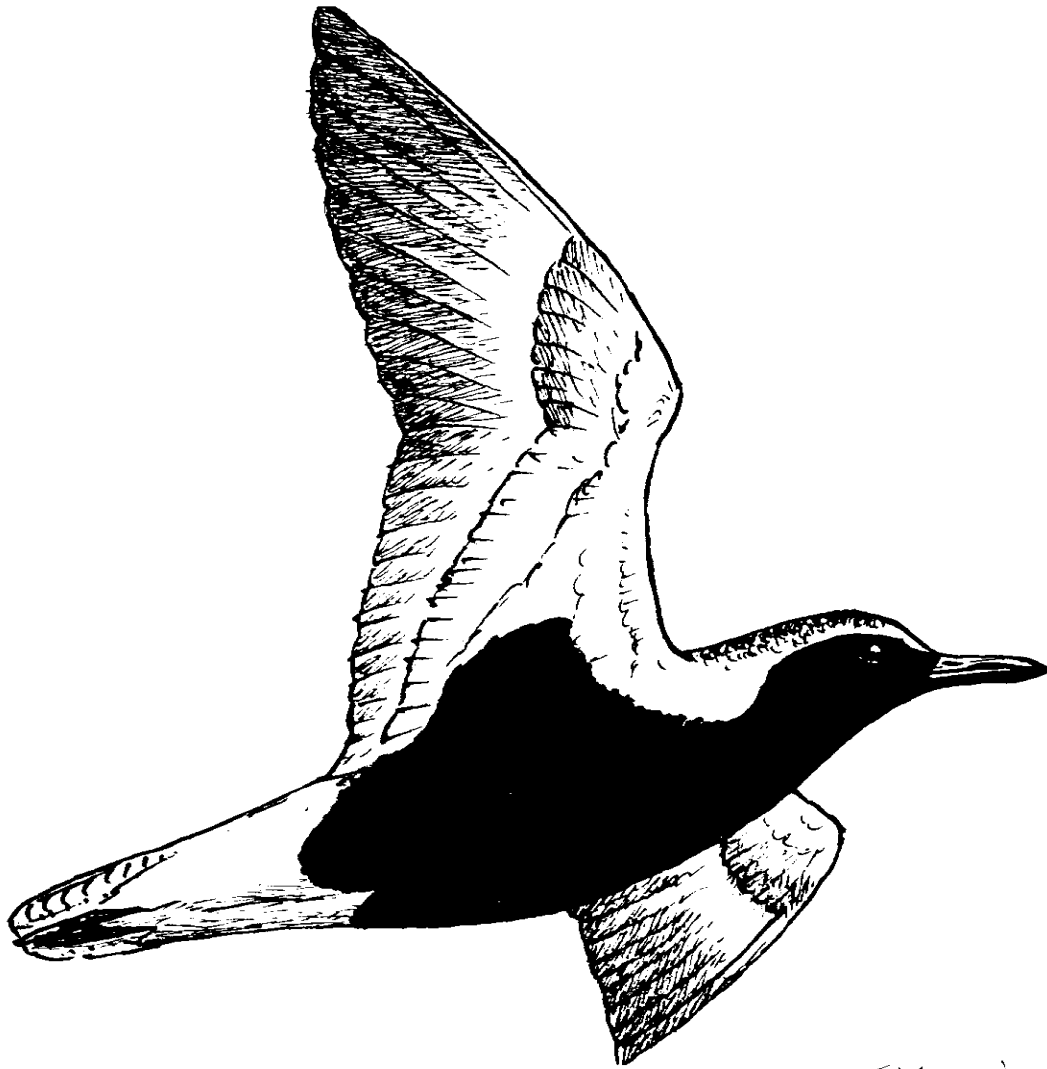


VWSG BULLETIN

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VICTORIAN WADER STUDY GROUP INC.

MISSION STATEMENT

The principal aim of the Victorian Wader Study Group is to gather, through extensive planned fieldwork programs, comprehensive data on waders and terns throughout Victoria on a long-term basis.

This scientifically collected information is intended to form a factual base for conservation considerations, to be a source of information for education of a wider audience, to be a means of generating interest of the general community in environmental and conservation issues, and to be a major contribution to the Australian Flyway and Worldwide knowledge of waders and terns.

FORMATION/BACKGROUND

The wader banding fieldwork, which led to the formation of the Victorian Wader Study Group, commenced in December 1975. The Group was formally named in late 1978 and incorporated in 1986.

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VWSG WEB SITE www.vicnet.net.au/~vwsg

Our web site is maintained by Roger Standen

Summary of VWSG Activities to July 2010

Clive Minton

Introduction

We live in exciting times. Who would have thought that more than 30 years after the Victorian Wader Study Group commenced intensive banding studies we would still be learning new things about wader migration – and at an ever increasing rate?!

The introduction of new techniques and new technology has enormously enhanced the effectiveness of our banding activities in recent years. The fabulous results obtained from our first deployment of light sensor geolocators on Ruddy Turnstones are detailed in an article in this Bulletin and have already received worldwide publicity. With so many more geolocators deployed on Ruddy Turnstones in south-east Australia in March/April 2010 we are in for a really exciting time when these birds return from the Northern Hemisphere from October onwards – providing of course we can catch them to remove the geolocators for downloading of the stored data. Being able to know where an individual bird was on every day of its life over a period of months – including two migrations and an arctic breeding season – is indeed an unbelievable advance on the information obtained by banding/flagging alone.

Another huge recent step forward is the increased use of individually engraved leg-flags. The incredible amount of movements data already generated on Bar-tailed Godwits in the first year is detailed in a separate article. For the first time this has provided quantitative information on the dates on which most one year old Bar-tailed Godwits from Australia move across the Tasman Sea to become long-term members of the population which spends the non-breeding season in New Zealand. The individual flags also enabled two Bar-tailed Godwits to be identified migrating northwards through Japan when only two years old – previously they were thought not to start migrating until age three.

Engraved leg-flags have been used on Ruddy Turnstones for a number of years but the information gained has escalated enormously in the last year due to hugely intensive resighting efforts in Taiwan. An article covering this also details the sighting histories of two individuals from King Island which have been seen on almost every northward and southward migration through Taiwan since they were banded/flagged. They have also been recaptured and seen back on King Island in intervening non-breeding seasons. All of the above is on top of the approximately 2,000 sightings received each year from overseas and elsewhere in Australia of a range of other waders given plain leg-flags in the VWSG's study areas in Victoria, South Australia and King Island (Tasmania).

Perhaps the most amazing record of all during 2009/10 was the sighting in Corner Inlet on 15th September 2009 of a Bar-tailed Godwit carrying an engraved leg-flag put on in Alaska. The sighting was made by Rob Schuckard, who had come over from New Zealand especially to search for flagged waders on the eastern coast of Australia which might be on their way back to their non-breeding areas in New Zealand. Unbelievably Rob Schuckard himself had put this flag on a breeding Bar-tailed Godwit in Alaska two years previously. The bird had made a 12,000km journey and yet was resighted by the same person who had originally marked it.

After all these highlights the rest of the Bulletin may appear to be dull. But in fact there were major achievements and notable records in a range of areas and these are detailed throughout this Bulletin. As usual, a summary of some of the main components of the VWSG's program is given below.

Banding

The overall catch total of 4796 waders was the lowest since 1995. This is mainly because far fewer Red-necked Stint have been caught, partly because populations are currently lower but also because more effort is directed towards obtaining satisfactory samples of other species. Notable totals in 2009 were 510 Sharp-tailed Sandpiper, 509 Ruddy Turnstone, 389 Bar-tailed Godwit, 172 Sanderling and 136 Red Knot. All but one of the Red Knot were caught in the winter period. Twenty-seven Greenshank was also a useful total. Seventy-nine Sooty Oystercatcher was satisfactory but 91 Pied Oystercatcher was rather below the target level.

Overall the VWSG has caught 223,849 waders, almost all since intensive cannon-netting started in early 1979. Werribee Sewage Farm is still the top location (1635 in 2009, 64,587 altogether). But good totals have also been obtained at various locations in Westernport, at Queenscliff/Swan Bay, at Corner Inlet, at Anderson's Inlet (but no catches in recent years) and increasingly recently at Sandy Point. 12,529 have now also been caught in South Australia and 964 on King Island.

Flagging was introduced in December 1990. Since then 91,354 waders have been flagged in Victoria and 7231 in South Australia.

Recoveries, retraps and flag sightings

A summary of all recoveries and flag sightings is given in the Bulletin, together with full details of a small selection of these. Because so much data is now being collected the detailed listings have become more selective, partly to help with the readability of each report.

17.3% of the birds caught by the VWSG in 2009 were recaptures of birds previously banded by the Group. This is about the normal level. There were no waders which were greater than 20 years old during this past year. Previously we have had Bar-tailed Godwit and Eastern Curlew which were 22 years old and a Pied Oystercatcher which was 29 years old.

There were relatively few recoveries of our birds overseas in the last year. This was offset by the control of a Chinese-banded Red-necked Stint in South Australia. The volume of flag sightings however continued at a very high level with 1976 Victorian-flagged waders being seen at other locations. Outstanding was 599 Red Knot sightings in the Yellow Sea in China, out of a total of 768 Victorian-flagged birds seen in China overall.

A Chinese-flagged Curlew Sandpiper was seen at Stockyard Point but even more remarkable was the sighting by Bernie McCarrick, on the same day at Laverton Saltworks, of a Sharp-tailed Sandpiper flagged in China and another flagged in Taiwan.

Terns

The 2009/10 breeding season was a record one for pairs (6300) of Crested Terns. This was mainly because the colony at The Nobbies increased to an incredible 4800

pairs. It is hard to believe that the Nobbies colony only started 15 years ago. Most of the foundation birds from this colony came from Mud Islands, which has been the focus of VWSG conservation efforts for many years.

Other good tern news was a new breeding colony of Fairy Tern at Inverloch, monitored by Steve Johnson and Brian Martin. The 29 pairs produced at least 32 chicks. This is the first successful significant colony of breeding Fairy Terns on the South Gippsland/Central Victoria coast for many years.

Other pleasing tern news was resightings of both Little and Fairy Tern which were both 20 years old. The continuing flow of sightings of flagged Common Tern also probably includes birds which are 20 years old.

Breeding success

We were hoping that the arctic breeding season of 2009 would be a good one after the very poor breeding season our waders experienced in 2008. Our prayers were answered with a bumper crop of young birds of many species in the wader populations throughout south-eastern Australia in the 2009/10 non-breeding season. Overall it was probably one of the best breeding seasons ever, with only Red-necked Stint apparently missing the bonanza. It was particularly welcome for Bar-tailed Godwit as it was the second consecutive good breeding season for them, being the only species which had enjoyed reasonable breeding success in 2008.

Finances

VWSG membership continues to grow slightly and the list at the end of this Bulletin contains over 200 names. Some of these are not particularly active in fieldwork but their financial and other support is greatly appreciated.

The Group's financial position remains satisfactory in spite of a huge expenditure of \$7773 on geolocators in early 2010. We were very fortunate that Maureen Christie raised \$4200 towards these costs through the "Friends of Shorebirds South-east" group. Other key financial contributions towards these geolocator costs and other operating expenses were received from Coast Action / Coast Care and the Department of Sustainability and Environment in Victoria.

With the plan to spend a further \$10-20,000 on geolocators in each of the next two years considerable external funding will be needed. Applications will be made to grant-giving bodies but if any members can find new sources of funding that would be extremely welcome. With this excellent new technology available it is highly desirable that the VWSG proceeds as rapidly as practical to utilise it to generate information on the migration strategy of different wader species. This information is often fundamental to conservation of species and their habitats.

Acknowledgements

As has been noted in previous VWSG Bulletins and publications the results we achieve are because of the input of a huge number of people in a great variety of ways. These range from landowners who give the Group permission to cross or operate on their land, to members and others who form the fieldwork teams, and to so many people who carry out tasks "behind the scenes" on behalf of the Group (e.g. flag-making, equipment maintenance, data entry). Some of these are listed in the "Subsidiary Activities" list prepared by Rosemary Davidson. All are hugely thanked for their contribution to our on-going success.

Total Number of Waders Caught – VWSG 2009

SPECIES	New	Retrap	Total
Bar-tailed Godwit	352	37	389
Eastern Curlew	8	0	8
Common Greenshank	25	2	27
Ruddy Turnstone	239	270	509
Great Knot	7	0	7
Red Knot	136	0	136
Sanderling	91	81	172
Red-necked Stint	2352	347	2699
Sharp-tailed Sandpiper	499	11	510
Curlew Sandpiper	123	15	138
Pied Oystercatcher	56	35	91
Sooty Oystercatcher	52	27	79
Grey Plover	16	6	22
Red-capped Plover	6	0	6
Double-banded Plover	2	0	2
Hooded Plover	1	0	1
TOTALS - 16 Species	3965	831	4796

Table prepared by Helen Vaughan and Clive Minton

**Total Waders Caught by Species
1975 to 31 December 2009 – VWSG**

Species	New	Retrap	Total
Latham's Snipe	347	14	361
Black-tailed Godwit	4	0	4
Bar-tailed Godwit	4617	590	5207
Short-billed Dowitcher	1	0	1
Whimbrel	47	6	53
Eastern Curlew	822	72	894
Marsh Sandpiper	2	0	2
Common Greenshank	535	64	599
Terek Sandpiper	37	1	38
Grey-tailed Tattler	38	3	41
Ruddy Turnstone	3998	1601	5599
Great Knot	689	89	778
Red Knot	5023	735	5758
Sanderling	4311	1672	5983
Little Stint	8	0	8
Red-necked Stint	114262	31248	145510
Long-toed Stint	1	0	1
Pectoral Sandpiper	2	0	2
Sharp-tailed Sandpiper	9648	435	10083
Curlew Sandpiper	25316	4836	30152
Cox's Sandpiper	1	0	1
Broad-billed Sandpiper	5	0	5
Pied Oystercatcher	2622	1366	3988
Sooty Oystercatcher	913	320	1233
Black-winged Stilt	44	0	44
Banded Stilt	486	0	486
Red-necked Avocet	368	5	373
Pacific Golden Plover	265	25	290
Grey Plover	176	29	205
Red-capped Plover	686	185	871
Double-banded Plover	3686	1003	4689
Lesser Sand Plover	115	11	126
Greater Sand Plover	31	3	34
Black-fronted Plover	57	4	61
Hooded Plover	30	2	32
Red-kneed Dotterel	136	11	147
Masked Lapwing	187	3	190
TOTALS - 37 Species	179516	44333	223849

Table prepared by Helen Vaughan and Clive Minton

New and Retrapped Waders Caught Each Calendar Year by VWSG

Calendar Year	New	Retrap	Total
* 1975	9		9
* 1976	616	4	620
* 1977	482	12	494
* 1978	1296	42	1338
1979	7436	486	7922
1980	6121	1206	7327
1981	4561	869	5430
1982	3774	796	4570
1983	2875	628	3503
1984	4272	1045	5317
1985	4073	1051	5124
1986	7144	2057	9201
1987	5350	1559	6909
1988	8019	2697	10716
1989	5437	1584	7021
1990	4094	1950	6044
1991	3224	850	4074
1992	4652	861	5513
1993	8831	2588	11419
1994	4839	1753	6592
1995	2708	625	3333
1996	5263	1035	6298
1997	4366	1050	5416
1998	8083	1408	9491
1999	6515	1591	8106
2000	10350	2594	12944
2001	4839	1320	6159
2002	10421	2162	12583
2003	8495	2854	11349
2004	5110	1224	6334
2005	6320	1893	8213
2006	6676	1467	8143
2007	4689	924	5613
2008	4611	1317	5928
2009	3965	831	4796
TOTALS to end 2009	179516	44333	223849

Average annual total for 1979 - 2009 = 7142 (* excluded)

Table prepared by Helen Vaughan and Clive Minton

Total Waders Caught Each Six Months

1979-2009 - VWSG

Calendar Year	January to June	July to December	Total
1975			9
1976			620
1977			494
1978			1338
1979	4289	3633	7922
1980	4127	3200	7327
1981	2113	3317	5430
1982	2394	2176	4570
1983	2882	621	3503
1984	2654	2663	5317
1985	3972	1152	5124
1986	5000	4201	9201
1987	3135	3774	6909
1988	5235	5481	10716
1989	3854	3167	7021
1990	1661	4383	6044
1991	2376	1698	4074
1992	3357	2156	5513
1993	5287	6132	11419
1994	2789	3803	6592
1995	1521	1812	3333
1996	1802	4496	6298
1997	1913	3503	5416
1998	5568	3923	9491
1999	4142	3964	8106
2000	5987	6957	12944
2001	3851	2308	6159
2002	8174	4409	12583
2003	3033	8316	11349
2004	1288	5046	6334
2005	5003	3210	8213
2006	5192	2951	8143
2007	3646	1967	5613
2008	3812	2116	5928
2009	2726	2070	4796
TOTALS to end 2009	112783	108605	223849

Table prepared by Helen Vaughan and Clive Minton

Location of Waders Caught in Victoria, South Australia and Tasmania

	To Dec 2008	2009	Total
<i>Victoria</i>			
Werribee	62952	1635	64587
Western Port/Flinders	57284	540	57824
Queenscliff/Swan Bay	31496	339	31835
Anderson Inlet (Inverloch)	22228	0	22228
Corner Inlet	27598	1470	29068
Sandy Point/Shallow Inlet	2138	0	2138
Laverton	956	0	956
Mud Islands	753	4	757
Killarney Beach	426	0	426
Geelong (Point Henry/ Belmont Common)	257	0	257
Bendigo SF	143	0	143
Seaford Swamp	98	0	98
Braeside/Croyden	79	0	79
Gippsland Lakes	40	0	40
Toowong	10	0	10
<i>South Australia</i>			
Canunda/ Carpenter Rocks/ Brown ay/Beachport/Coorong	11944	585	12529
<i>Tasmania</i>			
King Island	741	223	964
TOTALS all locations	219143	4796	223939

Table prepared by Helen Vaughan and Clive Minton

Numbers of waders processed by the VWSG each month to December 2009.

	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
Latham's Snipe	51	44	0	0	0	0	0	0	106	99	35	61	396
Short-billed Dowitcher	0	0	0	0	0	1	0	0	0	0	0	0	1
Black-tailed Godwit	1	0	0	0	0	1	0	0	0	1	1	0	4
Bar-tailed Godwit	597	903	777	99	24	655	127	286	77	334	276	501	4656
Whimbrel	3	0	41	0	0	1	0	0	1	4	3	0	53
Eastern Curlew	16	148	19	0	22	18	21	75	175	124	180	100	898
Common Greenshank	69	135	122	0	0	0	0	0	0	37	176	60	599
Marsh Sandpiper	0	0	0	0	0	0	0	0	0	0	0	2	2
Terek Sandpiper	17	2	1	1	2	0	1	1	0	1	1	12	39
Grey-tailed Tattler	31	0	1	3	0	4	0	0	0	0	1	1	41
Ruddy Turnstone	397	587	2024	884	39	23	77	63	75	165	597	540	5471
Great Knot	196	83	26	0	0	30	21	6	16	116	74	130	698
Red Knot	853	392	302	201	2	430	469	139	85	1000	532	284	4689
Sanderling	376	1654	1940	385	0	0	1	5	0	265	414	463	5503
Little Stint	1	2	0	0	0	0	0	0	0	0	1	4	8
Red-necked Stint	2730	1584	6860	2503	546	749	1032	895	992	2140	3458	3685	27174
Long-toed Stint	0	0	0	0	0	0	0	0	0	1	0	0	1
Pectoral Sandpiper	0	2	0	0	0	0	0	0	0	0	0	0	2
Sharp-tailed Sandpiper	1821	934	237	2	0	0	0	16	635	563	625	2800	7633
Curlew Sandpiper	1516	1419	1718	231	223	128	266	514	273	1139	923	1410	9760
Broad-billed Sandpiper	1	2	0	0	0	0	0	0	0	0	0	2	5
Pied Oystercatcher	112	218	407	515	656	833	637	292	146	38	15	59	3928
Sooty Oystercatcher	6	70	85	165	204	341	275	96	0	1	0	0	1243
Black-winged Stilt	1	9	0	0	0	0	1	12	0	4	2	15	44
Banded Stilt	0	0	0	0	0	0	0	0	0	0	0	151	151
Red-necked Avocet	39	0	0	0	0	0	3	67	76	46	47	89	367
Pacific Golden Plover	40	27	60	2	0	0	0	0	0	28	62	65	284
Grey Plover	36	14	4	6	0	9	0	0	2	92	42	1	206
Red-capped Plover	42	86	62	118	210	110	77	28	12	23	24	13	805
Double-banded Plover	0	2	212	296	757	956	1053	964	1	0	0	0	4241
Lesser Sand Plover	54	5	13	7	3	2	2	0	0	1	15	12	114
Greater Sand Plover	21	3	6	0	0	1	1	0	0	0	1	0	33
Black-fronted Dotterel	0	7	1	0	11	16	7	9	2	0	4	8	65
Hooded Plover	0	0	1	1	0	15	0	0	0	0	0	0	17
Red-kneed Dotterel	0	10	0	20	0	44	11	17	12	8	23	1	146
Masked Lapwing	5	6	92	14	4	13	4	1	1	5	21	19	185
Cox's Sandpiper	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL	9032	8348	15011	5453	2703	4380	4086	3486	2687	6235	7554	10488	79463

Table prepared by Helen Vaughan and Clive Minton

Numbers of Waders Leg-flagged in Victoria (orange)

	2007	2008	2009	Total 1989 - 2009
Latham's Snipe	0	0	0	278
Black-tailed Godwit	0	0	0	4
Bar-tailed Godwit	186	268	351	3344
Whimbrel	0	1	0	44
Eastern Curlew	0	0	8	552
Marsh Sandpiper	0	0	0	2
Common Greenshank	0	0	25	456
Terek Sandpiper	0	0	0	13
Grey-tailed Tattler	0	0	0	5
*Ruddy Turnstone	328	497	238	2703
Great Knot	36	1	7	385
Red Knot	248	5	136	3818
*Sanderling	506	261	89	2652
Little Stint	0	0	0	6
Red-necked Stint	1727	2754	2055	59968
Pectoral Sandpiper	0	0	0	1
Sharp-tailed Sandpiper	285	276	496	5479
Curlew Sandpiper	94	308	122	10504
Cox's Sandpiper	0	0	0	1
Broad-billed Sandpiper	0	0	0	3
Black-winged Stilt	0	6	0	26
Banded Stilt	0	0	0	152
Red-necked Avocet	0	0	0	140
Pacific Golden Plover	0	0	0	64
Grey Plover	5	0	16	107
Red-capped Plover	1	6	3	108
Double-banded Plover	10	45	2	424
Lesser Sand Plover	0	0	0	55
Greater Sand Plover	0	0	0	16
Hooded Plover	1	0	1	2
Black-fronted Dotterel	0	0	0	2
Red-kneed Dotterel	0	0	0	3
Masked Lapwing	1	5	0	37
Total	3428	4433	3549	91354

*Includes Ruddy Turnstone and Sanderling flagged with orange (only) in the south east of South Australia between 1993 and 1998.

Numbers of Waders Leg-flagged in South Australia (orange/yellow)

Species	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Latham's Snipe	0	0	4	0	0	0	0	0	0	0	0	4
Grey-tailed Tattler	0	1	0	0	0	0	0	0	0	0	0	1
Bar-tailed Godwit	0	0	0	3	0	8	0	0	0	0	0	11
Ruddy Turnstone	234	226	73	193	76	141	74	258	84	141	96	1596
Red Knot	0	0	0	0	0	1	0	11	0	0	0	12
Sanderling	63	420	2	315	328	76	220	250	506	244	87	2511
Red-necked Stint	126	383	22	319	163	93	174	465	54	90	179	2068
Sharp-tailed Sandpiper	0	2	0	27	7	73	27	21	0	15	0	172
Curlew Sandpiper	24	11	0	190	13	2	103	8	21	33	1	406
Banded Stilt	0	0	0	0	0	0	0	334	0	0	0	334
Pacific Golden Plover	0	2	0	0	1	0	16	13	0	0	0	32
Red-capped Plover	0	0	1	7	5	0	7	4	1	0	0	25
Double-banded Plover	0	0	4	5	1	0	0	27	2	0	1	40
Black-fronted Plover	0	0	0	3	0	0	0	0	0	0	0	3
Hooded Plover	0	0	0	0	1	0	0	0	1	0	1	3
Masked Lapwing	0	0	0	0	4	2	2	4	1		0	13
Total	447	1045	106	1062	599	396	623	1395	670	523	365	7231

Table prepared by Helen Vaughan and Clive Minton

VWSG FIELDWORK PROGRAM
January to December 2010

DATE	PLACE AND OBJECTIVES	HIGH TIDE	
Net set PM Thurs 7 Jan Fri 8 Jan	Flinders - Ruddy Turnstone – to retrieve geolocators	0611	1.57
Mon 11 Jan	Clonmel Island, Corner Inlet-Crested Tern chicks –	0823	2.49
Net set PM Sat 16 Jan Sun 17 Jan	Werribee SF - Red-necked Stint, Curlew Sandpiper, Sharp-tailed Sandpiper	0551	0.84
Net set pm Fri 22 Jan Sat 23 Jan	Barry Beach - Red-necked Stint	0700	2.36
Fri 29 and Sat 30 Jan	West Corner Inlet Count East Corner Inlet Count (Nooramunga NP) (Clive Minton)	0942 1050	2.41 2.31
Mon 1 Feb	Rhyll - Bar-tailed Godwit	1508	2.63
Net set PM Fri 5 Feb Sat 6 Feb	Yallock Creek - Red-necked Stint, Curlew Sandpiper & Sharp-tailed Sandpiper	0650	2.90
Net set PM Sun 7 Feb Mon 8 Feb to Thurs 11 Feb	Corner Inlet (Nooramunga NP) - Bar-tailed Godwit, Red Knot (Stay at Mann's Beach hut)	0724 to 0911	2.53 to 2.22
Wed 17 Feb	Sandy Point (near Waratah Bay) - Sanderling	1521	1.35
Sat 20 Feb & Sun 21 Feb	Stockyard Point - Red-necked Stint & Curlew Sandpiper	1816 0607	2.77 2.73
Net set PM Tues 23 Feb Wed 24 Feb	Swan Island, Queenscliff - Red-necked Stint and Curlew Sandpiper * at The Heads, two hours later in Swan Bay (Camp at Swan Island)	0653*	1.34
Mon 1 March to Mon 8 March	South Australia - Sanderling and Ruddy Turnstone (camping) King Island	1316 to 1743	0.83 to 0.92
Tues 16 March to Tuesday 23 March	Ruddy Turnstone - including applying geolocators	1338 To 1814	1.26 to 1.50
Wed 31 March	Flinders - Sooty Oystercatchers	1355	1.56
Fri 16 April	Flinders - Ruddy Turnstone to apply geolocators	1341	1.55
Sun 18 April and Mon 19 April	Barry Beach - Pied and Sooty Oystercatchers Roussac Farm - Pied and Sooty Oystercatchers	1532 1614	2.36 2.44
Thurs 29 April	Fairhaven – French Island - Pied Oystercatchers	1334	3.00
Sat 1 May	Charles Hall Road - Sooty Oystercatcher	1455	2.58
Sat 15 May	Stockyard Point - Pied Oystercatcher	1407	2.97
Sat 12 June	Rhyll - Pied Oystercatcher & Bar-tailed Godwit	1238	2.83
Sun 13 June	East Corner Inlet Count (Nooramunga NP) (Clive Minton)	1235	2.33
Mon 14 June	West Corner Inlet Count	1333	2.40
Fri 25 to Mon 28 June	Corner Inlet (Nooramunga NP) - Pied and Sooty Oystercatcher and overwintering Bar-tailed Godwit	1056 to 1350	2.35 to 2.37
Tues 13 July	Stockyard Point - Pied Oystercatcher	1402	2.99
Sun 25 July	Rhyll - Pied Oystercatcher & Bar-tailed Godwit	1212	2.70
Sat 14 August	Barry Beach - Pied and Sooty Oystercatcher	1510	2.53
Sun 15 August	Roussac Point Pied and Sooty Oystercatcher	1557	2.61
Sat 28 August	VWSG AGM (Clive & Pat's house) 10am – 10pm 10am Equipment maintenance, 4pm AGM 7-10pm Talks		
Sat 11 September	Stockyard Point - Pied Oystercatcher	1447*	2.91
Sat 31 October	Flinders - Ruddy Turnstone – geolocator retrieval	0615	1.48
Thurs 4 November	Mud Islands - Crested and Caspian Tern	0949	1.31
Fri 5 to Wed 10 November	King Island - Ruddy Turnstone – geolocator retrieval	1053 to 1431	1.32 to 1.44
Fri 12 to Mon 15 November	Queenscliff Bar-tailed Godwit, Red Knot	*0503 To 0657	1.60 to 1.39
Tues 30 November Dave Cropley	Mud Islands Crested and Caspian Tern	1224	Low tide
Sat 11 December	Sandy Point, near Wilson's Prom - Sanderling	1625	1.34
Wed 15 December	Mud Islands Crested and Caspian Tern	1253	Low tide
Tues 21 December	The Nobbies, Phillip Island Crested Tern	1808	Low tide
Wed 22 December	Clonmel Island, Corner Inlet Caspian & Crested Tern	1209	2.10
Tues 28 to Thurs 30 December	Werribee SF Small waders	0843 to 0957	0.90 to 0.90

Recoveries of Waders Relating to Victoria

Clive Minton, Roz Jessop and Maureen Fitzgerald

When large scale wader banding first started in Australia in the late 1970s/early 1980s most reports of birds which had moved overseas were in the form of recoveries. These were dead birds found on shores by members of the public, birds killed by hunters, and occasionally birds recaptured by the small number of wader banders operating in other countries at that time. Recovery rates for the different species ranged from 0.1% for Red-necked Stint to 1.0% for Eastern Curlew. Over the years new techniques - colour leg-flagging and, more recently, the use of engraved leg-flags or colour-band combinations - have greatly increased the reporting rate of birds away from their marking areas. At the same time the number of recoveries coming in by the traditional methods has decreased. Thus the recoveries listed below are the only ones which have been received during the past year from “traditional” methods (as opposed to via birds individually marked with engraved leg-flags – see separate articles on Bar-tailed Godwit and Ruddy Turnstone). Even the first of the records listed below was actually obtained via the sighting of a bird carrying an engraved leg-flag put on in Alaska. And the last bird was a Ruddy Turnstone carrying an engraved flag from New Zealand.

Bar-tailed Godwit

Band No.	Banding details			Recovery details		
	Age	Date	Location	Date	Location	Movement
USA 0944- 01306	Adult Female	21/6/08	Yukon – Kuskokwim Delta, ALASKA	15/9/09	Corner Inlet	11,897km SSW

This is perhaps the most amazing recovery relating to a wader in Victoria in the 32 years of the VWSG’s existence. This Bar-tailed Godwit was one of a pair nesting in the Yukon-Kuskokwim Delta in the south-west of Alaska in June 2008. Both of the breeding pair were caught at the nest by a team including Rob Schuckard from New Zealand. Each bird was given an individually engraved leg-flag (white engraving on a black flag).

Rob Schuckard, who lives at the north end of South Island New Zealand, made a month long special visit to Australia in September/October 2009 principally to search for New Zealand-marked Bar-tailed Godwits and Red Knot staging in Australia during their return migration to New Zealand. On almost his first day in the field in Victoria, when Peter Anton took him out in his boat to look at the waders in Corner Inlet, Rob spotted a Bar-tailed Godwit carrying white engraved black flag J1. This was one of the pair of breeding birds which he himself had marked in Alaska the previous year, almost 12,000km away!! It is understood the event was celebrated with champagne in Yarram that evening.

Eastern Curlew

Band No.	Banding details			Recovery details		
	Age	Date	Location	Date	Location	Movement
091-26485	1 st Year	30/7/95	The Gurdies	22/9/06	Wakimoto, Oga-Shi, JAPAN	8,720km N

The VWSG has not caught many Eastern Curlew in recent years so it is particularly pleasing that we received a recovery from Japan 11 years after this bird was first banded in Western

Port. The recovery date (22nd September) is rather late as most Eastern Curlew arrive back on their non-breeding grounds in Victoria between late July and early September.

Red Knot

Band No.	Banding details			Recovery details		
	Age	Date	Location	Date	Location	Movement
052-59329	Juv	23/6/09	Corner Inlet	17/7/10	Miranda, Firth of Thames, NEW ZEALAND	2,493km E
052-60459	Juv	"	"	"	"	2,493km E

The above two recoveries are yet further examples of Red Knot which spend their first year in Australia, subsequently moving across the Tasman to become "citizens" of New Zealand. These birds thus spent their first austral winter in Corner Inlet but their second austral winter in the Firth of Thames.

Ruddy Turnstone

Band No.	Banding details			Recovery details		
	Age	Date	Location	Date	Location	Movement
New Zealand D161626	1+	4/11/06	Invercargill, South Island, New Zealand	11/9/09	Killarney Beach	2,325km W

This is a particularly interesting re-sighting of a Ruddy Turnstone carrying an engraved leg-flag from New Zealand. It was seen at Killarney Beach in September 2009 by VWSG member Maureen Christie. It had been originally banded in early November 2006 at

Invercargill, in the very far south of New Zealand. But it had previously been seen at Newcastle in New South Wales in September 2007. Presumably both the sightings in Australia refer to the bird when it was on migration back to Invercargill, so it presumably took slightly different routes in the two years.



Recoveries of Waders Banded in South Australia

Clive Minton, Roz Jessop, Maureen Christie and Iain Stewart

Red-necked Stint

Band No.	Banding details			Recovery details		
	Age	Date	Location	Date	Location	Movement
China C242301	Not known	12/8/08	Huanghua, Cangzhou, CHINA	23/4/09	Carpenter Rocks	8,775km S

The recapture in the southern half of Australia of waders banded in China is infrequent. It was thus particularly nice to recapture this bird, banded on southward migration in the Yellow Sea, at Carpenter Rocks in late April 2009.

Sanderling

Band No.	Banding details		Recovery details		
	Date	Location	Date	Location	Movement
042-53480	5/3/07	nr. Port MacDonnell	8/9/07	Tayuan, TAIWAN	7,311km
			14/9/07		
			16/9/07		
042-44838	15/3/05	nr. Port MacDonnell	8/9/07	Tayuan, TAIWAN	7,313km
			16/9/07		

Amazingly, all these recoveries derived from the band numbers being read on the live birds in the field. Congratulations to the skill and perseverance necessary to achieve this by the observer in Taiwan. It is interesting that both birds were similar in their timing of southward migration through Taiwan, in the second week of September.

Ruddy Turnstone

All the reported recoveries of Ruddy Turnstone derive from observations of the individually engraved flags on birds. These are given in a separate article in this Bulletin.



Sightings of Waders Leg-flagged in Victoria

Report Number 17

Clive Minton, Roz Jessop and Heather Gibbs

Leg flagging of waders in Victoria started in December 1990. Over the first few years all subsequent sightings of leg-flagged birds away from the marking areas were published in full in the annual VWSG Bulletin (and in the AWSG journal "Stilt"). This was not just for the purpose of keeping VWSG members in the picture on the results. It also served to create a permanent record of these movements and to recognise the important contribution made by the individuals who sighted and reported flagged birds.

The number of flag sightings reported annually has grown rapidly (it was 2361 in 2008/09 for Victorian-marked birds) and it has increasingly been necessary to publish results in a summary table, with only a small selection of individual records being listed. Publication of a full report in Stilt was discontinued several years ago. Instead the "record for posterity" is via a comprehensive database of all leg-flag sightings, in a format similar to the Australian Bird Banding Scheme's Recoveries Database. Updated versions of this are periodically forwarded to ABBBS in Canberra for safe storage.

The listing of individual flag-sighting details will be further curtailed in this and subsequent VWSG Bulletins. Instead, appropriate text will describe what has occurred in the way of flag-sightings for most species during the previous 12-month period. This will make the Bulletin more digestible to readers.

The full database information on each species can always be requested, and this regularly happens when analyses are being carried out and papers prepared for publication. It is regretted that it is no longer practical to list the names of all those who have made flag sightings, but they are formally recognised and thanked via an official flag-sighting report sent out acknowledging receipt of each sighting.

VWSG/AWSG member Heather Gibbs is responsible for managing the leg-flag database and for all work related to the "processing" of flag sightings. For many years funding to pay for the costs of this activity was provided by the Federal Government (partly because it saved a huge amount of work which would otherwise fall on the Banding Office), but this funding ceased in mid-2009. For the past year some unexpended AWSG funds were used, supplemented by a generous contribution from the 2020 Shorebirds program of Birds Australia. However these funds are now also exhausted and unless government funding is provided in the very near future the whole flag-processing operation will fall in a heap.



Whimbrel at Rhyll (Photo Doris Graham).

Summary of Flag Sightings in 2009/10 – Birds flagged in Victoria

Species	China (mainland)	New Zealand	Australia	S Korea	Taiwan (China)	Hong Kong (China)	Russia	Indonesia	USA	Japan	TOTAL
Red Knot	599	241	56	2	7		1				906
Bar-tailed Godwit	16	393	36	47					2	1	495
Curlew Sandpiper	98		46		19	10					173
Red-necked Stint	32		55		11	10	13	2			123
Sanderling	6		3	16	2		5				32
Sharp-tailed Sandpiper	15				6						21
Great Knot			14	1							15
Ruddy Turnstone		1	2	1	5	1					10
Eastern Curlew	2		3								5
Double-banded Plover		3									3
Grey Plover				2							2
Black-tailed Godwit			1								1
Total	768	638	216	69	50	21	19	2	2	1	1786

This table excludes sightings of birds carrying engraved leg flags where these have been read in the field. This is because such records are technically “recoveries” because birds can be individually identified. In Victoria the only migratory waders which are given ELF’s are Ruddy Turnstone, Bar-tailed Godwit and Red Knot.

Pied and Sooty Oystercatchers, which have in the past been individually colour-banded and which are now marked with engraved leg flags, are also excluded from the table. Their movements are also all dealt with in the Recoveries section.

Individual species

Comments are given below, where appropriate, on the pattern of flag-sightings in the past year for selected species. In just a few cases full details of individual flag-sightings are given.

Bar-tailed Godwit

As usual the majority of Bar-tailed Godwit flag-sightings (393 out of 495) have come from New Zealand. This is because a large proportion of the birds marked in their first year in Victoria subsequently move to New Zealand for subsequent non-breeding seasons. A continuing feature of the flag-sighting pattern for Bar-tailed Godwits is the high number in South Korea (47) compared with mainland China (16). This is in contrast to the flag-sighting pattern of Bar-tailed Godwits marked in north-west Australia where the highest proportion occur in the Chinese portion of the Yellow Sea during migration.

A small number of reports are received each year from Alaska, where the Bar-tailed Godwits which occur in Victoria breed. Details are given below of one which was still on migration when seen in the Aleutians on 28th May. The other was on the breeding grounds on the North Slope of Alaska on 24th June. This was 13,079km from Victoria (as far as any of our Victorian birds has ever travelled).

28/05/2010	1	Adak Island, Aleutians West (coords approx), USA	Unknown observer	10655 km NE
24/06/2010		Colville River Delta, Alpine Oilfield, near the CD2 pad, USA	Peter Sanzenbacher ABR, Inc. - Environmental Research and Services	13079 km N

Eastern Curlew

The VWSG catches few Eastern Curlew these days and so flag sighting reports from overseas are relatively small in number. Detailed below are two sightings of a bird on migration through the northern end of the Yellow Sea. Sightings of birds on migration through Queensland and New South Wales on their way to/from Victoria are more regular.

9/04/2009	1	Yalu Jiang Site 10, China (mainland)	Wang Xiao Fei	8922 km N
10/04/2009	1	Yalu Jiang Site 4, China (mainland)	Gillian Vaughan and Janie Vaughan	8914 km N

Ruddy Turnstone

With most Ruddy Turnstone being marked with engraved leg flags the majority of movements records are recoveries. The flag sightings reported this year again show the key role of Taiwan as a principal stopover migration location for Ruddy Turnstone on both northward and southward migration.

Great Knot

Few Great Knot are banded each year in Victoria. Most of the sightings reported in the last year related to birds seen elsewhere in Australia, mostly in Queensland, on migration.

Red Knot

The huge number of sightings in the past year (906) is almost entirely due to the intensive re-sighting efforts by Chris Hassell and Adrian Boyle (599) throughout April and May in the Bohai region on the north-west side of the Yellow Sea. These emphasise the key role that the Bohai area plays as a stopover site for Red Knot on northward migration. Their work has also shown, by examination of the breeding plumages which these birds are in when they are passing through Bohai, that a significant proportion of the birds marked in Victoria are from the *piersmai* sub-species, which breeds on the north coast of Siberia. Based on previous recoveries and flag-sightings it was thought that virtually the whole of the non-breeding Red Knot population in Victoria were of the *rogersi* sub-species, which breeds in Chukotka in the far north-east of Siberia.

The number of Red Knot sightings in New Zealand in the past year (241) shows a marked reduction from the previous year (862). This is because very few Red Knot have been caught in Victoria in the last two seasons. This is partly because they have had poor breeding success in recent years and the overall population is now significantly reduced.

A flag sighting of a Red Knot on 10th July in Sakhalin, Russia, is detailed below. This is a rather early date for a bird to be on southward migration. It could have come from either the *piersmai* or the *rogersi* breeding areas, but probably more likely the latter.

10/07/2009	1	Odoptu Bay, Okha District, Northern Sakhalin, Russia	Andrej Y. Blokhin & Ivan M. Tiunov	10,166 km N
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Sanderling

Some Sanderling sightings occur each year in the Sakhalin area of eastern Siberia. These occur on both northward and southward migration. This year there was an unusually large number of reports from South Korea (16).

Red-necked Stint

There was a marked reduction in the number of sighting (173) compared with the previous year (420). Most of this reduction relates to China (364 down to 32) where particularly favourable conditions occurred for migratory Red-necked Stint in newly reclaimed areas in 2009.

There was a wide range of countries in which Red-necked Stints were reported, reflecting the rather broad migration path of this species. Thirteen records came from the same area of Sakhalin in which Sanderling are regularly reported. Flag sightings in Indonesia are not common and therefore the two which occurred during the past year are given in full below. One bird was on southward, and the other on northward migration. Most of our Red-necked Stints seem to fly non-stop between the northern Australian coast and the Asian mainland during both northward and southward migration.

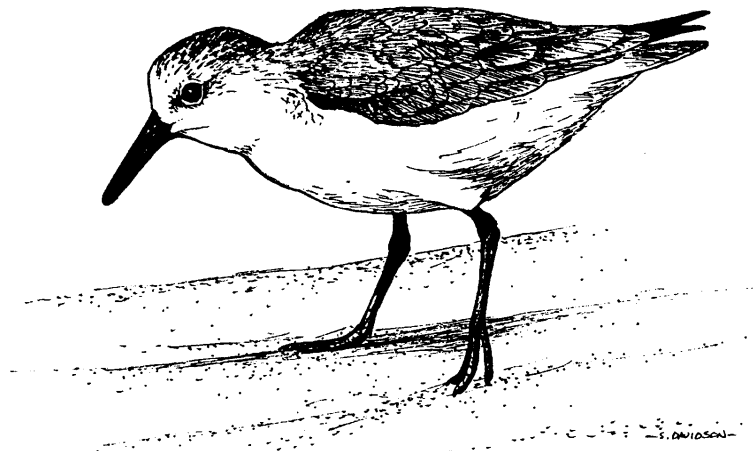
30/08/2009	1	Jerakah, Semarang, Indonesia	Karyadi Baskoro	4902 km NW
4/05/2010	1	Wetland Gunung Anyar Tambak, Surabaya, Indonesia	Yuwana Peksa /Anak Burung and Hubertus Aji /Yapeka	4700 km NW

Sharp-tailed Sandpiper

Fifteen movements to the Chinese mainland and six to Taiwan were rather more than usual.

Curlew Sandpiper

This species seems to have a much higher flag resighting rate than Red-necked Stint. The 98 records in China mainly arise through the intensive flag sighting efforts on Bohai Bay in the north-west of the Yellow Sea. The 46 sightings within Australia are mostly from north-west Australia. There is a much stronger link between north-west Australia and Victoria for Curlew Sandpiper than there is for Red-necked Stint.



Sightings of Waders Leg-flagged in South Australia

Report Number 10

Clive Minton, Roz Jessop, Maureen Christie, Iain Stewart and Heather Gibbs

The 2009/10 year has been another extremely good one for the reporting of sightings of waders flagged in the south-east of South Australia. There was a further marked increase in the total number (221, compared with 164 the previous year), especially in the reports from overseas (151 versus 90).

The table below summarises flag-sightings in South Australia reported during the past year. As in the Victorian report it excludes records of birds carrying engraved leg-flags (many Ruddy Turnstones).

Summary of sightings in 2009/10 – Waders leg-flagged in South Australia

Species	Australia	Taiwan (China)	S Korea	New Zealand	China (mainland)	Russia	Hong Kong (China)	Total
Sanderling	30	22	40		14	20	1	127
Ruddy Turnstone	17	21					1	39
Bar-tailed Godwit	2			17				19
Red-necked Stint	11	1			2			14
Curlew Sandpiper	9	1			1		2	13
Red Knot				3	3			6
Double-banded Plover				2				2
Banded Stilt	1							1
Total	70	45	40	22	20	20	4	221

Individual species

Some comments on the flag-sighting patterns during the past year for each species are given below. As in the Victorian report, full details of individual sightings are mostly not published this year. If required, they can be requested from the leg-flag database maintained by Heather Gibbs for VWSG/AWSG.

Bar-tailed Godwit

Amazingly, quite a number of reports continue to be received, all relating back to the eight juveniles flagged in November 2004 or the three in late 2001. As previously, most sightings were in the intensively watched areas of New Zealand, with five records from North Island and 12 from South Island. In addition there were new sightings in Queensland and Tasmania.

Ruddy Turnstone

All but one of the overseas sightings were in Taiwan, which seems to be the centre of gravity of Ruddy Turnstone stopover sites in Asia on both northward and southward migration. Sightings within Australia contain four records from the Northern Territory and four from north-west Australia of birds on southward migration. On northward migration most Turnstone probably overfly the north coast of Australia.

Red Knot

Another six overseas sightings, three in China and three in New Zealand, were reported during the last year. These relate back to only 13 Red Knot flagged in South Australia. As in previous years the New Zealand sightings were all in the North Island.

Sanderling

A bumper crop of 127 Sanderling, including 97 overseas, was received in the last year. Some of these were delayed records from earlier years' sightings in South Korea and Russia. However there was a big increase in sightings in mainland China, again because of the intensive sighting activities in Bohai Bay.

Red-necked Stint

The broad nature of the migration routes of Red-necked Stint was illustrated by the wide range of states in Australia from which leg-flag sightings were reported (11 records from six different states).

Curlew Sandpiper

There were only four sightings this year (last year seven). As previously, most of the sightings elsewhere in Australia came from north-west Australia. This area seems to be strongly favoured by Curlew Sandpipers as a gateway to south-eastern Australia on southward migration.

Double-banded Plover

Two birds were sighted in February 2010 near Lake Ellesmere, Canterbury, South Island New Zealand at the same location as a South Australian-flagged Double-banded Plover was seen in January 2006.

Banded Stilt

It is nice to receive any report of a flagged Banded Stilt. The bird listed below would have been banded as a chick in The Coorong in January 2007.

There were also two exciting sightings of leg-flagged Banded Stilts at the breeding colony at Lake Torrens in April and June 2010. These birds have not yet been formally processed into the leg-flag system and so details will be provided in a future VWSG Bulletin.

26/03/2009	1	Price Saltworks, Upper Yorke Peninsula, SA	Ian May	447 km NW
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Sightings of Waders Leg-flagged on King Island, Tasmania

Clive Minton, Roz Jessop, Maureen Christie,
Mavis Burgess and Heather Gibbs

Almost all the waders caught during the VWSG visits to King Island, Tasmania, over the last four years have been Ruddy Turnstone and so most of the reported flag-sightings relate to this species. Details of those reported in the last year are given in the table below.

Sightings of Waders Leg-flagged at King Island, Tasmania

Species	Taiwan (China)	Australia	China (mainland)	New Zealand	Russia	Total
Ruddy Turnstone	10	5	2			17
Red-necked Stint		1			1	2
Double-banded Plover				1		1
Total	10	6	2	1	1	20

Ruddy Turnstone

Although all the Ruddy Turnstone banded on King Island have been given engraved leg-flags (ELF), these are sometimes seen under conditions which do not permit the engraving to be read. Nevertheless the orange over blue flag combination enables the bird to be identified as one marked on King Island. The above table only includes birds where the ELF was not read.

During the past year there have been 12 overseas sightings, of which 10 were at the main stopover sites for this species in Taiwan. The other two were in Bohai Bay in the northwest of the Yellow Sea in mainland China. Four of the five sightings within Australia relate to birds on southward migration, three in the Northern Territory and one in Queensland.

Red-necked Stint

A sighting in the Sakhalin region of eastern Siberia is detailed below. This is only the second overseas report of a Red-necked Stint banded/flagged on King Island, but is in a regular area for sightings of flagged Red-necked Stints from elsewhere in south-east Australia.

10/07/2009	1	Odoptu Bay, Okha District, Northern Sakhalin, Russia	Andrej Y. Blokhin & Ivan M. Tiunov	10375 km N
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Double-banded Plover

With only a handful of these having been caught in King Island it's nice that one has subsequently been seen in one of the main breeding areas near Lake Ellesmere in the South Island of New Zealand.



Sightings of Waders Leg-flagged elsewhere and then seen in Victoria, South Australia or King Island, Tasmania

Clive Minton, Roz Jessop, Maureen Christie and Heather Gibbs

Victoria

There were 39 sightings in Victoria in 2009/10 of waders flagged overseas (six) or elsewhere in Australia (33).

Species	Flagging location	Resighting Details		
		Date	Location	Movement
Sharp-tailed Sandpiper	Chongming Dao, China	4/2/2010	Laverton	8069km S
"	Taiwan	4/2/2010	"	7349km S
Red Knot (2 birds)	North Island, New Zealand	16/9/2009	Corner Inlet	2259km W
Curlew Sandpiper	Chongming Dao, China	21/8/2009	Stockyard Point	8141 km S
Ruddy Turnstone	Lake Furen, Hokkaido, Japan	17/11/2009	Port Fairy	9083km S

Details of the overseas-flagged birds are given in the table above. Most mirror the flag sightings overseas of the same species when flagged in Victoria. Unusual however was the sighting of two Red Knot (together) from New Zealand in Corner Inlet in mid-September. These were seen by Rob Schuckard who made a special visit to Australia from New Zealand to search for birds passing through Australia on their return migration. There have been very few sightings previously of New Zealand leg-flagged Red Knot in south-east Australia, probably because the main migration route of adult birds passes through Queensland and New South Wales.

South Australia

There were 22 sightings in South Australia during the past year of waders leg-flagged elsewhere, five from overseas and 17 from within Australia. The five records from overseas, which relate to three individuals, are detailed below.

Species	Flagging location	Resighting Details		
		Date	Location	Movement
Ruddy Turnstone	Chongming Dao, China	28/1/2010 10/2/2010	Beachport	7887km S
Common Greenshank	"	11/10/2009 15/1/2010	Coorong	7671km S
Red-necked Stint	Lake Komuke, Hokkaido, Japan	15/11/2009	Kangaroo Island	8715km S

King Island, Tasmania

Only six waders flagged elsewhere were seen in King Island during the past year. Five were Ruddy Turnstones, four being from South Australia and one from New Zealand (detailed below). The latter may well be the same individual seen on King Island in November 2008 and March 2009.

Species	Flagging location	Resighting Details		
		Date	Location	Movement
Ruddy Turnstone	North Island, New Zealand	19/3/2010	Surprise Bay	2713km W

A Sanderling from Victoria was the first seen on King Island. The population of this species on King Island is small, usually not more than 10 individuals.

HAVE YOU SEEN?

By Roz Jessop

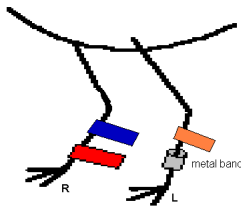
RED-CAPPED PLOVERS WITH ENGRAVED LEG-FLAGS?

In 2008 Deakin University commenced a banding study of Red-capped Plover at Cheetham Wetlands and Truganina Swamp, west of Melbourne – near Altona and Altona Meadows. Dr Mike Weston and students have flagged over 100 Red-capped Plover on the upper leg with an orange leg-flag engraved with two letters. They would greatly appreciate any sightings you may make.

Please send details (including date and place) to
 Dr Mike Weston, Deakin University,
 221 Burwood Hwy, Burwood, 3125.
 Email: mike.weston@deakin.edu.au
 Phone: (+61 3) 9251-7433

Mike and his post graduate students would also like to acknowledge the generous support of the VWSG in helping with the manufacture of the flags – especially Doris Graham.

HOODED PLOVERS, OYSTERCATCHERS OR GREY WADERS WITH FLAGS?

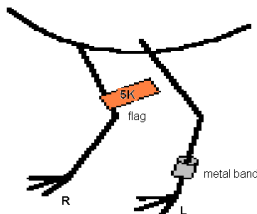
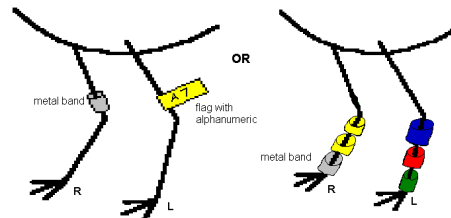


Hooded Plover with colour bands or flags?

Phillip Island Nature Park has an ongoing study colour flagging Hooded Plover chicks on Phillip Island. Any sightings of colour marked Hooded Plover should be sent to Roz Jessop
rjessop@penguins.org.au

Pied and Sooty Oystercatchers with colour bands or flags?

Any sightings of Pied and Sooty oystercatchers with colour bands or flags should be sent to David Trudgen
trudgen@iinet.net.au



“Grey” waders and terns with engraved or plain flags or colour bands? Any sightings of grey waders or terns with engraved flags or plain colour flags should be reported to Clive Minton
mintons@ozemail.com.au

Tern Breeding and Banding Report 2009/10

Clive Minton, Roz Jessop and Susan Taylor

Caspian Tern

Location	Breeding Pairs	Chicks banded
Mud Islands	30	15
Corner Inlet	40-50	23
Totals	70-80	38

Caspian Terns appear to have had a reasonably good breeding season in November/December 2009. The colony at Mud Islands was a little larger than usual (30 pairs) and 15 chicks were banded (and probably fledged). The colony on the west end of Clonmel Island had between 40 and 50 pairs when first visited in November and 23 chicks were banded on the 21st December. However a subsequent visit in early January suggested that the remaining nests had all failed and that no further re-nesting attempts were being made.

Although the overall breeding productivity of Caspian Terns is quite low – perhaps averaging less than 0.5 chicks fledged per breeding year from the two to three egg clutch laid – the high annual survival rate of this species (we re-trapped a bird which was 22 years old) means that the Victorian population seems to be able to sustain itself.

A few pairs of Caspian Terns as usual nested in scattered pairs or small groups elsewhere in Victoria. A pair again nested on Rams Island, just off French Island in Westernport and two or three pairs nested on Reef Island near Bass River. Chicks were hatched at both locations but fledging success is not known.

Crested Tern

Location	Breeding pairs	Chicks banded	Banded adults caught	Sightings of colour-banded adults
Mud Islands	1300	676	151	108 (595)
The Nobbies	4800	4502	-	-
Corner Inlet	200	40	-	-
Totals	6300	5218	151	108 (595)

There was a huge increase in the number of pairs of nesting Crested Tern at The Nobbies, with the total reaching a record 4,800 pairs. The total for the state (6,300 pairs) was also a record. This now represents a six-fold increase in Crested Terns nesting on the South Gippsland and central Victorian coasts since conservation actions at Mud Islands were successfully initiated in 1985. A record 5,218 chicks were banded in November 09/January 10.

Sixteen breeding pairs were also seen on Dannevig Island, off Wilson's Promontory, but no information is available on breeding success.

The recapture of banded breeding adults and the re-sighting of colour-banded adults continued at Mud Islands. We now have a large body of data from this 15 year study which should enable the age of first breeding of Crested Terns to be accurately calculated.

Fairy Tern

The good news is that the first really successful breeding colony of Fairy Tern in South Gippsland/central Victorian coasts for more than 20 years occurred at a new nesting site in Andersons Inlet near Inverloch. 29 breeding pairs were present and 32 chicks were banded during visits in January/February 2010.

Fairy Tern made their usual unsuccessful attempt to nest in Corner Inlet. The only nest site found was where 15 pairs were present on the east end of Dream Island in late January. Subsequent visits showed that nesting had not been successful – due to the usual problems of storm tides and wind-blown sand accumulations.

Eight pairs nested at the fairly regularly used site on Rams Island, off the south-east coast of French Island, Western Port. Some chicks were hatched but fledging success is not known. Apparently no pairs nested on Tortoise Head, French Island, this year.



Crested Tern banding at the Nobbies – December 2009 (Photos Ken Gosbell).

Tern Recovery Report 2009/10

Clive Minton and Roz Jessop

Caspian Tern

Band No.	Age	Date banded	Location banded	Date recovered	Location recovered	Km. Moved
091-38660	Adult	30/06/98	Rhyll	22/11/09	Churchill Island	4km E
091-49308	Chick	21/12/05	Corner Inlet	21/01/10	Corner Inlet	Local
091-50469	Chick	15/12/03	Mud Islands	28/03/10	Mud Islands	Local

All of these recoveries were close to the original banding area. The two birds banded as chicks were nearly five and more than six years old respectively. The bird banded in winter as an adult was recovered more than 12 years later. The circumstances (in November, injured flying into overhead wires) suggest it was one of the small number of Caspian Terns which breed annually in the south-eastern part of Westernport.

Fairy Tern

Band No.	Age	Date banded	Location banded	Date recovered	Location recovered	Km. Moved
042-00440	Juv	13/03/99	Gippsland Lakes	20/12/08	Lake Conjola N.P., NSW	383km NE

This bird was identified by its colour bands and was nesting, paired to a Little Tern. It had twice previously been reported nesting in NSW, at Lake Conjola in January 2002 and at Shoalhaven Heads in January 2004.

Little Tern

Band No.	Age	Date banded	Location banded	Date recovered	Location recovered	Km. Moved
041-10481	Adult	9/03/91	Gippsland Lakes	20/12/09	Lake Conjola N.P., NSW	388km NE
042-00548	Adult	13/03/99	Gippsland Lakes	7/02/10	Tathra, N.P. NSW	238km NE

The first of these birds was also nesting at Lake Conjola in the 08/09 season. It is now a minimum of 20 years old. The second bird was also recognised by its colour flags. It was not known to be nesting. It was a minimum of 13 years old.



Clive marshalling Crested Tern chicks at the Nobbies, December 2009 (Photo Ken Gosbell).

Crested Tern

Banded at Mud Islands, Port Phillip Bay

Band No.	Date banded	Date recovered	Location recovered	Method of recovery	Km. Moved
072-27063	19/12/92	19/4/10	Jervis Bay, NSW	Injured	636km NE
072-04311	16/12/89	- /9/07	Tidal River	Found dead	131km ESE
073-55733	15/12/09	16/3/10	Tuncurry Beach, NSW	Collided with vehicle	978km NE
072-27040	19/12/92	24/11/09	Phillip Island	Found dead	42km SE

The first two of these birds were over 17 years old and the fourth bird was almost 17. There were only two interstate movements this year, both detailed above. It was rather unfortunate that the third bird had successfully travelled 978km north-east but then flew into a four-wheel drive vehicle on the beach.

Banded at The Nobbies, Phillip Island

Band No.	Date banded	Date recovered	Location recovered	Method of recovery	Km. Moved
073-98924	22/12/09	7/6/10	Moruya Heads, NSW	Died	532km NE
073-97320	"	6/6/10	Iluka, NSW	Found dead	1269km NE
073-97713	"	29/4/10	Tathra, NSW	Alive	472km ENE
073-97160	"	18/4/10	St. Georges Basin, NSW	Died	618km NE
074-01210	24/12/09	4/4/10	Wallagoot Lake, NSW	Found dead	466km ENE
073-96902	22/12/09	7/3/10	Hat Head Beach, NSW	Alive	1101km NE
073-96181	15/12/08	6/11/09	Newcastle, NSW	Found dead	865km NE

Only interstate movements are shown. Birds were banded as chicks. All the listed recoveries were on the New South Wales coast which is where most of the Victorian Crested Terns go in the non-breeding season. Some of these movements are quite quick with birds reaching there in March and April only three or four months after they have fledged.



*Nobbies, Crested Tern colony, December 2009
(Photo Leanne Renwick)*

Sightings of Victorian-flagged Terns 2009/10

Clive Minton, Roz Jessop, Heather Gibbs and Susan Taylor

Caspian Tern

Clonmel Island

28/03/2009	1	Toorbul, near Bribie Island, QLD	Dez Wells and Deborah Metters	1420 km NE
24/07/2009	1	Thooloora Southeast, Qld	Jill Dening	1427 km NE
25/07/2009	1	Toorbul Sandfly Bay roost, QLD	Dez Wells	1421 km NE
30/07/2009	1	Manly Harbour, QLD	Arthur Keates and Gavin O'Brien	1381 km NE
22/08/2009	2	Toorbul, near Bribie Island, QLD	Dez Wells	1420 km NE
9/09/2009	1	Shoalhaven Rivermouth estuary NSW	Phil Craven	549 km NE
19/09/2009	1	Toorbul, near Bribie Island, QLD	Dez Wells and Deborah Metters	1420 km NE
20/09/2009	1	Boonooroo Point, Great Sandy Strait, QLD	Chris Barnes and Nev Capell	1553 km NE
26/09/2009	1	Toorbul, near Bribie Island, QLD	Phil Cross	1420 km NE
28/09/2009	1	Manly Harbour, Moreton Bay, near Brisbane, QLD	Rob Schuckard	1381 km NE
7/11/2009	1	Manly Harbour, QLD	Ken Cowell and Phil Cross	1381 km NE
15/11/2009	1	Fishermans Island, Moreton Bay, QLD	Linda Cross	1391 km NE
15/05/2010	1	Pine River Wetland Reserve, QLD	Dawn Beck Vicki Campbell	1373 km NE

Mud Islands

29/09/2009	1	Toorbul, near Bribie Island, QLD	Rob Schuckard	1472 km NE
25/01/2010	1	Merimbula estuary (36.892 S, 149.921 E), NSW	James Nicholls Institute of Evolutionary Biology	481 km E
17/03/2010	1	Ocean Grange, Lakes NP, VIC	Jim Reside	265 km E

There was another good crop of sightings during the last year of Caspian Terns carrying orange flags put on chicks at the Mud Islands and Clonmel Island colonies. Most sightings were from south-east Queensland which seems to be the preferred location for most of the Victorian Caspian Terns to migrate to for the winter. Sightings of flagged birds there in the breeding season almost certainly relate to immature birds which have not migrated back to Victoria.

Common Tern

Gippsland Lakes

17/03/2009	2	Salty Lake, Broadwater National Park, NSW	Bo Totterman	1123 km NE
24/10/2009	1	Newcastle Beach, NSW	Mick Roderick	672 km NE
21/12/2009	1	Broadwater Beach, Broadwater, NSW	Bo Totterman	1132 km NE
10/01/2010	1	Flat Rock Beach, North of Ballina, NSW	Katherine Wilk, Tweed Bird Observers	1152 km NE

Considering that it is 20 years since our main effort banding Common Terns in the Gippsland Lakes it is surprising that we are still receiving a small number of new flag sightings each year. The majority of these are on the well-watched shores on the northern half of the New South Wales coast. Many Common Terns (which breed in Siberia and other parts of the Northern Hemisphere) spend the non-breeding season there and others migrate through there on their way back to non-breeding areas further south. Apparently the population in Gippsland Lakes each January/March is now much reduced from the 1,000 to 2,000 birds which regularly occurred there in the early 1990s.

South Australian Team Report

August 2009 – July 2010

Maureen Christie



We have had an extremely busy year having taken on several special projects as well as our normal workload of catching, counting and protecting breeding waders and terns.

Engraved leg-flags and Geo-locators, Banding and flagging

Our summer was dominated by searching – unsuccessfully - for turnstone ADX and ADK and their geo-locators. 10 additional geo-locators were fitted at Nene Valley in March, 2010. Prior to migration we resighted 8. There are now 12 geo-locators out there that originated in the SE of SA – here's hoping that we achieve some returns come spring 2010!

We wish to thank the Millicent mill of Kimberley-Clark Aust P/L for \$2,200 for 10 geo-locators and the Nature Foundation of SA for \$2,000 towards the cost of another 10. This represents a substantial contribution to this year's tri-state project.

The number of SA engraved flags in the field continues to grow. To date 780 flags have been placed on 'new' birds, and 194 on retraps, giving a total number of engraved flags in the field of 974. Of the 302 retraps that had existing ELF's, 152 were replaced mainly because of illegibility of codes. In last year's bulletin I advised that, as part of grant obligations, a report covering local ELF sightings covering the period Nov 2004 to August 2008 had been prepared. The report was awarded 'Friends of Parks Best Biodiversity Project Award for 2009'. We received a framed certificate and \$700 (courtesy of Nature Foundation SA). Thank you to Leah McIntyre, local Coast & Marine Officer, for nominating us, and thank you to everyone who continues to work hard on this project!

Although recoveries and flag reports are discussed in separate articles, I would like to mention here several sightings that aroused considerable excitement in our group. The first Pied Oystercatcher chick to have an engraved flag was banded on 6.1.2009 at Piccaninnie Ponds Beach, seen in Livingston Bay in April and on the Coorong Ocean Beach, 37 kms south of the Murray Mouth in November. This is the third season two Chongming Dao flagged waders have been seen in the same location - a Greenshank in the Coorong and a turnstone at Beachport. Our first ever sighting of an individually colour banded turnstone – seen at Killarney whilst en-route to the 2009 VWSG AGM. It was banded by Rod Schuckard on 4.11.2006 at Invercargill. Two individually colour banded Double-banded Plover have been sighted this year, after an absence of several years. Both have been site faithful – one banded in 2005 in the Tasman River being seen at the Glenelg river mouth in 2006 and 2010; the other banded in 2004 and seen in the Carpenter Rocks area 2005, 2006, 2007 and 2010.

A team of four spent a week reading engraved flags on King Island, before joining the VWSG catching team for all but the last two days of catching.

Our main catching target continues to be overwintering turnstone as well as departure weights. This year we only managed one catch just prior to migration. It included an interesting retrap - it had originally been banded at Nora Creina in 2006, retrapped at Beachport on 7.3.2010 when it weighed 103 gms. On 20th April it weighed 160 gms – a weight gain of 57 gms in 44 days – over 1 ¼ gms per day!!!! But why did it move from Beachport to Pelican Point just as it was preparing for migration?

This winter there have been at least 115 turnstones overwintering in the Nene Valley area. But they have proved an elusive target, spending time between Lake Bonney SE and coastal beaches. We are slowly accumulating ELF flag sightings that document the link between these sites.

At the request of Celia Dickason, Senior Veterinarian with PIRSA Biosecurity – Animal Health, we made two attempts to catch Red-necked Stint in December. Both were unsuccessful, but she was able to collect samples when the VWSG team visited in March.

Counting

Our President, Jeff Campbell is count organiser. Efforts to try and gauge the effect of predation control measures being undertaken as part of a Caring for Country Grant have seen us undertake more counting than usual. Hooded Plover counts were completed in December and May. The usual PMP counts, 'extra' sections of the coast and coastal lakes were done along with counts of coastal lakes. We also participated in the annual AWSG Coorong count. Highlights for the summer count include 7860 Sharp-tailed Sandpiper at the ephemeral Lake Hawdon South. Winter counts continue to have very low numbers of waders along the coast, but, increasingly, we are finding good numbers using the coastal lakes.

Iain Stewart is co-ordinating a special project on Lake George. Commenced in July, 2009, the aim is to monitor the lake monthly, with an emphasis on Little Lake. This is in response to a proposed 'Lake George Environmental Enhancement and Marina Development' which would see the bulk of Little Lake converted into a marina and golf course. Little Lake is proving full of surprises. Until now we have rarely counted this part of the system when it is dry. But this summer, despite being dry, it was full of life. In December the lake bed was damp – and there were 1500 stint! Early January there were 300 Red-caps, and in February 400+ Red-caps including chicks! The sections of Lake George that contained water were crammed with Shelduck (more than Iain had ever seen there!) and we also found approx 5000 stint.

Jo Oldland from Shorebirds 2020 will be conducting an Identification Workshop and Adelaide Optical will be showcasing scopes/binoculars at Port MacDonnell on 24th October. It is hoped that this will stimulate increased interest in counting and result in new volunteers becoming involved. We continue to work with Shorebirds 2020 to help resolve anomalies in historical data and to map count sites

Predator Control – Treat Abatement Project

Our group is involved with the Department of Environment and SE Natural Resources Management Board with a Caring for Our Country project which is undertaking extensive coastal fox and cat control during 2009/10. Our main commitment is to monitor how successful the project has been in improving conditions for beach nesting birds. In addition to the normal summer and winter counts, it was decided to also do a count during May to assess the number of fledged juveniles in the population. But counting is more suited to a much longer time scale than the 18 months of this project. What could we do to obtain some meaningful results? Monitoring nests was difficult because our most easily accessible control site had only one (or occasionally two) pair of Hooded Plover in 17 kms! Grainne Maguire's involvement in aversion techniques using artificial nests of quail eggs led to the suggestion that we could use artificial nests to monitor predation. 10 nests of 3 quail eggs were set up in two sites - Rivoli Bay and Canunda. The work load was shared, with DEH responsible for the nests in Canunda and our group responsible for those in the unbaited Rivoli Bay. Nests were set out on 29th December, 2009, and checked 10 times (every 3rd day). David and Wendy Trudgen carried out the bulk of the surveys, and have prepared statistics on the Rivoli Bay nests. Eight out of ten nests had egg predation. Predation varied from 89% maximum to 0% with an average of 39% overall. All nest sites had fox tracks either at the nest site or within 1 metre of the eggs. Bird tracks at nest sites suggest they are a noteworthy predator of eggs, and possums at one site were probable predators as well. Scats were collected from nest sites, and have been sent for analysis. Statistics have not yet

been completed for the Canunda site, but DEH have advised that they experienced a much lower incidence of predation than that experienced in Rivoli Bay. This has been an extremely interesting and worthwhile project and all involved are congratulated on their effort! With the federal funding for this project drawing to a close, and the next round of grants not yet announced, there is a real concern that this important predation control work will not be continued.

Breeding Waders and Terns

Little and Fairy Tern

Little Tern visit the coast of the Lower South East in small numbers. For the last six summers a small number of pairs have nested here, with 3 young fledged in 2006/7 and 5 or 6 fledged 2007/8. The fate of the single chick banded in the 2008/9 breeding season is unknown. This season we had single nests at Piccaninnie Ponds, Danger Point and Port MacDonnell. Two chicks were banded at Port MacDonnell but it is not known whether they fledged. The Little Tern originally banded by David Paton at the Murray Mouth, in November 2006, was again one of a pair at Piccaninnie Ponds. First seen at Piccaninnie Ponds on 28.12.2006, it has failed in its breeding attempts in 4 consecutive seasons.

Once again Fairy Tern nested on Cowrie Island. Their first attempt, in November, was abandoned. Although Fairy Tern were observed exchanging fish at two sites on Lake George during December, no evidence of nesting was found. By late December they were back at Cowrie Island. This time they were successful, and when a banding team visited on 3rd February, there were eggs as well as chicks of all sizes. 28 chicks were banded. As there is very little shelter on the island, chunky style chick shelters had been scattered throughout the nesting colony. Although observations made by telescope from shore suggested that chicks were using the shelters, no chicks retreated to the shelters when we were banding.

Crested Tern

Crested Tern regularly breed on Penguin Island, Beachport. This year we were requested by Glen Jackway, the Senior Ranger at Southend, to band the chicks. There was the added incentive that we may be able to read bands on terns banded by Max Waterman approx. 20 years ago. Unfortunately bad weather on the planned banding day meant that we were unable to get to the island. Perhaps next year! On 7th January a colony on Baudin Rocks was incubating eggs.

Whiskered Tern

In December, Whiskered Tern were recorded breeding in the swamp on the Ardno Homestead Road, just over the border in Victoria.

Hooded Plover and Oystercatchers

As usual, a great deal of effort was put into monitoring and protecting Hooded Plover and Oystercatcher nests, with Jeff Campbell co-ordinating the protection of all beach nesting waders/terns. Our first Hooded Plover nest of the season was found at Blackfellows Caves on 29th August, and our first fledged chick was seen there on 15th December. Jeff has produced a modest, but useful, leaflet – 'Protecting beach nesting birds.....what you can do'. As part of grant obligations, a report on 'Population Status of the Little Tern *Sterna albifrons* and the Fairy Tern *S. nereis* in the lower South East of South Australia, has been prepared. Grainne Maguire's Hooded Plover Workshop in Southend last October was appreciated by all who attended.

Banded Stilt

As a group, we continue to be deeply involved with recording Banded Stilt activity in the Coorong, and tracking them as they move around the continent. This year we had the thrill of being involved with the breeding event at Lake Torrens which is the subject of another article in this bulletin. Particularly exciting for our group was the sighting of an adult that had been flagged as a chick in the Coorong in 2006 observed – and photographed - escorting chicks to the water.

Pick Swamp Monitoring

Friends of Shorebirds SE in partnership with Birds SE is into the fourth year of a long term bird monitoring program. Bryan Haywood is co-ordinating this project in his role as Chair of Birds SE, but he is also a member of our group.

General

All SA and King Island data is entered by David and Wendy Trudgen. David has also taken over the responsibility of maintaining the VWSG Oystercatcher Database.

Flag making is organised by Jeff and Sarah Campbell, in collaboration with Malcolm Brown. Except in special circumstances, such as the rushed order of size 8's for Banded St, we endeavour to make all of our own yellow flags. A successful flag making day for size 8's has led to the resolve to hold more such days in the future.

We have finally adopted a logo for our group. Members had the choice of 3 designs at the AGM. A design of stylised birds and 'shore' was a unanimous choice. Jeff's striking design of a turnstone in flight will also be used as an emblem once we are able to have the design digitalised.

The group continues to provide input into various forums, with both Jeff Campbell and myself representatives on various committees. Press reports and radio interviews are conducted as the opportunity arises. Volunteers Day on 9th August proved a relatively unsuccessful day for our group. DEH held a very successful family day at Valley Lake, Mount Gambier to celebrate World Wetlands Day on 31st January. We mounted a display in the foyer for all of The Threatened Species Autumn Talks. We assisted at the Threat Abatement Project stand for the two days of the Lucindale Field Days.

Conclusion

The South Australian Team has had a successful year. Modelled on the successful VWSG working bee cum social gathering cum formal meeting formula, our Annual General Meeting was held in February at the Campbell family home in Mount Gambier.

Thank you to the members of the group who have worked hard to produce these results. Thank you too, to the members of both the Regional and District Offices of the Department of Environment and Heritage (now Department of Environment and Natural Resources) who have provided encouragement and practical help.

SOUTH AUSTRALIAN TEAM CATCHES 01/08/09 TO 31/07/2010.

DATE	PLACE	Sanderling	Ruddy Turnstone	Red-necked Stint	Curlew Sandpiper	Sharp-tailed Sandpiper	Banded Stilt	Other		TOTALS
17.12.2009	Nene Valley									*
18.12.2009	Nene Valley									*
05.01.2010	Piccaninnie Ponds							**2	Pied Oystercatcher	2
10.01.2010	Cape Banks Light							**1	Pied Oystercatcher	1
22.01.2010	Danger Point							**2	Little Tern	2
03.02.2010	Cowrie Island							**28	Fairy Tern	28
13.2.2010	Gerloff Bay							**1	Hooded Plover	1
17.02.2010	Blackfellows Caves							**1	Hooded Plover	1
20.04.2010	Pelican Point		17	7				5	Double-banded Plover	29
15.06.2010	Lake Torrens						**2			2
16.06.2010	Lake Torrens						**22			22
17.06.2010	Lake Torrens						**30			30
Sub Totals			17	7			54	40		118
B/F	1.12.00 – 30.7.10	26	433	395	18	107	334	159		1472
	TOTALS TO DATE	26	450	402	18	107	388	199		1590

*net set, no catch made. ** chicks/runners'

SOUTH AUSTRALIAN TEAM CATCHES - Month Waders Caught in 1/12/2000 TO 31/07/2010

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	TOTALS
Ruddy Turnstone	5		1	242	38	16	46	61	39	1	1		450
Red Knot				1		12							13
Sanderling		17	2	2				5					26
Red-necked Stint		34	34	100	4	20	49	67	27	43	1	23	402
Sharp-tailed Sandpiper									6	101			107
Curlew Sandpiper						2	7	6		3			18
Pied Oystercatcher	6			1	1						2	8	18
Sooty Oystercatcher			2	3	2								7
Banded Stilt	185	149				54							388
Red-capped Plover	3	4	1	4				5		1		1	19
Double-banded Plover			4	6		4		2					16
Black-fronted Dotterel			3										3
Hooded Plover		2		1								3	6
Little Tern	13												13
Fairy Tern		104											104
TOTALS	212	310	47	360	45	108	102	146	72	149	4	35	1590

Conservation Report - August 2010

Doris Graham

This year has been “quiet” in the realm of needing work on new Draft Management Plans or commenting on developmental projects containing aspects that would be detrimental to our waders – but one of the joys of this job comes when one’s work is rewarded. This has come from the successful appeals regarding two projects this year.

Ralphs Bay, Tasmania, has almost certainly been saved.

In March 2004, a project, Walker’s “Lauderdale Quay Project” was announced to occupy a vast area of Ralph’s Bay, SE of Hobart. Very briefly, see Bulletin_2009 for details, the project was to excavate 150 hectares of the Ralph’s Bay Conservation Area for the development of a canal estate of 457 houses and a very large marina. This area is the richest section of this very beautiful and much coveted, shallow, tidal Bay which included the area used by up to 300 Pied Oystercatchers, and Hooded Plover plus Red-necked Stint and Curlew Sandpiper. Immediate action was taken by the local community to form an action group to “Save Ralph’s Bay (SRB)” www.saveralphsbay.org.au . *I followed this battle closely and several times asked for your assistance by writing letters/emails and sending text messages to assist the SRB group, and after 6 years, 3 months and 5 days the Government-set-up Integrated Assessment Report recommended that this project *not go ahead*--- this was accepted by the state **Government** on 22nd June this year.*

However, the proponent has been given a few weeks to lodge an appeal, but we are very hopeful that that will not succeed.

The Government has now begun discussions to prohibit residential canal development/marinas throughout Tasmania as has been done in Victoria and New South Wales. My thanks to everyone who has helped in this very long and expensive battle, which has been well worth all our efforts.

Tooradin Hovercraft Project—see Bulletin 2009—has been stopped and a successful prosecution was made against the proponents in relation to destruction of mangroves.

I am currently assessing the Draft Management Plan for Point Nepean, and represent VWWSG at the bi-monthly meetings of the Western Port Catchment Management Committee. This Group has been consolidated with the Mornington and Westernport Biosphere, which provides a meeting place for representatives from the many groups working in the region to interact for the better management of the area.

Just add water and wait for the excitement! Lake Torrens turns on a special Banded Stilt breeding event

Ken Gosbell, Maureen Christie and Iain Stewart

The normally dry, salt encrusted bed of Lake Torrens was transformed into a lake following significant local rain which occurred in April this year. Members of Friends of Shorebirds SE have been monitoring the large flock (150 – 200,000) of Banded Stilt that has been utilizing the hypersaline conditions of the lower Coorong for the last 8 years. Iain Stewart, who had been tracking water flows throughout the arid interior since the floods in northern Australia, reinforced by David Dadd's report of the absence of birds in the Coorong, immediately realised the significance of the water in Lake Torrens. A call went out to members and Department for Environment and Heritage (DEH) Coorong staff for news of the Coorong flock. The last documented sighting of a significant number was on 5th April. The DEH head office in Adelaide was contacted stressing the urgency of the situation – high in every-one's thoughts was the massive predation that had occurred at Lake Eyre in 2000, and the need to locate and protect a breeding colony as soon as possible. They firstly flew over the Coorong and "confirmed" the missing birds and then subsequently made a search of a number of inland lakes from Lake Eyre to the south. In early May they located a large colony of around 140,000 Banded Stilt which appeared to be nesting on an island in Lake Torrens. This was a very special event as this species had not had an extensive breeding event since the one at Lake Eyre South in 2000 although a small attempt was recorded in the Coorong in 2006.

This species requires small isolated islands in large ephemeral inland salt lakes where the influx of fresh water stimulates the dormant brine shrimp and other small crustaceans to hatch and reproduce. Such conditions are erratic given the nature of inland Australia and Banded Stilts are known to have bred in SA only seven times in the last 70 years.

In response to the discovery of this breeding colony, the DEH sent in an expedition of ecologists and rangers in early May, led by Alex Clarke of the Port Augusta office of DEH. Their objective was to observe and check for any excessive predator activity. They were able to confirm the colony had 140,000 - 150,000 birds and that they were witnessing probably the largest breeding event on record with up to 200,000 chicks produced. Even better news was the fact that predation activity by Silver Gulls was minimal and within natural bounds. It was also observed that following the first hatching, the colony split with half moving to a northern island and the remainder laying a second clutch of eggs in the original colony.



Photos Ken Gosbell

The AWSG, VWSG and Friends of Shorebirds SE, were invited to participate in a second expedition timed to coincide with the second hatching to record observations and to attempt to place bands and coloured leg-flags on some of the chicks. The latter was aimed at finding more about the movements of these birds including any possible movement between the WA and south-eastern Australian populations. Accordingly 4 of us (Maureen Christie, Iain Stewart, David Hollands and Ken Gosbell) accompanied a team of rangers and ecologists from the Coorong office of DEH (Simon Oster, Clare Manning and Chris

Thompson). We set out from Port Augusta and camped on the shores of Lake Torrens from 14 – 18 June when we returned to Port Augusta. To view this body of water almost 200km long and up to 30km wide, surrounded by gibber and desert, listening to a colony of Banded Stilts almost 3km away was an amazing experience.

The colony occupied about half of a small island some 320m by 200m which was located 2.7km from the shoreline campsite. Hence a walk through water 20 – 30cm in depth for this distance to get to the colony each day was more than sufficient exercise. The colony was much reduced by the time we arrived with less than 10,000 birds in it. It was located on sandy patches interspersed with low Salt bush, Samphire, *Rhagonia* and other plants. Birds were nesting in scrapes which were at a density of 10 – 15 per square metre and were sitting on 2 to 4 eggs. Some 30% of the colony had been abandoned probably due to disturbance by a fox and/or dingo which had killed quite a few adult birds. We assessed that chicks from the second clutch had been hatching for the last week and this continued at a reasonably constant rate for the days we were there. When the chicks are 1 or 2 days old the adults take them across the stony beach and introduce them to the water. The rate of chicks being taken to the water varied from 50 to 350 chicks per hour and we saw very few actually taken by gulls. However, as the colony thinned out, more gulls were entering the colony.

One of the inspiring sights was to see the adults shepherd their family of 2 – 4 fluffy white/grey down covered chicks to the water, negotiate past the line of gulls and reach the open water where they amalgamated with other family groups to form crèches. The largest crèche we observed was 40 but as they were moving some distance (several kms) to feed we suspect that even larger crèches were being formed which is their normal behavior.



Photos Ken Gosbell

Great care was taken to reunite chicks with adults who were caring for crèches during banding. Because of this constraint we were only able to band and leg-flag 54 chicks. So, if you see a Stilt with orange/yellow on the Left tibia it is a very special bird and we need to hear about it. We are also interested in observations of juvenile stilts – recognizable by their grey legs. Indeed news of the arrival of adults is also of interest as it will help us understand how they disperse after such a large breeding event. One of the highlights of our visit to the colony was when Clare spotted a bird with flags on its right leg which was the result of the banding undertaken by Maureen and her team in the Coorong in 2006.

Overall this was an exciting event which at this stage appears to have been extremely successful for this enigmatic species. To have observed and photographed this unique event combined with the experience of witnessing the way in which outback Australia comes alive with water was very special. We would like to thank the staff of DEH SA for their consideration, co operation and assistance on site; it was a great team effort. We also thank our flag making teams for making a large number of flags at short notice.

It should also be noted that a small breeding event also took place on Lake Eyre where some 5,000 birds nested.

Although we have increased our knowledge of one of the most interesting of our resident species through the observations of this event, there is still much to learn. Just how did those birds who were happily feeding in the Coorong know that suitable breeding conditions had been created 1000kms away? Maybe in time we will learn.

Initial Results from Light Level Geolocator Trials on Ruddy Turnstone *Arenaria interpres* Reveal Unexpected Migration Route

Clive Minton, Ken Gosbell, Penny Johns,
Maureen Christie, James W. Fox and Vsevolod Afanasyev

STILT 57: 21-28. REPRINTED with permission from the editor.

With the development of archival light level geolocators weighing only 1g, their deployment on medium size waders is now possible. Trials showed that attachment via leg-flag rather than backpack harness was preferable because of the large weight gains of Ruddy Turnstone during preparation for migration. Geolocators attached to leg-flags were fitted to six Ruddy Turnstones at Flinders, Victoria, SE Australia, and four were retrieved the following season. All four birds had made an initial non-stop 7,600 km flight, in six days, to Taiwan, with three probably travelling in the same flock. Individuals then followed separate paths through E Asia before locations became indiscernible in early June in E Siberia as birds encountered continuous daylight. Brief data were recorded for two birds at the beginning of southward migration through E Siberia in early August before the damaged light sensor stalk on the geolocator failed, as another had also done on the breeding grounds. The fourth bird, without a stalked light sensor in its geolocator, was in the Aleutian Islands, SW Alaska, when locations again became discernible on 26 July. It remained there until 15 October and then made a 6,200 km non-stop flight to the Gilbert Islands, western central Pacific in four days. After another prolonged stopover it departed on 29 November reaching E Australia in four days (5,000 km) and arrived back at Flinders on 8 December. This bird had made a round trip migration of around 27,000 km. Between 26 June and 14 July, when it was in the Arctic, the light data record of this bird suggested that it had been incubating. A further 60 geolocators will be deployed on Ruddy Turnstones in SE Australia in March/April 2010.

Introduction

Band recoveries and sightings of colour-marked birds have, for many years, been the principal means of determining migration routes, stopover locations, and breeding and non-breeding (wintering) locations of migratory shorebirds. Whilst much data has been generated and broad migration patterns have been established for many species in the East Asian Australasian Flyway (Minton 2005, Minton *et al.* 2006), the techniques also have limitations, particularly because reports of marked birds are inevitably influenced by the distribution and habits of the human population. The use of electronic devices, where birds' daily positions are recorded, potentially overcomes these problems and can lead to a much clearer understanding of migratory strategy.

Satellite transmitters have been used on some of the larger waders over the last 15 years (e.g. Driscoll & Ueta 2002, Gill *et al.* 2005) but the early results appeared to be partly affected by adverse effects on the flight aerodynamics caused by the 26g transmitter harnessed to the birds' backs. Smaller transmitters (down to 9.5g) appear to have overcome this problem (e.g. Whimbrel in N Virginia (Watts *et al.* 2008)), as has surgical implantation of transmitters (Gill *et al.* 2009)

Light level geolocators that record time-stamped periodic ambient light levels have long been used on large seabirds (hence the involvement of the British Antarctic Survey (BAS) in their development and supply). Conklin & Battley (2010) have successfully applied leg-band mounted geolocators to Bar-tailed Godwits *Limosa lapponica* in New Zealand and Marcel Klaassen (pers. comm.) to Redshank *Tringa totanus* in Sweden (harness mounted). It was the publication by Stutchbury *et al.* (2009) which showed that geolocators had now become small enough to be applied to migratory birds weighing as little as 50g. A disadvantage of current archival geolocators is that birds must be recaptured and the devices removed to obtain the data collected; not an easy task with a migratory shorebird.

The Victorian Wader Study Group (VWSG) has been monitoring the development of electronic tracking devices ever since its involvement in placing satellite transmitters on Eastern Curlew *Numenius madagascarensis* in 1998 (Driscoll & Ueta 2002). When the VWSG learned, in February 2009, of the success of 1.4g BAS-supplied geolocators on passerines in North America (Stutchbury *et al* 2009) it decided to commence trials on medium-size waders. Ruddy Turnstone was the species selected because:

- (a) Relatively high recapture rates could be achieved due to small populations (<100) present in limited locations and with birds exhibiting strong site fidelity (VWSG data).
- (b) An intensive banding study had revealed much about migratory stopover locations in Asia, but there had been no recoveries or flag sightings close enough to the possible breeding grounds to indicate where these were (Minton *et al.* 2006).
- (c) They are the most robust of the medium-size waders visiting Australia (the Starling *Sturnus vulgaris* of the wader world). Fat free birds typically weigh 90–100g.

Methods

Eight archival geolocators were obtained from British Antarctic Survey (BAS) in Cambridge, England. Two were Mk10 and six were Mk10-S. In the latter the light sensor was at the end of a stalk, intended to keep it above the feathers when mounted with a backpack harness.

Trials (see Results) indicated that the harness attachment method was not satisfactory once Ruddy Turnstones gained weight (up to 198g) prior to migration. The birds became so round – almost like a tennis ball – that the harness tended to slip down towards the rear, impeding leg movement and potentially dropping off completely when the legs were held up close to the body during flight.

Attachment of the geocator to a plastic (PVC) leg-flag, however, seemed acceptable to birds and this method was adopted. The leg-flag was similar to those that have been used on waders in Australia for the last 20 years, and was placed on the opposite (left) tibia to the normal flag (which is engraved with an alphanumeric code in the case of Ruddy Turnstones).

The geocator was attached with epoxy resin applied to one face of the flag, prior to catching birds, and then subsequently reinforced with a strong, durable thread (Kevlar®) after the flag had been placed on the bird (Fig.1). This cumbersome process was later eliminated for future deployments by a modified design allowing the Kevlar binding to be put on before catching (Fig.2).



Fig. 1. Ruddy Turnstone 9Y with geocator attached to leg-flag and secured with Kevlar thread.

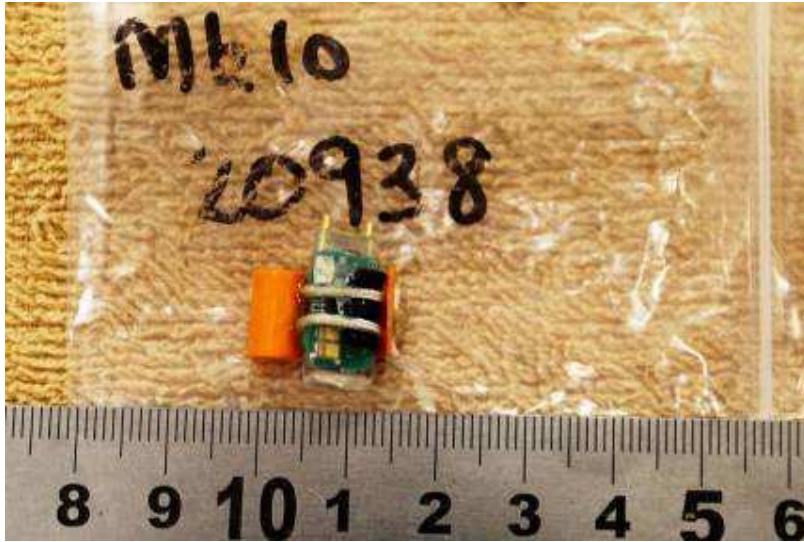


Fig. 2. Modified design to be used in 2010 allowing attachment of geolocator to the leg-flag prior to deployment in the field.

The geolocators were switched on by BAS before supply and BAS also downloaded data from units later retrieved from birds. In future these operations will be done by the VWSG with the aid of an interface box supplied by BAS.

Ruddy Turnstones were captured with a cannon-net at high tide roosts or feeding locations on ocean shores. This is the main catching method used by the VWSG for the past 30 years, with annual wader catch totals varying between 5,000 and 13,000. Because Ruddy Turnstone catches are small, all birds are normally banded, processed and released within 1-2 hours, and this was the case for birds to which geolocators were attached.

Results

Geolocator Attachment methods

It was originally intended to use the Rappole-Tipton style harness attachment employed by Stutchbury *et al* (2009) and others, including R. Klaassen (pers. comm.) on Redshank. Wooden dummy geolocators were placed on captured Ruddy Turnstones during fieldwork in South Australia during 12-17 March 2009. Birds were placed in keeping cages made of shade-cloth and were observed regularly for up to two hours. Harnesses with and without elasticated components were tested and birds generally appeared to be comfortable and to be moving normally. These birds mostly weighed 95-110g and had therefore only just started pre-migratory weight gain.

Further trials with Ruddy Turnstones on King Island, Tasmania, during 28 March to 2 April produced very different results. All birds seemed uncomfortable with the harnesses and had some difficulty in walking. Furthermore, it was possible to slide the harness off the rear of the bird if its feet were up as they would be in flight. Birds were noticeably fatter, mostly 140–180g (one 198g), and had no ‘waist’ to help hold the harness in place. Many were so round that the problem was likened to one of trying to put a harness on a tennis ball.

Trials then switched to a dummy geolocator glued onto the flap of a conventional leg-flag. This seemed acceptable to the birds and of course eliminated any effects of profile changes related to migratory fat deposition. The flag height was increased from the usual 7mm to 11mm to cater for the geolocator being mounted vertically. The flag flap lengths were shorter (8mm) than normal as they only needed to be as wide as the geolocator. Slight profiling allowed the Kevlar securing thread to remain in place.

Geolocator deployment and retrieval

One Mk10 geolocator was deployed on a Ruddy Turnstone at Flinders on 8 April 2009; another Mk10 and four Mk10-S units were deployed on 21 April. All were put on adults and five out of the six were retraps which had been caught at Flinders previously; three were males and three females. Two further Mk10-S units were put on retraps at Carpenter Rocks, South Australia, on 23 April.

There was some concern that the light sensor stalks on the Mk10-S might hamper leg movement, even though the stalks were facing outwards, but this did not seem to be the case. The Mk10-S units had been requested when backpack attachment was envisaged and it was not possible to replace them with Mk10 units in the time available.

All Ruddy Turnstones had departed from Flinders by early May and the first returned birds were seen on 11 September 2009. The first two birds carrying geolocators were seen on 18 October and, by the time of the first catching attempt with a cannon-net on 20 October, three were present. At one stage all three were in the catching area but, the net could not be fired because of some Red-necked Stints *Calidris ruficollis* standing too close to the net, in the danger area. Seventeen Ruddy Turnstones were eventually caught but only one carried a geolocator. It took a further four catching attempts, in three of which the net was not even fired, before other geolocators were retrieved on 8 January 2010. Although only two birds with geolocators had been seen beforehand, three were caught. No further geolocator-carrying birds have been seen and neither of the two birds from South Australia have been seen again. All four of the turnstones from which geolocators were retrieved had had them fitted on 21 April 2009. Their leg-flag codes (which are used to identify them throughout this paper) were ANB, APU, ANC and 9Y; APU was a female, the rest were males.

Migratory movements

The accuracy of locations derived from geolocators depends on a number of factors including season, latitude, weather conditions, attachment method and the behavior of the bird. To determine the likely location error, a calibration analysis was carried out on data gathered from birds at a known location. For ANC the variation in location when it was known to be at Flinders had a mean error of 244km, SD = 139, n = 27; for 9Y at Flinders the mean error was 262km, SD = 157, n = 6. This bird was also observed in Taiwan on 11 May 180km to the west of the fix provided by the geolocator. Taken together these results suggest that for the purpose of this study an accuracy of ± 300 km can be assumed. This is less accurate than reported by Phillips *et al.* 2004. Our data was calibrated from birds on the shore whose daily behavior is likely to include resting on one leg or feeding amongst mounds of seaweed, thus potentially creating variability in apparent shading to the light sensor at the critical times of dusk and dawn. Errors in longitude values were approximately one third of the errors in latitude.

Data were processed using a fixed light threshold value and edited using BASTrak TransEdit software to reject false and noisy transitions caused by obvious shading. The chosen light threshold level corresponded to an average sun elevation angle of -3.5 degrees with the Flinders data. This was used to compute all location fixes with the BASTrak BirdTracker software (Fox, 2009). Information downloaded from the retrieved geolocators was initially plotted on Google Earth[®]; these maps displayed considerable noise at stopover sites and were simplified by plotting a single point representing the average position of such stopovers. These are shown in Figs. 4-7.



Fig. 3. Ruddy Turnstone 9Y photographed in Taiwan on 11 May 2009 after departing Flinders on 27 April (photo: Huang Ming-Tang)

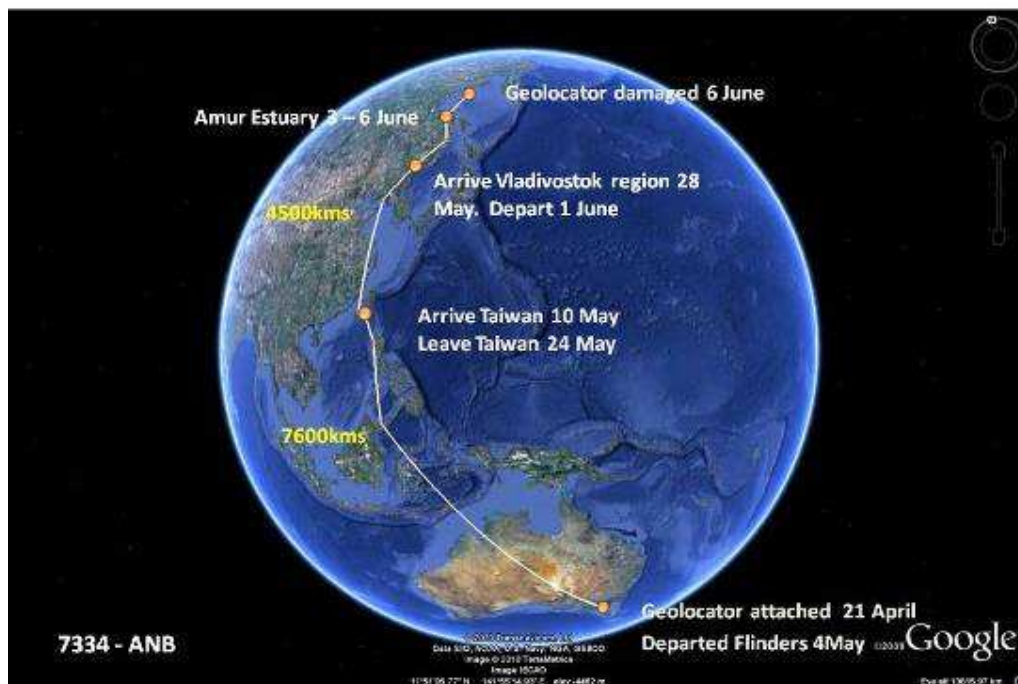


Fig. 4. Migration route recorded by geolocator for Ruddy Turnstone with leg-flag ANB.

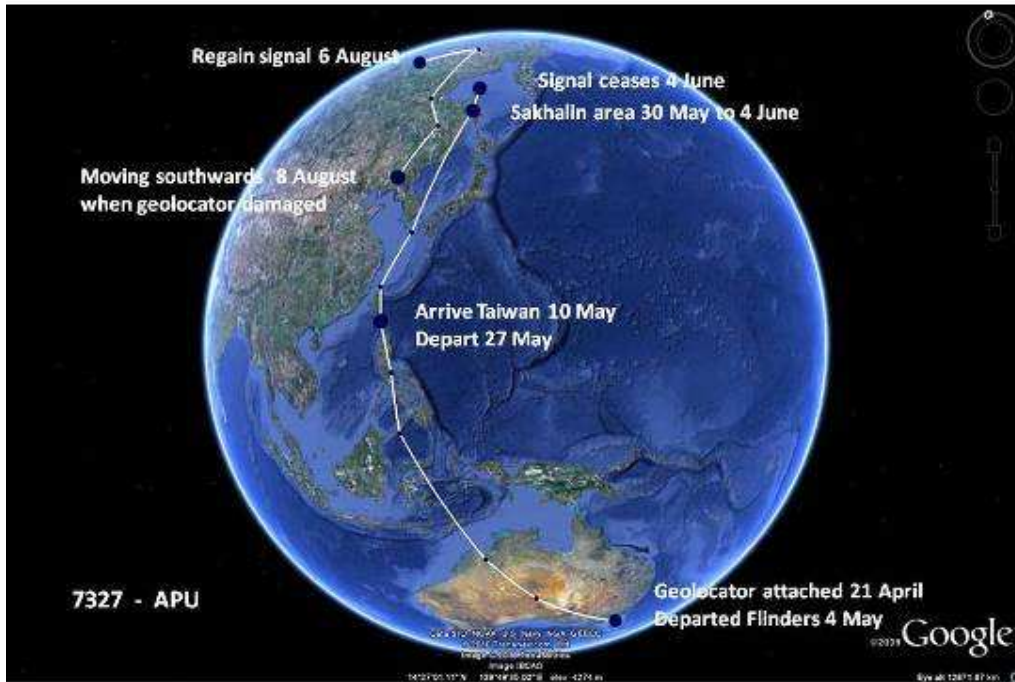


Fig. 5. Migration route recorded by geolocator for Ruddy Turnstone with leg-flag APU.

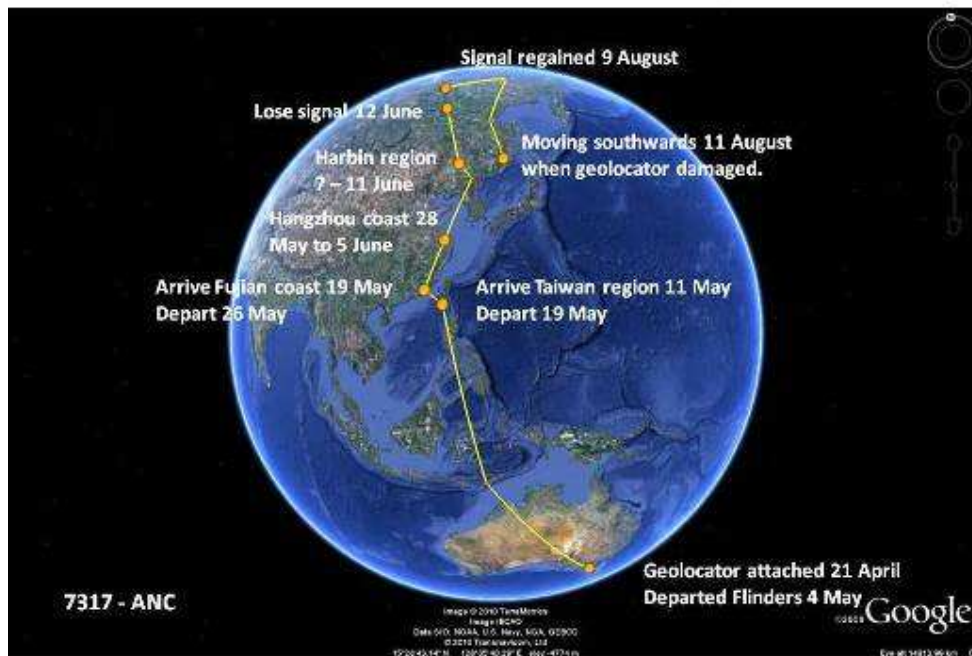


Fig. 6. Migration route recorded by geolocator for Ruddy Turnstone with leg-flag ANC.

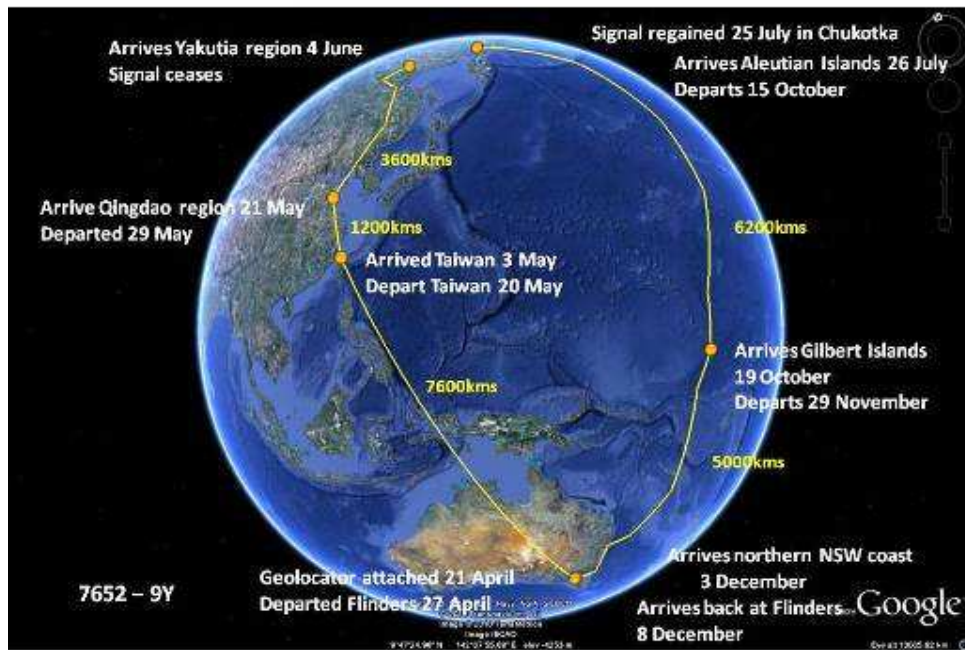


Fig. 7. Migration route recorded by geolocator for Ruddy Turnstone with leg-flag 9Y. This bird departed Flinders (Victoria) 27 April, 2009 and returned 8 December, 2009 after a journey of 27,000kms.

The first reported sighting of a geolocator bird was of 9Y, seen and photographed in Taiwan on 11 May by Huang Ming-Tang (Fig. 3). Many other Ruddy Turnstones marked in SE Australia were also seen in Taiwan in late April/May.

At the start of their northward migration all four turnstones made a non-stop flight of 7,600 km in six or seven days, from Flinders to Taiwan (Figs. 4-7). One left Flinders on 27 April and the other three on 4 May. The synchronous paths of the latter suggest they travelled in the same flock (Fig. 8).

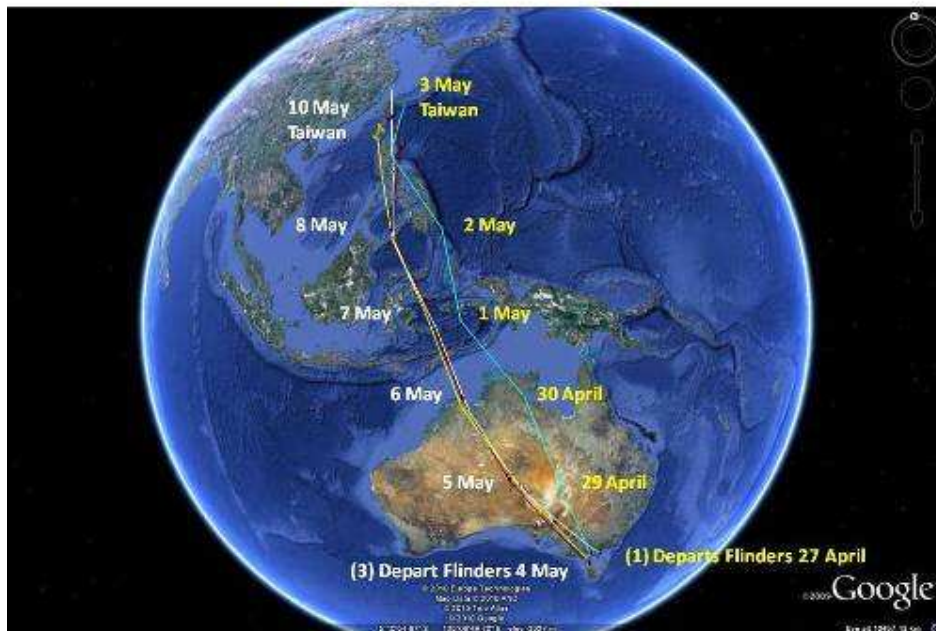


Fig. 8. Migration routes of the four Ruddy Turnstones from Flinders (Victoria) to Taiwan.

All four birds followed similar, but not identical, paths towards breeding areas in NE Siberia after staging in Taiwan for 8, 14, 17 and 17 days respectively (Figs 4-7). One to three stops of 3-8 days duration were made as birds travelled north-north-eastwards a further 4,500–5,000 km across China and Korea to the north Sakhalin / Sea of Okhotsk / East Yakutia region in Siberia. These locations became indiscernible between 4 and 12 June as birds encountered continuous daylight.

The geolocator on one bird (9Y) started showing intermittent light and dark periods of around 7 hours per day on 26 June and these continued until 14 July, suggesting that nesting activity may have been occurring.

Locations were once again discernible from three of the four geolocators in late July or early August (Fig. 5-7) when night time darkness reappeared in the data. The fourth (ANB) had apparently failed by then and when this bird was recaptured at Flinders in October the light sensor stalk was missing. Both APU and ANC, which appear to have nested near the Yakutia coast, moved to the southeast at the start of southward migration, passing close to the Sea of Okhotsk. They then briefly visited the Amur region before their stalk-mounted light sensors ceased to function on 8 and 11 August in Korea and the Vladivostok region respectively. When recaptured at Flinders in January the stalks were still attached but their casings had been damaged and fatal sea water ingress had occurred.

Shortly after the location of 9Y was again discernible, on 26 July, it was in the Aleutian Islands off SW Alaska (Fig. 7). Light sensor recordings on 23 and 25 July indicate that the bird moved to the Aleutian Islands through NE Siberia. It remained in the Aleutians until 15 October and then flew non-stop for 6,200 km, in four days, to the Gilbert Islands in the central western Pacific. There it paused for a further six weeks before departing on 29 November on a 5,000 km flight, again achieved in four days, to the coast of E Australia. The bird arrived back at Flinders five days later, on 8 December. Its round trip migration covered 27,000 km rivalling the 29,000 km journey of the Bar-tailed Godwit E7 between Alaska and New Zealand (Gill *et al.* 2005). The return route is very close to a great circle route.

Discussion

The outstanding feature of these results is the unexpected return route through the Aleutian Islands off SW Alaska and the central Pacific used by one bird, 9Y. Its late arrival back in its non-breeding area (8 December) is also a surprise as VWSG banding/flagging/recapture/moult data all suggest that most adults have completed their southward migration by mid-November.

There is some previous evidence of movements by Ruddy Turnstones between the islands off SW Alaska and Australia. Extensive banding and colour marking of Ruddy Turnstones (18,500 birds) in the Pribiloff Islands in the mid 1960s (Thompson 1974) showed that the large numbers feeding there on slaughtered seal carcasses in July-September were mainly from the Chukotka breeding grounds. Most spent the winter on Pacific islands but three (out of 198 recoveries) reached the coast of E Australia, one in Queensland and two in New South Wales. Davidson & Gill (2008) refer to the potential importance of the Trans-Pacific Flyway for a small number of shorebird species including Ruddy Turnstone.

However there has only been one report from a Pacific island of an Australian-marked Ruddy Turnstone. This was a bird retrapped in Guam, Western Pacific, in early September 2008. In contrast, there are six other recoveries, 55 sightings of individually identifiable birds (from engraved leg-flags) and 75 sightings of plain flagged Ruddy Turnstones in Asia during the late July to November southbound migration period. This suggests that the trans-Pacific return route followed by 9Y is not widely used by Ruddy Turnstone which spend the non-breeding season in Australia.

The distance travelled by 9Y on its apparently circuitous route on southward migration is little more than its northward migration through Asia (14,000 versus 13,000 km). There may be advantages if there are rich food supplies in the SW Alaska islands and periodic strong tail winds to assist migration as shown to be used by juvenile Sharp-tailed Sandpipers *Calidris acuminata* from Siberia and Bar-tailed Godwits from Alaska (Gill *et al.* 2009, Handel & Gill in press). However, the late return to the moulting/non-breeding area and the potentially more hazardous long sea-crossings would seem to be potential disadvantages. Future deployments of geolocators will reveal how regularly such return routes are used by Ruddy Turnstone with non-breeding areas in SE Australia.

Two of the other three Ruddy Turnstones (APU and ANC) appear to have initially moved east before starting on a return migration route through Asia, not dissimilar to that used on northward migration. There are many recoveries and flag sightings in Asia in the July/September period supporting such a route (Minton *et al.* 2006). Future studies using geolocators should reveal full details of southward migration routes.

Another conclusion from this trial is that Taiwan is an important stopover location during northward migration. This seemed to be the case from previous recoveries and flag sightings but that impression could have resulted simply from the intense activities of the Taiwan Wader Study Group. It is not clear at present why Taiwan should be so favoured by this species relative to other locations used by waders in the East Asian Australasian Flyway.

All four Ruddy Turnstones followed similar paths but used different northward migration strategies after their initial stopover in Taiwan. Shorter flights, with short stopovers between them, seem to be employed with no particular further preferred staging site. All birds appeared to be heading towards the breeding areas in Eastern Siberia. The data show it unlikely that any were aiming for breeding grounds in Alaska. 9Y, a male, which later staged in Aleutian Islands, was exhibiting nesting activity between 26 June and 14 July, which appears rather late for Alaska where the breeding season is generally earlier than in N Siberia (P. Tomkovich & R. Gill pers. comm.). There are sufficient data to show that this bird approached the Aleutian Islands from Siberia rather than Alaska.

Some of the longer flights recorded in this study afford the opportunity to calculate migratory flight speeds. For example the 7,600 km first leg of the northward migration appears to have been covered at an average ground speed of 50-55 kph. The 6,200 km flight from the Aleutian Islands to the Gilbert Islands averaged around 65 kph, which lends support to the view that birds generally set off from Alaska when they have favourable tail winds (Gill *et al.* 2009). The 5,000 km onward flight to Australia seems to have averaged 50-55 kph. These speeds are similar to those reported previously for waders on long non-stop steps in their migration (Driscoll & Ueta 2002).

This trial on Ruddy Turnstones has confirmed the huge potential of geolocators to provide much greater insights into the migratory strategy of waders than previously obtainable from banding recoveries and flag sightings. Attachment of the Mk10 BAS geolocators via a plastic leg-flag on the tibia seems to be acceptable for medium size waders and the geolocator appears to operate satisfactorily in that position. Not unexpectedly, geolocators with light sensors on stalks are not suitable for deployment using leg attachments on waders as they are probably damaged when birds walk through vegetation on the breeding grounds or during incubation.

As archival geolocator weights continue to be reduced (the latest BAS model Mk12 is only 0.75g), their deployment even on small waders seems a possibility. However, two practical difficulties remain: the inability to pinpoint breeding locations in the high Arctic precisely (due to continuous daylight) and the need to recapture birds to obtain the stored data (always difficult to achieve on waders).

The future

The Victorian Wader Study Group plans to deploy a further 60 geolocators on Ruddy Turnstones at three locations in SE Australia in March/April 2010, with 30 additional geolocators to be applied to Greater Sandplover *Charadrius leschenaultii* at Broome in NW Australia (an Australasian Wader Studies Group / Deakin University joint project). Some will also be placed on Sharp-tailed Sandpipers at Werribee Sewage Farm in Victoria (a Marcel Klaassen, Deakin University project). The next few years should see some exciting developments in wader migration studies using geolocators.

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Thanks are due to a great many people who facilitated this research. Initially much information and advice was provided by people around the world who had used geolocators and other electronic devices and who had developed or used harness and leg attachment methods (Bridget Stutchbury, Ron Porter, Raymond Klaassen, Phil Battley, Jesse Conklin, and Theunis Piersma). Charles Francis and Stuart Pimm provided contact details for various people. Bridget Stutchbury, whose results stimulated this study, is particularly thanked for promptly answering a range of questions. Carlene Gosbell provided considerable help in making the leg-flag attachments and Margaret Rowe and Robyn Atkinson helped carry out the initial harness trials with dummy geolocators. Pavel Tomkovich and Robert Gill kindly provided information on the timing of Ruddy Turnstones' breeding season in Siberia and Alaska respectively. Heather Gibbs kindly extracted recovery and flag sighting information from the relevant data banks. Victorian Wader Study Group members kindly went into the field many times to catch Ruddy Turnstones to apply and retrieve the geolocators. Roz Jessop and Richard Loyn kindly assisted with permit applications. The wildlife authorities in Victoria and South Australia, and relevant Ethics Committees, gave permission for the banding and for the application of the geolocators. Banding was carried out under the auspices of the Australian Bird and Bat Banding office.

References

- Conklin, Jesse R. and Battley, Phil F. 2010.** Attachment of geolocators to Bar-tailed Godwits: a tibia-mounted method with no survival effects or loss of units. *Wader Study Group Bull.* 117(1): in press.
- Driscoll, P.V. & M. Ueta. 2002.** The migration route and behaviour of Eastern Curlews *Numenius madagascariensis*. *Ibis* 144 (online): E119-130.
- Davidson, N.C. & Gill, R.E. 2008.** How do Ruddy Turnstones *Arenaria interpres* prepare to cross the Pacific? *Wader Study Group Bull.* 115: 33-35.
- Fox, James W. 2009.** Geocator Manual v7. British Antarctic Survey. www.birdtracker.co.uk
- Gill, R.E., T. Piersma, G. Hufford, R. Servanckx & A. Riegen. 2005. Crossing the ultimate ecological barrier: Evidence for an 11,000-km –long nonstop flight from Alaska to New Zealand and eastern Australia by Bar-tailed Godwits. *Condor* 107: 1-20.
- Gill, R.E., Tibbitts T.L., Douglas, D.C., Handel, C.M., Mulcahy, D.M., Gottschalck J.C., Warnock, N., McCaffery, B.J., Battley, P.F. & Piersma, T. 2009.** Extreme endurance flights by land birds crossing the Pacific Ocean; ecological corridor rather than barrier? *Proc. R. Soc. B.* 276: 447-457.
- Handel, C.M. & R.E. Gill.** (In press). Wayward youth: Trans-Beringian movement and differential southward migration by juvenile Sharp-tailed Sandpipers. *Arctic*.
- Minton, C.D.T. 2005.** What have we learned from banding and flagging waders in Australia? In Straw, P. 5006. Status and Conservation of Shorebirds in the East Asian-Australasian Flyway; *Proceedings of the Australasian Shorebirds Conference 13–15 December 2003*, Canberra, Australia. *Wetlands International Global Series 18, International Wader Studies 17.* Sydney, Australia. 116–142.
- Minton C., Wahl J. Jessop R., Hassell C., Collins P. & H. Gibbs, 2006.** Migration routes of waders which spend the non-breeding season in Australia. *Stilt* 50: 103-134.
- Phillips R.A, Silk J.R.D., Croxall J.P., Afanasyev V. & Briggs D.R. 2004.** Accuracy of geolocation estimates for flying seabirds. *Mar. Ecol. Prog. Ser.* 266: 265-272.
- Stutchbury J.M., Tarof S.A., Done T., Gow M. Kramer, P.M., Tautin, J., Fox, J.W. & Afanasyev, V. 2009.** Tracking long-distance songbird migration by using geolocators. *Science* 323: 896.
- Thomson M.C. 1974.** Migration patterns of Ruddy Turnstones in the central Pacific region. *Living Bird* 12: 5-23.
- Watts, B.D., Truitt, B.R., Smith, F.M., Mojica, E.K., Paxton, B.J., Wilke, A.L. & Duerr, A.E. 2008.** Whimbrel tracked with satellite transmitter on migratory flight across North America. *Wader Study Group Bull.* 115: 119-121.

Ruddy Turnstones *Arenaria interpres* Catching on King Island, Tasmania 16 to 23 March 2010

Clive Minton

Background

This was the fourth annual week-long visit by VWSG to King Island in connection with the long-term study of Ruddy Turnstones. This "Technical Report" covers aspects of the information we obtained or which has been generated since the previous visit in March/April 2009.

2010 Visit

A team of 11 people from Melbourne was in King Island from 16th to 23rd March. A separate team of four from the south-east of South Australia, led by Maureen Christie, was present from 12th to 21st March. In addition Paul van Loon and his wife visited for several days, photographing as well as helping with catching and scanning for engraved leg-flags.

The Count

Data on the numbers of Ruddy Turnstone present at each location was collected throughout the visits. Three small areas which were not covered were subsequently counted by Margaret Bennett on 26th March. Details of the counts are given in Table 1, together with a comparison with 2009. There was a further slight reduction in the number of birds found. Given that the arctic summer of 2009 was a better breeding season for Ruddy Turnstone (see later) this is disappointing. It may however be that the two complete breeding failures in 2006 and 2008 are still having a negative effect.

Two new locations were counted and contained an additional 105 birds. These will become part of the population monitoring portfolio in future years.

Catching and banding

a) Catches

Details of the eight catches are given in the list attached (Appendix 1) and in Table 2. The total of 211 Ruddy Turnstone was slightly lower than in 2009 and the lowest so far for the four years of visits. In general, it proved harder to make large catches of Ruddy Turnstone this year than in previous years. This was partly because birds were not quite as numerous or concentrated (e.g. many fewer at the confined catching location at Stokes Point). It was also perhaps because they were a little more spread out as a result of the rather limited sources of rotting seaweed containing insects, maggots and other larvae. For the first time no catch was made at Central Manuka – a consistently good catching site in previous years.

b) Controls and Retraps

A high percentage of the birds caught were again retraps (42% versus 44% in 2009) (Table 2). This is an indication of the strong site fidelity of Ruddy Turnstone. This was also illustrated, for example, in the retrap rate for a catch at Surprise Bay (0%, because no catch was made there in 2009 and the location of the catch within the bay was a new one). At Dripping Wells, where it was also the first catch ever, the retrap rate was only 12%.

Although no catching site was visited for a second time this year two birds, both juveniles, were caught twice (at Dripping Wells on 22nd March). One had been banded at Currie (12 km north) the previous day and the other at Trough Bay (20 km south) three days previously!

One bird previously banded in South Australia (on 18th April 2008) was caught at Dripping Wells. There is some evidence that a few birds from King Island do stop off in South Australia, at the beginning of northward migration particularly.

c) Percentage Juveniles

Juvenile Ruddy Turnstone were present this year at all the locations sampled. They comprised 14.2% of the catch (Table 2). This is close to the average for Ruddy Turnstone in south-east Australia, slightly lower than the 17.9% on King Island in 2008, but much better than the 0% on King Island in 2007 and 2009. Clearly the arctic summer of 2009 was a reasonably good breeding season for the Ruddy Turnstone populations which come to south-east Australia (the figure for South Australia, between 2nd and 7th March this year, was 27%).

Some more good breeding years for Ruddy Turnstone are needed to make up for the complete washouts in two of the last four years.

d) Sexes

There were marked differences in the proportion of each sex at different locations, with figures ranging from 17% to 71% males (Table 2). A pattern is beginning to emerge of some locations being preferred consistently each year by one particular sex. But several years' further data are needed to ensure that this is statistically significant.

Over the total birds caught the sex ratio was even – 90 males and 91 females – as in previous years.

e) Weights

The mean weights, and ranges of weights, of birds caught in each catch are given in Table 2. As in 2009 the weights of birds in the Manuka area were significantly lower than those at other locations. It did appear to us that the rotting seaweed in the Manuka area held fewer invertebrates, but no attempt was made to quantify this. The average weights of the Ruddy Turnstone at the other locations sampled was reasonably consistent and fitted well on to the graph of date versus weight of Ruddy Turnstone including in last year's King Island Visit Report.

Because no adults were captured twice during this year's visit no additional data was collected on the rate of weight gain of birds before they depart on migration (see last year's Report).

Recoveries and Flag-sightings away from King Island

The information gained on migratory movements from the banding and flagging (particularly the use of individually identifiable engraved flags) Ruddy Turnstone on King Island has far exceeded expectations. Much data has been given in previous years' reports but the information generated in 2009 was even more impressive.

Heather Gibbs has very kindly extracted the relevant information from the leg-flag sightings and recoveries databases. Between 1st April and the beginning of November 2009 there were 71 sightings of King Island marked birds overseas or on mainland Australia. Taiwan seems to be especially favoured as a stopover site on migration (60 sightings involving 17 individuals). Two birds were also seen in mainland China and one each in Hong Kong and Korea. Sightings within Australia ranged from Broome to Darwin and the central Queensland coast, with two also in South Australia.

The data from Taiwan is particularly illuminating. It was generated from intensive searches by skilled flag sighters from the Taiwan Wader Study Group (led by ChungYu Chiang). Some birds were seen many times – two were seen 13 times and another 10 times (all three being seen on both northward and southward migration). Some birds stayed for quite long periods during northward migration – 24, 37 and 43 days were the longest. Similarly the duration

between first and last sighting for three birds on southward migration in August/September was 17, 19 and 28 days.

The bird carrying engraved flag EA (originally marked XO) and mentioned in last year's King Island Visit Report was again seen on its southward migration in 2009. It has now been seen making a migratory stopover in Taiwan on both northward and southward migration in 2007 and 2009 and also on northward migration in 2008. Let us hope it is still around to continue its migration record in 2010 (we didn't see it or catch it during our recent visit).

The King Island-flagged Ruddy Turnstone seen in the northern half of Australia were all on southward migration in the late September to early November period. Rather surprisingly one of the two recorded in the Darwin area stayed there until at least 7th November, a date by which previous information suggests most adult Turnstone would have returned to their non-breeding area.

One of the small number of Double-banded Plover which we have leg-flagged on King Island (with the orange over blue combination) was seen near Christchurch in New Zealand in mid-February this year. The central region of South Island in New Zealand is the main breeding area for Double-Banded Plover which come to the south-east of Australia for the autumn and winter.

Flag sightings on King Island

A large number of sightings of the engraved leg-flags on Ruddy Turnstone were made during the visits, particularly by Maureen Christie and her team, and by Paul van Loon. Almost all the locally-flagged birds were at exactly the same location at which they had originally been marked.

Several birds flagged in China and South Australia were also recorded, as well as a bird carrying a white flag from New Zealand (as in other years too).

Geolocators

A key element of the 2010 fieldwork was the application of 38 light-sensor geolocators to Ruddy Turnstone. These devices, weighing around 1g, record the position of each bird each dawn and dusk for up to a year. Birds have to be recaptured and the geolocators removed for the stored data to be downloaded. Geocator retrieval will be the key element of the 2010 fieldwork on King Island and this may necessitate two visits. Hopefully we will have a great deal more information on Ruddy Turnstone migration by this time next year.

Acknowledgements

The large number of local people from King Island, and the group of visiting members from Victoria and South Australia are all gratefully thanked for their contributions.



King Island Ruddy Turnstone (photo Mavis Burgess)

Table 1 Counts of Ruddy Turnstone on King Island (West Coast) 16-23 March 2010

Listed from south to north

	2010	<u>2009</u>
(Seal River Mouth)	(60)	Not
counted		
Stokes Point	20	90
Stokes Point to Surprise Bay	110	40
Surprise Bay (including Denby Beach)	105	80
Seal Rocks	--	0
Dripping Wells	65	40
Ettrick Beach	0	0
Miller Bay	--	0
Currie Golf Course (Burgess Bay)	90	96
Currie Harbour	25	14
Dirty Bay	30	22
Manuka – South	10}	67}
– Central	150}	68}
– North (Whalebone)	15}	65}
South Porky	0	40
Unlucky Bay	10	20
North of Bungaree Creek	0	35
Duck Bay – Island Point}	115}	15
South Whistler }	}	80
Whistler Point	40	55
[The Springs (Cape Wickham)]	(45)	Not counted
Lighthouse area	<u> -</u>	<u> 0</u>
	<u>785*</u>	<u>827</u>

*890 if the two new areas (in brackets) are included

Table 2: Ruddy Turnstone Catch Details, King Island, 17-22 March 2010

Date	Place	Ne w	Retrap	Total	(Juvs)	♂	♀	%♂	Mean Weight Adults (g)	Weight Range (g)
17.3.10	South Manuka	9	3		(1)	5	6	45%	118.5	105-135
18.3.10	North Manuka	10	24	34	(6)	20	8	71%	115.4	100-129
19.3.10	Trough Bay	25	6	31	(6)	4	21	16%	141.6	115-168
20.3.10	Surprise Bay	17	-	17	(3)	8	6	57%	130.1	118-148
20.3.10	Currie Golf Course	3	3	6	(-)	1	5	17%	142.8	123-155
21.3.10	"	9	21	30	(5)	12	13	48%	141.8	110-164
21.3.10	South Whistler	14	26	40	(3)	19	18	51%	144.5	112-164
22.3.10	Dripping Wells	36	5*	41	(6)	21	14	60%	140.0	120-170
Total	(8 catches)	123	88	211	(30)	90	91	49.7%		
			(42%)		(14.2%)					

*Includes one from South Australia

Mean weight of the 30 juveniles was 100.5g (range 90-114 [124])

Table 3. Ruddy Turnstone Catch Totals on King Island 2007-10

	<u>New</u>	<u>Recapture</u>	<u>Total</u>	<u>(Juveniles)</u>
2007	230	11	241	(0)
2008	354	65	419	(75)
2009	124	99	223	(0)
2010	<u>123</u>	<u>88</u>	<u>211</u>	(30)
TOTAL	<u>831</u>	<u>263</u>	<u>1094</u>	

King Island, Tasmania, 16-23 March 2010

			New	Retrap	Total	(Juvs)	Nets fired
17/03/2010	South Manuka (geolocators put on and released at Central Manuka)	Ruddy Turnstone (5 male / 6 female)	9	3	12	(1)	1/2
18/03/2010	North Manuka (geolocators deployed)	Ruddy Turnstone (20 male / 8 female) Double-banded Plover Sooty Oystercatcher	10 5 1 16	24 0 0 24	34 5 1 40	(6) (4) (1)	1/2
19/03/2010	Trough Bay (between Surprise Bay and Stokes Point)	Ruddy Turnstone (4 male / 21 female)	25	6	31	(6)	1
20/03/2010	Surprise Bay (end by gate)	Ruddy Turnstone (8 male / 6 female)	17	0	17	(3)	1/2
20/03/2010	Burgess Bay, Currie Golf Course	Ruddy Turnstone (1 male / 5 female)	3	3	6	(0)	1/2
21/03/2010	Burgess Bay, Currie Golf Course	Ruddy Turnstone (12 male / 13 female)	9	21	30	(5)	1
21/03/2010	South Whistler	Ruddy Turnstone (19 male / 18 female)	14	26	40	(3)	1
22/03/2010	Dripping Wells * includes one from South Australia	Ruddy Turnstone (21 male / 14 female)	36	5*	41	(6)	1
KING ISLAND TOTALS		SPECIES	NEW	RETRAP	TOTAL	(Juv)	
17/03 - 22/03/2010 (8 catches)		Ruddy Turnstone	123	88 (42%)	211	(30 = 14%)	
Ruddy Turnstone sexes: 90 male / 91 female		Double-banded Plover	5	0	5	(4)	
		Sooty Oystercatcher	1	0	1	(1)	
		TOTAL	129	88	217		

Amazing Initial Results from the Deployment of Engraved Leg-flags on Bar-tailed Godwits in Victoria

Clive Minton, Susan Taylor, Roz Jessop, Heather Gibbs,
Tony Habraken and Rob Schuckard

Introduction

Plain orange leg-flags have been used on waders caught and banded in Victoria since December 1990. Individually engraved leg-flags (ELFs) have been used on Pied and Sooty Oystercatchers in Victoria since 2003, on Ruddy Turnstones in south-east Australia since 2004 and on many species of migratory waders in north-west Australia since 2005. The prime purpose of using ELFs was to facilitate the resighting of birds in the field in order to determine survival rates, i.e. without the need to recapture them. This has been very successful, with up to 80% of individuals being sighted again.

An added bonus has been an ever increasing flow of sightings of ELF birds overseas as flag-sighting enthusiasts and photographers became aware of such birds. These records are technically recoveries – because the band number of each individual bird is known. They have greatly increased the value of each sighting over that of a bird carrying a plain flag, because the banding date etc. is known.

In 2009 it was therefore decided to extend the use of ELFs in Victoria, initially starting on species with high resighting rates such as Bar-tailed Godwit and Red Knot. The prime purpose of using ELFs on these species in Victoria was to gain more detailed information on migratory movements. Resighting for survival rate estimates would be particularly difficult in Victoria with most Bar-tailed Godwit and Red Knot occurring in relatively inaccessible areas such as Corner Inlet and Swan Island/Mud Islands.

This note records the initial most successful results which have derived from the ELF program on Bar-tailed Godwits. It only deals with the movements away from marking areas. The authors are those who have been most closely involved in putting ELFs on Bar-tailed Godwits, the person who has maintained the sighting database and who extracted the information for this paper, and the two people in New Zealand who were responsible for most of the resightings there.

Flagging

The table below shows the number of orange ELFs put on Bar-tailed Godwits in Victoria since this process was commenced in February 2009. Catching in summer (February) and in winter (June) in Corner Inlet has been particularly successful. The catches have contained a high proportion of first year birds because in the last two summers there have been many juveniles present following two successive good breeding seasons in Alaska. All the birds caught in winter were immatures, with approximately 75% being first year birds.

Engraved Orange leg-flags put on Bar-tailed Godwits

08/09 Season

7/2/09	Clonmel Island, Corner Inlet	81
9/2/09	Barry Beach, Corner Inlet	29
23/6/09	Clonmel Island, Corner Inlet	<u>173</u>
		<u>283</u>

09/10 Season

23/11/09	Mud Islands	3
1/2/10	Rhyll	32
10/2/10	Dream Island, Corner Inlet	150
28/6/10	Clonmel Island, Corner Inlet	<u>157</u>
		<u>342</u>
	<u>Total</u>	<u>625</u>

On all occasions the ELF was placed on the right tibia (the same place which the plain orange flag used to be located), with the metal band on the left tarsus. A total of 625 orange ELFs have now been deployed, with 283 in the first year (08/09) and 342 in the second year (09/10).

Amazingly there have been 53 different individuals resighted away from the flagging areas up until the end of July 2010 (see table below). All but one of these was originally marked in the 08/09 season, giving a distant resighting rate of 18% already on those birds.

Sightings of orange ELF Bar-tailed Godwits

(Data to 31/7/10)

<u>Sighting Location</u>	<u>Number of individual birds</u>
North Island, New Zealand	32
South Island, New Zealand	11
Japan	6
South Korea	3
Queensland } same }	2
New South Wales } bird }	<u>1</u>
Total	<u>55</u>

Sightings in New Zealand

Not surprisingly the majority of resightings (43) have come from New Zealand – 32 in North Island and 11 in South Island. This is because a high proportion of first year Bar-tailed Godwits in Victoria move across the Tasman Sea to New Zealand during their second year, thereafter becoming New Zealand “citizens”. Of the sightings in New Zealand 34 relate to birds originally marked as juveniles and seven to birds in their second year, with only two apparent adults (2+) changing location.

The timing of the resightings in New Zealand is particularly enlightening. Firstly there was a most unexpectedly quick trans-Tasman movement with one bird (ELF 95) marked at Barry Beach on 9th February 2009 being seen near Auckland only seven weeks later (29th March). This is the first time there has been any indication that such movements can take place at the same time as the adult Bar-tailed Godwits are moving in the opposite direction on their way back to their breeding grounds.

The next sighting in New Zealand was not until late September and then there were eight sightings in October and eight more in November. These results tend to confirm previous views that the main trans-Tasman movements of immature birds take place in the late September/November period. Twelve of the birds which were subsequently seen in New Zealand were still in Corner Inlet on 16th September (Rob Schuckard observations). Many of the birds which have crossed to New Zealand have subsequently been resighted there several times. Thirty-two had moved to North Island and 11 to South Island.

Sightings in Asia and elsewhere in Australia

There have so far been six Bar-tailed Godwits with orange ELF's sighted in Japan and three in South Korea. As would be expected, most of these were flagged as adult birds or had reached at least the age of three by the time they were resighted.

However a considerable surprise has been the sighting of two different Bar-tailed Godwits in Japan which were only two years old. Previous information from recoveries of Australian Bar-tailed Godwits has suggested that they do not migrate northwards for the first time until age three. Both birds were seen at the same place by the same observer on 25th May. This is a rather late date as many Bar-tailed Godwits would normally have already reached their breeding grounds in Alaska by the last week in May.

The two resightings in Queensland and one in New South Wales all relate to the same individual which was probably on southward migration back to its non-breeding area in Victoria.

Conclusions

With the unexpectedly high "dividends" already received from the first year's investment in ELF's for Bar-tailed Godwits the future looks extremely promising. With even more birds flagged in 09/10 than in 08/09 there should be another huge flood of sightings from New Zealand starting in late September/October. Increasingly, as birds mature, we can also expect more sightings of birds on migration through Asia. And best of all it would be nice to have one seen on its breeding grounds in Alaska!

The ELF program has already shown an unusual mid-season migration across the Tasman by one bird and will gradually produce more quantitative information on the timing of the main trans-Tasman movement of immature birds. Further evidence should also accrue concerning the age of first northward migration for Bar-tailed Godwits.

Acknowledgements

As always, scientific results on wild birds are highly dependent on critical input by a wide range of people.

VWSG members are thanked and congratulated on their perseverance in catching the godwits, especially in Corner Inlet. It took four consecutive days, for example, in June 2010 to achieve the most successful catch on 28th June.

The huge amount of time spent by New Zealand wader enthusiasts, particularly Tony Habraken and Rob Schuckard, scanning wader flocks for flagged birds is greatly appreciated. Without the dedication and perseverance, and systematic recording and reporting of resightings by such people, a task coordinated by Adrian Riegen, results such as those detailed in this note could not have been obtained.

Heather Gibbs set up and managed the database for storing all the ELF reports.

Special thanks also go to ChungYu Chiang in Taiwan who arranged for the manufacture of all the engraved leg-flag blanks and to Doris Graham and the teams from the VWSG who spent many hours carefully forming the flags.

Sightings of engraved leg-flag Ruddy Turnstones on migration

Clive Minton, Maureen Christie, Penny Johns,
ChungYu Chiang, Chih-Hui Liu and
Heather Gibbs

Introduction

When engraved leg-flags (ELFs) were first put on waders in Australia it was primarily for the purpose of being able to resight individuals locally, to facilitate survival rate analyses. However there has been an unexpectedly large bonus in the form of sightings of these individually marked birds away from the flagging area on migration. Some of these have been published in previous VWSG bulletins but the volume has now grown too large to continue this.

This note summarises the movement information which has been derived so far from the introduction of the use of engraved leg-flags on Ruddy Turnstone in Victoria in late 2003, in South Australia in early 2004, and in King Island, Tasmania, since March 2007.

Methods

Birds were all flagged with the normal colour code allocated to their particular area – orange (Victoria), orange over yellow (South Australia), and orange over blue (Tasmania). In all cases it was the orange flag which was engraved. This was always placed on the right tibia. This had the advantage of minimizing wear of the engraving but the disadvantage that resting turnstones often fluff up their feathers in cold weather and can sometimes therefore obscure the engraved flag when roosting.

Wear of metal bands and flags on Ruddy Turnstones is considerable. This meant that engraved flags periodically had to be replaced when birds were recaptured. Even metal bands were occasionally worn to become illegible if placed on the tarsus and therefore in later years these have been placed on the tibia (left) whenever possible.

Results

Up to the end of June 2010 the number of Ruddy Turnstone given ELFs has been 174 in Victoria, 974 in South Australia and 828 in King Island giving a total of 1976.

So far there have been 143 resightings of ELF Ruddy Turnstone away from the marking areas, with 131 of these overseas (Table 1). 126 of these have been in Taiwan where systematic massive field observation work has been organized by ChungYu Chiang (Taiwan Wader Study Group coordinator) in recent years. Other overseas sightings have been in Hong Kong, mainland China, Japan and Korea. Sightings have been both during northward and southward migration although, as with most other species of waders in Australia, sightings on northward migration predominate.

The 12 resightings elsewhere in Australia are of birds staging on southward migration on their way back to their respective non-breeding areas. Excluded from the table are a small number of movements between the three flagging locations, mainly between King Island and South Australia.

The listed sightings include multiple sightings of the same bird. So the total number of individuals involved is significantly less than the 143 total shown. Some of these resightings have given an excellent insight into the constancy of use of particular stopover locations (Table 2). It is particularly interesting that the two birds illustrated have so regularly used the same stopover location in Taiwan on both northward and southward migration. XO/EA has been seen in all except one migration season ever since it was originally banded and flagged on King Island in March, 2007. 4H/XM has been seen in Taiwan in each migration season since it was marked at King Island in March 2008. Both birds have also been recaptured

once back in King Island (when their flags were changed) and 4H/XM was also seen there during the other non-breeding season.

Discussion

The strong emphasis on Taiwan as a stopover location for Ruddy Turnstones on both northward and southward migration is not considered to have solely derived from the high sighting efforts there. It does appear to be a location particularly favoured by Ruddy Turnstones. This is illustrated by the fact that all four Ruddy Turnstones from Flinders carrying geolocators used Taiwan as their first stopover location in Asia on northward migration (see Turnstone Geocator article elsewhere in this Bulletin).

The lack of sightings elsewhere in Australia during northward migration supports the view that when birds depart from their breeding areas in April they make very long non-stop migrations well into Asia. Taiwan is 7,600km from Flinders and from South Australia and a little bit further still from King Island.

The insight which these engraved leg-flags are giving into the migratory movements of individual birds is quite amazing. These results are of course only achievable because of the incredible dedication of flag sighters in Taiwan.

The future

The use of ELF's on Ruddy Turnstone in Victoria, the south-east of South Australia and on King Island is planned to continue for several more years. This is not only to strengthen the data for calculation of survival rates but also because the ELF's are providing such valuable information on migratory movements.

This work has been greatly supplemented by the deployment of a further 75 geolocators on Ruddy Turnstones at these locations in March/April 2010. As results become available from the retrieval of these geolocators over the next couple of years we will hopefully develop a greater insight into the migratory strategy of Ruddy Turnstone than any other wader species which visits Australia.

Acknowledgements

As with all VWSG research our results are dependent on a large number of people in a wide range of ways. Firstly the banding and flagging teams spend a lot of time in the field catching birds and in trying to recapture them (especially those carrying geolocators.). A key input to this particular study has come from flag-sighters in Taiwan and elsewhere in the east Asian/Australasian Flyway. The Taiwan Wader Study Group is particularly thanked for its intensive flag-sighting efforts. Everyone who is responsible for maintaining the various records is thanked.

The Australian Bird and Bat Banding Scheme and the relevant authorities in Victoria, South Australia and Tasmania are thanked for providing the necessary permits.

Table 1. Sightings of Ruddy Turnstones with engraved leg-flags
(Data to 31/7/10)

Sighting location

Flagging Location	<u>Sighting location</u>						TOTAL seen	Total flagged
	Taiwan	Hong Kong	China	Japan	Korea	Elsewhere		
Victoria (Flinders & Barwon Heads)	6						6	174
South Australia (south-east)	21	2	2	1		7 in NWA	33	974
King Island, Tasmania	89	2	5	4	1	3 in NT & 2 in WA	104	828
TOTAL	126	4	7	5	1	12	143	1976

Table 2. Resightings of two individual Ruddy Turnstones

Engraved flag XO, then EA (Metal band 052-51886)

Date	Location	Circumstances	Status
24/3/07	Currie, King Island	Original banding	Non-breeding area
4 & 8/5/07	Taiwan	Seen at migratory staging location	Northward migration
3/8/07	“	“	Southward migration
17/4/08	“	“	Northward migration
30/3/09	Currie, King Island	Recaptured, Flag changed	Non-breeding area
14/4 to 21/5/09 (8 sightings)	Taiwan	Seen at migratory staging location	Northward migration
22 & 24/8/09	“	“	Southward migration
19&28/4/10	“	“	Northward migration

Engraved flag 4H, then XM (Metal band 052-52039)

Date	Location	Circumstances	Status
9/3/08	Whistler Point, King Island	Original banding	Non-breeding area
17 to 23/4/08 (4 times)	Taiwan	Seen at migratory staging location	Northward migration
16/8 to 2/9/08 (3 times)	“	“	Southward migration
18/2/09	Porky's Beach, King Island	Seen back in non-breeding area	Non-breeding area
13/4 to 7/5/09 (10 times)	Taiwan	Seen at migratory staging location	Northward migration
19 to 24/8/09 (3 times)	“	“	Southward migration
21/3/10	South Whistler, King Island	Recaptured. Flag changed	Non-breeding area
19/4 to 3/5/10 (3 times)	Taiwan	Seen at migratory staging location	Northward migration

Wader Breeding Success in the 2009 Arctic Summer, based on Juvenile Ratios of Birds which Spend the Non-breeding Season in Australia.

Clive Minton, Rosalind Jessop, and Chris Hassell

Stilt 57: 63-66. Reprinted with permission from the editor.

Introduction

For many years the breeding success of waders from the Northern Hemisphere which spend the non-breeding season in Australia has been estimated from the percentage of juveniles in cannon-net catches. Since 2000 the results have been published each year in *Arctic Birds* (Minton et al 2000, Minton et al 2008).

Data is collected in two regions of Australia 3,000km apart – north-west Australia (Broome and 80 Mile Beach) and south-east Australia (Victoria, the south-east of South Australia, and King Island, Tasmania). This paper covers information gathered during the 2009/10 non-breeding season and relates to breeding success in the 2009 Northern Hemisphere summer.

Methods

Fieldwork operations were similar in 2009/10 to those of previous years. Only cannon-net catches are included in the tabulated data because mist-net catches tend to show a different, higher, percentage of juveniles. In north-west Australia (NWA) the main sampling period – usually in the second half of November – was a little earlier than usual (1st - 20th November). This is not considered to be likely to affect the results as most juveniles have reached that region by the end of October. In south-east Australia (SEA) the usual range of sites was sampled, at similar dates to previous years.

Previous papers have detailed potential limitations of this method of measuring breeding success (Minton et al 2005). However, in the absence of other proven techniques and established monitoring programs, it is the only comprehensive quantitative breeding success information available on arctic and Northern Hemisphere waders in the East Asian/Australasian Flyway at the present time. Given the comparability of sampling techniques used each year the data is considered to, at least, provide a good index of annual variations in breeding success.

Results

Catch and percentage juvenile data collected in SEA and NWA in 2009/10 are given in Tables 1 and 2. The results for this most recent year have also been added to the long term datasets from these two regions given in Tables 3 and 4.

Table 1. Percentage of juvenile/first year waders in cannon-net catches in south-east Australia in 2009/2010

Species	No. of catches		Total caught	Juv./1st year		Long term median* % juvenile (years)	Assessment of 2009 breeding success
	Large (>50)	Small (<50)		No.	%		
Red-necked Stint – <i>Calidris ruficollis</i>	7	4	1856	227	12.2	13.8 (31)	Average
Curlew Sandpiper – <i>C. ferruginea</i>	2	4	302	82	27.2	10.0 (30)	Very good
Bar-tailed Godwit – <i>Limosa lapponica</i>	1	1	184	57	31.0	18.6 (20)	Very good
Red Knot – <i>C. Canutus</i>	0	0	0	0	(-)	52.1 (17)	?
Ruddy Turnstone – <i>Arenaria interpres</i>	0	15	336	62	18.5	9.3 (19)	Good
Sanderling – <i>C. alba</i>	1	2	366	71	19.4	12.4 (18)	Good
Sharp-tailed Sandpiper – <i>C. acuminata</i>	2	3	374	120	32.1	11.1 (28)	Very good
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 22 March are included. * Does not include the 2009/2010 figures							

Table 2. Percentage of juvenile/first year waders in cannon-net catches in north-west Australia in 2009/2010

Species	No. of catches		Total caught	Juv/1st year		Assessment of 2009 breeding success
	Large (>50)	Small (<50)		No.	%	
Great Knot – <i>Calidris tenuirostris</i>	4	8	927	381	41.1	Excellent
Bar-tailed Godwit – <i>Limosa lapponica</i>	2	9	232	65	28.0	Very good
Red-necked Stint – <i>C. ruficollis</i>	2	8	1183	198	16.7	Average
Red Knot – <i>C. canutus</i>	2	9	296	153	51.7	Excellent
Curlew Sandpiper – <i>C. ferruginea</i>	2	11	293	102	34.8	Very good
Ruddy Turnstone – <i>Arenaria interpres</i>	0	3	9	5	(55.5)	(? Excellent)
Sanderling - <i>C. alba</i>	1	3	156	16	10.3	Below average
Sharp-tailed Sandpiper - <i>C. acuminata</i>	1	7	263	15	5.7	Poor
Non-arctic northern migrants						
Greater Sand Plover – <i>Charadrius leschenaultii</i>	4	8	489	170	34.8	Very good
Terek Sandpiper – <i>Xenus cinereus</i>	0	4	122	23	18.8	Good
Grey-tailed Tattler – <i>Heteroscelus brevipes</i>	0	9	99	24	24.2	Good
Common Greenshank – <i>Tringa nebularia</i>	0	1	21	1	(4.8)	(? Poor)
Whimbrel - <i>Numenius phaeopus</i>	0	1	25	1	(4.0)	(? Poor)
Broadbilled Sandpiper – <i>Limicola falcinellus</i>	1	2	53	8	10.9	(?Below average)
Oriental Plover – <i>Charadrius veredus</i>	0	4	26	4	7.5	(?Poor)
Eastern Curlew – <i>Numerius madagascarensis</i>	0	2	26	4	15.4	(?Good)
All birds cannon-netted in period 1 November to mid-March						

Table 3. Percentage of first year birds in wader catches in south-east Australia 1998/1999 to 2009/2010

Species	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	Average (11 yrs)
Ruddy Turnstone – <i>Arenaria interpres</i>	6.2	29	10	9.3	17	6.7	12	28	1.3	19	0.7	19	12.7
Red-necked Stint – <i>Calidris ruficollis</i>	32	23	13	35	13	23	10	7.4	14	10	15	12	17.5
Curlew Sandpiper – <i>C. ferruginea</i>	4.1	20	6.8	27	15	15	22	27	4.9	33	10	27	16.8
Sharp-tailed Sandpiper – <i>C. acuminata</i>	11	10	16	7.9	20	39	42	27	12	20	3.6	32	18.9
Sanderling – <i>C. alba</i>	10	13	2.9	10	43	2.7	16	62	0.5	14	2.9	19	16.1
Red Knot – <i>C. canutus</i>	(2.8)	38	52	69	(92)	(86)	29	73	58	(75)	(-)	(-)	53.1
Bar-tailed Godwit – <i>Limosa lapponica</i>	41	19	3.6	1.4	16	2.3	38	40	26	56	29	31	24.6

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 11 years) exclude figures in brackets (small samples) and **exclude** 2009/2010 figures

Table 4. Percentage of first year birds in wader catches in north-west Australia 1998/1999 to 2009/2010

Species	98/99	99/00	00/01	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	Average (11 yrs)
Red-necked Stint – <i>Calidris ruficollis</i>	26	46	15	17	41	10	13	20	21	20	10	17	21.7
Curlew Sandpiper – <i>C. ferruginea</i>	9.3	22	11	19	15	7.4	21	37	11	29	10	35	17.5
Great Knot – <i>C. tenuirostris</i>	2.4	4.8	18	5.2	17	16	3.2	12	9.2	12	6	41	9.6
Red Knot – <i>C. canutus</i>	3.3	14	9.6	5.4	32	3.2	(12)	57	11	23	12	52	17.0
Bar-tailed Godwit – <i>Limosa lapponica</i>	2.0	10	4.8	15	13	9.0	6.7	11	8.5	8	4	28	8.4
Non-arctic northern migrants													
Greater Sand Plover – <i>Charadrius leschenaultii</i>	25	33	22	13	32	24	21	9.5	21	27	27	35	23.2
Terek Sandpiper – <i>Xenus cinereus</i>	12	(0)	8.5	12	11	19	14	13	11	13	15	19	12.9
Grey-tailed Tattler – <i>Heteroscelus brevipes</i>	26	(44)	17	17	9.0	14	11	15	28	25	38	24	20.0

All birds cannon-netted in the period 1 November to mid-March. Averages (for last 11 years) exclude figures in brackets (small samples) and **exclude** 2009/2010 figures

Sampling in SEA was again satisfactory for six of the seven main study species. However, for the third successive year, sampling was inadequate on Red Knot. No Red Knot at all were caught. This is mainly as a result of the large decrease in Red Knot population which has taken place over many years, with numbers now reduced to a level which makes them difficult to catch at all.

Good samples were obtained in NWA for all of the usual species except Little Curlew and Ruddy Turnstone. The latter is only present in relatively low numbers at Broome, and only in scattered birds in the parts of 80 Mile Beach which we visit, and therefore obtaining an adequate sample is difficult in most years. Little Curlew are also ephemeral in their numbers and location and in some years no suitable catching opportunity is available. As an offset, reasonable samples were obtained of four species which are not normally caught in sufficient numbers (Sharp-tailed Sandpiper, Broad-billed Sandpiper, Oriental Plover and Eastern Curlew).

It should be noted that the median (Table 1) and average (Tables 3 and 4) percentage juvenile data is calculated on a different basis to that used in previous years. The figures do *not* include the current year's data. This change has been made to facilitate a better comparison between the new results and those collected in earlier years.

Discussion

In Australian terms this was the "year we had to have"! It was a record year for breeding success for most of the wader populations which spend the non-breeding season in NWA and a good/very good year for all but one of the species regularly monitored in SEA. This welcome turn-round from the disastrous breeding success experienced by most of these species in 2008 is especially welcome. Presumably it resulted from most of the factors affecting breeding success being favourable in 2009. There must have been a propitious combination of an early snowmelt, above average June/July temperatures, absence of late snowfalls and low predation levels.

South-east Australia

In recent years Curlew Sandpiper seem to have fluctuated between particularly good and particularly bad breeding success. The 2009/10 percentage of juveniles (27%) was the second highest in the last 12 years. Their current population is still well below previous levels and a more sustained period of good breeding success is required. In contrast Sharp-tailed Sandpiper returned to a high level of breeding success (32% juveniles), continuing a long series of eight good years which was only interrupted by the poor performance of 2008 (3.6%). Bar-tailed Godwit (31%) also continued their recent run of six consecutive above-average breeding years. Ruddy Turnstone and Sanderling (both 19%) showed a welcome return to good breeding success after a disastrous performance in 2008.

It is a pity that no data could be collected on Red Knot. However there was a marked increase in the population counted in the main Victorian habitat (Corner Inlet) and it is probable that 2009 was a good breeding season for this species.

Red-necked Stint again had a breeding outcome slightly below the long-term average. It is now seven years since Red-necked Stint had an above average breeding performance.

North-west Australia

It was a wonderful experience to be catching juvenile birds in such large numbers during our main sampling period in NWA in the 2009/10 season. Almost all species which are regularly sampled had a good/very good/excellent breeding outcome in 2009. For Curlew Sandpiper (35%), Great Knot (41%), Bar-tailed Godwit (28%) and Greater Sand Plover (35%) breeding success was the highest recorded in 12 years of monitoring in NWA. In Red Knot (52%) it was the second highest figure ever. Of the main study species only Red-necked Stint (17%) had an outcome below (only slightly) the long-term average.

The high productivity of Great Knot and Bar-tailed Godwit is particularly welcome given the huge losses of feeding habitat these species have experienced in their main migratory stopover regions of the Yellow Sea. One might speculate whether the high breeding success is an indication of density dependent factors coming into play. However this seems unlikely on the arctic breeding grounds. Considering the high breeding success values for other

species in 2009 it seems more likely an effect of favourable climatic and predation conditions in their breeding areas.

It is interesting that Broad-billed Sandpiper (11%) and Sanderling (10%), the two species most similar in size to Red-necked Stint, also appear to have had relatively poor breeding outcomes in 2009. In contrast Eastern Curlew, which are rarely sampled, had 15% juveniles – unexpectedly high for a large species and well above the occasional data collected on this species in previous years.

Sharp-tailed Sandpiper do not normally occur in sufficient numbers on the shores in NWA for their breeding success to be monitored annually. However unusually large numbers were present on the shores in November 2009 and these proved to be mostly adults. Only 5.7% were juveniles which compares with a much higher figure (32%) for Sharp-tailed Sandpipers sampled in SEA. It is also interesting to compare the 5.7% figure from cannon-netted birds in NWA with the figure for 72 Sharp-tailed Sandpipers mist-netted (58%) at the inland freshwater site of Lake Eda, near Broome.

Conclusion

There is no doubt that the 2009 breeding season was a very good one – in several cases a record one - for most of the wader populations which spend the non-breeding season in SEA and NWA. Quite why Red-necked Stint seem to have had a below average outcome in so many recent years, in both regions, is not apparent. Breeding success in 2009 appears to have been especially good for species nesting in the high arctic but still also generally good for many of those nesting in more central regions of Siberia.

Percentage juvenile monitoring in SEA and NWA will continue in the 2010/2011 season. However the main monitoring period in NWA will move from November to the late February/early March period, (for non-wader reasons). This is still within the specified 1st November to mid-March sampling period, when adult and juvenile populations are considered stable. The ongoing monitoring of breeding productivity is fundamental to understanding reasons for population changes recorded in the long-term wader count programs.

Acknowledgements

Enormous thanks are due to those in the Victorian Wader Study Group, and those who have taken part in north-west Australia wader expeditions and other catching activities there, for all their hard work which enabled good samples of the main wader species to be caught in the 2009/10 season. Their preparedness to go into the field regularly, often at some inconvenience and under difficult climatic conditions, is fundamental to our achieving the required minimum samples of key monitoring species each year.

References

Minton, C., Jessop, R. & Hassell, C. 2000. 1999 Arctic breeding success from Australian perspective. – *Arctic Birds* 2: 19-20.

Minton, C., Jessop, R., Collins, P. & Gosbell, K. 2005. Monitoring wader breeding productivity by the proportion of first year birds in wader populations in S. E. Australian non-breeding areas. – *Status and Conservation of Shorebirds in East Asian-Australasian Flyway*. Proceedings of the Australian Shorebirds Conference, Canberra, Dec. 2003. IWSG Special Publication 17 and Wetlands International Global Series 18. Pp. 73-85.

Minton, C., Jessop, R. & Hassell, C. 2008. 2007 Arctic breeding success, based on juvenile ratios of Northern Hemisphere waders which spend the non-breeding season in Australia. – *Arctic Birds* 10: 53-58.

Migration Fascination

Graham Beal

I have always told people that I have been a birdwatcher since I was a teenager. It was as early as 4 years old though that I can remember being fascinated by the several species of gulls that wintered on the sports playing fields at the back of my Grandparent s home in South Harrow, in the county of Middlesex, a North West London Suburb. These birds had come inland to shelter, away from the more severe weather on the coast .It was exciting as they came swooping round and circling overhead as Nan threw soaked bread over the tall cyclone fence.

Nan & Grandad also used to take my brother and me on a short bus trip to Heathrow International Airport where I was also intrigued by large mechanical birds with their various signs and logos signifying which country they originated from which led me to wonder about these countries !.

I wonder if the combination of these experiences was one of the factors that kindled my interest in bird migration and the extraordinary journeys that they make. Later as a teenage bird watcher it was always a thrill to spot at the local sewerage farm spring migrants such as Common Sandpipers *Actitis hypoleucos*, with their distinctive call and Green Sandpipers *Tringa ochropus*, revealing their distinguishing white rump as they flew rapidly away, both recently arrived from Africa and making their way North.

Other experiences that stand out in my mind are seeing flocks of Godwit in V formation arriving at their breeding grounds in the flat Dutch countryside. Also in Holland a flock of Pink Footed Geese also in V formation flying low over the city of Amsterdam, their underbellies illuminated by the street lights .

It was always magical walking home on a crisp winter night in England to hear Fieldfare and Redwing thrushes calling from the darkness above, newly arrived from Scandinavia.

This fascination has of course continued with the VWSG with even more incredible facts being revealed with recent work with geolocators.

Tower 42: Visible migration is always a thrill and these feelings recently remerged when I read about how observations had commenced in the City of London from a tall building known as the Tower 42 Bird Study Group.

Tower 42 is the second tallest skyscraper in the City of London and the sixth tallest in London as a whole. The original name was the National Westminster Tower, having been built to house the National Westminster Bank's International Division it stands at 183 m (600 ft).

When observations began the group was soon rewarded by amazing views and photography of 6 species of raptors as well as common bird species such as swallows and swifts.

Oh yes and the catalyst for writing this article in the first place for the VWSG Bulletin is that an Arctic tern *Sterna paradisaea* was seen following the Thames heading west and an Oystercatcher *Haematopus ostralegus* heading east!!

You can follow their progress at t42bsg.blogspot.com.

They also recommend a book 'Bird Migration' by Ian Newton.

Publications and Presentations using VWSG data

Compiled by Roz Jessop

NEWSLETTERS

Members made contributions to the following:

- “**The Tattler**”, Newsletter for the East Asian-Australasian Flyway. Copies can be downloaded from the AWSG web page <http://www.awsq.org.au/>
- “**VicBabbler**”, quarterly newsletter of the Birds Australia – Victoria Regional Group of Birds Australia.

Papers of interest:

Branson, N., Shigeta, Y., Chiang, C.Y. and Minton, C.D.T. 2010. Movements of Grey-tailed Tattlers and Terek Sandpipers in the East Asian-Australasian Flyway. Wader Study Group Bulletin 117: 27-34.

Minton, C., Gosbell, K., Johns, P., Christie, M., Fox, J.W. and Atanasyev, V. 2010. Initial results from light level geolocator trials on Ruddy Turnstone *Arenaria interpres* reveal unexpected migration route. Wader Study Group Bulletin 117: 9-14.

Minton, C., Jessop, R. and Hassell, C. 2009. Wader breeding success in the 2008 Arctic summer, based on juvenile ratios of birds which spend the non-breeding season in Australia. Stilt 56: 6-9.

Minton, C., Jessop, R. and Hassell, C. 2010. Wader breeding success in the 2009 Arctic summer, based on juvenile ratios of birds which spend the non-breeding season in Australia. Stilt 57: 63-66.

Minton, C., Jessop, R., Hassell, C. and Christie, M. 2010. Report of North-west Australia Wader and Tern Expedition 31st October to 21st November 2009. Stilt 57: 67-71.

Oliveira N. and Clemens, R. 2009. Report on population monitoring counts winter 2008 and summer 2008–09. Stilt 56: 45-60.

Abstracts of papers presented at the AWSG Conference Hobart – September 2009.

Site faithfulness of Ruddy Turnstone *Arenaria interpres* in the South East of South Australia. Maureen Christie, Rosalind Jessop, and Heather Gibbs

The site faithfulness of Ruddy Turnstone *Arenaria interpres* found along the coastline of South East of South Australia was analysed from flag sightings made between November 2004 and August 2008. 775 field visits were made and 722 flags read. Most adult (2+) and second year birds remained site faithful with at least 95% of adults (2+) and 82% of second year birds remaining at the same site throughout the austral summer. Over 88% of adults returned to the same site the following year. First year birds were more mobile with between 47% and 84% remaining at their flagging site throughout the austral winter. Movements of first year birds appeared to be in response to the availability of food in the local area but may also have been influenced by the absence of the dominant adults from more favoured feeding areas during the winter. Protection of roost sites and feeding areas is needed to ensure all the habitat requirements of these international migrants are met. Further research on the impacts of climate change needs undertaking.

Natal dispersal of Hooded Plover *Thinornis rubricollis* at Phillip Island, Victoria, Australia.

Rosalind Jessop, Peter Dann, Richard Dakin, Jarvis Weston & Jon Fallaw.

We looked at natal dispersal of 96 Hooded Plover *Thinornis rubricollis* chicks hatched on Phillip Island between March 1993 and March 2009. All chicks were uniquely colour flagged the week before fledging. Sixty four percent have been sighted one or more times between one month and nine years after flagging and 24% recorded breeding on Phillip Island. Two birds have been reported breeding away from Phillip Island and an additional 20% of birds have been re-sighted on Phillip Island but not recorded breeding. 91% stayed on Phillip Island and 3% went west (Mornington Peninsula - approx. 44 km and Breamlea - 90km) and 6% east along the Gippsland coast as far as Venus Bay near Inverloch (48km).

Of the birds found nesting on Phillip Island, 43% bred for the first time in the year following fledging and 39% in the second season. The remainder recorded in subsequent years.

Further opportunities for recruitment to Phillip Island and the likelihood of natal dispersal in the future is discussed.

Thirty years of wader counts in Corner Inlet-what is causing declines in wader populations?

Clive Minton

Nearly half the wader populations throughout the world are in marked decline and few are increasing. Thirty years of wader counts in Corner Inlet, which has the largest and most diverse wader population in southeast Australia, have shown a similar pattern. Possible causes of this will be examined, including habitat change throughout the Flyway and changes in recruitment rates and survival rates.

The VWSG Web site was regularly updated by Roger Standen

www.vicnet.net.au/~vwsq

VWSG Financial Report

Rosemary Davidson and Clive Minton

The Victorian Wader Study Group's finances remain in a satisfactory position.

Details of income and expenditure during the 2009/10 financial year are given in the attached table. These are listed according to various categories of income and expenditure.

"Normal" income was \$5766.19 (the first section plus the first two items from the second section). The largest item was member subscriptions (\$3120). Operating expenditure and new and replacement items of equipment totalled \$6943.75 (the first two sections plus the hovercraft costs). The largest items were colour bands and engraved flags (\$2237.45) and the printing of the annual Bulletin (\$2018.50). Normal operating expenditure therefore exceeded income by \$1177.56.

A major new expenditure item in 2009/10 was \$7773.72 on geolocators. These new electronic devices have revolutionised the amount of detailed information obtainable on individual migrating birds (see elsewhere in this Bulletin). We have been very fortunate to receive donations from Kimberley Clark and Nature Foundation (both in South Australia) towards these costs. This was organized by Maureen Christie and her group "Friends of Shorebirds, South Australia". Additionally, generous grants have also been received from DSE South Gippsland and Coast Action/Coast Care towards the cost of the geolocators and other VWSG equipment and operating consumables.

It is envisaged that further major expenditure (\$10-15,000) will be made during the 2010/11 financial year for additional geolocators. The VWSG will be seeking donations/grants from a variety of sources to help cover these costs.

Victorian Wader Study Group Inc.

ABN 12 724 794 488

Income & Expenditure Statement for the year ended 30 June 2010

INCOME		EXPENDITURE	
Subscriptions	3,120.00	Printing Bulletins	2,018.50
Bank Interest	1,435.19	Postage, photocopying, stationary & phone calls	216.10
Donations	420.00	Bank charges	17.50
M Anderson, M Bennett, M&N Burgess P Collins, T Gale, A. Gutowski, P Jenkins, P&M Johns, I Marks, K O'Riley, H Phillipson, N&N Roussac D Thomas		Miscellaneous expenses	290.00
Surplus from AGM Food	268.00	Gifts in appreciation of help	75.00
Surplus from Corner Inlet & SA stays	28.00	Excess from Manns Beach rent	30.00
		Sub-total	\$2,647.10
Sub-total	\$5,271.19	<i>Equipment:</i>	
Reimbursement from DSE for net for I Veltheim	300.00	Colour bands & engraved flags	2,237.45
Sale of engraved flags to Greg Clancy	195.00	Trailer expenses	212.95
Donations for geolocatos from: Kimberley Clarke	2,200.00	Radios, batteries & lights	190.75
Nature Foundation S A	2,000.00	Cannon repairs	130.00
		Stools, windbreaks, tarp, repairs & spade	118.60
Sub-total	\$4,695.00	Glue, grease, tape, reels etc	292.30
		Calipers & balance	325.00
		Headset & microphone	81.00
		Firing box cable & drum	262.00
		Flag making equipment	96.60
		Sub-total	\$3,946.65
Grants:		<i>Hovercraft fuel & repairs</i>	\$350.00
<i>Coast Action/Coast Care</i>		<i>Payment to DSE for Spartina report & audit</i>	\$1,000.00
Grant for equipment	3,000.00		
<i>DSE South Gippsland</i>		<i>Geolocator Expenses:</i>	
Grants for equipment	4,000.00	Purchase of geolocators	7696.32
<i>DSE:</i>		Postage for interpretation	77.40
Grant for assistance at Swan Island, Mud Islands & Queenscliff	2,000.00	Sub-total	\$7,773.72
<i>DPI:</i>			
Influenza Sampling	400.00		
Sub-total	\$9,400.00		
TOTAL INCOME	\$19,366.19	TOTAL EXPENDITURE	\$15,717.47
Cash Balance 1/07/2009		Cash Balance 30/06/2010	
Petty Cash	11.80	Petty Cash	42.70
Westpac Com. Solns. Account	1,220.11	Westpac Com. Solns. Account	4,120.45
Westpac Maxi Bonus Account	35,080.53	Westpac Bus. Cash Res. Bonus Account	39,061.64
Macquarie Account	3,438.24	Macquarie Account	385.16
		Unpresented cheques:	16.95
			196.60
Net Total	\$39,750.68	Net Total	\$43,396.40

News of Members of the Group 2009-2010

Rosemary Davidson and Clive Minton

Vale - Ira Savage (27th April 1927 – 17th August 2010)

by Roz Jessop

Ira joined the VWSG in the early days - late 70's, and became equipment officer, a role which he filled for many years. He always took the trailer home after a days field work and put nets, keeping cages and covering material out to dry in the Park opposite his home and brought it along restored and dry to the next catch - it was his own trailer that he lent to the group when the equipment could no longer fit on Clive's roof rack!! He also participated in many of the early AWSG expeditions to NW Australia, including cannon netting, mist netting and counts.



Ira loved travel and in the early days of the Broome expeditions my sister Angela, Ira and I always tacked on an extra bit of time to explore the WA coastline and help drive CALM vehicles up to Broome. We also did many enjoyable bird watching trips around Victoria. Later he travelled extensively with his son Ian in Hong Kong and China.

Ira on the 1986 expedition in Broome enjoying a watermelon break.

Ira "saving our bacon in Newman" – more oil in the diff to get us to Perth – somehow those CALM cars always needed a lot of tender loving care" 1990.



The road from Broome to Perth always seemed long and isolated – but we always had Ira to entertain us and make the journey go faster.

He was a great supporter of the Friends of Mud Islands and participated in most of their outings throughout the eighties and early nineties. He undertook a lot of revegetation work at the Belmont Common and I remember his disappointment when many of the trees he had worked so hard to put in died when their roots hit the salt water table. His other great love was steam trains and he was a director of the Geelong and Queenscliff Steam Preservation Societies for many years. His enthusiasm and knowledge of steam engines and fund raising abilities was a great asset to the group.

Ira was a stalwart of the group since its early days. He always supported the group in the field in Victoria and came on many of our early explorations to SA, Tasmania, NSW and WA. He was a most dedicated equipment officer for many years, making and repairing equipment at his workplace, Shell in Geelong. He was always helping other people. Clive Minton, Victoria.

I remember Ira well. I think it was 1990 and I was at the Port Hedland airport when the plane with the Melbourne group came in. There was Ira with a straw hat on and with a big smile. It seems to me that the smile was never missing. I very much enjoyed knowing him over the years on the northwest expeditions. A very rewarding person to know. Betty Gilbert, USA.

I remember Ira well and with some affection as a weather-bronzed rather bent old Aussie who could turn his hand to anything and was never short of a dry witticism especially if it was turned against the Poms. Daphne (Watson), UK

Thanks for this sad news. Ira was quite a character and took me under his wing from my first return visit to Oz in the late 70s when I joined VWSG activities. Rowena Langston, UK

A great character, he used to tell some really good stories. For instance: When he was sticking back a stopping in his tooth with araldite in the toilet and he heard someone coming and trying desperately to get his finger off the tooth which had stuck to the tooth! Priscilla Park, Tasmania.

Our condolences to Ira's family and friends. He was a valuable member of the team in the early 80s when I worked with him on Clive's wader expeditions and good bloke. Grant Pearson, WA.

Condolences to Joan, Laurie, Geoffrey and Ian, as well as grandchildren Tim and Matthew.

Vale – Lee Duclos

by Tom Putt

Lee Duclos was introduced to me by my dad, Steven, back in 1988. Dad was servicing his pool in Brighton and spoke of my interest in birds. Lee immediately piped up that he knew a group that banded and released birds, and suggested I come along to the next VWSG outing. So several weeks later we jumped in Lee's car and drove down to the Spit at Werribee to catch oystercatchers.

It was a perfect day. The sun was out, the birds were around, and we spent a beautiful morning setting the nets at the top of the south spit. Lee and Clive were in jovial moods. Lots of chatter and laughter was had before the birds arrive, then it was into the serious business. With a burst of gun powder and a cloud of smoke, I soon found myself on my first sprint to the nets. Clive arrived soon after me and we dragged the nets onto the beach. Lee's voice could be heard from anywhere as we sat processing, and after a very pleasant day out, we were on our way home. Or at least we thought...

The paddock leading into the spit was overgrown and full of holes and rocks. Lee's BMW didn't quite have the ground clearance necessary, and with a thud and a few swear words from Lee's mouth, we came to a halt. Assessing the damage, we discover the sump was cracked and the RACV was called. After what seemed like hours of waiting, they arrived and alternative car transport came to the rescue to get us home.

A fun day had by all and one I will never forget (despite the expensive repair job to Lee's much-beloved car). That was the start of it for me. Every time Clive was out in the field (for the next 5 years I so), I was there to help out and experience the love of the birds.

Lee thank you for your introduction to the VWSG that was such an enormous influence on my life during my teenage years. (Lee died 20th November 2009 after a long illness.)

VWSG MEMBERSHIP LIST

July 2010

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ABBBS
Australasian Wader Studies Group
Birds Australia
BOCA
Broome Bird Observatory
CSIRO Library, ACT
Dept. of Defence, Swan Is.
Queenscliff
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