QUEENSLAND WADER

Issue 100 June, July, August 2017

Newsletter of the Queensland Wader Study Group (QWSG), a special interest group of *Queensland Ornithological Society Incorporated.* www.waders.org.au

Tracking the Migratory Movements of Pacific Golden Plover Spending the Summer in Moreton Bay, Queensland, Australia

With financial support from the Port of Brisbane Pty Ltd, the Queensland Wader Study Group has placed 5-gram Platform Terminal Transmitters (**PTTs**) from Microwave Telemetry on four Pacific Golden Plover. The birds were caught at the Manly artificial shorebird roost, located near Brisbane, in Queensland, Australia.

Previous studies using geolocators in Hawaii and Alaska have provided detailed information on the migration of those central Pacific birds (Johnson *et al*. 2015) but there have been no corresponding studies from birds spending the non-breeding season in Australia. Leg-flag resightings of Australian banded birds are sparse, with records in the Yellow Sea (Minton *et al.* 2006) and a more recent record in Japan (QWSG database). Occasional records of Alaskan flagged birds in Australia suggest that at least some birds in Australia may originate from Alaskan breeding sites (Minton *et al.* 2006).

Two Pacific Golden Plover (**DAA** and **DAB**) were caught on 29 November 2016 in mist-nets and have provided several months of data on the way the species uses Moreton Bay and the surrounding region for feeding and roosting. This tracking has already uncovered some behaviours that the wader study group were not aware of from leg-flag resightings alone. A further two birds (**BSA** and **BHM**) were fitted with transmitters on the 12th March. All four birds, have continued to roost at Manly regularly with their daytime feeding areas being within 1-3 km of the Manly roost, mainly to the north in the Wynnum area and in the Wellington Point area. All of them have also occasionally moved further north, with records from the Port of Brisbane reclamation area (7 km north of Manly), at least once.

Figure 1: **BHM** having its transmitter attached

The transmitters are programmed with a standard 10-hour transmit cycle and 48 hours off to allow the battery to recharge. Although frustrating during the 48 hours' downtime, this does allow the devices to cycle through a full 24-hour period over time. At night, both **DAA** and **DAB** have been regularly flying inland and spending time at night on the Royal Queensland Golf Course, situated on the banks of the Brisbane River 10 km west-north-west of Manly, which gives a whole new perspective on golf courses!

Figure 2: Local positions recorded in Moreton Bay

DAB unfortunately stopped transmitting on 19th April near the Port of Brisbane motorway after being in that area for over a week. We suspect the bird was taken by a predator as **DAB** has not been seen since that date. The remaining three birds remained local to Moreton Bay and all left between the 27th and 29th April with all three birds flying to the East of Papua New Guinea with one heading towards Guam (**DAA**), one towards Palau (**BSA**) and one which turned south towards the coast of New Guinea (**BHM**).

Catching two birds in the middle of the non-breeding season while the birds were still at their lean weights and catching the final two as they are starting to increase weight prior to migration provided an interesting opportunity to compare the effectiveness of harnesses fitted at different times in the migratory cycle. Unfortunately, both transmitters that were fitted later in the summer stopped transmitting on the 3rd and 5th May mid Pacific and we think as the birds have lost body mass that the units may have fallen off. **DAA**, with a harness fitted when the bird was lean has continued to operate as the bird migrates north.

DAA made landfall in Guam on the 2nd May and remained there until at least the 10th May, remaining in the Sasa bay area in the South West of the island. The bird was flying north from Guam on the 12th May, making landfall in Japan on the 14th May.

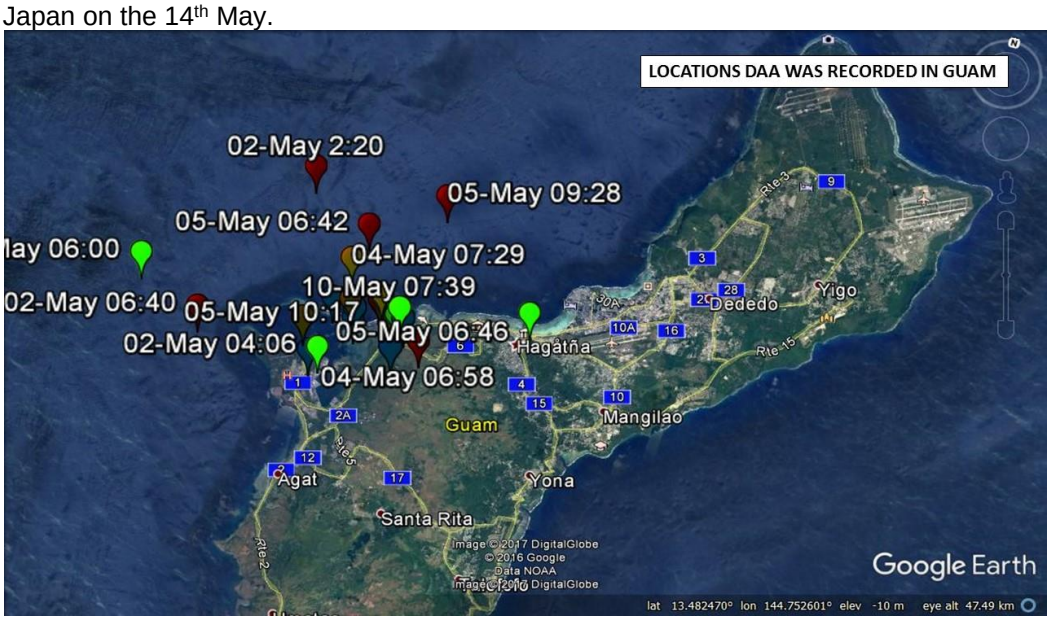


Figure 3: Local positions for DAA in Guam

Regular updates with maps showing where the birds have been seen are being posted on the Queensland Wader Study Group website. These are only local movements, within the Moreton Bay area at this stage and the updates will be more frequent as the birds start migrating and leave our region; http://waders.org.au/studying-waders/banding-shorebirds/satellite-transmitters-and-geolocators/pacific-golden-plover-satellite-tracking/

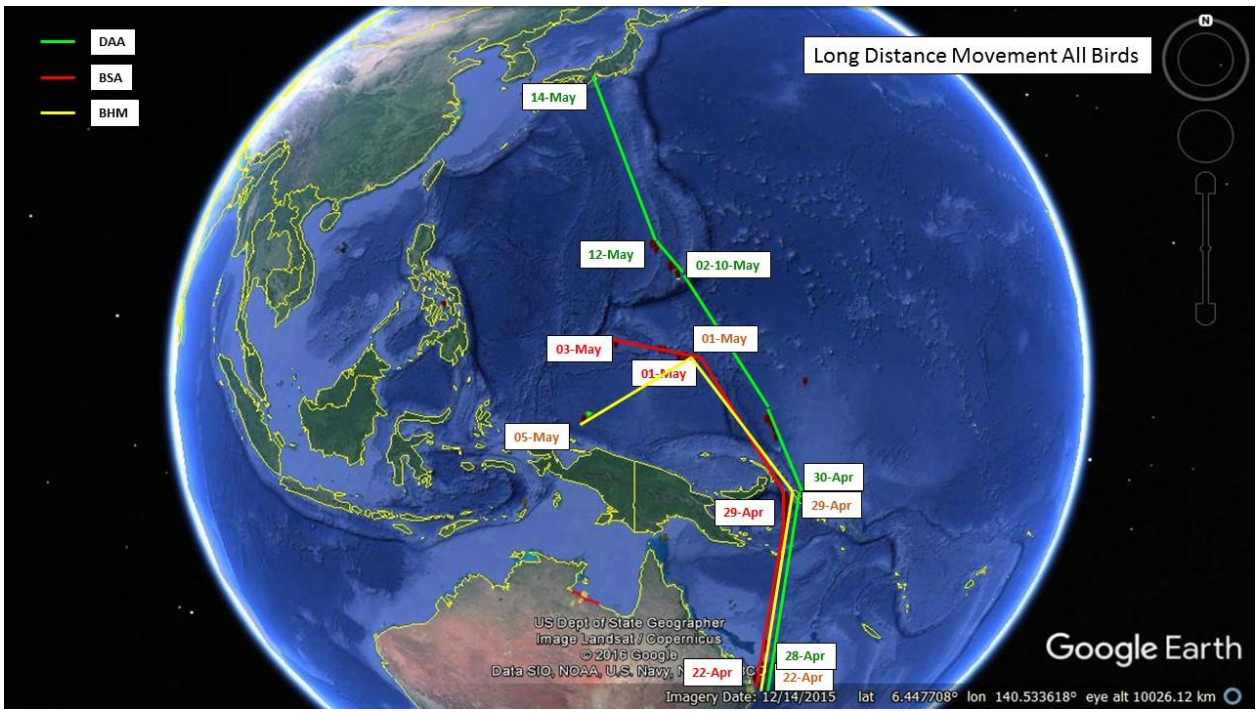


Figure 4: Migratory movements up to 14th May 2017

Many thanks to the Port of Brisbane for their support and to the many volunteers at Queensland Wader Study Group who have helped with the catching. Particular thanks are due to Robert Bush who has developed an expertise in fitting these devices, as evidenced by four healthy, transmitting birds that are currently flying around the Brisbane area.
Jon Coleman, Queensland Wader Study Group

References

Johnson, O.W., Porter, R.R., Fielding, L., Weber, M.F., Gold, R.S., Goodwill, R.H., Johnson, P .M., Bruner, A.E., Brusseau, P .A., Brusseau, N.H., Hurwitz, K. and Fox, J.W. (2015). Tracking Pacific Golden-Plovers Pluvialis fulva: transoceanic migrations between non-breeding grounds in Kwajalein, Japan and Hawaii and breeding grounds in Alaska and Chukotka. *Wader Study* **122**(1): 13–20.

Minton, C., Wahl, J., Jessop, R., Hassell, C., Collins, P. and Gibbs, H. (2006). Migration routes of waders which spend the non-breeding season in Australia. *Stilt* **50**:135-157.

Port of Brisbane Count Results 2016 by Linda Cross

QWSG now has data for 14 years of counts conducted by the group for the Port of Brisbane Pty Ltd (PBPL) at the Port of Brisbane complex (formerly known as Bishop or Fisherman Island). As with previous years, the counts were conducted the day after the scheduled monthly count set for the QWSG count programme.

The methodology for the counts has continued as before with numbers being listed under the appropriate habitat that the birds were observed using (dry open area, wet margin, broken ground and bund wall). The overall count for the complex in 2016 was 53,616 waders, 6,360 terns/gulls and 4,362 waterbirds/raptors which do not include the figures for the Visitors Centre Lake (30 waders, 1 tern/gull and 4,845 waterbirds/raptors). However, these figures of course are not the number of birds using the site at any one time, but the aggregate of the monthly totals. No count was conducted in June due to bad weather creating unstable conditions within the complex.

The following table is the total migratory and resident waders recorded at the complex over the last 14 years.
Note: These figures do not include the Visitors Centre Lake site.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Totals
2016	5913	6386	6528	2793	4103	No count	1532	1356	4581	7544	7969	4911	53616
2015	9132	9233	14299	5618	3380	1737	2089	3352	7460	9994	9653	9953	85900
2014	8701	7673	6520	4809	1075	1022	1513	1839	7007	8145	7329	5567	61200
2013	No count	5897	7377	4312	4553	3989	2709	2934	4089	7793	7331	6506	57490
2012	6214	6676	6476	1335	1624	No count	1098	1267	2862	9461	10029	8389	55431
2011	No count	10173	No count	8108	2112	1552	1236	1488	2004	5430	8738	No count	40841
2010	7345	7099	6709	2864	1256	2145	1648	2568	5205	6942	5904	NC	49685
2009	10072	13243	7192	2293	NC	1200	1245	2439	4372	6478	6182	8003	62719
2008	5179	8935	4394	4204	2202	2793	2700	2724	5468	4069	6617	8286	57571
2007	8853	5264	8307	1120	1989	1543	1752	1629	3885	7609	6165	5664	53780
2006	12323	10573	7055	4230	2142	1969	2250	2635	5296	8051	8995	7514	73033
2005	4751	5609	3572	3317	2162	3034	2436	2096	3790	6173	6745	7731	51416
2004	11650	4528	7398	1607	2416	1617	1328	2410	2974	6026	5976	8194	56124
2003	7445	6922	6126	4021	2286	2107	2041	1720	4466	4118	8054	7996	57302

The following table provides the numbers for migratory and resident waders, terns, waterbirds and raptors for the complex and Visitors Centre Lake each month for 2016.

2016 Month	Port Waders	Port Terns/ Gulls	Port Waterbirds/ Raptors	Lake Waders	Lake Terns	Lake Waterbirds/ Raptors	Totals
January	5913	787	366	10	1	448	**7525**
February	6386	1036	126	13	0	498	**8059**
March	6528	1225	183	0	0	379	**8315**
April	2793	578	373	0	0	474	**4218**
May	4103	405	708	2	0	559	**5777**
June	No count	No count	No count	No count	No count	No count	No count
July	1532	257	1516	0	0	501	**3806**
August	1356	191	366	1	0	504	**2418**
September	4581	176	112	0	0	324	**5193**
October	7544	246	200	2	0	387	**8379**
November	7969	208	127	0	0	441	**8745**
December	4911	1251	282	2	0	330	**6776**
Totals	**53616**	**6360**	**4359**	**30**	**1**	**4845**	**69211**

Overall total wader figures for 2016 were considerably less than 2015, and the fourth lowest total since 2003 when extensive surveys began at the PBPL.

Comments on individual count sites for 2016 are as follows:-

R3 – This riverside paddock is currently still the largest within the complex, but wader numbers have dropped during the year. However, the site recorded the highest wader counts on 2 occasions during the year. In March and December, the highest wader counts were 2,554 and 1,936 respectively, which were both 39% of the total waders recorded on all sites. Pacific Golden Plover did favour the site for the first 3 months of the year with 425 recorded on site in January, 298 in February and 214 in March. Some of the larger species numbers using the site during the year were 313 Great Knot in January, 622 Lesser Sand Plover, 44 Ruddy Turnstone and 26 Terek Sandpiper in March, 408 Curlew Sandpiper in September increasing to 730 in October, 31 Grey Plover in November, 746 Bar-tailed Godwit, and 523 Lesser Sand Plover in December. The site also recorded 2 Broad-billed Sandpiper in March. This site again attracted the highest counts of terns and gulls for 6 months of the year.

C2 – This site continues to be filled for development and bird numbers were very low for most of the year. However, the highest wader count (1,453) was recorded at this site in April, which was due to pumping fill into the site on the day of the count. Included in this count were 51 Broad-billed Sandpiper, 3 Double-banded Plover, 20 Greater Sand Plover, 575 Lesser Sand Plover and 781 Red-necked Stint. Other significant records included 1,018 Red-necked Stint in November, 52 Red-capped Plover and 287 Red-necked Stint in July.

C3 – This year saw a complete turnaround of wader numbers for this paddock compared to 2015 records. The site struggled to attract many birds for most of the year with 1,219 being the best total for waders in March, which included 113 Pied Oystercatcher, 313 Lesser Sand Plover and 516 Red-necked Stint. During the April count 305 Red-necked Avocet, 134 Pied Oystercatcher, 44 Broad-billed Sandpiper and 27 Far Eastern Curlew were recorded, and in March 1 Common Greenshank was recorded on site, which is uncommon within the complex.

BS1 – As in previous years, this first of the bay-side ponds continued to have very low numbers of waders. The highest count was 326 birds in November, of which 274 were Red-necked Stint. A single Double-banded Plover was recorded on site in March. Only 2 terns were recorded in March and the site failed to attract any waterbirds at all during the year.

BS2 – For the first 3 months of the year no bird species were recorded at this site and the remaining months figures were very low with the exception of November, when the site recorded the highest wader total (3,130) for the month, which was 39% of total waders recorded on all sites. The November totals included 582 Curlew Sandpiper, 72 Greater Sand Plover, 560 Lesser Sand Plover, 213 Pacific Golden Plover, 1,283 Red-necked Stint and 419 Sharp-tailed Sandpiper. Other interesting records were 338 Pacific Golden Plover in September, 6 Double-banded Plover in May and 1 Grey Plover in April.

BS3 – During 2016 waders favoured this site over other sites within the complex recording the highest totals for 5 months, and also having the highest wader count (4,237) for the whole of the year in October, which was 56% of the total wader count for the whole of the Port of Brisbane count sites. Red-necked Stint were recorded every month of the year with some of the better totals being 902 in January, 686 in February, 1,564 in May, 2,100 in October and 616 in December. Other reasonable species counts included 31 Grey Plover, 889 Lesser Sand Plover and 105 Greater Sand Plover in February, 81 White-headed Stilt, 302 Red-necked Avocet and 46 Ruddy Turnstone in May, 900 Lesser Sand Plover, 781 Curlew Sandpiper and 129 Far Eastern Curlew in October. Other interesting species recorded were 14 Broad-billed Sandpiper in March, 3 Double-banded Plover in July and 1 Common Greenshank recorded both on the February and July count.

BS4 – Although the site attracted some waders during all months of the year, the totals were in the low hundreds except for February when the total waders recorded were 1,409. Grey-tailed Tattler was once again faithful to the site for 9 months of the year with 583 in January, 1,175 in February, 383 in March and in excess of 200 during the other months. Other interesting totals included 85 Ruddy Turnstone, 3 Grey Plover and 131 Pied Oystercatcher in February, 2 Terek Sandpiper in March and 320 Curlew Sandpiper in September. Some other species records that are unusual within the complex included 2 Black-fronted Dotterel in April, 1 Black-tailed Godwit in May and 4 Masked Lapwing in October.

FPE Outer – Total wader numbers at this site were in the hundreds for 6 months of the year and only 2 other months (January) and (September) had anything more significant (1,083 and 1,817 total waders). The site attracted Ruddy Turnstone for 8 months of the year, with the highest total being 122 in January. The site still attracted Grey-tailed Tattler for 4 months and in reasonable numbers of 408 in January, 543 in March, 218 in May and 568 in December. Terek Sandpiper were recorded 5 months of the year (although in very low numbers), and 6 in October was the highest total. Other high totals include 218 Pacific Golden Plover in February, 485 Curlew Sandpiper and 1,110 Red-necked Stint in September, 340 Lesser Sand Plover and 722 Red-necked Stint in November. One Sooty Oystercatcher was recorded on site in February and 2 were seen in May. Unfortunately, the very uncommon Wandering Tattler that has been recorded using this site in 2015 was not recorded at all on any of the Port of Brisbane sites.

PLDE (Lucinda Drive drain east) – This long drain area that was constructed along the southern end of the reclamation area is not intended as wader habitat, but did attract 1 White-headed Stilt and 1 Red-necked Stint in January and 2 White-headed Stilt in February. A handful of other waterbirds (mainly cormorant species), were recorded using the area at other times of the year.

PBAR (Artificial Roost) – Many species of waterbirds continue to be attracted to this roost, but unfortunately wader numbers were once again quite low for the year with the highest total being 840 in January. Although wader numbers were low, 19 species were recorded throughout the year. In February 39 Broad-billed Sandpiper decided to feed in the site on their northward migration and

the less common Black-tailed Godwit (1) was recorded in February and (2) in July and August. The roost is a favoured site for Black-fronted Dotterel and was counted 5 months of the year and 1 Marsh Sandpiper was recorded on site in July, which was the only record of this species from all sites for the whole of 2016.

FICP (Claypan) – Counting of this large claypan outside the reclamation area was made easier by accessing the site through a fenced area onto the other side of the Casuarina and mangrove trees, which gave uninterrupted views of the species using the site. For 3 months of the year there were just a few birds and for 5 months the birds numbered in the hundreds. However, May and November counts produced the second highest counts for those months (1,003 and 1,251), and the site is still favoured by 2 particular species. The Far Eastern Curlew was recorded for 8 months of the year with reasonable counts of 101 in January, 201 in May and 135 in November. Whimbrel were also recorded 8 months of the year and although numbers were significantly lower, 338 were recorded in May after some unknown disturbance brought this large flock out of the mangroves. Interesting sightings included 1 Black-tailed Godwit in March, 6 Black-fronted Dotterel in May, 1 Double-banded Plover in August, 780 Bar-tailed Godwit and 9 Red Knot in November.

FIVC (Visitors Centre Lake) (Swan Lake) – Only 2 wader species (White-headed Stilt and Masked Lapwing) were recorded during the year. White-headed Stilt were only seen in January (10) and February (11), while Masked Lapwing were recorded 5 months, but with only a maximum of 2 each time. The Lake produced the highest count of waterbirds for 10 months of the year, with the highest count being 559 in May, and although there was an increase in the total bird numbers than 2015, it was significantly lower than other previous years. Black Swan were recorded every month with the highest count being 124 in January. Royal Spoonbill were recorded 10 months of the year with July, August and September producing the best counts of 192, 307 and 158 respectively. Breeding records were recorded for Chestnut Teal, Grey Teal and Dusky Moorhen. These records and other interesting sightings appear further down in this article.

Leg flag sightings: There were 11 green leg-flagged birds seen during the counts, but because these birds have been flagged by our group in Moreton Bay, and have not travelled any significant distance from the banding site, they have not been included in the leg flag sightings. Other leg-flagged and banded birds seen throughout the complex are as follows:

January	Black flag over white flag on Great Knot (flagged Chong-ming Dao, China).
February	Black flag over engraved white flag 'L75' on Great Knot (flagged Chong-ming Dao, China).
May	Red engraved band 'AHU' on Black Swan (flagged south-east Queensland).
August	Orange engraved flag on Caspian Tern (flagged Victoria).
September	Orange engraved flag on Bar-tailed Godwit (flagged Victoria) and engraved orange flag '39' on Caspian Tern (flagged Victoria).

Breeding records:

Red-capped Plover – 1 chick in **BS4** in January, 2 pair of adults displaying nesting behaviour in **BS1** in September and 1 chick in **FICP (claypan)** in October.

Some other interesting sightings (not waders) during the counts were:

January	456 Little Tern in **R3** – 227 Little Tern in **BS3** – 165 Chestnut Teal in **PBAR** – 1 Pacific Reef Egret and 4 Chestnut Teal ducklings in the **Lake**.
February	188 Little Tern in **R3** – 677 Little Tern in **BS3**.
March	455 Little Tern in **R3** – 483 Little Tern in **C3**.
April	233 Silver Gull in **C2** – 1 Pacific Reef Egret in **FPE Outer** – 1 Chestnut Teal duckling and 2 Grey Teal duckling in the **Lake**.
May	203 Silver Gull and 1 Pacific Reef Egret in **BS4** – 363 Chestnut Teal in **PBAR** – 143 Chestnut Teal in the **Lake**.
July	1 Lesser Crested Tern and 147 Gull-billed Tern in **BS3** – 929 Little Black Cormorant in **FPE Outer** – 292 Chestnut Teal in **PBAR**.
August	1 Lesser Crested Tern in **BS3** – 192 Chestnut Teal in **PBAR** – 25 Great Egret in the Lake.
September	5 Lesser Crested Tern in **R3** – 59 Pied Cormorant in the **Lake**.
October	1 Lesser Crested Tern in **R3** – 1 Brown Goshawk in **PBAR** – 112 Pied Cormorant in the **Lake**.
November	10 Chestnut Teal duckling in **PBAR** - 10 Chestnut Teal duckling, 3 Dusky Moorhen young and 72 Pied Cormorant in the **Lake**.
December	1,075 Little Tern and 16 Common Tern in **R3**.

The table shows wader species and numbers at the complex during 2016 (with the exception of the Visitors Centre Lake), has been included. Many other waterbirds were also recorded using the sites; however, lack of space in the newsletter does not allow their inclusion.

Species	17.01.16	14.02.16	13.03.16	10.04.16	08.05.16	05.06.16	27.07.16	21.08.16	18.09.16	16.10.16	13.11.16	04.12.16
Bush Stone-curlew	0	0	0	0	0	NO	0	0	0	0	0	0
Pied Oystercatcher	101	134	115	147	54	COUNT	13	23	8	9	24	8
Sooty Oystercatcher	0	1	0	0	2	HEAVY	0	0	0	0	0	0
White-headed Stilt	45	71	129	80	252	RAIN	177	100	0	0	0	3
Red-necked Avocet	92	101	74	305	302	MADE	0	7	0	0	0	0
Pacific Golden Plover	575	562	233	19	34	COMPLEX	0	0	71	348	227	342
Grey Plover	6	52	5	1	0	UNSTABLE	0	0	10	1	31	23
Red-capped Plover	15	31	73	66	115		76	35	59	57	69	43
Double-banded Plover	0	0	2	3	8		3	1	0	0	0	0
Lesser Sand Plover	472	1168	1003	579	91		0	28	165	1145	1002	858
Greater Sand Plover	67	133	122	20	8		0	0	1	0	85	51
Black-fronted Dotterel	0	1	0	2	7		2	1	0	1	0	0
Red-kneed Dotterel	0	0	0	0	0		0	0	0	0	0	0
Masked Lapwing	2	4	7	7	0		3	4	5	10	7	5
Latham's Snipe	0	0	0	0	0		0	0	0	0	0	0
Black-tailed Godwit	0	1	1	0	1		2	2	0	0	0	0
Bar-tailed Godwit	1255	699	877	76	239		28	0	650	633	1101	1066
Whimbrel	49	33	54	40	338		1	1	1	42	99	21
Far Eastern Curlew	102	81	53	33	202		4	63	14	148	143	5
Terek Sandpiper	3	0	29	0	2		0	0	0	7	4	0
Common Sandpiper	0	0	0	0	0		0	0	0	0	0	0
Grey-tailed Tattler	991	1175	947	4	292		257	273	324	207	250	621
Wandering Tattler	0	0	0	0	0		0	0	0	0	0	0
Common Greenshank	0	2	1	0	0		1	0	0	1	0	1
Marsh Sandpiper	0	0	0	0	0		1	0	0	0	0	0
Ruddy Turnstone	125	127	95	9	104		0	4	1	22	47	47
Asian Dowitcher	0	0	0	0	0		0	0	0	0	0	0
Great Knot	420	181	256	6	1		0	0	130	153	22	19
Red Knot	0	3	0	1	0		0	0	0	20	18	0
Sanderling	0	0	0	0	0		0	0	0	0	0	0
Red-necked Stint	1162	896	1962	1169	2022		944	690	1840	3045	3377	868
Sharp-tailed Sandpiper	204	83	147	9	19		0	5	38	74	542	108
Curlew Sandpiper	227	808	327	122	9		20	119	1264	1621	920	822
Broad-billed Sandpiper	0	39	16	95	0		0	0	0	0	0	0
Unidentified wader	0	0	0	0	1		0	0	0	0	1	0
Total Wader Species	**19**	**24**	**23**	**22**	**21**		**15**	**16**	**16**	**19**	**18**	**18**
Total Wader Numbers	**5913**	**6386**	**6528**	**2793**	**4103**		**1532**	**1356**	**4581**	**7544**	**7969**	**4911**

QWSG would like to sincerely thank the PBPL for their ongoing support to the group and supplying their staff and vehicles during the counts. Craig Wilson, Environmental Manager for the PBPL, Michael Linde, Senior Environmental Advisor, Nadene Perry, Environmental Advisor and Jessica Rudd Environmental Coordinator shared the role in looking after our welfare and needs during the counts.

We must also sincerely thank the following committed regular counters and other members for helping us obtain the results for the PBPL and the QWSG database in 2016. Without people like these this would not have been possible. My apologies if I have omitted anyone from the list.

Michele Burford, Robert Bush, Deirdre Chrzescijanski, Rae Clark, Jon Coleman, Barbara Collyer, Rob Collyer, Ken Cowell, Linda Cross, Phil Cross, David Edwards, Paul Finn, Sandra Harding, Micha Jackson, Arthur Keates, Sheryl Keates, Penn Lloyd, Kelly Matthews, David Milton, Peter Rothlisberg, Amelia Selles, Ged Tranter, Floss Wainwright and Melissa Whitby.

The contract with PBPL continues throughout 2017 and as the majority of the regular counters are now retired and taking off on extended holidays, we need a bigger support group to help spread the workload, particularly during the spring and summer months. As the PBPL insurance only covers their employees you will need to be either a QWSG or BQ member to attend these counts so their liability insurance will cover you. Please also note that these counts are not recreational outings, but we are always looking for committed counters to join our team. Please contact Peter Rothlisberg or myself if you would like to participate. The dates and meeting times for the counts are listed at the back of this newsletter.

Peter Rothlisberg email:
Or
Linda Cross email:

Low Tide Survey of Shorebirds at Toondah Harbour Within the Moreton Bay Marine Park During the Summer 2016-17

Robert Bush Queensland Wader Study Group

Introduction

During the 2016-17 summer months, a low tide shorebird survey was undertaken at Toondah Harbour within the Moreton Bay Marine Park. The survey involved six counts of shorebirds (waders) and water birds undertaken between October 2016 and March 2017. The findings from this survey are reported here.

Moreton Bay Marine Park is a designated Ramsar site. It is one of a chain of internationally recognized sites across the East Asian-Australasian flyway that migratory shorebirds depend upon for their long-term survival. Moreton Bay is both a migration stop-over site and destination for migrating shorebirds during the southern hemisphere summer months.

The purpose of the survey was to collect information about the use of the Toondah Harbour area by shorebirds and water birds. The survey was done under the auspices of the Queensland Wader Study Group (QWSG). The QWSG has conducted surveys and regular counts along the Queensland coast and in particular within Moreton Bay for more than 25 years. This consistent collection of information from the field has made a major contribution to the scientific knowledge of migratory shorebirds and to conservation at local, national and international levels. This low tide survey was undertaken to gain additional information about the use of the existing tidal mudflats proposed to be developed as a residential, retail and small boat marina.

The survey area covered the proposed Toondah Harbour development site as it was described by the developer, Walker Group Holding Pty. Ltd. at the time the survey commenced in October 2016. The proposed development area was slightly changed in the information provided for public comment in May 2017 by the Australian Department of Environment and Energy (EPBE Reference No: 2017/7939). The new application allows for a 100m buffer between the landfill area and Cassim Island. However, the boundaries of the updated proposed development lie within the survey area and are not significantly different to that originally proposed in terms of the intertidal mudflats to be reclaimed for the development.

Low tide surveys such as this one provides information about the use of intertidal areas when migratory shorebirds have the greatest opportunity to use the full extent of the inter-tidal mudflats. It follows that observations can be used to determine whether the area for proposed development remains a relevant site for migratory shorebirds during a period when feeding is the main activity.

Counts of dispersed shorebirds within a defined area such as this are usually lower than counts undertaken when the tide rises and there is less intertidal zone available.

Survey Method

The Site

Using publicly available documents, the survey site was plotted onto Google Maps. The survey area was bounded on the western shoreline by the Stradbroke Ferry Terminal and the G. J. Walter Park. The low tide mudflat to the south of the navigation channel to the ferry terminal with a width of 100 m and reaching out to 400 m formed the southern boundary. The northern boundary was from the northern end of the G. J. Walter Park stretching north-east over the inter-tidal mudflats by 400 m. The eastern boundary was a line approximately parallel with mangroves (see Google Map). For survey purposes the area within this boundary was segmented into 7 count zones. These areas generally formed natural mudflats separated by water channels. The southern count zone (1) is separated from the others zones by the deeper navigation channel. The eastern zones (2,3,4) are separated from the shoreline by a shallow channel and the remaining zones (5,6,7) are the intertidal mudflats adjacent to the shoreline.

Counting Method

Counts were conducted between 31 October 2016 and 15 March 2017, a period when migrating birds have arrived in Moreton Bay from their southern migration but not yet departed on their northern breeding migration. All counts were conducted within 1 hour either side of low tide. Counts took approximately 40 minutes to complete.

Two counting locations were used. Area (1) was counted from the public boat ramp beside the ferry terminal. All other areas (2 to 7) were counted from the shoreline at G. J. Walker Park adjacent to the public car park. Both locations provided a clear view of the survey area.

Any bird movement between counting zones was documented to avoid double counting.

Observations

All migratory shorebird species (e.g. Bar-tailed Godwit) and non-migratory species (e.g. Pied Oystercatcher) were counted, as well as all resident water birds, (e.g., Egrets and Silver Gulls).

Bird behaviour was also recorded as well as any sources of disturbance (people, water craft and dogs).

Findings

The Table below summarises the findings from the six counts undertaken over the course of the summer, 2016-17. The Table summarises the migratory shorebirds and water birds separately. The Table lists: Individual counts of each species within each sampling episode; the highest count over the survey period; and the areas within the surveyed area used by each species.

Species Diversity

During the count period, 6 migratory shorebird species, 2 resident shorebird species and 7 species of local water birds as well as 1 species of gull were observed within the site.

Two species present are listed as endangered. The Eastern Curlew is listed as critically endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act (1999) and the Bar-tailed Godwit was listed as endangered in May 2017 under the Queensland Nature Conservation Act (1992).

Other migratory waders present were the Grey-Tailed Tatter, Whimbrel, Terek Sandpiper and Common Greenshank. Pied Oystercatchers and Masked Lapwing are non-migratory resident waders that were present in the survey area over the summer period.

A small number of water birds use the water channels at low tide. Royal Spoonbill, Little and Great Egret, White Ibis and Striated Heron were observed. There were also Chestnut Teal, Little Pied Cormorant and Silver Gull within the survey area.

Prevalence, Distribution and Behaviour

Migratory shorebirds outnumbered the other species throughout all the summer counts across the survey area. The Grey-tailed Tattler was the most prevalent with feeding flocks both within the survey area and passing through to mudflats to the north and east of the study area.

Eastern Curlew were widely dispersed across areas adjacent to the navigation channel and the outer count zones (2,3,4). Whimbrel and Bar-tail Godwit are widely distributed over most of the survey site. Common Greenshank and Terek Sandpiper were present irregularly and in small numbers.

Of the resident shorebirds, a small number of Pied Oystercatchers were distributed widely throughout the site. Masked Lapwings were an occasional visitor to the site. All observed shorebirds use the site for feeding during low tide. The wide distribution of long billed shorebirds across the site suggests that food supply within the mudflats is widely distributed.

Water birds were generally present in the shallow water channels at low tide and feeding.

Overall, shorebirds tended to prefer the outer count zones (1,2,3,4) where they were engaged in feeding on the exposed mudflats.

Disturbance

Over a total of six visits with an estimated total time period of 120 minutes, two dogs were observed off leash and one person was walking within the survey site.

Summary

The proposed Toondah Harbour development site, within the Moreton Bay Marine Park (Ramsar site), is used during low tide as a feeding area by migratory shorebirds. Two listed endangered species, – the Eastern Curlew and the Bar-tailed Godwit – were present during all but one of the count observations. Other migratory and resident shorebirds and water birds used the site for feeding during low tides in the summer months.

The Toondah Harbour development site forms part of an intertidal mudflat used for feeding by migratory shorebirds during a period of recovery from their southern migration and in preparation for their northern migration. The site is recognised internationally as significant for these purposes (via the Ramsar Convention). The survey provides count data and field observations confirming the site's current relevance to migratory shorebird conservation

TABLE: Wader and Water Bird Species Prevalence on 6 Summer Count Occasions, Highest Count and Zone Observed Within the Survey Site

Species			**Count**	**Dates**			Highest	Zones
WADERS	31/10/16	10/11/16	08/12/16	15/12/16	10/1/17	15/03/17		
Eastern Curlew	0	1	4	5	6	2	**6**	*1+2+7*
Whimbrel	18	9	4	13	4	5	**18**	*1+2+3+4+5+6+7*
Bar-tailed Godwit	15	6	5	12	9	6	**15**	*1+2+3+5+6+7*
Terek Sandpiper	0	7	0	0	0	0	**7**	*1+*
Pied Oystercatcher	6	3	0	2	1	18	**18**	*1+3+4+6*
Masked Lapwing	0	0	2	0	0	1	**2**	*2+*
Grey-Tailed Tattler	15	0	4	0	32	5	**32**	*4+5*
Com' Greenshank	0	4	0	0	0	0	**4**	*6+*
TOTAL	**54**	**30**	**19**	**32**	**52**	**37**		
WATERBIRDS								
Royal Spoonbill	5	1	1	0	0	0	**5**	*2+*
Little Egret	0	0	0	0	0	1	**1**	*7+*
Great Egret	3	0	0	3	3	1	**3**	*2+3*
Chestnut Teal	0	0	3	0	0	0	**3**	*1+*
White Ibis	0	2	1	1	7	1	**7**	*2+5+7*
Little P'd Cormorant	0	0	0	0	1	0	**1**	*4+*
Striated Heron	0	1	0	0	2	0	**1**	*7+*
TOTAL	**8**	**4**	**5**	**4**	**13**	**3**		
Silver Gull	0	2	0	2	4	1	**4**	*7+*

MAP: Toonbah Harbour Survey Site and Count Zones

Drones and Waders

Wikipedia's entry has: An **unmanned aerial vehicle** (**UAV**), commonly known as a **drone**, is an aircraft without a human pilot aboard. UAVs are a component of an unmanned aircraft system (UAS); which include a UAV, a ground-based controller, and a system of communications between the two. The flight of UAVs may operate with various degrees of autonomy: either under remote control by a human operator or autonomously by onboard computers.

Compared to manned aircraft, UAVs were originally used for missions too "dull, dirty or dangerous" for humans. While they originated mostly in military applications, their use is rapidly expanding to commercial, scientific, recreational, agricultural, and other applications, such as policing, peacekeeping, and surveillance, product deliveries, aerial photography, agriculture, smuggling, and drone racing. Civilian drones now vastly outnumber military drones, with estimates of over a million sold by 2015.

Drones, UAVs, RPAs are first and foremost regulated by CASA (Civil Aviation Safety Authority). They have rules around where and how high they can fly them. They can't be flown over people, private property (without permission) and must be flown below 120m. So not great for our shorelines next to public parks.

Hobbyist/Non-commercial Flight

From 25th September 2016 the term UAV will generally be replaced with RPA (Remotely Piloted Aircraft) in official documents and the UAV Controller's Certificate will be replaced by the Remote Pilot Licence (RePL). For full details of the changes see https://www.legislation.gov.au/Details/F2016L00400.

Very Small RPAs (under 2 kg) – Regulations effective 29th September 2016

The Federal Government has recently passed legislation which will allow a person to operate a *very small RPA* (that is, one weighing less than 2 kg) without certification, if it is being operated in *standard RPA operating conditions*. This will be known as an *excluded aircraft*.

Standard RPA operating conditions means that the RPA must be operated:

- within visual line of sight
- below 400 ft AGL
- during the day
- more than 30 m away from anyone who is not directly associated with the operation (people being filmed are not considered to be directly associated with the RPA's operation)

It may NOT be operated:

- over a populous area
- within 3 nautical miles of the movement area of a controlled aerodrome
- in a prohibited area
- in a restricted area that is classified as RA3
- in a restricted area that is classified as RA2 or RA1 otherwise than in accordance with regulation 101.065
- over an area where a fire, police or other public safety or emergency operation is being conducted without the approval of a person in charge of the operation

What does this translate to? Real Estate photographers will usually NOT be able to conform with ALL these conditions and will therefore require a UAV Operator Certificate (UOC) which is the CASA certificate to operate legally.

If you are not making any commercial gain from your flying, then you may fly your UAV without requiring certification (please note however that "commercial gain" can include flights for advertising purposes or even uploading videos to YouTube – there does not have to be a direct payment involved). The following restrictions apply for uncertified flying:

- Below 400 ft (120 m)
- In uncontrolled (Class G) airspace
- More than 3 nm (5.5 km) from an aerodrome or helipad listed on the VTC
- More than 30 m away from other people
- Not in a Populous Area
- Within Visual Line of Sight (VLOS) – this means no FPV unless you have a spotter who can take control at any time

Under Marine Park legislation they come under the definition of Aircraft. To fly an aircraft below 500ft or to land and take one off in the marine park requires a permit. The Department does not have the capacity to issue permits to every drone operator, therefore they are currently working on a policy and more practical approach of managing the issues they are concerned about with drones, such as their ability to disturb shorebirds.

At this stage Marine Park has provided advice on the Department's draft UAV policy along the lines of not landing and taking off within 200m of shorebird sites and not flying above or hovering over shorebird sites, as a general guideline. It is already an offence to disturb shorebirds, therefore a guideline for UAV users will assist them to comply with shorebird disturbance provisions. What would help with the effectiveness of this guideline and education is up to date mapping of where the key shorebird sites are so that people and their drones can avoid them.

Marine Parks have granted a number of permits to operate drones for surveys, research etc. and are gathering information from these permit holders regarding the occurrence of shorebird disturbance and at what distances so that we can feed this back into management. So please make note of the type of drone i.e. quad copter or fixed wind, the height, conditions if the birds are disturbed.

If you are at Manly or any other roost site and are having troubles with drones disturbing shorebirds, and can see the operator of the drone, please email the Acting RIC Rohan Couch (with a CC to) or call him on 3101 2072 or 0457 505 404 as they are in breach of the zoning plan.

National Parks state that drones, UAVs, RPAs are under the jurisdiction of CASA but that you can fly these vehicles in the Parks though draft legislation is underway.

Local councils have their own policies and you should contact your local authority, but it seems as if once again the CASA regulations are the guiding tool.

There is a lot of ongoing studies about the effects of drones on birds in general and flocking birds in particular because of the uses that can be, hopefully gained by the use of these devices. As we all know it can be difficult getting around and to some areas of our sites. The views that a camera mounted on a drone could give would be most helpful, then counting the birds from your armchair has advantages. Just imaging walking across our northern mudflats, both the distances and the threat of crocodiles make the thought of drones wonderful.

One of our members, Tony, sent me a link to an app that might help in determining the use of drones in specific areas. I have not used it myself but Tony says that the app is for drone operations that shows restricted areas -. And for the Manly Roost area – Drones can't fly higher than 45m in that area also beware of helicopter landing pad – no mention of Wading Bird Roost
Here is his link: https://casa.dronecomplier.com/ - (www.casa.drone.complier.com)

At present on the QWSG's Count Sheet there is no area where RPAs (drones) are specifically mentioned and a new box at this stage is not envisioned. However, it is important that you note if a RPA (drone) is present at or near your site area, plus its effect on the waders and other birds as this will help us design answers to the appropriate authorities in the future.

Editor:I have just found this recent article using drones over wetlands

Monitoring biodiversity using drone technology:

The use of flying 'drones' to monitor changes in biodiversity and ecosystems is becoming more common.

BirdLife - 26 May 2017 *By Chris Magero, Justine Dossa and Ademola Ajagbe*

Paolo Paron showing members of the local community live drone images of the Mara Wetland, Tanzania © Joseph Ouko

Two women, suddenly aware of a buzzing sound airborne, frantically look up to the sky. They jump from their seat, trying to dodge this invading gadget. The invader is a 'drone', currently being used for wetland monitoring and is harmless after all.

Some call it Unmanned Aerial Vehicle (UAV). Others call it Remotely Piloted Aerial System (RPAS) or Unmanned Aircraft System (UAS). Everyone knows it as drone. Drones are flying robots that are remotely controlled or can fly autonomously using a software-controlled plane. From an evolution point of view, one can be tempted to think drones are hybrids of aircrafts with supersonic engines, or common toys that keep toddlers busy. Drones have proliferated both military and civil worlds, coming in different shapes, sizes and capabilities.

Their functionalities are almost endless: from intelligence gathering to missile attack, herding livestock, and even delivery of orders – one can only imagine! The benefits of drones are increasingly gaining traction in biodiversity conservation. Two BirdLife led projects in West and East Africa are using drones for aerial assessment of impenetrable wetland ecosystem and bird populations, respectively.

BirdLife and the United Nations Educational, Scientific and Cultural Organization – Institute for Higher Education (UNESCO IHE) are implementing a PREPARED USAID project on promoting the sustainable management of the Mara wetland. Through this project, an Integrated Management Plan for the wetland is being developed. In order to do so, there is need for a good understanding of the wetland resources, the threats faced by direct and perceived impacts, as well as their impact on livelihoods.

The Mara wetland in northern Tanzania is the largest wetland in the Lake Victoria basin, covering approximately 500 Km^2. The area is an Important Bird and Biodiversity Area (IBA) supporting several species of birds, mammals, insects, fish and plants and support vital ecosystem services.

Aerial Shot of the Mara Wetland using the drone © Paolo Paron – UNESCO IHE

Paolo Paron (Senior Lecturer in Hydraulic Engineering and River Basin Development) of UNESCO IHE has been conducting aerial surveys of water and land resources for many years using the drone technology. The survey of the Mara wetland has involved visiting sites and developing transects over the wetland and on its margins where farming is prevalent. The drone is programmed and is able to fly along these transects taking images of the wetland from a height of 200 – 400m. These images are able to provide an excellent resolution of the resources in the area of interest; it can show individual papyrus or typha plants. With this detail, one can model the changes in land cover and land use over time.

The two ladies, now looking over Paolo's shoulder are amazed at what they see on the tablet and admit that they thought they were under attack by a foreign object. We take a moment to explain to them how this mapping works and they are absolutely thrilled. More at the prospects of an object flying in the air without a pilot on board - the future of resource monitoring and technology.

The drone before flight © Joseph Ouko/BirdLife

Equipped with a high-definition camera, a drone is the ideal tool for monitoring biodiversity in areas difficult to access and counting animal populations in particular. For the BirdLife International seabird project in West Africa – the Alcyon project, 2015 is the first time that we are experiencing this new technology for the overall counting of our amazing Laridae colonies. The Veda Consultancy team, contracted to support this work for the Alcyon project, was able to try out the new technique with the drone Phantom II which flew dozens of metres high over all the Laridae colonies; in particular, those of Royal Terns on all the main nesting sites from Mauritania to Guinea, which allowed amazing views of the colonies.

“It was exciting to see the consulting team successfully conclude this regional census by trialing our new, remote-operated drone-mounted cameras,” said Justine Dossa, BirdLife’s Alcyon Project Manager.

She added that: “The simultaneous comprehensive census of seabird colonies nesting along the West African coastline from Mauritania to Guinea was carried out with great success.” The team flew the drone over tern colonies up and down the West Africa coast, and were able to get amazing views and great data to support efforts at identifying marine IBAs.

A scientific article currently being prepared, will analyse the astonishing results obtained using the drones for a census for the first time in the sub-region compared to census results obtained until now using the usual contemporary counting methods. The second round of this global drone counting is now done, harmonising the seabird global counting cycle with that of other international initiatives such as Africa-Eurasian Waterbird Agreement and Wadden Sea Flyway Initiative.

This Korean Recipe Could Save Piper

11 May 2017

On the west coast of South Korea, there is a precious mudflat remaining in a sea of coastal concrete. Following a BirdLife team visit with a nature-tourism focused county government, we tell the story of Yubu Island, its people, its renowned cuisine, and its millions of birds

Traditional clam-sifting with an industrial backdrop in Seocheon, South Korea © Seocheon County
By Samir Whitaker

Military fighter jets fly regular sorties around our heads, each time causing thousands of shorebirds to take flight, whirling around in formation before landing to resume their frantic feeding. We look south through an otherworldly haze, where less than two kilometres away, rise the stacks and structures of a large industrial zone in the middle of the west coast of South Korea.

Here, before boarding our boat, we walked past enormous pipes whirring and clanking with sand being pumped away from a gigantic dredging machine floating at the mouth of the river. Further south, invisible yet unequivocal, is one of largest land reclamation projects in history – the thirty-three kilometre long Saemangeum Seawall, enclosing an area of four hundred square kilometres of former prime intertidal habitat.

The loss of this, and countless other mudflats in the broader Yellow Sea region, means that shorebirds are left searching the landscape for increasingly small pockets of natural mud between the concrete, and when they land in cramped flocks, there is less food to go around.

Just north of Saemangeum however, is an unlikely beacon of hope: a small island with a few simple houses encircled by rich, squelchy mudflats, where life depends on the mud's bounty of fish and shellfish. Here, in Seocheon, the county government realises the area's natural value and is doing all it can to protect it for both avian and human inhabitants.

The island, Yubu-do, and the wider Geum Estuary in which it is found, are now considered the most important site for migratory shorebirds in South Korea.

Clouds of shorebirds seek refuge in the mudflats around Yubu Island © Seocheon County

An estimated 70% of all migratory shorebirds that visit the country are found here, a crucial refuelling "stopover" on a migratory flyway that runs from Australia and New Zealand to the Russian Arctic and Alaska, qualifying it an Important Bird and Biodiversity Area (IBA), a Ramsar site, and an East Asian-Australasian Flyway Partnership (EAAFP) Flyway Network Site. For these birds flying an astounding 20,000 km round trip every year, this is THE place in South Korea for them to rest, feed… and survive.

Yubu Island could provide a unique opportunity for residents through birdwatching and culinary tourism, whilst protecting birds

The thousand-strong clouds of shorebirds in the air and on the mudflats around us include internationally significant numbers of Sanderling (*aka* Pixar's Oscar-winning 'Piper'), Great Knot, Far Eastern Curlew, Broad-billed Sandpiper, breeding Eurasian Oystercatcher and (although we can't see any, we know they're out there), Spoon-billed Sandpiper (Critically Endangered).

While the island itself is a hub for birds, the broader estuary supports populations of endangered shorebirds such as Spotted Greenshank and Chinese Egret, but also huge flocks of waterfowl, including some of the largest flocks of Baikal Teal anywhere in the world.

To take advantage of this spectacular natural phenomenon, Seocheon County Government has set up ecotourism infrastructure such as the Migratory Bird Centre (MBC) in Geum River, an excellent facility mainly focused on the education of children, and coastal Seocheon brings thousands of visitors each year to taste fresh seafood and birdwatch as part of a nature-tourism route.

The team coming back from Yubu Island © EAAFP

Yubu Island's residents, who are mostly over 60 years old, trudge out in bountiful sludge and collect food with traditional hand tools like they have done for centuries, never taking too much. Looking out at the estuary from their perspective, you can understand why they have an unwritten agreement to share the mudflat's resources with birds and ensure that they are passed on to the next generation, despite the impending development on the horizon.

The high diversity and availability of clams plays a central role in the cultural identity of the area – where seafood is a staple food – and a tourism icon of Seocheon County as a whole. Stamping Yubu Island on the tourist trail, if done in an environmentally sensitive way with birdwatching and enriching cultural experiences, could be significant enough to prevent the industrialisation of these vital mudflat habitats.

With increasing national interest and commitment to conservation, several large international meetings hosted by the Korean Government, and a growing cadre of Korean ornithologists and biologists, environmental issues are gaining importance. Young-min Moon, a Korean ornithologist and post-doctoral shorebird researcher who co-led our trip to Yubu-do, gives us some personal context:

"This site must be saved, not just as a site of international importance to shorebirds but also as a symbol of Korea's commitment to protect its environment and cultural heritage. It is something that the Government wants to do, but also something that the people would like to see."

An unlikely beacon of hope, where life depends on the mud's bounty of fish and shellfish

The Korean government has so far designated twelve sites across Korea for ecotourism, including Seocheon, where County officials have strongly focused on promoting this alternative to industrial expansion. To support this aim, BirdLife International and Seocheon County signed a Memorandum of Understanding in 2014 to "conserve shorebirds and develop nature-based tourism for the benefit of habitat and species".

Our visit to Yubo Island and a World Wetlands Day event that followed were part of an agreed work plan to support Seocheon County's mission.

The Head of the Ecotourism Department of Seocheon County, who also co-led our trip, tells us that "Over the last twelve years, Seocheon's priority has been sustainability and nature preservation", and this reaffirms our shared commitment to conservation.

Seocheon County's openness to partnerships has now allowed the addition of BirdLife Australia, who, along with Woodside Energy, have committed to conserving more habitats along the East Asian-Australasian Flyway (EAAF).

The mudflats are an important stopover site for Spoon-billed Sandpiper EAAFPAs an overarching conservation measure, the Korean Government is working on nominating Yubu Island and its mudflats as a World Heritage Site, which would offer it the international recognition it deserves, as well as a degree of protection nationally. Hopefully it will come in time: as one resident tells us "We are all getting older. Young people do not want to go fishing anymore and they don't want to live on the island as they feel there is nothing left here for them."

As we hop back on the boat, leaving the tranquillity of the island for the clanking pipes and motorised cranes, the group is noticeably subdued. However, returning with "glorious Geum mud on our boots" (as one colleague put it) is a reminder that there truly are riches in mud, and although the challenges are numerous, Yubu Island could – with the right support – provide a unique opportunity for its residents to lead a comfortable life through birdwatching and culinary tourism, whilst providing a safe rest and refuelling site for millions of birds.

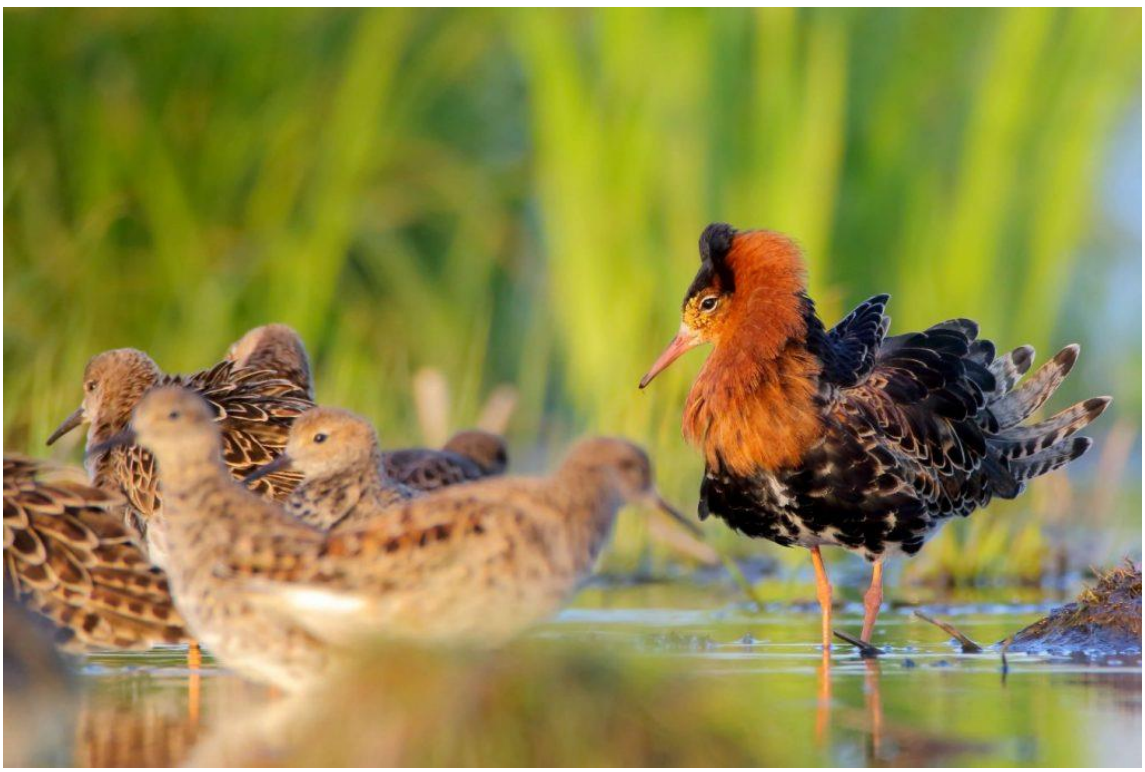
The task now is to bring attention to this threatened natural haven (and to others in Yellow Sea coastlines), enough to attract future custodians, people who would rather benefit from the spectacle of swirling shorebirds and bountiful shellfish, instead of more concrete.

Record-Breaking 120,000 Ruffs Counted in Belarus

May 16 2017

Despite the cold weather, bird migration is in full swing. Millions of birds have started moving from their wintering grounds in Africa, stopping over in the cold tundra of Eurasia.

At this time of the year, Turau Meadow in Belarus becomes a paradise for nature lovers – as many as 150,000 Eurasian Wigeon Mareca Penelope and 20,000 Black-tailed Godwit *Limosa limosa* can gather in these plains, sometimes in a single day.



Ruffs are known for their impressive displays during spring © Dzmitry Yakubovich

But this year, it's the Ruff *Calidris pugnax* that gave birdwatchers the most joy, when thousands of these long-necked birds blanketed the skies.

While this site is currently the largest stopover site for the species during their spring migration across Europe, this year the numbers were a surprise to everyone.

A group of ornithologists, including researchers from APB (BirdLife Belarus) and Turov Ringing Station (NAS of Belarus), registered a record number of 120,000 Ruffs in a single day, which hadn't been reported since the observations began in Turau Meadow back in 1997.

Turau Meadow is an open floodplain in the middle of Pripyat River and one of Europe's most essential nesting and stopover areas for more than 50 migratory wading bird species such as Black-tailed Godwit, Great Snipe *Gallinago media* and Eurasian Oystercatcher *Haematopus ostralegus* – the three of them classified as Near Threatened by BirdLife for the IUCN Red List.

And these species don't only stop there – this is where they nest.

Ruffs on Turau Meadow © Victor Natykanets

For this reason, the floodplains were categorized as an Important Bird and Biodiversity Area by BirdLife and, since 2008, it has been recognized as a locally significant wildlife sanctuary by the Belarussian authorities.

This recognition has helped Ruff populations, whose range and populations have shrunk significantly in Belarus in the last 30-40 years. While listed as Least Concern by BirdLife, global populations are thought to have been decreasing as a result of habitat loss, intensive agriculture and climate change.

It comes as no surprise then that they have been added to Belarus' Regional Red List, which means the species is excluded from the list of huntable species and their nesting area needs to be protected by the government.

Banding data shows that these birds nest across a territory that spans Scandinavia to Yakutia. Migration is often a difficult time for all birds, and stopover sites such as Turau Meadow, where they can relax and gather energy, are critical so they can reach their final destination.

Unfortunately, stopovers like this meadow are now few and far between in Europe. Birds are reportedly staying in the floodplain for up to a month, taking the opportunity to feed on the invertebrates and grain available on the surrounding fields – almost doubling their weight in the process. This energy is vital for them to continue their journey to the next site.

Seeing how many birds depend on this habitat along the Pripyat River remind us of how important it is to conserve these vital ecosystems so we can save these birds from disappearing.

“The Pripyat River floodplain is such a vital place. It’s important to protect it and leave it unchanged,” says Pavel Pinchuk, Head of the Belarusian Center for Bird Ringing.

Ornithologists & volunteers ready for evening bird counting © Victoria Tereshonok

Since 2007, APB rents the area of Turau Meadow and has created a management plan for the local authorities. Both parties agreed on how to best safeguard this unique landscape and every year APB organizes volunteer camps to clean the area of overgrowing bushes while also managing the closing of the hunting season within the floodplains. They also participate in the surveying of the area and record bird population trends.

In March 2014, ornithologists recorded the largest number of birds in Turau Meadow ever. As many as 200,000 birds were counted within one square kilometer of the sanctuary. A similar number of migrating birds had not been recorded anywhere in Belarus up to that point.

With continued protection, we expect the area will continue to surprise everyone with record-breaking numbers of birds for many years to come.

This article was first published by BirdLife International on 08 May 2017

Chasing ghosts: how technology is helping track the bird that mysteriously disappeared

By Alex Dale

The Slender-billed Curlew hasn't been seen since 1995, and could very well be extinct. But before we write it off for sure, we need to scour its vast, inhospitable breeding range for straggling populations. A ground-breaking new technique, which studies tiny atoms left in the feathers of long-dead specimens, is telling us where we should look first.

Slender-billed Curlew, Morocco, 1995 © Chris Gomersall

How do you look for a Critically Endangered species' final few nesting sites, when you were never really sure where they bred in the first place?

That's the magnitude of the task facing conservationists who are attempting to chase the tail feathers of the world's final remaining Slender-billed Curlew *Numenius tenuirostris* population. That is of course, if any such population even still exists at all.

In an attempt to narrow the search for this lost species, a new paper published by BirdLife's journal, Bird Conservation International, involving staff from, or linked to, the RSPB (BirdLife in the UK), has used data gleaned from tiny atoms, harvested from the feathers of deceased specimens, to pinpoint where in the vast Siberian wilderness we should begin our search.

We didn't always need to resort to such elaborate measures to catch a glimpse of this medium-sized wader. At the beginning of the 19th Century, it was a somewhat common bird that wintered all across the Middle East, North Africa and central and eastern Europe.

But even in these bountiful times, the species' breeding habits were poorly understood. We knew they retreated to remote Central Asia in Spring, but not much more beyond that. To date, the only fully-documented Slender-billed Curlew nests are a handful that were discovered in the 1910s and 1920s, near the town of Tara in Omsk, Siberia.

Also poorly understood are the exact reasons for its rapid decline, although we can make a few educated guesses. Widespread hunting across its wintering grounds in the late 19th and early 20th Century had a noticeable impact, and the extensive drainage of wetlands across the Mediterranean and North Africa only served to put further pressure on this migratory species. However, the threats the species faces across its breeding grounds, wherever they may be, are largely unknown.

Either way, eventually things got so dire that the Slender-billed Curlew stopped appearing at its wintering grounds altogether. The last fully-verified sighting was in Morocco in February 1995, and although there have since been claimed sightings in places as far apart as France and Ukraine, the species' visual similarity to more common birds such as Eurasian Curlew *Numenius arquata* and Whimbrel *Numenius phaeopus*

means they are difficult to verify. See the video below for a comparison, and to watch the only known footage of a Slender-billed Curlew:

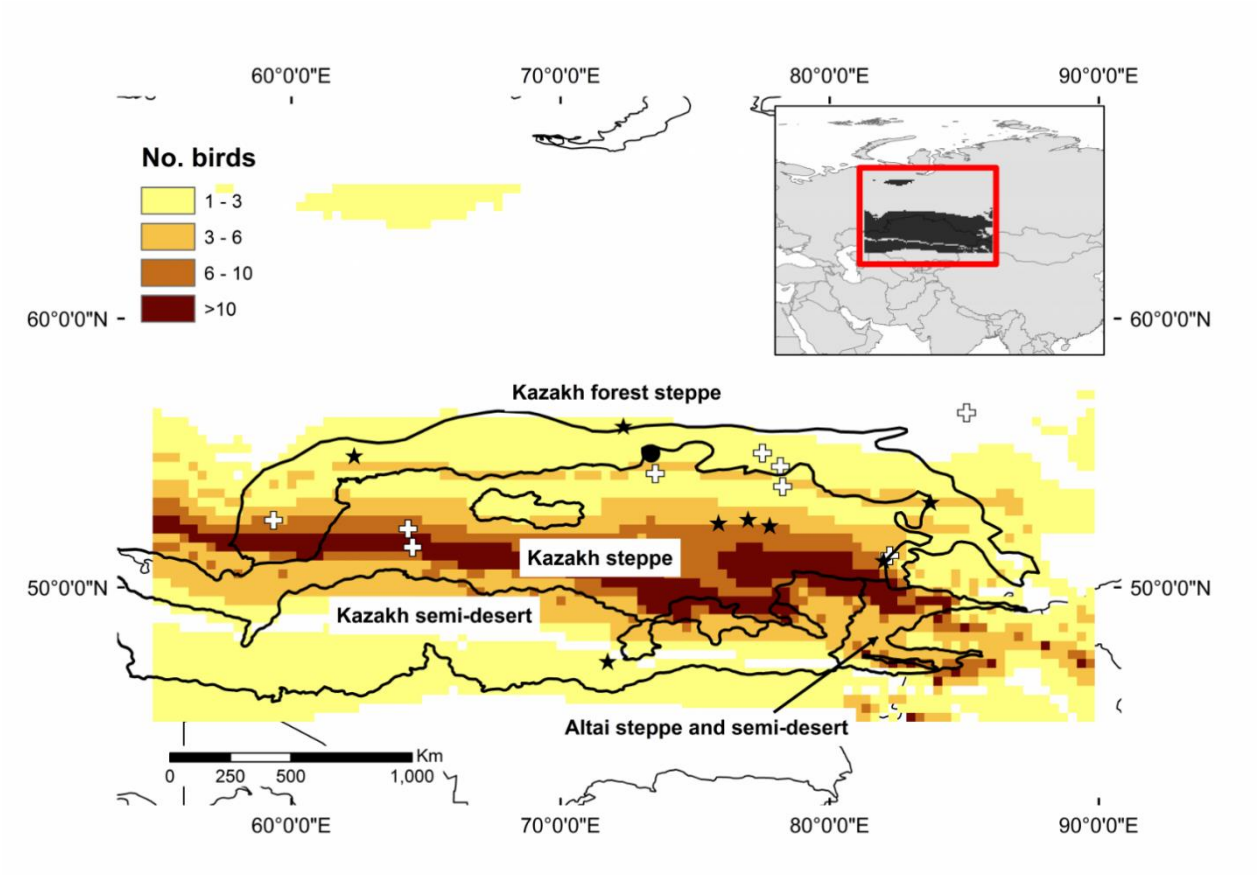
It's possible that as numbers began to thin, Slender-billed Curlews, being gregarious birds, joined flocks of these similar species, making them almost impossible to spot. Equally as likely, the Slender-billed Curlew has died out altogether, in the process becoming the first bird extinction in Europe since the Great Auk *Pinguinus impennis* was hunted into the history books in 1852.

But to know for sure, we need to scour its vast potential breeding ranges for straggling subpopulations. In any case, even if we were unsuccessful in finding any Slender-billed Curlews, any knowledge we could gain about its breeding habits, and the factors that contributed to its extinction, could be helpful in our efforts to protect other species of waders from suffering the same fate.

Could the slender-billed Curlew become the first European bird extinction since the Great Auk? (Illustration by John James Audubon)

The study involved the analysis of stable isotopes harvested from feathers of 35 Slender-billed Curlew specimens kindly donated from all around the world. These atoms are tiny traces of the environment (such as food or water) that are transferred into body tissues when the bird consumes them, and subsequently becomes a part of the bird's feathers as they are formed. By studying the isotopes from juvenile specimens – that is to say, young birds at the breeding site preparing to embark on their first migration – staff at Iso-Analytical, a laboratory specialising in isotope analysis, were able to calibrate their findings with existing large-scale isotope ratio maps from across the world, allowing the team to discover where these young birds first grew their feathers.

The team was able to discern the birds' origins by studying hydrogen atoms within the isotopes. "Heavy water differs from normal water in that the hydrogen element has an extra neutron" explains Dr Graeme Buchanan, Principal Conservation Scientist, RSPB, and one of the authors of the paper. "As you move further away from the equator, the ratio of heavy water to normal water decreases; it's this established ratio that we used to place the species into a specific band of latitude".



The potential breeding areas of Slender-billed Curlew, This is based on the number of juvenile birds assigned to cells based on δ^2H values from feather samples in comparison to an isoscape (Buchanan et al 2017). Stars represent locations of sightings of birds in the study region between May and July, while crosses indicate birds shot in these months. Broken lines indicate boundaries of ecoregions from Olsen et al. (2001). A filled circle indicates the only known nesting site.

The results of the study proved what had long been suspected: that we were looking in the wrong place all this time. It appears that the Slender-billed Curlew's traditional breeding stronghold is (or indeed, was) not in Omsk, where the only known nests were found, but further south, in the steppes and forest-steppes of Kazakhstan and southern Russia. Another area, in the north of the Ural Mountains, was identified as a likely source for some of the sampled birds. "This suggests there is some degree of specialisation in the Slender-billed Curlew's breeding habits", says Buchanan. "Previously it was thought of as a forest-steppe species, but the findings suggest that it is more of a steppe environment species".

The study confirmed what many conservationists had long believed: that we had been looking in the wrong place for the bird all along

While the findings came as a surprise, they do back up long-held beliefs in some conservation circles. "It has been suggested in the past that the breeding range was further south. In the late nineties, a group from Glasgow University went on an expedition to this area to look for the Slender-billed Curlew – but didn't find it" says Buchanan. "But while people have speculated it for a long time, but this is the first evidence that this is where we should look."

By no means should we be discouraged by the failed expedition - while we have managed to pin down a latitude, the potential breeding area still covers a huge swathe of land, and the prospect of locating the breeding site of a bird that probably numbers less than 50 seems, ahem, slender at best. But the Eurasian steppes have previous form for hiding birds from view. In 2000, a field survey in the area uncovered a far larger population of Sociable Lapwing (*Vanellus gregarius)* than the previously-estimated worldwide figure of 200-600.

Sociable Lapwing (via Wikicommons)

But is it realistic to expect to find any Slender-billed Curlews? After all, the conditions are too inhospitable for the birds to stay there all year round. They would still need to migrate, and as we know, there have been no fully-documented sightings since 1995. But Buchanan suggests that the species could very well still be making the trips south. "The species does have an extensive wintering range which includes parts of north Africa, which almost certainly haven't been surveyed in great detail. So it remains a possibility that it is still migrating to the Mediterranean Basin, but the population is so small, and going to such a little-studied area, that we don't know about it."

If we're planning a repeat trip to find the Slender-billed Curlew, however, time is of the essence. It was previously thought that habitat loss across its core breeding area was not a major factor in the Slender-billed Curlew's slide towards extinction, but the paper's findings mean we have to rethink that assumption. A considerable amount of steppe areas in northern Kazakhstan have been ploughed for use in agriculture, leaving only the areas with poorer soil quality. This change in land use has been linked with the decline of numerous steppe species in the region, and it seems we can add the Slender-billed Curlew to that list.

Nonetheless, we can't give up hope that the Slender-billed Curlew persists. And if the 22 years that have passed since the last confirmed sighting feels like too long, then take heart from the story of the Steppe Whimbrel *Numenius phaepous alboaxillaris*, a sub-species of Whimbrel that was thought extinct in 1994, until sightings in Russia and, more recently, Mozambique. In the search for extinct species, hope springs eternal - no matter how slender.

You can help in the search. Anyone birdwatching across its range who suspects they are looking at a potential Slender-billed Curlew should take detailed notes and photographs. These will be essential to assess the veracity of the record. They should contact the RSPB's Slender-billed Curlew working group without delay (email nicola.crockford@rspb.org.uk).

Further information on Slender-billed Curlews, including a downloadable identification leaflet can be found at www.slenderbilledcurlew.net.

Count Programme - Linda Cross

As per the last couple of newsletters, I will continue recording wader species and numbers in the table below for other count sites within the count programme. In this issue, we will continue with the last site in the Great Sandy Strait and further south to the Sunshine Coast. Once again, the count dates are different to reflect the maximum number of species recorded at the sites.

Table below with counts from Tin Can Bay and Sunshine Coast sites. List as per IOC taxonomic order.

Species	GSCO 26 Mar 17	NRSB 03 Mar 17	MRNS 01 Mar 17	MRGI 01 Mar 17	WICK 01 Jan 17	SBN1 24 Mar 17	SBN2 24 Mar 17
Pied Oystercatcher	2		4	3		2	2
Sooty Oystercatcher					5		
Masked Lapwing	2					1	
Pacific Golden Plover	22	43	21				4
Red-capped Plover	200	29				3	
Lesser Sand Plover	31						
Greater Sand Plover	7	1					
Bar-tailed Godwit	2830	13	18	2		43	25
Whimbrel		30	26	6		7	22
Far Eastern Curlew	12	1	1	1		9	4
Common Greenshank	7	1					
Grey-tailed Tattler	38		2				
Wandering Tattler					1		
Terek Sandpiper	2						
Great Knot	123						
Red Knot	1						
Red-necked Stint	138						
Unidentified Sand Plover			4				

GSCO – Cooloola, Tin Can Bay — Counters – Kelvin and Amelia Nielsen.
NRSB – Noosa River Sandbanks — Counters – Jill Dening, Barb Dickson et al.
MRNS – Maroochy River North Shore — Counters – David and Robbie Leslie
MRGI – Maroochy River Goat Island — Counters – David and Robbie Leslie
WICK – Wickham Point — Counter – Judith Coles
SBN1 and 2 – Sandbank No.1 and No.2 Caloundra — Counter – Jill Chamberlain

Kelvin & Amelia Nielsen and David & Robbie Leslie also have additional count sites, but wader species and numbers are much lower at those sites, so I have not included them. The other 2 Maroochydore sites that David & Robbie count are favoured by a number of tern species.

At the end of 2015 we added 2 new count sites to the count programme. Dez Wells investigated where a flock of Far Eastern Curlew flew into at Toorbul and found them (along with other species), in what is now registered as Toorbul George Bishop Causeway, where the December count produced 288 Far Eastern Curlew and 304 in January. Andy Jensen has been a standby counter for 1 of the northside sites for some time, but has now stumbled onto a count site of his own, which is Gregory Road claypan at Mango Hill. The March count produced 3,394 waders, which included 308 White-headed Stilt, 71 Red-necked Avocet, 109 Whimbrel, 18 Greenshank, 51 Marsh Sandpiper, 139 Black-tailed Godwit, 374 Sharp-tailed Sandpiper, 1,200 Stint, 622 Curlew Sandpiper and 1 Asian Dowitcher.

In the last newsletter I mentioned the return to the coast of some of the resident wader species, but not in great numbers and not wide spread. It is certainly a different story now with many more sightings of a number of species.

White-headed Stilt have now been recorded at 39 sites during the last few months, with numbers in excess of 100 at most sites. Some of the higher totals were 300 at Deception Bay Central on 25.02.17, 308 at Gregory Road claypan Mango Hill on 25.03.17, 318 at Kianawah Road Wetland on 25.03.17, 453 at Maaroom on 29.04.17, 485 at the main Toorbul roost on 01.05.17 and 695 at Kedron Brook Wetlands on 26.03.17. Some counters took the time to count and record the number of immatures within the flock to give an indication of breeding success.

The Toorbul flock mentioned above had 121 immatures in the group, which is nearly 25%of the flock, while records during the March count from Pine Rivers Northside recorded nearly 30% of immature birds in the flock and nearly 29% at Deception Bay Central.

Black-fronted Dotterel records were reported from 14 sites (5 more than noted in the last newsletter), but with higher totals coming from Endeavour River Claypan in Cooktown (11), Buckley's Hole sandbar on Bribie Island (18) and Kedron Brook Wetlands (22). The latter site having 3 immatures in the flock.

Only 1 record for Red-kneed Dotterel was recorded in the last newsletter, however, records have come from 8 sites since then, which include 2 each at Endeavour River Claypan in Cooktown, Gregory Road Claypan Mango Hill and Kinka Beach Wetland in Yeppoon, 3 (includes1 immature) at George Bishop Causeway in Toorbul, 4 at Bishop's Marsh in Toorbul, 5 at Pine Rivers Northside and 17 at Kedron Brook Wetlands.

In the last newsletter I mentioned that there were no records of Red-necked Avocet returning to the coast, but just a couple of weeks later the first record came in from Deception Bay Central on 25.02.17 when 6 birds were recorded, and has increased to 79 in March and 89 in April. Other records have come from Maaroom (1 in March and 19 in April), King Street mudflats in Thornlands (1 in May), Trute's Bay in Tweed Heads (5 in April), Gregory Road Claypan (71 in March and 1 in April) and Port of Brisbane (185 in March and increasing to 1,099 in April).

The cross Tasman winter visitor, Double-banded Plover, has also made a return to our shores with the first record of 1 bird at Manly Harbour on 21.02.17. In total, 12 sites have recorded this species, with 7 being in single digits. However during the April counts 15 where seen at Shellgrit Creek Entrance, Mackay, 22 at East Geoff Skinner Reserve, 36 at Mirapool Beach,Moreton Island and 40 at Sandbank off Amity Point. On 25.03.17 a large count of 212 were recorded at East Geoff Skinner Reserve.

More unusual sightings extracted from counts include 1 Ruff/Reeve at Pine Rivers Wetland Reserve on 25.02.17, 8 Sanderling at Mirapool Beach Moreton Island on 28.04.17, 3 Sanderling at Shellgrit Creek Entrance Mackay on 27.02.17 and 2 Sanderling at Sandbank Amity Point on 28.04.17. There was also 1 Common Sandpiper at Queensland Aluminium Settling Pond in Gladstone on 23.02.17 and Endeavour River mouth in Cooktown on 25.02.17.

Some other interesting records extracted from counts as follows:

Bar-tailed Godwit – 4,527 at Toorbul on 26.02.17. 3,380 at Reeder's Point Moreton Island on 16.02.17. 2,830 at Cooloola Tin Can Bay on 26.03.17. 1,820 at Maaroom on 25.02.17. 1,440 at Geoff Skinner Reserve West on 25.03.17 and 1,189 at Manly Harbour on 25.02.17.

Beach Stone-curlew – 4 at Kakadu Beach roost Bribie Island on 26.03.17. 4 at Maroochy River Sandbanks on 24.03.17. 2 at Drive Seaforth north of Mackay on 28.04.17, 1 at Tweed River Entrance in Tweed Heads on 17.04.17 and 1 at O"Regan's Creek Westside in Hervey Bay on 25.03.17.

Broad-billed Sandpiper – 35 at the Port of Brisbane on 26.03.17 (24 during February count) and 4 at Bundaberg Port on 26.02.17 (1 during the March count).

Sooty Oystercatcher – It is always pleasing to see this species recorded on counts, and particularly when it was recorded at 9 sites during the last few months. Manly Harbour recorded 2 birds on the February count, but then it dropped to 1 in March and 1 in April. A single bird was also recorded along Wynnum Esplanade in March, which was probably the one using the high tide roost, and a single bird was recorded at Kakadu Beach roost Bribie Island in February. Tweed River Entrance in Tweed Heads, Shellgrit Creek Entrance in Mackay and the Port of Brisbane each recorded 2 birds in March, while Toorbul recorded 2 birds in April. Finlayson Point north of Mackay recorded 2 birds in February and March and 3 in April. The largest count came from Wickham Point on the Sunshine Coast when 5 were seen in April.

Red-capped Plover – 13 sites recorded numbers in excess of 50 birds with high totals coming from O'Regan's Creek Westside in Hervey Bay (243) on 25.03.17, Cooloola in Tin Can Bay (200) on 26.03.17, Port of Brisbane (145) on 26.03.17 and Bundaberg Port (116) on 26.02.17. I have been intrigued for the last couple of years about the number fluctuations for this species at different times of the year. Further investigation is warranted to ascertain if they are more nomadic than we thought.

Other high totals for species extracted from counts over the last few months were as follows:

4,172 Red-necked Stint – Port of Brisbane – 26.02.17
2,403 Curlew Sandpiper – Port of Brisbane – 26.02.17
1,296 Grey-tailed Tattler – Port of Brisbane – 26.02.17
473 Far Eastern Curlew – Geoff Skinner Reserve East – 25.02.17
244 Sharp-tailed Sandpiper – Pine River Wetland Reserve – 25.02.17
156 Terek Sandpiper – Manly Harbour – 16.03.17
73 Common Greenshank – Maaroom – 25.03.17
305 Pacific Golden Plover – Port of Brisbane – 26.02.17
157 Ruddy Turnstone – Port of Brisbane – 26.02.17
47 Grey Plover – Adair Street Boonooroo – 24.02.17
5 Comb-crested Jacana – Ewan Maddock Dam – 02.04.17
1,804 Lesser Sand Plover – Port of Brisbane – 26.02.17
72 Marsh Sandpiper – Maaroom – 25.02.17
690 Great Knot –Maaroom – 25.02.17
40 Red Knot – Maaroom – 29.04.17
394 Whimbrel – Toorbul – 05.04.17

Breeding records

White-headed Stilt – at Manly Harbour there have been several records as follows. Nesting on 25.02.17, 1 chick a week old on 07.03.17, 2 pair nesting on 16.03.17 and 2 pair nesting again on 02.05.17. Pair possibly nesting at Kianawah Wetland on 25.03.17.

Black-fronted Dotterel – 1 adult on nest and 2 other adults with 1 chick at Queensland Aluminium Settling Pond in Gladstone on 23.02.17.

Red-capped Plover – nest with egg at Noosa River sandbanks on 20.01.17

Counters not entering their counts online, please continue to send them to me at my email or postal address as follows: xenus69@xxxxxxxcom
Snail mail: xxxxxxxxx Phone: xx xxxx xxxx

A reminder that Leg flag sightings must not be entered online during count entry. Please also note that flag sightings emailed to Phil should be sent to his new email address Please contact Phil or me for the Leg Flag Observation Report Form

Happy counting.
Linda Cross.

Interesting wader sightings

1,387 Red-necked Stint – East Geoff Skinner Reserve – 25.03.17
780 Grey-tailed Tattler – Manly Harbour – 16.03.17
775 Grey-tailed Tattler – Reeder's Point Moreton Island – 28.04.17
86 Black-tailed Godwit – Pine Rivers Northside – 24.03.17
287 Greater Sand Plover – Port of Brisbane – 26.02.17
175 Greater Sand Plover – Shellgrit Creek Entrance Mackay – 25.03.17
51 Terek Sandpiper – Queen's Esplanade Thornside – 20.03.17
30 Common Greenshank – Kougari St, Boonooroo – 24.02.17
25 Common Greenshank – West Geoff Skinner Reserve – 25.03.17
1 Latham's Snipe – Endeavour River Mouth Cooktown – 25.03.17
34 Marsh Sandpiper – Pine Rivers Northside – 24.03.17
82 Pacific Golden Plover – Shellgrit Creek Entrance Mackay – 25.03.17
136 Pied Oystercatcher – Port of Brisbane – 26.02.17
14 Red Knot – Manly Harbour – 07.03.17
38 Ruddy Turnstone – Manly Harbour – 02.05.17
237 Sharp-tailed Sandpiper – Pine River Northside – 24.03.17
245 Whimbrel – Fisherman Island claypan Port of Brisbane – 26.03.17
182 Whimbrel – Shellgrit Creek Entrance Mackay – 27.02.17

Not waders but of interest anyway

2 White-browed Crake – Endeavour River Claypan, Cooktown – 25.02.17
2 Black Bittern – Endeavour River Claypan, Cooktown – 25.03.17
2 Australasian Shoveler – Visitors Centre Lake, Port of Brisbane – 26.02.17
2 Cotton Pygmy Goose – Ewan Maddock Dam – 26.02.17, 02.04.17 & 07.05.17
4 Pacific Black Duck – Maaroom – 25.03.17 (first time seen at this site)
5 Grey Teal – Cairns Esplanade (rare at this site) – 29.04.17
130 Grey Teal – Entrance mudflat Queensland Aluminium Gladstone – 28.04.17
214 Chestnut Teal – Artificial Roost Port of Brisbane – 30.04.17 (Total 417 for all Port sites)
156 Hardhead – Ewan Maddock Dam – 26.02.17
132 Plumed Whistling Duck – Bundaberg Port – 26.03.17
12 Plumed Whistling Duck (includes 12 ducklings) – Kinka Wetlands Yeppoon
5 Plumed Whistling Duck – Visitors Centre Lake, Port of Brisbane – 30.04.17 (1st record for site)
8 Wandering Whistling Duck – Endeavour River Claypan Cooktown – 29.04.17
2 Wandering Whistling Duck – Ewan Maddock Dam – 12.03.17
13 Black Kite – Bundaberg Port – 26.03.17
3 Glossy Ibis – Bundaberg Port – 26.03.17
2 Glossy Ibis – Kianawah Road Wetlands – 25.03.17
1 Glossy Ibis – Kinka Wetlands Yeppoon – 29.04.17
5 Great Cormorant – Ewan Maddock Dam – 02.04.17
7 Yellow-billed Spoonbill – O'Regan's Creek Westside, Hervey Bay – 29.04.17
1 Black-necked Stork – Maroochy River Northshore – 24.03.17
3 White-necked Heron – Kinka Wetlands Yeppoon – 29.04.17
750 Common Tern – Maroochy River Northshore – 27.02.17
14 Lesser Crested Tern – sandbank off Amity Point – 28.04.17
4 Lesser Crested Tern – O'Regan's Creek Westside, Hervey Bay – 25.03.17
250 White-winged Black Tern – Maroochy River Northshore – 27.02.17
1 White-winged Black Tern (in stunning breeding plumage) – Endeavour River Claypan, Cooktown -29.04.17

WADER WATCH - Phil Cross

Can everyone please remember to use the 'Leg Flag Observation Report' form. **Please email leg flag sightings to Phil on his new email address**

Can we also please ask people to carefully check which leg the flag is on. If you are not sure, or just see the colour, and do not know which leg it is, please do not make it up. We do record the sighting on the database, even if we do not know which leg it was on. Recording information that you have not seen, or do not know creates extra work for Phil and other people who this information goes to. We would appreciate your cooperation on this issue.

Green leg flag sightings

In each Qld Wader issue, there are quite a number of green leg flag sightings recorded within Moreton Bay, which is where the bird was banded originally. As we are now seeing more leg flag combinations from other states and countries, and have limited space available for sightings, we will not be listing each individual sighting of green flag records in Queensland unless there is a significant movement of the bird. Instead, we will list the number of flags for each species and the period in which they were seen.

Slightly fewer sightings of green flags in Moreton Bay & Environs in the last three months compared to the previous three months, down by 85 which is roughly 5%. The species recorded and the number of observations was as follows: Australian Pied Oystercatcher 47, Bar-tailed Godwit 622, Curlew Sandpiper 24, Double-banded Plover 3, Eastern Curlew 4, Great Knot 114, Greater Sand Plover 2, Grey Plover 6, Grey-tailed Tattler 243, Lesser Sand Plover 33, Pacific Golden Plover 63, Red-capped Plover 4, Red-necked Stint 133, Ruddy Turnstone 77, Sharp-tailed Sandpiper 12, Terek Sandpiper 4, Whimbrel 122, and White Headed Stilt 9.

They were sighted by Sarah Beavis, Robert Bush, Susan Chisholm, Jimmy Choi, Judith Coles, Rob Collyer, Tony Cotter, Phil Cross, Linda Cross, Michael Daley, Ken Doy, David Edwards, Peter Driscoll, Stephen Haase, Micha Jackson, Arthur Keates, Sheryl Keates, John Lawson, Penn Lloyd, Wayne Matthews, Steve Popple, Peter Rothlisberg, Brian Russell, Michael Strong, Chris Walker, Marj Webber, Dez Wells, Brian Willey and Desley Willgoss.

The following is a list of the individually marked green flags that have been seen on these species during this reporting period.

Australian Pied Oystercatcher – AAB, AAD, AAK, AAT, AAU, AAY, ABC, ABE, ABL, ABM, B6, C4, EX and H7.

Bar-tailed Godwit – AAA, AAB, AAE, AAH, AAM, ABJ, ABN, ACA, ACH, ACK, ACL, ACN, ACT, ACX, ACY, ADA, ADB, ADC, ADH, ADW, ADX, AEA, AEJ, AEN, AES, AEU, AEV, AHA, AHE, AHL, AHM, AHS, AHT, AJD, AJL, AJM, AJS, AJZ, AKA, AKB, AKD, AKS, AKV, ALH, ALM, ALN, ALZ, AMC, AMH, AMK, AML, ANW, ANX, APN, APP, APU, APY, AR, ARA, ARJ, ARM, ARN, ART, ASA, ASD, ASE, ASH, ASM, AST, ASX, ASZ, ATA, ATB, ATD, AVB, AVK, AVM, AVP, AVS, AVW, AVX, AWC, AWD, AX, AXT, AXU, AXZ, AYB, AYC, AYD, AYK, AYN, AYV, AZA, AZB, AZC, AZN, AZU, AZX, BAA, BAK, BBA, BBD, BBJ, BBK, BBL, BBM, BBN, BBP, BBR, BBS, BBX, BBY, BCC, BCE, BCE, BCX, BCZ, BDA, BFP, BJZ, BKJ, BKK, BKL, BKT, BNB, BNH, BNL, BNN, BNS, BPB, BPC, BPD, BPF, BPH, BPK, BPL, BPS, BPU, BPV, BPY, BR, BRD, BRK, BRL, BRT, BSD, BTA, BTH, BTK, BTL, BTN, BUH, BUK, BX, CAB, CAC, CAD, CAF, CAH, CAJ, CAK, CAL, CAN, CAS, CAT, CAU, CAV, CAX, CAY, CAZ, CBA, CBB, CBD, CBF, CBH, CBJ, CBK, CBL, CBP, CBS, CBT, CBV, CBX, CBY, CBZ, CCA, CCB, CCC, CCD, CCF, CCH, CCJ, CCK, CCL, CDC, CJA, CJB, CJC, CJD, CJF, CJH, CJJ, CJK, CJL, CJM, CJN, CJP, CJS, CPB, CPL, CU, CX, DX, EC, EL, ET, EX, FJ, FY, HA, HL, HR, HU, JB, JE, JJ, JY, KN, NC, PA, PC, PD, PE, PN, PP, PU, RL, RP and RR.

Curlew Sandpiper – AAK, ADA, AHH, AJK, AJS, AJV, AKD, AKL, AVF, AXA, AYB, AYF, AYP, AYS.

Eastern Curlew – AHA, AHC, AR.

Great Knot – AAP, ADA, AEE, AEU, AHA, AHZ, AJH, AJT, AJU, ALT, ALU, AMK, ATH, ATL, ATN, ATR, ATT, ATU, ATX, ATY, ATZ, AWK, AYR, AYX, AYY, BAZ, BBD, BBE, BCE, BEE, BEH, BEJ, BEL, BEM, BEN, BER, BES, BET, BEU, BEV, BEW, BEX, BEY, BHA, BLA, BNA, BNS, BRD, BTK, BTT, CMY, CNS, and NA.

Greater Sand Plover – CCB.

Grey Plover – JT.

Grey-Tailed Tattler – AAC, AAD, AAK, ABB, ABD, ACC, ACK, ACR, ACW, ACX, ACY, ADH, ADJ, ADK, ADN, ADT, ADU, ADY, AKB, AKJ, AKV, AKW, ANK, ANN, ANT, APJ, APL, APP, APT, APU, APV, APY, AR, ARW, ARY, ASE, ATC, ATD, ATJ, ATL, ATP, ATV, AUN, AUS, AUT, AUU, AUW, AUY, AV, AVA, AVC, AVD, AVE, AVN, AWU, AXB, AXD, AXP, AXV, AXX, AYB, AYD, AZL, AZT, AZV, AZX, AZZ, BAD, BAJ, BAL, BAM, BCJ, BDD, BDJ, BDL, BDN, BHE, BT, BXC, BXD, BXF, BXH, BXS, CA, CD, DAC, DAD, DD, DX, EM, HY, JC, JD, JN, JU, JY, JZ, KM, KV, KX, KY, KZ, LN, RD and RX.

Lesser Sand Plover – ABJ, AJZ, AKX, ALR, ALU, ANP, ANV, APT, AUP, AUT, AUV, AUZ, AVC, AYT and DL.

Pacific Golden Plover – AVS, AVV, AVW, BHK, BHL, BHM, BSA, BSC, BSF, BVA, DAA and DAB.

Red-capped Plover – CP.

Red-necked Stint – 2A, 2F, 2J, 2P, 2T, 2X, 2Y, 2Z, 3A, 3C, 3D, 3L, 3X, 4B, 4C, 4L, 4T, 4Y, 4Z, 5D, 5F, 5M, 5N, 5P, 5Z, 6C, 6F, 6H, 6V, 7A, 7F, 7H, 7L, 7N, 7U, 7X, 8B, 8N, 8T, 8U, 8X, 8Z, 9F, A5, A6, AT, AV, AY, J5, S5, UK, V9, VJ, X9, XS, Z2, Z7, Z9, ZA, ZH, ZJ, ZV, ZX and ZZ.

Ruddy Turnstone – ABY, AJB, AKW, AKX, ALC, APJ, ATA, ATB, ATC, ATD, ATF, ATK, ATL, ATN, ATS, ATT, ATU, ATV, ATY, ATZ, AUA, AUB, AUC, AUD, AUF, AYH and HE.

Sharp-tailed Sandpiper – ACY, AEL, AJT, CCA and CCD.

Terek Sandpiper – ACU.

Whimbrel – AAD, ABT, BXA, BXC, BXD, BXJ, BXK, BXN, BXP, BXY, BXZ, BYA, BYB, BYD, BYH, BYJ, BYK, BYL, BYN, BYP, BYS, BYT, BYU, CJV, CJX, CJY, CKA, CKB, CKD, CT, DAD, DAF, DAK, DAL, DAM, DAN, DAP, DAS, DAT, DAV, DAX, DAY, DJA, DJB, DJC, DJD, DJF, DJH, DJJ, DJM, DJN, DJP, DJS, FV, FX and UP.

White-headed Stilt – AAZ.

Green leg flag sightings seen Interstate

Australian Pied Oystercatcher

(A6 on flag) – Iluka NSW – S Ward -4.3.2017

(A8 on flag) – Kingsford Smith Park Ballina NSW – Observer unknown – 17.3.2017

Curlew Sandpiper

(AZA on flag) – Stockton Bridge Newcastle NSW – Tony Neilson – 24.3.2017

Green leg flag sightings seen Overseas

Japan

Grey-tailed Tattler

ASP on flag - 28.4.2017 – Fujimae Tidal Flat Nagoya Aichi – Tomoko Nomura

South Korea

Bar-tailed Godwit

ADX on flag – 11.4.2017 – Song Do Incheon City – Spike Millington

Taiwan

Great Knot

ALN on flag – 8.4.2017 – Wang-Gong Chang-Hua County – Kunchang Li

Orange (Victoria) leg flag sightings

Bar-tailed Godwit

1 with plain flag – 26.3.2017 – Tuan – Sarah Beavis

Great Knot

1 with plain flag – 15.1.2017 – Toorbul – Dez Wells

1 with plain flag – 26.3.2017 – Fisherman Island – Peter Rothlisberg & Penn Lloyd

Red Knot

1 with plain flag – 26.2.2017 – Port of Brisbane – Arthur Keates & Sheryl Keates

Overseas flagged birds seen in Qld

Black over white or white over black (Shanghai, China) leg flag sightings

Great Knot

J62 on white flag – 2.3.2017 – Wynnum Esplanade – Arthur Keates

J74 on white flag – 24.2.2017 – Wynnum Esplanade – Wayne Matthews

J74 on white flag – 3.4.2017 – Wynnum Esplanade – Tony Cotter

J74 on white flag – 26.2.2017 – Port of Brisbane – Arthur Keates & Sheryl Keates

Lesser Sand Plover

1 plain flags right tibia – 6 & 8.3.2017 – Gatakers Bay Point Vernon – Bill Price

Green over Blue (Jiangsu, China) leg flag sightings

Lesser Sand Plover

1 plain flags left tibia – 21 & 22.2.2017 – Manly Harbour – Arthur Keates

Green over Orange (Yalu Jiang Nature Reserve, China) leg flag sightings

Bar-tailed Godwit

Also blue over white band left tarsus, yellow over yellow band right tarsus and metal band left tibia.

15.1.2017 – Toorbul – Dez Wells

4.3.2017 – Toorbul – Arthur Keates

12.3.2017 – Toorbul – John Lawson

29.3.2017 – Toorbul – Michael Strong

1.4.2017 – Toorbul – Arthur Keates & Jimmy Choi

Black over Yellow (Kamchatka Russia) leg flag sightings

Great Knot

EH on yellow flag – 2.3.2017 – Bushland Beach Townsville – John Lowry

Blue (Japanese) leg flag sightings – use four combinations

Grey-tailed Tattler

18.3.2017 – Manly Harbour – Arthur Keates & Robert Bush

18.3.2017 – Wynnum Esplanade – Tony Cotter

25.3.2017 – Wynnum Esplanade – Tony Cotter

1.4.2017 – Toorbul – Jimmy Choi & Micha Jackson

1 & 22.4.2017 – Wynnum Esplanade – Tony Cotter

Blue & White (Japanese) leg flag sightings

Grey-tailed Tattler

315 on blue flag – 22.2.2017 – Manly Harbour – Arthur Keates

315 on blue flag – 10.4.2017 – Wynnum Esplanade – Tony Cotter

191 on blue flag – 22.2.2017 – Manly Harbour – Arthur Keates

191 on blue flag – 13.3.2017 – Manly Harbour – Arthur Keates

191 on blue flag – 16.3.2017 – Manly Harbour – Arthur Keates

191 on blue flag – 21.3.2017 – Manly Harbour – Arthur & Sheryl Keates

White & Blue (Taiwan) leg flag sightings

Red-necked Stint

080 on white flag – 21.2.2017 – Manly Harbour – Arthur Keates

Pied Oystercatcher Yellow leg flag (2 digit) sightings

The following sightings of yellow flagged oystercatchers are not birds flagged in North West Western Australia, as per the flagging protocol. They are another project being run from Victoria and New South Wales. Birds flagged in Victoria will have a yellow flag on the right tibia and inscribed with two digits. New South Wales birds will have the yellow flag on the left tibia and inscribed with two digits.

C4 on flag –3.4.2017 – Wynnum Esplanade – Tony Cotter

Other leg flag sightings and banded birds

Caspian Tern Orange flag (Victoria)

37 on flag, right tarsus - 26.2.2017 – Toorbul – Dez Wells
UO on flag, right tarsus - 26.3.2017 – Buckley's Hole Sandbar – Dez Wells

QWSG Return to Survey Mackay Region on 4th–5th November 2017

The QWSG have been surveying the coast within 100 km of Mackay since 2002 when we were awarded a federal government grant through the national WWF shorebird project. After that project finished in 2004, QWSG decided to continue these surveys and have returned to Mackay every second year. The last survey was in 2014 and now it is time to return for the 10th Mackay regional survey. This time, we are partnering with the local natural resource management group, Reef Catchments to expand the survey area north of Mackay to include the coast up to Bowen. This will effectively double the length of coast to be surveyed, although probably only add about 10% to the total number of waders counted.

This is an early notice about the survey to encourage members to plan ahead. We hope members will set aside the weekend of 4 – 5 November 2017 to come to Mackay and join other QWSG members and interested locals visiting new and exciting locations to help count the 25,000 waders that occur along this part of the Queensland coast. Survey participants will have their travel, accommodation and most food expenses covered while on the survey. Participants do not need to be experienced and those with limited wader identification skills or previous survey experience will be partnered with experienced surveyors when they go in the field.

Members interested in being involved should contact either Peter Driscoll or Peter Rothlisberg to express their interest or make enquiries. We will make further announcements in future newsletters. We look forward to seeing you in Mackay in November!

QWSG 25th Year Celebrations

The Queensland Wader Study Group will be celebrating its 25th birthday this year. So, keep the week-end of 7th October 2017 free and wait for future information of our activities.

Also, the next Issue of Queensland wader will be number 100. So, if you have any reminiscences, articles or photos please send them to me as soon as possible. The usual restrictions will apply to the hardcopy mail-out so make sure, if you have not given us your email address, to send it to the membership registrar ASAP. Hoping Issue will be a bumper issue.

Wader ID Day

Shorebird Outing - Sunday 30 July 2017 at Manly Harbour

1.98 m high tide at 13:20. Meeting time 13:00 at the end of Davenport Dr, on the southern boundary of the Royal Queensland Yacht Squadron Clubhouse.

The specific object of this outing to the shorebird roost at Manly Harbour is to look for Double-banded Plover at a time when most of them will be in advanced breeding plumage just before their return migration to New Zealand. Of course, overwintering birds of other species will also be present.

QWSG has a licence over the roost. Under the conditions of the licence, participants in this field trip will be required to sign a form acknowledging responsibility for their own health and safety, including:

- wearing protective clothing at all times (eg. hat, shoes, sunglasses) and using sunscreen
- drinking water to avoid dehydration
- using insect repellant if necessary
- telling a leader about any health issues that may affect taking part in the field trip
- if feeling unwell, or concerned about someone else being unwell, immediately telling a group leader or another participant
- immediately telling a group leader or another participant about any injury suffered (including a slip, trip, fall and snake bite) or hazard that may cause injury to someone.

Participants must wear enclosed footwear, have drinking water and, because the site is exposed and the likelihood of a westerly wind, a jacket is advisable.

Anyone who does not comply with these conditions will not be allowed to enter the site or asked to leave.

The gate will be locked after we enter the site and late arrivals will not be able to enter.

Participation in this field trip is strictly limited to those who have registered with the leaders. Please do not just turn up on the day without registering.

Leaders: Arthur and Sheryl Keates

Wader ID Day Reports

TOORBUL WADER ID DAY REPORT 1 APRIL 2017

With the remnants of cyclone Debbie lashing south-east Queensland just two days before this outing, a few people made contact to enquire if the outing would still be held, to which they were advised that it would. A total of 27 people assembled at the roost for a view of the waders. Weather conditions were fine, dry and warm with a pleasant south to south easterly wind.

As with the previous two wader ID outings to this site, the diversity of wader species was lower with only 7 species present which was very disappointing for some attendees who came to this outing (and previous ones) in the hope of improving their identification skills. There were some people who did not know anything about waders and I spent a bit of time explaining some of the finer details about the species and their incredible journeys.

Breeding plumage was evident on some of Far Eastern Curlew, Whimbrel, Bar-tailed Godwit and Great Knot. In particular, several male Bar-tailed Godwit looked quite stunning with their chestnut coloured plumage on their underparts and almost black bills, clearly in peak physical condition, as were several of the Great Knot.

There were four species of tern for people to identify, but only 1 Little Tern and 1 juvenile White-winged Black Tern, which was new for some people.

A Peregrine Falcon flew over and really upset and disturbed the flock, while most settled back down after it went passed. Experienced QWSG member Jimmy Choi, considered c100 godwit that flew off in a northerly direction had in fact set off on their northern migration. Toward the end of the viewing 4 children came along the foreshore in front of the mangroves, one of them throwing something at the birds putting some of the flock up again, resulting in a reprimand by a member.

Bar-tailed Godwit 'Mr Bling' was spotted again within the flock sporting his usual green flag over orange flag on the right tibia, yellow band over yellow band on the right tarsus, metal band on the left tibia and blue band over white band on the left tarsus. The white band on the left tarsus is very strained and looks yellowish. 'Mr Bling', showing advanced breeding plumage, was flagged at Yalu Jiang Nature Reserve, China on 14 April 2012 and has been seen and reported many times at the Toorbul or Kakadu Beach roost on Bribie Island.

There were many other birds sporting engraved green leg flags (flagged in south-east Queensland).

A count was conducted at the roost and added to the QWSG database. The birds with totals next to them are those counted at the roost and those with no totals next to them were seen along the Esplanade.
Birds seen at Toorbul Roost and environs (F/O – flying over):

17 Black Swan (and more in the passage), Maned Duck, Australian Pelican, 1 White-faced Heron F/O, 1 Royal Spoonbill, 1 Whistling Kite (F/O), 1 Peregrine Falcon (F/O), 8 Pied Oystercatcher, 58 White-headed Stilt (includes 6 immature), 4 Masked Lapwing, c800 Bar-tailed Godwit, 300 Whimbrel, 31 Far Eastern Curlew, Common Greenshank, 69 Great Knot, 64 Gull-billed Tern, 15 Caspian Tern, 1 Little Tern and 1 White-winged Black Tern.

Bishop's Marsh had extensive water in it and throughout the paddocks and a quick scan of the site after we left Toorbul revealed White-headed Stilt, Masked Lapwing, Grey Teal, Australian White Ibis and Straw-necked Ibis.

Linda Cross.

TOORBUL WADER ID DAY REPORT 4 MARCH 2017

Although only 10 people advised they would be attending this outing, the final number of attendees that arrived over a 1-hour period was 25. Weather conditions were dry with some cloud, but very humid and just the slightest of wind from the north-east.

The Far Eastern Curlew were stretched out along the shoreline in front of the picnic table just north of the roost as some of us arrived, and a large flock of other waders were present at the main roost. Unfortunately, once again the diversity of wader species was low with only 9 being present, which was a little disappointing for those who came to hone their skills on this group of birds.

A number of Bar-tailed Godwit had advanced breeding plumage and a couple of Black-tailed Godwit had around 50%. Some Great Knot too were showing advanced breeding plumage along with a few Far Eastern Curlew, and it was good to show the group the different stages from non-breeding plumage through to what was on show.

Only one overseas flagged bird was seen, and this was 'Mr Bling' sporting his usual green flag over orange flag on the right tibia, yellow band over yellow band on the right tarsus, metal band on the left tibia and blue band over white band on the left tarsus. The white band on the left tarsus is very strained and looks yellowish. 'Mr Bling' was flagged at Yalu Jiang Nature Reserve, China on 14 April 2012 and has been seen and reported many times at the Toorbul or the Kakadu Beach roost on Bribie Island. There were many other birds sporting engraved green leg flags (flagged in south-east Queensland).

A count was conducted at the roost and added to the QWSG database.
Birds seen at Toorbul Roost and environs (F/O – flying over):

Black Swan in the passage, 1 Maned Duck, 2 Australian White Ibis, 1 Little Egret, Australian Pelican, 1 Eastern Osprey (F/O), 1 Whistling Kite (F/O), 1 Brahminy Kite (F/O), 1 White-bellied Sea Eagle (F/O), 26 Pied Oystercatcher, 8 White-headed Stilt, 4 Masked Lapwing, 21 Black-tailed Godwit, 1,790 Bar-tailed Godwit, 274 Whimbrel, 156 Far Eastern Curlew, 82 Great Knot, 2 Red-necked Stint, 3 Gull-billed Tern, 1 Caspian Tern, 2 Greater Crested Tern and 8 Little Tern.

Bishop's Marsh did have some water in it and although we but we did not survey the site the only species apparently present was White-headed Stilt.

Linda Cross.

Other Conservation Activities of Interest

QWSG is a special interest group of the Birds Queensland Inc. whose object is:
"To promote the scientific study and conservation of birds by all means possible, with particular reference to the birds of Queensland".
Separate membership is required.
Contacts: President, Rae Clark president@birdsqueensland.org.au
Secretary, Robert Bush secretary@birdsqueensland.org.au
Treasurer, Judith Giles treasurer@birdsqueensland.org.au

Monthly Meetings Birds Queensland
1st Thursday each month except January, when there is no meeting.
Royal Geographical Society Meeting Room, 237 Milton Road, Milton.
Arrive after 7:15pm for a 7:30pm start.

Dog Disturbance on Shorelines

When people see dogs chasing or disturbing shorebirds,
Phone the BCC Call Centre 3403 8888 and request a RAPID RESPONSE TEAM be sent.
Add the number to your mobile.

Missing QWSG Spotting Scope

After our course last year the group's spotting scope has gone missing. So, please check your gear to see if it has taken a holiday with your stuff.
It is a black Carton Spot 60 with a 20-40x zoom lens + Velbon tripod

If found please let one of us know at:-
David Edwards Email chairperson@waders.org.au
Sheryl Keates Email membership@waders.org.au
Linda Cross Email xenus69@bigpond.com

NEW MEMBERS

We welcome the following new members who have joined recently:

Ms Joanne BARBER, Mr John LAWSON, Ms Deb MOSTERT,
Mr Chris COATES, Mr Brian WILLEY, Mr Stuart PELL,
Mr Ian McDONALD, Mr Bill PICKIN & Family,
Ms Catherine SINN, Ms Laura PHILLIPS.

A reminder to members, please let the Treasurer know if you change your email address. If you do please make sure that it does allow delivery and not send downloads to spam.

Many thanks too to those who have included a donation with their renewal or membership fee. This is greatly appreciated as such donations make on-going work possible.

QWSG CONTACTS

QUEENSLAND WADER www.waders.org.au
The Official Quarterly Publication of
Queensland Wader Study Group

MEMBERS of the MANAGEMENT COMMITTEE of the QWSG

CHAIRPERSON:	David Edwards		chairperson@waders.org.au
TREASURER/MEMBERSHIP	Sheryl Keates		membership@waders.org.au
SECRETARY:	Peter Rothlisberg		secretary@waders.org.au
NEWSLETTER EDITOR:	David Edwards	17	gouldian@ozemail.com.au

Robert Bush, Jon Coleman, Paul Finn, Richard Fuller, Andrew Geering, Sandra Harding, David Milton

COUNT COORDINATOR:	Linda Cross
LEG FLAG COORDINATOR	Phil Cross
MERCHANDISE	Position suspended.

BQ PRESIDENT **Rae Clark** Email president@birdsqueensland.org.au

CORRESPONDENCE All correspondence to:
The QWSG Chairperson,
54, Elliott Street,
CLAYFIELD,
QLD 4011

CHANGE OF ADDRESS Please notify the Treasurer as soon as possible of any change of address so that your Newsletter can be dispatched correctly.

SUBSCRIPTIONS Annual subscription rates:
Single: $15:00
Student/Pensioner: $10:00
Family: $25:00
A receipt will be forwarded if required.

Forward application to:
QWSG Treasurer,
PO Box 3138,
SOUTH BRISBANE,
QLD 4101

Members are reminded their membership expires on the date shown on the newsletter address label, and the membership joining/renewal form is now on the back page. **Note:** that your subscription will fall due twelve (12) months after date of joining the QWSG or date of renewal, and only one further newsletter will be sent after expiry of your subscription.

Copy Deadline for the next issue of Queensland Wader is **Aug 18th 2017**
Contributions should be addressed to:
David Edwards, the QWSG Editor, 54 Elliott Street, Clayfield, Qld 4011
or E-mail to: gouldian@ozemail.com.au

Opinions expressed in Queensland Wader are those of the individual contributors and are not necessarily those of the Queensland Waders Study Group, nor Birds Queensland.
Advertising Rates are $20:00 for one-quarter page and $25:00 for a third of a page.

PRINTED BY: Mr Bob Durrington of J.R. Durrington & Sons Pty Ltd.
admin@jrdsons.com.au

Count Activities – 2017

QWSG High Tide – Monthly Count Program 2017

Sat 25th Mar	2.30m at 07:35	Sat 29th Apr	2.07m at 11:34
Sat 27th May	2.06m at 10:31	Sat 24th Jun	2.01m at 09:25 **National Winter Count**
Sat 22nd Jul	1.92m at 08:20	Sat 26th Aug	1.99m at 12:33
Sat 23rd Sep	2.14m at 11:23	Sat 21st Oct	2.26m at 10:21
Sat 18th Nov	2.33m at 09:24	Sat 16th Dec	2.32m at 08:25

Also, for 6 months of counts there are quite high tides, but unfortunately these cannot be avoided. Please ensure you get to your sites before the waders are pushed off the roosts. This will probably mean that you do the count on an incoming tide before the peak of the tide, when possibly the birds have gone.

Port of Brisbane Count Dates 2017

Sun 26th Mar	2.39m at 08:19	Meet 06:30	Sun 30th Apr	1.93m at 12:26	Meet 10:35	
Sun 28th May	1.98m at 11:23	Meet 09:35	Sun 25th Jun	1.98m at 10:18	Meet 08:30	**Nat Winter Count**
Sun 23rd Jul	1.95m at 09:16	Meet 07:25	Sun 27th Aug	1.94m at 13:16	Meet 11:25	
Sun 24th Sep	2.10m at 11:59	Meet 10:10	Sun 22nd Oct	2.25m at 10:55	Meet 11:05	
Sun 19th Nov	2.35m at 09:58	Meet 08:10	Sun 17th Dec	2.37m at 09:30	Meet 07:40	

The Port of Brisbane is a work site and we are doing the survey for the Port and ourselves. Unfortunately, we cannot accept people who turn up on the day for a bird watching day.

PLEASE CHECK TO SEE IF YOUR RENEWAL IS DUE!

MEMBERSHIP/RENEWAL APPLICATION

A reminder to members: please check to see if your renewal is due and please let the Treasurer know if you change your contact details.

I / We wish to join / renew: (Single: $15; Family: $25; Student/Pensioner: $10)
Title:….. First name: ……Surname: …….

Address:…….. Membership: $……
…… Postcode:……. Donation: $……..
Payment enclosed: $_____
Do you require a receipt? Yes / No
Phone: (Home) …….. (Work) ……(Mobile)……
Email ……..Fax……
How did you hear about QWSG?.....
Are you a member of Birds Queensland? .....
What activities do you wish to participate in? (Please circle)
WADER COUNTS, FIELD TRIPS, SCIENTIFIC DATA COLLECTION, SURVEYS, CLERICAL,
OTHER (specify :……)
Would you like to receive your newsletter (colour version) by E-mail?……

Signature …….. Date:……

Please email this form to: membership@waders.org.au
Direct funds transfer to:
Qld Wader Study Group
BSB: 313 140
Account number: 08305297
Or Please post this form to: QWSG Treasurer PO Box 3138, SOUTH BRISBANE, QLD 4101.
Cheques to be made out to: Qld Wader Study Group