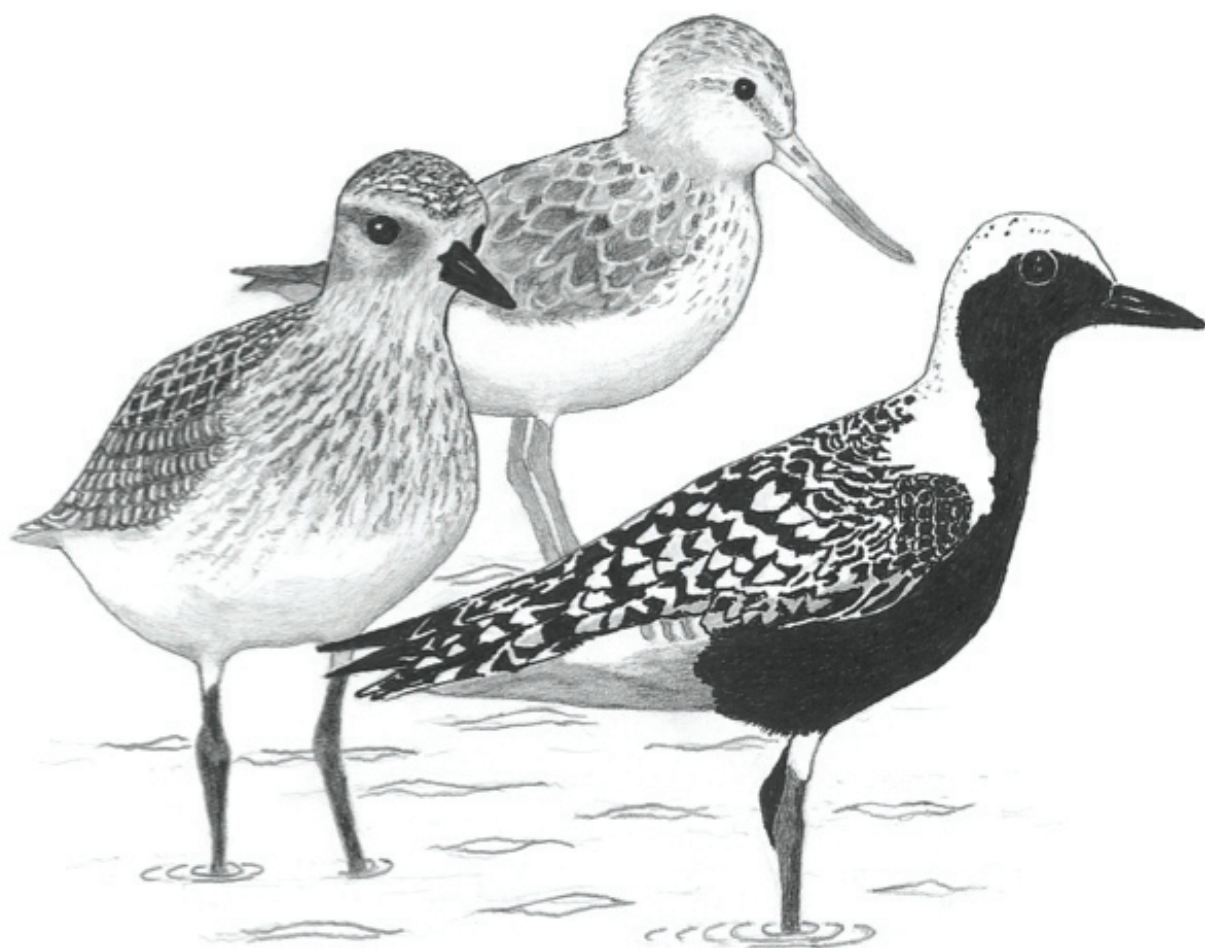


Stilt

The Journal for the East Asian-Australasian Flyway



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Stilt

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MISSION STATEMENT

To ensure the future of waders and their habitats in Australia through research and conservation programmes, and to encourage and assist similar programmes in the rest of the East Asian–Australasian Flyway.

OBJECTIVES

- To monitor wader populations through a programme of counting and banding in order to collect data on changes on a local, national and international basis.
 - To study the migrations of waders through a programme of counting, banding, colour flagging and collection of biometric data.
 - To instigate and encourage other scientific studies of waders such as feeding and breeding studies.
 - To communicate the results of these studies to a wide audience through *Stilt*, the *Tattler*, other journals, the internet, the media, conferences and lectures.
 - To formulate and promote policies for the conservation of waders and their habitat, and to make available information to local and national governmental conservation bodies and other organisations to encourage and assist them in pursuing this objective.
 - To encourage and promote the involvement of a large band of amateurs, as well as professionals, to achieve these objectives.
-

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MEMBERSHIP OF THE AUSTRALASIAN WADER STUDIES GROUP

Membership of the AWSG is open to anyone interested in the conservation and research of waders (shorebirds) in the East Asian–Australasian Flyway. Members receive the twice yearly bulletin *Stilt*, and the quarterly newsletter *The Tattler*. Please direct all membership enquiries to the Membership Manager at Birds Australia (RAOU) National Office, Suite 2-05, 60 Leicester St, Carlton Vic 3053, AUSTRALIA.
Ph: 1300 730 075, fax: (03) 9347 9323.

Email: membership@birdsaustralia.com.au

| | | |
|-----------------------|--------------|----------|
| Annual Subscriptions: | Australia | A\$35.00 |
| | New Zealand | A\$35.00 |
| | Overseas | A\$40.00 |
| | Institutions | A\$45.00 |

AWSG WEB SITE:

www.tasweb.com.au/aws/index.htm

Cover Illustration: Annie Rogers.

EDITORIAL

This years Shorebird Conference in Newcastle in July 2007 had the theme “**Migratory Shorebirds is a Threatened Flyway**”. The main outcomes of the conference are outlined by AWSG Chair Ken Gosbell below:

Australasian Shorebird Conference, Newcastle, NSW

Through a series of excellent presentations on migration studies including the use of satellite technology, threats to habitats, shorebird population studies, management of shorebird sites, the occurrence of avian influenza and the challenges for government and communities, the delegates were updated on a number of issues related to the study and conservation of shorebirds. Shorebird specialists who joined the conference from China, South Korea, Japan, Thailand and New Zealand provided valuable insight into the pressures on habitats in other parts of the East Asian Australasian Flyway.

The Conference concluded that migratory shorebird populations continue to be under major threat because of the reclamation and loss of thousands of hectares of coastal habitat each year at the critical stopover locations in the Yellow Sea.

The meeting requested the AWSG committee, working with Birds Australia, make representations to the Australian Government on this issue. The bilateral Migratory Bird Agreement meetings proposed for early 2008 in Australia, and the Ramsar CoP 10 in November 2008 in South Korea, provide significant opportunities for the Australian Government to promote collaborative activities to address habitat loss in coastal area in China and South Korea.

In addition to the approaches to the Australia Government, AWSG agreed to take the following action:

- Continue its engagement in collaborative shorebird conservation projects with non-government organizations in South Korea
- Actively contribute to the development of the Flyway Partnership and its program of activities
- Seek the reactivation of the Australian Wetland Alliance to provide for coordination of Australian NGO input into the 2008 Ramsar CoP in South Korea
- Seek assistance of the International Wader Study Group to raise awareness of the impact of coastal reclamation on shorebirds and to discuss a joint program of action for the Yellow Sea

- Continue the publication and distribution of the Tattler as a Flyway newsletter on shorebirds
- Support the development of the Asia-Pacific Shorebird Network to increase communication between shorebird researchers and conservationists in the region
- Re-develop the AWSG web site to increase awareness of shorebirds and their conservation needs

The Conference also heard of habitat loss that is occurring at some Australian coastal sites (such as the Hunter estuary) and in inland South-eastern Australia. Members requested the AWSG Committee approach the Commonwealth Government to discuss how the Environment Protection and Biodiversity Conservation Act could better address the loss of shorebird habitat loss in Australia.

Abstracts from the conference can be found at the AWSG web page.

Rosiland Jessop, *Editor*

AWSG ELECTIONS

Under the Rules of the AWSG, which is a Special Interest Group of Birds Australia, all positions on the Committee are open and nominations are sought for the following:

Chair
Vice-Chair
Scientific Committee Chair
Editor of Stilt
Secretary
Treasurer
Conservation Officer
Liaison Officer
Up to 8 Committee members.

Nominations for the above positions, seconded by a Member of the Group should be sent to the Secretary by 31 January 2008. Should an election be necessary ballot papers will be sent out with the April 2008 *Stilt*. As there will be several of the current committee not standing for nomination, members are asked to give consideration to standing for any of these positions.

Penny Johns, *Secretary*

TREASURER'S REPORT FOR 2006

The consolidated accounts show that payments exceeded receipts by \$33,716 during 2006, however this reflects expenditure from contract income received in the prior year. The balance carried forward of \$101,041 at 31st December 2006 includes commitments for expenditure on contracts yet to be paid of \$64,387.

**Australasian Wader Studies Group
Consolidated Accounts
Statement of Receipts and Payments
1 January 2006 - 31 December 2006**

| RECEIPTS | | | PAYMENTS | | |
|---------------------------|-------------------|-------------------|--------------------------------|-------------------|-------------------|
| Item | 2006 \$ | 2005 \$ | Item | 2006 \$ | 2005 \$ |
| Balance brought forward | 134,757.89 | 65,352.24 | Stationery/Printing | 6,094.44 | 25,883.87 |
| Subscriptions | 4,449.10 | 7,779.06 | Insurance | | 220.00 |
| Contracts - Federal Govt. | 16,000.00 | 133,000.00 | Postage/Courier | 8,320.87 | 2,244.76 |
| Contracts - State Govts. | 9,272.73 | 9,631.82 | Consultants/Contracts | 61,012.10 | 53,969.23 |
| Contracts - Other | 27,260.53 | 16,133.49 | Field expenses | 1,137.60 | |
| Sales | 809.68 | 353.14 | Conferences/Meetings | 435.80 | 330.00 |
| Grants and Donations | 11,127.35 | 4,972.00 | Phone/Fax | 192.60 | 179.44 |
| | | | Equipment (consumable) | 521.00 | 1,274.43 |
| | | | Travel & accommodation | 23,902.61 | 17,090.95 |
| | | | Repairs and maintenance | | 189.18 |
| | | | Admin fee (BA) | 1,000.00 | 1,000.00 |
| | | | Depreciation | 19.00 | 82.00 |
| Total income | 68,919.39 | 171,869.51 | Total expenses | 102,636.02 | 102,463.86 |
| | | | Balance carried forward | 101,041.26 | 134,757.89 |
| | 203,677.28 | 237,221.75 | | 203,677.28 | 237,221.75 |

Research Fund:

The Research Fund comprises Specific Donations and is included in the Consolidated Accounts.

In accordance with the Rules the following is a Report for the Fund for the year ended 31st December 2006.

| | | |
|-------------------------------|-------------|--------|
| Brought forward from 31/12/05 | \$10,363.09 | |
| Donations 2006 | \$1,570.00 | Note 1 |
| Total Research Fund 31/12/06 | \$11,933.09 | |

Note 1: excludes special donations of \$9,557.35 utilised for nominated purpose.

Membership Statistics for 2006:

The membership at the end of 2006 was:

| | |
|-----------------------|-----|
| Australia/New Zealand | 185 |
| Overseas (excl. NZ) | 29 |
| Institutions | 17 |
| Complimentary | 57 |
| Total | 288 |

The Consolidated Accounts are not audited, but are an extract of receipts and payments from the audited accounts of Birds Australia, which relate to the Australasian Wader Studies Group. I would like to express my thanks to the staff at Birds Australia who have again provided such excellent service in processing accounts and memberships.

Brian Speechley, Treasurer.

BREEDING SUCCESS OF ARCTIC WADERS IN 2006, BASED ON JUVENILE RATIOS IN AUSTRALIA IN THE 2006/2007 AUSTRAL SUMMER

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INTRODUCTION

Data on the breeding success of waders in the Arctic, based on the juvenile ratios of birds caught for banding in Australia, has been published in the Arctic Birds newsletter each year since 2000 (Minton *et al.* 2000, Minton *et al.* 2005a, online Arctic Birds 2006). This paper gives the results for 2006, based on birds caught in the 2006/07 season.

Information is, as usual, presented for two different regions of Australia, some 3000 km apart. The data for north-west Australia (NWA) again comes from cannon-net catches on the beaches of Roebuck Bay, near Broome, and from Eighty Mile Beach, some 175 km to the south west. Most was obtained during the annual Australasian Wader Studies Group "expedition" there, between 4 and 25 November 2006.

The data from south-east Australia (SEA) was generated by the Victorian Wader Study Group. Most was from cannon-net catches at various locations along the central coast and bays of Victoria and on the coast of the south-east of South Australia. However this year, for the first time, Ruddy Turnstone (see Tables for scientific names) data was also collected on King Island, Tasmania, situated in Bass Strait 200 km south of the Victorian coast.

Results for 2006 are compared in detail with those previously published in the Arctic Birds newsletter covering the period since 1998/99. Reference is also made, however, to earlier data generated by the VWSG in SEA, which in some species goes back as far as the 1978/79 season (Minton *et al.* 2005b).

METHODS

Only data arising from cannon-net catches is presented and used in the main analysis. However good data on a number of species was gathered this year by mist-netting on Roebuck Plains, near Broome, in NWA and this is included also, in a separate table. Some NWA mist-netting data, mostly for the same species, was also presented in the 2004/05 report (Minton *et al.* 2005a).

Catch conditions were the same, as far as possible, as in previous years. The period of data collection was timed to be when most adult and juvenile birds would be on their non-breeding locations. This is 1 Nov to 21 March in NWA and 15 Nov to 21 March in SEA.

RESULTS

The 2006/07 data for SEA is presented in Table 1 and for NWA in Table 2. This data is compared with that of the previous eight seasons in Tables 3 and 4 respectively. The mist-netting data for six species in NWA is given in Table 5.

Satisfactory catch totals were accumulated for all the usual main study species, except for Sanderling and Whimbrel in NWA. However this year sufficient Oriental Plover were captured there for this species to be included.

The data summarized in the tables belies the vast amount of fieldwork effort which is necessary to obtain it. The Victorian Wader Study Group was in the field catching waders for more than 50 days in the mid-November to late-March period. Efforts became increasingly targeted on building satisfactory totals for the "difficult" species. For example it took nine catches, and several unsuccessful attempts, to amass a total of only 204 Curlew Sandpipers. When Curlew Sandpipers were much more numerous 25 years ago, they were usually caught mixed with Red-necked Stints in a ratio of around 1:3. Nowadays the ratio is 1:10-20.

In NWA 25 days of fieldwork were needed to collect the data presented in Table 2. Even then the total on one key species, Red Knot, only reached 74 birds, spread over six catches. A further five days were needed to generate the mist-netted samples.

DISCUSSION

South-east Australia

The 2006 breeding season for the eight species monitored in 2006/07 appears to have been the worst in the 29 years for which data has been collected. Ruddy Turnstone, Sanderling and Great Knot had almost total breeding failures (but see NWA), and the Curlew Sandpiper result was not much better. The breeding outcome for Sharp-tailed Sandpiper and Red-necked Stint was close to the long-term average. Only Bar-tailed Godwit and Red Knot had good breeding seasons.

The result for Sanderling (0.5% juveniles) was the lowest ever in the 16 years for which data is available. For Ruddy Turnstone (1.3% juveniles) it was the second poorest breeding season in 17 years of data. Only 1989/90 was worse, with no juveniles found in 109 birds caught. Great Knot data is obtained only intermittently in SEA, but clearly zero juveniles in 37 birds caught (out of a core roosting wader flock) must be an indication of a poor breeding season.

It was pleasing that Red-necked Stint (13.6% juveniles) had a better breeding outcome than in the previous two

Table 1. Percentage of juvenile/first year waders in cannon-net catches in South-east Australia in 2006/2007.

| Species | No. of catches | | Total caught | Juv./1st year | | S.E. (% pts) | Long term median % juvenile (years) | Assessment of 2006 breeding success |
|--|----------------|----------------|-----------------|---------------|-------------|-----------------|--|--|
| | Large (>50) | Small (≤50) | | (#) | % | | | |
| Red-necked Stint <i>Calidris ruficollis</i> | 8 | 10 | 3931 | 536 | 13.6 | 0.5 | 13.8 (29) | Average |
| Curlew Sandpiper <i>C. ferruginea</i> | 1 | 8 | 204 | 10 | 4.9 | 1.5 | 9.8 (28) | Poor |
| Bar-tailed Godwit <i>Limosa lapponica</i> | 0 | 4 | 136 | 35 | 25.7 | 3.7 | 15.4 (18) | Good |
| Red Knot <i>C. canutus</i> | 1 | 1 | 153 | 88 | 57.5 | 4.0 | 47.0 (16) | Good |
| Ruddy Turnstone <i>Arenaria interpres</i> | 2 | 10 | 373 | 5 | 1.3 | 0.6 | 9.3 (17) | Very poor |
| Sanderling <i>C. alba</i> | 3 | 1 | 809 | 4 | 0.5 | 0.2 | 12.4 (16) | Very poor |
| Sharp-tailed Sandpiper <i>C. acuminata</i> | 2 | 6 | 373 | 43 | 11.5 | 1.6 | 11.1 (26) | Average |
| Great Knot <i>C. tenuirostris</i> | 0 | 2 | 37 | 0 | 0 | n.a. | - | Very poor |

All birds cannon-netted in period 15 November to 28 February except for Red-necked Stint, Ruddy Turnstone, and Sanderling, for which catches up to 24 March are included.

Table 2. Percentage of juvenile/first year waders in cannon-net catches in North-west Australia in 2006/2007.

| Species | No. of catches | | Total caught | Juv./1st year | | S.E. (% pts) | Assessment of 2006 breeding success |
|--|----------------|-------------|-----------------|---------------|-------------|-----------------|--|
| | Large (>50) | Small (≤50) | | (#) | (%) | | |
| Great Knot <i>Calidris tenuirostris</i> | 5 | 7 | 1154 | 106 | 9.2 | 0.8 | Average |
| Bar-tailed Godwit <i>Limosa lapponica</i> | 5 | 10 | 708 | 60 | 8.5 | 1.0 | Average |
| Red-necked Stint <i>C. ruficollis</i> | 1 | 3 | 310 | 65 | 21.0 | 2.3 | Average |
| Red Knot <i>C. canutus</i> | 0 | 6 | 74 | 8 | 10.8 | 3.6 | Poor |
| Curlew Sandpiper <i>C. ferruginea</i> | 1 | 8 | 171 | 18 | 10.5 | 2.3 | Poor |
| Ruddy Turnstone <i>Arenaria interpres</i> | 0 | 5 | 33 | 3 | 9.1 | 5.0 | Poor |
| Non-Arctic northern migrants | | | | | | | |
| Greater Sand Plover <i>Charadrius leschenaultii</i> | 3 | 8 | 372 | 78 | 21.0 | 2.1 | Average |
| Terek Sandpiper <i>Xenus cinereus</i> | 3 | 4 | 291 | 33 | 11.3 | 1.9 | Average |
| Grey-tailed Tattler <i>Heteroscelus brevipes</i> | 2 | 9 | 264 | 75 | 28.4 | 2.8 | Very good |
| Common Greenshank <i>Tringa nebularia</i> | 1 | 1 | 70 | 0 | 0 | n.a. | Very poor |
| Oriental Plover <i>C. veredus</i> | 1 | 3 | 83 | 9 | 10.8 | 3.4 | Poor |

All birds cannon netted in period 1 November to mid-March

years, which were very poor. However, only one of the last five years has had a percentage of juveniles above the long-term (29 year) median. It is most noticeable in the field that Red-necked Stint numbers, which peaked after a series of good breeding seasons in the late 1990s and in 2001/02, have now returned to more normal levels.

Though the Sharp-tailed Sandpiper breeding success (11.5% juveniles) was close to the 26 year median populations are still well above the low levels of five to ten years ago. This was the fifth successive year in which the

breeding success of Sharp-tailed Sandpiper was at or above the level of the long-term median.

The percentage of juveniles in Bar-tailed Godwit and Red Knot catches has fluctuated more markedly between years than in most other species in SEA. However 2006 was the third consecutive year in which the Bar-tailed Godwit (the *baueri* subspecies, which breeds in north and west Alaska) has had a breeding outcome above the long-term median (18 years). This has resulted in populations recovering from the low levels reached in the early 2000s

Table 3. Percentage of first year birds in wader catches in South-east Australia 1998/1999 to 2006/2007.

| Species | 98/99 | 99/00 | 00/01 | 01/02 | 02/03 | 03/04 | 04/05 | 05/06 | 06/07 | Average |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| Ruddy Turnstone <i>Arenaria interpres</i> | 6.2 | 29 | 10 | 9.3 | 17 | 6.7 | 12 | 28 | 1.3 | 13.3 |
| Red-necked Stint <i>Calidris ruficollis</i> | 32 | 23 | 13 | 35 | 13 | 23 | 10 | 7.4 | 14 | 18.8 |
| Curlew Sandpiper <i>C. ferruginea</i> | 4.1 | 20 | 6.8 | 27 | 15 | 15 | 22 | 27 | 4.9 | 15.8 |
| Sharp-tailed Sandpiper <i>C. acuminata</i> | 11 | 10 | 16 | 7.9 | 20 | 39 | 42 | 27 | 12 | 20.4 |
| Sanderling <i>C. alba</i> | 10 | 13 | 2.9 | 10 | 43 | 2.7 | 16 | 62 | 0.5 | 17.8 |
| Red Knot <i>C. canutus</i> | (2.8) | 38 | 52 | 69 | (92) | (86) | 29 | 73 | 58 | 53.1 |
| Bar-tailed Godwit <i>Limosa lapponica</i> | 41 | 19 | 3.6 | 1.4 | 16 | 2.3 | 38 | 40 | 26 | 20.7 |

All birds cannon-netted between mid November and third week in March (except Sharp-tailed Sandpiper and Curlew Sandpiper to end February only). Averages (for last nine years) exclude figures in brackets (small samples).

Table 4. Percentage of first year birds in wader catches in North-west Australia 1998/1999 to 2006/2007.

| Species | 98/99 | 99/00 | 00/01 | 01/02 | 02/03 | 03/04 | 04/05 | 05/06 | 06/07 | Average |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| Red-necked Stint <i>Calidris ruficollis</i> | 26 | 46 | 15 | 17 | 41 | 10 | 13 | 20 | 21 | 23.2 |
| Curlew Sandpiper <i>C. ferruginea</i> | 9.3 | 22 | 11 | 19 | 15 | 7.4 | 21 | 37 | 11 | 17.0 |
| Great Knot <i>C. tenuirostris</i> | 2.4 | 4.8 | 18 | 5.2 | 17 | 16 | 3.2 | 12 | 9.2 | 9.8 |
| Red Knot <i>C. canutus</i> | 3.3 | 14 | 9.6 | 5.4 | 32 | 3.2 | (12) | 57 | 11 | 16.9 |
| Bar-tailed Godwit <i>Limosa lapponica</i> | 2.0 | 10 | 4.8 | 15 | 13 | 9.0 | 6.7 | 11 | 8.5 | 8.9 |
| Non-Arctic northern migrants | | | | | | | | | | |
| Greater Sand Plover <i>Charadrius leschenaultia</i> | 25 | 33 | 22 | 13 | 32 | 24 | 21 | 9.5 | 21 | 22.3 |
| Terek Sandpiper <i>Xenus cinereus</i> | 12 | (0) | 8.5 | 12 | 11 | 19 | 14 | 13 | 11 | 12.7 |
| Grey-tailed Tattler <i>Heteroscelus brevipes</i> | 26 | (44) | 17 | 17 | 9.0 | 14 | 11 | 15 | 28 | 17.1 |
| Little Curlew <i>Numenius minutus</i> | 57 | 33 | - | 36 | 30 | - | (40) | - | - | 39.0 |

All birds cannon-netted in the period 1 November to mid-March. Averages (for last nine years) exclude figures in brackets (small samples).

Table 5. Percentage of juvenile/first year waders in mist-net catches in north-west Australia in 2006/2007.

| Species | No. of catches | | Total caught | Juv./1st year | % Juv./1st year |
|--|----------------|-------------|--------------|---------------|-----------------|
| | Large (>50) | Small (<50) | | | |
| Sharp-tailed Sandpiper <i>Calidris acuminata</i> | 0 | 4 | 122 | 39 | 32.0 |
| Marsh Sandpiper <i>Tringa stagnatilis</i> | 0 | 2 | 11 | 6 | 54.5 |
| Wood Sandpiper <i>T. glareola</i> | 0 | 4 | 29 | 8 | 27.6 |
| Long-toed Stint <i>C. subminuta</i> | 0 | 3 | 27 | 20 | 74.1 |
| Swinhoe's Snipe <i>Gallinago megala</i> | 0 | 2 | 2 | 2 | - |
| Common Greenshank <i>T. nebularia</i> | 0 | 2 | 5 | 2 | - |

All birds mist-netted on Roebuck Plains near Broome 27 October to 29 December 2006.

when three of the four breeding seasons in the period 2000 to 2003 had extremely poor outcomes.

Red Knot also had a second successive good breeding year, although not as good as the preceding one. Note that the figures for Red Knot are much higher than for other species because many young birds of this population (the *rogersi* subspecies, which breeds in Chukotka in the far north-east of Siberia) spend their first year in SEA before moving to New Zealand for subsequent non-breeding seasons.

North-west Australia

Overall the 2006 breeding season for wader populations which spend the non-breeding season in NWA was not quite as poor as for SEA birds. Nevertheless it is probably the poorest so far recorded in the nine years for which data is available.

As in SEA Curlew Sandpipers and Ruddy Turnstone fared poorly (Sanderling was not monitored in NWA this year). In contrast to SEA Red Knot also fared poorly. This is a different subspecies however, being mainly *piersmai* which breed much further north and west in Siberia, on the New Siberian Islands.

The outcome for Great Knot, Bar-tailed Godwit and Red-necked Stint was close to average. Since NWA is the core

non-breeding area for Great Knot the breeding outcome recorded there is probably more relevant to the population as a whole than the figure for SEA, where the species is only present in small numbers. The Bar-tailed Godwit juvenile ratio in NWA was much lower than that from SEA. However it is a different subspecies (*menzbieri*), breeding in northern Yakutia, along the north coast of Siberia. Though the Red-necked Stint figure for NWA was higher than in SEA both were close to their respective long-term averages.

As usual, a number of wader species which breed further south in Siberia were monitored. Grey-tailed Tattler had an outstanding performance with 28.4% juveniles, the highest recorded in nine years of monitoring this species. This result appeared to be genuine as it was apparent in most of the 11 samples which made up the catch total of 264. In contrast Greenshank appear to have had an almost total breeding failure with no juveniles found in the 70 birds caught. Terek Sandpiper and Great Sand Plover appear to have had an average breeding year whilst Oriental Plover, which are not regularly monitored, seem to have had a poor breeding outcome.

The percentages of juveniles in all species mist-netted was much higher than is typical for species caught by cannon-netting. This may be partly an effect of the catching method, with mist-netted samples tending to have higher

percentages of juveniles than cannon-netted catches (Pienkowski & Dick 1976). But it would still appear that Long-toed Stint, Marsh Sandpiper, Sharp-tailed Sandpiper and Wood Sandpiper must have had good breeding success in 2006.

General conclusions

Whilst the overall outcomes of the breeding seasons for wader populations in SEA and NWA are usually quite clear it is not easily understandable why in most years some species differ markedly from the overall pattern. In 2006 the big exception was Grey-tailed Tattler in NWA. Why should it have bred so successfully when all the other species monitored, from both Arctic and non-Arctic breeding areas, had average to poor breeding outcomes? Why was the breeding success of Sanderling and Ruddy Turnstone populations which spend the non-breeding season in SEA so abysmal in 2006? A similar marked variation between species was apparent in other recent years. For example Red-necked Stints stood out from other species in SEA by their very poor breeding success in 2004 and 2005. And, in contrast, Sharp-tailed Sandpipers in SEA had especially good breeding success in 2003 and 2004.

Examinations of the relationships between snowmelt date, June and July temperatures and predation conditions in breeding areas and the percentage of juveniles recorded in the non-breeding areas have shown that all these factors can have an effect on breeding outcome (Boyd *et al.* 2005, Soloviev *et al.* 2006, Boyd *et al.* 2007). The extreme variations in breeding success apparent in the most recent years will hopefully further help examinations of such data to try to find the principal causes of such divergent results between species.

The Future

Monitoring of the percentage of juveniles in the main species of waders spending their non-breeding season in SEA and NWA will be continued in the future. However this does require an enormous commitment of time and effort by a large number of people over a prolonged period to carry out the necessary fieldwork each year. It is hoped that sufficient support will continue to be available to enable the important breeding success demographic to be monitored on a long term basis. This is especially desirable at a time when major changes to habitat at staging areas in the East Asian-Australasian Flyway are occurring and when the effects of climate change will increasingly be felt.

ACKNOWLEDGEMENTS

Enormous thanks are due to the large number of people who took part in fieldwork in SEA and NWA between November and March in the 2006/07 non-breeding season. All participants were operating in a volunteer capacity. Their commitment in time and effort and expense, is greatly appreciated. Their sustained, dedicated and targeted efforts were vital to obtaining satisfactory sample sizes for the majority of the main wader species monitored annually.

The Australian Bird Banding Office and the State Wildlife agencies are thanked for the necessary permits and licenses to catch and band waders.

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RESULTS OF MEETING BANDING BIRDS ON SAKHALIN ISLAND

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During the periods of April-May and October-November 1988-1991 and 1999-2006 we carried out observations on the gulfs of northeast coast of Sakhalin Island in the Sea of Okhotsk. Sixty three flagged birds of eight species were observed. Of the 49 waders of six species 15 were banded in Japan, 44 in Australia, one in Taiwan, one in Korea and two reminded unresolved. Fourteen ducks of two species were also observed.

INTRODUCTION

Sakhalin Island is situated in the East-Asia-Australia flyway in the Sea of Okhotsk. The Sea of Okhotsk is large semi-enclosed embayment located on the Pacific coast of the Russian Far East and most of the coastline belongs to the Russian Federation. Various and vast biotopes of water and swampy coastline, particularly on the northeast coast of the island form favorable conditions for rest, feeding and moulting of numerous near-aquatic and aquatic birds. It is here that we can observe a noticeable number of flagged birds moving along migratory pathways during seasonal migrations. A recent review of the evidence concerning banded birds of Sakhalin Island can be found in Pirogov's work (Pirogov 2005). In this review the number and occurrence of banded birds by the researchers of the last few years have been summarized (Voronov 1972; Ostapenko 1970 & 1981; Nechaev 1991) including the information on flagged birds seen by the author. The evidence presented in this work contains data on recovered bands from more than 60 flagged birds of 31 species.

METHODS

During the periods of April-May and October-November 1988-1991 and 1999-2006 we carried out observations along the gulfs of the northeast coast of the island. For observations we used 12-fold wide-aperture field glasses which allowed us to study the birds in detail. We tried as far as possible to record individual features, such as, feather wear and completion of moult allowing us to avoid duplicating sightings on the same day. In addition, we consulted hunters and local people to get information on flagged birds and bands from the birds bagged by them.

RESULTS

Sixty three flagged birds of eight species were recorded; 15 from Japan, 44 from Australia, one from Taiwan, one from Korea and two which could not be allocated to a country (Figure 1). The greatest amount birds were recorded in May and July – 26 and 16, respectively. Fourteen ducks of two species and 49 waders of six species were seen.

Results by Species

European Wigeon – *Anas penelope* L

Banded female was bagged on October 15, 2001 in Chayvo Gulf. It was banded in Japan (Shinhama Duck

Refuge, Ichikawa, Chiba pref.) on November 11, 1980. Distance moved was 1887 km. Pirogov's review (2005) contains information on three more birds banded in Japan and bagged in Poronaysky district (Southern Sakhalin): one bird – in the Poronay River, two birds – on Nevskoye Lake.

Northern Pintail – *Anas acuta* L.

Of thirteen banded Northern Pintail twelve were bagged from Chayvo gulf and one on Tunaycha Lake (Southern Sakhalin). All the birds were banded in Japan. Banded birds were mostly bagged in May (ten birds). In addition, two birds were bagged in October and one in September (Table 1). Northern Pintail banded both 1-2 years ago and 4-9 years ago were recovered, one bird had been banded for nearly 21 years. There is evidence in Pirogov's review (2005) of about 21 birds additional birds banded in Japan and bagged in

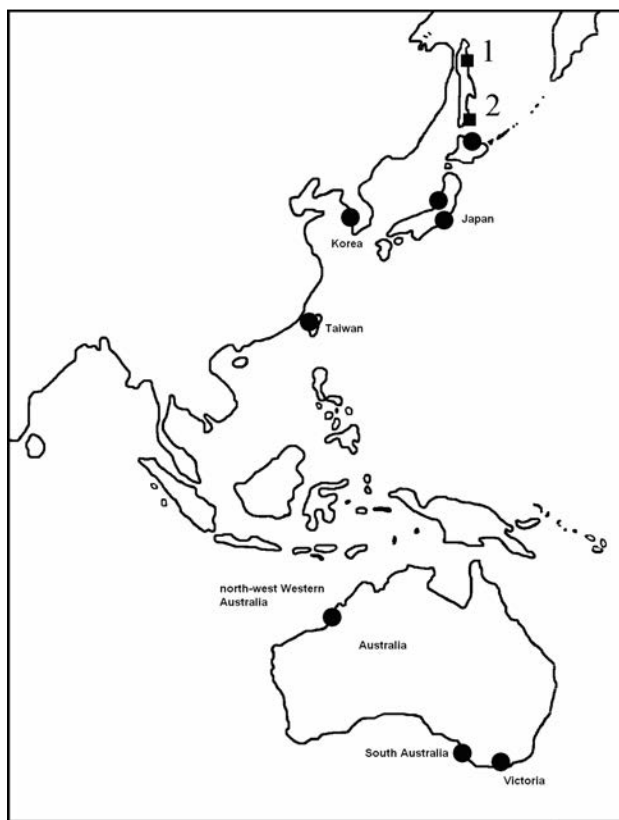


Figure 1. Map of locations in the text: ● – banding locations; ■ – resighting/recovery location on Sakhalin Island; 1 = Chayvo and Nyyskiy Gulfs; 2 = Lebyazh'ye and Tunaycha Lakes

Table 1. Banded Northern Pintail - *A. acuta*, bagged in the period of study (1988-1991 and 1999-2006)

| Sex | Data of banding | Place of banding | Data of finding | Place of finding | Distance (km) | Time (days) |
|-----|-----------------|---|------------------|-----------------------------------|---------------|-------------|
| ♀ | 06 Nov. 1980 | Saitama Duck Refuge, Obayashi, Koshigaya-shi, Saitama pref. | 15 Oct. 2001 | Banding location | 1873 | 7648 |
| ♂ | 09 Jan. 1992 | Saitama Duck Refuge, Obayashi, Koshigaya-shi, Saitama pref. | 15 Oct. 2001 | Banding location | 1873 | 3567 |
| ♂ | 23 Oct. 1998 | Shinhama Duck Refuge, Ichikawa, Chiba pref. | 01-30 Sept. 2002 | Korsakov district, Tunaycha Lakes | 1264 | 1409 |
| ♀ | 15 Nov. 2001 | Shinhama Duck Refuge, Ichikawa, Chiba pref. | 09 May 2003 | Nogliki district, Chayvo Gulf | 1882 | 540 |
| ♂ | 13 Nov. 2001 | Saitama Duck Refuge, Obayashi, Koshigaya-shi, Saitama pref. | 11 May 2003 | Banding location | 1868 | 544 |
| ♀ | 29 Jan. 2001 | Shinhama Duck Refuge, Ichikawa, Chiba pref. | 09-13 May 2003 | Banding location | 1882 | 830 |
| ♂ | 31 Jan. 2002 | Hyoko pond, Suibara town, Niigata pref. | 09-13 May 2003 | Banding location | 1657 | 463 |
| ♂ | 14 Dec. 2001 | Saitama Duck Refuge, Obayashi, Koshigaya-shi, Saitama pref. | 11 May 2003 | Banding location | 1868 | 513 |
| ♂ | 21 Jan. 2003 | Hyoko pond, Suibara town, Niigata pref. | 11 May 2003 | Banding location | 1657 | 110 |
| ♂ | 06 Nov. 2002 | Saitama Duck Refuge, Obayashi, Koshigaya-shi, Saitama pref. | 13 May 2003 | Banding location | 1868 | 188 |
| ♂ | 09 Nov. 2001 | Saitama Duck Refuge, Obayashi, Koshigaya-shi, Saitama pref. | 01-10 May 2005 | Banding location | 1868 | 1269 |
| ♂ | 11 Dec. 1997 | Shinhama Duck Refuge, Ichikawa, Chiba pref. | 01-10 May 2005 | Banding location | 1883 | 2698 |
| ♀ | 23 Jan. 2004 | Hyoko lake, Agano, Suibara, Niigata pref. | 01-10 May 2005 | Banding location | 1657 | 464 |

Poronaysky district (Southern Sakhalin) in May (16 birds), in September (two birds) and in October (three birds).

Terek Sandpiper – *Xenus cinereus* (Guld.).

We have noticed only one bird with colored flags (Left leg: white flag on tibia (upper leg) above orange flag on tarsus) in Chayvo Gulf on May 28, 2006. The bird was banded on the Korea Peninsula in 1998. Distance moved was 2251 km.

Red-necked Stint – *Calidris ruficollis* (Pall.).

We observed 13 birds with colored flags and two birds with metal bands on the shore of Chayvo Gulf. We failed to recover the waders with metal bands (without colored flags). Out of 13 Stints observed only three birds were bagged (2005). Twelve Red-necked Stint were banded in Australia: three bagged birds were from Victoria (Right leg: orange flag on tibia) and an additional seven flagged birds observed from Victoria, two from South Australia (Right leg: orange flag on tibia (upper leg) above yellow flag on tarsus), one from the north west of Western Australia (Right leg: yellow flag on tibia). One bird was banded in Japan (Right leg: blue flag on tibia (upper leg) above blue flag on tarsus) (Table 2). Flagged birds were recorded in the period May 24-27 (four birds) and July 21-29 (11 birds), between one and three birds being seen each day. The wave of bird migration is characterized by the occurrence of Red-necked Stint as well

as Sanderling *C. alba*. The spring migration of Red-necked Stint is confined by late May and early June, the autumn migration occurred in July-September. In autumn, young Red-necked Stint appear in the first ten days of July (Nechaev 1991). Some birds were banded one to two years ago but one was banded 15 years ago.

Dunlin – *Calidris alpina* sp.

A banded female was bagged on October 14-20, 1999 on Lebyazh'ye Lake (South Sakhalin). It was from Taiwan (Tatu Estuary, Changhua County) and banded on March 16, 1996. The distance was 3233 km. Only three returns from Sakhalin Island have been recorded before (Zykov, Revyakina, 2001).

Great Knot – *Calidris tenuirostris* (Horsf.).

We recorded only one bird with a colored flag on July 13, 2000 in Chayvo Gulf (Right leg: yellow flag on tibia). The bird was banded in the north-west of Western Australia since August 1992 when flagging started at this location. The distance was 8223 km.

Sanderling – *Calidris alba* (Pall.).

Thirty individuals were observed on sand bars of Chayvo Gulf, three of them being bagged. All the birds were banded in Australia including South Australia – 19 birds (Right leg: orange flag on tibia (upper leg) above yellow flag on tarsus), north-west Western Australia – five birds (Right leg: yellow

Table 2. Banded Red-necked Stint *C. ruficollis*, recorded in the period of study (1988-1991 and 1998-2006)

| Center of banding | Date of banding | Place of banding | Date of finding | Distance (km) |
|--|-----------------|---|-----------------|---------------|
| Australia (Australian Bird and Bat Banding Scheme) | Since Jan.1990 | Australia, Victoria | 21 July1999 | 10049 |
| Australia (Australian Bird and Bat Banding Scheme) | Since Jan.1990 | Australia, Victoria | 21 July1999 | 10049 |
| Australia (Australian Bird and Bat Banding Scheme) | Since Jan.1990 | Australia, Victoria | 21 July1999 | 10049 |
| Australia (Australian Bird and Bat Banding Scheme) | Since Jan.1990 | Australia, Victoria | 23 July 1999 | 10049 |
| Australia (Australian Bird and Bat Banding Scheme) | 2-7 April 1999 | Australia, SE South Australia | 28 July 1999 | 10042 |
| Australia (Australian Bird and Bat Banding Scheme) | 2-7 April 1999 | Australia, SE South Australia | 28 July 1999 | 10042 |
| Australia (Australian Bird and Bat Banding Scheme) | 1992 | Australia, NW Western Australia | 29 July 1999 | 8197 |
| Australia (Australian Bird and Bat Banding Scheme) | Since Jan.1990 | Australia, Victoria | 27 May 2000 | 10049 |
| Australia (Australian Bird and Bat Banding Scheme) | Since Jan.1990 | Australia, Victoria | 27 May 2000 | 10049 |
| Australia (Australian Bird and Bat Banding Scheme) | 19 Feb. 2005 | Australia, Victoria | 24 May 2005 | 10044 |
| Australia (Australian Bird and Bat Banding Scheme) | 31 Dec.2003 | Australia, Victoria | 25 May 2005 | 10044 |
| Australia (Australian Bird and Bat Banding Scheme) | Since Jan.1990 | Australia, Victoria | 26 July 2005 | 10058 |
| Japan | 05 Sept. 2003 | Japan, Komuke Lake, Kyowa, Monbetsu, Hokkaido pref. | 28 July 2005 | 893 |

flag on tibia), in Victoria - six birds (Right leg: orange flag on tibia) (Table 3). The birds were noticed within the period between May 24 and June 8 (13 birds) and between July 21 and August 25 (17 birds), between one and six birds being registered daily. There were between one and five flagged Sanderling in a flock. On June 6, 2006, for example, five birds marked with colored flags were noticed in a flock of 200 Sanderling, two birds being banded in South Australia, two birds in Western Australia and one in Victoria. Banded

birds behaved with caution and when alarmed they move a much longer distance than non-banded birds. In general, flagged Sanderling occur on the first stage of migration both in spring and summer and during autumn migrations. This may be due to adult birds migrating first followed by the main flock of younger birds. Sanderling were banded both 1-2 years ago and some 15-16 years ago.

Bar-tailed Godwit – *Limosa lapponica* Port.

One banded, one-year-old bird was shot in Nyyskiy Gulf

Table 3. Banded Sanderling *C. alba*, recorded within the period of study (1988-1991 and 1998-2006)

| Date of banding | Place of banding | Date of finding | Distance (km) |
|-----------------|--|-----------------|---------------|
| 09.03.2000 | Australia, South Australia | 01.06.2000 | 10052 |
| 04.1999 | Australia, South Australia | 01.06.2000 | 10052 |
| 01.1990 | Australia, Victoria | 21.08.2000 | 10058 |
| 28.11.1993 | Australia, South Australia, Canunda National Park SA | 15.08.2002 | 10015 |
| 08.1992 | Australia, North-west Australia | 24.05.2003 | 8216 |
| 08.1992 | Australia, North-west Australia | 21.07.2003 | 8223 |
| 08.1992 | Australia, North-west Australia | 22.07.2003 | 8223 |
| 04.1999 | Australia, South Australia | 22.07.2003 | 10079 |
| 07.04.1998 | Australia, Victoria | 24.05.2005 | 10089 |
| 04.1999 | Australia, South Australia | 24.05.2005 | 10062 |
| 04.1999 | Australia, South Australia | 24.05.2005 | 10062 |
| 04.1999 | Australia, South Australia | 28.07.2005 | 10052 |
| 04.1999 | Australia, South Australia | 16.08.2005 | 10052 |
| 04.1999 | Australia, South Australia | 17.08.2005 | 10057 |
| 04.1999 | Australia, South Australia | 17.08.2005 | 10057 |
| 04.1999 | Australia, South Australia | 17.08.2005 | 10057 |
| 04.1999 | Australia, South Australia | 17.08.2005 | 10069 |
| 04.1999 | Australia, South Australia | 17.08.2005 | 10069 |
| 04.1999 | Australia, South Australia | 17.08.2005 | 10069 |
| 04.1999 | Australia, South Australia | 30.05.2006 | 10070 |
| 08.1992 | Australia, North-west Australia | 06.06.2006 | 8200 |
| 08.1992 | Australia, North-west Australia | 06.06.2006 | 8200 |
| 04.1999 | Australia, South Australia | 06.06.2006 | 10057 |
| 04.1999 | Australia, South Australia | 06.06.2006 | 10057 |
| 01.1990 | Australia, Victoria | 06.06.2006 | 10053 |
| 01.1990 | Australia, Victoria | 08.06.2006 | |
| 01.1990 | Australia, South Australia | 02.08.2006 | 10067 |
| 01.1990 | Australia, Victoria | 02.08.2006 | 10053 |
| 01.1990 | Australia, Victoria | 05.08.2006 | 10066 |
| 04.1999 | Australia, South Australia | 25.08.2006 | 10067 |

on October 15, 1998. It was banded on April 6, 1988 in the north-west of Western Australia (Beaches Crab Creek Road, Roebuck Bay, Broome). Distance was 8042 km.

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TERMINOLOGY FOR RECORDING PRIMARY MOULT IN JUVENILE/FIRST YEAR WADERS

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In a paper detailing methods and terminology used for recording age and primary moult in waders, Rogers et al (2005) considered the recording of the primary moult in juvenile/first year birds in Australia. They recommended that the moult column on field data sheets should not be left blank, as this could leave a future analyst unsure whether this meant that no moult was taking place or whether it meant that an examination for moult condition had not taken place.

Instead they recommended that a retained juvenile primary on a migrant wader, hatched in the Northern Hemisphere in June or July and arriving in Australia in August/November, should be recorded as a “5” until the end of November and then as an “0” from 1 December. This moult terminology and arbitrary transition date was chosen to minimise potential confusion with the wings of adults and to cater for the primary moult commencing in juveniles of some species by December.

It has subsequently been suggested that a simpler, potentially less confusing and less arbitrary, method of recording of the primary moult in juvenile/first year waders would be to use “J” for any primary feather which was originally acquired when the bird was a juvenile (i.e. for its first set of flight feathers). The J terminology could then be

used for any original juvenile primary throughout the whole of the first year (i.e. until 31 July of the year following that of hatching, when age and moult terminology automatically change).

Thus a newly-arrived juvenile would be recorded as J¹⁰. A bird which did not carry out any primary moult in its first year would have the moult recorded as J¹⁰ throughout the year. Any bird which did a partial moult would have the original juvenile primaries recorded as J. Only if a complete moult was carried out in the first year would a bird cease to have any J primaries.

An analyst converting recorded moult into a moult score would allocate 0 to any J feather.

It is recommended that, in the future, wader banders adopt this J coding for all unmoulted primaries of a juvenile/first year bird throughout the year.

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POSSIBLE EFFECTS OF HOT WEATHER ON WADER FOOD SUPPLIES

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Details are given of two separate observations which may indicate that food supplies for waders were adversely affected by the extremely hot weather in Victoria during the 2006/07 summer.

INTRODUCTION

Waders generally seem to be well adapted to the wide range of temperatures and other climatological conditions which they experience during their lives on their breeding grounds, during migration and in their non-breeding areas. There is little evidence that they are adversely affected in Australia by temperature. Certain adjustments may however be made to minimise the effects of heat (or cold) such as choosing high tide roosting areas which minimise the effects of high temperatures like those recorded in north-west Australia (Battley *et al.* 2003). Waders may also adjust their plumage “tightness” to conserve heat or, more usually in Australia, to facilitate cooling.

OBSERVATIONS IN THE 2006/07 SUMMER

Western Treatment Plant, Werribee

Most of the waders which feed on the tidal shores near the Western Treatment Plant (“Werribee Sewage Farm”) adjourn at high tide to roost and “top up” feed on shallow lagoons which are set aside and managed specifically for waders by Melbourne Water. The three species mainly involved are Red-necked Stint (*Calidris ruficollis*), Curlew Sandpiper (*C. ferruginea*) and Sharp-tailed Sandpiper (*C. acuminata*).

There are twelve lagoons spread over the sewage farm which are used regularly by the waders when water levels are suitable. Most waders are typically present on these lagoons for a four to five hour period, centered around the time of high tide. Usually part of this period is spent feeding, with intervals of resting/roosting.

A four hour visit to the area over the high tide period on the afternoon of 19 February revealed an entirely different pattern of behaviour by the waders. All were concentrated (estimated 8-10,000) on one large lagoon and all were roosting throughout the whole of the four hour period. All the “wader lagoons”, spread over a lateral distance of eight kilometres, were visited and all were in a potentially suitable condition for waders, being part mud and part water. All but one contained no waders and, unlike on any other previous visit to the sewage farm over the previous 29 years, no waders were observed feeding.

At the end of the high tide period small groups of birds began to leave the roosting flocks and return to the tidal shores a kilometre or so away.

Shallow Inlet/Barry Beach

Shallow Inlet, near Sandy Point and just to the west of Wilson’s Promontory, is a long thin shallow tidal inlet which normally has a wader population of around 5000 birds. Many

of the smaller waders fly out of the inlet at high tide to roost on the sandy ocean shore to the east of Sandy Point. Typical non-breeding season numbers are 2-3000 Red-necked Stint, 500 - 1000 Curlew Sandpipers and 300 – 500 Sanderling (*C. alba*).

Numbers towards the upper end of these ranges were recorded on the ocean beach when the Victorian Wader Study Group visited on 23 December 2006 and numbers were even higher on 3 February 2007 (4000 Red-necked Stints and 1500 Curlew Sandpipers). However on a subsequent visit, on 24 February, no Curlew Sandpipers were present and only about 300 Red-necked Stints, even though the height of the high tide was the same as, or marginally above, that of most previous visits.

In contrast, at Barry Beach, in Corner Inlet and about 20 kilometres east of Shallow Inlet, exceptionally high numbers of Red-necked Stints and Curlew Sandpipers were recorded during a visit on 23 February. Normally 2-3000 Red-necked Stints and around 200 Curlew Sandpipers roost on the shore there at high tide. On 23 February at least 8000 Red-necked Stints and up to 1500 Curlew Sandpipers were present. Higher than normal numbers had also been recorded there on 31 January, when the official AWSG Summer Count was carried out, but the numbers had since increased still further.

DISCUSSION

The complete lack of feeding by waders at the Western Treatment Plant over a four hour high tide period on 19 February suggests that food was not available. Prior to this date there had been nearly two months of extremely hot weather in Victoria. The drought, and restrictions on domestic and industrial water usage, had greatly reduced the inflow of sewage into the Western Treatment Plant. The result was widespread low water levels with heavily discoloured water in almost all the shallow lagoons normally used by waders. Other observers also noted this, and lower than normal feeding activity, during visits around this time. It seems possible therefore that the high temperatures and minimal amount of water inflow had created conditions in the wader lagoons where the invertebrate food supply normally used by waders was not available.

Whilst the link is more tenuous, it is possible that the hot weather had a similar adverse effect on the invertebrate food supplies in Shallow Inlet in February 2007. Most of the mud at Shallow Inlet is exposed for eight hours over the low tide period. The area of Corner Inlet near Barry Beach is subject to much higher tidal flows and the mud flats are only gradually uncovered on receding tides.

It seems highly probable that at least part of the exceptionally high population of Red-necked Stints and Curlew Sandpipers at Barry Beach in late February was caused by birds moving there from Shallow Inlet. It is possible that the cause of this unusual redistribution of birds was a lack of available food in Shallow Inlet because of the prolonged and exceptionally hot summer weather.

THE FUTURE

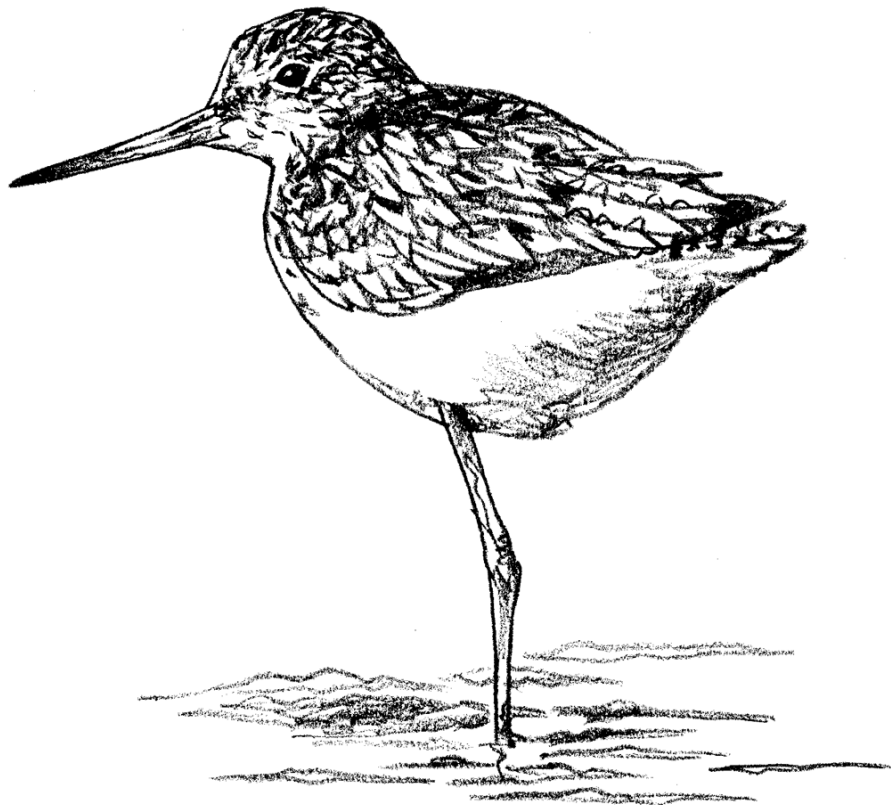
These two observations have been placed on record, even though their cause is not certain, because of the possibility that "climate change" could lead in the future to hotter than normal summers in Victoria and elsewhere. Ornithologists need to be aware that this could potentially have adverse effects on food supplies, at least locally, and they therefore need to be on the lookout for similar occurrences.

ACKNOWLEDGEMENTS

Melbourne Water are thanked for permission to visit the Western Treatment Plant at Werribee. Members of the Victorian Wader Study Group made the observations of wader numbers at Shallow Inlet and Barry Beach. Parks Victoria and ANCON are thanked for permission to visit these two locations respectively. Danny Rogers is thanked for helpful discussions on a draft of this note.

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NORTH-WEST AUSTRALIA WADER AND TERN EXPEDITION

4 TO 25 NOVEMBER 2006

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INTRODUCTION

This was the twenty sixth Wader and Tern Study Expedition to north-west Australia organized by the Australasian Wader Studies Group since 1981. Visits now take place at least once each year so that annual breeding productivity, measured by the percentage of juvenile birds in catches, can be monitored on the principal species.

Yet again, the 2006 expedition was a great success. All the key scientific objectives were met, a larger than normal team worked extremely hard and still managed to enjoy themselves, and the hot weather cannon-net catching procedures developed in recent years proved to be excellent.

The main achievements of the expedition are detailed below, together with information on participants, itinerary, ancillary activities, finances etc.

MAIN ACHIEVEMENTS

The most important results, especially those which relate to the specific scientific aims of this expedition are outlined below.

A total of 4001 birds were caught, around 1000 more than on other three-week-long recent expeditions (Table 1). There were 3795 waders (31 species), 182 terns (8 species), 23 ducks and a gull. In addition, 213 passerines (of 13 species) were mist-netted in two "leisure time" sessions at the Anna Plains Hot Bore Pool.

Birds were caught in 19 cannon-net catches and three mist-net catches. The average cannon-net catch for waders was 209 and the average mist-net catch was 75. Eight of the wader cannon-net catches were at Broome and nine were at 80 Mile Beach. The largest catch was 831 at Broome on 20 November. Many catches contained a wide variety of

Table 1. NWA 2006 Expedition Catch Totals

| Date | Location | Beach | New | Retrap | Total | Comments |
|--------------|---|-----------------------------|-------------|------------|-------------|-------------------------------|
| 05/11/2006 | Broome | Wader Beach | 41 | 4 | 45 | |
| 06/11/2006 | Broome | Nicks Beach (first catch) | 11 | 5 | 16 | |
| 06/11/2006 | Broome | Nicks Beach (second catch) | 325 | 47 | 372 | (includes two terns) |
| 07/11/2006 | Broome | Two Dog Hermit | 334 | 88 | 422 | |
| 08/11/2006 | Broome | Eagles Roost | 92 | 15 | 107 | |
| 08/11/2006 | Taylor's Lagoon | (mist netting) | 54 | 15 | 69 | (includes 10 terns) |
| 10/11/2006 | 80 Mile Beach | 25km S of AP | 163 | 2 | 165 | (includes one tern) |
| 11/11/2006 | 80 Mile Beach | 28km S of AP | 191 | 1 | 192 | |
| 12/11/2006 | 80 Mile Beach | 29km S of AP | 108 | 6 | 114 | |
| 13/11/2006 | 80 Mile Beach | 3km S of AP | 19 | 0 | 19 | |
| 14/11/2006 | 80 Mile Beach | 7km S of AP | 30 | 0 | 30 | |
| 16/11/2006 | 80 Mile Beach | 8km S of AP | 261 | 8 | 269 | |
| 16/11/2006 | Anna Plains | Fish Dam | 23 | 0 | 23 | (all Plumed Whistling Ducks) |
| 16/11/2006 | 80 Mile Beach | 10km S of AP (mist netting) | 88 | 2 | 90 | (includes one tern, one gull) |
| 17/11/2006 | 80 Mile Beach | 12km S of AP | 267 | 10 | 277 | |
| 18/11/2006 | 80 Mile Beach | 14km S of AP | 352 | 24 | 376 | |
| 19/11/2006 | 80 Mile Beach | 2.5km S of AP | 117 | 2 | 119 | |
| 20/11/2006 | Broome | Stilt Viewing | 678 | 153 | 831 | |
| 21/11/2006 | Broome | Greenshank Corner | 205 | 18 | 223 | |
| 21/11/2006 | Broome | One Tree | 12 | 2 | 14 | (all terns) |
| 22/11/2006 | Coulomb Point | | 159 | 2 | 161 | (includes 153 terns) |
| 22/11/2006 | Lake Eda | (mist netting) | 66 | 1 | 67 | (includes one tern) |
| TOTAL | 19 cannon net catches and 3 mist net catches | | 3596 | 405 | 4001 | |

Summary

3795 waders (31 species)
 182 terns (8 species)
 23 ducks (excluding mist-netted ducks)
 1 gull
 Total 4001

species, as usual, with several containing 10 species and one with 13 species.

The largest species totals were Great Knot (1146), Bar-tailed Godwit (584), Greater Sand Plover (386), Red-necked Stint (361), Terek Sandpiper (291) and Grey-tailed Tattler (266) (Table 2). The team struggled to gradually build up a satisfactory total of 180 Curlew Sandpiper. Twenty years ago numbers were much larger but nowadays Curlew Sandpipers are just thinly distributed in roosting wader flocks and are only caught in small numbers at any one time. Red Knot are even scarcer now and only 74 were caught.

Notable totals amongst the less commonly caught species were 78 Greenshank (mostly in one catch), 83 Oriental Plover and 13 Eastern Curlew. The numbers of Little Curlew caught (four) was disappointing, especially since several thousand were roosting during the heat of the day on the shores of Lake Eda. They appeared to have an alternative roost in another location and quickly disappeared when disturbed. Two attempts to catch Whimbrel were both unsuccessful, with the birds preferring to fly inland up Crab Creek to roost in the mangroves rather than stay on the beaches. No concentrations of Black-tailed Godwit or Grey Plover were seen sufficient to warrant catching attempts.

These good catch totals were achieved in spite of having three blank days. The first of these was not unexpected; we were still learning to successfully catch on even the lowest (neap) tides at 80 Mile Beach. But failures to catch on both of the last two days of the expedition were real "hard luck stories". At Lake Eda on November 23 after much twinkling, around 100 Oriental Pratincoles settled in the catching area and a similar number were in the process of landing. Unfortunately there was no gap in the landing birds to fire the net safely and all took off again before landing was complete. On the next day, at Eagle's Roost on the beaches at Broome, the countdown to firing on 200 or more Grey-tailed Tattler which had just settled in the catching area got as far as "3, 2, 1," before being aborted when the birds took wing.

The weather was warmer than during other recent November/December expeditions, reaching 44° C. one day, before the sea breeze came in, and 45° C. the next. No captured birds, however, showed any signs of heat stress. This was partly because small mesh nets, from which birds can be quickly extracted, were used on hot days or days when the timing of catching was in the hottest parts of the day. Another part of the improved procedures was that, once the birds in the net had been quickly covered, virtually the whole team was deployed in setting up sufficient keeping cages for the estimated catch. When necessary, hot sand was removed from the surface of the beach, to a depth of at least ten centimeters, before the keeping cages were erected. Birds could then be emptied from the net quickly and efficiently and put into the keeping cages. The large size of the team also enabled some people to be erecting shade cloth above the keeping cages, to keep them cool, at a much earlier stage of the process than previously.

As usual the amount of processing - biometric and weight measurements and the recording of primary moult - was tailored to ensure that all birds were released within four hours of capture, or a shorter time if temperature conditions

Table 2. NWA 2006 Expedition -Wader and Tern Catch Totals

| Species | Catch Totals | | Total |
|----------------------------|--------------|------------|-------------|
| | New | Retrap | |
| Waders | | | |
| Great Knot | 1012 | 134 | 1146 |
| Bar-tailed Godwit | 515 | 69 | 584 |
| Greater Sand Plover | 344 | 42 | 386 |
| Red-necked Stint | 301 | 60 | 361 |
| Terek Sandpiper | 274 | 17 | 291 |
| Grey-tailed Tattler | 248 | 18 | 266 |
| Curlew Sandpiper | 168 | 12 | 180 |
| Red-capped Plover | 101 | 9 | 110 |
| Oriental Plover | 83 | | 83 |
| Common Greenshank | 75 | 3 | 78 |
| Red Knot | 69 | 5 | 74 |
| Sharp-tailed Sandpiper | 51 | 11 | 62 |
| Ruddy Turnstone | 25 | 7 | 32 |
| Marsh Sandpiper | 17 | 1 | 18 |
| Sooty Oystercatcher | 11 | 5 | 16 |
| Eastern Curlew | 12 | 1 | 13 |
| Long-toed Stint | 10 | 3 | 13 |
| Black-fronted Plover | 12 | | 12 |
| Grey Plover | 9 | | 9 |
| Lesser Sand Plover | 9 | | 9 |
| Wood Sandpiper | 7 | 2 | 9 |
| Sanderling | 7 | | 7 |
| Masked Lapwing | 6 | | 6 |
| Black-winged Stilt | 6 | | 6 |
| Black-tailed Godwit | 4 | 2 | 6 |
| Australian Pratincole | 5 | | 5 |
| Little Curlew | 4 | | 4 |
| Broad-billed Sandpiper | 4 | | 4 |
| Whimbrel | 3 | | 3 |
| Pied Oystercatcher | | 1 | 1 |
| Swinhoe's Snipe | 1 | | 1 |
| Waders (31 species) | 3393 | 402 | 3795 |
| Terns | | | |
| Little Tern | 82 | | 82 |
| Roseate Tern | 58 | | 58 |
| Gull-billed Tern | 12 | 2 | 14 |
| Common Tern | 12 | 1 | 13 |
| Whiskered Tern | 10 | | 10 |
| Crested Tern | 3 | | 3 |
| Caspian Tern | 1 | | 1 |
| White-winged Black Tern | 1 | | 1 |
| Terns (8 species) | 179 | 3 | 182 |
| Total | 3572 | 405 | 3977 |

necessitated. All birds were, of course, metal banded, aged and leg-flagged.

A further improvement to our cannon-net catching technique was the use of rubber decoys. These were purchased overseas and skillfully repainted as Bar-Tailed Godwit (four) and Grey Plover (three) by Marj Reni (VWSG). They were only put out in front of the nets when birds did not come naturally into the catching area, and were only set up when the tide was sufficiently close to the net for birds standing on the beach in the netting area to be credible. The decoys were particularly good at attracting birds during the neap tide period at 80 Mile Beach. Two wooden Gull-billed Tern decoys helped obtain a small catch of this species

at Broome, but they also seemed to help attract waders to settle in the catching area.

One indication of how hard the team worked was that two catches were made on the one tide, at Nick's Beach near Broome on the 6 November. With 16 Sooty Oystercatchers having been put into a keeping cage and being processed, part of the team set another net just 100 metres away. Within minutes birds started to land with the decoys and a further catch of 372 was made, including 281 Great Knot. The Sooty Oystercatcher catch was the first of any size for several years and blood samples were taken for sexing by DNA.

Then, on the 16 November, a morning cannon-net catch on 80 Mile Beach produced 269 birds, a lunchtime catch on the Fish Dam beside Anna Plains station contained 23 Plumed Whistling Ducks and a night-time mist-netting (6 p.m. to 10 p.m.) session produced another 90 birds!

It was particularly beneficial that the excellent wet season in Jan/Feb 2006 had left several freshwater locations around Roebuck Plains in a suitable condition for night-time mist-netting. Catches were made at both Taylor's Lagoon and at Lake Eda. These produced good numbers of species which are not normally caught on the shore – Sharp-tailed Sandpiper (62), Long-toed Stint (13), Wood Sandpiper (nine), Marsh Sandpiper (18), Australian Praticole (5) and – the highlight – a Swinhoe's Snipe. Evening mist-netting on 80 Mile Beach was also productive (90 birds) – the first time this has been carried out for several years.

Eight waders previously banded in China and two from Japan were caught during the expedition (Table 3). This is the largest number of foreign controls made during an expedition and is a reflection of the huge increase in wader banding at Chongming Dongtan, near Shanghai in China, which has taken place during the last three years. Particularly pleasing was the capture of a Chinese- and a Japanese-banded Greenshank, in the same catch at Broome on 21 November. There have been no recoveries and only three flag sightings to indicate the migratory paths used by this species, in spite of 275 Greenshank being banded and 23 flagged in north-west Australia over the years.

A Pied Oystercatcher, caught with a group of terns at Coulomb Point, some 70 km. north of Broome, had been banded ten years previously in a flock in Roebuck Bay. This is only the third non-local movement recorded for a Pied Oystercatcher in north-west Australia.

A total of 405 previously banded birds were recaptured (10% of the total catch), including 134 Great Knot and 69 Bar-tailed Godwit. Twelve birds, involving six species, were more than 15 years old (Table 4). The oldest were two Greater Sand Plover, one at least 23½ years old and the other 22½ years old. These are the oldest recorded for this species and the oldest for any species banded in north-west Australia.

The percentage of juvenile birds in the cannon-net catches made during the expedition is shown in Table 5.

Table 3. NWA 2006 Expedition - Recaptures of Waders originally banded overseas

| SPECIES | BAND NO. | BANDING DETAILS | RECAPTURE DETAILS | FLAGS | COMMENTS |
|---------------------|----------------|--|-----------------------------|---|--|
| Grey-tailed Tattler | China F05-4376 | Juv 4/09/2006 Chongming Dongtan | 1 6/11/2006 Broome | Black/White right tibia | Aust Band 062-88573 added |
| Great Knot | China F05-0354 | 2+ 28/03/2006 Chongming Dongtan | 2+ 6/11/2006 Broome | White/Black right tibia | Aust Band 062-88632 added |
| Bar-tailed Godwit | China G05-6349 | 2+ 8/04/2006 Chongming Dongtan | 2+ 12/11/2006 80 Mile Beach | Black/White right tibia | Aust Band 073-22157 added |
| Great Knot | China F05-2753 | 2+ 3/03/2000 then 30/03/2006 2+ Broome Chongming Dongtan | 2+ 20/11/2006 Broome | White/Black right tibia | Already carried Aust Band 062-59543 & China Band. Blue age cohort band removed |
| Great Knot | China F03-9588 | 2+ 4/04/2004 Chongming Dongtan then 29/03/2005 2+ Chongming Dongtan | 2+ 20/11/2006 Broome | White/Black right tibia | Chinese Band removed (worn). Aust Band 062-89911 added |
| Bar-tailed Godwit | China G05-6334 | 2+ 7/04/2006 Chongming Dongtan | 2+ 20/11/2006 Broome | Black/White right tibia | Aust Band 073-22420 added |
| Bar-tailed Godwit | China G05-4947 | 2+ 13/04/2006 Chongming Dongtan | 2+ 20/11/2006 Broome | Black/White right tibia | Aust Band 073-21963 added |
| Greenshank | China G07-0864 | 2+ 9/04/2006 Chongming Dongtan | 2+ 21/11/2006 Broome | Black/White right tibia (White engraved R3) | Aust Band 073-22447 added |
| Grey-tailed Tattler | Japan 5A 31210 | 2+ 11/08/2002 Shunkunitai, Nemuro, Hokkaido | 2+ 16/11/2006 80 Mile Beach | Blue Left tibia | Aust Band 062-88873 added |
| Greenshank | Japan 6A 25538 | Juv. 6/09/2003 Benten, Tomakomai, Hokkaido, Japan (42° 37'N) (141° 47'E) | 2+ 21/11/2006 Broome | Yellow Flag K8 added | Aust Band 073-22550 added |

Table 4. NWA 2006 Expedition - Recaptures of old birds.

| Species | Band No | Original banding details | | | Recapture details | | Age (years) |
|---------------------|-----------|--------------------------|----------|---------------|-------------------|---------------|--------------------|
| | | Age | Date | Location | Date | Location | |
| Bar-tailed Godwit | 071-86894 | 1+ | 18/07/91 | Broome | 20/11/06 | Broome | 16 $\frac{1}{2}$ + |
| | 061-72422 | 3+ | 02/09/92 | Broome | 06/11/06 | Broome | 16 $\frac{1}{2}$ + |
| Great Knot | 061-72505 | 3+ | 16/09/92 | Broome | 06/11/06 | Broome | 16 $\frac{1}{2}$ + |
| | 061-72976 | 2 | 01/10/92 | Broome | 20/11/06 | Broome | 15 $\frac{1}{2}$ |
| Greater Sand Plover | 051-27980 | 2+ | 17/04/85 | Broome | 07/11/06 | Broome | 23 $\frac{1}{2}$ + |
| | 051-27930 | 1 | 17/04/85 | Broome | 07/11/06 | Broome | 22 $\frac{1}{2}$ |
| | 051-54537 | 1 | 12/04/90 | Broome | 07/11/06 | Broome | 17 $\frac{1}{2}$ |
| | 051-54877 | 3+ | 25/09/92 | 80 Mile Beach | 18/11/06 | 80 Mile Beach | 16 $\frac{1}{2}$ + |
| Red-necked Stint | 033-78962 | 3+ | 13/10/92 | Broome | 07/11/06 | Broome | 16 $\frac{1}{2}$ + |
| Grey-tailed Tattler | 061-72117 | 1 | 12/04/90 | Broome | 08/11/06 | Broome | 17 $\frac{1}{2}$ |
| | 061-72332 | 2 | 01/09/92 | Broome | 08/11/06 | Broome | 15 $\frac{1}{2}$ |
| Eastern Curlew | 091-24326 | 1 | 26/07/91 | Broome | 21/11/06 | Broome | 16 $\frac{1}{2}$ |

Table 5. Percentage Juveniles in cannon net catches in NW Australia 4th- 25th November 2006

| Species | No. of Catches | | Total caught | Juvenile/1st year | | Average % Juv. 98/99 - 05/06 | Assessment of 2006 breeding success |
|---------------------|----------------|-----------|--------------|-------------------|------|---------------------------------|--|
| | Large >50 | Small <50 | | No. | % | | |
| MAIN | | | | | | | |
| Great Knot | 5 | 5 | 1146 | 101 | 8.8 | 9.9 | Average |
| Bar-tailed Godwit | 3 | 10 | 582 | 48 | 8.2 | 8.9 | Average |
| Greater Sand Plover | 3 | 8 | 372 | 78 | 21.0 | 22.4 | Average |
| Red-necked Stint | 1 | 3 | 310 | 65 | 21.0 | 23.5 | Average |
| Terek Sandpiper | 3 | 4 | 291 | 33 | 11.3 | 12.8 | Average |
| Grey-tailed Tattler | 2 | 9 | 264 | 75 | 28.4 | 15.6 | Very good |
| Curlew Sandpiper | 1 | 8 | 171 | 18 | 10.5 | 17.7 | Poor |
| Red Knot | - | 6 | 74 | 8 | 10.8 | 17.8 | Poor |
| Ruddy Turnstone | - | 4 | 32 | 3 | 9.4 | 17.0* | Poor* |
| OTHERS | | | | | | | |
| Red-capped Plover | 1 | 4 | 108 | 12 | 11.1 | | |
| Oriental Plover | 1 | 3 | 83 | 9 | 10.8 | | |
| Greenshank | 1 | 1 | 70 | 0 | 0.0 | | |

*Average of only three years (sample size too small in other years)

Adequate samples of the nine main study species were obtained for an estimate of breeding success to be calculated. The results show that in most species 2006 seems to have been an average to poor breeding season. In five species the percentage juveniles was slightly below the average for the previous eight years. In three species (Curlew Sandpiper, Red Knot and Ruddy Turnstone) it was some 40% below, indicating that 2006 should be classed as a poor breeding year for them. Only Grey-tailed Tattler appears to have bred successfully in 2006, with the percentage of juveniles (28.4%) being nearly twice the long-term average (15.6%). The reason why this species should have had such markedly different breeding success to others is not clear.

Trying to obtain catches which are representative of the total population is always a potential problem. Juveniles are known to be non-uniformly distributed at certain times (e.g. soon after arrival), at some locations and in some species, on both a local and on a wider scale. By maximizing the number of catches which contribute to the percentage juvenile estimate it is hoped that the effect of these variations can be minimized.

Examples of the potential problems are illustrated by some of the catches during the expedition. In the case of the Grey-tailed Tattler, with its unusually high breeding success

in 2006, it was good to note that this figure was fairly uniformly representative of most of the eleven catches from which it was derived. On the other hand there was much variation in Great Knot figures. In a catch of 281 at Broome the 34 juveniles represented 12% of the catch. On a later catch at Broome the 14 juveniles in a catch of 470, gave only a 3% juvenile figure. This latter catch was from the core of a very large roosting congregation. In contrast there were 22 juvenile Great Knot in a catch of 51 (43%) in a small catch made during the neap tides on one of the less frequented sections of 80 Mile Beach (2.5 km. south of Anna Plains). Bar-tailed Godwit juveniles also seemed to strongly favour such areas; in one catch there all twelve Bar-tailed Godwit caught were juveniles. In contrast the big catch in the core of a large roosting flock at Broome on the 20th November contained only nine juvenile Bar-tailed Godwit in a total of 337 (2.7%, compared with the expedition average of 8.1%).

An illustration that mist-netting often produces a much higher proportion of juveniles than cannon-netting was provided by the mist-netting session at 80 Mile Beach on the 16th November. This was close to the core of the area where much of the cannon-netting had been carried out. 43 of the 51 Red-necked Stint mist-netted (84%) were juveniles compared with 21% for cannon-netted birds. Curlew

Sandpiper, with five out of eight birds mist-netted being juveniles, also showed a much higher juvenile proportion than cannon-netted birds (10.5%).

Eight birds carrying flags put on elsewhere were seen in Roebuck Bay at Broome and at 80 Mile Beach during the expedition. Of these three, Great Knot and three, Bar-tailed Godwit marked at Chongming Dao in China – were seen on 80 Mile Beach. The others were a Grey-tailed Tattler from Japan and a Red-necked Stint from Victoria – both seen at Broome. In addition four individually marked birds from Broome were seen at 80 Mile Beach – two Bar-tailed Godwits, a Great Knot and a Red Knot. There have been few recorded movements between these two locations – 200 km. apart – but the advent of individual engraved leg flag and colour band marking schemes may change that situation in the future.

A key objective of the current expedition was to put as many new engraved flags on waders at Broome as possible. These individually-marked birds are the basis of a survival rate study being carried out by Alice Ewing for her Ph.D. at Melbourne University. Over 1100 new flags were applied. Unfortunately we ran out of engraved flags during one catch and 250 Great Knot and 14 Bar-tailed Godwit had to be given plain (yellow) flags.

A number of flags previously put on birds were replaced because the ink was becoming worn off as a result of the engraving on some flags being too shallow. The latest batches of flags, laser engraved in Taiwan, appear to be excellent and hopefully this problem will not recur in future.

In spite of these problems the engraved flagging project has been an outstanding success. From the 3000 engraved flags which had been put on before the start of this expedition a total of 13,000 resightings have now been made. Whilst most of these have been, as hoped for, at the original marking location in Roebuck Bay, a few have been seen overseas or at locations elsewhere in Australia (including at 80 Mile Beach). These overseas movements are a bonus to the migration studies. Movements to locations elsewhere in Australia, which mostly represent a change in non-breeding area, are a complicating factor which has to be allowed for in survival rate calculations.

A minor crisis, which could have affected the flagging programme, occurred when the PVC solvent cement to be used on the expedition was confiscated from the hold luggage of an expedition participant at London airport. Fortunately it proved possible to post some to Broome from the remaining stocks in Melbourne.

The biannual counts of waders at Roebuck Bay and 80 Mile Beach are now carried out largely by a Broome-based team, particularly Chris Hassell, Adrian Boyle and George Swann. The expedition therefore confined its counting mainly to particular species and non-core locations, such as the inland freshwater lakes at Roebuck Plains and the species that utilize the grasslands at Anna Plains. Oriental Plover were noticeably more widespread at Anna Plains station, and on the adjacent 80 Mile Beach during the heat of the day, than in November 2005. This may partly be an effect of the better pastures, and hence insect life, following the good 2006 wet season (in early 2005 the wet season was poor). It may also have been because the 2006 expedition was one

week earlier and fewer birds had departed to inland locations. Little Curlew were also present in larger numbers on both Roebuck Plains (up to 8000 at Lake Eda) and at Anna Plains/80 Mile Beach, with several thousand roosting on the beach in the middle of the day. Oriental Praticoles, which were only seen in very small numbers in November 2005, were also more apparent with at least 300 attracted to the green pastures around Lake Eda at the beginning of the fourth week in November.

In contrast two shore waders normally seen in small numbers at Broome were less apparent than normal. No Asian Dowitchers were seen and only the very occasional Redshank.

The highlight as far as field observations were concerned was not a wader or a tern. An Arctic Warbler, only the second for mainland Australia, was seen in the garden of the house we were occupying at Anna Plains station. It was present throughout the last two days of our visit there (18th and 19th November) and was apparently still there on the 20th. This tiny leaf warbler, weighing only 10 grams, breeds in the Northern Hemisphere in places such as Mongolia and Siberia up to a latitude of around 67° North.

A total of 702 waders of twelve species, 44 terns (of three species) and 23 Plumed Whistling Ducks had cloacal swabs and/or blood samples taken, by John Curran and his veterinary team from the Australian Quarantine and Inspection Service, to test for avian-borne diseases such as the highly pathogenic H5N1 strain of influenza. Results will not be available for some weeks. However testing over the last 23 years suggests that the incidence of avian-borne disease symptoms will be very low. It is still considered unlikely that migratory wading birds and terns could bring the H5N1 virus from Asia into Australia.

An excellent catch containing 82 Little Terns and 58 Roseate Terns was made on 22nd November at Coulomb Point, around 70 km. north of Broome. All but one of the Little Terns were in non-breeding plumage, indicating that they were visitors from breeding grounds in the northern hemisphere. Broome-marked Little Terns have previously been reported from Japan. There were many fewer Common Terns present than in November 2005 and only 13 were caught.

Further feather samples were collected, especially from juvenile birds, for future stable isotope studies. A comprehensive ‘bank’ of samples is gradually being built up.

OTHER MATTERS

Participants

Thirty-two people from seven different countries participated: 17 from Australia (nine from Victor, five from Western Australia, two from New South Wales and one from South Australia); five from the United Kingdom, four from Thailand, three from New Zealand one from China, United States and Japan.

The four people from Thailand came to learn about cannon-netting so that they can use this technique there for catching water birds and waders for testing for Avian Influenza. They made such excellent progress that they are now constructing their first net in Thailand and hope to be

catching there in only a few weeks (late January 2007). It was nice to have New Zealand participants again, after a blank year in 2005. For the second consecutive year one of the persons from the Chinese banding operations at Chongming Dao was present. We hope this association with personnel from there will continue in the future.

A complete list of participants is given later in this report.

Itinerary

The expedition spent slightly longer at 80 Mile Beach this year than on other recent expeditions. In total ten banding days were spent at each location. This was partly achieved by catching at 80 Mile Beach on the same day as the move back to Broome.

Finances

The financial accounts cannot yet be completed because not all expected items of income have yet been received and some significant expenditures still have to be completed (mainly items of equipment, including new engraved flags). It is estimated that total income will be \$29,588 and that expenditure will probably be about \$31,000. This expected small loss can be covered by a surplus carried forward from previous expeditions.

Equipment

The equipment in north-west Australia has been progressively expanded and improved over the years, so little now needs to be brought up from Victoria for expeditions. The main recent additions have been

1. A new 22m. x 10m. three-cannon small-mesh Cannon-net. This worked brilliantly during the expedition.
2. Replacement of all the keeping cages which were made of dark (heat absorbing) shade cloth.
3. Increase of the number of sets of processing equipment to six, to facilitate maximum efficiency in dealing with birds after catching.
4. Four new ICOM radios, and spare batteries. Good communications are essential for successful catching. The previous radios had gradually deteriorated in the harsh conditions.
5. Six new, reinforced, cannons with stainless steel barrels.

Habitat Creation and Maintenance

The new wader lagoon, the Anna Plains Scrape, created in early September and gradually filled with bore water in ensuing weeks was already attracting some waterbirds. It is 100 metres long by 40 metres wide and about 30 cm. deep. It contains two 20-metre square islands. Up to 200 Brolgas were using the lagoon each day. Small numbers of Little Curlew called in occasionally to drink and several other species of waders were seen there briefly. It is likely that utilization of this lagoon will increase after the forthcoming wet season as more birds using the plains become aware of it.

The Hot Bore Pool, in the bush about 2 km. inland from Anna Plains station, had reeds and other vegetation cleared from it during the NWA 2005 Expedition. It now looked to be in wonderful condition and was again used by Brolgas, a

Red-kneed Dotterel and a Wood Sandpiper, as well as many species of passerines and birds of prey.

These habitat creation and management actions by John Stoate, the owner of Anna Plains Station, are significantly increasing the diversity and numbers of birds in the area.

Passerines

A total of 213 birds of 13 species were caught in two early-morning mist-netting sessions at the Anna Plains Hot Bore Pool. Brown Honeyeaters (148) dominated, as usual. The most interesting species caught were Black-eared Cuckoo, Diamond Dove, Rainbow Bee-eater and Tawny Frogmouth.

NEXT EXPEDITION

It appears from the experience of recent years that holding three-week-long expeditions in November is the optimum timing for monitoring the percentage of juveniles in populations each year and for achieving other objectives of the wader and tern studies in north-west Australia. The NWA 2007 Expedition will therefore take place from 10 November to 1 December. This timing has been chosen to match tidal cycles as closely as possible with those of previous years but also because the next Australasian Ornithological Congress takes place in Perth at the beginning of December. It should be convenient for intending participants to go directly from Broome to Perth after the expedition in order to attend the A.O.C.

ACKNOWLEDGEMENTS

It is always difficult to know where to start in acknowledging those who have made major contributions to the success and enjoyment of a large fieldwork expedition. Most of all, thanks are due to everybody who gave their time and incurred significant travel and other costs in order to participate. They all worked so hard and maintained such a friendly and helpful manner, even at times of high pressure, that it made the whole expedition a memorable event for participants as well as making it so successful scientifically. Many made special contributions by taking on particular responsibilities and these were acknowledged verbally at the end of the expedition.

Those who made vehicles available to the expedition, especially those who also brought equipment and personnel up from south-east Australia, are especially thanked. John Ralph, George Swann, Broome Bird Observatory and CALM very kindly loaned trailers.

The expedition is also extremely grateful to Broome Bird Observatory, and its staff and Management Committee, and to John Stoate at Anna Plains for providing accommodation and much other assistance during the expedition. Without such marvellous bases and such enormously generous help these expeditions would not be so successful, would not be so enjoyable and would not be so popular.

The Department of Conservation of W.A. is thanked for its generous financial support for Zhijun Ma by paying for his flight and expedition costs. BBO is also thanked for providing him with free accommodation.

LIST OF PARTICIPANTS

Australia

VIC: Clive Minton, Rosalind Jessop, Susan Taylor, Mike Dawkins, Prue Wright, Alice Ewing, Dave Cropley, Irma Kluger, Rob Ganly

WA: Chris Hassell, Frank O'Connor, Maurice O'Connor, Sue Abbots, Robina Haynes

NSW: Phil Craven, Peter Madvig

SA: Maureen Christie

U.K.: David Price, Brian Little, Rob Robinson, Loyd Berry, James Hutchison

Thailand: Rattapan (Tom) Rattarangsarn, Krairat Eiam-amthai, Somchai Nimnuan, Jarunee Siengsan

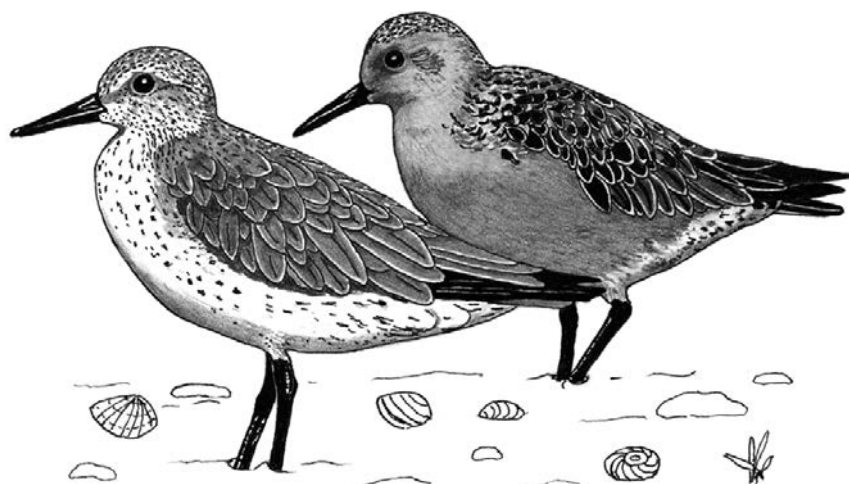
New Zealand: Tony Crocker, Mark McFadden, Eila Lawton

China: Zhijun Ma

U.S.A.: Jake Owens

Japan: Naoko Takeuchi

In addition Liz Rozenberg and Pete Collins participated occasionally at Broome and Andrea Spencer at 80 Mile Beach.



REPORT ON POPULATION MONITORING COUNTS, 2005 AND 2006

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13 Waterloo Street, Heathmont, Vic 3135 Australia

The following pages contain the summer and winter counts for the shorebird Population Monitoring Program carried out in 2005 and 2006. As usual, very sincere thanks are due to the many volunteers who braved the elements to carry out these counts, and to the many people who co-ordinated these efforts, by organising beforehand and by collecting, collating and handing on the data. Many of the most significant wader sites have now been monitored for more than 20 years, producing a very significant and valuable data set. With all the increasing threats to these wonderful birds, having this kind of long-term evidence provides great support to our arguments for conservation.

It is therefore very pleasing that the PMP is to be re-energised in the new program Shorebirds 2020. I will shortly be handing over responsibility for collating the wader count data to the new Program Manager Joanne Oldland and the Technical Manager Rob Clemens at Birds Australia. This will be a terrific boost to wader counting, and is a confirmation of its importance in conservation. I would like to thank Ken Gosbell for his dedicated work in supporting this new initiative.

I have asked Joanne Oldland to introduce the new program, and this appears below.

Over the next year, Jo and Rob will be meeting many of the great team of counters around the country, and we all look forward to great results from their work

SHOREBIRDS 2020 UNDERWAY!

JOANNE OLDLAND

Birds Australia, Suite 2-05, 60 Leicester Street, Carlton, Victoria 3053. Australia, j.oldland@birdsaustralia.com.au

A major new programme is underway at Birds Australia. Titled Shorebirds 2020, the programme is designed to reinvigorate national shorebird monitoring in Australia through improved methods, counter training and recruitment, and increased analysis and reporting of population trends. The project is a collaborative enterprise between Birds Australia, the Australasian Wader Studies Group, WWF Australia and the Australian Government's Natural Heritage Trust. A Project Manager (Joanne Oldland) and Technical Manager (Rob Clemens) have been appointed to oversee the project. The role of national count coordinator will also be shortly passed over to Jo from Jenny Skewes, who is retiring after over five years of service. Jo will be in touch with state and regional coordinators over the coming months with details of new arrangements and to explore opportunities for increased involvement and recruitment of new volunteers.

We would like to take the opportunity to acknowledge our generous donors - the Australian Government's Natural Heritage Trust, James Fairfax, Lady Southey and the Myer Foundation. Funding for this programme has been secured for two years with part funding secured for a further three years and plans to ensure the programme continues well into the future.

Shorebirds 2020 Contact Details:

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SUMMER 2005**QUEENSLAND****NEW SOUTH WALES**

| | Cairns | Townsville | Mackay | Moreton Bay | Bowen | Tweed | Richmond | Clarence | Hunter | Parramatta R | Botany Bay | Shoalhaven |
|------------------------|--------|------------|--------|-------------|-------|-------|----------|----------|--------|--------------|------------|------------|
| Date | 22/1 | | 22/1 | 22/1 | 22/1 | 22/1 | 27/2 | feb | 26/2 | 23/2 | 25/2 | 26/2 |
| Latham's Snipe | | | | | | 1 | | | | | | |
| Black-tailed Godwit | | | | 433 | | | | | 200 | | | |
| Bar-tailed Godwit | | N | 36 | 5793 | 18 | | 228 | 297 | 1103 | 224 | 336 | 346 |
| Little Curlew | | O | | | | | | | | | | |
| Whimbrel | 2 | T | 129 | 1028 | 12 | | 41 | 59 | 43 | | 84 | |
| Eastern Curlew | 2 | | 212 | 1341 | 3 | | 54 | 103 | 391 | | 238 | 34 |
| Marsh Sandpiper | 3 | C | | 115 | | | | | 112 | | | |
| Common Greenshank | 8 | O | 24 | 151 | 3 | | 12 | 3 | 152 | | 1 | |
| Wood Sandpiper | | U | | | | | | | | | | |
| Terek Sandpiper | | N | 24 | 136 | | | 62 | 15 | | | | |
| Common Sandpiper | 9 | T | | 6 | | | | | 2 | 1 | | |
| Grey-tailed Tattler | | E | 66 | 825 | | | 73 | 199 | 1 | | 94 | |
| Wandering Tattler | | D | | | | | | | | | | |
| Tattler Spp | | | | | | | | | | | | |
| Ruddy Turnstone | | | 28 | 21 | | | 27 | 19 | | | 26 | |
| Great Knot | | | 193 | 770 | | | 16 | 74 | 4 | | | |
| Red Knot | | | | 11 | | | | | 70 | | | |
| Sanderling | | | | | | | 11 | | | | | |
| Red-necked Stint | | | 460 | 3144 | 17 | | 104 | 60 | 22 | | 110 | 132 |
| Pectoral Sandpiper | | | | | | | | | | | | |
| Sharp-tailed Sandpiper | 31 | | 17 | 961 | 45 | | 4 | 3 | 539 | 35 | | |
| Curlew Sandpiper | | | | 1076 | | | 12 | | 131 | | 2 | |
| Bush Stone-curlew | | | 16 | | | | | | | | | |
| Beach Stone-curlew | 3 | | 2 | | | | | 1 | | | | |
| Pied Oystercatcher | | | 12 | 281 | 7 | | 3 | 6 | 12 | | 74 | 8 |
| Sooty Oystercatcher | | | | | 2 | | | 11 | 3 | | 7 | |
| Black-winged Stilt | 1 | | | 400 | 22 | 8 | 28 | 4 | 478 | 120 | | |
| Banded Stilt | | | | | | | | | | | | |
| Red-necked Avocet | | | | 214 | | | | | 2899 | 30 | | |
| Pacific Golden Plover | | | 14 | 1038 | | | 53 | 97 | 239 | 3 | 18 | |
| Grey Plover | | | | 52 | | | | | | | | |
| Red-capped Plover | | | 25 | 172 | 18 | | 1 | 16 | 24 | | 10 | 48 |
| Double-banded Plover | | | 4 | | | | | 3 | | | 3 | 10 |
| Lesser Sand Plover | | | 1020 | 2049 | | | | 69 | | | 1 | |
| Greater Sand Plover | | | 42 | 452 | | | 23 | 64 | | | | |
| Oriental Plover | | | | | | | | | | | | |
| Black-fronted Dotterel | 8 | | | | 2 | 1 | | | 14 | 30 | | |
| Hooded Plover | | | | | | | | | | | | |
| Red-kneed Dotterel | | | | | | | | 10 | 6 | | | |
| Banded Lapwing | | | | | | | | | | | | |
| Masked Lapwing | 3 | | 3 | 41 | 8 | 11 | 12 | 7 | 116 | 15 | 7 | 4 |
| Long-toed Stint | | | | | | | | | | | | |
| Redshank | | | | | | | | | | | | |
| Broad-billed Sandpiper | | | | | | | | | | | | |
| Ruff | | | | | | | | | | | | |
| Swinhoe's Snipe | | | | | | | | | | | | |
| Asian Dowitcher | | | | | | | | | | | | |
| Unidentified waders | | | | | | | | | | | | |
| TOTAL | 70 | 0 | 2327 | 20510 | 157 | 21 | 764 | 1120 | 6561 | 458 | 1011 | 582 |
| No SPECIES | 10 | 0 | 19 | 24 | 12 | 4 | 18 | 21 | 22 | 8 | 15 | 7 |

SUMMER 2005

VICTORIA

TASMANIA

| | Corner Inlet East | Corner Inlet West | Westernport | East Port Phillip | Altona | Wrrbee/Avalon | BellarinePen/ Mud Is | E Derwent/ Pittwater | Marion & Blackman Bays | North West | Cape Portland/ NNE |
|------------------------|-------------------|-------------------|-------------|-------------------|--------|---------------|----------------------|----------------------|------------------------|------------|--------------------|
| Date | 8/2 | 5/2 | 12/2 | 23/1 | | 14/2 | 13/2 | 30/1 | 26/1 | 10/2 | 4/2 |
| Latham's Snipe | | | | 29 | | 1 | 128 | | | | |
| Black-tailed Godwit | | | | | | 9 | | | | | |
| Bar-tailed Godwit | 7310 | 350 | 363 | | N | | 4 | | | 453 | 17 |
| Little Curlew | | | | | O | | | | | | |
| Whimbrel | | 34 | 25 | | T | | | 2 | | 4 | |
| Eastern Curlew | 341 | 488 | 775 | | | 1 | 18 | 42 | | 175 | 40 |
| Marsh Sandpiper | | | | 2 | C | 50 | 76 | | | | |
| Common Greenshank | | | 147 | 1 | O | 57 | 396 | | 7 | 1 | 12 |
| Wood Sandpiper | | | | | U | 2 | 1 | | | | |
| Terek Sandpiper | | | 6 | | N | | | | | 3 | |
| Common Sandpiper | | | | 2 | T | | | | | | |
| Grey-tailed Tattler | 2 | | | | E | | 1 | | | | |
| Wandering Tattler | | | | | D | | | | | | |
| Tattler Spp | | | | | | | | | | | |
| Ruddy Turnstone | 1 | | 73 | | | 11 | 14 | | | 809 | 43 |
| Great Knot | 152 | | | | | | 19 | | | 4 | |
| Red Knot | 948 | 150 | 6 | | | | 239 | | | 502 | |
| Sanderling | 180 | | | | | | 1 | | | 13 | |
| Red-necked Stint | 12049 | 614 | 7003 | 18 | | 9286 | 6195 | 1779 | 1925 | 7502 | 497 |
| Pectoral Sandpiper | | | | | | 2 | | | | | |
| Sharp-tailed Sandpiper | 150 | | 225 | 137 | | 3458 | 1598 | | | 6 | |
| Curlew Sandpiper | 300 | 108 | 2236 | | | 763 | 800 | 140 | | 935 | 22 |
| Bush Stone-curlew | | | | | | | | | | | |
| Beach Stone-curlew | | | | | | | | | | | |
| Pied Oystercatcher | 653 | 124 | 343 | | | 69 | 60 | 706 | 39 | 1395 | 78 |
| Sooty Oystercatcher | 101 | 179 | 4 | | | | 6 | 5 | | 337 | 49 |
| Black-winged Stilt | | | | 5 | | 251 | 311 | | | | |
| Banded Stilt | | | | | | 49 | 149 | | | | |
| Red-necked Avocet | | | 1 | | | 207 | 477 | | | | |
| Pacific Golden Plover | | | 32 | | | 120 | 74 | 54 | | 185 | 80 |
| Grey Plover | 350 | | | | | | 13 | 3 | | 261 | |
| Red-capped Plover | 6 | 4 | 129 | | | 40 | 145 | 37 | 11 | 62 | 25 |
| Double-banded Plover | | | 3 | | | 3 | | | | 10 | 2 |
| Lesser Sand Plover | | | | | | | 1 | | | 1 | |
| Greater Sand Plover | | | | | | | 2 | | | 1 | |
| Oriental Plover | | | | | | | | | | | |
| Black-fronted Dotterel | | | | 16 | | 2 | 12 | 1 | | | |
| Hooded Plover | 5 | | | | | | 3 | 2 | 15 | 24 | 4 |
| Red-kneed Dotterel | | | | | | | | | | | |
| Banded Lapwing | | | | | | | | | | | 32 |
| Masked Lapwing | | 26 | 233 | 85 | | 167 | 430 | 461 | 5 | 283 | 67 |
| Long-toed Stint | | | | | | | | | | | |
| Redshank | | | | | | | | | | | |
| Broad-billed Sandpiper | | | | | | | | | | | |
| Ruff | | | | | | 3 | | | | | |
| Swinhoe's Snipe | | | | | | | | | | | |
| Asian Dowitcher | | | | | | | | | | | |
| Unidentified waders | | | | | | | | | | | |
| | 22548 | 2077 | 11604 | 295 | 0 | 14551 | 11173 | 3232 | 2002 | 12966 | 968 |
| | 15 | 10 | 17 | 9 | 0 | 21 | 27 | 12 | 6 | 22 | 14 |

SUMMER 2005

| | SA | | | WA | | | | NT | Total- all sites |
|------------------------|-------------|-----------------|----------------|--------|---------------------|-------------------|--------|--------|------------------|
| | SE coast SA | Gulf St Vincent | Eyre peninsula | Albany | Swan Est/ Rottneest | 80 Mile (0-60 km) | Broome | Darwin | |
| Date | 31/1 | | | 5/2 | 5/2 | | | 15/1 | |
| Latham's Snipe | | | | | | | | | 159 |
| Black-tailed Godwit | | | | | | 4 | 641 | | 1287 |
| Bar-tailed Godwit | | N | N | | 15 | 46950 | 11257 | | 75100 |
| Little Curlew | | O | O | | | 3261 | | | 3261 |
| Whimbrel | | T | T | 5 | | 99 | 151 | | 1718 |
| Eastern Curlew | 1 | | | | | 400 | 492 | | 5151 |
| Marsh Sandpiper | 1 | C | C | | | 230 | | | 589 |
| Common Greenshank | 25 | O | O | 48 | 44 | 2227 | 260 | 8 | 3587 |
| Wood Sandpiper | | U | U | | | | | | 3 |
| Terek Sandpiper | | N | N | | 1 | 11944 | 478 | | 12669 |
| Common Sandpiper | | T | T | 3 | | 30 | 17 | 4 | 74 |
| Grey-tailed Tattler | 3 | E | E | 4 | 1 | 8532 | 1475 | | 11276 |
| Wandering Tattler | | D | D | | | | | | 0 |
| Tattler Spp | | | | | | | | | 0 |
| Ruddy Turnstone | 658 | | | 12 | 159 | 205 | 361 | | 2467 |
| Great Knot | | | | 31 | 1 | 70456 | 14160 | | 85880 |
| Red Knot | 11 | | | 7 | | 11374 | 1184 | | 14502 |
| Sanderling | 389 | | | | 87 | 264 | | | 945 |
| Red-necked Stint | 2761 | | | 730 | 1468 | 20013 | 4935 | | 80824 |
| Pectoral Sandpiper | | | | | | | | | 2 |
| Sharp-tailed Sandpiper | 223 | | | | 16 | 106 | 1 | | 7555 |
| Curlew Sandpiper | 41 | | | 12 | 27 | 4332 | 1392 | | 12329 |
| Bush Stone-curlew | | | | | | | | | 16 |
| Beach Stone-curlew | | | | | | | | | 6 |
| Pied Oystercatcher | 21 | | | 101 | 106 | 9 | 17 | | 4124 |
| Sooty Oystercatcher | 11 | | | 4 | 4 | | 21 | | 744 |
| Black-winged Stilt | | | | | 118 | 6 | | | 1752 |
| Banded Stilt | | | | 450 | 5738 | | | | 6386 |
| Red-necked Avocet | | | | 2 | 12 | | | | 3842 |
| Pacific Golden Plover | 45 | | | 13 | 1 | 162 | 12 | | 2240 |
| Grey Plover | 1 | | | 67 | 32 | 779 | 119 | | 1677 |
| Red-capped Plover | 84 | | | 13 | 269 | 4812 | 1157 | 1 | 7109 |
| Double-banded Plover | | | | | | | | | 38 |
| Lesser Sand Plover | | | | | 1 | 37 | 141 | | 3320 |
| Greater Sand Plover | | | | 7 | 2 | 26180 | 3028 | | 29801 |
| Oriental Plover | | | | | | 54815 | 1 | | 54816 |
| Black-fronted Dotterel | 2 | | | | | | | | 88 |
| Hooded Plover | 16 | | | | | | | | 69 |
| Red-kneed Dotterel | | | | | | | | | 16 |
| Banded Lapwing | | | | | | | | | 32 |
| Masked Lapwing | 184 | | | | 38 | | | 2 | 2208 |
| Long-toed Stint | | | | | | | | | 0 |
| Redshank | | | | | | 1 | | | 1 |
| Broad-billed Sandpiper | | | | | | 39 | 12 | | 51 |
| Ruff | | | | | | | | | 3 |
| Swinhoe's Snipe | | | | | | | | | 0 |
| Asian Dowitcher | | | | | | | | | 0 |
| | | | | | | | | | 0 |
| Unidentified waders | | | | 37 | | | | | 37 |
| | | | | | | | | | 0 |
| | 4477 | 0 | 0 | 1546 | 8140 | 267267 | 41312 | 15 | 437754 |
| | 18 | 0 | 0 | 18 | 21 | 27 | 23 | 4 | 49 |

| WINTER 2005 | | QUEENSLAND | | | | | NEW SOUTH WALES | | | | | | |
|------------------------|--|------------|------------|--------|-------------|-------|-----------------|----------|----------|--------|--------------|------------|------------|
| | | Cairns | Townsville | Mackay | Moreton Bay | Bowen | Tweed | Richmond | Clarence | Hunter | Parramatta R | Botany Bay | Shoalhaven |
| Date | | 23/7 | 23/7 | 23/7 | 23/7 | 23/7 | 23/7 | 28/7 | | Jun | 25/6 | 25/6 | |
| Latham's Snipe | | | | | | | | | | | | | |
| Black-tailed Godwit | | | | | | | | | | 30 | | | |
| Bar-tailed Godwit | | | 80 | 73 | | 31 | | 26 | | 226 | 46 | 87 | |
| Little Curlew | | | | | | | | | | | | | |
| Whimbrel | | 2 | 6 | 45 | 315 | 8 | | 10 | N | | | 13 | N |
| Eastern Curlew | | 2 | 79 | 45 | 155 | 8 | | 2 | O | 122 | | 38 | O |
| Marsh Sandpiper | | 3 | | | | | | | T | | | | T |
| Common Greenshank | | 8 | | 6 | 2 | 1 | | | | | | 1 | |
| Wood Sandpiper | | | | | | | | | C | | | | C |
| Terek Sandpiper | | | | | | | | | O | | | | O |
| Common Sandpiper | | 9 | | | | | | | U | | | | U |
| Grey-tailed Tattler | | | 45 | 121 | 831 | 2 | | 3 | N | 4 | | 15 | N |
| Wandering Tattler | | | | | | | | | T | | | | T |
| Tattler Spp | | | | | | | | | E | | | | E |
| Ruddy Turnstone | | | | | 30 | | | 2 | D | | | 2 | D |
| Great Knot | | | | 15 | 35 | | | | | 3 | | | |
| Red Knot | | | | | | | | | | | | | |
| Sanderling | | | | | | | | | | | | | |
| Red-necked Stint | | | | 40 | 1286 | | | 6 | | 22 | | 24 | |
| Pectoral Sandpiper | | | | | | | | | | | | | |
| Sharp-tailed Sandpiper | | 31 | | | | | | | | | | | |
| Curlew Sandpiper | | | | | 131 | | | | | | | | |
| Bush Stone-curlew | | | | | | | | | | | | | |
| Beach Stone-curlew | | 3 | | | | | | | | | | | |
| Pied Oystercatcher | | | 4 | 3 | 146 | 3 | | 2 | | 10 | | 59 | |
| Sooty Oystercatcher | | | | | | 1 | | | | 8 | | 8 | |
| Black-winged Stilt | | 1 | 30 | | | 30 | 12 | 5 | | 364 | 35 | 14 | |
| Banded Stilt | | | | | | | | | | | | | |
| Red-necked Avocet | | | | | 197 | | | | | 4208 | | | |
| Pacific Golden Plover | | | | | 68 | | | | | | | 1 | |
| Grey Plover | | | 1 | | | | | | | | | | |
| Red-capped Plover | | | 3 | 43 | 160 | 27 | | | | 34 | 6 | 11 | |
| Double-banded Plover | | | | | 204 | | | 8 | | | | 47 | |
| Lesser Sand Plover | | | | | 152 | | | | | | | | |
| Greater Sand Plover | | | 4 | | 66 | | | | | | | | |
| Oriental Plover | | | | | | | | | | | | | |
| Black-fronted Dotterel | | 8 | | | | | 1 | | | 15 | 13 | | |
| Hooded Plover | | | | | | | | | | | | | |
| Red-kneed Dotterel | | | | | | | | | | 3 | 14 | | |
| Banded Lapwing | | | | | | | | | | | | | |
| Masked Lapwing | | 3 | | 6 | 33 | 2 | 7 | 8 | | 39 | 14 | | |
| Long-toed Stint | | | | | | | | | | | | | |
| Redshank | | | | | | | | | | | | | |
| Broad-billed Sandpiper | | | | | | | | | | | | | |
| Ruff | | | | | | | | | | | | | |
| Swinhoe's Snipe | | | | | | | | | | | | | |
| Asian Dowitcher | | | | | | | | | | | | | |
| Unidentified small | | | | | 43 | 15 | | | | | | | |
| Unidentified medium | | | | | | | | | | | | | |
| Unidentified large | | | | | | | | | | | | | |
| TOTAL | | 70 | 252 | 397 | 3854 | 128 | 20 | 72 | 0 | 5088 | 128 | 320 | 0 |
| No SPECIES | | 10 | 9 | 10 | 17 | 11 | 3 | 10 | 0 | 14 | 6 | 13 | 0 |

WINTER 2005**VICTORIA****TASMANIA**

| | Corner Inlet East | Corner Inlet West | Westernport | East Port Phillip | Altona | Warrabee/Avalon | BellarinePen/ Mud Is | E Derwent/ Pittwater | Marion & Blackman Bays | North West | Cape Portland/ NNE |
|------------------------|-------------------|-------------------|-------------|-------------------|--------|-----------------|----------------------|----------------------|------------------------|------------|--------------------|
| Date | 21/6 | | 7/7 | June | | 22/7 | | 26/6 | 19/6 | 23/7 | |
| Latham's Snipe | | | | | | | | | | | |
| Black-tailed Godwit | | | | | | 7 | | | | | |
| Bar-tailed Godwit | 2530 | | 97 | | | | 136 | 33 | 14 | | |
| Little Curlew | | | | | | | | | | | |
| Whimbrel | | 6 | | | N | | | | | | N |
| Eastern Curlew | 65 | 35 | 53 | | O | | 21 | 2 | | | O |
| Marsh Sandpiper | | | | | T | 4 | 2 | | | | T |
| Common Greenshank | | 13 | | | | 25 | 97 | | | | |
| Wood Sandpiper | | | | | C | | | | | | C |
| Terek Sandpiper | | | | | O | | | | | | O |
| Common Sandpiper | | | | | U | | | | | | U |
| Grey-tailed Tattler | | | | | N | | | | | | N |
| Wandering Tattler | | | | | T | | | | | | T |
| Tattler Spp | | | | | E | | | | | | E |
| Ruddy Turnstone | 10 | | 13 | | D | | 21 | | | 13 | D |
| Great Knot | 10 | | | | | | | | | | |
| Red Knot | 865 | | 30 | | | | 80 | | | | |
| Sanderling | | | | | | | | | | | |
| Red-necked Stint | 55 | 530 | 163 | 15 | | 773 | 765 | 122 | 180 | 384 | |
| Pectoral Sandpiper | | | | | | | | | | | |
| Sharp-tailed Sandpiper | | | | | | | 16 | | | | |
| Curlew Sandpiper | | | 8 | 2 | | 23 | 39 | | | 32 | |
| Bush Stone-curlew | | | | | | | | | | | |
| Beach Stone-curlew | | | | | | | | | | | |
| Pied Oystercatcher | 504 | 127 | 368 | | | 33 | 47 | 855 | 77 | 764 | |
| Sooty Oystercatcher | 155 | 232 | 1 | | | | 3 | 46 | 4 | 215 | |
| Black-winged Stilt | | | | 183 | | 234 | 425 | | | | |
| Banded Stilt | | | | | | | | | | | |
| Red-necked Avocet | | | 400 | 20 | | 67 | 8 | | | | |
| Pacific Golden Plover | | | | | | | | | 83 | | |
| Grey Plover | 45 | 1 | | | | | 7 | | | | |
| Red-capped Plover | 15 | | 108 | 8 | | 109 | 249 | 152 | | 186 | |
| Double-banded Plover | 240 | 140 | 271 | 7 | | 162 | 233 | 222 | 31 | 1630 | |
| Lesser Sand Plover | | | | | | | | | | | |
| Greater Sand Plover | 1 | | | | | | | | | | |
| Oriental Plover | | | | | | | | | | | |
| Black-fronted Dotterel | | | | 110 | | 51 | 17 | 4 | | | |
| Hooded Plover | | | | | | | 2 | 7 | 7 | 53 | |
| Red-kneed Dotterel | | | | 1 | | 2 | | | | | |
| Banded Lapwing | | | | | | | | | | | |
| Masked Lapwing | | 60 | 102 | 95 | | 143 | 299 | 639 | | 56 | |
| Long-toed Stint | | | | | | | | | | | |
| Redshank | | | | | | | | | | | |
| Broad-billed Sandpiper | | | | | | | | | | | |
| Ruff | | | | | | | | | | | |
| Swinhoe's Snipe | | | | | | | | | | | |
| Asian Dowitcher | | | | | | | | | | | |
| Unidentified small | | | | | | | | | | | |
| Unidentified medium | | | | | | | | | | | |
| Unidentified large | | | | | | | | | | | |
| 0 | 4495 | 1144 | 1614 | 441 | 0 | 1633 | 2467 | 2082 | 396 | 3333 | 0 |
| 0 | 12 | 9 | 12 | 9 | 0 | 13 | 19 | 10 | 7 | 9 | 0 |

WINTER 2005

| WINTER 2005 | | SA | | | WA | | | NT | | |
|------------------------|------|-------------|-----------------|----------------|--------|--------------------|--------------------|--------|--------|------------------|
| | | SE coast SA | Gulf St Vincent | Eyre peninsula | Albany | Swan Est/ Rottnest | 80 Mile (km 10-30) | Broome | Darwin | Total- all sites |
| | Date | | | | | | | | | |
| | | 23/6 | | | | | 20/7 | 22/7 | 24/7 | |
| Latham's Snipe | | | | | | | | | | 0 |
| Black-tailed Godwit | | | | | | | 14 | 299 | | 350 |
| Bar-tailed Godwit | | | | | | | 2404 | 177 | | 5960 |
| Little Curlew | | | | | | | | | | 0 |
| Whimbrel | | | N | N | N | N | 1 | 2 | 1 | 409 |
| Eastern Curlew | | | O | O | O | O | 66 | 5 | | 698 |
| Marsh Sandpiper | | | T | T | T | T | 5 | 13 | | 27 |
| Common Greenshank | | 1 | | | | | 340 | 159 | | 653 |
| Wood Sandpiper | | | C | C | C | Y | | | | 0 |
| Terek Sandpiper | | | O | O | O | E | 110 | 89 | | 199 |
| Common Sandpiper | | | U | U | U | T | | | 9 | 18 |
| Grey-tailed Tattler | | | N | N | N | | 277 | 265 | 14 | 1577 |
| Wandering Tattler | | | T | T | T | A | | | | 0 |
| Tattler Spp | | | E | E | E | V | | | | 0 |
| Ruddy Turnstone | | 80 | D | D | D | A | 12 | 48 | 2 | 233 |
| Great Knot | | | | | | I | 2271 | 310 | | 2644 |
| Red Knot | | | | | | L | 221 | 41 | | 1237 |
| Sanderling | | | | | | A | 43 | | | 43 |
| Red-necked Stint | | 53 | | | | B | 1009 | 1135 | | 6562 |
| Pectoral Sandpiper | | | | | | L | | | | 0 |
| Sharp-tailed Sandpiper | | | | | | E | | | | 47 |
| Curlew Sandpiper | | 3 | | | | | 74 | 301 | | 613 |
| Bush Stone-curlew | | | | | | | | | | 0 |
| Beach Stone-curlew | | | | | | | | | | 3 |
| Pied Oystercatcher | | 13 | | | | | | 72 | | 3087 |
| Sooty Oystercatcher | | 7 | | | | | | 14 | | 694 |
| Black-winged Stilt | | | | | | | 2 | 691 | 14 | 2040 |
| Banded Stilt | | | | | | | | | | 0 |
| Red-necked Avocet | | | | | | | 24 | 139 | | 5063 |
| Pacific Golden Plover | | | | | | | | | 12 | 164 |
| Grey Plover | | | | | | | 47 | | | 101 |
| Red-capped Plover | | 26 | | | | | 2481 | 40 | | 3658 |
| Double-banded Plover | | 13 | | | | | | | | 3208 |
| Lesser Sand Plover | | | | | | | 4 | 1 | | 157 |
| Greater Sand Plover | | | | | | | 965 | 459 | | 1495 |
| Oriental Plover | | | | | | | | | | 0 |
| Black-fronted Dotterel | | | | | | | | | | 219 |
| Hooded Plover | | 4 | | | | | | | | 73 |
| Red-kneed Dotterel | | | | | | | | | | 20 |
| Banded Lapwing | | | | | | | | | | 0 |
| Masked Lapwing | | 22 | | | | | | | 56 | 1584 |
| Long-toed Stint | | | | | | | | | | 0 |
| Redshank | | | | | | | | 1 | | 1 |
| Broad-billed Sandpiper | | | | | | | | | | 0 |
| Ruff | | | | | | | | | | 0 |
| Swinhoe's Snipe | | | | | | | | | | 0 |
| Asian Dowitcher | | | | | | | | | | 0 |
| Unidentified small | | | | | | | | | | 58 |
| Unidentified medium | | | | | | | | | | 0 |
| Unidentified large | | | | | | | | | | 0 |
| | 0 | 222 | 0 | 0 | 0 | 0 | 10370 | 4261 | 108 | 42895 |
| | 0 | 10 | 0 | 0 | 0 | 0 | 20 | 21 | 7 | 50 |

| SUMMER 2006 | | QUEENSLAND | | | | | NEW SOUTH WALES | | | | | | | |
|------------------------|--|------------|------------|--------|-------------|-------|-----------------|----------|----------|--------|--------------|------------|------------|---|
| | | Cairns | Townsville | Mackay | Moreton Bay | Bowen | Tweed | Richmond | Clarence | Hunter | Parramatta R | Botany Bay | Shoalhaven | |
| Date | | | | | | | | | | | | | | |
| Latham's Snipe | | | | | 1 | | 2 | 15/2 | | Feb | 11/2 | 11/2 | | |
| Black-tailed Godwit | | | | | 731 | | | | | 200 | 145 | | | |
| Bar-tailed Godwit | | | | 540 | 12134 | 28 | | 263 | | 981 | | 379 | | |
| Little Curlew | | | | | | | | | | | | | | |
| Whimbrel | | N | N | 448 | 961 | 37 | | 109 | N | 105 | | 87 | N | |
| Eastern Curlew | | O | O | 157 | 2304 | 51 | | 59 | O | 388 | | 185 | O | |
| Marsh Sandpiper | | T | T | | 109 | 5 | | | T | 57 | 1 | | T | |
| Common Greenshank | | | | 21 | 282 | 6 | | 22 | | 128 | | 4 | | |
| Wood Sandpiper | | C | C | | | | | | C | | | | C | |
| Terek Sandpiper | | O | O | 78 | 182 | | | 33 | O | 44 | | | O | |
| Common Sandpiper | | U | U | | 1 | | | 2 | U | 5 | | 1 | U | |
| Grey-tailed Tattler | | N | N | 373 | 2055 | | | 70 | N | 21 | | 84 | N | |
| Wandering Tattler | | T | T | | | | | | T | | | | T | |
| Tattler Spp | | E | E | | | | | | E | | | | E | |
| Ruddy Turnstone | | D | D | 7 | 296 | | | 20 | D | | | 23 | D | |
| Great Knot | | | | 72 | 1917 | | | 10 | | 1 | 2 | | | |
| Red Knot | | | | | 1 | | | | | 2 | 1 | | | |
| Sanderling | | | | | | | | 9 | | | | | | |
| Red-necked Stint | | | | 171 | 5400 | 80 | | 118 | | 45 | | 127 | | |
| Pectoral Sandpiper | | | | | | | | | | | 1 | | | |
| Sharp-tailed Sandpiper | | | | 1 | 3568 | 75 | | 3 | | 289 | 138 | | | |
| Curlew Sandpiper | | | | 13 | 2681 | 45 | | 26 | | 301 | 23 | 2 | | |
| Bush Stone-curlew | | | | | 1 | | | | | | | | | |
| Beach Stone-curlew | | | | 4 | | 3 | | | | | | | | |
| Pied Oystercatcher | | | | 29 | 1044 | 12 | | 2 | | 6 | | 55 | | |
| Sooty Oystercatcher | | | | 7 | | 3 | | 3 | | 5 | | 10 | | |
| Black-winged Stilt | | | | | 856 | 6 | 19 | 3 | | 464 | 100 | 4 | | |
| Banded Stilt | | | | | | | | | | | | | | |
| Red-necked Avocet | | | | | 239 | 17 | | | | 1032 | 91 | | | |
| Pacific Golden Plover | | | | 29 | 1165 | | | 85 | | 18 | | 19 | | |
| Grey Plover | | | | | 59 | | | | | | | | | |
| Red-capped Plover | | | | 54 | 153 | 37 | | | | 26 | | | | |
| Double-banded Plover | | | | | | | | | | | | | | |
| Lesser Sand Plover | | | | 1314 | 1841 | 68 | | 18 | | | | | | |
| Greater Sand Plover | | | | 72 | 132 | 213 | | 14 | | | | | | |
| Oriental Plover | | | | | | | | | | | | | | |
| Black-fronted Dotterel | | | | | | | 4 | | | 3 | 4 | | | |
| Hooded Plover | | | | | | | | | | | | | | |
| Red-kneed Dotterel | | | | | | | | | | 4 | | | | |
| Banded Lapwing | | | | | | | | | | | | | | |
| Masked Lapwing | | | | | 63 | 5 | 7 | 20 | | 71 | 5 | 9 | | |
| Long-toed Stint | | | | | | | | | | | | | | |
| Redshank | | | | | | | | | | | | | | |
| Broad-billed Sandpiper | | | | | | | | | | | | | | |
| Ruff | | | | | | | | | | | | | | |
| Little Ringed Plover | | | | | | | | | | | | | | |
| Asian Dowitcher | | | | | | | | | | | | | | |
| Unidentified small | | | | | | | | | | | | | | |
| Unidentified medium | | | | | | | | | | | | | | |
| Unidentified large | | | | | | | | | | | | | | |
| TOTAL | | 0 | 0 | 3390 | 38176 | 691 | 0 | 32 | 889 | 0 | 4197 | 511 | 989 | 0 |
| No SPECIES | | 0 | 0 | 18 | 26 | 17 | 0 | 4 | 20 | 0 | 24 | 11 | 14 | 0 |

SUMMER 2006**VICTORIA****TASMANIA**

| | Corner Inlet East | Corner Inlet West | Westernport | East Port Phillip | Altona | Wribbee/Avalon | BellarinePen/ Mud Is | E Derwent/ Pittwater | Marion & Blackman Bays | North West | Cape Portland/ NNE |
|------------------------|-------------------|-------------------|-------------|-------------------|--------|----------------|----------------------|----------------------|------------------------|------------|--------------------|
| Date | 26/2 | 27/2 | 18/2 | | 21/2 | 6/2 | | 12/2 | 11/2 | 29/1 | feb |
| Latham's Snipe | | | | | | | 42 | | | | |
| Black-tailed Godwit | | 1073 | | | | 6 | | | | | |
| Bar-tailed Godwit | 9010 | | 445 | | | 25 | 1523 | 89 | 60 | | 32 |
| Little Curlew | | | | | | | | | | | |
| Whimbrel | 22 | | 28 | | | | | 1 | | | |
| Eastern Curlew | 660 | 264 | 705 | | | 1 | 103 | 55 | | 119 | 36 |
| Marsh Sandpiper | | | | | 43 | 117 | 149 | | | | |
| Common Greenshank | 124 | 56 | 233 | 1 | 32 | 118 | 276 | 37 | | 2 | 16 |
| Wood Sandpiper | | | | | | 1 | | | | | |
| Terek Sandpiper | | | | | | | | | | | |
| Common Sandpiper | | | | | | 1 | 1 | | | | |
| Grey-tailed Tattler | | | | | | 6 | | | | 2 | |
| Wandering Tattler | | | | | | | | | | | |
| Tattler Spp | | | | | | | | | | | |
| Ruddy Turnstone | 25 | | 95 | | | 7 | 65 | | | 240 | 76 |
| Great Knot | 110 | | | | 1 | | 15 | | | 1 | |
| Red Knot | 1970 | 370 | 6 | | | 1 | 219 | | | 1520 | |
| Sanderling | 102 | | | | | | 2 | | | 11 | |
| Red-necked Stint | 8100 | 4046 | 7691 | 140 | 4560 | 9305 | 8018 | 840 | 236 | 15726 | 424 |
| Pectoral Sandpiper | | | | | | 1 | | | | | |
| Sharp-tailed Sandpiper | 160 | | 881 | 301 | 372 | 4594 | 7825 | | | 145 | 12 |
| Curlew Sandpiper | 400 | 180 | 597 | 20 | 856 | 3247 | 3541 | 56 | 5 | 2374 | 31 |
| Bush Stone-curlew | | | | | | | | | | | |
| Beach Stone-curlew | | | | | | | | | | | |
| Pied Oystercatcher | 962 | 220 | 312 | | | 91 | 62 | 1169 | 56 | 842 | 70 |
| Sooty Oystercatcher | 253 | 345 | 2 | | | | 1 | 19 | | 249 | 39 |
| Black-winged Stilt | | | | 83 | 58 | 305 | 392 | | | | |
| Banded Stilt | | | | | 310 | | | | | | |
| Red-necked Avocet | | | | 250 | 460 | 66 | | | | | |
| Pacific Golden Plover | | | 52 | | 56 | 20 | 41 | 28 | | | 54 |
| Grey Plover | 264 | | | | | 1 | 40 | | | 109 | |
| Red-capped Plover | | 2 | 77 | 31 | 26 | 56 | 159 | 66 | 7 | 153 | 34 |
| Double-banded Plover | 24 | 42 | 25 | 2 | 1 | 2 | | 1 | 2 | 1 | 5 |
| Lesser Sand Plover | | | | | | | | | | 2 | |
| Greater Sand Plover | | | | | | | | | | | |
| Oriental Plover | | | | | | | | | | | |
| Black-fronted Dotterel | | | | 55 | | 3 | 11 | 6 | | | |
| Hooded Plover | | | | | | | | 3 | 7 | 62 | 1 |
| Red-kneed Dotterel | | | | 7 | | 1 | 4 | | | | |
| Banded Lapwing | | | | | | | 23 | | | | 73 |
| Masked Lapwing | | 37 | 457 | 168 | 19 | 361 | 477 | 487 | | 8 | 136 |
| Long-toed Stint | | | | | | | | | | | |
| Redshank | | | | | | | | | | | |
| Broad-billed Sandpiper | | | | | 1 | | | | | | |
| Ruff | | | | | | | | | | | |
| Little Ringed Plover | | | | | | | | | | | |
| Asian Dowitcher | | | | | | | | | | | |
| Unidentified small | | | | | | | | | | | |
| Unidentified medium | | | | | | | | | | | |
| Unidentified large | | | | | | | | | | | |
| 0 | 22186 | 6635 | 11606 | 1058 | 6795 | 18336 | 22989 | 2857 | 373 | 21566 | 1039 |
| 0 | 15 | 11 | 15 | 11 | 14 | 24 | 23 | 14 | 7 | 18 | 15 |

SUMMER 2006

| | SA | | | WA | | | NT | Total- all sites |
|------------------------|-------------|-----------------|----------------|--------|--------------------|--------------------|--------|------------------|
| | SE coast SA | Gulf St Vincent | Eyre peninsula | Albany | Swan Est/ Rottnest | 80 Mile (km 10-30) | Broome | |
| Date | 28/2 | | | | No/De | 16/12 | 29/1 | |
| Latham's Snipe | | | | | | | | |
| Black-tailed Godwit | | | | | 1 | 1246 | 703 | 4105 |
| Bar-tailed Godwit | 2 | | | | 12 | 12036 | 6320 | 141 |
| Little Curlew | | | | | | 1280 | 1 | 1281 |
| Whimbrel | | N | N | N | 1 | 8 | 417 | 158 |
| Eastern Curlew | 1 | O | O | O | | 184 | 363 | 36 |
| Marsh Sandpiper | | T | T | T | | | | 1 |
| Common Greenshank | 14 | | | | 24 | 451 | 295 | 4 |
| Wood Sandpiper | | C | C | C | | | | |
| Terek Sandpiper | | O | O | O | 2904 | 749 | 5 | 3995 |
| Common Sandpiper | | U | U | U | | 15 | 56 | 82 |
| Grey-tailed Tattler | | N | N | N | 3489 | 1908 | 5 | 8013 |
| Wandering Tattler | | T | T | T | | | | |
| Tattler Spp | | E | E | E | | | | |
| Ruddy Turnstone | 313 | D | D | D | 211 | 98 | 433 | 50 |
| Great Knot | | | | | 11 | 29880 | 10201 | 3402 |
| Red Knot | | | | | | 43 | 1210 | 200 |
| Sanderling | 450 | | | | 91 | 149 | 6 | 130 |
| Red-necked Stint | 1143 | | | | 1347 | 3284 | 5127 | 34 |
| Pectoral Sandpiper | | | | | | | | |
| Sharp-tailed Sandpiper | 87 | | | | | 1 | 9 | 18461 |
| Curlew Sandpiper | 29 | | | | 25 | 381 | 1543 | |
| Bush Stone-curlew | | | | | | | | |
| Beach Stone-curlew | | | | | | | 2 | |
| Pied Oystercatcher | 5 | | | | 110 | 2 | 45 | |
| Sooty Oystercatcher | 9 | | | | | 1 | 18 | |
| Black-winged Stilt | | | | | 91 | | 159 | 2 |
| Banded Stilt | | | | | 4 | | | |
| Red-necked Avocet | | | | | 11 | | 1 | |
| Pacific Golden Plover | 84 | | | | 3 | 32 | 28 | 2 |
| Grey Plover | | | | | 59 | 339 | 173 | 54 |
| Red-capped Plover | 85 | | | | 262 | 2041 | 1145 | 26 |
| Double-banded Plover | 22 | | | | | | | |
| Lesser Sand Plover | | | | | | 6 | 78 | |
| Greater Sand Plover | | | | | | 7933 | 3903 | 170 |
| Oriental Plover | | | | | | 10598 | 1 | |
| Black-fronted Dotterel | | | | | | | | |
| Hooded Plover | 4 | | | | | | | |
| Red-kneed Dotterel | | | | | | | | |
| Banded Lapwing | | | | | 24 | | | |
| Masked Lapwing | 97 | | | | | | | 20 |
| Long-toed Stint | | | | | | | | |
| Redshank | | | | | | | | |
| Broad-billed Sandpiper | | | | | | 4 | 328 | |
| Ruff | | | | | | | | |
| Little Ringed Plover | | | | | | | | 3 |
| Asian Dowitcher | | | | | | | | |
| Unidentified small | | | | | | | | |
| Unidentified medium | | | | | | | | |
| Unidentified large | | | | | | | | |
| 0 | 2345 | 0 | 0 | 0 | 2286 | 75145 | 35724 | 5202 |
| 0 | 15 | 0 | 0 | 0 | 16 | 24 | 28 | 21 |

| WINTER 2006 | | QUEENSLAND | | | | | NEW SOUTH WALES | | | | | | |
|------------------------|------|------------|------------|--------|-------------|-------|-----------------|----------|----------|--------|--------------|------------|------------|
| | | Cairns | Townsville | Mackay | Moreton Bay | Bowen | Tweed | Richmond | Clarence | Hunter | Parramatta R | Botany Bay | Shoalhaven |
| | Date | | | | | | | | | | | | |
| Latham's Snipe | | | | | | | | | | 24/6 | 24/6 | 24/6 | |
| Black-tailed Godwit | | | | | 14 | | | | | 1 | | | |
| Bar-tailed Godwit | | | | 27 | 958 | | | | | 172 | 33 | 113 | |
| Little Curlew | | | | | | | | | | | | | |
| Whimbrel | | | | 3 | 196 | | | | | 30 | | 45 | |
| Eastern Curlew | N | N | 22 | 198 | N | | N | N | 54 | | | 21 | N |
| Marsh Sandpiper | O | O | | 7 | O | | O | O | | | | | O |
| Common Greenshank | T | T | | 7 | T | | T | T | 9 | | | | T |
| Wood Sandpiper | | | | | | | | | | | | | |
| Terek Sandpiper | C | C | | 1 | C | | C | C | | | | | C |
| Common Sandpiper | O | O | | | O | | O | O | | | | | O |
| Grey-tailed Tattler | U | U | 32 | 584 | U | | U | U | 4 | | | 3 | U |
| Wandering Tattler | N | N | | | N | | N | N | | | | | N |
| Tattler Spp | T | T | | | T | | T | T | | | | | T |
| Ruddy Turnstone | E | E | 1 | 53 | E | | E | E | | | | 5 | E |
| Great Knot | D | D | | 5 | D | | D | D | | | | | D |
| Red Knot | | | | | | | | | | | | | |
| Sanderling | | | | | | | | | | | | | |
| Red-necked Stint | | | | 1184 | | | | | | 8 | | 14 | |
| Pectoral Sandpiper | | | | | | | | | | | | | |
| Sharp-tailed Sandpiper | | | | | | | | | | | | | |
| Curlew Sandpiper | | | | 66 | | | | | | | | | |
| Bush Stone-curlew | | | | | | | | | | | | | |
| Beach Stone-curlew | | | | | | | | | | | | | |
| Pied Oystercatcher | | | 1 | 188 | | | | | | 3 | | 48 | |
| Sooty Oystercatcher | | | | | | | | | | | | 1 | |
| Black-winged Stilt | | | | 721 | | | 2 | | | 320 | 34 | 6 | |
| Banded Stilt | | | | | | | | | | | | | |
| Red-necked Avocet | | | | 250 | | | | | | 3977 | | | |
| Pacific Golden Plover | | | | 49 | | | | | | | | 2 | |
| Grey Plover | | | | 6 | | | | | | | | | |
| Red-capped Plover | | | 23 | 165 | | | | | | 23 | | 6 | |
| Double-banded Plover | | | | 116 | | | | | | | | 50 | |
| Lesser Sand Plover | | | | 76 | | | | | | | | | |
| Greater Sand Plover | | | | 18 | | | | | | | | | |
| Oriental Plover | | | | | | | | | | | | | |
| Black-fronted Dotterel | | | | 3 | | | 7 | | | 46 | 21 | | |
| Hooded Plover | | | | | | | | | | | | | |
| Red-kneed Dotterel | | | | 1 | | | | | | | | | |
| Banded Lapwing | | | | | | | | | | | | | |
| Masked Lapwing | | | | 61 | | | 8 | | | 66 | 2 | 2 | |
| Long-toed Stint | | | | | | | | | | | | | |
| Redshank | | | | | | | | | | | | | |
| Broad-billed Sandpiper | | | | | | | | | | | | | |
| Ruff | | | | | | | | | | | | | |
| Swinhoe's Snipe | | | | | | | | | | | | | |
| Asian Dowitcher | | | | | | | | | | | | | |
| Unidentified small | | | | | | | | | | | | | |
| Unidentified medium | | | | | | | | | | | | | |
| Unidentified large | | | | | | | | | | | | | |
| TOTAL | | 0 | 0 | 109 | 4927 | 0 | 17 | 0 | 0 | 4713 | 90 | 316 | 0 |
| No SPECIES | | 0 | 0 | 7 | 24 | 0 | 3 | 0 | 0 | 13 | 4 | 13 | 0 |

WINTER 2006

VICTORIA

TASMANIA

| | Corner Inlet East | Corner Inlet West | Westernport | East Port Phillip | Altona | Wrrbee/Avalon | BellarinePen/ Mud Is | | E Derwent/ Pittwater | Marion & Blackman Bays | North West | Cape Portland/ NNE |
|------------------------|-------------------|-------------------|-------------|-------------------|--------|---------------|----------------------|--|----------------------|------------------------|------------|--------------------|
| Date | 14/6 | 24/7 | 26/6 | Jun | 8/7 | 25/6 | 24/6 | | 24/6 | 2/7 | 23/7 | 21/6 |
| Latham's Snipe | | | | | | | 1 | | | | | |
| Black-tailed Godwit | | | | | | | 107 | | 63 | | 1 | |
| Bar-tailed Godwit | 3171 | 410 | 309 | | | | | | | | | |
| Little Curlew | | | | | | | | | | | | |
| Whimbrel | | | 2 | | | | 1 | | | | | |
| Eastern Curlew | 30 | 15 | 56 | | | | 1 | | 3 | | 1 | |
| Marsh Sandpiper | | | | | | 2 | | | | | | |
| Common Greenshank | | | | | 3 | 1 | 82 | | 2 | | 1 | |
| Wood Sandpiper | | | | 1 | | | | | | | | |
| Terek Sandpiper | | | 1 | | | | | | | | | |
| Common Sandpiper | | | | | | | | | | | | |
| Grey-tailed Tattler | | | | | | | | | | | | |
| Wandering Tattler | | | | | | | | | | | | |
| Tattler Spp | | | | | | | | | | | | |
| Ruddy Turnstone | 10 | | 10 | | | | 39 | | | | 464 | |
| Great Knot | 30 | | | | | | 10 | | | | | |
| Red Knot | 350 | 3 | 42 | | | | 103 | | | | 170 | |
| Sanderling | 12 | | | | | | | | | | | |
| Red-necked Stint | 405 | 475 | 286 | 2 | 211 | 717 | 1032 | | 68 | 52 | 282 | |
| Pectoral Sandpiper | | | | | | | | | | | | |
| Sharp-tailed Sandpiper | | | | | | | 39 | | | | | |
| Curlew Sandpiper | | 31 | 8 | | 3 | 194 | 135 | | | | | |
| Bush Stone-curlew | | | | | | | | | | | | |
| Beach Stone-curlew | | | | | | | | | | | | |
| Pied Oystercatcher | 516 | 138 | 391 | | | 36 | 54 | | 598 | 203 | 346 | 70 |
| Sooty Oystercatcher | 166 | 206 | 2 | | | 1 | 1 | | 57 | | 313 | 45 |
| Black-winged Stilt | | | | 126 | 54 | 436 | 352 | | | | | |
| Banded Stilt | | | | | | | | | | | | |
| Red-necked Avocet | | | 142 | | | 147 | 38 | | | | | |
| Pacific Golden Plover | | | | | 1 | | 1 | | | | | |
| Grey Plover | 25 | | | | | | 5 | | | | | |
| Red-capped Plover | 12 | | 73 | | 56 | 128 | 336 | | 155 | 16 | 65 | 32 |
| Double-banded Plover | 240 | 190 | 410 | | 258 | 97 | 289 | | 153 | 30 | 875 | 53 |
| Lesser Sand Plover | | | | | | | | | | | | |
| Greater Sand Plover | | | | | | | | | | | | |
| Oriental Plover | | | | | | | | | | | | |
| Black-fronted Dotterel | | | | 129 | | 68 | 25 | | | | | 2 |
| Hooded Plover | 5 | | | | | | 31 | | | 6 | 41 | 12 |
| Red-kneed Dotterel | | | | | | 47 | 3 | | | | | |
| Banded Lapwing | | | | | | | | | | | | 4 |
| Masked Lapwing | | 10 | 129 | 134 | 15 | 117 | 291 | | 103 | 17 | 34 | 30 |
| Long-toed Stint | | | | | | | | | | | | |
| Redshank | | | | | | | | | | | | |
| Broad-billed Sandpiper | | | | | | | | | | | | |
| Ruff | | | | | | | | | | | | |
| Swinhoe's Snipe | | | | | | | | | | | | |
| Asian Dowitcher | | | | | | | | | | | | |
| Unidentified small | | | | | | | 200 | | | | | |
| Unidentified medium | | | | | | | | | | | | |
| Unidentified large | | | | | | | | | | | | |
| 0 | 4972 | 1478 | 1861 | 392 | 601 | 1991 | 3176 | | 1202 | 324 | 2593 | 248 |
| 0 | 13 | 9 | 14 | 5 | 8 | 13 | 24 | | 9 | 6 | 12 | 8 |

WINTER 2006

| WINTER 2006 | | SA | | | WA | | | NT | | Total- all sites |
|------------------------|-----|-------------|-----------------|----------------|--------|--------------------|--------------------|--------|--------|------------------|
| | | SE coast SA | Gulf St Vincent | Eyre peninsula | Albany | Swan Est/ Rottnest | 80 Mile (km 10-30) | Broome | Darwin | |
| Date | | | | | | | | | | |
| | | 18/7 | | | | | 23/6 | 25/6 | 16/7 | |
| Latham's Snipe | | | | | | | | | | 0 |
| Black-tailed Godwit | | | | | | | | 135 | | 151 |
| Bar-tailed Godwit | | | | | | | 783 | 1446 | 34 | 7627 |
| Little Curlew | | | | | | | | | | 0 |
| Whimbrel | | | | | | | 6 | 248 | 1 | 532 |
| Eastern Curlew | | | N | N | N | N | 38 | 117 | 4 | 560 |
| Marsh Sandpiper | | | O | O | O | O | 5 | | | 14 |
| Common Greenshank | | | T | T | T | T | 68 | | 5 | 178 |
| Wood Sandpiper | | | | | | | | | | 1 |
| Terek Sandpiper | | | C | C | C | Y | 531 | | 1 | 534 |
| Common Sandpiper | | | O | O | O | E | | | 6 | 6 |
| Grey-tailed Tattler | | | U | U | U | T | 460 | 80 | 1 | 1164 |
| Wandering Tattler | | | N | N | N | | | | | 0 |
| Tattler Spp | | | T | T | T | A | | | | 0 |
| Ruddy Turnstone | 151 | | E | E | E | V | 49 | 31 | 6 | 819 |
| Great Knot | | | D | D | D | A | 2297 | 2205 | 46 | 4593 |
| Red Knot | | | | | | I | 386 | 119 | | 1173 |
| Sanderling | | | | | | L | 25 | | 12 | 49 |
| Red-necked Stint | 57 | | | | | A | 572 | 1 | | 5366 |
| Pectoral Sandpiper | | | | | | B | | | 62 | 62 |
| Sharp-tailed Sandpiper | | | | | | L | | | | 39 |
| Curlew Sandpiper | | | | | | E | 278 | | | 715 |
| Bush Stone-curlew | | | | | | | | | | 0 |
| Beach Stone-curlew | | | | | | | | | | 0 |
| Pied Oystercatcher | 13 | | | | | | | 21 | 2 | 2628 |
| Sooty Oystercatcher | 8 | | | | | | | 17 | | 817 |
| Black-winged Stilt | | | | | | | | 378 | | 2429 |
| Banded Stilt | | | | | | | | | | 0 |
| Red-necked Avocet | | | | | | | | 23 | | 4577 |
| Pacific Golden Plover | 1 | | | | | | | | 2 | 56 |
| Grey Plover | | | | | | | 104 | 2 | 15 | 157 |
| Red-capped Plover | 95 | | | | | | 2730 | 30 | 47 | 3992 |
| Double-banded Plover | 38 | | | | | | | | | 2799 |
| Lesser Sand Plover | | | | | | | | | 1 | 77 |
| Greater Sand Plover | | | | | | | 1026 | 1 | 219 | 1264 |
| Oriental Plover | | | | | | | | | | 0 |
| Black-fronted Dotterel | | | | | | | | | | 301 |
| Hooded Plover | 1 | | | | | | | | | 96 |
| Red-kneed Dotterel | | | | | | | | | | 51 |
| Banded Lapwing | | | | | | | | | | 4 |
| Masked Lapwing | 4 | | | | | | | | 62 | 1085 |
| Long-toed Stint | | | | | | | | | | 0 |
| Redshank | | | | | | | | | | 0 |
| Broad-billed Sandpiper | | | | | | | | | | 0 |
| Ruff | | | | | | | | | | 0 |
| Swinhoe's Snipe | | | | | | | | | | 0 |
| Asian Dowitcher | | | | | | | | | | 0 |
| Unidentified small | | | | | | | | 1380 | | 1580 |
| Unidentified medium | | | | | | | | | | 0 |
| Unidentified large | | | | | | | | | | 0 |
| 0 | 368 | 0 | 0 | | 0 | 0 | 9358 | 6234 | 526 | 45496 |
| 0 | 9 | 0 | 0 | | 0 | 0 | 16 | 17 | 18 | 50 |

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Extensions to these dates must be discussed with the Editor.

Contributors of research papers and notes are encouraged to submit well in advance of these dates to allow time for refereeing. Other contributors are reminded that they will probably have some comments to consider, and possibly incorporate, at some time after submission. It would be appreciated if this could be done promptly.

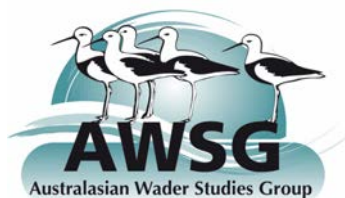
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Vignettes:

Rob Mancini, p12

Annie Rogers, p19



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