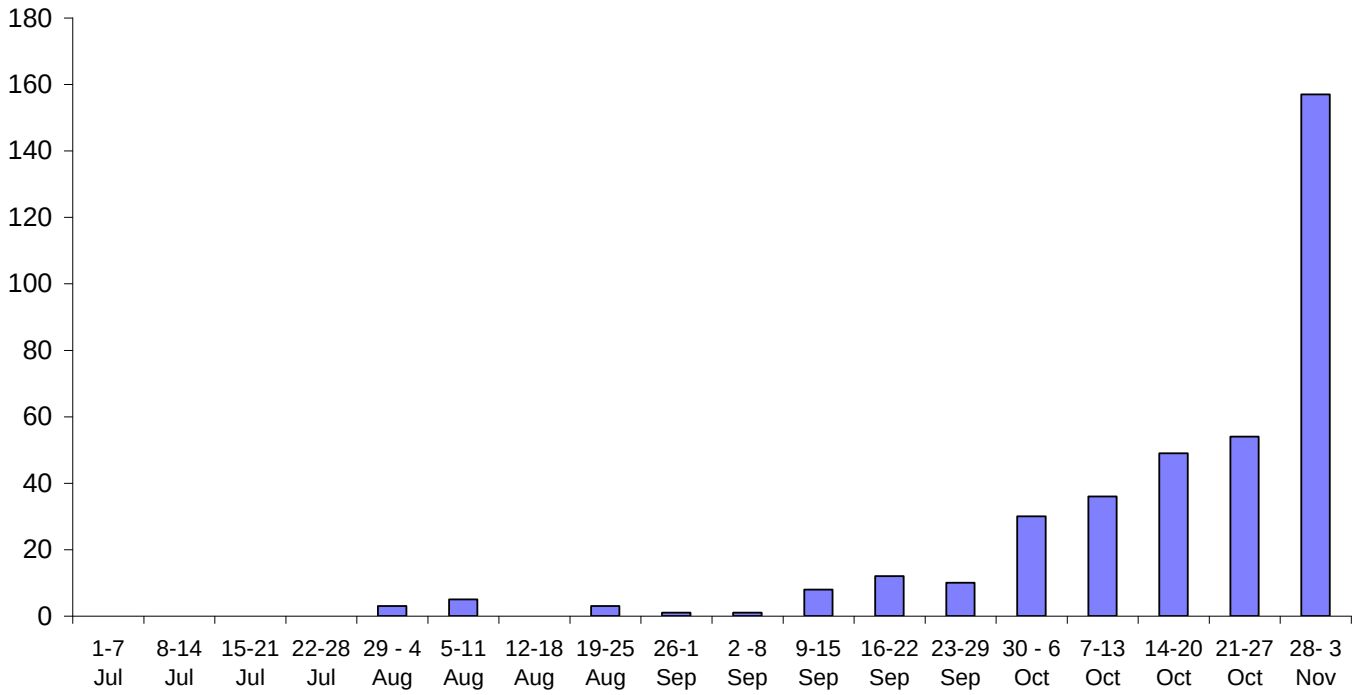


Figure 13. Counts of Common Redshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

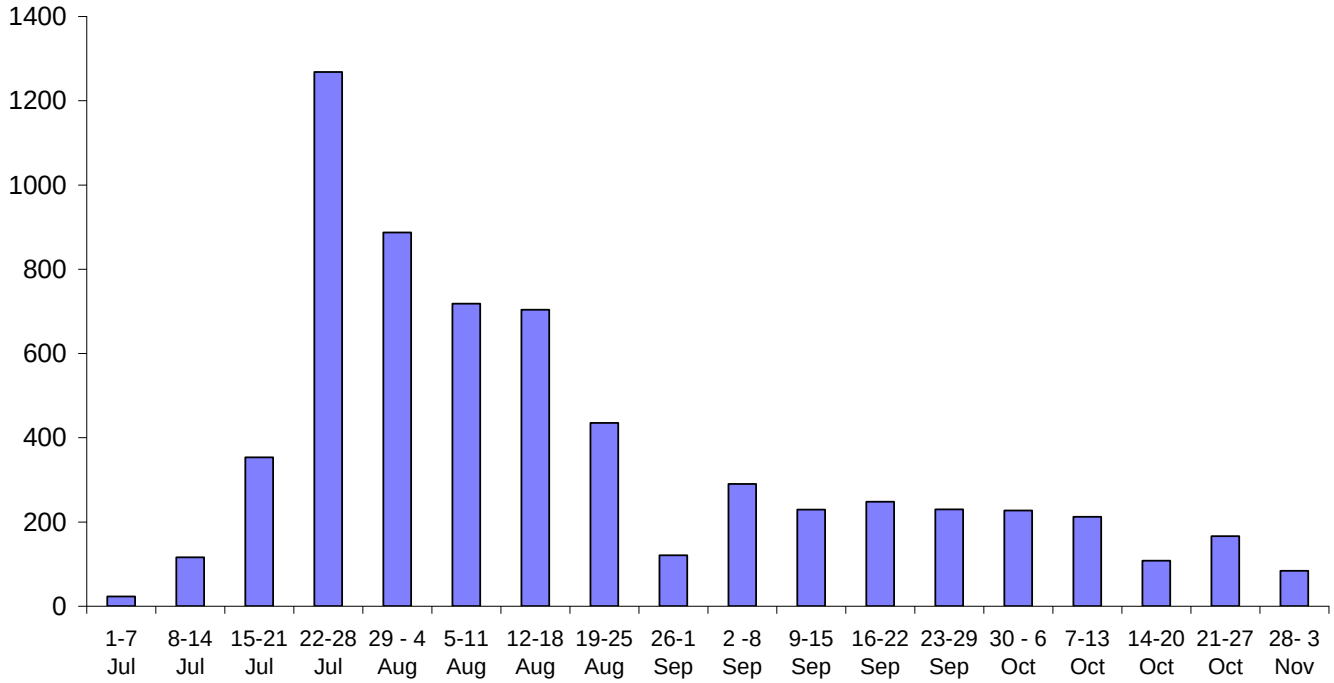


Figure 14. Counts of Marsh Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

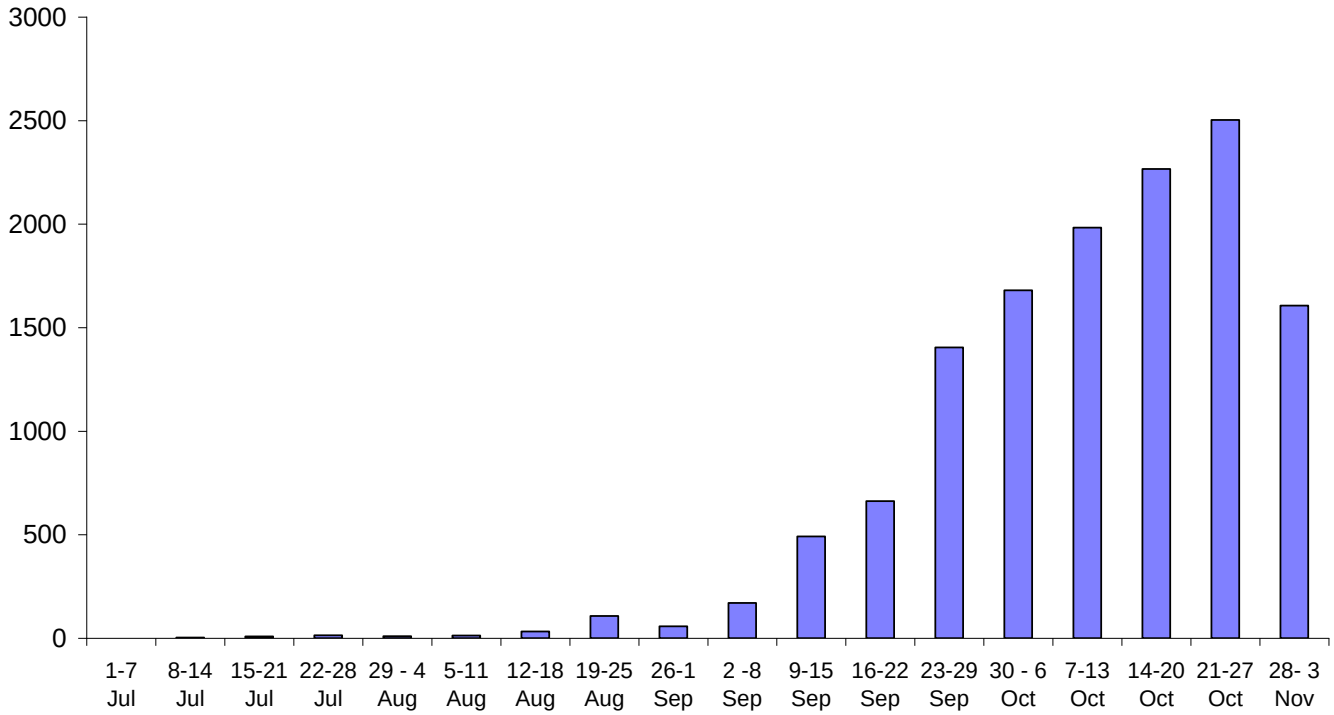


Figure 15. Counts of Common Greenshank at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

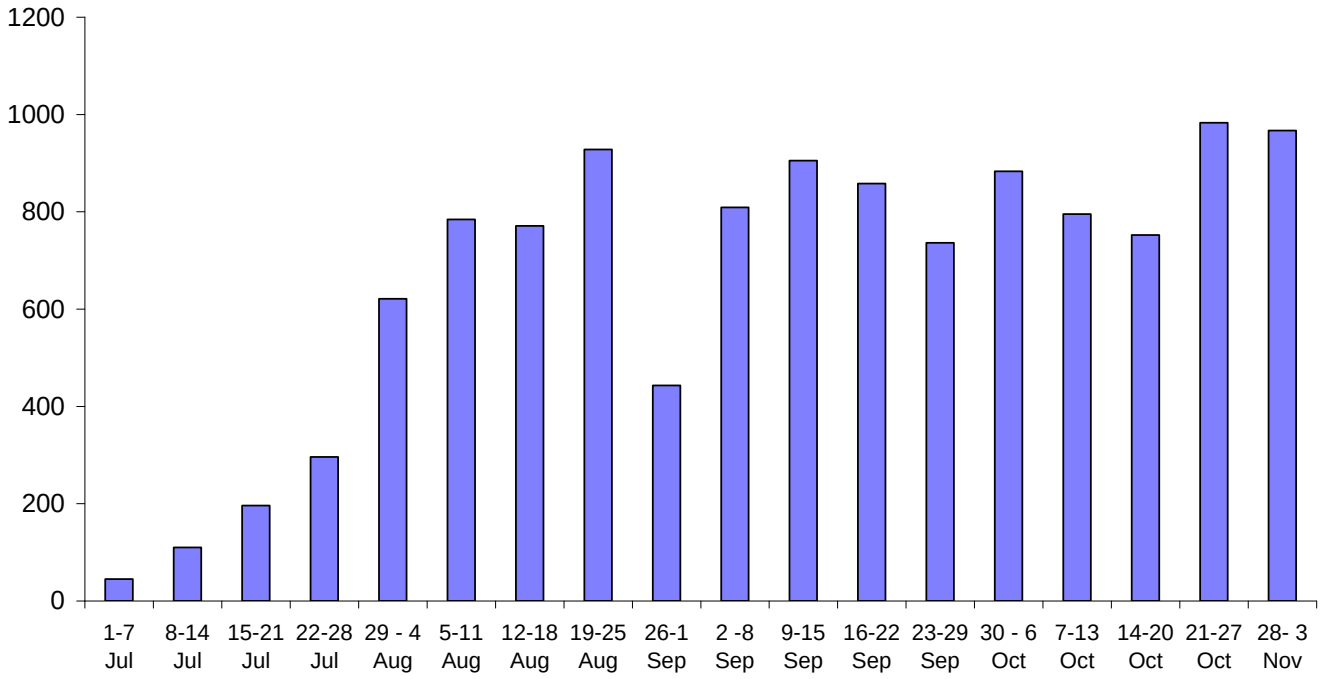


Figure 16. Counts of Wood Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

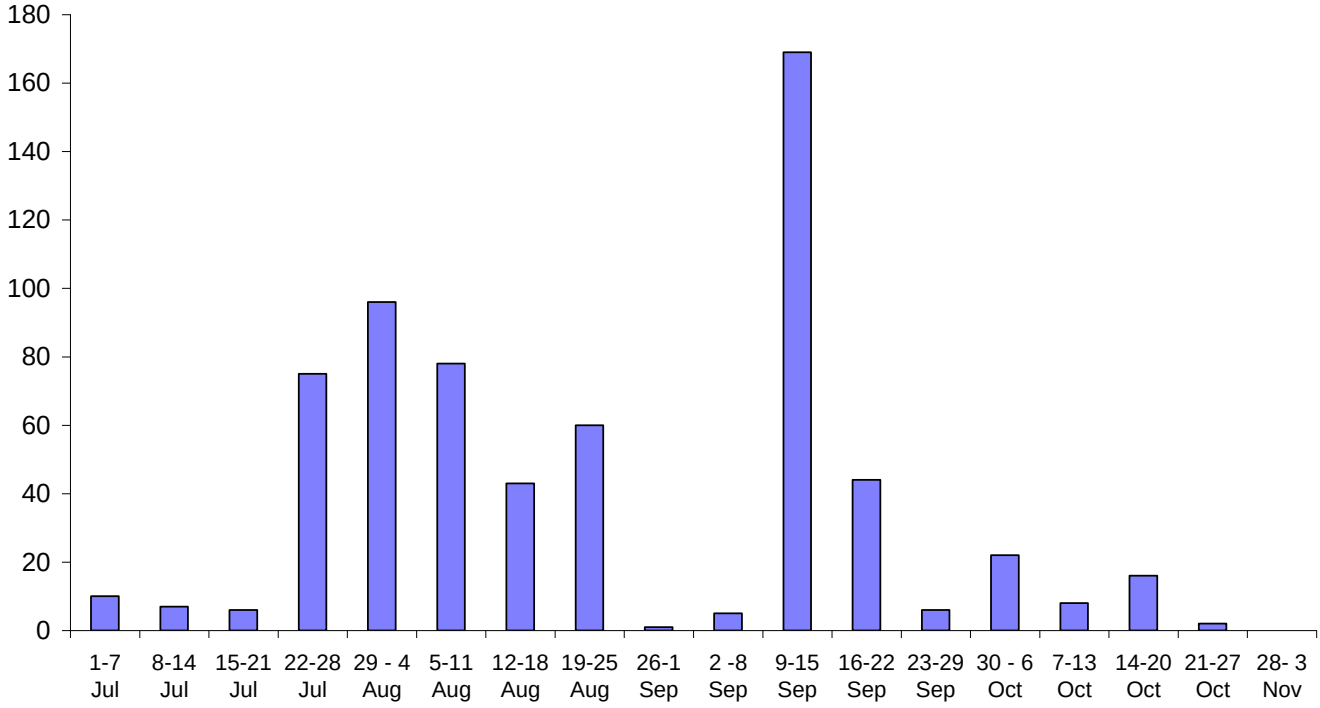


Figure 17. Counts of Great Knot at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

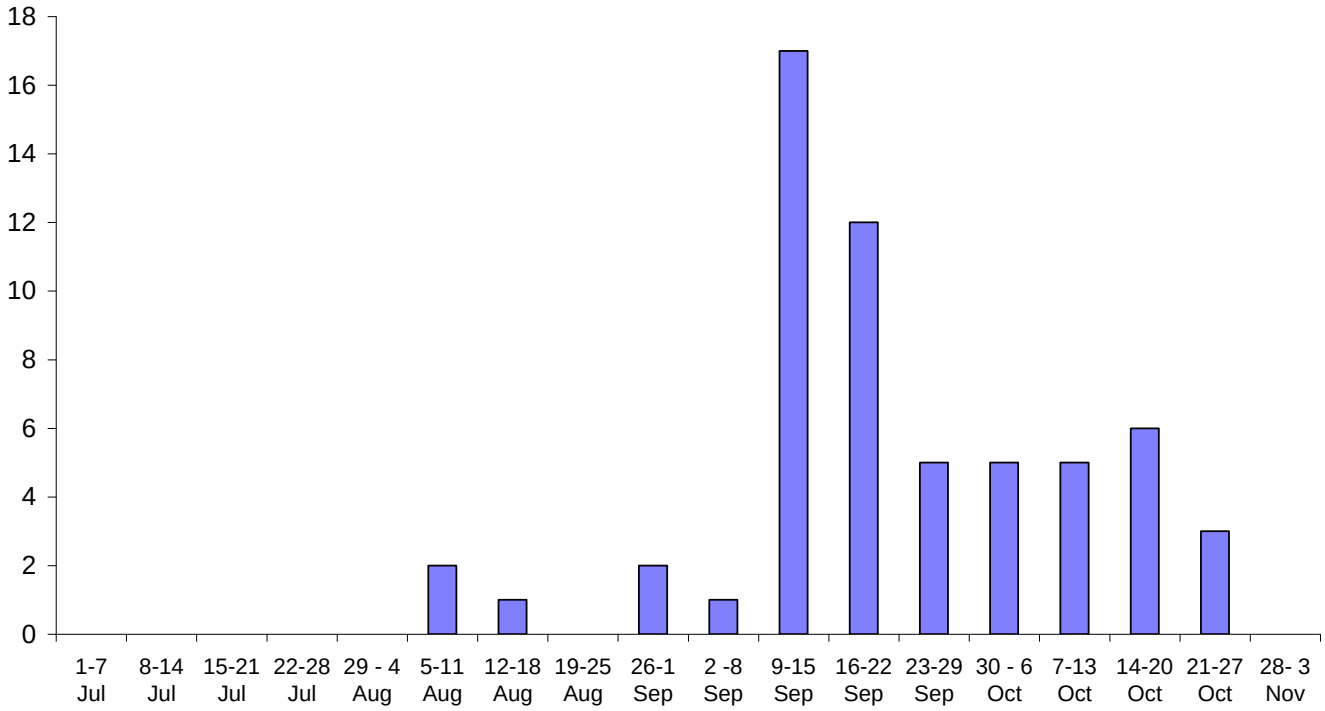


Figure 18. Counts of Red Knot at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

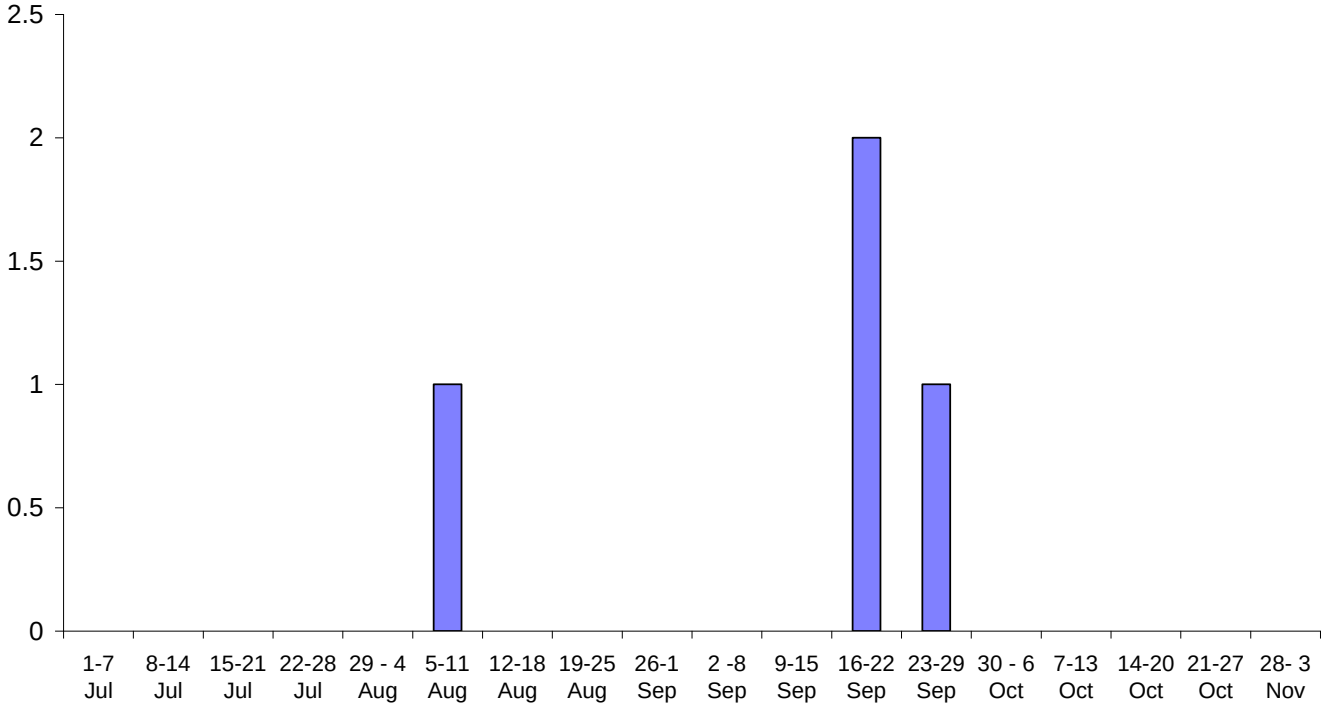


Figure 19. Counts of Broad-billed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, autumn 2010

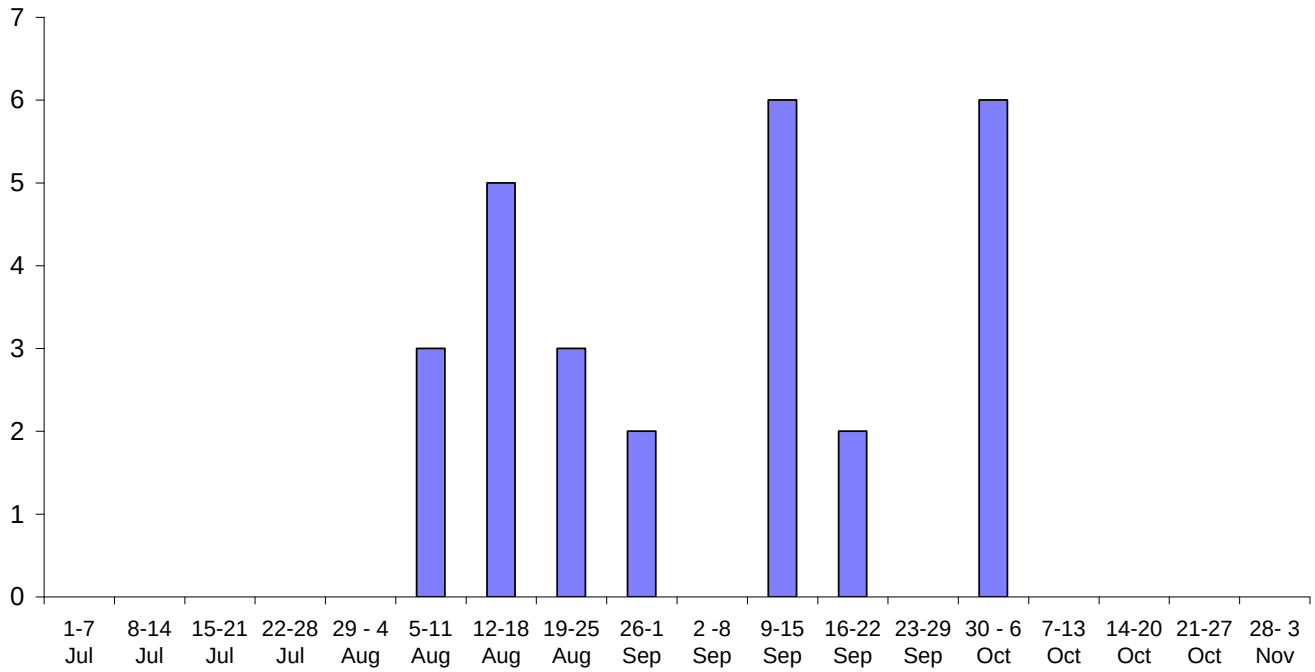


Figure 20. Total number of shorebirds recorded at Mai Po Inner Deep Bay, spring 2011

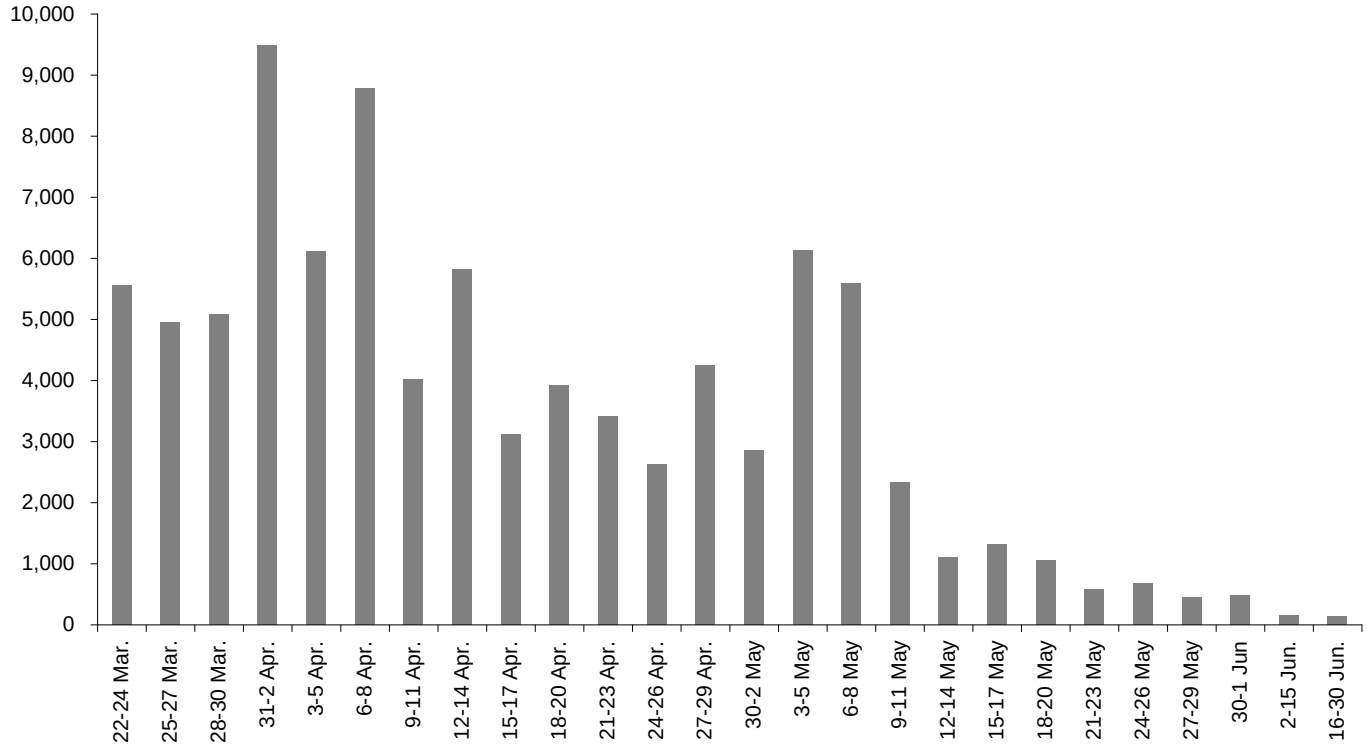


Figure 21. Counts of Pacific Golden Plover at Mai Po Inner Deep Bay Ramsar Site, spring 2011

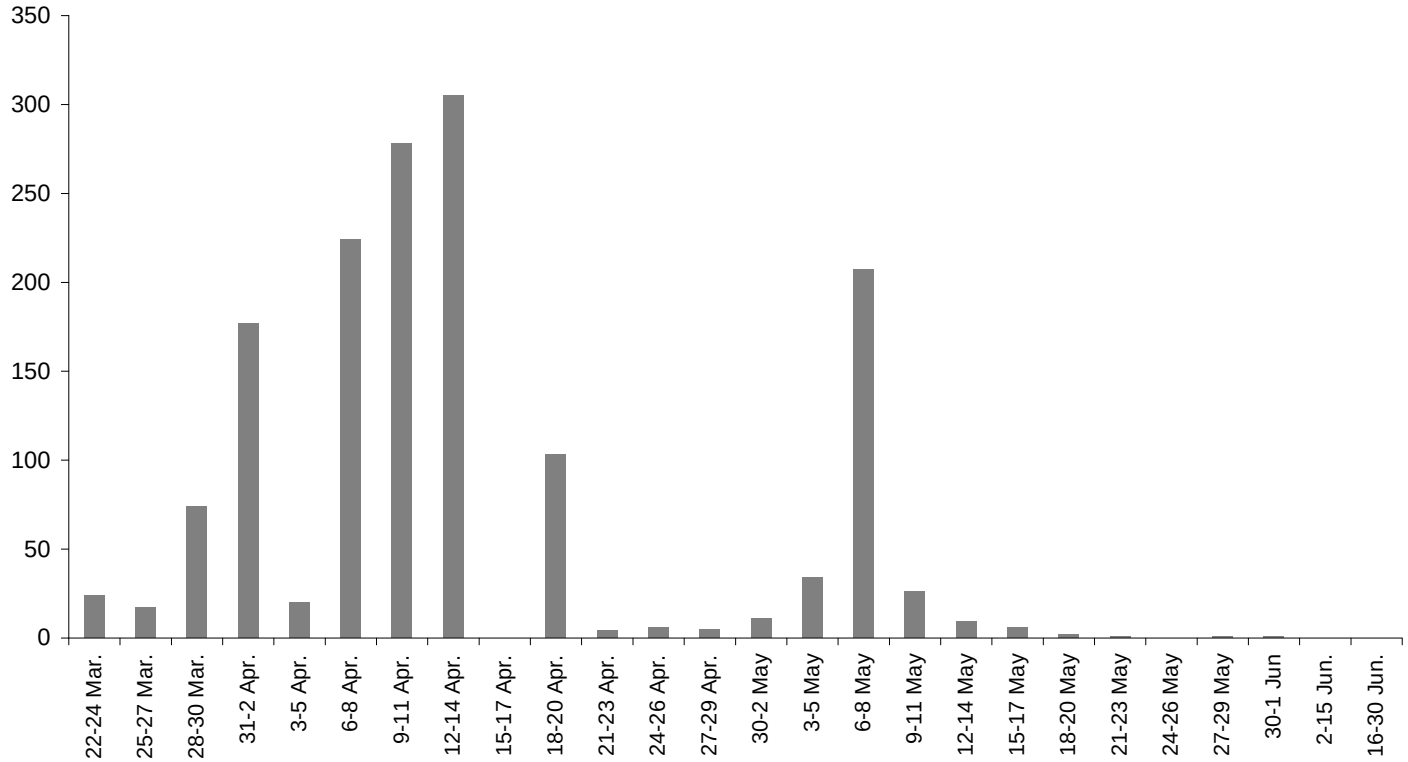


Figure 22. Counts of Lesser Sandplover at Mai Po Inner Deep Bay Ramsar Site, spring 2011

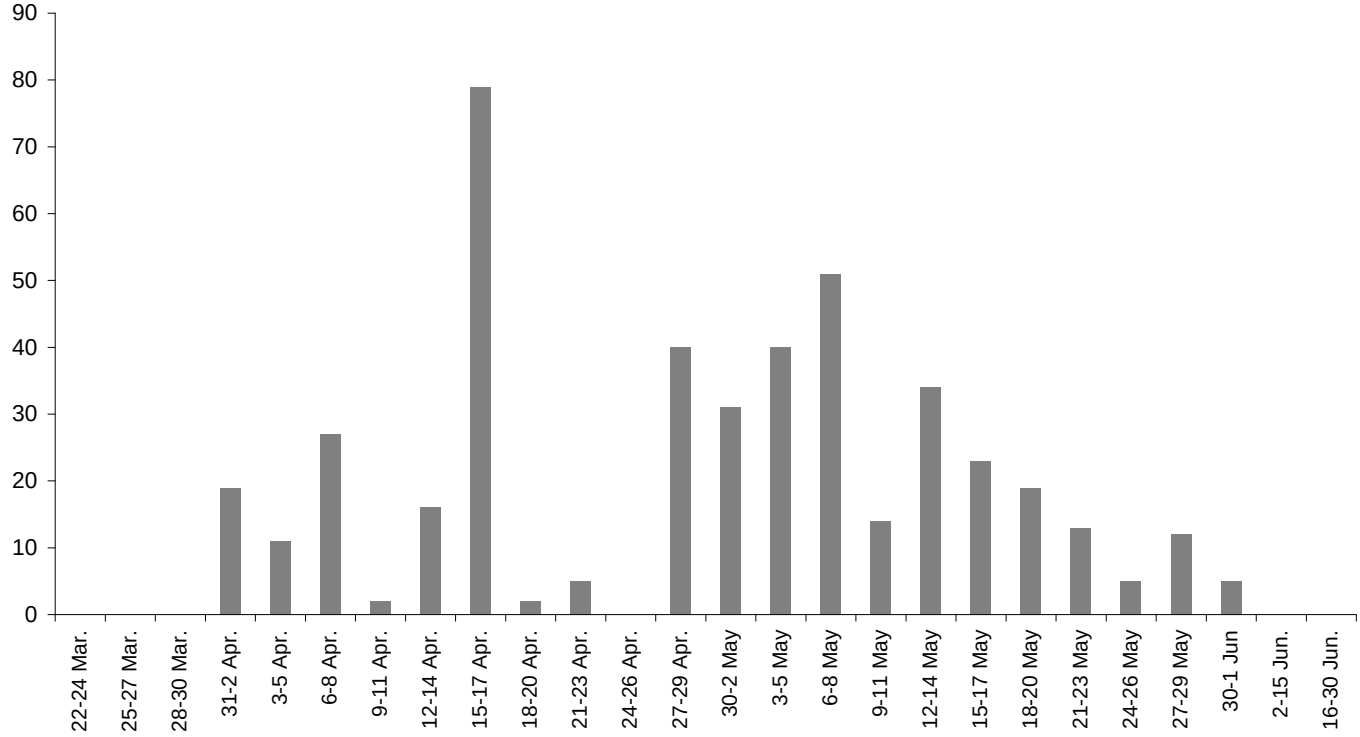


Figure 23. Counts of Greater Sandplover at Mai Po Inner Deep Bay Ramsar Site, spring 2011

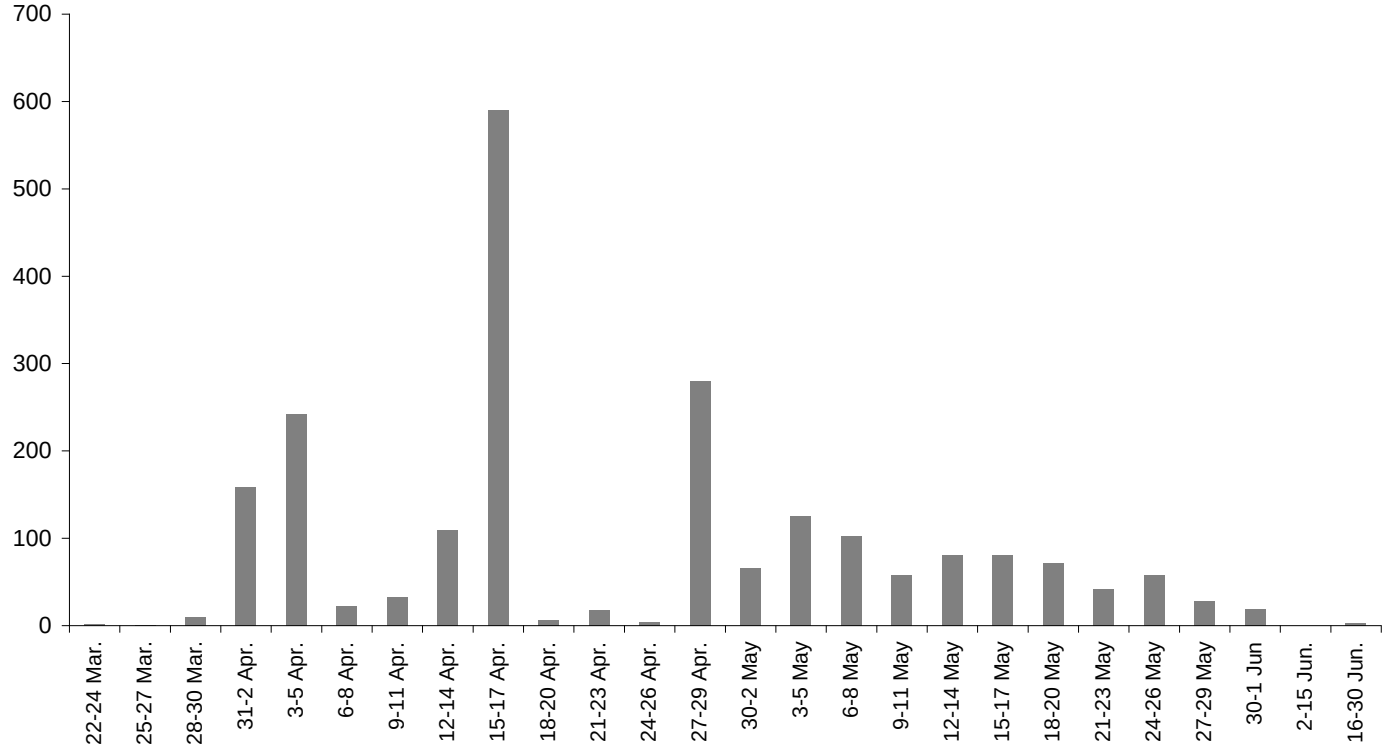


Figure 24. Counts of Black-tailed Godwit at Mai Po Inner Deep Bay Ramsar Site, spring 2011

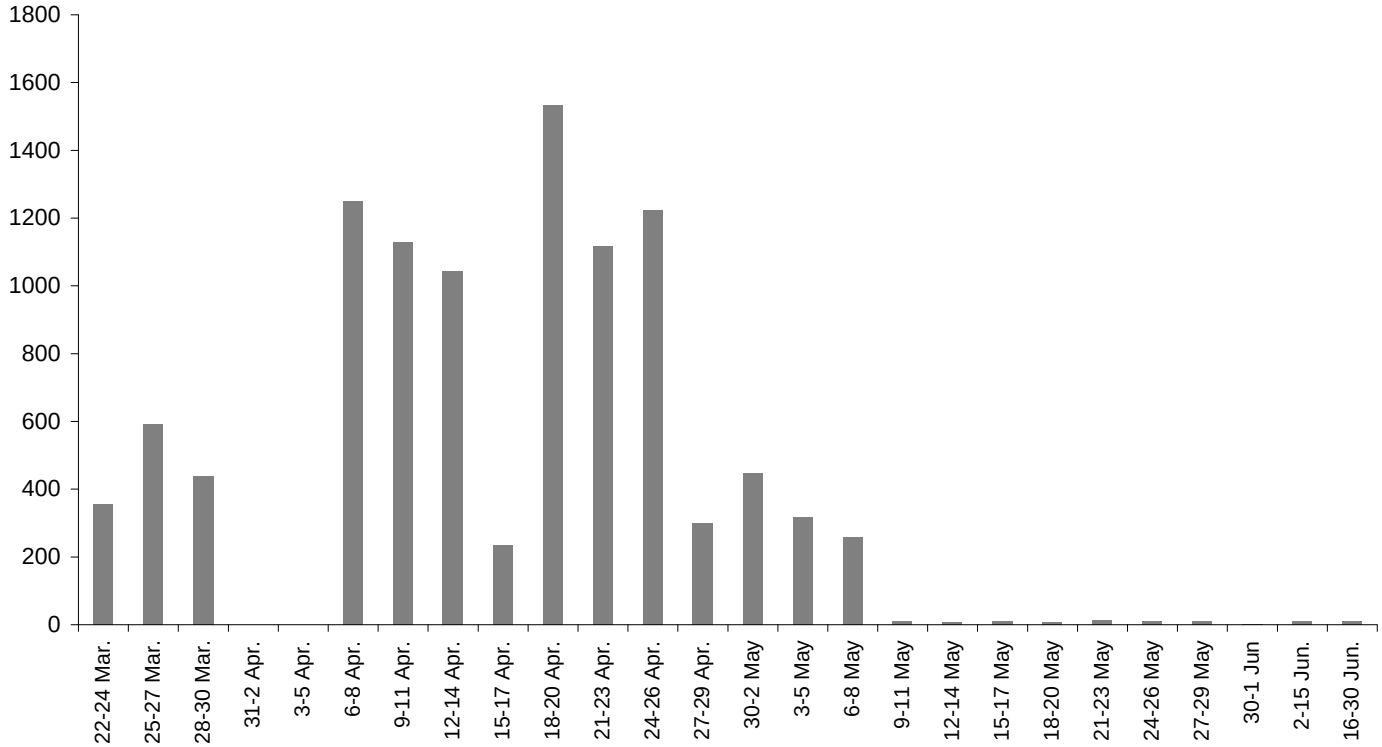


Figure 25. Counts of Spotted Redshank at Mai Po Inner Deep Bay Ramsar Site, spring 2011

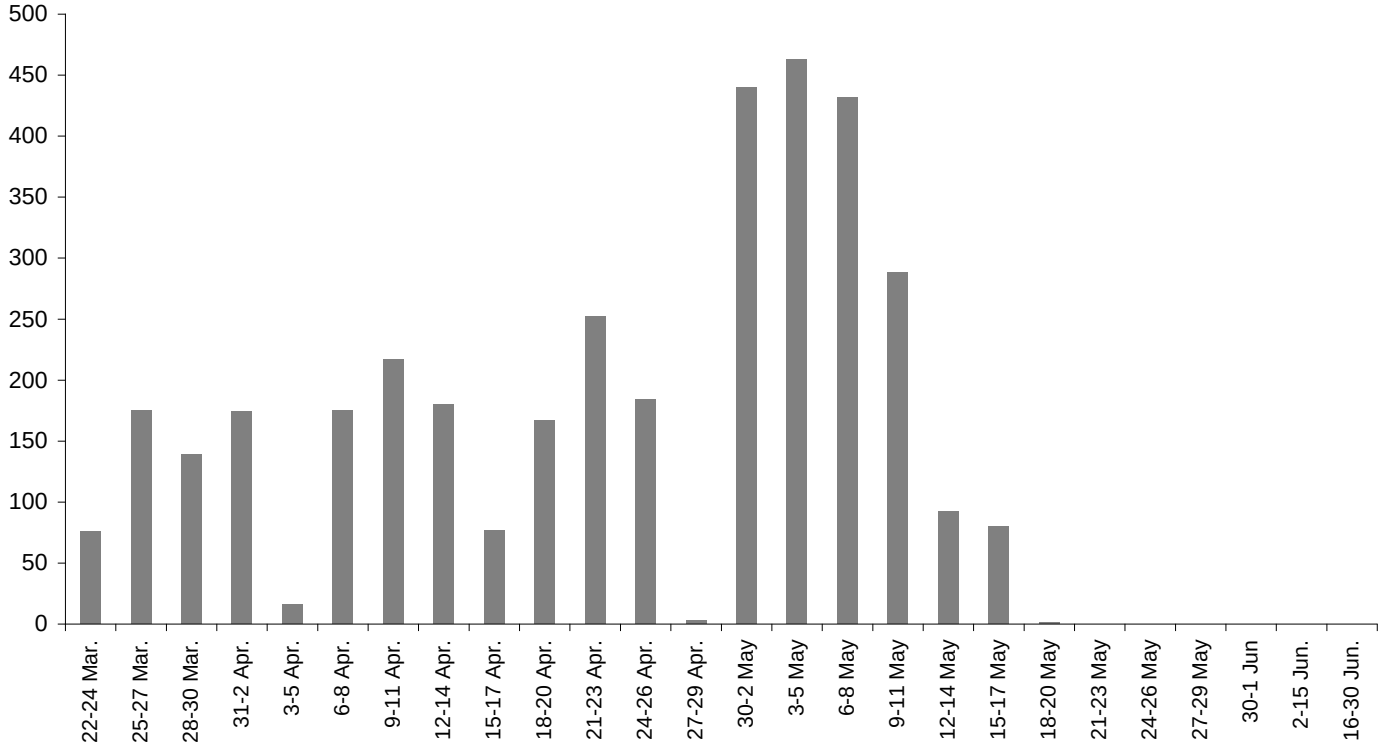


Figure 26. Counts of Common Redshank at Mai Po Inner Deep Bay Ramsar Site, spring 2011

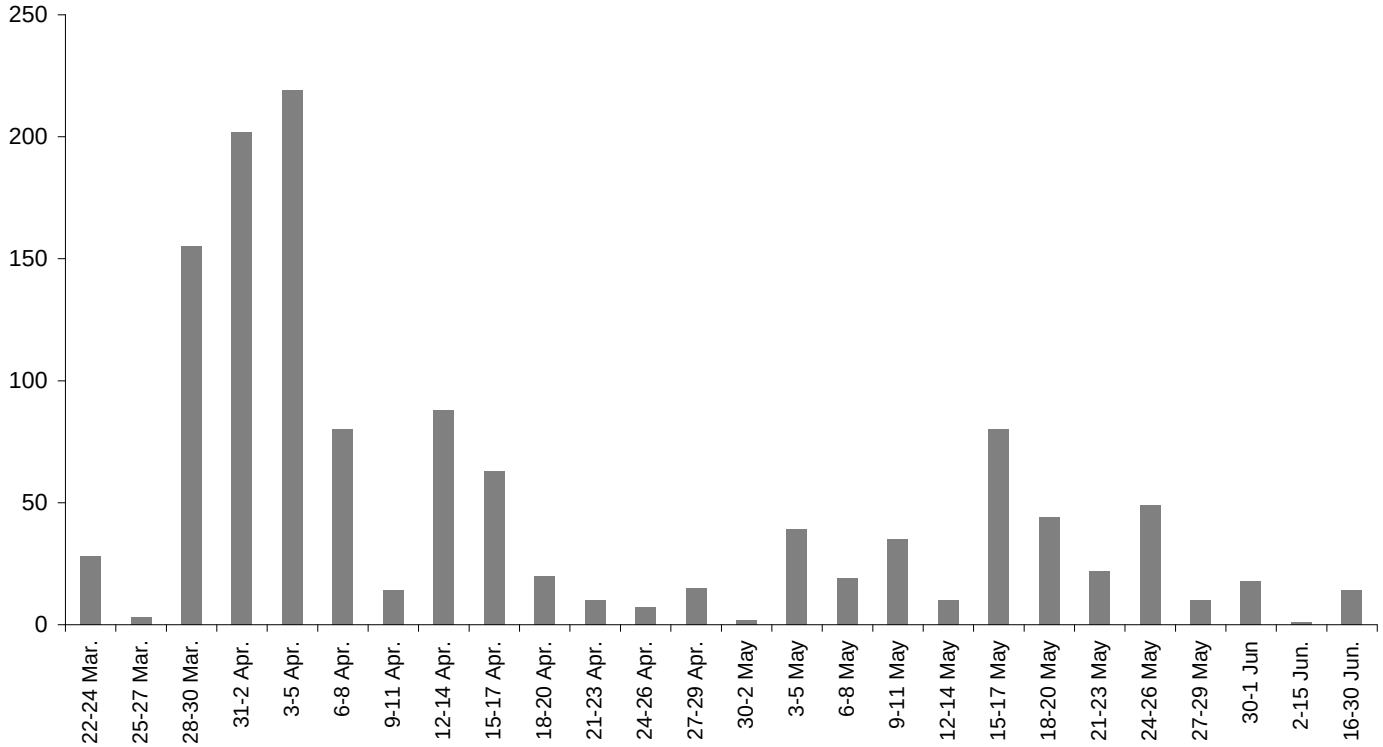


Figure 27. Counts of Marsh Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2011

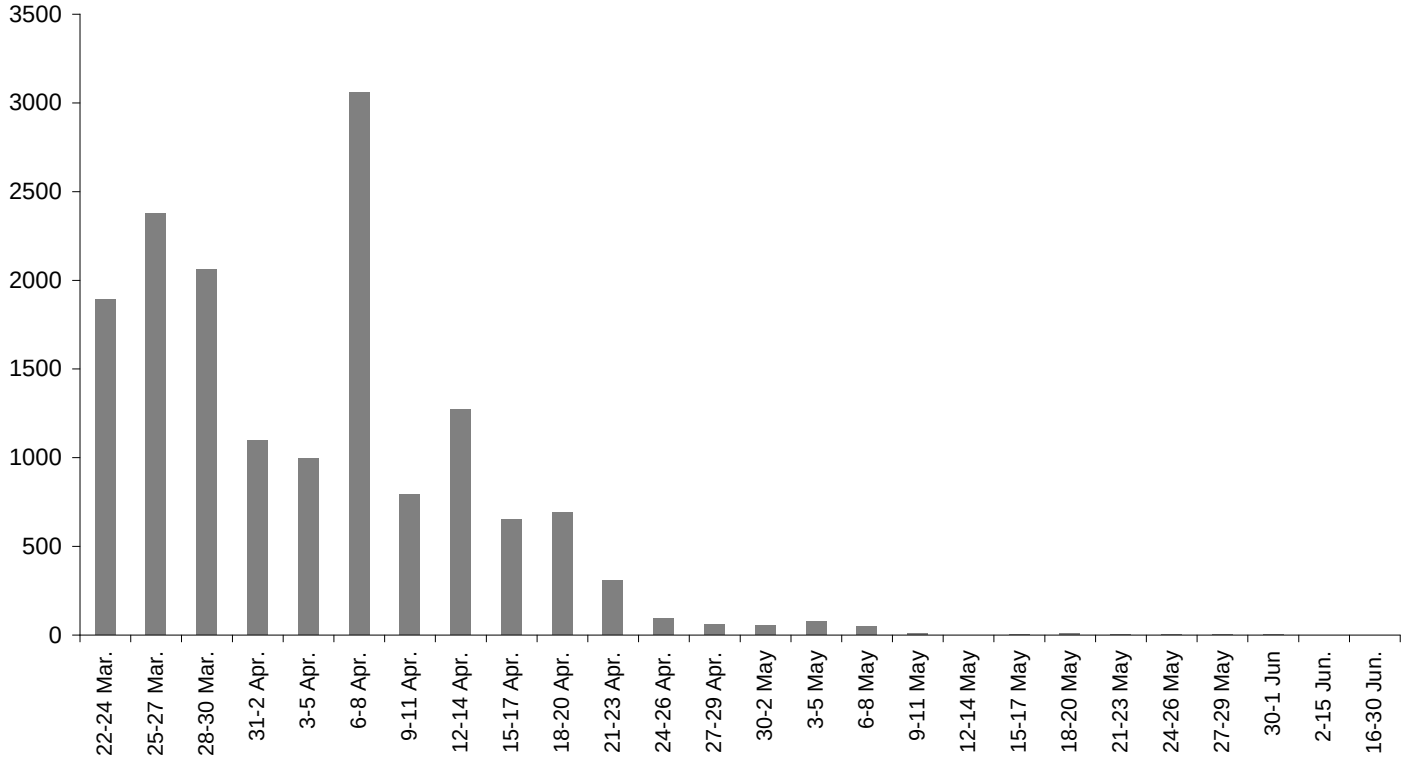


Figure 28. Counts of Common Greenshank at Mai Po Inner Deep Bay Ramsar Site, spring 2011

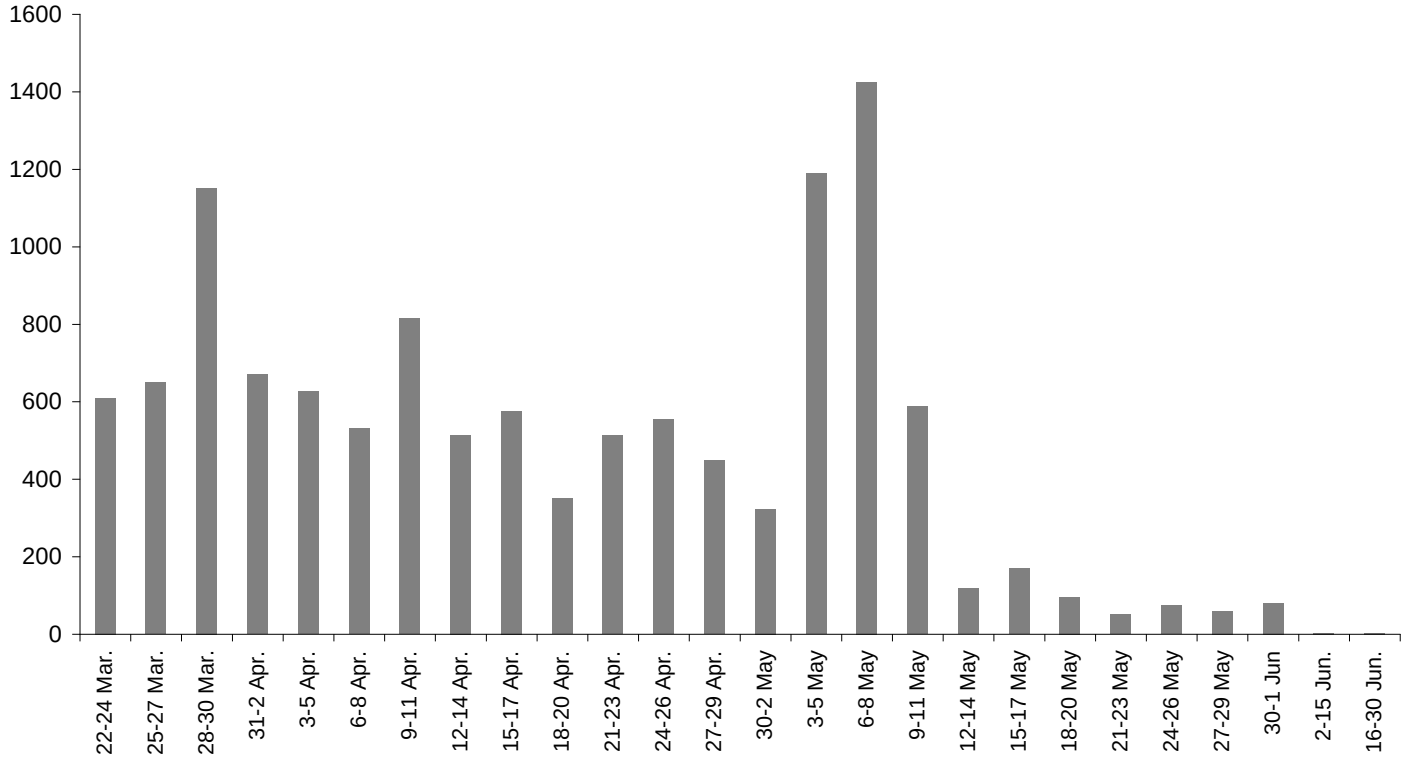


Figure 29. Counts of Terek Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2011

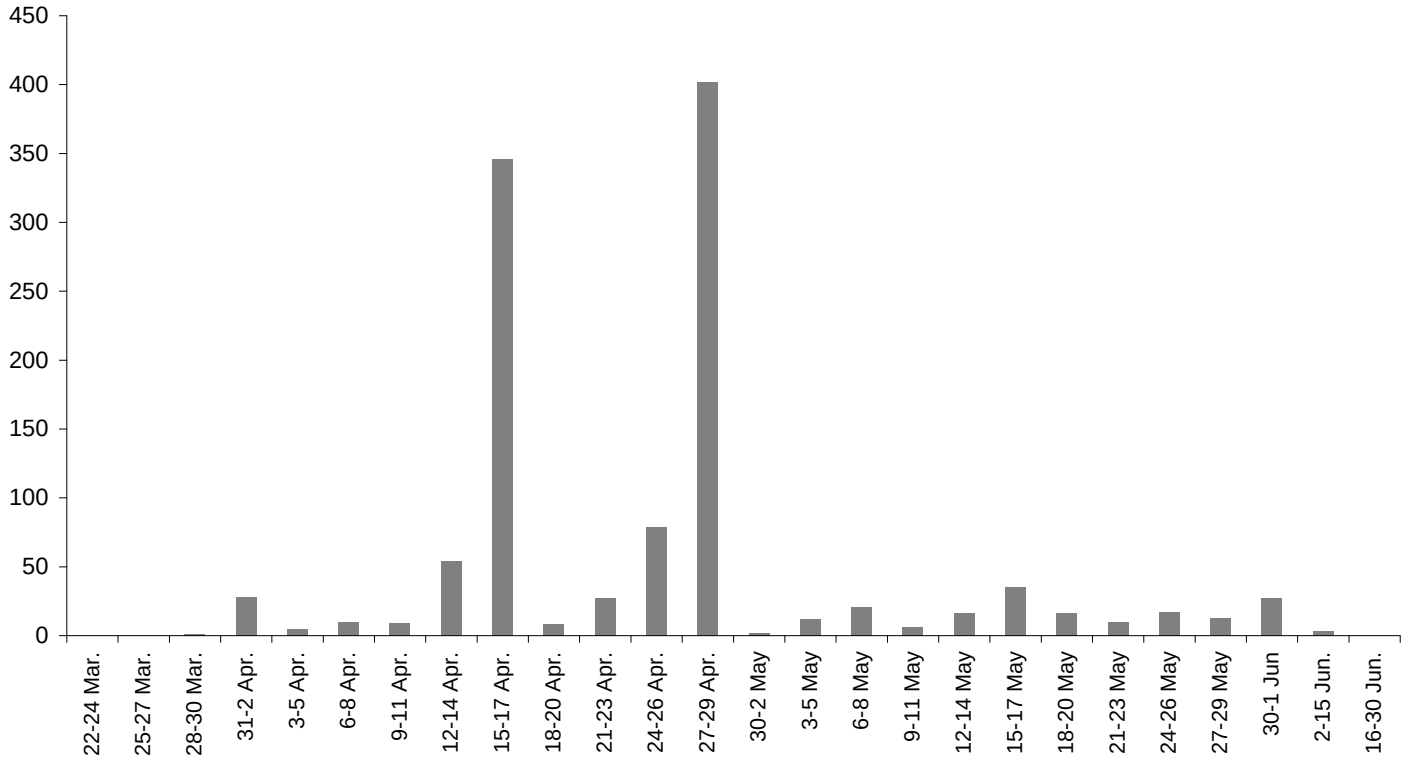


Figure 30. Counts of Grey-tailed Tattler at Mai Po Inner Deep Bay Ramsar Site, spring 2011

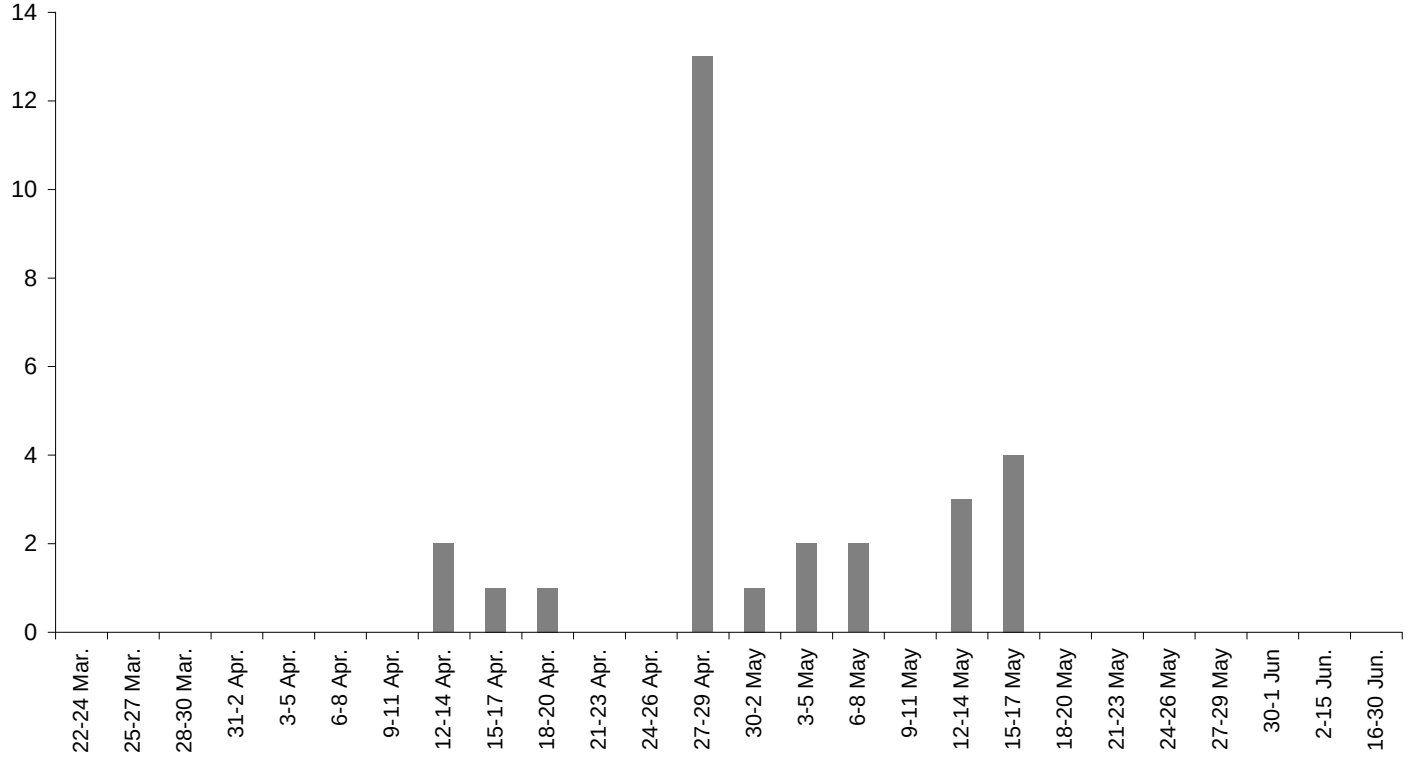


Figure 31. Counts of Ruddy Turnstone at Mai Po Inner Deep Bay Ramsar Site, spring 2011

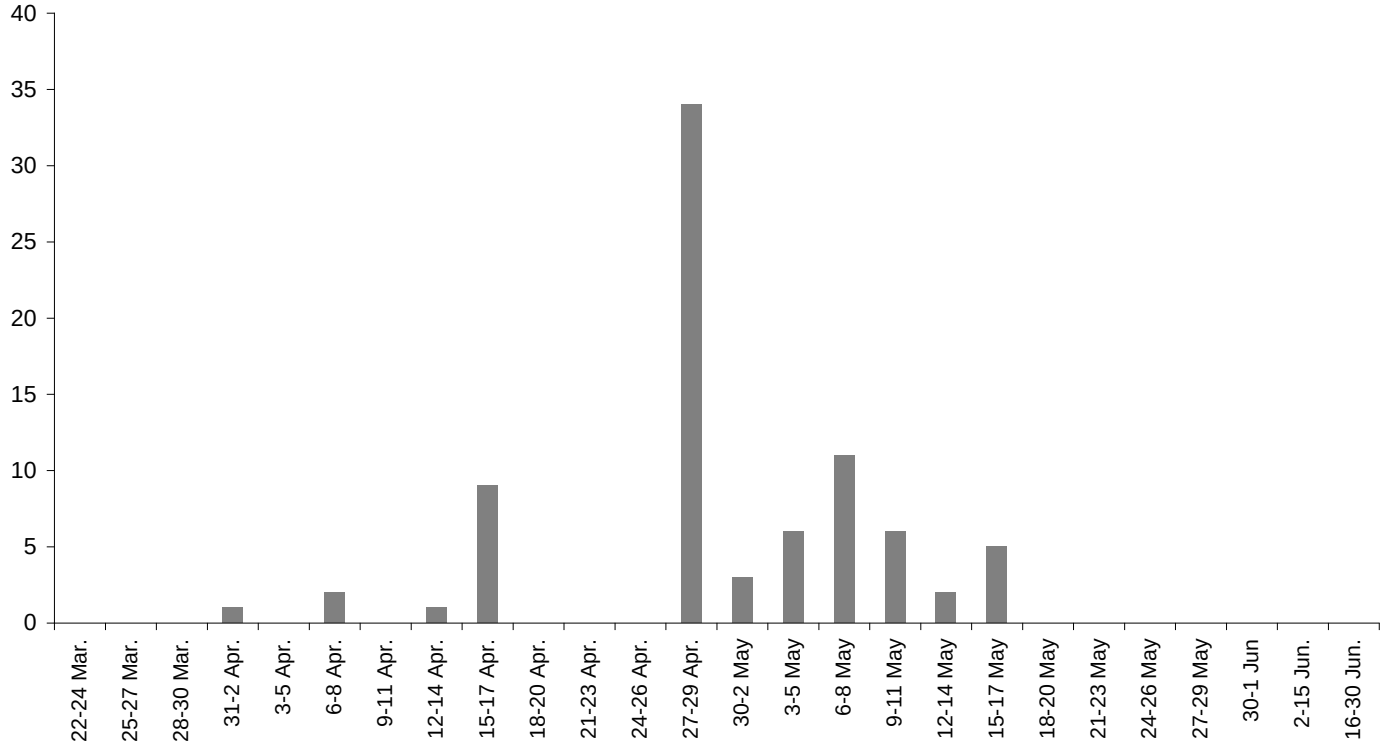


Figure 32. Counts of Asian Dowitcher at Mai Po Inner Deep Bay Ramsar Site, spring 2011

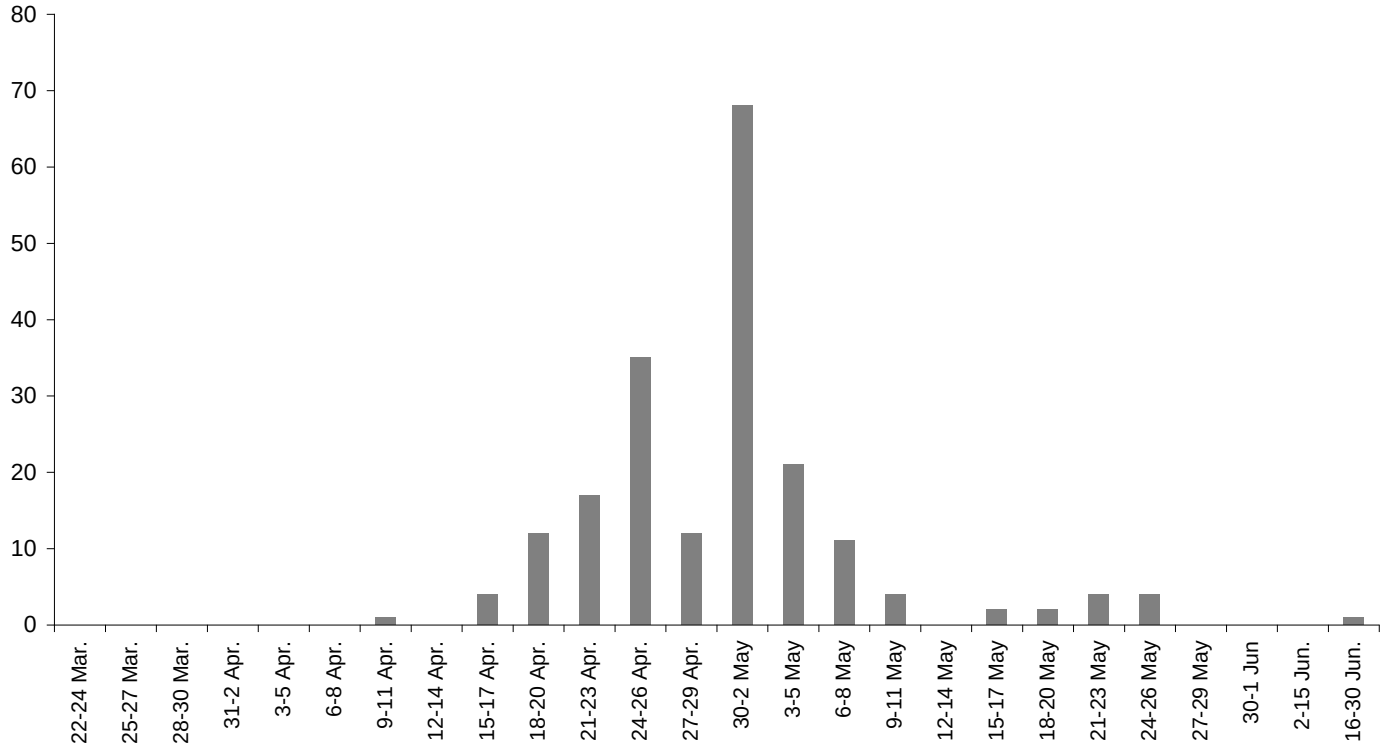


Figure 33. Counts of Red Knot at Mai Po Inner Deep Bay Ramsar Site, spring 2011

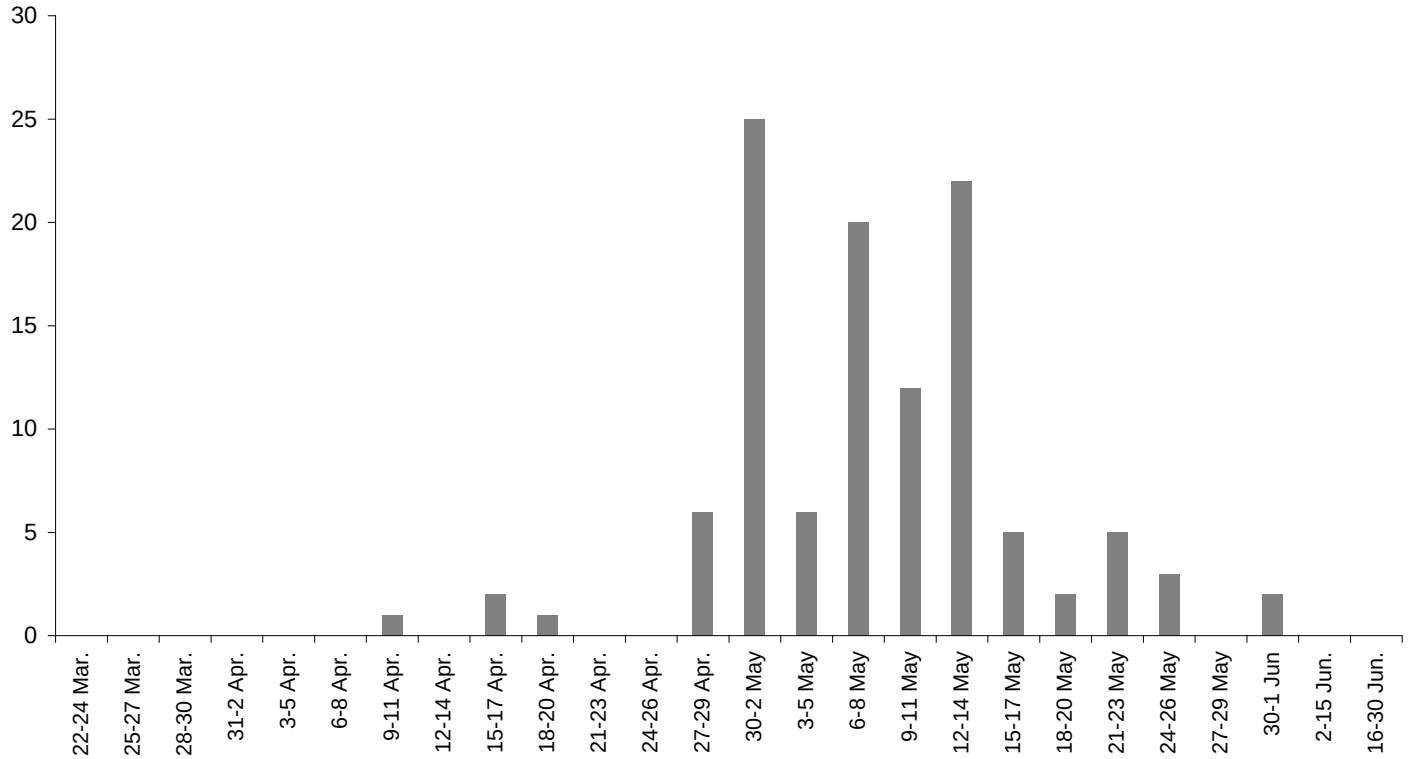


Figure 34. Counts of Great Knot at Mai Po Inner Deep Bay Ramsar Site, spring 2011

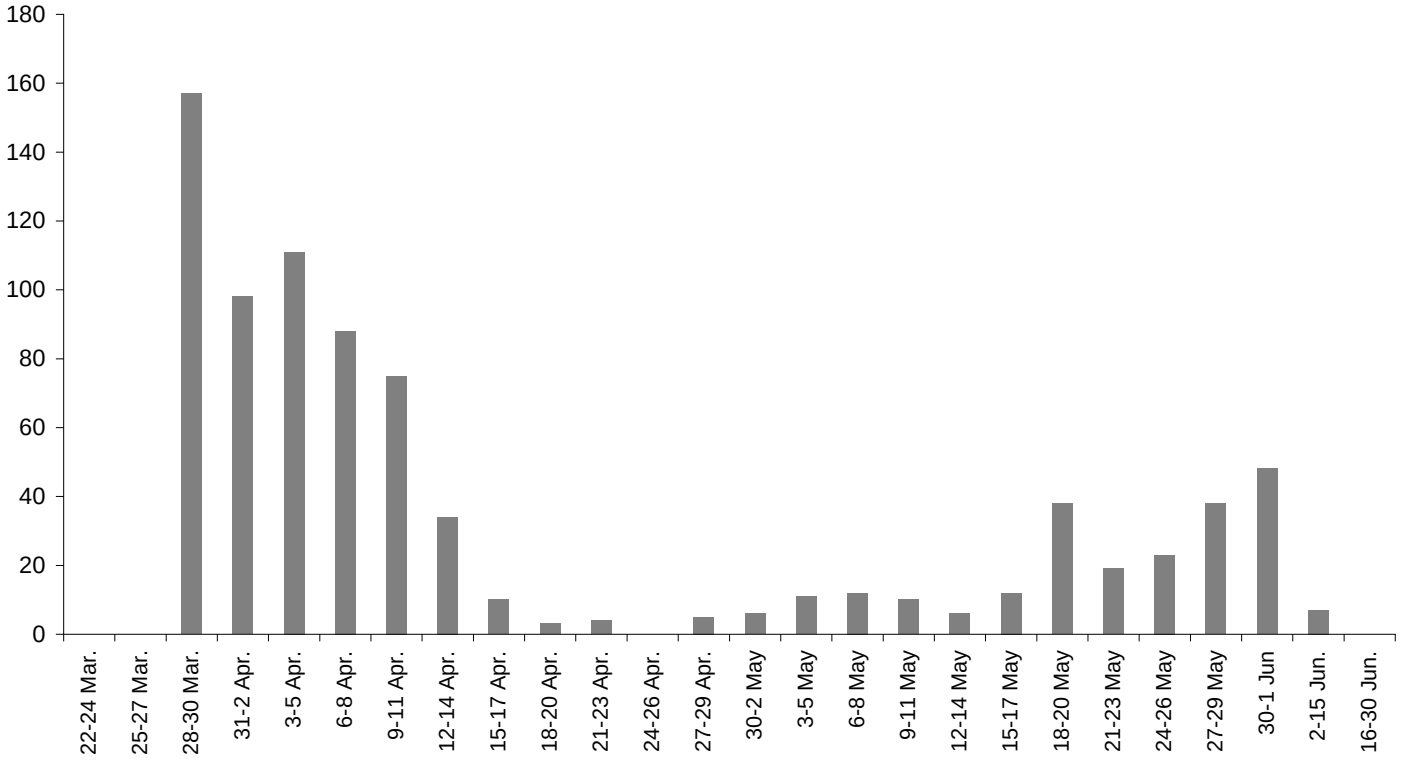


Figure 35. Counts of Red-necked Stint at Mai Po Inner Deep Bay Ramsar Site, spring 2011

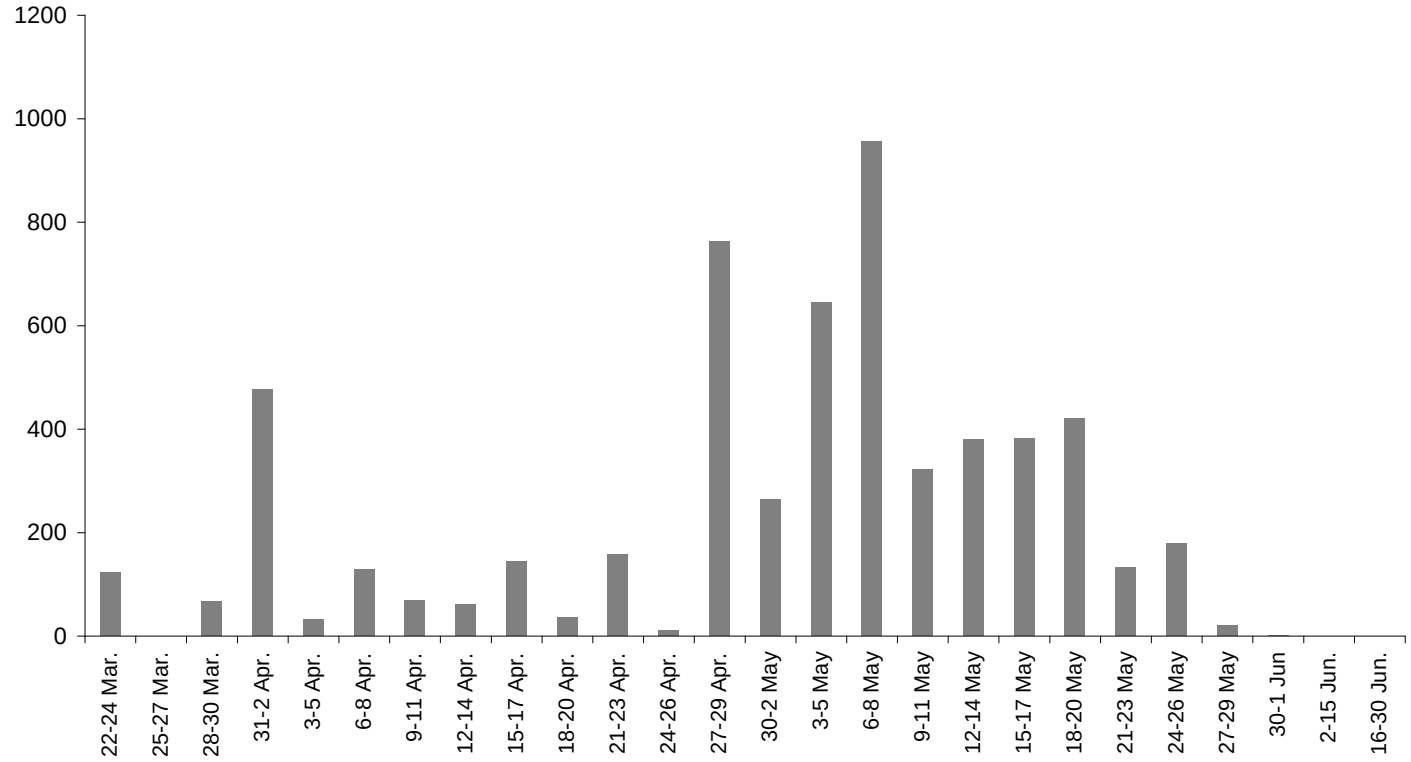


Figure 36. Counts of Sharp-tailed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2011

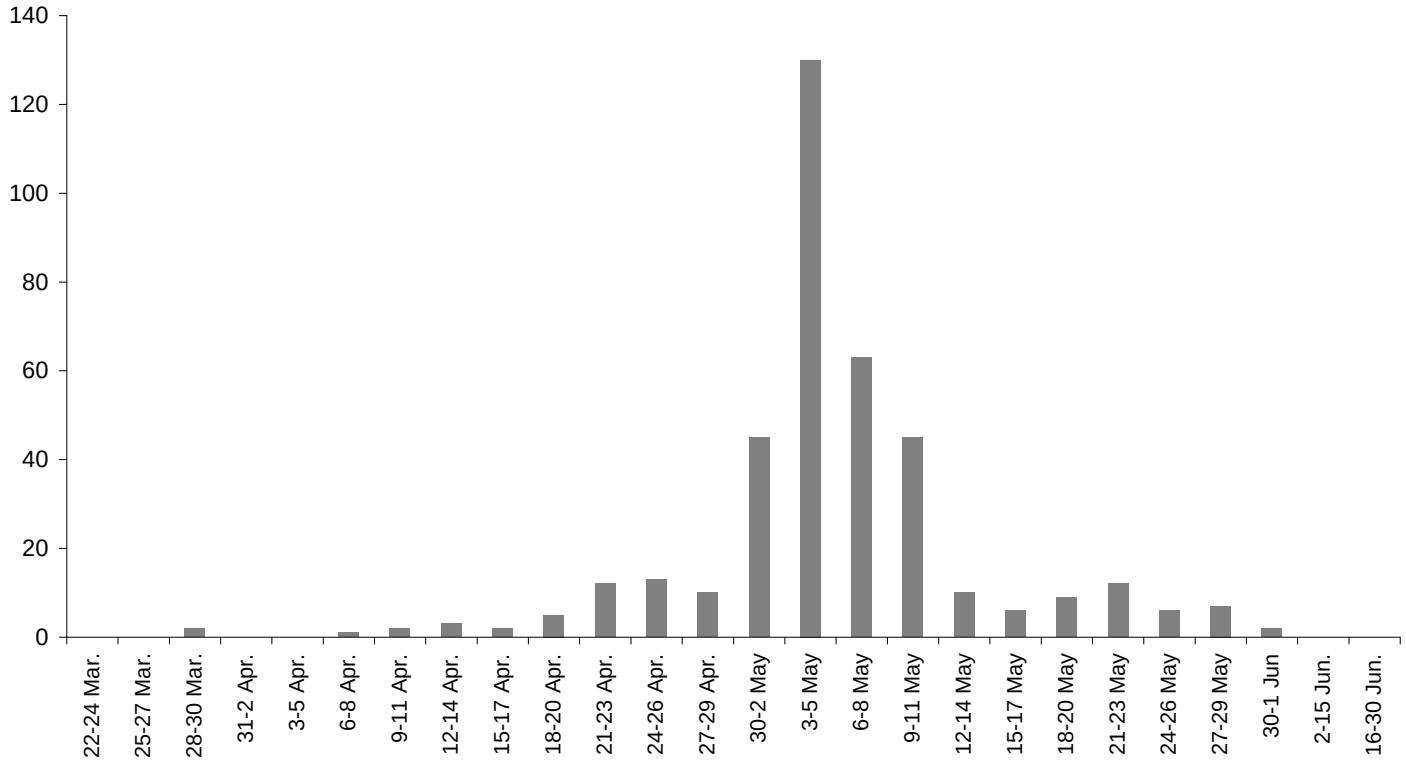


Figure 37. Counts of Curlew Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2011

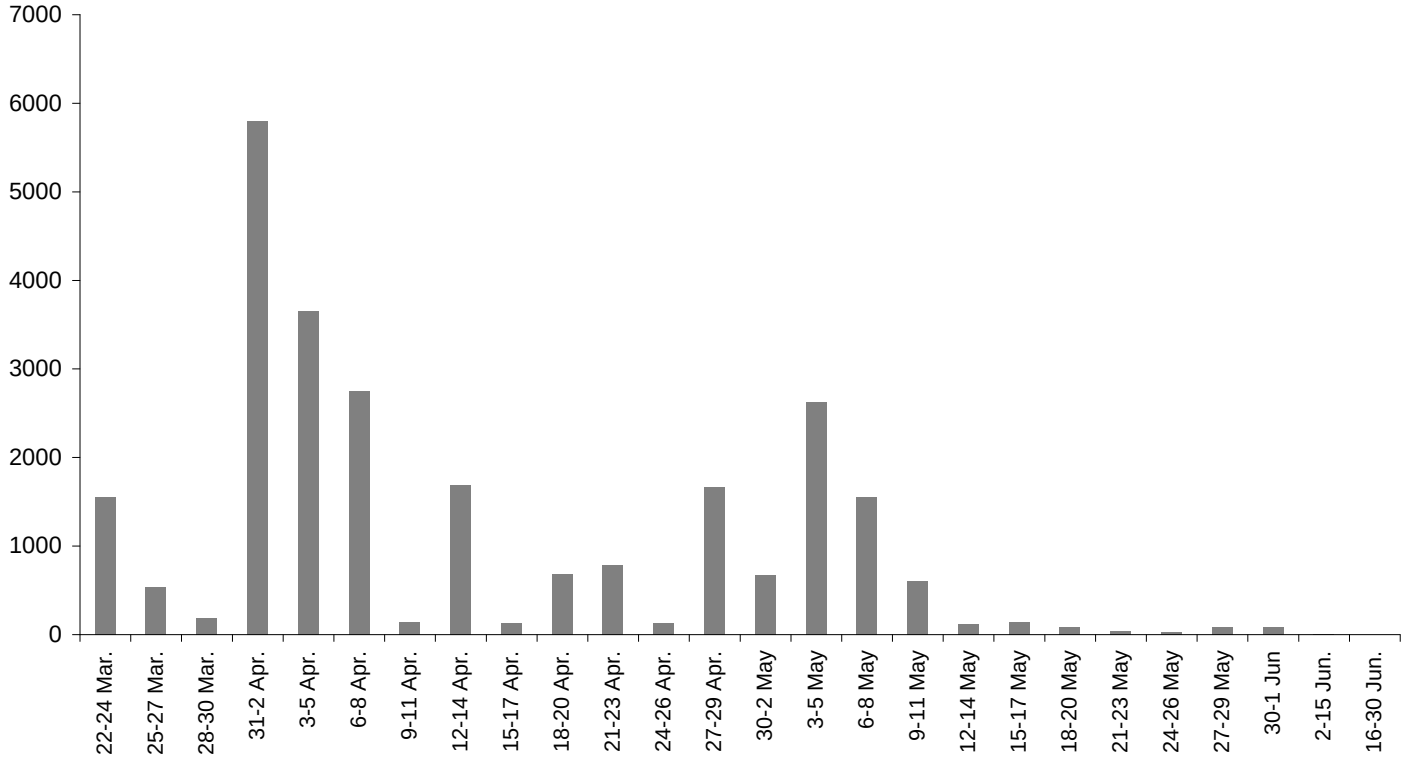
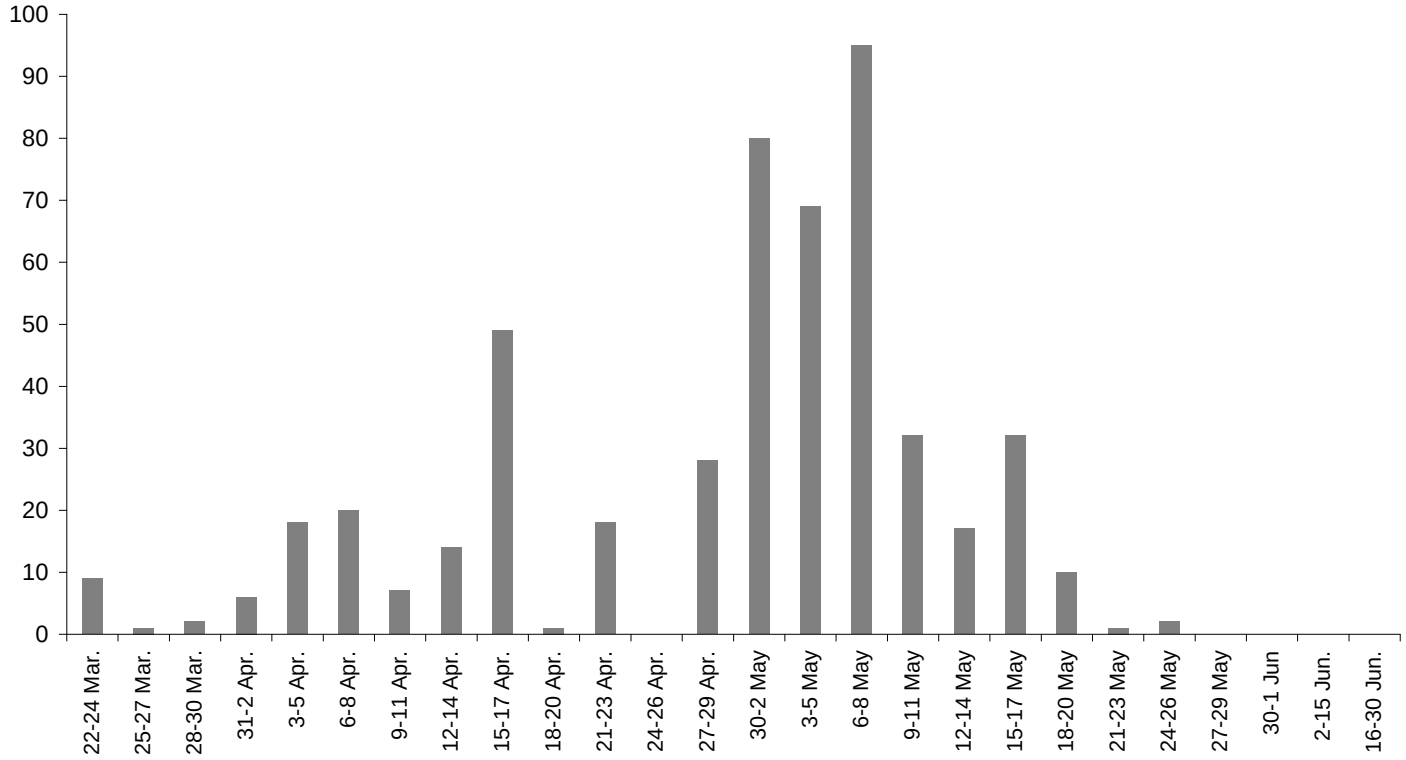


Figure 38. Counts of Broad-billed Sandpiper at Mai Po Inner Deep Bay Ramsar Site, spring 2011



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

2010-11 Report

Appendix 4

Records of leg-flagged shorebirds in autumn 2010 and spring 2011

The Hong Kong Bird Watching Society Limited

Agriculture, Fisheries and Conservation Department

Records of leg-flagged shorebirds in autumn 2010 and spring 2011

				Right Leg				Left Leg				
Date	Observer	Species	Breeding plumage	Colour	Position	Colour	Position	Colour	Position	Colour	Position	Ringed location
16-Jul-10	Yu Yat Tung	Eurasian Curlew	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Jul-10	Yu Yat Tung	Eurasian Curlew	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
28-Aug-10	Yu Yat Tung	Marsh Sandpiper	0	White	Above	Yellow	Below					Mai Po, Hong Kong
29-Aug-10	HF Cheung	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
29-Aug-10	HF Cheung	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
29-Aug-10	HF Cheung	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
29-Aug-10	HF Cheung	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
29-Aug-10	HF Cheung	Marsh Sandpiper	0	White	Above	Yellow	Below					Mai Po, Hong Kong
5-Sep-10	Mike Kilburn	Common Greenshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
5-Sep-10	Mike Kilburn	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
5-Sep-10	Mike Kilburn	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
5-Sep-10	Mike Kilburn	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
5-Sep-10	mhs	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
5-Sep-10	Mike Kilburn	Curlew Sandpiper	Not record	Yellow	Above							N Western Australia
5-Sep-10	Mike Kilburn	Marsh Sandpiper	0	White	Above	Yellow	Below					Mai Po, Hong Kong
5-Sep-10	Mike Kilburn	Marsh Sandpiper	0	White	Above	Yellow	Below					Mai Po, Hong Kong
5-Sep-10	mhs	Marsh Sandpiper	0	White	Above	Yellow	Below					Mai Po, Hong Kong
19-Sep-10	Richard Lewthwaite	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong

				Right Leg				Left Leg				
Date	Observer	Species	Breeding plumage	Colour	Position	Colour	Position	Colour	Position	Colour	Position	Ringed location
19-Sep-10	Richard Lewthwaite	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
19-Sep-10	Richard Lewthwaite	Whimbrel	0	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Yu Yat Tung	Common Greenshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Yu Yat Tung	Common Greenshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Katherine Leung	Common Greenshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Katherine Leung	Common Greenshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Katherine Leung	Common Greenshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Yu Yat Tung	Common Redshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Yu Yat Tung	Common Redshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Yu Yat Tung	Common Redshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Yu Yat Tung	Common Redshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
20-Sep-10	Katherine Leung	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Sep-10	Richard Lewthwaite	Common Greenshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Sep-10	Richard Lewthwaite	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Sep-10	Richard Lewthwaite	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Sep-10	Richard Lewthwaite	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Sep-10	Richard Lewthwaite	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
24-Sep-10	dick	Common Redshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong

				Right Leg				Left Leg				
Date	Observer	Species	Breeding plumage	Colour	Position	Colour	Position	Colour	Position	Colour	Position	Ringed location
26-Sep-10	Kitty Koo	Red-necked Stint	0	Blue	Above	Blue	Above					Northern Hokkaido, Japan
11-Oct-10	John Allcock	Black-winged Stilt	Not record	White	Above	Blue	Below					Taiwan
19-Oct-10	Yu Yat Tung	Eurasian Curlew	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Oct-10	Yu Yat Tung	Common Redshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Oct-10	Yu Yat Tung	Common Redshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Oct-10	Yu Yat Tung	Common Redshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Oct-10	Yu Yat Tung	Common Redshank	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
4-Nov-10	Yu Yat Tung	Common Greenshank	0	White	Above	Yellow	Below					Mai Po, Hong Kong
23-Jan-11	Peter Chan	Dunlin	0	Green	Above	Orange	Below					Yalujiang, China
19-Mar-11	John and Jemi Holmes	Curlew Sandpiper	25	Blue	Above	Yellow	Below					Bohai Bay, China
21-Mar-11	Peter Wong and Michelle Kong	Curlew Sandpiper	0	Orange	Above	Yellow	Below					South Australia
26-Mar-11	Peter Wong and Michelle Kong	Great Knot	50	Yellow	Above							N Western Australia
28-Mar-11	Yu Yat Tung	Common Greenshank	50	White	Above	Yellow	Below					Mai Po, Hong Kong
28-Mar-11	Yu Yat Tung	Marsh Sandpiper	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
31-Mar-11	Yu Yat Tung	Greater Sand Plover	75	White	Above	Yellow	Below					Mai Po, Hong Kong
1-Apr-11	John and Jemi Holmes	Curlew Sandpiper	Not record	?	Above							Unknown
1-Apr-11	John and Jemi Holmes	Great Knot	Not record	Yellow	Above							N Western Australia
1-Apr-11	John and Jemi Holmes	Sandering	Not record	Yellow	Above							N Western Australia

				Right Leg				Left Leg				
Date	Observer	Species	Breeding plumage	Colour	Position	Colour	Position	Colour	Position	Colour	Position	Ringed location
2-Apr-11	John Allcock	Curlew Sandpiper	Not record	Orange	Above							Victoria, Australia
2-Apr-11	John Allcock	Red-necked Stint	Not record	Black	Above	White	Below					Shanghai, China
2-Apr-11	John Allcock	Terek Sandpiper	Not record	Yellow								N Western Australia
3-Apr-11	Peter Wong and Michelle Kong	Great Knot	50	Yellow	Above							N Western Australia
6-Apr-11	Yu Yat Tung	Curlew Sandpiper	100	Orange	Above							Victoria, Australia
7-Apr-11	John and Jemi Holmes	Great Knot	75	Yellow	Above							N Western Australia
7-Apr-11	John and Jemi Holmes	Greater Sand Plover	50	Yellow	Above							N Western Australia
12-Apr-11	Yu Yat Tung	Great Knot	50	Yellow	Above							N Western Australia
16-Apr-11	puppymic	Curlew Sandpiper	100	White	Above	Yellow	Below					Mai Po, Hong Kong
16-Apr-11	kyshum	Red-necked Stint	100	Yellow	Above							N Western Australia
16-Apr-11	kyshum	Terek Sandpiper	trace	black	Above	White	Below	Green	above			Shanghai, China
18-Apr-11	Yu Yat Tung	Common Greenshank	75	White	Above	Yellow	Below					Mai Po, Hong Kong
18-Apr-11	Yu Yat Tung	Curlew Sandpiper	50	Yellow	Below							N Western Australia
18-Apr-11	Yu Yat Tung	Marsh Sandpiper	100	White	Above	Yellow	Below					Mai Po, Hong Kong
18-Apr-11	Peter Wong and Michelle Kong	Red-necked Stint	0	Yellow	Above							N Western Australia
21-Apr-11	Yu Yat Tung	Curlew Sandpiper	100	White	Above	Yellow	Below					Mai Po, Hong Kong
22-Apr-11	John Allcock	Curlew Sandpiper	Not record	Yellow								N Western Australia
22-Apr-11	John Allcock	Greater Sand Plover	Not record	Yellow								N Western Australia
22-Apr-11	John Allcock	Red-necked Stint	Not record	Black	Above	Green	Below					Thailand

				Right Leg				Left Leg				
Date	Observer	Species	Breeding plumage	Colour	Position	Colour	Position	Colour	Position	Colour	Position	Ringed location
22-Apr-11	John Allcock	Red-necked Stint	Not record	Yellow	Above	Orange	Below					SW Western Australia
22-Apr-11	John Allcock	Terek Sandpiper	Not record	Black	Above	White	Below					Shanghai, China
22-Apr-11	John Allcock	Terek Sandpiper	Not record	Yellow								N Western Australia
22-Apr-11	John Allcock	Terek Sandpiper	Not record	Yellow								N Western Australia
24-Apr-11	John Allcock	Curlew Sandpiper	Not record	Orange	Above							Victoria, Australia
24-Apr-11	tsawong	Great Knot	75	Blue	Above	Blue	Above	Yellow/ Red/Green				Northern Hokkaido, Japan
24-Apr-11	tsawong	Great Knot	75	Yellow	Above							N Western Australia
24-Apr-11	John Allcock	Red-necked Stint	Not record	Orange	Above							Victoria, Australia
24-Apr-11	John Allcock	Red-necked Stint	Not record	Orange	Above							Victoria, Australia
29-Apr-11	Yu Yat Tung	Red-necked Stint	50	Orange	Above							Victoria, Australia
29-Apr-11	Yu Yat Tung	Red-necked Stint	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
29-Apr-11	Yu Yat Tung	Red-necked Stint	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
4-May-11	Yu Yat Tung	Curlew Sandpiper	100	Orange	Above	Yellow	Below					South Australia
4-May-11	Yu Yat Tung	Red-necked Stint	50	Orange	Above							Victoria, Australia
6-May-11	Yu Yat Tung	Curlew Sandpiper	75	Yellow	Above							N Western Australia
6-May-11	Yu Yat Tung	Curlew Sandpiper	75	Yellow	Above							N Western Australia
6-May-11	Yu Yat Tung	Curlew Sandpiper	100	Yellow	Above							N Western Australia
6-May-11	Yu Yat Tung	Curlew Sandpiper	100	Yellow	Above							N Western Australia
6-May-11	Yu Yat Tung	Red-necked Stint	75	Orange	Above							Victoria, Australia

				Right Leg				Left Leg				
Date	Observer	Species	Breeding plumage	Colour	Position	Colour	Position	Colour	Position	Colour	Position	Ringed location
12-May-11	Yu Yat Tung	Red Knot	75	Yellow	Above							N Western Australia
12-May-11	Yu Yat Tung	Red Knot	100	Yellow	Above							N Western Australia
14-May-11	John Allcock	Curlew Sandpiper	Not record	Blue	Above	Yellow	Below					Bohai Bay, China
14-May-11	John Allcock	Curlew Sandpiper	Not record	Orange	Above							Victoria, Australia
14-May-11	John Allcock	Greater Sand Plover	Not record	Yellow								N Western Australia
14-May-11	John Allcock	Grey-tailed Tattler	Not record	Black	Above	Yellow	Below					Malaysia
14-May-11	John Allcock	Red-necked Stint	Not record	Orange	Above	Yellow	Below					South Australia
14-May-11	John Allcock	Red-necked Stint	Not record	Orange	Above							Victoria, Australia
15-May-11	Yu Yat Tung	Red-necked Stint	50	Orange	Above							Victoria, Australia
18-May-11	Yu Yat Tung	Grey Plover	0	White	Above	Yellow	Below					Mai Po, Hong Kong
18-May-11	Yu Yat Tung	Marsh Sandpiper	50	White	Above	Yellow	Below					Mai Po, Hong Kong
21-May-11	John Allcock	Grey-tailed Tattler	Not record	Yellow								N Western Australia
21-May-11	Yu Yat Tung	Red-necked Stint	50	Orange	Above	Yellow	Below					South Australia
21-May-11	John Allcock	Red-necked Stint	Not record	Orange	Above	Yellow	Below					South Australia
21-May-11	John Allcock	Red-necked Stint	Not record	Orange	Above	Yellow	Below					South Australia
21-May-11	Yu Yat Tung	Red-necked Stint	50	Orange	Above							Victoria, Australia
21-May-11	John Allcock	Red-necked Stint	Not record	Orange	Above							Victoria, Australia
21-May-11	John Allcock	Red-necked Stint	Not record	Orange	Above							Victoria, Australia
21-May-11	John Allcock	Red-necked Stint	Not record	Orange	Above							Victoria, Australia
21-May-11	John Allcock	Red-necked Stint	Not record	Orange	Above							Victoria, Australia

				Right Leg				Left Leg				
Date	Observer	Species	Breeding plumage	Colour	Position	Colour	Position	Colour	Position	Colour	Position	Ringed location
21-May-11	John Allcock	Red-necked Stint	Not record	Orange	Above							Victoria, Australia
29-May-11	Yu Yat Tung	Curlew Sandpiper	Not record	White	Above	Yellow	Below					Mai Po, Hong Kong
1-Jun-11	Yu Yat Tung	Grey Plover	0	White	Above	Yellow	Below					Mai Po, Hong Kong