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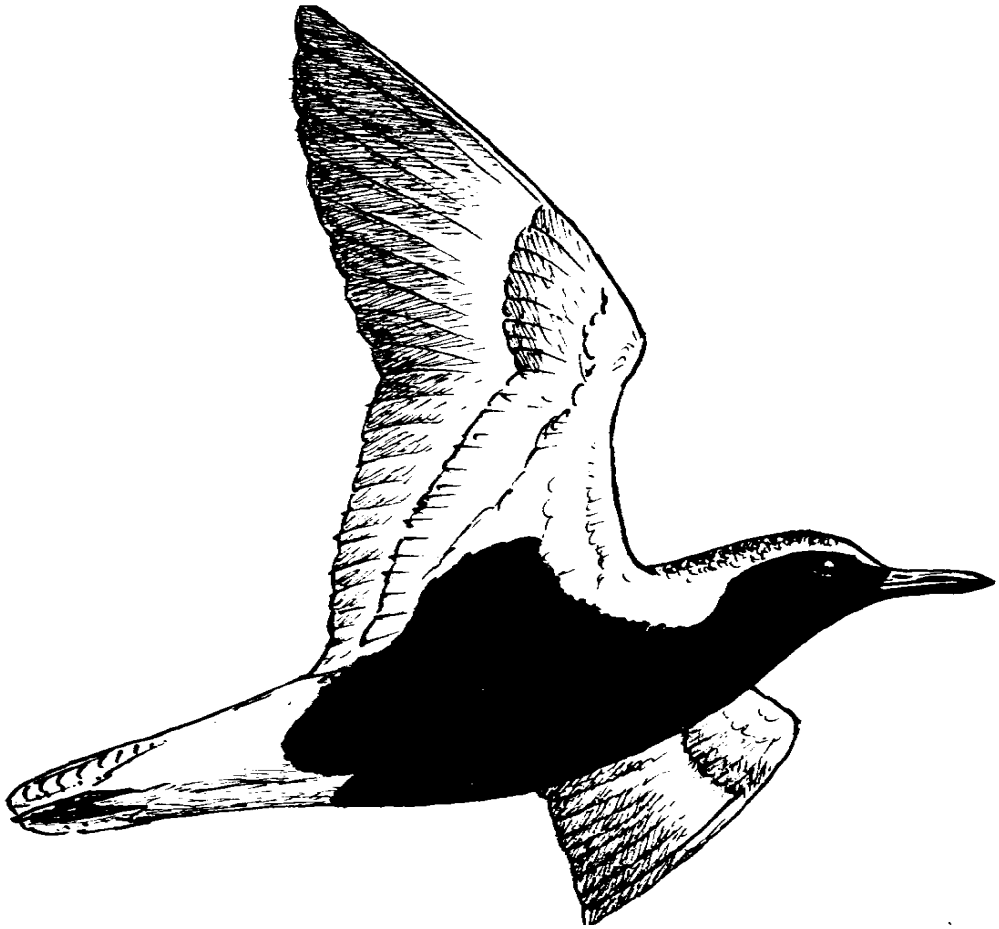

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VICTORIAN WADER STUDY GROUP INC.

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 East-Asian Australasian 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.

LUCKY DOOR PRIZE DONORS

Thank you to the following donors for their generous donations:

Elgee Park Winery for 1 dozen bottles of wine
Kate Gorringe-Smith for her print
Flinders Hotel for the $100 restaurant voucher
Flinders General Store for a hamper
Roger & Annabel Richards

Support for VWSG across the year

During the year, Paul Buchhorn explained the very generous prices given by Kevin Roach to the Victorian Wader Study Group (VWSG) over the past few years for the materials needed to construct and repair our cannon-netting equipment. Kevin would just say “Oh this is for the bird group is it?” and the accompanying invoice would be very ‘lean’.

As a completely volunteer organisation we rely very heavily on member's time and generosity plus any other assistance we can get from outside groups and businesses such as Kevin’s. His support has been of a significant level and we would like all readers to appreciate this.

VICTORIAN WADER STUDY GROUP INC.

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Subscriptions for 2018/19 (payable in advance on 1 July 2018)

Full Member	$30.00
Student	$15.00

This bulletin is usually published on the date of the Annual General Meeting and contains reports and cumulative records of fieldwork of the Victorian Wader Study Group (VWSG) with articles, field notes and other material. Contributions are welcome. Please consult the editor or assistant editor on questions of format. Line illustrations are reproduced from the Australasian Wader Studies Group journal, “Stilt” with permission of the editor unless otherwise indicated.

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VWSG WEB SITE http://www.vwsg.org.au/

Our web site is maintained by Birgita Hansen

Chairman's report – Roger Standen

Introduction

In some ways, this past year has been a significant one for the VWSG – finding its way without Clive at the helm. But in another it has been business as usual with a large number of people continuing to take on roles within the group. We are all interdependent as we all rely on others doing their roles to complement those we each undertake.

Continuing Clive's precedent in this report I will summarise the various activities from the past year but also comment on a few matters of relevance to the group.

Fieldwork

"Challenging" would be the single word to describe the start to last summer's catching. Crested Terns changed their breeding locations, equipment malfunctions saw more misfires than I have ever experienced and a mismatch of water levels at the Western Treatment Plant meant extra catches had to be scheduled there.

Field teams and maintenance crews really dug deep over this past season, returning again and again to try and fulfil our catch requirements for percentage juvenile assessment. We managed to achieve that for all but Sanderling which have proved extremely difficult to catch. Our only opportunities these days are on the South Australian coast and they eluded our teams there in both the November and March expeditions.

Terns

For the 2017/18 breeding season, the Crested Terns at the Nobbies again used the outer Seal Rocks platform for their breeding (and in small numbers) so no banding could be made there. Mud Islands had an exceptional year (about 300 pairs breeding 1611chicks banded) but Corner Inlet was a complete failure with no Crested Terns breeding there for the first time in 39 years of monitoring.

However, to reinforce the flexibility that these birds have, it turns out that many birds from the Victorian coast relocated to the intermittent colony at Burgess Bay on King Island, bolstering numbers there to over 1000 pairs. This was confirmed by a catch of 55 terns there, which were all banded as chicks in Victoria.

Caspian Terns had another good year at Mud Islands but, did not at Corner Inlet with only half the normal number of pairs nesting.

Equipment malfunction

While attempting to catch Curlew Sandpipers at Yallock Creek, with a strong flock settled well in front of the net, out went the "3-2-1-fire" call, but two of the cannons did not fire. This experience was repeated again on a stint catch at Barrallier Island. What was going on? Forensic examination pointed inconclusively to a change of cartridge loading that had unintended consequences. Fortunately, the issue has been arrested, but I suspect it will take another season of catching without misfires for full confidence to return.

Even the indefatigable Clive felt like it might be time to call it quits (momentarily) in our most down time during these malfunctions and other trials of this season. Fortunately, it appears that we are out the other side and back to successful catching.

Migratory waders

Last summer was our most challenging but with enormous persistence and effort from the catching teams, we actually managed to reach most of our targets for the year.

A catch of 49 Bar-tailed Godwit gave us a look at their breeding season and at 20% juveniles it was a good one. After several attempts, with teams again having to dig deep, a nice catch (137 birds) of Sharp-tailed Sandpipers was made at Werribee that, combined with a number of smaller catches, showed a good (22% juveniles) breeding season was had in 2017 for them. A Sharpie catch later in the season proved to be difficult to age so this estimate may be a little on the low side. A full report on breeding success is included elsewhere in the Bulletin.

It took four outings to get enough Curlew Sandpipers to deploy the 75 geolocators we had supplied by Marcel Klaassen's Deakin University projects. After last year's bonanza breeding season for the Curlew Sands, this year they came back to a very poor season of 5.5% juveniles.

Corner Inlet is becoming a very challenging place to catch as the sandbars at the entrances are changing so much it is difficult to find roosts where nets can be set.

Resident waders

Our focus has moved away from oystercatchers as 40 years of data is analysed. Preliminary results from Pied Oystercatchers confirm what has been reported in pieces over the years: around 70% of marked birds are not reported outside their original region; Corner Inlet in particular seems to be a supply point for NSW coast sites; most movement where birds switch from one region to another involve adult birds with very few first-year birds switching regions; the 30% which do move can do so for many years (e.g. one bird moved from Westernport to western Victoria and back 12 times between 1988 and 2002) and the data from the last decade for Victorian coastal banding sites largely reflects what has been shown in the previous three decades.

Other resident waders are caught cannon netting when the opportunity arises, but with all the difficulties of this last season there were few other residents caught. The highlight was a family of four Black-fronted Dotterels – see a report about filming at Werribee elsewhere in the Bulletin.

Geolocators

King Island turnstones were again targeted with over 80 geolocators deployed (again funded by Marcel's Deakin University projects) and 26 retrieved. We have now looked at over 150 tracks for KI turnstones. The SA expeditioners also deployed and retrieved a further set of turnstone geos.

Three more Red-necked Stint geos were retrieved at Yallock Creek to add to the 16 retrieved in previous years. With all these geos retrieved, Ken Gosbell has been putting in a mammoth effort to keep up with all the tracking and to make sense of it.

The challenge for the team next year will be to retrieve a good proportion of the 75 geos deployed on Curlew Sandpipers at Yallock Creek. Amazingly, two of these birds were seen on their migration by the Global Flyway Network team in Bohai Bay. Not bad considering there are around 90,000 Curlew Sandpipers in the flyway but only 42 in the pond they were scanning. On top of this they were flagged together – JDD and JDE. What are the odd

VWSG Committee Structure

Following the AGM last year, the Executive Committee (EC) met three times to ensure the machinery of the group continued to turn. The broader committee (essentially involving those with a nominated role) have been busy diligently carrying out their duties whilst receiving occasional updates from the EC for their information and, at times, consideration. All are thanked for their many contributions and for many, considerable time input.

One of the actions undertaken this year has been to compile an internal operation manual to gather all the procedures and policies involved with running the VWSG. As Clive is no longer the common thread to everything that happens, the compilation of the operation manual was deemed to be an important step to avoid losing the enormous 'corporate knowledge' that Clive carried around for so long (refer to a separate note within the Bulletin for more on this).

The Scientific Advisory Committee determined that Red-necked Stint are no longer to be flagged as it was considered that very limited new information will come from further flag sighting reports. We must be clear that all activities undertaken can stand up to the scrutiny of why it is done.

Positive Flyway News

A rare bright spot in the year for waders was the news that the central Chinese government was taking over control of development along the coast of the Yellow Sea. It was reported in the People Republic of China, State Council website that they "…will prohibit all reclamation activities unless they pertain to national key infrastructure, public welfare or national defence, …, adding that local authorities will no longer have the power to approve reclamation projects."

This gives real hope that the loss of mudflats may finally become limited and there may even be some restoration of damaged mudflats under our most optimistic hopes (http://english.gov.cn/news/top_news/2018/01/18/content_281476017712430.htm).

It is news like this that heartens the resolve of our members as our data has been fed into the decision-making processes that result in outcomes like this. Sometimes it may seem a long way from a windswept sandbar and a long trudge back to the vehicles, but all the efforts are important.

On the other side of the Yellow Sea in North Korea, New Zealand wader researchers (Adrian Riegen et al) have continued their steady work gaining solid support for the protection of coastal mudflats so that the migratory waders can continue to refuel there for many years to come (https://www.tvnz.co.nz/one-news/world/secret-north-korea-stopover-following-worlds-migratory-shorebirds?ref=emailfriend).

That Man Clive Minton

Much has been written about Clive's contribution to wader studies, through the citations of his many awards (John Hobbs Medal, Member of the Order of Australia, Australian Natural History medallion, Eisenmann Medal and of course the inaugural Life member of the VWSG) and much of it was compiled in the e-book "The Father of Wader Studies – Tales of C.D.T. Minton".

However, having taken on the role of Chair after his 40 years at the helm, I feel I need to make a further comment. Previously I knew he did an enormous amount for the VWSG, but I was still somewhat surprised at the breadth of issues and tasks he had to manage or carry out over those decades. Every stone turned over revealed another task that someone was doing or needed to be found to do and reinforced to me the admiration that we should hold for this man.

Fortunately, Clive is not lost to us. He is around for us to consult, whether it be at a catch walking over to his car and asking, "What do you think about covering material on this net?", or calling him to sound out people for cannon-netting endorsement, or with, "Someone has contacted us about leg flags on…" etc, etc.

Thanks again Clive.

While details are still being finalised, to perpetuate Clive's memory within the VWSG for future members, it's pleasing to note that we are going to strike a Clive Minton Award to be allocated to a worthy recipient each AGM commencing in 2019. Watch for the call for nominations mid-year.

Broader recognition of Clive's input and that of the hundreds of volunteers who have been involved with the VWSG over the decades was being awarded the joint winner of the 2018 Victorian Coastal Council award for "Partnerships in Research and Monitoring" (see more detail in a separate note elsewhere in the Bulletin).

Editorial change

After some 21 years as Editor of this Bulletin, Roz Jessop has passed the baton to Jeff Campbell. Each year Roz has done a fantastic job in compiling the many and varied reports into a cohesive and informative record of the group's activities and receives our enormous thanks for such an effort. Fortunately, among other things, Roz continues to undertake the role of preparing and updating all our ethics and scientific permits, which is a very sizeable task.

Jeff is returning to a formal role with the group having been Conservation Officer decades ago when he lived in Victoria. He has edited Stilt for the AWSG and done a number of other related roles. Thanks for taking this on Jeff.

The Future

Our review of the research program is not yet completed but should soon provide us with the guidance and direction we need for our future field program. To continue with the field work we are:

- seeking new ways to expose the wider population to our aims and activities with a view to recruitment,
- encouraging members to become Team Leaders to share the load,
- ensuring our procedures are appropriate and consistent for the health of the birds and our participants and
- continually on the look-out for ways to secure funds for the group.

All ideas and support for any aspects of this are welcomed.

Data analysis and publication remains one of the large areas needing expertise and energy. We have built a huge database of information about wader biometrics and behaviour and we have turned much into understanding and knowledge by analysing that data. However, there is more to do, and it requires two particular skill sets: knowledge of how to handle large data sets as well as an understanding of how data is gathered. This may mean partnerships of people with these different skills may be the way forward. Please consider how you might help in this regard.

We have a strong, dedicated team of people who make the VWSG a successful research group. We need to replenish the ranks to ensure that situation remains into the future so that the waders continue to have a solid group working for them.

Total Waders Caught, by Species
1975 to December 2017 by VWSG

Species	New	Retrap	Total
Latham's Snipe	347	14	361
Australian Painted Snipe	1	0	1
Black-tailed Godwit	4	0	4
Bar-tailed Godwit	5827	820	6647
Short-billed Dowitcher	1	0	1
Whimbrel	49	6	55
Eastern Curlew	873	89	962
Marsh Sandpiper	2	0	2
Common Greenshank	541	64	605
Terek Sandpiper	37	1	38
Grey-tailed Tattler	38	3	41
Ruddy Turnstone	6322	3434	9756
Great Knot	702	89	791
Red Knot	5351	746	6097
Sanderling	5888	2143	8031
Little Stint	9	0	9
Red-necked Stint	131511	35162	166673
Long-toed Stint	1	0	1
Pectoral Sandpiper	2	0	2
Sharp-tailed Sandpiper	10785	470	11255
Curlew Sandpiper	28065	5256	33321
Cox's Sandpiper	1	0	1
Broad-billed Sandpiper	7	0	7
Red-necked Phalarope	1	0	1
Sth Is P Oystercatcher	1	0	1
Pied Oystercatcher	3516	1758	5274
Sooty Oystercatcher	1116	420	1536
Black-winged Stilt	53	0	53
Banded Stilt	2112	8	2120
Red-necked Avocet	908	131	1039
Pacific Golden Plover	270	26	296
Grey Plover	195	33	228
Red-capped Plover	799	187	986
Double-banded Plover	4091	1031	5122
Lesser Sand Plover	115	11	126
Greater Sand Plover	31	3	34
Black-fronted Plover	57	4	61
Hooded Plover	101	12	113
Red-kneed Dotterel	136	11	147
Masked Lapwing	200	5	205
40 Species	**210066**	**51937**	**262003**

Table prepared by Helen Vaughan and Clive Minton
No new species were caught during 2017

Location of Waders Caught in Victoria, South Australia & Tasmania

Victoria	To Dec 2016	2017	Total
Werribee	74032	321	74353
Western Port/Flinders	68118	2436	70554
Queenscliff/Swan Bay	31975	0	31975
Corner Inlet	32699	188	32887
Anderson Inlet (Inverloch)	22316	1	22317
Sandy Point/Shallow Inlet	2788	0	2788
Laverton	956	0	956
Mud Islands	757	0	757
Killarney Beach	512	0	512
Barwon Heads	845	0	845
Other	628	0	628
South Australia	19775	330	20105
Tasmania	3061	355	3416
Total	258462	3631	262093

Other includes Geelong (Point Henry/Belmont), Bendigo Sewage Farm, Seaford Swamp, Braeside/Croyden, Gippsland Lakes and Toowong

Table prepared by Helen Vaughan and Clive Minton

Corner Inlet continues to be a challenging area to catch with constantly moving sandbars shifting potential catch sites from one visit to another and oystercatchers seemingly learning more and more about our practices and how to elude them.

The Western Treatment Plant at Werribee proved difficult in late 2017 due to the challenge of getting water levels set for the catching days. Additional catches had to be scheduled for early in 2018 to bolster numbers caught there.

The various sites in Westernport continue to be a stronghold for catching.

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

Species	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Latham's Snipe	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Grey-tailed Tattler	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Bar-tailed Godwit	0	0	0	3	0	8	0	0	0	0	0	0	0	12	6	0	0	0	0	29
Com. Greenshank	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	0	0	6
Ruddy Turnstone	234	226	73	193	76	141	74	258	84	141	96	109	268	45	117	322	254	103	72	2886
Great Knot	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	2	0	0	0	6
Red Knot	0	0	0	0	0	1	0	11	0	0	0	0	0	1	0	1	0	0	19	33
Sanderling	63	420	2	315	328	76	220	250	506	244	87	261	439	268	159	211	85	29	129	4092
Red-necked Stint	126	383	22	319	163	93	174	465	54	90	179	208	356	92	369	390	124	166	17	3790
Sharp-t. Sandpiper	0	2	0	27	7	73	27	21	0	15	0	0	74	40	1	23	5	0	0	315
Curlew Sandpiper	24	11	0	190	13	2	103	8	21	33	1	4	15	0	7	8	0	0	3	443
Broad-b. Sandpiper	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Banded Stilt	0	0	0	0	0	0	0	334	0	0	0	54	332	12	998	53	0	0	0	1783
Pacific Golden Plover	0	2	0	0	1	0	16	13	0	0	0	0	2	1	0	0	1	0	0	36
Grey Plover	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	5	4	1	20
Red-capped Plover	0	0	1	7	5	0	7	4	1	0	0	2	3	8	0	18	14	14	1	85
Double-band. Plover	0	0	4	5	1	0	0	27	2	0	1	5	29	12	0	3	0	0	0	89
Black-fronted Plover	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Hooded Plover	0	0	0	0	1	0	0	0	1	0	1	1	5	0	3	14	12	20	3	61
Masked Lapwing	0	0	0	0	4	2	2	4	1	0	0	0	1	0	0	0	3	0	0	17
Total	**447**	**1045**	**106**	**1062**	**599**	**396**	**623**	**1395**	**670**	**523**	**365**	**644**	**1524**	**495**	**1660**	**1060**	**505**	**336**	**245**	**13700**

Table prepared by Helen Vaughan and Clive Minton

This table shows all waders leg-flagged in South Australia since flagging was commenced there in 1999 (excluding oystercatchers).

Number of waders processed by the VWSG each month to December 2017													
	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
Australian Painted Snipe	0	0	0	1	0	0	0	0	0	0	0	0	1
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	889	1414	831	99	24	842	292	286	77	335	294	566	5949
Whimbrel	3	2	41	0	0	1	0	0	1	4	3	0	55
Eastern Curlew	23	181	24	0	24	18	21	76	175	149	180	100	971
Common Greenshank	69	135	123	0	0	0	0	0	0	41	177	60	605
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	441	785	3163	2084	39	23	77	103	132	216	1643	832	9538
Great Knot	197	87	26	0	0	30	21	6	16	118	78	130	709
Red Knot	929	417	317	216	47	491	479	139	96	1000	566	317	5014
Sanderling	376	1654	2229	770	0	0	1	5	0	265	893	725	6918
Little Stint	2	2	0	0	0	0	0	0	0	0	1	4	9
Red-necked Stint	3123	1931	7249	3018	546	749	1032	985	1104	2140	3730	4332	29939
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	1839	943	240	3	0	0	0	16	635	564	748	3246	8234
Curlew Sandpiper	1700	1710	1806	289	223	128	335	528	348	1140	943	1776	10926
Broad-billed Sandpiper	1	2	0	0	0	0	0	0	0	0	0	3	6
Red-necked Phalarope	0	0	0	0	0	0	0	0	0	0	0	1	1
Pied Oystercatcher	170	259	414	648	827	1053	887	517	235	41	43	70	5164
Sooty Oystercatcher	23	108	86	220	255	386	312	144	0	1	5	3	1543
Black-winged Stilt	6	9	0	0	0	0	1	12	0	4	2	18	52
Banded Stilt	107	50	12	41	59	0	0	0	15	0	0	162	446
Red-necked Avocet	344	0	0	0	14	0	11	78	279	171	47	89	1033
Pacific Golden Plover	40	27	62	2	0	0	0	0	0	28	66	65	290
Grey Plover	38	14	9	7	0	9	0	0	2	102	44	5	230
Red-capped Plover	44	90	68	124	210	110	77	35	12	25	40	50	885
Double-banded Plover	0	4	241	375	757	984	1113	1014	1	0	0	0	4489
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	13	3	12	5	2	15	0	0	0	2	7	4	63
Red-kneed Dotterel	0	10	0	20	0	44	11	17	12	8	23	1	146
Masked Lapwing	5	11	93	17	5	13	4	1	1	5	21	19	195
Cox's Sandpiper	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL	10557	9911	17068	7950	3048	4921	4685	3972	3249	6462	9613	12674	94110

Table prepared by Helen Vaughan and Clive Minton

"Processed" means that two or more of the following were recorded for a bird: bill length, total head length, wing length, weight, primary moult.

The number of waders processed has grown slowly in recent years as there is a reduced need for the full biometic and moult data on many species in most months that we catch because we already have sufficient data. Only 35% of birds caught in 2017 were processed, the remainder were released with bands and flags.

New and Retrapped Waders Caught Each Calendar Year by VWSG

Calendar Year	New	Retrap	Total
* 1975	9	0	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
2010	3006	759	3765
2011	4291	830	5121
2012	3598	869	4467
2013	4404	1084	5488
2014	3704	1008	4712
2015	5911	1176	7087
2016	3050	833	3883
2017	2586	1045	3631
Totals to end 2017	**210066**	**51937**	**262003**

Average annual total for 1979 - 2017 = 6718 *excluded

The total of 3631 birds caught in the calendar year is the lowest since 1995 (3333) and the third lowest since the VWSG was formed in 1978.

Reduced numbers of birds at several sites has made catching more difficult.

However, the proportion of retrapped birds (28.8%) greatly exceeded the long-term average of 19.8%.

Table prepared by Helen Vaughan and Clive

Total waders caught each 6 months 1979 to

Calendar Year	January	July to	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
2010	2136	1629	3765
2011	1967	3154	5121
2012	3199	1268	4467
2013	3270	2218	5488
2014	2768	1944	4712
2015	4651	2436	7087
2016	1987	1896	3883
2017	2870	761	3631
Totals to end	**135631**	**123911**	**262003**

The number of birds caught in the first
of 2017 greatly out-numbered those
the second half. This was partly due to
catching at Werribee due to difficulties
water levels restricting catching
As a rule, migratory waders are not
the second half of the year as catches
planned for after all juveniles have
their breeding grounds. This leaves
catching as the main planned migratory
catching in that six months.

Numbers of Waders Leg-flagged by VWSG

	1989-2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total
Latham's Snipe	278	0	0	0	0	0	0	0	0	0	O	O	278
Australian Painted Snipe	0	0	0	0	0	1	0	0	0	0	0	0	1
Black-tailed Godwit	4	0	0	0	0	0	0	0	0	0	0	0	4
Bar-tailed Godwit	2357	186	268	351	308	243	207	10	153	87	191	14	4375
Whimbrel	43	0	1	0	0	0	2	0	0	0	0	0	46
Eastern Curlew	544	0	0	8	0	38	9	0	4	0	0	0	603
Marsh Sandpiper	2	0	0	0	0	0	0	0	0	0	0	0	2
Com. Greenshank	431	0	0	25	0	0	0	0	4	2	0	0	462
Terek Sandpiper	13	0	0	0	0	0	0	0	0	0	0	0	13
Grey-tailed Tattler	5	0	0	0	0	0	0	0	0	0	0	0	5
Ruddy Turnstone	1610	328	497	238	348	455	170	317	375	259	131	259	4987
Great Knot	341	36	1	7	0	4	5	0	2	0	2	0	398
Red Knot	3429	248	5	136	17	50	75	4	20	73	27	39	4123
Sanderling	1796	506	261	89	277	439	280	159	179	78	26	128	4218
Little Stint	6	0	0	0	0	1	0	0	0	0	0	0	7
Red-necked Stint	53432	1727	2754	2055	1496	2043	497	1943	1856	991	1054	875	70723
Pectoral Sandpiper	1	0	0	0	0	0	0	0	0	0	0	0	1
Sharp-t. Sandpiper	4422	285	276	496	11	110	99	135	106	553	14	39	6546
Curlew Sandpiper	9980	94	308	122	382	47	235	381	120	575	292	371	12907
Cox's Sandpiper	1	0	0	0	0	0	0	0	0	0	0	0	1
Broad-b. Sandpiper	3	0	0	0	0	0	0	0	1	1	0	0	5
Red-necked Stint	0	0	0	0	0	0	0	0	0	0	1	0	1
Black-winged Stilt	20	0	6	0	0	2	0	5	0	2	0	0	35
Banded Stilt	152	0	0	0	54	332	15	1097	53	74	0	0	1777
Red-necked Avocet	140	0	0	0	0	0	199	63	169	105	0	0	676
Pac. Golden Plover	64	0	0	0	0	2	1	0	0	3	0	0	70
Grey Plover	86	5	0	16	0	1	0	0	10	3	4	1	126
Red-capped Plover	98	1	6	3	5	7	21	4	19	28	23	1	216
Double-band. Plover	367	10	45	2	11	37	72	17	121	75	13	52	822
Lesser Sand Plover	55	0	0	0	0	0	0	0	0	0	0	0	55
Greater Sand Plover	16	0	0	0	0	0	0	0	0	0	0	0	16
Hooded Plover	0	1	0	1	1	7	0	3	8	7	9	11	48
Blk.-fronted Plover	2	0	0	0	0	0	0	0	0	0	0	0	2
Red-kneed Dotterel	3	0	0	0	0	0	0	0	0	0	0	0	3
Masked Lapwing	31	1	5	0	0	1	2	0	1	3	0	4	48
Total	**79732**	3428	4433	3549	2910	3820	1889	4138	3201	2919	1787	1794	113600

Table prepared by Helen Vaughan and Clive Minton
This table includes all birds leg-flagged by the VWSG in Victoria, South Australia and King Island since leg-flagging commenced in Red-necked Stint that are still plain flagged).

The 13700 South Australian leg-flagged birds that are included in the above table are shown split by species and year in their own table.

Colour-marked Pied and Sooty Oystercatchers are not included in tha above table. From the end of 2017, Red-necked Stint will no longer be leg-flagged.

Total Number of Waders Caught, by Species
VWSG 2017

	New	Retrap	Total
Bar-tailed Godwit	14	10	24
Ruddy Turnstone	258	208	466
Red Knot	39	2	41
Sanderling	129	14	143
Red-necked Stint	1582	717	2299
Sharp-tailed Sandpiper	39	0	39
Curlew Sandpiper	371	64	435
Pied Oystercatcher	66	19	85
Sooty Oystercatcher	14	1	15
Grey Plover	1	1	2
Red-capped Plover	1	0	1
Double-banded Plover	52	8	60
Hooded Plover	16	1	17
Masked Lapwing	4	0	4
14 Species	**2586**	**1045**	**3631**

Table prepared by Helen Vaughan
The number of species and individuals caught was again reduced in 2017. This was partly due to the more focussed approach to catching (e.g. more catches are aimed at fitting and recovering geolocators) but also due to the generally increasing challenge of catching birds.

Strong catches of Ruddy Turnstone and Curlew Sandpiper were notable, but both oystercatcher species, Sharp-tailed Sandpiper and Bar-tailed Godwit were less than needed.

VWSG FIELDWORK PROGRAMME
July to December 2018

DATE	*PLACE AND OBJECTIVES*	Tide time and height (m)	
Friday 13 July to Monday 16 July	**Barry Beach, Roussac Pt, Charles Hall Rd.,** Oystercatchers. Stay at Davidson house.	1238 to 1558	2.51-2.80m
Friday July 27	**Rhyll, Fishermans Pt.** Oystercatchers	1240	2.76
Saturday 18 August	**A.G.M.** At Clive's house, 165 Dalgetty Rd, Beaumaris 1000 Equipment maintenance 1600 AGM 1800 BBQ 1900 – 2200 Presentations/talks		
Tuesday 11 September	**Stockyard Point** Pied Oystercatchers	1355	2.95
Sun. 7 – Wed. 10 October	**Corner Inlet** Flag sightings		
Tuesday 16-Thursday 18 October	**Yallock Creek** deployment of satellite transmitters on Eastern Curlew . **Net set Monday 15th.** Stay at Harewood House	0644 to 0752	2.96m. to 2.75m
Thursday 1st November	**Mud Islands** Caspian Tern chicks& Crested Tern adults	1143	0.57m
10th – 17th November	**South Australia, Thompsons Beach,** travel days 10th and 17th.		
17th-24th November	**South Australia, Carpenters Rocks,** travel days 17th & 24th.		
Sunday 2nd December Net set Saturday 1st.	**Yallock Creek**, stay Saturday night at Harewood House Retrieve geolocators from Curlew Sandpiper	0827	2.82m.
Thursday 6th – Friday 14th December	**King Island** Retrieval of geolocators from Ruddy Turnstones.		
Tuesday 11thDecember	Mud Islands Caspian & Crested Tern chicks	0916	0.59m
Mon. 17th December	The Nobbies Crested Tern chicks	1257	0.54
Friday 21st December	Corner Inlet, Caspian & Crested Tern chicks Stay at Davidson house		
Friday-Sunday 28-30 December Net set Thursday 27 dec.	**Western Treatment Plant (Werribee S.F)** Red-necked Stint, Curlew Sandpiper and Sharp-tailed Sandpiper	0812- 0929	0.95-0.94m

Meeting time normally 5 hours before high tide.
Please try to let Penny or Rob know, by email or phone, several days before each fieldwork activity if you are planning to participate.

Penny Johns pennyjohns@hotmail.com 0419 366507
Rob Patrick rob@farmingminds.com.au 0408 429944

Sightings of Migratory Waders Leg-flagged in Victoria, South Australia and King Island, Tasmania in 2017/2018

Joris Driessen

Introduction

This year's report contains a comprehensive set of flag sightings from all known sources. Flag sightings come in from a range of regular reporters, plus individuals who incidentally record flagged birds. A huge thank you goes out to all those who continue to send in sighting reports.

The tables present all reported sightings of birds flagged in VIC, SA and TAS (plain flags and engraved leg flags or ELFs) that were seen between July 1, 2017 and June 30, 2018.

Because resightings are received until well after the end of the annual report, the tables should not be interpreted as a definitive set of sightings for the season. Given past experience with annual re-sighting rates it is considered the clear majority of data has been received for 2017/2018. Note that many of the sightings are of the same birds many times over, particularly in areas where dedicated wader watchers are active.

A total of 2,161 resightings were processed for this report, the highest number of records in the past four seasons (2,043 in 2015/16).

Victoria

A total of 1,688 VIC-flagged resightings were reported, of which 971 observations involved birds seen overseas. As in previous years, Bar-tailed Godwit, Curlew Sandpiper and Red Knot make up the bulk of the observations (Table 1), largely as a result of efforts in mainland China (Bohai Bay Team), New Zealand (Adrian Riegen, Tony Habraken *et al.*) and South Korea (Andreas Kim). A total of 717 observations were reported from within Australia, 570 of which were recorded in Victoria (Table 2). The clear majority of these observations were collected by Maarten Hulzebosch at the WTP and by Peter Crighton and a VWSG Team (Jonathon Stevenson, Susan Taylor, Heather Franklin) in Corner Inlet.

Table 1. Sightings of Victorian flagged waders seen overseas and across Australia

Species	Australia	Indonesia	Japan	New Zealand	PDR North Korea	PR China	Philippines	South Korea	Russian Federation	Taiwan	Total overseas	Total sightings
Banded Stilt	1										0	1
Bar-tailed Godwit	208		18	94	8	132		225		2	479	687
Black-tailed Godwit									1		1	1
Curlew Sandpiper	304					56	1	1		5	63	367
Double-banded Plover				3							3	3
Far Eastern Curlew	1										0	1
Great Knot	46					5			1		6	52
Hooded Plover	5										0	5
Red Knot	48			24		365			1	1	391	439
Red-necked Avocet	70										0	70
Red-necked Stint	15	1	1			13			1	4	20	35
Ruddy Turnstone	19					1					1	20
Sanderling			1								1	1
Sharp-tailed Sandpiper						4				2	6	6
Total	**717**	**1**	**20**	**121**	**8**	**576**	**1**	**226**	**4**	**14**	**971**	**1688**

At 94 records, more Bar-tailed Godwit resightings from New Zealand were received compared to the previous season (76), but that total is still a long way off from the 206 reports received in 2015/16. Resightings from South Korea by Andreas Kim were back to their usual lofty heights with 225 godwits (136 in 2016/17; 229 in 2015/16).
Red Knot sightings from New Zealand (24) were lower again than last year (90 in 2016/17; 322 in 2015/16), largely a result of lower scanning efforts. At 365 reported sightings from Bohai Bay (Chris Hassell) the annual tally is much better than last year (255), a reflection of larger number of shorebirds stopping over in Bohai Bay compared to the relatively poor 2017 season. A total of 70 Red-necked Avocet resightings – largely from two scanning efforts at Stockyard Point – stands out as we usually receive not nearly as many reports on this species.
Outside Victoria, the majority of resightings were received from Queensland (QWSG via Phil Cross) and Western Australia (Chris Hassell et al., Clare and Grant Morton, Grace Maglio) (Table 2).

Table 2. Sightings of Victorian flagged waders seen within Australia

Species	NSW	NT	QLD	SA	Tas	Vic	WA	Total Australia
Banded Stilt						1		1
Bar-tailed Godwit	2		20	2		182	2	208
Curlew Sandpiper		1	1	2		292	8	304
Far Eastern Curlew	1							1
Great Knot			43				3	46
Hooded Plover				5				5
Red Knot	2		20	5		1	20	48
Red-necked Avocet						70		70
Red-necked Stint	4			1		10		15
Ruddy Turnstone				3	2	14		19
Total	**9**	**1**	**84**	**18**	**2**	**570**	**33**	**717**

The past season resulted in a number of highlights for VIC-flagged birds, the main ones of which are summarised below.

Russia

All Russian resightings in the past season came from the Kamchatka Peninsula, where regular shorebird expeditions now take place. Dmitry Dorofeev reported small numbers of plain VIC-flagged Red Knot, Great Knot and Red-necked Stint from the Khairusova and Belogovaya Rivers estuary.

Japan

Bar-tailed godwit Orange 8D highlights the connectivity between people along the flyway: first seen on Okinawa on 8 April 2018 by Hiroshi Tomida, too much excitement by the observers the bird was seen again two weeks later in South Korea by Shin Hwan Kim! Masashi Sakai managed to take sufficiently high-resolution photos of a VIC-flagged Red-necked Stint on Hokkaido to determine the metal band number. 03695545 was banded at Yallock Creek on 7 January 2017 (age 2+).

Indonesia

Seppo Hjerppe recorded a VIC-flagged Red-necked Stint near Serangan, Bali on 27 April 2018.

New Zealand

Three plain VIC-flagged Double-banded Plovers were reported from New Zealand: one on 2017 from the 30 October Godley River Valley (South Island) and two males from the Opihi River Mouth on 3 January 2018. There is a clear need to switch from plain leg flags to *engraved flags on this species to better understand population movements and* survival rates
.

North Korea

A NZ shorebird team yet again visited North Korea in 2018, returning with no fewer than eight resightings of VIC-flagged Bar-tailed godwits recorded at Elephant Island Bay, Sindo. The oldest bird among these is Orange CA, banded in Corner Inlet in June 2010 (age 1). Initially re-sighted in South Korea in 2012 (Andreas Kim), CA was not seen again until November 2016 when Peter Crighton recorded it in a roost in Corner Inlet. The NZ team recorded the bird on two consecutive days in mid-April 2018.
Another interesting bird is Orange AJC, banded in 2012 at Barwon Heads at age 1: seen in New Zealand in March 2015 and February 2017, AJC was never recorded in the northern hemisphere until Adrian Riegen found it in April 2018 in Elephant Island Bay. Assuming efforts in North Korea continue over the coming years it will be interesting to see what other VIC Bar-tailed godwits have evaded detection abroad thus far.

South Korea

A plain VIC-flagged Bar-tailed godwit was spotted at Mokpo by Andreas Kim on 14 May 2018. Through taking several photos of the bird's metal band sufficient information was captured to allow identification to the individual level: 07301745 was banded in Corner Inlet on 7 February 2008, age 1.

Philippines

Irene Dy recorded a VIC-flagged Curlew Sandpiper Tibsoc, San Enrique, in the Philippines on 18 January 2018.

South Australia

A total of 223 SA-flagged resightings were reported, of which 65 observations (Table 3) were reported from overseas.

Within Australia

Jonathon Stevenson reported what is probably the oldest known VIC-flagged Bar-tailed godwit: Orange UC was seen at a high tide roost in Corner Inlet in September 2017. First banded in Swan Bay, Queenscliff in November 2004 as 2-year-old, the bird was retrapped at Barwon Heads in January 2011 and equipped with its engraved flag. At the time of re-sighting UC was 15 years old.

Table 3. Sightings of SA-flagged waders seen overseas and across Australia

Species	Australia	Japan	New Zealand	PR China	South Korea	Russian Federation	Taiwan	Total overseas	Total sightings
Banded Stilt	1							0	1
Bar-tailed Godwit	2		3	3				6	8
Curlew Sandpiper	2							0	2
Great Knot	2					4		4	6
Greenshank	1							0	1
Grey Plover	6							0	6
Red Knot	2		1	2				3	5
Red-necked Stint	12			4				4	16
Ruddy Turnstone	99	1		2	1		8	12	111
Sanderling	31	12		19			5	36	67
Total	**158**	**13**	**4**	**30**	**1**	**4**	**13**	**65**	**223**

Russia

Two Great Knot resightings from Russia were from the Khairusova and Belogovaya Rivers estuary on the Kamchatka Peninsula. Orange ELF/Yellow '01' and '02', both banded age 2 at Thompson's Beach on 29 November 2012 were recorded in the estuary in mid-July and early August 2017 respectively. Both birds were recorded at the same location in 2016.

Usually a key location for SA-flagged Sanderling sightings, the past season yielded no observations from Piltun Bay on Sakhalin Island: field impressions indicated a very poor season with few shorebirds passing through the area in late July – August 2017 (pers. comm. Peter van der Wolf).

Japan

Ten observations were received from Japan, 9 Sanderling and 1 Ruddy Turnstone. The oldest bird among these was Orange/Yellow EB, first banded in December 2012 in Canunda National Park (age 2+), only the bird's second re-sighting since banding.

Orange ELF/Yellow BRT made an appearance yet again: first banded age 2+ at Nora Creina in late March 2016, Orange/Yellow BRT, by September 2016 it already had 4 Japanese resightings (from 3 different locations) to its name. In 2017 it was first recorded at the same location and date as the previous (Kahoku-shi, 22 August).

Taiwan

Sanderling Orange ELF/Yellow (Left) 6L was seen in Taiwan yet again: Alder Chang recorded the bird on 28 August 2017 (it already having been reported from Japan in early August 2017). First banded in November 2011 at Yanerbie Beach as a 2+ year old, 6L has been reported 9 times from overseas, but not yet from Australia.

Tasmania

A total of 250 TAS-flagged resightings were reported, of which 207 observations involved birds recorded on the main banding site (King Island), collected by Katherine Leung, Marcel Klaassen and Robert Bush.

Table 4. Sightings of King Island (TAS) flagged waders seen overseas and across Australia

Species	Australia	Japan	PR China	Philippines	Taiwan	Total overseas	Total sightings
Red-capped Plover	1					0	1
Red-necked Stint	4					0	4
Ruddy Turnstone	227	2	3	1	12	18	245
Total	**232**	**2**	**3**	**1**	**12**	**18**	**250**

Philippines

On 5 September 2017 Pete Simpson struck gold at Malalag Fishponds, Davao del Sur, Mindanao, when he photographed Ruddy Turnstone Orange/Blue 'ZUK'. Equipped with a geolocator, the bird appeared in good condition. In early December 2017 Katherine Leung recorded 'ZUK' twice at its wintering site in Burgess Bay, King Island, where it was also retrapped around the same time. Geolocator data will in due course be reported on.

Sightings of Migratory Waders Leg-flagged elsewhere and then seen in Victoria, South Australia or Tasmania in 2017/2018

Joris Driessen

A total of 97 birds banded overseas or interstate site were recorded across VIC (54), SA (39) and Tas (4), down from 159 in 2016/2017 when particularly extensive re-sighting efforts were undertaken.
Thirty-three of the VIC sightings were of interstate flagged-birds and 21 were flagged overseas (Table 1).

Table 1. Sightings of overseas-flagged and interstate-flagged waders in Victoria

Species	Alaska	China	Japan	New Zealand	Total overseas	Australia			Total AU	Total
						SA	Tas	WA		
Bar-tailed Godwit	2	3			5	1			1	6
Curlew Sandpiper		12	1		13			1	1	14
Greenshank		1			1				0	1
Grey Plover					0	6			6	6
Red Knot				1	1	1		1	2	3
Red-necked Stint		1			1	1		1	2	3
Ruddy Turnstone					0	13	4		17	17
Sanderling					0	4			4	4
Total	**2**	**17**	**1**	**1**	**21**	**26**	**4**	**3**	**33**	**54**

The highlights of the past season were an Alaskan Bar-tailed godwit seen on two occasions in Corner Inlet in October 2017 by Peter Crighton, who also recorded a Yalu Jiang Bar-tailed godwit and a New Zealand Red Knot at the same time. Two Hong Kong-flagged Curlew Sandpipers were reported several times from the Werribee Treatment Plants, while a Japanese Curlew Sandpiper was seen by Maarten Hulzebosch at the same location in January 2018.

South Australia
Twenty-two of the SA sightings were of interstate flagged-birds, with the remaining 17 flagged overseas (Table 2).

Table 2. Sightings of overseas-flagged and interstate-flagged waders in South Australia

Species	China	Russia	Thailand	Total overseas	Australia				Total AU	Total
					NT	Tas	VIC	WA		
Bar-tailed Godwit				0			2		2	2
Curlew Sandpiper	1			1			2		2	3
Great Knot	6	3		9				2	2	11
Red Knot	1		1	2			5	2	7	9
Red-necked Stint	1	1		2	1		1		2	4
Ruddy Turnstone	3			3		4	3		7	10
Total	**12**	**4**	**1**	**17**	**1**	**4**	**13**	**4**	**22**	**39**

Particularly exciting is the wealth of overseas flagged birds Andrew Brooks recorded in the Ceduna area: details are provided elsewhere in this bulletin.

Tasmania

All four sightings in Tasmania were of interstate flagged-birds, 2 from SA and 2 from VIC (Table 3). Sanderling Orange/Yellow ‘ADK’ was recorded on mainland Tasmania in January 2018 – originally banded near Yanerbie, SA in April 2015 this bird was reported overwintering in Scamander in late 2015 and 2016.

Table 3. Sightings of overseas-flagged and interstate-flagged waders on King Island (Tasmania)

Species	SA	VIC	Total
Ruddy Turnstone	1	2	3
Sanderling	1		1
Total	**2**	**2**	**4**

Sightings of Oystercatchers Leg-flagged in Victoria, South Australia and King Island, Tasmania in 2017/2018

Joris Driessen and Ila Marks

Introduction

The tables present all reported sightings of Pied and Sooty Oystercatchers flagged in VIC, SA and TAS (individual colour bands and engraved leg flags) that were seen between July 1, 2017 and June 30, 2018.

For the second season in a row the Oystercatcher resighting tally exceeded all expectations. In the 2016/17 season 389 resightings were received, but the past season yielded a total of 440 records! Even discounting the rather well-reported (flagged) South Island Pied Oystercatcher the tally sits at 400 records. Equally incredible are the 373 flags or colour band combinations that were fully read in the field! Special mention needs to go to Gary Matthews, Katherine Leung, Peter Crighton, Reuben Worseldine, John Hutchison, Danny Rogers, Maarten Hulzebosch and Jeff, Sarah and Michael Campbell for their efforts in the field. Grainne Maguire (BirdLife Australia) kindly provided flag sightings collected during Hooded Plover surveys in Corner Inlet in early 2018.

Victoria

A total of 391 observations of VIC-flagged Pied and Sooty Oystercatchers – as well as the now famous South Island Pied Oystercatcher - were reported from across SE Australia (Table 1).

Table 1. Sightings of Victorian flagged Oystercatchers seen in SE Australia

Species	Victoria	King Island	New South Wales	Queensland	South Australia	Tasmania	Total sightings
Pied Oystercatcher	254	2	51	1	25	3	336
Sooty Oystercatcher	15						15
South Island Pied Oystercatcher	39			1			40
Total	**308**	**2**	**51**	**2**	**25**	**3**	**391**

The season's longest movement for a Pied Oystercatcher goes to Yellow ZK. First banded in August 2015 at Roussac's Farm, Corner Inlet, this bird had moved 1,265 km by late December 2017 when it was seen near Ballina, NSW by Steve McBride.

Katherine Leung reported two VIC-flagged Pied Oystercatchers from King Island in early December 2017: Red 7M and Yellow 87. The former was banded as an adult at Stockyard Point in April 2017, where it was still present in June 2017 (Dan Weller). Yellow 87 was banded as an adult at Barry Beach, Corner Inlet in August 2011. It was recorded near Lakes Entrance in the same month, but all subsequent eight observations are from King Island. These records highlight the presence of King Island Pied Oystercatchers on the Victorian mainland during at least part of their lifespan.

Eric Woehler (2) and Richard Ashby (1) both reported VIC-flagged Pied Oystercatchers from Tasmania, Yellow 79, P4 and RX. These are all birds caught in Corner Inlet, without any subsequent resightings from the mainland.

The furthest movement west is from a Yellow-flagged Pied Oystercatcher (ELF not read) recorded by Keith Jones near Goolwa, South Australia – approximately 750 km from the banding location in Corner Inlet.

South Island Pied Oystercatcher Red 1N is no slouch either – despite racking up 39 reports at Stockyard Point in Western Port Bay in July-August 2017 the bird managed an outing to Brisbane in September 2017 where it was photographed by Renate Hottmann-Schaefer. In July 2018 Red 1N was seen again at Stockyard Point.

All Pied Oystercatcher 'oldies' which were reported on last year are still going strong: Blue A4, the oldest known bird in Victoria was seen near Inverloch in October 2017 by Steve Johnson (at least 31 years old), Black H9 was seen in November 2017 near Beachport by Ross Anderson (at least 30 years old) and Yellow KZ was seen by Jonathon Stevenson at McLoughlin's Beach in August 2017 (at least 27 years old).

Of the few Sooty Oystercatchers recorded RWY/WWM is of interest: first banded age 3+ at Flinders in 2005 it was recorded on three occasions at the same location between 2006 and 2008. No subsequent reports were received until February 2018 when Debbie Menzies reported the bird from Cape Schank.

South Australia

A total of 41 observations of SA-flagged Pied (40) and Sooty (1) Oystercatchers were reported respectively (Table 2).

Nearly all SA Oystercatchers involved local breeding birds and were recorded within the state, with the exception of Pied Oystercatchers R6 (Bridgewater Bay, SW VIC) and C7 (Nobles Rocks, SW VIC) as well as Sooty Oystercatcher Black J5 which was seen at Killarney, SW Victoria by Mary Hartney in September 2017.

Table 2. Sightings of SA-flagged Oystercatchers seen in SE Australia

Species	**South Australia**	**Victoria**	**Total sightings**
Pied Oystercatcher	38	2	40
Sooty Oystercatcher		1	1
Total	**38**	**3**	**41**

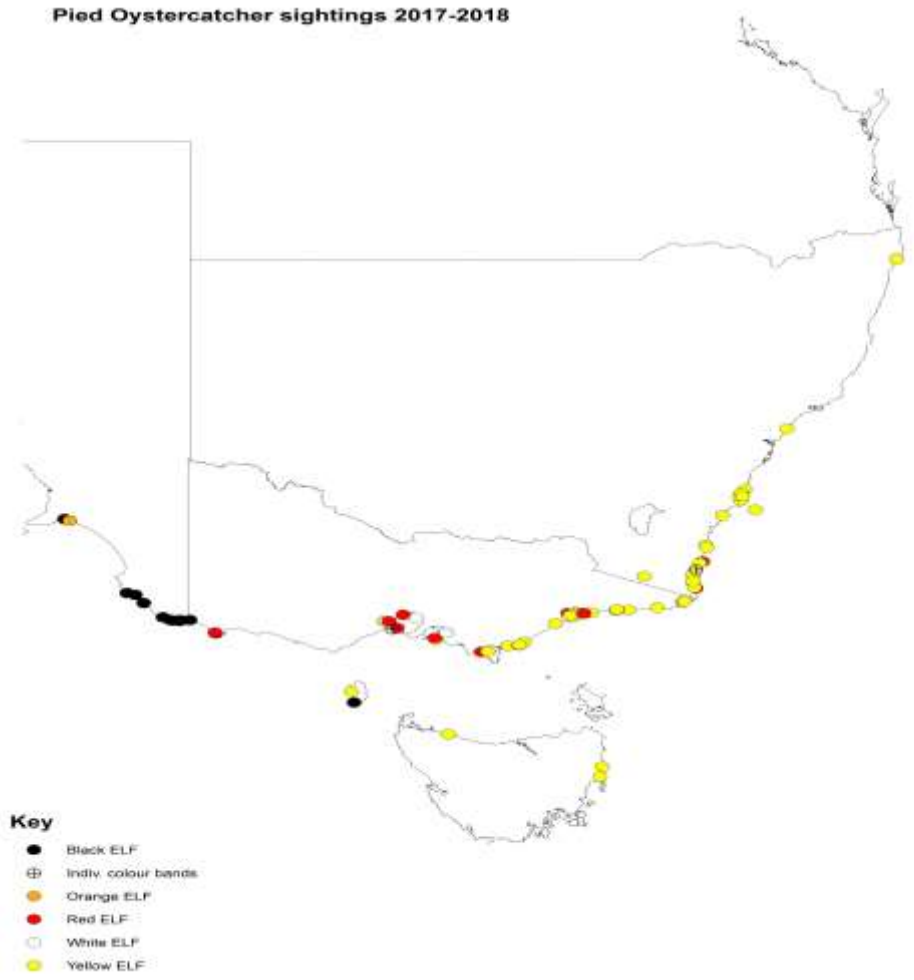
Tasmania

A total of 10 observations of TAS-flagged Pied Oystercatchers were reported, of which 9 were seen on King Island and 1 was recorded on the mainland (Table 3).

Black P1 was seen by Joris Driessen near Yanakie, South Gippsland on 23 July 2017. P1 was first banded as an adult near Manuka, King Island in November 2015 and had not been reported previously. This is only the third reported resighting of a King Island flagged Pied Oystercatcher on the mainland.

Table 3 Sightings of King Island (TAS) flagged Oystercatchers seen in SE Australia

Species	King Island	Victoria	Total sightings
Pied Oystercatcher	7	1	8
Sooty Oystercatcher	2		2
Total	**9**	**1**	**10**



Tern Flag Sighting Report 2017/18

Joris Driessen

Almost all significant movements of terns each year now derive from sightings of flags (including engraved flags). Records showing significant movements are summarised below.

Caspian Tern

There were 54 refighting's of orange-flagged Caspian Terns marked at either the Mud Islands or Corner Inlet breeding colonies. Fifty of these records were off successfully read engraved flags, enabling the birds to be identified individually.

Sightings were predominantly received from the Queensland around Toorbul, near Bribie Island and from the Gippsland Lakes in Victoria. Thirty-nine records were reported from south-east Queensland (QWSG via Phil Cross), eleven were recorded from Victoria and only four were from the northern New South Wales coast.

Orange 96 was found dead on Clonmel Island by Gary Matthews on 2 January 2018. First banded at the same colony in early 2013 as a chick this individual had not been reported previously.

Highlighting the species' apparent site fidelity in the non-breeding season is Orange 47 (banded as a chick in Corner Inlet in January 2012), now having been recorded at Toorbul, QLD on 24 separate occasions since December 2013.

Orange 28 was seen in Swan Bay near Port Stephens in May 2018 by Lois Wooding, marking the 20th wintering record from NSW for this bird.

Another 'old-timer', Orange 37, (banded as a chick in Corner Inlet in December 2011) has been reported from the same location on 13 occasions.

Conversely, and just to emphasise that not all of these birds' winter in heavily monitored areas – Orange 38, banded at the same location and in the same season as the three previous birds, was reported for the first time since banding (Gippsland Lakes, January 2018, John Hutchison).

The longest distance movement this season was clocked up by Orange X8, a bird first banded as a chick in November 2017 at the Mud Islands. In early June 2018 X8 was seen by Chris Barnes near Bowen, QLD, a mere 2,020 km from the banding location.

Crested Tern

We continue to receive a significant number of metal band number readings off live Crested Terns by Steve McBride. These are mostly birds seen on their wintering grounds near Ballina on the New South Wales north coast in the period March to September. An interim analysis is currently underway which should give an indication of the age structure of the Crested Tern population and hopefully an estimate of the average annual survival rate.

Little Tern

Few Little Tern refighting's were received in the 2017/18 season. Steve McBride reported an orange-flagged individual near Ballina, NSW, in November 2017. A Little Tern with a colour band from the Gippsland Lakes project was recorded near Corringle in East Gippsland in December 2017 by Len and Jacquie Axen.

The sole overseas observation came from Japan, where a VIC flagged Little Tern was recorded in Tokyo in May 2017 by Hitoshi Wada.

Fairy Tern

Fairy Terns are much less mobile than Little Terns and Victorian birds rarely move interstate.
An orange-flagged bird and a locally colour-banded individual were seen at an active breeding colony in the Gippsland Lakes in November 2017 by John Hutchison.

Tern Recovery Report 2017/18

Ila Marks, Clive Milton

Recovery Reports are birds that are seen in the field and reported to the ABBBS, who then notify the VWSG with a Recovery Report. These reports contain the band number, where the bird was seen, if it was injured or alive, when and where the bird was banded, and age at the time of banding.

Caspian Tern

Since our last AGM there have been thirteen reports of Caspian Terns, all were banded as chicks at their breeding colonies in Victoria. Nine were banded at Corner Inlet and four were banded at Mud Islands. They were all carrying colour bands or engraved flags.

All reports, except three were of birds seen along the eastern coast of Australia from Nowra in New South Wales to Bribie Island in Queensland. One bird was found dead at Rhyll eight months after it was banded at Mud Islands. Also banded as a chick at Mud Islands one tern travelled much further north than the others, being seen at Bowen Pier Queensland six months 27 days after it was banded. Travelling a distance of 2,057 kilometres, this is the second furthest north one of our banded Caspian Terns have been reported. The longest recorded movement is a bird seen in Townsville about 5 years ago. One tern with ELF 85, was seen at Nowra on the 1st of August 2017. This is the third year in a row it has been seen there.

Another Tern was found dead, "taken by an unknown animal", at Fox Lake, Robe South Australia. This is very unusual movement for a Victorian Caspian Tern, going west instead of east and up the coast to northern NSW and Queensland.

The oldest reported bird was found "trapped because band was tangled in fishing gear….and was rehabilitated and released alive with band "at Wellington Point near Brisbane Queensland". It was banded Off Manns Beach, Corner Inlet on the 11th of February 1989 and was 29 years old.

Crested Tern

Over the past year we have received over 200 reports of Crested Terns. The majority from the Ballina/Evans Head/Ilkua area of the north coast of New South Wales and mostly over the winter months between March and September. As in previous years no Crested Tern were seen in Queensland, in contrast to Caspian Tern where the majority reach Queensland.
Seventeen of the reports were for birds over 20 years of age and with one being 28, two being 29 and six being over 30 years of age. Over half the birds were banded at the Nobbies Phillip Island, and the others were banded at Mud Islands and Off Manns Beach, Corner Inlet.

Common Tern

Common Terns visit the east coast of Australia in their non-breeding season, that is, the Northern Hemisphere winter. This year we have had three reports of orange-flagged Common Terns. Last year we reported on our oldest recorded report of a Common Tern. It was seen at Ballina and banded as an adult at the Gippsland Lakes on the 24th of January 1997 and aged a minimum of 21 and half years. This bird has been seen again at Ballina on the 16th of March 2018. It remains the oldest bird recorded now at least 22 and a half years old. The other two reports were of birds both banded off Manns Beach, Corner Inlet on the 9th of February 2010 aged 2+ and were seen at Ballina on the 25th March 2018.

Fairy Tern

There have been no recovery reports of Fairy Terns with orange flags in Australia this year. They are less mobile than Little Terns and rarely move interstate. This year one hundred and twenty-two were banded in South Australia and seven in Victoria (see report this Bulletin).

Little Tern

There have been no recovery reports of Little Terns sighted with orange flags in Australia this year.

Whiskered Tern and White-winged Tern

As set out in this Bulletin Whiskered Terns and White-winged Terns were banded at Werribee Treatment Plant this year. However, we have no reports from the ABBBS regarding these birds.

Tern Breeding and Banding Report 2017/18

Ila Marks, Clive Minton

Caspian Tern

The Caspian Tern at Mud Islands nested about a half a kilometre from the Crested Terns in the same place as last year, a sand bank on the south-west side of Mud Islands. A total of thirty-nine chicks were banded over the three trips made to the colony. At West Clonmel, Corner Inlet, there were 17 pairs on nests with eggs and one chick.

Victoria

Location	Breeding Pairs	Chicks Banded
Mud Islands	**N/A**	**39**
Corner Inlet, West Clonmel	**14**	**0**
Totals	**N/A**	**39**

Crested Tern

This has not been a typical year for Crested Terns. There were an estimated 2,500 breeding pairs on Mud Islands, but none at West Clomel, Corner Inlet. Also, there were no Crested Tern at the Nobbies, Phillip Island. However, there were 1,500 breeding pairs on the nearly Seal Rock where most nests provided a fledged chick. Seal Rock is close to the Nobbies but not accessible for banding activities. There were 2,000 breeding pairs at Burgess Bay, King Island, some of these at least come from Victoria (see a separate report in this bulletin.)

It was only possible to band at Mud Islands where 1,234 chicks were banded, and 114 bands were read

Victoria.

Location	Breeding Pairs	Chicks Banded	Retrapped Banded Adults
Mud Islands	**2,500**	**1,234**	**114**
The Nobbies	**0**	**0**	**0**
Seal Rock	**1,500**	**0**	**0**
Corner Inlet	**0**	**0**	**0**
Totals	**4,000**	**1,234**	**114**

Fairy Tern

On our second trip to Mud Islands we were excited to find 24 active Fairy Tern nests, 23 with eggs. We were looking forward to banding the chicks on a future trip to the Islands. However, when we returned on the 18th of December 2017 we could found only twelve Fairy Terns, one chick that we banded, and one nest with an egg. Not much to show for the activity seen previously. The nests appeared to have been washed out in a storm.

King Island - Crested Terns a Nice Surprise

Clive Minton, Penny Johns, Robyn Atkinson and David Wilbrahan

When the VWSG team was on King Island in December (2017) it spent a couple of hours at the large Crested Tern colony in Burgess Bay, Currie, re-trapping adult birds which were already banded. A total of 55 birds were caught and **ALL** had originally been banded as chicks in Victoria!!

Crested Terns have apparently nested in Burgess Bay periodically over many years and numbers are reported to have grown in recent years, to an estimated 1000 pairs. In 2014 it was noticed that some 5 - 10% of the breeding adults were carrying metal bands. Permission to recapture some of these to ascertain their origin was obtained but could not be implemented during the November 2016 visit because the Crested Tern colony had moved elsewhere. This year the VWSG team was surprised to find that not only had the colony returned to the site at Burgess Bay but it had doubled in size, to 2000 pairs.

The table below shows the origin of the 55 banded birds which were recaptured. All had been banded in Victoria as chicks. The majority (43) had originally been banded at the colony at The Nobbies on the west end of Phillip Island. Eleven were originally from Mud Islands, in Port Phillip Bay, and one was from Corner Inlet. Three of the birds from Mud Islands had previously been recaptured as breeding adults at The Nobbies. Five of the Phillip Island birds had also been retrapped there as breeding adults – one in two different years.

With all birds having been originally banded as chicks we know their exact age at re-trapping. The oldest was 27 years and there were several other birds more than 20 years old. At the other end of the range there were four birds which were only five years old, and none younger than this. Data from our Mud Islands recapture studies indicated that Crested Terns did not usually attempt to breed until at least their fourth year, with many perhaps not doing so until they were five years old. However, in interpreting this day from King Island we also need to be aware that younger birds are rather less easily recaptured at their nests.

Origins of banded Crested Terns retrapped as breeding adults on King Island on 11/12/17

Banding location	No. of individuals	Previously retrapped
Mud Islands	11	3 breeding at Phillip Island
Phillip Island (Nobbies)	43	5 breeding at Phillip Island (one in two different years)
Corner Inlet	1	
	55	

All banded originally as chicks.

The distance from The Nobbies breeding colony to the one at Currie on King Island is 190km. Previously quite a number of The Nobbies breeding adults had moved to Corner Inlet to nest for a couple of seasons, this being a distance of 140km. But most breeding adults tend to remain at the same colony year after year.

The original intention of recapturing the banded breeding adults on King Island was to see the origin of the birds nesting there. However, it seems that the results obtained in December 2017 are not typical with the situation being confused by a transfer this year to King Island of about 1000 pairs which normally nest at The Nobbies. It seems we shall need to wait for a more normal year before being able to ascertain just what proportion of the regular King Island breeding population has derived from Victorian-hatched chicks.

Re-trapping a sample of the banded breeding adult Crested Terns will obviously remain a target on future November/December visits to King Island.

Thanks are due to the VWSG December 2017 King Island Team for its efforts and perseverance in re-trapping so many banded Crested Terns. David Wilbraham is thanked for extracting all the banding information from the VWSG database. The Tasmanian Ethics Committee and Wildlife Department are thanked for providing banding permits

Little Tern. Photo: Michael Campbell

Errata

Some confusion was given in tern figures for South Australia in last bulletin. In the *Tern Recovery and Flag Sighting Report 2016/17* for `Fairy Tern. “Seventy Fairy Tern chicks were banded in South Australia this year” (page 38). However, on page 36 in *Tern Breeding and Banding Report 2016/17* it was stated that “A total of 234 Fairy Terns were banded in South Australia”. This latter figure (234) is in fact the correct number, made up of 229 in the south east and five at Thompson Beach.

On page 37 *2017 Fairy Tern breeding event on Cowrie Island, South Australia.* Missing photo credits: Petra Hanke. Apologies.

VWSG Satellite Tracking of Grey Plovers from South Australia

Tony Flaherty

The Victorian Wader Study Group and Friends of Shorebirds SE have been assisting the Adelaide and Mt Lofty Ranges Natural Resources Management Board with shorebird banding studies along the “Samphire Coast” area north of Adelaide in South Australia (SA) since 2012. This work has sought to better understand local movements and migration of shorebirds in Gulf St Vincent. Whilst the patterns of shorebird roosting and limited areas for net deployment have limited overall catches in comparison to other canon netting locations, the work has greatly increased the number of flagged shore and seabirds in the Gulf. The effort is being rewarded with flag resights of Thompson Beach flagged shorebird species at a number of locations along the flyway. The area is now part of the Adelaide International Bird Sanctuary and associated East Asian Australasian Flyway site (EAAF 131)

With funding support through the Australian Government for the NRM Board’s Samphire Coast Icon Project, ten Microwave Telemetry 5 g solar powered Platform Terminal Transmitters (PTT) have been deployed on Grey Plover in the Gulf St Vincent (GSV) flyway site in South Australia (SA) since 2015. These units have been attached using ‘leg-loop harnesses’ and units programmed to a 10 hrs ON/48 hrs OFF duty cycle. Initial PTT deployments in 2015 and 2016 were made at Thompson Beach some sixty kilometres north of Adelaide. The birds have South Australian flags of orange over yellow flag on their right leg.

Previous Bulletin articles (No.39 Aug. 2016 and No.38, Aug. 2015) have provided accounts of the satellite tracking of Grey Plover at the catch location of Thompson Beach, north of Adelaide, South Australia. These updates detailed tracking of two grey Plover, flagged CYA and CYB from Thompson Beach to the arctic breeding grounds of Wrangel Island, and the southward migration of CYB from Wrangel, via Ul’bansky Bay in Eastern Russia, its stopover back in northern Bohai Bay and a tempestuous return skirting a “super typhoon” off Taiwan to landfall on Australia’s northern coast.

In December 2016, a further three transmitters were successfully deployed on Grey Plovers CAS, CAR and CAU at Bald Hill, some ninety kilometres north of Adelaide adjacent to the Defence Proof Range. A transmitter on Grey Plover CAT, failed soon after deployment, but the bird was resighted without harness feeding with other plovers in the area. On the 1st of March 2017, a catch of two Grey Plover at Thompson Beach, included a retrap, Flag CMN, originally banded 28th October 2014, aged 3 years or more as well as a smaller, younger bird. A transmitter was deployed on CMN.

***Female Grey Plover CAR on capture at Thompson Beach December 2016, Photo Tony* Flaherty**

All birds settled into what appears to be the typical austral summer Gulf St Vincent Grey Plover behaviour of strong site fidelity, moving with a few kilometres radius between the tidal flats to feed and to the beach or into samphire sabkas (clay pans) slightly inland.

Migration was initiated in April, typically linked to high pressure systems which create favourable sou-easterly winds. However only limited tracking was obtained for these further deployments. Transmissions of Bald Hill birds were lost on northward migration from Australia, but two birds made stopovers in Sulawesi in Indonesia rather than direct flights to Yellow Sea.

With the exception of CAT which was observed at Bald Hill without harness and transmission after initial deployment, the cause of other signal failure, from either transmitter failure, loss of the harness or loss of the bird is unknown.

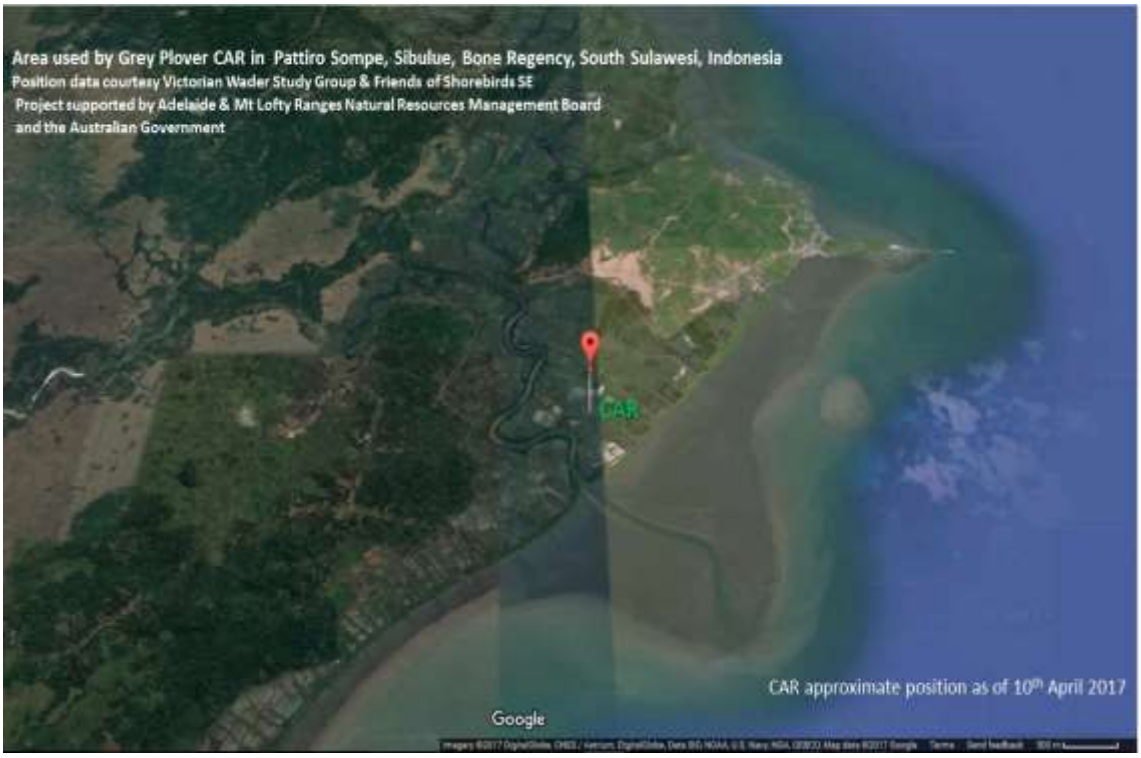
Plover CMN left Thompson Beach, 4th April 2017, at its last tracked position on the 6th April the bird was just passing west of Uitiuh Ana, South Semau, Kupang in Indonesia, having flown some 3000 kilometres when transmission for the bird was lost. It is possible this bird made landfall on South Semau, Kupang, Indonesia, or it lost its transmitter. A range of poor quality signals were received in May and later in August to September a number of signals were received from the west Kupang area.

Plover CAS headed off from Bald Hill sometime after the 7th of April transmission cycle flying to Suluwasi. Transmissions indicated landfall in northern Sulawesi after the 14th of April. The bird was using rice fields around a small river delta near Leboto, Kwandang in North Gorontalo Regency, Indonesia. The plover had flown over 4,460 kilometres since departing Bald Hill South Australia. The plover left this stopover site on northern Sulawesi from where the bird left sometime after the 23rd April. As of the last received transmission on the 25th of April, CAS was approaching the island of Panay in the Philippines, some 1000 kilometres from its Sulawesi stopover. The plover had flown over 5530 kilometres since departing Bald Hill.

Female Grey Plover, CAR departed Bald Hill sometime after the 2nd April and by the 7th April had made landfall on the western shores of the Gulf of Boni in South Sulawesi. The Plover was on the coast amongst rice paddies of a small river delta near the town of Benteng, Pakkasalo, Sibulue in the Bone Regency of South Sulawesi, Indonesia. CAR had travelled over 3,700 kilometres from Bald Hill in South Australia. Transmission was lost after the 14th April and regained briefly on the 21st April.

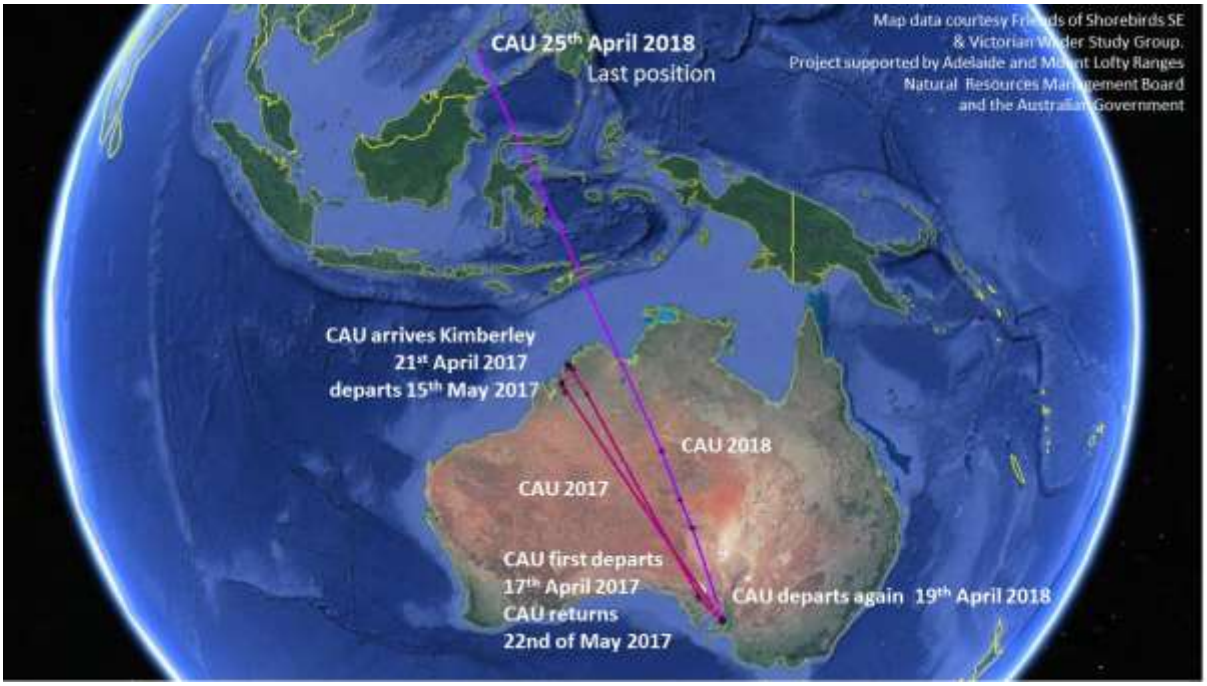
Tracks of Bald Hill Grey plovers CAS and CAR to Sulawesi stopover sites, April 2017.

Bald Hill Grey plovers CAS stopover site, April 2017 in northern Sulawesi. The bird was using rice fields around a small river delta near Leboto, Kwandang in North Gorontalo Regency, Indonesia.



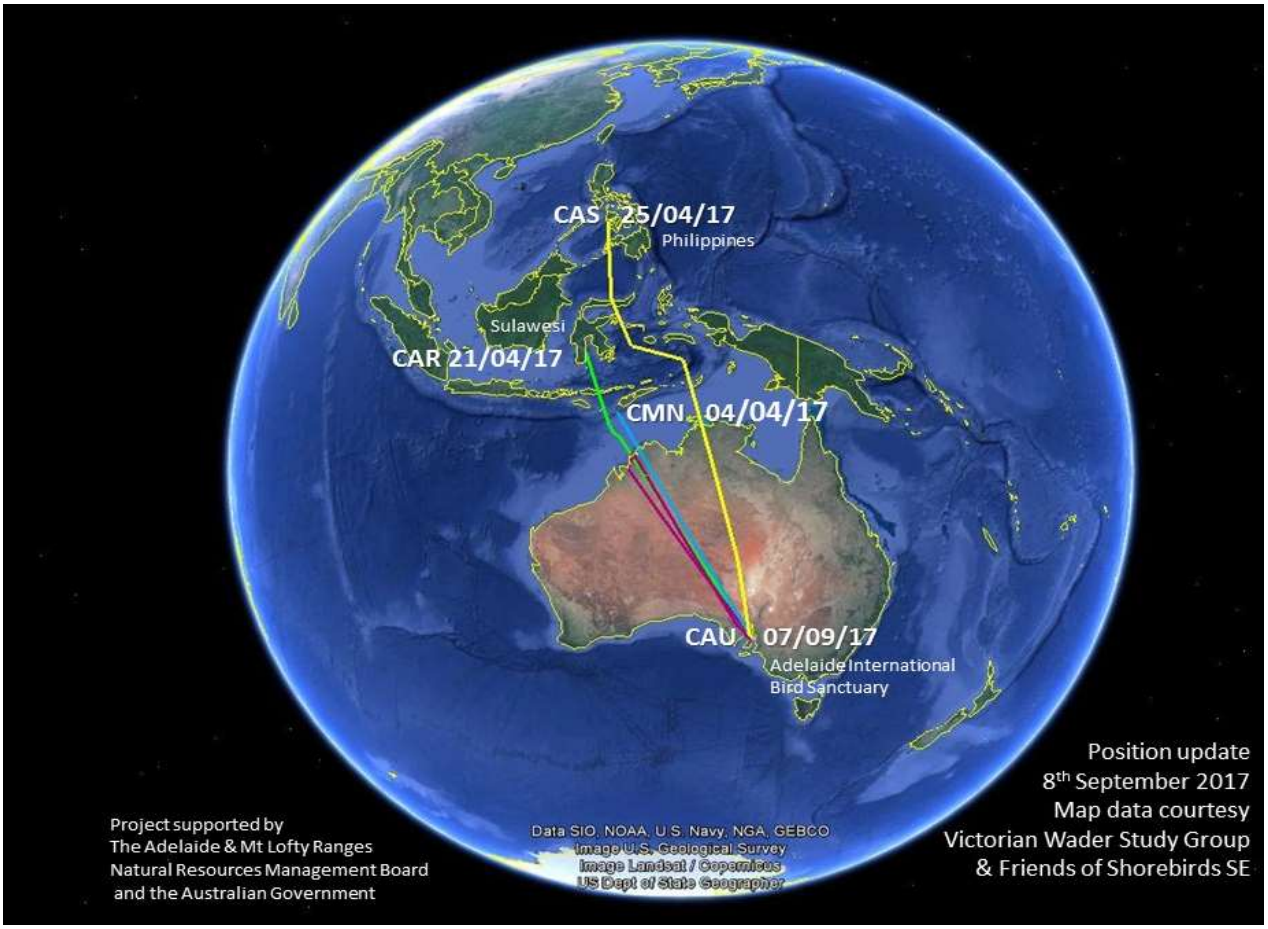
Bald Hill Grey plovers CAR stopover site, April 2017 in South Sulawesi. The Plover was on the coast amongst rice paddies of a small river delta near the town of Benteng, Pakkasalo, Sibulue in the Bone Regency of South Sulawesi, Indonesia.

Transmissions were received from male Grey Plover CAU for some sixteen months, but this bird over wintered at Bald Hill after a journey to North-western Australia. CAU departed Bald Hill around the 17th April 2017, flying to the Prince Regent River area of Kimberley Coast, Western Australia by the 21st April. However, around the 15th of May 2017, Grey Plover CAU, departed the Kimberley coast and returned back to Bald Hill by the 22nd of May 2017, joining a small group of other overwintering Grey Plovers. CAU overwintered at Bald Hill. After overwintering at Bald Hill, CAU departed on migration after 19th of April 2018 tracked north-west over the Tanami desert by the 22nd and over Sulawesi to where transmission was lost of the north east coast of Sabah, Malaysia on the 25th April 2018.



CAU movements' north-west to the Kimberley and return to Bald Hill in 2018 and part migration track in 2018

Overwintering of Grey Plover CAU at Bald Hill showing high site fidelity.



Tracks of Birds Flagged at Bald Hill and Thompson Beach in 2017
(not showing CAU 2018 partial migration track)

Gulf St Vincent, many of the overwintering Grey Plovers appear to roost and feed in a very small "home range" during the southern summer. The back lagoons and salt pans appear to play a very important role in the gulf for shorebirds such as Grey Plover with some large groups using these areas as high tide roosts. This has influenced conservation management of these sabkas to mitigate disturbance and off-road vehicle and bike management, as well as influencing the inclusion of sabka areas into the new Adelaide International Bird Sanctuary National Park.

Of note is the use of Sulawesi as a stopover on northward migration by two of the Bald Hill birds, and a possible landfall of the Thompson Beach plover CMN in Kupang.

Local birder Paul Taylor regularly photographs shorebirds at Bald Hill. He photographed Grey Plover CAU at Bald Hill on a number of occasions, and a number of images accompany this article.

Grey Plover CAU on the 6th September 2017 after return from north-western Australia with what appeared to be another recently arrived bird and 3 other overwintering Grey Plovers. Photograph courtesy Paul Taylor.

Male Grey Plover CAU photographed by Paul Taylor at Bald Hill, Gulf St Vincent in South Australian, on 5th March 2018.

Grey plover CAU at Bald Hill shortly before second recorded northward migration, March 25, 2018, Photograph courtesy Paul Taylor.

Map data courtesy Victorian Wader Study Group & Friends of Shorebirds SE. Project supported by Adelaide and Mount Lofty Ranges Natural Resources Management Board and the Australian Government funded Samphire Coast Icon Project. Map data is provided for public information. The presentation of data here does not constitute publication. All data remain copyright of the project partners. Maps or data on this website may not be used or referenced in scientific or commercial publications without explicit written consent.

Some of the SA Grey Plover tracking team at Bald Hill, December 2016

Curlew Sandpiper Catch
Penny Johns

One of our priority activities over the summer has been to deploy geolocators on Curlew Sandpipers.

The population of Curlew Sandpipers is in serious decline, so it is imperative that we learn more about these birds, exactly where they breed and which route they take on their northward and southward migration. To do this we wanted to place geolocators on a number of these birds that would record where and when they moved during their migration.

We decided Yallock Creek on Westernport Bay was the most likely place as retraps of birds banded in previous seasons were high, telling us that we had a good chance of retrieving geolocators there. On our last catching attempt a recce had been done some days before determining that there were 1500 small waders (a mix of Red-necked Stint, Sharp-tailed and Curlew Sandpipers) present.

This was really a do or die effort as at our three previous attempts at catching Curlew Sandpipers they had proved very elusive. We still had geolocators to deploy and their departure for the northern hemisphere was fast approaching, as could be seen by the number which were in advanced breeding plumage. The net was fired, covering material was quickly in place and the birds settled nicely. Imagine our delight when we counted 182 Curlew Sandpiper (together with over 300 stint). We fitted 59 with geolocators and the whole catch was fitted with orange engraved leg flags. Please report any sightings of engraved leg flags of any colour, any migratory species, anywhere you see them to Joris Driessen through the AWSG website (http://awsg.org.ay/wp-content/themes/AWSG/reportform.php) or directly to Joris at flagging@awsg.org.au (if you have any photos they need to be sent directly to Joris)

We are fairly confident that we can retrieve the geolocators when they return at the end of this year as this does seem a site to which they are faithful.

Follow Valdman on Twitter @josvaldman or Facebook.com/valdmancartoons. Signed Valdman cartoons are for sale at the News Shop, 31 Waymouth St, or phone 8206 2242 or email photosales@adv.newsltd.com.au

With thanks to Jos Valdman for permission to use this delightful cartoon. The cartoon was featured in the Adelaide Advertiser on the same day as an article about Bar-tailed Godwit AKK. This bird was banded and flagged by the VWSG At Thompson Beach, north of Adelaide, and then seen and photographed by Adrian Boyle at Nanpu on Bohai Bay in China.

Flagged birds sighted on the West Coast of South Australia

Andrew Brooks, Ceduna

I grew up on the family farm, a large remote 22,000-acre property, 20km south of Penong, on the Far West Coast of South Australia. Luckily for me this property is on the coast, so our southern boundary consisted of 18km of wild, high energy surf beach facing the Great Australian Bight. The property includes a huge granite headland called Point Bell, which in 2006 was constituted as a 470-hectare Conservation Park. From an early age I showed a keen interest in animals and in particular – birds, our farm was full of them!

In recent years I have been focusing more attention and learning about migratory shore birds. As a kid I found them very confusing because they all looked the same! I now know otherwise and have been an "official" volunteer for the local 2020 shorebird surveys for the past nine years. My surfing and fishing lifestyle brings me into constant contact with migratory shorebirds, so I always carry a good quality scope, binoculars and camera in the vehicle. I also have a small boat, a "tinnie" with a 20hp motor which allows me to access some of the local islands which are also great shorebird haunts. I believe one of the islands, St Peter Island, in the Nuyts Archipelago Conservation Park, regularly supports Internationally Significant Populations of Pied and Sooty Oystercatchers and Ruddy Turnstone and Nationally Significant numbers of Grey Plover, Red Knot and Sharp-tailed Sandpiper. We have been consistently counting 27 to 31 Critically Endangered Eastern Curlew for the last 10 years. Most of my beaches are reasonably remote with somewhat "minimal" human disturbance so the birds seem quite happy spending the summer here.

I've been fortunate in spotting quite a few flagged birds during the past couple of years, including numerous internationals! One particular noteworthy flag sighting I had last summer was a Great Knot black/yellow ELF H5 which was flagged 1/8/2016 at the Khairusova & Belogovaya Rivers estuary, Kamchatka Peninsula, in the Russian Federation. I sighted this bird on three separate occasions during the summer but at the time I didn't realise the significance of it and regrettably – didn't take a photo! I will be keeping a sharp eye open for it this coming summer! Another interesting observation is a Ruddy Turnstone - orange ELF CLN flagged 8/1/2010 at West Head Flinders, Victoria, which I have sighted for the past four consecutive years on the exact same 200 metre corner of beach! It must really like the tucker there! I have noticed that quite a few of the flagged birds return every summer to my area so I am starting to wonder if they are using the beaches of the Great Australian Bight as part of their migration to and from Broome in Western Australia? Hopefully another couple of years of flag sightings will help piece the puzzle together.

(Note: Andrew has recorded the codes on leg-flagged birds from at least seven locations; eight from Victoria, five from Chongming Dao, Shanghai, China, two from Roebuck Bay, Broome, 13 from south east South Australia, two from Yanerbie Beach near Streaky Bay, three from King Island and one from Kamchatka. Many of these birds have been seen on more than one occasion and several in more than one year. Ed).

The VWSG Geolocator program – Another year of success and challenges

Ken Gosbell, Clive Minton, Maureen Christie

Introduction

The geolocator program was initiated by the VWSG in 2009 with trials of six geolocators deployed on Ruddy Turnstone at Flinders, Victoria, and two at Carpenter Rocks in South Australia. Since then some 783 geolocators have been deployed by the VWSG on five species in Victoria and South Australia as well as King Island. In addition, 165 have been deployed on three species in NW Australia by the AWSG and GFN. The VWSG were among the first in the world to use this instrument on shorebirds while today the technique is used by almost all countries undertaking shorebird studies. We have continued to be leaders in this field through our publications and, in collaboration with Deakin University, developing new analytical techniques which are adding enormously to our knowledge of migratory shorebirds in our flyway. The following provides a snapshot of the nature and extent of our program; it does not attempt to cover in any detail the scientific outcomes of these studies as these are more adequately covered in existing or proposed publications. It must be noted that these outcomes have only been possible through the dedication and generosity of the VWSG field teams and supporters who have volunteered so many days under sometimes difficult conditions, to deploy and retrieve these loggers. Of particular significance has been the collaboration with Marcel Klaassen and his team at Deakin University who have contributed expertise as well as physical and financial resources. Additionally, Xenia Dennett, a VWSG member, made generous donations in each of 2015, 2016 and 2017.

Once again, several interesting stories of migration were revealed. Several of these were the tracks of several Ruddy Turnstone that made flights across the Pacific on their return journey from the breeding grounds. One of these was WMA which was initially banded on King island and made a stopover at Newcastle, NSW, for the third consecutive year. See a separate article in this Bulletin for further details.

Deployment and retrievals of geolocators by VWSG

The Table below shows the summary of deployments and retrievals by VWSG since 2009. In summary, 571 have been deployed on Ruddy Turnstone, 68 on Sanderling, 23 on Eastern Curlew and 61 on Red-necked Stint and 60 on Curlew Sandpiper making a total of 783 fitted to shorebirds expected to migrate to the northern hemisphere to breed. Over the last year we have again concentrated on Ruddy Turnstone for several reasons which include the proven site faithfulness of this species making retrieval more likely. The focus on this species has enabled a longitudinal study to be made of birds for which we have data on multiple migrations. It is of interest that we now have 197 viable tracks for Ruddy Turnstone.

During the last season (2016/17) we deployed 116 geolocators comprising 86 on Ruddy Turnstone 26 in SA and 60 in King Island. In addition, after some years of debate, we deployed 60 geolocators on Curlew Sandpipers at Yallock Creek; little is known of the actual migration strategies of this species and with its critical decline, we are anxious to better understand these.

Retrievals of geolocators during the 2017/18 season was lower than last year with the King Island teams retrieving 26 geolocators during their 2 visits while the SA team retrieved 5. However, there were a number of cases where the geolocators retrieved provided tracks for 2 years (or at least part years). It will be noted that we retrieved 4 more loggers from the Red-necked Stint at Yallock Creek also. See separate reports on some of the findings of the KI and SA programs.

One of the features of our program has been the high retrieval rate, particularly for Ruddy Turnstone; over the last nine years 237 retrievals have been made which is 50% of those deployed. Averaged over all species this is 44% which is high in comparison with many other studies but does reflect the site faithfulness of Turnstones (and the tenacity of those in the field).

Geolocators deployed/ retrieved each year by VWSG in SEA to 05/2017													
Season	Ruddy Turnstone		Sanderling		Eastern Curlew		Red-necked Stint		Curlew Sandpiper		**TOTAL**		% retrieved
(Summer)	On	Off	On	Off	On	Off	On	Off	On	Off	**On**	**Off**	by year
2009	8	4									8	4	50
2010	75	33									75	33	44
2011	46	13	24	1	23	3					93	17	18
2012	32	12	44	16		5					76	33	43
2013	69	23		1							69	24	35
2014	60	22									60	22	37
2015	107	34					61				168	34	20
2016	88	65						14			88	79	90
2017	86	31						4	60		146	35	
TOTAL	571	237	68	18	23	8	61	18	60		783	281	44
%		50		26		35		30					

Outcomes from the program

There have been a number of outcomes from this program some of which can be summarised as follows:

1. An understanding of migration strategies including tracks, timings and stopover areas for northward and southward migration. Some of these have added new knowledge or provided confirmation on migratory paths such as the use of the Pacific for south migration for some Ruddy Turnstones, the use of the Vietnam coasts as short stopovers for Sanderling and the Daursky Wetlands in Russia as an initial stop for many Ruddy Turnstones heading south.
2. The identification of major stopover areas for both northward and southward migrations. In particular, the vital importance of the Yellow Sea has been demonstrated and reinforced for all of the species studied.
3. By using the analytical technique developed by Simeon Lisovski (Deakin University and Swiss Ornithological Institute), we have identified the breeding areas for Ruddy Turnstone, Sanderling and Great Knot. This is a major contribution to our knowledge of these species.
4. In addition, we have made assessments of the probability of incubation success of nesting birds. For instance, of the 21 sets of data from Ruddy Turnstones retrieved from SA and King Island this year, only 4 were judged to show signs of successful incubation. This is very low compared to other years, but it does correlate with the trend observed from cannon net catches. Of course, we have no way of knowing how many chicks actually fledged and migrated south.
5. Over the period 2009 to 2017 we have recorded 30 repeat tracks by Ruddy Turnstone. Of these two birds have provided 4 tracks while others have provided 2 and 3 tracks. This provides a significant opportunity to study an individual bird's strategy with time.

Conservation Outcomes

One of the objectives of the program has been to utilise the results to input to conservation strategies and programs. The identification of critical stopover areas is essential in driving the development and implementation of conservation plans by governments and organisations such as the Flyway Partnership and the results from our program have already proved useful.

The information gained from geolocators has also played a major part in local conservation issues. The proposal to harvest beach wrack (seaweed) from the beaches of the southeast of South Australia, which are important to the pre-migration feeding of Ruddy Turnstone and Sanderling, was successfully contested by VWSG and FoSSE on the basis of the known migratory departure times gained through our geolocator studies.

Costs The geolocators have been purchased at an average cost of close to $200 each. With 783 units deployed over the last seven years this equates to a cost of around $160,000.

Funding has been obtained from a wide range of sources including significant contributions made by, or organised by, VWSG members (including legacies from two deceased members). Funds were also raised by a number of special activities, particularly at the AGM, which included raffles for items such as wine (generously donated by the Myer family) and books (kindly donated by Andrew Isles). We also acknowledge the contributions by the Norman Wettenhall Trust and Xenia Dennett.

Over the last two years the major funding source has been from Marcel Klaassen's Migration Ecology unit at Deakin University; it is through their wish to maintain their research program on the Ruddy Turnstone from King Island in particular, that their support has enabled the program on this site to continue to our mutual benefit.

Friends of Shorebirds SE (FoSSE) has contributed almost $42,000 from sources including Nature Foundation of SA, Kimberley Clark Aust P/L, Department of Environment and Natural Resources (DEWNR), South East Natural Resource Management Board, Limestone Coast & Coorong Coastal Management Group and Newbery Park Primary School. All are greatly thanked for their most generous help which has been fundamental to us being able to undertake geolocator studies on a scale which is significant.

Publications The scientific papers published so far based on the results of our geolocator studies are listed at the conclusion of this paper. Further analyses are in train and additional papers will be published in the future. Also listed are the most recent verbal presentations made on our geolocator work.

The Future When the initial geolocator deployments and successful retrievals were made, these provided, for the first time, a picture of the migration tracks of Ruddy Turnstone. We had little idea then of the scale that the program would develop into and the incredible amount of information it would provide across several species. Eight years later the VWSG can be very proud of the leadership in this technology that it has provided and the valuable results it has recorded and published.

Future plans for the use of geolocators in southern Australia have limitations due to there being comparatively few species of migratory waders which visit south-eastern Australia on which geolocators can be economically deployed. Species which it would be highly desirable to study – Sharp-tailed Sandpiper, Red Knot, Bar-tailed Godwit for example – have low recapture rates, either because only a small proportion of the population can be captured each year because of their low

populations/inaccessibility, or because of the ephemeral nature of their return patterns. However, the development of a 0.3g geolocator by Migrate Technology, enabled deployment on Red-necked Stint for the first time. The retrieval of 18 of these, has now provided some indication of the migration strategies of our smallest wader.

With the close collaboration and cooperation with Marcel Klaassen's team at Deakin University, it is intended to continue, at least for another year, the deployment of geolocators on Ruddy Turnstone on King Island and in South Australia. In addition, we will continue to support the Deakin team as they examine in more detail the data now available on multiple journeys, incubation characteristics and the marked migration ecology differences between the Ruddy Turnstone populations of the south-east of South Australia and those of King Island, which are only some 200km apart. Multiyear sequential migrations are also providing some indications of the impact of climate change and habitat destruction at key stopover regions in the flyway; these issues are a major focus of the Deakin University studies.

Conclusion

The VWSG's move into the field of geolocators in early 2009 has proved to be an astounding success. We were, and still are, one of the world leaders in the use of geolocators to study shorebird migration. VWSG members are to be congratulated and thanked for the dedication and perseverance they have demonstrated through many hours of intensive field work which has enabled the deployment of 753 geolocators over five sites in south eastern Australia and such a satisfactory retrieval rate to be achieved. This has led to so much significant information on migration and other characteristics being obtained.

Papers published

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Migration phenology and stopover site use of a long distance migratory bird along the East Asian-Australasian Flyway– a multi-population assessment. Meijuan Zhao, et al (in prep)

Why fly the extra mile? Latitudinal trend in migratory fuel deposition rate as driver of trans-equatorial long distance migration. Yaara Aharon-Rotman, Ken Gosbell, Clive Minton and Marcel Klaassen. Ecology and Evolution

Time versus energy minimization migration strategy varies with body size and season in long-distance migratory shorebirds. Meijuan Zhao, Maureen Christie, Jonathan Coleman, Chris Hassell, Ken Gosbell, Simeon Lisovski, Clive Minton and Marcel Klaassen. Zhao et al. Movement Ecology (2017) 5:23

Presentations were made at the ASC Conference, Adelaide, September 2012 and Darwin, September 2014. A presentation was also made at the Auckland Conference in October 2016.

A review of geolocator studies in Australia, 2009-2016. Where to now? Ken Gosbell.

Unlocking some of the mysteries of migration – geolocators providing new insights of the migration strategies for 4 shorebird species. Clive Minton, Ken Gosbell

What can geolocators tell us about shorebirds breeding in the Arctic? Ken Gosbell, Clive Minton

EAAF Partnership Meeting, Alaska, June 2013 What we have learnt from Geolocators in Australia about the migration of small waders. Ken Gosbell.

IWSG Conference, Germany, 2013 What we have learnt from six years of deploying geolocators in Australia. Clive Minton

AWSG Conference, Darwin, September 2014

Latitudinal trend in deposition of migratory fuel as driver of trans-equatorial long distance migration in shorebirds. Yaara Aharon-Rotman, Clive Minton, Ken Gosbell and Marcel Klaassen

5 Years on – What have we learned from geolocators deployed in Australia. Clive Minton, Ken Gosbell, Chris Hassell, Maureen Christie and Marcel Klaassen.

Geolocator Studies on Ruddy Turnstone (2009 to 2014) reveals information on migration strategies. Clive Minton, Ken Gosbell and Yaara Rotman

Insights into migration pattern of Sanderlings using geolocators: from raw light data to ecological insights Simeon Lisovski, Ken Gosbell & Clive Minton

Australasian Ornithological Conference, Deakin University, Geelong, November 2017

A review of geolocators studies in Australia, 2009 – 2016. Where to now?
Ken Gosbell, Clive Minton, Jon Coleman, Simeon Lisovski, Maureen Christie, Chris Hassell, Marcel Klaassen

Deploying geolocator on a Curlew Sandpiper at Yallock Creek

Our schizophrenic Ruddy Turnstone! WMA - Does it call Newcastle or King Island home?

Ken Gosbell, Simeon Lisovski and Clive Minton

The VWSG geolocator program which commenced in 2009, has provided insights into many of the strategies and characteristics of the species studied. There are currently 197 tracks now available as a result of studies on Ruddy Turnstone at three locations in southern Australia, namely Flinders (Victoria), SE South Australia and King Island (Tasmania). An increasing number of these are multiple tracks for the same bird. However, there are relatively few with field sightings to enable supporting calibration and confirmation of computed locations, hence the value of the field sightings of bird WMA in Newcastle. This bird was recorded making a stopover in Newcastle for three consecutive years, 2015, 2016 and 2017 thus making a very interesting story.

There are several features of the tracks described for WMA that are of particular interest. The bird (a male) was first banded at Currie on King Island in February 2015 aged 2+ and fitted with an Intigeo geolocator. It departed on 18th April and flew non-stop to Hainan then to Taiwan before moving north along the coasts of China and the Sea of Okhotsk to the breeding grounds in northern Siberia. However, its track south was via Japan and the Pacific. Our extensive geolocator studies have shown that although the majority of pathways south to the non-breeding areas undertaken by Ruddy Turnstone are generally similar, but not identical, to the pathways followed on northern migration, there have been a limited number of examples where the bird has travelled southeast from the breeding grounds and crossed the Pacific on its return journey to Australia. The earliest example was bird 9Y which returned to Flinders (Victoria) with a stopover in the Marshall Islands (Minton *et al.* 2010). However, in 2015, the bird, WMA, travelled from the breeding grounds to Japan where it spent the month of August before it made a long non-stop flight of 5,500kms across the Pacific to Bougainville Island arriving 8 September and staying until 20 October. It then flew south to the Newcastle region of NSW. It was observed at Stony Point and Newcastle Beach on 23 October and 28 December and was last photographed there on 16 January 2016 (pers. comm. J. Thomas). The bird returned to King Island on 13 February 2016.

The bird was recaptured at Manuka, King Island, in March 2016 and another geolocator fitted. It made a similar non-stop 7,500km migration to Taiwan before going to the breeding grounds. As the geolocator failed on the breeding grounds we have little detail of this track, but the bird was seen again in Newcastle on 4 November 2016. The bird subsequently returned to King Island where it was recaptured and another geolocator fitted. Once again it departed on 23 April 2017 and repeated the northern track through Taiwan. On the return journey it again travelled via Japan where it departed in early September and flew south across the Pacific to the Chuuk Islands, a series of atolls in Micronesia before stopping in New Britain. It was observed in Newcastle on 28th October before undertaking its final leg back to King Island where it was captured on 9 December and the geolocator removed. The fact that it made a major stopover in the Newcastle region for 3 consecutive years before returning to King Island is of interest as it is relatively unusual for this species to use a location on the east coast Australia as a major stopover; that it made this stop for three consecutive years is special. The value of the sightings in Newcastle are obvious, not only for confirming the computed tracks but establishing the importance of this area as a refuelling location.

The breeding locations derived from the geolocator data for WMA are in the high Arctic on the northern slopes of Yakutia. Analyses of other Ruddy Turnstone data have indicated the breeding areas of this species from southern Australia to cover a range from Yakutia to the New Siberian Islands (unpublished). The 3 breeding locations identified from the analyses are within a 90 km

radius, well within the accuracy for this methodology. Although incubation was attempted for the 3 years covered by these data, WMA did not achieve the full term of incubation. The variability of incubation success has been shown in Gosbell *et al*. (2012), and subsequent unpublished results.

The departure dates from King Island were 18, 12, and 23 April in 2015, 2016 and 2017 respectively. In common with the majority of other Ruddy Turnstones, the first leg was either a non-stop flight to Taiwan or an initial stop in Hainan and then on to Taiwan. Taiwan has been shown to be a critical stopover and refuelling location for northward migrating Ruddy Turnstones (Minton *et al*. 2013 and unpublished data). The study of this one bird over three years has provided a lot of useful information relating to migration strategies, timings and major stopover locations including the value of appropriate Australian sites. In addition, breeding locations were derived to be in the high Arctic regions of Siberia in common with other Ruddy Turnstones.

This study has also reinforced the value of sighting and reporting birds equipped with a geolocator anywhere in the Flyway. With another replacement geolocator deployed on WMA in December 2017 it will be interesting to retrieve it and follow another year of migration. This is a remarkable story and thanks are due to a lot of people who have contributed; Deakin University for provision of funds for the geolocators, the VWSG teams who undertook the task of retrieving and deploying them and particular thanks to the wader watchers in Newcastle (Judith and Richard) whose observations have assisted enormously in ground truthing the geolocator data.

A more detailed paper on WMA's movements will be published in *The Whistler,* the journal of the Hunter BOC (Newcastle, NSW).

2015 **2016** **2017**

Figure 1. Migration tracks for Ruddy Turnstone WMA for years 2015, 2016, 2017.

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VWSG King Island Trip 17-26 March 2018

Clive Minton, Robyn Atkinson, Katherine Leung and Rob Patrick

The VWSG has been visiting King Island once or twice per year since March 2007. The prime interest has been the Ruddy Turnstone population which spends its non-breeding season there. This is the 12th year and 20th visit of this long-term study. The team of nine members visited King Island on 17-26 March 2018 aiming to achieve the following objectives:

1) to carry out a population count of Ruddy Turnstone on the complete west coast of the island;

2) to evaluate the breeding success of Ruddy Turnstone in the 2017 Arctic breeding season by measuring the percentages of juveniles in catches;

3) to deploy and retrieve geolocators on Ruddy Turnstone;

4) to facilitate Deakin University's research project on sampling of birds for the presence of avian diseases.

1) Population count

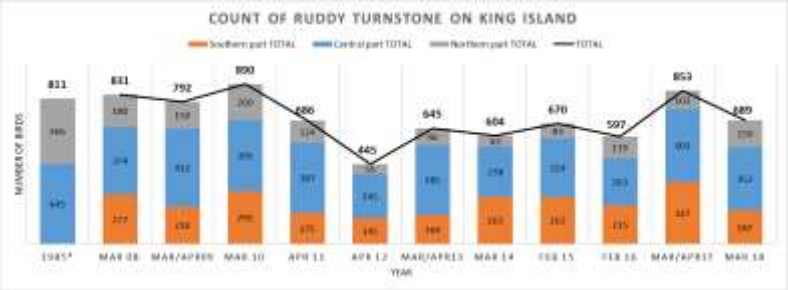
A population count was carried out on the first day (17 March) during high tide as soon as the team arrived. All known sites along the west coast of the island at which Ruddy Turnstone are regularly present were visited. The total count was 689 individuals. Detailed results of the counts since 2008 are shown in Table 1a.

Although the total number of birds this year has significantly dropped compared to the very high count of 853 birds in Mar/Apr 2017, it is still a reasonably high number (second highest since 2010). The number of birds in the northern part was the highest since 2010, contributing 22% of the total count, while the number in the southern part was the lowest in the last five years. The count in the central part remained similar to previous years comprising 50% of the total count.

It appears that the reduction in population in the early years of the study may have ceased with the population now recovering, particularly as a result of the good Arctic breeding season in 2016 (Fig 1).

The turnstone population is also counted when visits are made to King Island in November-December. Details are given in Table 1b.

Figure 1. Population change in Ruddy Turnstone on King Island's west coast



2) Catching

Despite the challenges from the “typical” King Island weather of strong winds and rain, nine catches were made on all eight scheduled catching days during the trip. Catches were made at eight locations across the northern, central and southern part of the west coast of the island with catch size between 5-41 birds (Table 2a). Even though a few catches were small, with less than 10 birds, most of them were still valuable catches in terms of retrieving old geolocators. The total number of birds caught was 160, including 149 Ruddy Turnstone and small number of Double-banded Plover (9), Red-capped Plover (1) and Sooty Oystercatcher (1) (Table 2b). A detailed daily log of the fieldwork activities can be found in Appendix 1.

This visit brings the total number of Ruddy Turnstone caught on King Island since VWSG’s first visit in 2007 to 3401 individuals (with 122 individuals of other species of wader caught) (Table 3). A total of 118 catches have been made with an average catch size of 30 birds.

Table 4 gives a breakdown of all catches made on King Island since the first visit in March 2007.

3) Percentage Juveniles

A very poor number of juveniles was recorded in the catches in this visit. There were only 4 juveniles among the total of 149 birds caught (2.7%) indicating a poor breeding season for Ruddy Turnstone in the Arctic summer in 2017. This is rather disappointing after the highest number of juveniles recorded in the previous year (31.0%).

Table 5 gives the percentage of juveniles over the past 12 years. Only data from the February/March/early April visits are included because it is thought that there are still a small number of juvenile birds on migration through King Island, to Tasmanian and New Zealand non-breeding areas, in November/December. The average juvenile percentage for 12 years of the study was 12.3%.

This year’s result continues to prove that Ruddy Turnstone is a species subject to wide fluctuations in breeding success (Fig. 2). In the 12 years of the study there have been two exceptionally good breeding seasons (the Arctic breeding seasons of 2013 and 2016) and five years of almost complete breeding failure (the Arctic summers of 2006, 2008, 2012, 2015 and 2017).

Figure 2: Percentage of juveniles in Ruddy Turnstone catches on King Island in Feb-Apr period 2007 to 2018

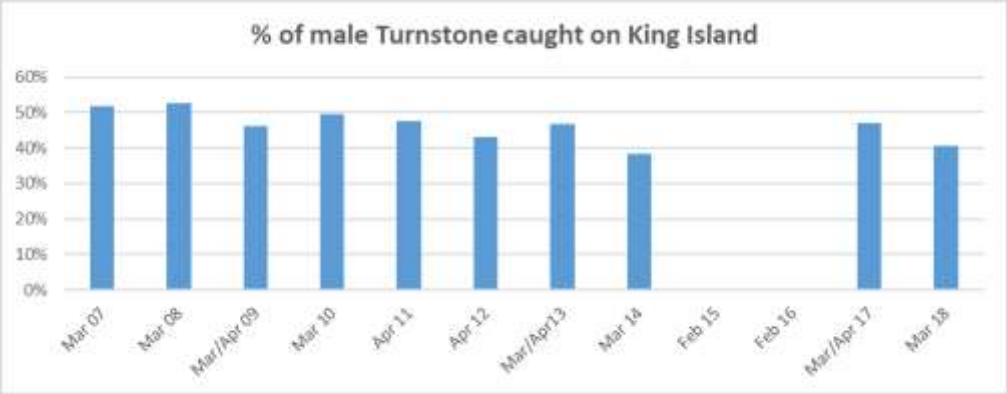
This extreme variation in breeding success may be related to the Ruddy Turnstone breeding in the *higher* arctic regions of northern Siberia. Geolocator data has shown that the New Siberian Islands are the centre of the breeding area of the Turnstones which spend the non-breeding season in south-east Australia.

4) Sex Ratios

All turnstones caught in the March/April period have assumed sufficient breeding plumage for their sex to be determined (because, unlike many waders, there is a marked difference in breeding plumage between males and females in turnstone). In two years when catches were made in February, sexes were determined by DNA analysis of blood samples. This work is still in progress, and the information will be added to the table in due course.

Table 6a shows that, except for the first two years, there has always been slightly fewer male birds in catch samples. Fig. 3 suggests that this decline in percentage of males is possibly still an ongoing process. Table 6b gives a breakdown of the male/female ratios at each of the locations sampled each year. There is significant variation between sites and between years. Some comments are included in the table which suggest that some locations may be regularly higher or lower in their percentage of male birds. Also, some sites show a tendency for the proportion of males to change over the years (declining in three separate locations).

Figure 3: Percentage of male in Ruddy Turnstone catches on King Island in Feb-Apr period 2007 to 2018



A more detailed statistical analysis will be carried out.

5) Weights

The mean weight of adult Ruddy Turnstone was calculated for each catch (Table 7).

During the March 2018 visit the weights averaged 155-163g, except for two much lower mean weights at Dripping Wells (137.8g, n=6) and at North Manuka (139.9g, n=38 from two combined catches).

In most years the mean weights at the different locations were similar. However, clearly standing out in the figures are the very much lower weights for North Manuka in six of the ten years sampled. The reason for such low mean weights is unclear, but they suggest a paucity of food at this location in some years.

In contrast, mean weights of over 170g have been recorded in three different years at Stokes Point (the south-western tip of King Island). The average of 175.1g there on 2 April 2017, is the highest mean weight of any sample caught on King Island. A more detailed analysis of all weight data will be carried out to see if there is a genuine pattern.

Captures of individual birds twice during a visit does not occur often, particularly because only one catch at each site is normally made. However, such recaptures have indicted the ballpark rate of weight gain which can be achieved. One bird put on 10g in four days and three others gained an average of 9g in three days. These weight gains of c. 3g per day are only a little bit lower than the Turnstone achieve at their massive migratory stopover in Delaware Bay (eastern USA) in May each year (5-7g per day).

6) Geolocators

Ten old geolocators (seven on yellow flags and three on white flags) were retrieved from this visit. Different flag colours for the geolocators are used each year. The three mounted on white flags would have been two or more years old and those on yellow flags one year old. Together with the 16 geolocators retrieved in December 2017, the total number of geolocators retrieved in the 2017-18 season now becomes 26. The data from these geolocators are not yet fully analysed and therefore the results will be circulated in a separate report.

A total of 42 new geolocators were deployed on this visit. Four of these were deployed on birds with geolocators just retrieved so that consecutive migration tracks may now be able to be recorded.

A total of 376 geolocators have now been deployed on Turnstone on King Island, with 157 retrieved (42%).

7) Flag sightings

Eighty-three flag sightings were made during the visit. These sightings were recorded during the recce visits, in between catches or back at the house by examining photographs in the evening. All sightings are local engraved leg flags, involving 79 Ruddy Turnstone and one Sooty Oystercatcher. Sixty-one of these Ruddy Turnstone individuals were not caught in any of the nine catches and 12 of them are still carrying “old” geolocators (11 yellow and 1 white).

8) Deakin University Studies on Avian Pathogen

As per other visits in the past years, Deakin University collected faecal swabs and blood for the presence of avian diseases (or the antibodies from previous infections). Cross analyses have been made with the geolocator data, with a number of papers already published.

9) Acknowledgements

The VWSG thanks the following people/parties for their contribution towards another successful visit (not in particular order):

- Members of the field team for making themselves available for the visit and their financial contribution to cover their airfare and daily expenses;

- Jenny Marshall for kindly making her house available as headquarters for the team;

- Graeme and Margaret Batey for providing accommodation for three of the team members at their house, and also for considerable help and support in fieldwork etc.;

- Margaret Bennett for providing space at her house for field equipment storage;

- King Island Airlines for transporting us and our equipment to/from King Island with great flexibility.

10) Future

It is hoped that a similar arrangement of two visits each year, one in Feb/Mar/Apr and one in the Nov/Dec period, will be continued to build up long-term valuable data and knowledge on the King Island Ruddy Turnstone population. Such long-term data will be increasingly valuable at a time of population change associated with habitat changes in the Flyway and climate change.

The King Island March 2018 Team:

Clive Minton, Robyn Atkinson, Rob Patrick, Robert Bush, Gary Matthews, Bretan Clifford, Michelle Willie, Alice Risely and Katherine Leung

The team departing King Island after a successful 10-day visit

(photo by Katherine Leung)

Table 1a: Counts of Ruddy Turnstone on King Island: Feb/Mar/Apr

West Coast	**1985***	**Mar-08**	**Mar/Apr 09**	**Mar-10**	**Apr-11**	**Apr-12**	**Mar/Apr 13**	**Mar-14**	**Feb-15**	**Feb-16**	**Mar/Apr 17**	**Mar-18**
The Springs	-	n.c.	n.c.	45	50	20	26	28	23	24	30	50
Whistler Point	106	180	55	40	4	0	0	0	0	42	2	45
Duck Bay, Green Island Point, South Whistler	260		95	115	70	35	70	35	60	53	71	55
Northern part TOTAL	**366**	**180**	**150**	**200**	**124**	**55**	**96**	**63**	**83**	**119**	**103**	**150**
Unlucky Bay	20	n.c.	20	10	48	15	25	15	19	1	40	28
South Porky	28	n.c.	40	0	9	40	25	0	38	35	70	65
Manuka – North (Whalebone)	-	220	65	15	60	35	30	60	63	33	60	32
Manuka - Central	67		68	150	50	50	70	50	84	58	54	36
Manuka - South	-		67	10	45	35	65	40	24	6	55	39
Dirty Bay	-	n.c.	22	30	13	n.c.	0	n.c.	0	0	0	8
Currie Harbour	-	114	14	25	15	0	20	26	0	0	39	30
Currie Golf Course (Burgess Bay)	330		96	90	85	30	75	42	66	65	25	64
Dripping Wells	-	40	40	65	62	40	75	45	30	65	60	50
Central part TOTAL	**445**	**374**	**432**	**395**	**387**	**245**	**385**	**278**	**324**	**263**	**403**	**352**
Seal Bay	-	20	n.c.	60	n.c.	n.c.	12	43	77	56	68	5
Surprise Bay (including Denby Beach)	-	187	80	105	75	70	80	106	71	90	116	43
Stokes Point to Surprise Bay	-	70	40	110	70	25	12	52	66	29	91	67
Stokes Point	-		90	20	30	50	60	62	49	40	72	72
Southern part TOTAL	**0**	**277**	**210**	**295**	**175**	**145**	**164**	**263**	**263**	**215**	**347**	**187**
TOTAL	**811**	**831**	**792**	**890**	**686**	**445**	**645**	**604**	**670**	**597**	**853**	**689**

* Count by D. B. Whitchurch

Table 1b: Counts of Ruddy Turnstone on King Island: Nov/Dec

West Coast	1985*	Nov-08	Nov/Dec11	Nov-12	Nov-13	Nov/Dec14	Nov/Dec15	Nov-16	Dec-17
The Springs	-	-	61	-	55	3	25	28	45
Whistler Point	106	-	0	-	36	112	95	71**	80
Duck Bay, Green Island Point, South Whistler	260	-	130	-					
Northern part TOTAL	**366**	**-**	**191**	**-**	**91**	**146**	**120**	**99**	**125**
Unlucky Bay	20	-	60	-	11	20	13	0	60
South Porky	28	-	0	-	37	20	0	5	8
Manuka – North (Whalebone)	-	-	5	-	88	145	127	35	27
Manuka - Central	67	-	60	-				50	25
Manuka - South	-	-	0	-				13	25
Currie Harbour	-	-	0	-	n.c.	n.c.	n.c.	0	0
Currie Golf Course (Burgess Bay)	330	-	35	-	69	80	90	69	80
Dripping Wells	-	-	90	-	60	55	60	60	70
Central part TOTAL	**445**	**-**	**250**	**-**	**265**	**320**	**290**	**232**	**295**
Seal Bay/Black Point	-	-	200	-	n.c.	n.c.	150	27	18
Surprise Bay (including Denby Beach)	-	-	12	-	125	182	1	113	55
Stokes Point to Surprise Bay	-	-	67	-	32	32	10	0	6
Stokes Point	-	-	0	-	33	74	60	30	65
Southern part TOTAL	**0**	**-**	**279**	**-**	**190**	**288**	**221**	**170**	**144**
TOTAL	**811**	**413*** **	**720**	**608*** **	**546**	**754**	**631**	**501**	**564**

*** Count data by D.B. Whitchurch**

****+ 48 at Bungaroo**

*****No details available**

Table 2a: VWSG Catch Details: King Island Visit 17-26 March 2018

Date	Location	Species	New	Retrap	Total	(Juv)	%Juv	Male	Female	%Male	Mean weight
18 Mar 18	Burgess Bay	Ruddy Turnstone	2	9	**11**	0	-	4	7	**36.4%**	**156.9g**
	(1 geos retrieved, 9 deployed)	Double-banded Plover	0	1	**1**	0	-				(n=11)
		TOTAL	**2**	**10**	**12**						
19 Mar 18	Currie Habour	Ruddy Turnstone	14	5	**19**	1	**5.3**	9	9	**50.0%**	**155.4g**
	(16 geos deployed)										(n=18)
											(1 juv. excluded)
20 Mar 18	South Manuka	Ruddy Turnstone	3	5	**8**	0	-	2	6	**25.0%**	**158.5g**
	(8 geos deployed)										(n=8)
21 Mar 18	North Manuka	Ruddy Turnstone	18	15	**33**	1	**3.0**	16	16	**50.0%**	**139.0g**
	(5 geos retrieved, 9 deployed)	Double-banded Plover	7	0	**7**	0	-				(n=31)
		Red-capped Plover	1	0	**1**	1	100.0				(2 birds excluded)
		TOTAL	**26**	**15**	**41**						
22 Mar 18	Dripping Wells	Ruddy Turnstone	2	4	**6**	0	-	4	2	**66.7%**	**137.8g**
	(2 geos retrieved)	Double-banded Plover	1	0	**1**	0	-				(n=6)
		TOTAL	**3**	**4**	**7**						
23 Mar 18	Stokes Point	Ruddy Turnstone	16	8	**24**	1	**4.2**	10	13	**43.5%**	**158.4g**
											(n=22)
											(2 birds excluded)
24 Mar 18	North Manuka	Ruddy Turnstone	3	2	**5**	0	-	0	5	**0.0%**	**145.6g**
											(n=5)
24 Mar 18	Central Manuka	Ruddy Turnstone	5	9	**14**	0	-	4	10	**28.6%**	**159.8g**
	(2 geos retrieved)										(n=14)
25 Mar 18	Whistler Point	Ruddy Turnstone	24	5	**29**	1	**3.4**	10	18	**35.7%**	**163.2g**
		Sooty Oystercatcher	1	0	**1**	1	100.0				(n=28)
		TOTAL	**25**	**5**	**30**						(1 juv. exculded)

Table 2b: Catch Totals for King Island 17-26 March 2018

Species	New	Retrap	Total	(Juv)	%Juv
Ruddy Turnstone	87	62	**149**	4	2.7
Double-banded Plover	8	1	**9**	0	-
Red-capped Plover	1	0	**1**	1	100
Sooty Oystercatcher	1	0	**1**	1	100
TOTAL	**97**	**63**	**160**		

9 catches

42 geolocators deployed

10 (old) geolocators retrieved

(59 ♂ 86 ♀) 41% males

Table 3: Catches on King Island 2007-2018

Date of visit	Catches	Total Turnstone caught	Total birds caught
March 2007	7	241	307
March 2008	8	419	434
March-April 2009	6	223	223
March 2010	8	211	217
November 2010	3	72	72
April 2011	8	197	211
November-December 2011	3	115	117
April 2012	7	118	118
November 2012	5	133	133
March-April 2013	10	255	285
November 2013	2	54	55
March 2014	6	173	181
November-December 2014	6*	146	150
February 2015	5*	119	154
November-December 2015	5	120	158
February 2016	4	75	79
November 2016	4	113	114
March-April 2017	7	216	227
December 2017	5	123	128
March 2018	9	149	160
12 years (20 visits)	**118**	**3401**	**3523**
Average individual catch size:		**29**	**30**
Average catch total per visit:		**170**	**176**

*Excludes 2 catches of Silver Gulls.
20 visits - 12 in February-April
- 8 in November-December

Table 4: Individual catch totals, by species, King Island, March 2007 – March 2018

Date	Number of catches	Species	New	Retrap	TOTAL	Juv.	%Juv
18-25 Mar 2007	7	Ruddy Turnstone	230	11	**241**	0	0.0
18-25 Mar 2007	-	Red-necked Stint	58	2	**60**	17	28.3
18-25 Mar 2007	-	Double-banded Plover	5	0	**5**	1	20.0
18-25 Mar 2007	-	Red-capped Plover	1	0	**1**	0	0.0
7-15 Mar 2008	8	Ruddy Turnstone	354	65	**419**	75	17.9
7-15 Mar 2008	-	Double-banded Plover	7	0	**7**	0	0.0
7-15 Mar 2008	-	Pied Oystercatcher	0	2	**2**	0	0.0
7-15 Mar 2008	-	Oystercatcher (not banded)			**6**		
26 Mar-2 Apr 2009	6	Ruddy Turnstone	124	99	**223**	0	0.0
16-23 Mar 2010	8	Ruddy Turnstone	123	88	**211**	30	14.2
16-23 Mar 2010	-	Double-banded Plover	5	0	**5**	4	80.0
16-23 Mar 2010	-	Sooty Oystercatcher	1	0	**1**	1	100.0
26 Nov-2 Dec 2010	3	Ruddy Turnstone			**72**		
4-12 Apr 2011	8	Ruddy Turnstone	122	75	**197**	29	14.7
4-12 Apr 2011	-	Double-banded Plover	8	0	**8**	3	37.5
4-12 Apr 2011	-	Red-necked Stint	2	0	**2**	0	0.0
4-12 Apr 2011	-	Hooded Plover	2	0	**2**	0	0.0
4-12 Apr 2011	-	Red-capped Plover	2	0	**2**	0	0.0
27 Nov-2 Dec 2011	3	Ruddy Turnstone	49	66	**115**	11	9.6
27 Nov-2 Dec 2011	-	Other waders			**2**		
6-14 Apr 2012	7	Ruddy Turnstone	65	53	**118**	18	15.3
14-22 Nov 2012	5	Ruddy Turnstone			**133**		
27 Mar-4 Apr 2013	10	Ruddy Turnstone	125	130	**255**	3	1.2
27 Mar-4 Apr 2013	-	Double-banded Plover	17	1	**18**	3	16.7
27 Mar-4 Apr 2013	-	Red-necked Stint	6	0	**6**	3	50.0
27 Mar-4 Apr 2013	-	Pied Oystercatcher	3	0	**3**	3	100.0
27 Mar-4 Apr 2013	-	Red-capped Plover	2	0	**2**	0	0.0
27 Mar-4 Apr 2013	-	Sooty Oystercatcher	1	0	**1**	0	0.0
18-24 Nov 2013	2	Ruddy Turnstone			**54**		
18-24 Nov 2013	-	Other waders			**1**		
17-25 Mar 2014	6	Ruddy Turnstone	81	92	**173**	53	30.6
17-25 Mar 2014	-	Other waders			**8**		
23 Nov-1 Dec 2014	6	Ruddy Turnstone	76	70	**146**	25	17.1
23 Nov-1 Dec 2014	-	Pied Oystercatcher	3	0	**3**	0	0.0
23 Nov-1 Dec 2014	-	Red-capped Plover	1	0	**1**	0	0.0
7-16 Feb 2015	5	Ruddy Turnstone	56	63	**119**	16	13.4
7-16 Feb 2015	-	Red-necked Stint			**31**	7	22.6
7-16 Feb 2015	-	Pied Oystercatcher			**4**	0	0.0
26 Nov-3 Dec 2015	5	Ruddy Turnstone	53	67	**120**	2	1.7
26 Nov-3 Dec 2015	-	Red-necked Stint	14	3	**17**	2	11.8
26 Nov-3 Dec 2015	-	Pied Oystercatcher	15	2	**17**	0	0.0
26 Nov-3 Dec 2015	-	Sooty Oystercatcher	2	0	**2**	0	0.0
26 Nov-3 Dec 2015	-	Pacific Golden Plover	2	0	**2**	0	0.0
10-17 Feb 2016	4	Ruddy Turnstone	27	48	**75**	1	1.3
10-17 Feb 2016	-	Red-necked Stint	2	1	**3**	0	0.0
10-17 Feb 2016	-	Red-capped Plover	1	0	**1**	0	0.0
15-24 Nov 2016	4	Ruddy Turnstone			**113**		
15-24 Nov 2016	-	Pied Oystercatcher			**1**		
28 Mar-6 Apr 2017	7	Ruddy Turnstone	125	91	**216**	67	31.0
28 Mar-6 Apr 2017	-	Hooded Plover	8	0	**8**	1	12.5
28 Mar-6 Apr 2017	-	Pied Oystercatcher	2	0	**2**	0	0.0
28 Mar-6 Apr 2017	-	Sooty Oystercatcher	1	0	**1**	0	0.0
4-13 Dec 2017	5	Ruddy Turnstone	61	62	**123**	7	5.7
4-13 Dec 2017	-	Pied Oystercatcher	5	0	**5**	0	0.0
17-26 Mar 2018	9	Ruddy Turnstone	87	62	**149**	4	2.7
17-26 Mar 2018	-	Double-banded Plover	8	1	**9**	0	0.0
17-26 Mar 2018	-	Red-capped Plover	1	0	**1**	1	100.0
17-26 Mar 2018	-	Sooty Oystercatcher	1	0	**1**	1	100.0

Table 5: Juvenile proportions in Turnstone catches on King Island in Feb-Apr period each year 2007 to 2018

Year	New	Retrap	Total	Juv	% Juv
2007	230	11	241	0	0.0%
2008	354	65	419	75	17.9%
2009	124	99	223	0	0.0%
2010	123	88	211	30	14.2%
2011	122	75	197	29	14.7%
2012	65	53	118	18	15.3%
2013	125	130	255	3	1.2%
2014	81	92	173	53	30.6%
2015	56	63	119	16	13.4%
2016	27	48	75	1	1.3%
2017	125	91	216	67	31.0%
2018	87	62	149	4	2.7%
TOTAL	**1519**	**877**	**2396**	**296**	**12.30%**

Note: Only includes Feb/Mar/April catches, **not** Nov/Dec catches.

Poor Arctic breeding years were 2006, 2008, 2012, 2015 and 2017

Very good Arctic breeding years were 2013 and 2016

Table 6a: Sex ratios of Turnstone catches on King Island in Feb-Apr period 2007 to 2018

Year	Male	Female	Total adult	% Male
2007	125	116	**241**	51.9
2008	181	163	**344**	52.6
2009	103	120	**223**	46.2
2010	90	91	**181**	49.7
2011	80	88	**168**	47.6
2012	43	57	**100**	43.0
2013	118	134	**252**	46.8
2014	46	74	**120**	38.3
2015	Not yet available			
2016	Not yet available			
2017	70	79	**149**	47.0
2018	59	86	**145**	40.7

Table 6b: Percentage of male Turnstone in catches at various locations on King Island, 2007 to 2018

Location	Mar-07	Mar-08	Mar/ Apr 09	Mar-10	Apr-11	Apr-12	Mar/ Apr13	Mar-14	Feb-15	Feb-16	Mar/ Apr17	Mar-18	Comments
The Springs					54.5%				Not yet available	Not yet available			
Trough Bay				16.0%									
Whistler Point		35.4%										35.7%	
Whistler Point (South)		48.4%	56.8%	51.4%	33.3%		48.7%						
Porky Beach						50.0%	41.2%				52.9%		
Manuka (North)	70.0%	57.1%	56.0%	71.4%	50.0%	38.5%	50.0%	38.9%			30.8%	43.2%	Initially high% ♂
Manuka (Central)	42.3%	63.6%	60.4%		44.0%	57.1%	35.0%	30.1%			0%	28.8%	Recently Low% ♂
Manuka (South)	46.9%			45.5%	31.8%	40.0%					54.5%	25.0%	Low% ♂
Currie Harbour							47.4%					50.0%	
Currie (Burgess Bay)	53.6%	59.5%	39.0%	41.9%	46.2%		43.3%	39.3%				36.4%	Low % ♂ in recent years
Dripping Wells				60.0%		43.5%	55.6%				55.5%	66.7%	High% ♂
Surprise Bay	51.2%	66.2%		57.1%	73.7%	33.3%	65.0%	47.6%			52.9%		High% ♂
Stokes Point		34.2%	27.3%			26.7%	35.3%	37.0%			36.7%	43.5%	Low% ♂
OVERALL (% Male)	**51.9%**	**52.6%**	**46.2%**	**49.7%**	**47.6%**	**43%**	**46.8%**	**38.3%**			**47.0%**	**40.7%**	**Decline in % ♂**

Table 7: Mean weights of adult Turnstones in each catch (Mar/Apr only) on King Island, 2007 to 2018

	Mar-07	Mar-08	Mar/Apr09	Mar-10	Apr-11	Aprl-12	Mar/Apr13	Mar-14	Mar/Apr17	Mar-18
The Springs					167.3					
South Whistler Point		141.6	164.8	144.5	165.5		168.8			
Porky Beach						161.5	161.7		154.7	
Manuka (North)	151.8	130.4	137.9	115.4	150.3	165.1	164.2	133.7	147.1	139.9
Manuka (Central)	155.8	125.9	121.8		171.1	167.6	155.8	153.0	153.7	159.8
Manuka (South)	150.5			118.5	159.7	169.4			158.2	158.5
Currie Harbour							165.3			155.4
Currie Golf Course (Burgess Bay)	162.6	134.7	154.8	142.0	170.6		166.1	162.9		156.9
Dripping Wells				140.0		160.7	151.7		151.7	137.8
Surprise Bay	150.7	126.9		130.1	160.6	158.7	161.7	152.2	156.3	
Trough Bay				141.6						
Stokes Point		131.4	167.0			173.0	174.8	147.3	175.1*	158.4

*Highest ever mean weight of any Turnstone sample caught on King Island.

Underlined figures are where mean weights are much lower than the mean weights at other locations on that particular visit to King Island.

Appendix 1: Daily log of fieldwork activities

Day 1: 17-Mar-18 (count)

The team arrived early (0815) at Currie Airport after a quick flight from Moorabbin Airport. We were met by Margaret Batey (Graeme being ill with flu and Margaret Bennet being in Western Australia on holiday). After dropping off our luggage at Jenny Marshall's house we split into three teams and comprehensively covered all of the usual turnstone sites on the western coast of King Island. There were generally good numbers of turnstones at all locations and a total of 689 was counted. This is down on the very high figure of 853 in March/April 2017, but still above any of the other figures recorded since March 2010. In assessing this figure, we need to consider that the 2017 figure was boosted by an exceptional number of juveniles (resulting from the brilliant Arctic breeding season of 2016). As we found out from our subsequent catching, the drop was magnified by the very low number of juvenile turnstones present this year as a result of the abysmal breeding season our Turnstones had in the 2017 Arctic summer.

Day 2: 18-Mar-18 (one catch at Burgess Bay)

Regardless of the thunderstorm in the early morning, the team set out at 07:30 to Burgess Bay. The net was set in the "dry" periods between heavy showers and significant strong wind. Only 3 birds landed in the catching area upon twinkling, so the net was reset at the other side of the bay. Garry and Bretan waded out to the island through water up to waist height and successfully twinkled birds from the other side of the bay. The net was finally fired at 13:15 in a "dry" period. The team was very pleased to make the catch (with 1 geolocator retrieved) in such weather conditions.

Waiting for the thunderstorm to pass during net setting (photo by Katherine Leung)

The wind eased off after we had finished processing the birds and a second net was set at Currie Harbour with 18 birds nearby feeding on kelp when we were net setting. Bretan attempted twinkling through the knee-height kelp, but birds eventually flew off towards Burgess Bay. Part of the team zoomed off immediately to try to get birds back and successfully sent 35 birds from >1km away. Another twinkling attempt lead to the same result. As the sun set, the net was left on the beach for the next morning.

Day 3: 19-Mar-18 (one catch at Currie Harbour)

As the pilot team (Rob and Katherine) headed out at dawn (07:00) to guard the net from kelpers, they immediately found a small flock of 15 birds feeding near the net, where they were the day before. The main team arrived half an hour later and started twinkling birds from Burgess Bay. It was however not as successful as the day before due to the strong wind blowing from the south. The team then concentrated on twinkling the small flock near the net and Gary successfully sent them into the catching area. The net was fired at 08:30 and birds were brought back to the house (only five minutes from the catching site) for processing because of the inclement weather. After banding, flagging and processing they were then taken back to the shore for release.

Processing birds at the house (photo by Alice Risely)

The team then headed out to Manuka and eventually worked out a suitable site at South Manuka where there were 28 birds, 3 with yellow geolocators. Just as the team had nearly finished setting the net, a big tidal surge washed up the beach to the cannon holes! Our morale was not dented, and the net was quickly reset. However, the tidal surge came through again! The unexpected tidal surge was probably a result of the on-shore wind. It was decided that the net would be set later when the tide retreated. After a further recce, 2 major flocks were located further south (up to 70 birds with at least one yellow geolocator) and another at Central Manuka (up to 50 birds with 5 yellow geolocators). Nets were set at both sites and left on the beach for the next morning. After setting 4 nets in 6 hours, the team finally enjoyed a nice sunset and the chance to see a Little Penguin on the beach.

Little Penguin stranded on Central Manuka (photo by Michelle Willie)

Day 4: 20-Mar-18 (one catch at South Manuka)

The team arrived at Central Manuka at 08:00 and started twinkling birds from both north and south. However, almost all birds flew past our beach. The team then decided to head to South Manuka to see if there was a chance to catch at the second net. Given the birds were not actively feeding on any beach, the team temporarily retreated from the nets until mid-day.

Twinkling resumed at the South Manuka net with limited success as birds were dispersed in small flocks both north and south on the outer rocks. Eventually, Michelle sent ~20 birds from the south towards the catching area. The net was fired at 14:10 on 16 birds but very disappointingly, one of the cannons didn't fire successfully and only half of the birds were caught. We also found out after the "boom" that there were another 30+ birds further along the beach which we had not been observed before deciding to fire.

After processing the birds, the team moved on to the Central Manuka net but surprisingly couldn't find any birds along most of the Central Manuka coast. The net was left on the beach again for the next day.

Day 5: 21-Mar-18 (one catch at North Manuka)

The team arrived at Central Manuka at 08:30 and very soon decided there wasn't enough birds around for catching. The net was quickly packed up and brought to North Manuka, where the team had found up to 40 birds with 8 old geolocators the day before. One major flock was eventually located feeding on a spot full of soft seaweed suitable for net setting. The net was set up quickly and easily with one twinkle from the south the birds gradually come back to feed on the same "hot spot" again. The number of birds and geolocators were counted as they entered the catching area. The net was fired at 10:45 on >25 turnstones with at least 2 geolocators observed. The result was even better with 5 geolocators retrieved and total of 33 turnstones! This included a bird with a geolocator had been seen at North Manuka for more than 2 years. In the afternoon, the team split to recce for suitable catching sites both north and south.

Net setting on soft and dense seaweed means lots of rocks are needed (photo by Alice Risely)

Day 6: 22-Mar-18 (one catch at Dripping Wells)

After a few early morning departures, the team had a slightly later start to arrive at Surprise Bay just before noon. More than 50 birds were observed actively feeding at the water edge. The net was set, and twinkling began. It was however very difficult to get birds back on to our beach. Each time the birds flew up, we lost half of the flock and the remaining birds tended to sit on outlying rocks. At one point there were 10 birds in front of the net but mostly at the edge which the net might not reach. We eventually lost the flock and called off the catch.

The team then decided to head to Dripping Wells hoping for an "easy" catch with a promising number of geolocators around the site. A flock of 20 birds including 1 yellow geolocator was seen as soon as the team arrived. The net was set at the traditional location. But unluckily, upon twinkling, the whole flock headed south far across the bay. Clive and Gary immediately drove off to twinkle them and the flock eventually come back to our beach and started feeding behind the net (including 1 white and 2 yellow geolocators). Amazingly, the birds were very focused feeding and didn't move even when our vehicle approached them. Our patience paid off at 18:15 with a magic flight of the birds into the catching area, including the yellow geolocator, which triggered our call to fire immediately. A small but valuable catch of 6 birds with 2 yellow geolocators (plus one Double-banded Plover) was the result.

Day 7: 23-Mar-18 (one catch at Stokes Point)

This was the sunniest day of the visit, with wind blowing mildly onshore. Clive and Robert departed the island in the early morning (Clive just for 24 hours to attend a memorial service for Margaret Hollands). The remaining 7 team members headed to the southernmost beach, Stokes Point. The turnstones were really attached to the catching location and there were birds around even during net setting. It didn't take long for the first flock of 13 birds to land in front of the net at the water's edge, but still >20 birds were roosting on the outlying rocks. Eventually, birds started to feed all around the catching area up to one metre in front of the net with more birds from the outlying rocks joining. Once the number of birds in the catching area built up to 20 and as soon as there were no birds in danger, the net was fired at 15:00 catching 24 turnstones in total.

Processing during the nice weather (photo by Michelle Willie)

Day 8: 24-Mar-18 (two catches at North and Central Manuka)

The weather was much better than forecast after some heavy thunderstorms in the morning. Clive arrived back, and the team then decided to set the net at North Manuka again given 20 birds were congregated on the seaweed to feed. There were only 13 birds in front of the net at one point and further twinkling resulted in only 5 remaining birds on the beach.

Another 2 major flocks of birds (30+ and 20+) were observed at Central Manuka during the twinkling earlier, so the team moved on to set another net at Central Manuka but faced problems with the electric circuit at the last minute. A cartridge needed to be replaced and therefore Clive and Robyn headed back to the house to fix the problem while the rest of the team headed north to work on the earlier net. It didn't take too long for the birds to land back on our beach. The net was fired at 16:55 on 10 birds but surprisingly only caught half of the flock. It was however still a satisfactory catch.

The team then moved back to the Central Manuka net. Twinkling resulted in >20 birds beyond the net to the south, where birds were busy feeding and reluctant to move into the catching area. Finally, birds slowly shifted into the catching area and the net was fired at 18:30 on 10+ birds. The small flock included 2 old geolocators!

Very delicious dinner made by Gary after a long day in the field (photo by Alice Risely)

Day 9: 25-Mar-18 (one catch at Whistler Point)

Regardless of the rainy weather forecast, the team set out north to Whistler Point in the morning. Upon arrival, no turnstone were seen on the beach until half of the team walked along the coast for >500m to find 38 birds. The net was set and soon after that 15 birds landed in front but too far out to catch. These birds quickly took off and could not be found again. Michelle and Gary were sent 1km away to Whistler Point by vehicle and then walked back to bring birds towards our beach. There was not much success in twinkling and as the team was enjoying watching an albatross flying close to the shore, 4 birds landed in the catching area

from nowhere. At 13:25 a further 20+ birds flew in. The net was fired at 13:30 with a catch of 29 turnstones and one Sooty Oystercatcher. Good enough to give us a day-off on the last day!

Ruddy Turnstone male (left) and female (right) (photo by Michelle Willie)

Ruddy Turnstone turning “sand” to find food (photo by Katherine Leung)

The “Cannon workshop” - servicing the equipment at the end of each day (photo by Alice Risely)

Victorian Leg Flag Observations in Queensland

Arthur Keates, QWSG

For the period 1992 to mid-March 2018, the Queensland Wader Study Group's (QWSG) leg flag database has just over 1,147 reports of observations in Queensland of Victorian flagged shorebirds of 15 species, as follows:

Species	No. of Observations
Ruddy Turnstone	1
Lesser Sand Plover	14
Greater Sand Plover	12
Red-necked Avocet	1
Far Eastern Curlew	37
Whimbrel	3
Bar-tailed Godwit	485
Grey-tailed Tattler	3
Terek Sandpiper	1
Curlew Sandpiper	53
Red-necked Stint	61
Sharp-tailed Sandpiper	17
Red Knot	246
Great Knot	113
Sanderling	5

Of course, the number of observations of species correlates with the abundance of the species, its migration route and the number of birds banded. Further, the number of observations would include multiple observations of some individuals. Nevertheless, not surprisingly, Bar-tailed Godwit and Red Knot account for over two-thirds of the total observations. Before taking a closer look at observations of those species, it is worth a brief look at other often reported species.

Since 1978, the Victorian Wader Study Group (VWSG) has fitted 379 leg flags to Great Knot, most of them during the 1980's and 1990's; the species has become less common and only a few birds have been banded there in recent years.

All the Great Knot observed in Queensland since 1998 have been fitted with a plain leg flag (PLF): 3 in the Gulf of Carpentaria, 1 each at Cairns and Gladstone, 12 in the Great Sandy Strait and the rest in Moreton Bay. Of the observations in Moreton Bay, 91 were of birds observed at roosts in Pumicestone Passage at Toorbul and Bribie Is, 77 apparently on southern migration.

On the other hand, 2 birds were observed at Toorbul in early January 2003, followed by observations there of an individual later that month in partial breeding plumage and an observation on 18 May of an individual in breeding plumage. These observations were quite possibly of the same individual, indicating it stayed in the area during the austral winter. Further, it is highly likely some individuals use the area in consecutive years.

Having regard to the proximity of the Pumicestone Passage roosts, the dates of observations, the number of birds observed at the same time at a roost and the observers' comments relating to the birds' breeding plumage, we know no more than 2 or 3 individuals used the area as a stop-over on migration in some years, including recent years. On 29 September 2009, 3

individuals were observed together at the Toorbul roost and a fourth individual (with the leg flag on the tarsus) was seen at the roost 5 days earlier, making the highest known number of individuals passing through the area in any year.

In most years since 1992, reports have been made of observations of Red-necked Stint fitted with a PLF. All but 28 of the 64 observations were made on southern migration. The sites for the reports are widespread: The Gulf of Carpentaria, Cairns, Mt Isa, Bowen, Bundaberg, Maryborough, Gladstone, the Great Sandy Strait, Lockyer Valley and several sites in Moreton Bay.

Only 3 reports of an engraved leg flag (ELF) fitted to a Curlew Sandpiper have been made:

- one in each of August and September 2015, for different individuals observed in the Gladstone area;
- an individual at Manly Boat Harbour on 24 January 2017, less than a month after being banded at Werribee Treatment Plant, Victoria; an unexpected movement by a juvenile.

All the other reports are of observations of PLFs in the Gulf of Carpentaria, Cairns, Bundaberg, Gladstone, the Great Sandy Strait and Moreton Bay, the majority on southern migration.

The 269 reports of Victorian flagged Red Knot since 1992 are made up of observations of 18 ELFs and 251 PLFs at sites in the Gulf of Carpentaria, Cooktown, Mackay, Gladstone, the Great Sandy Strait, the Sunshine Coast and Moreton Bay. Of the ELF reports, 3 relate to unread flags while the rest relate to 9 individuals as follows:

- 3 individuals (**D9**, **S7** and **40**) in the Gulf of Carpentaria in March-April 2013
- 2 reports of an individual (**B9**) in the Great Sandy Strait on 30 September and 1 October 2014
- 2 reports of an individual (**1C**) in Moreton Bay between 12 and 25 September 2014, and 3 reports of the same individual in Moreton Bay between 16 and 21 September 2017
- a report of an individual (**1S**) in the Gladstone area on 30 September 2015
- a report of an individual (**3Z**) in the Great Sandy Strait on 24 September 2016
- 4 reports of an individual (**1N**) in Moreton Bay between 9 and 22 October 2016
- a report of an individual (**45**) in Moreton Bay on 20 October 2017.

These observations, and count data, show SE Queensland is predominantly used as a stop-over by Red Knot on southern migration with very small numbers staying for the austral summer or northern migration and this is confirmed by nearly 200 PLF reports. However, the following PLF reports indicate some Victorian flagged birds stayed in SE Queensland or passed through on northern migration:

- 9 reports, quite possibly of the same individual, at Toorbul between 2 March and 1 May 2002 (the last report stating the bird had some breeding plumage)
- 8 reports, quite possibly of the same individual, at Pumicestone Passage roosts between 11 January and 28 March 2003
- a report of 2 individuals at Toorbul on 6 February 2006
- a report of an individual at a Moreton Bay site on 11 February 2006
- a report of an individual at Bribie Island on 12 March 2006
- a report of an individual in the Great Sandy Strait on 22 March 2007
- a report of an individual at Bribie Island on 6 February 2011
- a report of an individual at the Port of Brisbane on 26 February 2017.

So far as the Gulf of Carpentaria is concerned, it is known Red Knot occur there in internationally important numbers, thousands passing through the area on southern and northern migration, to or from Victoria or New Zealand. In addition to the ELF reports for the area, PLF reports for the area cover both migrations (21 northern and 16 southern), although the reports are likely to include multiple observations of some individuals.

Turning to the most reported species, the Bar-tailed Godwit, Victorian leg flagged birds have been observed at Cairns, Bowen, Mackay, Bundaberg, Gladstone, the Great Sandy Strait, Fraser Is, the Gold Coast, South Stradbroke Is and Moreton Bay. Notably, there are no reports of observations in the Gulf of Carpentaria. The reports relate to observations of 149 ELFs for 61 known individuals (11 of the reports were unread or unconfirmed by the observer), the remainder relate to PLFs.

Victorian Bar-tailed Godwit predominantly pass through Queensland on southern migration as evidenced by the vast majority of just over 350 observations of PLFs. However, observations during January to April indicate a small number pass through on northern migration. Further, observations from mid-May to mid-July of at least 8 individuals since 2000 indicate some stayed in SE Queensland for the austral winter.

The following observations of ELFs at various sites in Moreton Bay appear to show the migration of Bar-tailed Godwit through Queensland on southern migration:

ELF	Banding Date	Age at Banding	Observation Dates
D9	23/6/2009	1	2014 - 7 and 9 October 2015 - 5, 7, 15 and 17 October
9P	10/2/2010	2+	2013 - 12 October 2014 - 9 October 2015 - 14 October
ANH	25/1/2012	2+	2013 - 9 and 22 June, 27 July, 25 and 29 August and 12, 21 and 26 September 2014 - 27 September and 1, 3 and 15 October 2017 – 23 September and 24 October
ADU	11/2/2012	2+	2012 - 1 October 2013 - 12 October 2014 - 27 September
CKV	11/2/2014	2+	2014 – 26 September and 6, 7 And 9 October 2015 – 14, 17, 19 and 21 September 2016 – 20, 22 and 24 September 2017 – 8 October

Victorian flagged Bar-tailed Godwit **CKV** at Manly Harbour, 19 September 2015. Photo: A Keates

Indeed, observations of both **9P** and **CKV** at Shoal Inlet Entrance (south side), Robertson's Beach, Victoria on 13 November 2016 confirm the return to Victoria of those birds for the austral summer. Incidentally, **9P** was first observed on 17 April 2011, on northern migration at Jeju Is, South Korea. The presence of **ANH** in Moreton Bay in June 2014 may be because of a failed or partial migration or it could even have overwintered in the Bay that year although, because it would have been at least 3 years old, one would expect it to have attempted migration. Similarly, Bar-tailed Godwit **ADY** was observed at Maaroom, in the Great Sandy Strait, on 14 June, 12 July and 14 August 2014.

On the other hand, the following observations in Moreton Bay of Bar-tailed Godwit **CHH** (aged 1 when banded on 11 February 2014) together with its site faithfulness in Moreton Bay and the lack of observations in the Bay in the austral summer, tend to indicate both northern and southern migration through SE Queensland:

- 2015 -14 and 24 February, 20 March and 18 April
- 2015 - 21 September, 14, 21, 22, 24, 27 and 28 October and 11 November
- 2016 - 22 March
- 2017 - 19 January
- 2017 - 15 December.

Although there are no observations of **CHH** in Victoria to establish its return there, it was observed at Kaipara Harbour, Auckland, New Zealand on 14 November 2016. That observation, together with the observations in Moreton Bay in January 2017, show its use of SE Queensland as a stopover site on northern migration, at least in that year.

I thank those who have reported their observations and Phil Cross for his diligence in maintaining QWSG's leg flag database. Also, I thank Clive Minton and Joris Driessen for providing banding and observation data.

Friends of Shorebirds SE

South Australian Team Report – August 2017 – July 2018

Maureen Christie and Jeff Campbell,
Friends of Shorebirds SE Inc.

Beachwrack harvesting.
Exploratory Permit EP003 (Rivoli Bay to the Victorian border) was issued early in July 2018. It appears to have the same conditions of operation attached to it as applies to Licence Y078 (Rivoli Bay to Cape Jaffa). Preliminary examination of the nominated exclusion zones indicates that only a relatively small area will be available for harvest, but further mapping work needs to be done before we can be sure.

Export approval on Licence Y078 (Rivoli Bay to Cape Jaffa) expired in May 2018. The Federal Department of Environment have extended the approval by 3 months, presumably pending the outcome of a review of a new Environmental Assessment. Comment closed on this Assessment in May. FoSSE made comment, raising concerns relating to disturbance and monitoring. However, we acknowledged that most of the conditions agreed to at the Administrative Appeals Tribunal Hearings have been honoured.

Harvesting in compliance with licence conditions (photo taken in Rivoli Bay).

Local team catches, geolocators and VWSG visits.
With all new banding/scientific permits required for South Australia needing to be extensively rewritten, we were not able to undertake any banding activities over 2017 winter and spring. Thankfully permits arrived in time for the VWSG visit in November! Extremely low summer tides as well of storms removing all of the food from the beach at inconvenient times made for extremely challenging catching. The November visit was the worst on record, with Hannah deserving a special commendation for compiling a report that managed to make catching 39 waders over 15 days seem to be a triumph. The Easter 2018 visit was marginally better (see separate article for report). Our season ended with an unsuccessful day at Nora Creina on 11th April, followed by a very small catch at Boatswain Point on the 17th. A total of 26 geolocators were deployed and 5 retrieved (see separate report). ATZ (now VAZ) once again returned to Nene Valley but this year we were unable to retrieve his geolocator.

Unfortunately, we failed to catch an injured Sooty Oystercatcher at Port Fairy, reported to us in January by Toni Ryan, Far West Friends of Hooded Plover and Killarney Coastcare.

Predator Control - Threat Abatement Project
Despite this long running project finishing June 2018, it is hoped that some fox baiting will be able to be continued. Meanwhile, FoSSE are supporting the Department of Environment and Water in the current round of National Landcare Grant applications. We have a formal role in 2 projects – as a Partner in a project involving Ramsar sites and covering the coast from the Murray mouth to the Victorian border and as a Collaborator in a project to protect Australasian Bittern in wetlands throughout our region. Funding granted under this program was supposed to commence in July 2018 but there has been no announcement made to date.

Dog's Breakfasts
Our Dog's Breakfasts program has, after 8 years, officially finished. 2018 was our most successful year, with all 3 events successful – with a grand total of 118 people and 76 dogs attending! Kingston was perhaps the most memorable as we set up in the rain, not knowing if anyone would brave the weather. But the Lions rotunda was soon packed with dogs and people. Quite a contrast to the year when we had no-one!

With new regulations coming into force on 1st July requiring dogs (and cats) to be microchipped, discount microchipping was offered by South East Animal Welfare League in Port MacDonnell and Lew from Kingston Vets in Robe. Sarah McGrath, Millicent Vets, was to have assisted at the Beachport Market Day (we cancelled because of the catastrophic fire day). So instead, she had a Shorebird display in the waiting room of the Vet Clinic for the balance of the season. Everyone associated with the Dog's Breakfasts are volunteers – thank you all!

Conservation.

Comment was made on the following:

Management Plan for the Adelaide International Bird Sanctuary.
Belfast Coastal Reserve Management Plan with emphasis placed on our concern with professional horse training being allowed on beaches.
Robe Beach Access Strategy.
FoSSE sent a congratulatory letter to the Chinese ambassador in response to their decision to limit coastal land reclamation in the Yellow Sea.
Press releases, radio interview and a letter to the Robe Mayor in relation to the Hooded Plover death on New Year's Eve (see separate article).

NRM sub-regional planning continued with FoSSE attending all of the second-round meetings. With meetings in Keith, Tintinara, Naracoorte, Mount Gambier and Robe it is hoped that our input has made a difference.

Presentations to year four, five and six, year students at McDonald Park Primary School and Millicent Rotary, a shorebird Identification workshop for the Nelson Landcare Group and a shorebird outing for Thumbprint Print Makers in preparation for their contribution to Kate Gorringe-Smith's Overwintering Project have all helped to raise awareness of shorebirds in our region. A presentation on Beachwrack was made at the SA Coastal Conference.

Beach Nesting Birds

Protecting and monitoring Beach Nesting Birds continues to be a major part of our work. Cape Jaffa to the Victorian border were, once again, counted in November and May. Where ever possible nests considered vulnerable were fenced. Three events illustrated the issues facing us. In November, two yobbos with 8 unleashed medium sized dogs on the swimming beach at Nene Valley resulted in the loss of a Hooded Plover nest. The District Council of Grant did not respond to my report. A Hooded Plover chick at Robe was killed on New Year's Eve, probably by a dog (see separate report). A newly fledged Pied Oystercatcher was run over by vehicles on the beach at Nora Creina.

We rarely have reports of Banded Lapwing breeding in the extreme lower south east. This year has been outstanding. During August, Lock Road, near Port MacDonnell had a maximum count of 4 nests, 22 adults and 6 chicks. Several paddocks had similar habitat and so the total number of lapwing present is unknown. Breeding pairs were also found further to the west in Firebreak Road (off Grundys Lane). Lapwing were reported in Christians Road (in the Kongorong area), but no breeding was observed. This season Banded Lapwing were first heard in Youngs Road, near Port MacDonnell, on the 7th June. A pair was already nesting in Bowerings Road (near Lake Bonney SE in the last week of July.

Banded Lapwing. Photo: Sarah Campbell

Bush Stone-curlew.

Last year we were invited to attend a meeting in Bordertown of a group concerned with the plight of the extremely small numbers of Bush Stone-curlew in the Bordertown/Mundulla area. A group of 'Curlew Friends' has been formed and co-operation with the District Council of Tatiara has resulted in better land management practises being put in place In Bordertown. The VWSG and FoSSE have agreed to assist by banding and flagging chicks. Our help is

dependent on strong local involvement. FoSSE have lent a telescope to assist with monitoring. Permits were put in place for the 2017/18 breeding season, but the only chick known to have hatched disappeared before it was old enough to band.

Thompson Beach and Bald Hill, Gulf St. Vincent.
'The uncatchable have been caught'! Finally, a catch of 20 Red Knot at Third Creek, Thompson Beach during our November 2017 expedition. The catch included one retrap - White BJR and so a New Zealander. Originally BJR was banded at Miranda on 18.10.2008 and not seen in New Zealand since February 2011. Red Knot DM was seen at Miranda on the 2nd and 3rd Jan. As it is a juvenile it fits the pattern of Red Knot banded in the lower SE. To complicate the issue several Red Knot wearing Chris Hassell's NW WA colour combinations have been seen in South Australia. So, a lot more work needs to be done before we have anything definitive. Flag sightings involving several species are slowly accumulating. Adelaide and Mount Lofty Ranges NRM, represented by Tony Flaherty, continues to enthusiastically (and financially) support our efforts. Congratulations to the dedicated team who continue to join in field work. See the separate article by Tony for details of the Grey Plover satellite transmitter project. Bat-tailed Godwit AKK also features elsewhere in the Bulletin.

South Australian Shorebird Alliance.
A concept to establish a Shorebird Alliance in South Australia was put forward to DEWNR (now DEW) in early 2017. This has been progressed, and FoSSE was invited to attend a workshop on 26.7.2018. The meeting was attended by all 6 regions of DEW as well as their Wildlife Management Branch, Birdlife and Birds SA. Apologies were received from Local Government. It was gratifying to hear that all present were committed to improving protection for both resident and migratory shorebirds. We also appreciated the opportunity to meet face-to-face with people who we had been involved with for many years!

Limestone Coast Pantry support for FoSSE
BYO take away coffee cup and choose to direct your 50c discount to either FoSSE or Port MacDonnell Landcare. For those of you on Facebook you can find them by searching for Limestone Coast Pantry. 'Thank you' to owner Lyn McLachlan, Social Media Manager Yolande Langford and the staff of Limestone Coast Pantry. Please give them your support in this great initiative.

General.
We were finalists in the Landcare Association SA, Coastal Award.
Flag making is organised by Jeff Campbell. A very successful AGM was held at the Campbell family home in Mount Gambier in February. Newsletters continue to be issued from time to time. Shorebird 2020 counts were done summer and winter, with Jeff continuing as coordinator. Jeff also continues as the Beach Nesting Birds Coordinator and his team managed 159 Hooded Plover, 37 Pied Oystercatcher and 34 Red-capped Plover entries into the Portal this breeding season.

Thank you to the members of the group who have worked hard to produce these results. Thank you too, to the members of the Department of Environment and Water, Natural Resources South East who have provided encouragement and practical help. David New, Volunteer Coordinator helps with all sorts of administrative tasks. Ross Anderson deserves special mention for all of the support he gives us, both as our Community Liaison Ranger and as a member.

SOUTH AUSTRALIAN TEAM CATCHES 01.08.2017 TO 31.07.2018

DATE	PLACE	Bar-tailed Godwit	Ruddy Turnstone	Red Knot	Sanderling	Red-necked Stint	Sharp-tailed sandpiper	Curlew Sandpiper	Pied Oyster-catcher	Sooty-Oyster catcher	Banded Stilt	Grey Plover	Red-capped Plover	Double-banded Plover	Hooded Plover	Other	Terns	TOTALS
18.11.17	Livingston Bay		10			6							1					17
28.11.17	Danger Point #														1			1
6.12.17	Robe #														1			1
20.12.17	Lurline Pt, Nora Creina **								2									2
20.12.17	10 Mile, Nora Creina **								1									1
20.12.17	5 Mile, Beachport **								2									2
1.1.18	Picaninnie Ponds **								2									2
8.1.18	Green Point **								1									1
17.1.18	Blacktellows Caves #														1			1
10.2.18	Danger Point **																1	1
10.2.18	Woolwash **														2			2
17.4.18	Boatswains Point		5			2												7
SA team this year			15			8			6				1		5		1	38
B/F SA team	26.11.00 – 31.7.2017		627	13	105	492	107	18	44	9	1773	0	43	25	73	3	445	3778
SA TEAM TO DATE			**642**	**13**	**106**	**500**	**107**	**18**	**52**	**9**	**1773**	**0**	**44**	**25**	**78**	**3**	**446**	**3816**
special geo trips																		
15-20.11.18	Multiple net sets																	0
18.11.18	Pelican Point		10			6							1					17
geo trip this year			10			6							1					17
B/F geo trips	23.4.2009 - 31.7.2017		430		648	340	82	13	2	1			2			1	7	1526
GEO TRIPS TO DATE			**440**		**648**	**346**	**82**	**13**	**2**	**1**			**3**			**1**	**7**	**1543**
Thompson Beach																		
see seperate table		18	26	21		58	40	1	5			21	10			12	31	243
Eyre Peninsula			68		262	393	23	8	12	4	15		21			2	1	809
GRAND TOTAL SA TEAM		18	1176	34	1016	1297	252	40	71	14	1788	21	78	25	78	18	485	6411

** chicks/runners: #noose mat: + Reece Pedler's PhD project (Banded Stilt chick retraps not included in totals)

TOTAL TO DATE OF TERNS AND 'OTHER' SPECIES

OTHER	SE	Yanerbie	Thompson Beach	
Black-fronted Dotterel	3			
Golden Plover	1	1		
Broad-billed Sandpiper		1		
Common Greenshank			6	
Great Knot			6	
	4	2	12	18

TERNS	SE	Yanerbie	Thompson Beach	
Crested	199	1	1	
Fairy	229		5	
Caspian	1		11	
Whiskered	6		14	
Little	18			
	453	1	31	485

THOMPSON BEACH CATCHES

DATE	PLACE	Common Greenshank	Bar-tailed Godwit	Ruddy Turnstone	Great Knot	Red Knot	Red-necked Stint	Sharp-tailed Sandpiper	Curlew Sandpiper	Grey Plover	Pied Oystercatcher	Red-capped Plover	Fairy Tern	Crested Tern	Caspian Tern	Whiskered Tern	TOTALS
2012 November			12		4	1	20	39				3					79
2013 November			6														6
2014 November		4		1	2			1	1	10	3		5		4	14	45
2015 March (2 visits)		1								3							4
2015/16 Summer (3 visits)		1		14			11			2		1					29
2016/17 (2 visits)				9			27			6	1	6		1	7		57
B/F totals		6	18	24	6	1	58	40	1	21	4	10	5	1	11	14	220
22-27.11.18	multiple net sets																
22.11.18	Third Creek			2		20											22
26.11.18	Band Hill #										1						1
Totals 2018				2		20					1						23
TOTALS TO DATE		6	18	26	6	21	58	40	1	21	5	10	5	1	11	14	243

SOUTH AUSTRALIAN TEAM CATCHES - Month Waders Caught in 1.12.200 TO 31.07.2018

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec	TOTALS
Ruddy Turnstone	6		11	238	38	16	46	87	92	1	107		642
Red Knot				1		12							13
Sanderling		17	2	82				5					106
Red-necked Stint		34	34	107	4	20	49	93	86	43	7	23	500
Sharp-tailed									6	101			107
Curlew Sandpiper						2	7	6		3			18
Pied Oystercatcher	12	4	1	1	1			2			10	21	52
Sooty Oystercatcher	1		2	3	2						1		9
Banded Stilt	208	173	12	351		54	429	520				26	1773
Red-capped Plover	5	5	9	6				6	1	7	1	4	44
Double-banded Plover			4	7		4		10					25
Black-fronted Dotterel			3										3
Hooded Plover	20	7	11	4	2					5	16	13	78
Little Tern	17	1											18
Fairy Tern	55	172	2										229
Crested Tern	199												199
TOTALS	523	413	91	800	47	108	531	729	185	160	142	87	3816

excludes special geo expeditions by visiting Vic teams, Thompson Beach and Eyre Peninsula catches.

Robe neighbour Hoodie - Hooded Plovers at Robe SA
Cath Bell (Friends of Shorebirds South East)

A breeding pair of Hooded Plovers at Long Beach in Robe, South Australia, captured community attention at the beginning of 2018 with their tragic story of a dead chick found on New Year's Day.

The birds' nest on a small section of Long Beach, where vehicles are actually excluded and is within the township limits. The breeding territory has been monitored and actively managed since 2011. Current council bi-laws allow dogs on leads in this section of beach. The breeding pair often have a nest or chicks during the festive period in Robe where town numbers swell from 1500 to 10,000+.

Despite this adversity, the Hoodies have successfully fledged chicks during several of the breeding seasons between 2011-2018, including a very successful season where the pair fledged 5 chicks from 2 clutches. Having a fenced zone has proven critical for their protection both for nests, or as a refuge zone for chicks/parents. It also helps to raise awareness of the Hoodies and their plight with the community and tourists. Volunteers from Friends of Shorebirds SE and Department of Environment & Water (SA) staff assist with the protection and monitoring of nests, as well as community awareness about sharing the beach with the Hoodies. The breeding pair had their own Facebook page ('Robe neighbour Hoodie') set up in 2014 to foster relationships between people and the Hoodies and provide a way for the public to follow the outcomes of their nesting attempts.

The outcome of this last breeding season was a tragic one which captured the attention of the wider community. The breeding pair hatched two chicks about 2 weeks before Christmas and the masses arrived. Between Christmas and New Year's Eve the exclusion fence and signs were pulled down on multiple occasions and one chick went missing. Volunteers and members of the community repeatedly reinstated the fences and signs, however, the vandalism continued. Chick shelters were smashed and even a permanent concreted metal Hoodie sign nearby was pulled out. On New Year's morning the remaining chick was found dead after further vandalism of the site. A necropsy revealed that the chick died from injuries associated with crush trauma consistent with a dog attack.

The best thing to come out of this terrible incident was the overwhelming response and support from both locals and tourists who were disgusted and outraged by the repeated attacks on the bird's refuge area and declared their support for the Hoodies. A picture says a thousand words and the image of the dead chick along with its tragic story captured community attention, with articles published in local newspapers, The SA Advertiser and stories on local ABC radio. The Robe neighbour Hoodie Facebook page also got around 12,000 hits and 64 shares. The tragic circumstances around this failed breeding attempt for the Long Beach Hoodies, is unfortunately not an uncommon one, however, the ability to tell this story with some level of detail through various media channels seemed to resonate with a wider audience and hopefully fostered a greater appreciation of the Long Beach Hoodies, and the plight of the Hoodies in general.

VWSG South Australia Field Trip – 30 March to 8 April 2018

Ila Marks

Our mascot on Flock Watch while the net is being set at Pether Rock – Photo Mary-Ann van Trigt

The VWSG South Australia Field trip from the 30th March to the 8th of April was characterised by delightful weather (sunny days with light winds), a willing hard-working team, delightful evenings and gorgeous sunsets. We achieved one of our major targets – that was deploying 26 geolocators on Ruddy Turnstone. We also recovered 5 old geo-locators and read sixteen engraved flags on turnstone. Our other target, to catch enough Sanderling to give the percentage of juveniles, proved to be difficult as we only caught six at Canunda National Park on our last day. But again, were able to read three engraved leg flags, this time on Sanderling. It became apparent very early into our field work that the beaches usually deep in rotting maggoty seaweed, (that shorebirds love) were missing. Instead the beaches were covered with clean washed sand and nice fresh seaweed. Finding that 'hot' section of beach with frantically feeding birds was difficult. The previous week seven metre swells and gale force winds had swept all the rotting seaweed out to sea.

The team arrived at Paul Feast's fishing shack on Friday afternoon 30th March. Maureen, Sally, Angus, Jenny, Mary-Ann, Eric, Ila and Heidi, a slim but keen team, with Jeff, Sarah, Peter and Cassie to join us in the morning. We set up camp and looked along the beach. No Sanderling and only a handful of Ruddy Turnstone. Sally, new to banding was delighted with the remoteness and wildness of the location. Jeff, Sarah and Maureen had carried out extensive recces the previous day and it was decided to set a net at Danger Point the next morning where Ruddy Turnstone and Sanderling had both been seen.

Danger Point Saturday 31st March – Our target species were Ruddy Turnstone and Sanderling. If persistence gets results we should have ended up with a fantastic catch. Sadly, this is not always the case with cannon netting. On the beach we could see 120 turnstone, with 25 Sanderling. Double-banded Plover and Red-necked Stint were also present. Our twinklers were persistent, but the birds kept flying past the catching area. By the time we decided we were not going to catch our target species the opportunity to catch Double-banded Plover and Red-necked Stint had also passed with the light fading and a receding tide.

Net setting at Danger Point – Photo Mary-Ann van Trigt

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On Sunday the 1st of April we went to Nene Valley. There were Ruddy Turnstone and Red-necked Stint on the beach feeding the breadth of the beach from high up on the dry sand to the water's edge. After a lengthy discussion it was decided to set high and away from the boat ramp area. As it was a public holiday and we did not want to interfere with holiday makers putting their boats in and out of the water. While the people in the hide were waiting for the birds to move up into the catching area they were generously treated to lemon polenta cake, chocolates and coffee by a local family; Nick and Jo and children, who also stayed to help extract the birds when we caught well before high tide. Vivien joined us for the catch of 26 turnstones and 27 Red-necked Stints. We also retrieved two geolocators, while deploying 16 on re-traps and birds of a good weight. The consensus was that we had had a very successful day and it had been a good initiation for people who had not been to many catches.
On Monday the 2nd of April we went back to Danger Point with our eyes turned to Sanderling. We had not seen many on the beach; however, Jeff and Sarah had previously seen 100 at high tide. We decided to set a net at where we thought the tide would be at high tide. Another net was set for Ruddy Turnstone in the location they had been feeding on Friday. All was looking good at the Sanderling net with birds moving from the waters' edge to where the net was set, but the Double-banded Plover and Red-necked Stint feeding with the Sanderling kept on walking right into the danger area where they stayed. The jiggler, though given several sturdy pulls failed to move them. Our eyes turned to the second net where a flock of 20 Ruddy Turnstone had landed nearby; with twinklers working both east and west of the net a catch looked promising; with now 60 Ruddy Turnstone present. However, the net was set a little too high and we decided to fire on a smaller catch of Stint and turnstone. Unfortunately, on firing, a guy rope was pulled out and we only managed to catch two Stints. - A sharp learning curve for us all.


At Danger Point setting up the keeping cages and Angus working on the electrics – Photo's by Jenny Hiscock

Tuesday 3rd April, and we were back at Nene Valley and decided to set a three-cannon net not far from the Boat Ramp. Again, it was looking promising with 100 Ruddy Turnstone to the east, our hopes were high. This time there was no polenta cake, just a man in difficulty at the boat ramp, his car became bogged, and he had to be towed out of the water, then he had problems getting his boat back onto his trailer when he abandoned his fishing trip. Jenny and Sally went to his assistance, but with three-quarters of an hour disturbance, the birds decided they had had enough and that was that. Even Roger joining us on the beach with his enthusiasm and goodwill made no difference.
It was an early morning for all of us on Wednesday the 4th of April, we had to pack up and say good bye to Paul and his beach shack because we were to heading to Sandy and Iain's Farm in Rendelsham. Good-bye's were said to Paul and we arrived at Nene Valley with our cars

packed and ready to transfer ourselves to Sandy and Iain's farm that evening. This time we went to the beach on the west of the town, where Jeff had seen 65 Ruddy Turnstone the previous day. There was evidence of recent feeding activity and we set the three-cannon small mesh net. However, the birds were feeding at the waters' edge and ignored the hot spot the net was set to cover. When the birds finally moved up the beach it was on either side of the net. Another frustrating day, but still a day with highlights; Jenny and Sally while driving towards Blackfellows Caves looking for turnstone saw 12 adult and five juvenile Hooded Plovers. Also, we were joined for the day by Noel, Sheila, Peter and Linda all from Millicent. That evening we settled in nicely at Iain and Sandy's farm and greatly appreciated their warm hospitality, a hot shower, heater, fridge and soft grass to camp on.
After four days without a catch we were becoming more determined to break the drought. On Thursday the 5th of April the plan was to recce at Beachport and if there were no birds there to go to Nora Creina. Only one turnstone was seen at Beachport which was not surprising as there was very little feed. On arriving at Nora Creina, the tide was out, but birds could be seen feeding around the rocks in the west corner. There were also birds feeding up the top of the beach in the dry weed and sand. A four-cannon net was set high on the dry sand. We were a well-oiled team by day six. Rog went south looking for birds, Jeff to the north, Jenny was sent to the cliffs, Mary-Ann on her scope looking for geolocators and reading ELF's, Eric in place looking for safety, Ila on the firing box and Maureen ready to oversee the operation. Nothing could go wrong….
Only today the turnstones were feeding low close to water's edge. At an hour to high tide it was time to re-consider. We decided to set the two-cannon net low where the birds had been feeding. As we only had five cannons we had to take two cannons from the net already set high. The new net was set, and it was just a matter of bringing the turnstones back to our bit of beach. After determined twinkling the birds arrived but decided to eat high up the beach in the area of the pillaged net. Some birds were eating at water's edge, but too low to catch. In all it proved to be an interesting day observing birds high in dry sand and weed with others at the water's edge. You can learn a lot by just looking. Mary-Ann counted eight geolocators and read many flags. We called it a day around 4.30. Before leaving the beach we closely looked at where the birds had been feeding and what they did when cars drove passed. It was decided to set two nets the next day; one placed down low on the beach with the chance of a wet catch, the other up high using the three-cannon small mesh net.
Friday the 6th of April – we arrived at Nora Creina in high spirits, there were birds in the northern corner by the rocks and birds to the south feeding high. We knew where we wanted to set the nets. Jenny and Viv had left us, but we had been joined by Cassie again for the day. We quickly set the nets and with everyone in position twinkling began from the south. The birds were feeding high with Silver Gulls about 100 m to the south of the net and feeding in the right direction. The twinkler took it slowly and the birds moved along beautifully. When Mary-Ann said there were at least three birds with geolocators in the catching area Maureen decided to fire. We were happy with our catch of 16 Ruddy Turnstone, as it included 12 retraps, three juveniles and three old geolocators. Also, we were able to deploy our remaining 12 geolocators. Interestingly Mary-Anne read a total of nine engraved leg flags on birds with geolocators over our two days at Nora Creina and when checked on our database all of them had been banded at Nora Creina. A very site faithful flock of birds.

Saturday 7th April - A trip to Canunda National Park is a delight whether wanting to band birds or not, there are fabulous sand dunes, waves rolling in from the Southern Ocean and sweeping beaches, not to mention the treacherous drive in. Iain and Sandy joined us for the day. We car pooled, only taking the three four-wheel drives. They all arrived at Pether Rock in one piece. On arriving there were 150 Red-necked Stints near the rocks. We set out looking for Sanderling with cars going north and south. To the south Iain, Sandy, Jeff and Sarah found 100 Sanderling roosting and several small groups feeding, chasing waves as they washed up the beach. We set the net close to Pether Rock in a place favoured by Sanderling on past occasions and just above what we thought was the previous day's high tide mark. It was then a matter of waiting for the tide. We knew there were birds to the south that were very content to feed running up and down with the waves. While waiting we had the excitement of three quad bikes driving along the beach and through our catching area. Fortunately, no

damage was done. We were then treated with seeing a Greater Sand Plover in partial breeding plumage. After two hours there had been no movement in the tide and our net looked very lonely far up the beach from the water's edge. At half an hour to high tide we decided to move the net. In fact, we moved it twice. Within 15 minutes of moving the net the second time Maureen had twinkled a small flock of Sanderling towards to the net. But as they came close to Pether Rock they flew north in ones and twos. Maureen decided to fire before they all left. A car drove past at a vital time and sent half of the remaining birds north. We fired with a catch of six Sanderling.

Thanks to Paul Feast for his assistance and the use of his snug beach shack while we were at Green Point and thanks to Sandy and Iain Stewart for their hospitality and care at their farm in Rendelsham.

Thanks also to the team for their persistence and never-failing enthusiasm
Noel Boyle, Sheila Boyle, Maureen Christie, Sarah Campbell, Jeff Campbell, Peter Feast, Cassie Hlava, Jenny Hiscock, Linda Johns, Peter Johns, Mary-Ann van Trigt, Roger Standen, Vivien Holyoake, Sally Leonard, Angus Langsmith, Eric Miller, Ila Marks, Heidi Miller, Sandy Stewart and Iain Stewart.

Catch Summary

Date	Location	Species	New	Re-trap	Total	Juv.
1/4/2018	Nene Valley	Ruddy Turnstone	16	10	26	(1)
		14 geolocators deployed 2 geolocators retrieved				
		Red-necked Stint	27	0	27	(7)
2/4/2018	Danger Point	Red-necked Stint	2	0	2	(0)
6/4/2018	Nora Creina	Ruddy Turnstone	4	12	16	(3)
		12 geolocators deployed 3 geolocators retrieved				
7/4/2018	Canunda National Park	Sanderling	5	1	6	(1)

Catch Summary

Species	New	Re-trap	Total	Juvenile
Ruddy Turnstone	20	22	42	(4)
Red-necked Stint	29	0	29	(7)
Sanderling	5	1	6	(1)
Total	**54**	**23**	**77**	

26 geolocators deployed on Ruddy Turnstone
5 old geolocators retrieved from Ruddy Turnstone

Red-necked Stints. Green Point. Sunrise. Photo: Mary-Ann van Trigt

Notes on geolocators retrieved from se South Australia November 2017 and April 2018.

Ken Gosbell and Maureen Christie

Five (5) geolocators were retrieved from Ruddy Turnstones on the se coast of SA during visits of the VWSG in November 2017 and April 2018. All were successfully downloaded, and I have undertaken an initial analysis of these data; the following is an overview of some of the more interesting results. It is stressed that these must be regarded as preliminary at this stage.
Of these 5 geolocators, several contributed to multiple tracks. 3 of those retrieved had double tracks, that is, they recorded 2 consecutive years (or part years) of migration. Furthermore, two had recorded tracks in previous years viz both CCJ and YUV recorded their third track. It is at least pleasing that despite the enormous effort put into the retrieval of 5 loggers, these produced 8 tracks and contributed to previously recorded tracks.
The following outlines aspects of particular interest:

1. Of the 8 tracks recorded, all appeared to reach the breeding grounds, although only one was judged to have successfully bred. This represents a very low success rate (albeit from a very small sample) which was also reflected in the King Island recoveries and also in our cannon net catches. This is in contrast to the previous season which indicated the highest level of breeding success for this species ever recorded.
2. On northward migration, most made their first stopover in Taiwan or the adjacent China coast after a leg of 5-7 days. Once again most made subsequent stops in the Yellow Sea (7 – 19 days) before heading for the breeding grounds (location yet to be determined). However, YUK was an exception to this strategy, flying direct from Taiwan to Sakhalin Island in both 2016 and 2017. WXC made a similar journey in 2016
3. On southward migration a favoured stopover was again Bohai Bay and the Jiangsu coast of China and Taiwan with subsequent stops being variously made in the Philippines, Indonesia and south west WA before returning to SA in late September to early November.
4. The departure dates were between 22 and 30 April, median 27 April. This compares with the median departure date for the King Island birds of 17 April. It is of interest that the median dates of departure for the last 6 years have been 26 April and 14 April for SA and King Island respectively.
5. They reached the Arctic between 25 May and 3 June where they spent 40 – 65 days before commencing their southward journey.
6. The speed of their first leg varied but XXL covered the leg to Taiwan (7,000kms) in less than 5 days at an estimated ground speed of 60kph.
7. One of the tracks of interest was for bird CCJ which, on southward migration, travelled from the south China coast directly to the north coast of Papua New Guinea – approx. 4,000kms before returning via the Gulf to SA. Of particular interest is that this is the third consecutive year that this bird has adopted this strategy. This is another example of how we are finding that for the majority of the repeated tracks that we have, the same strategy is adopted year on year.

These results should be regarded as preliminary at this stage. Obviously, these outcomes would not be possible without the teams of people from Victoria and SA who undertook the fieldwork to deploy and retrieve these instruments; to all those teams a big thank you.

VWSG recognised in Victorian Coastal Council Award

Rog Standen

The Victorian Wader Study Group (VWSG) was the joint winner of the 2018 Victorian Coastal Council (VCC) award for “Partnerships in Research and Monitoring”. As readers of the VWSG Bulletin will be aware, hundreds of volunteers have been travelling thousands of kilometres catching birds, maintaining equipment, managing and analysing data, writing papers and generally working very hard over 40 years to build our understanding of the (primarily) migratory waders and terns under study. Led by Clive Minton, all these people were acknowledged through this award by the peak coastal body.

While we have not been a group to seek wider public recognition, this was a great opportunity to give exposure of our group’s achievements to a wide range of people with related interests. The extensive breadth of projects represented was shown by the summaries of the finalists for each of the six sections (http://www.vcc.vic.gov.au/page/awards). Examples include local groups protecting their resident waders during breeding, protecting stingrays, rebuilding shellfish reefs, extensive studies of Westernport, restoring shorebird habitat in Gippsland Lakes, cleaning up beaches, caring for our bays and many other important environmental works. Everyone who was present on the night gained a great insight into the quality of work that is going on to protect our coastal and marine habitats and the life supporting and supported by that habitat.

An excerpt from the award states that through an extensive program of capture, banding, marking and release, with at times electronic tracking, volunteers have contributed an astonishing 14,000+ hours annually both in the field across the coasts of Victoria, South Australia and King Island and in numerous home offices completing the much-needed data entry/data analysis/permit approvals etc. Victorian sites extend from Port fairy to the Gippsland Lakes, with regular catches around Port Phillip and Westernport Bays.” South Australian catch sites are mainly around the south-east, but include Thompson’s Beach, north of Adelaide and right over to Streaky Bay.

Initially, the group’s driver was to understand where the birds migrated to and what routes they took. Now, with declining populations of most of the migratory wader species there is a critical need to better understand what drives that, so looking at breeding success (through measuring the percentage of juveniles as a surrogate) and survival rates has become an important aspect of the recent work.

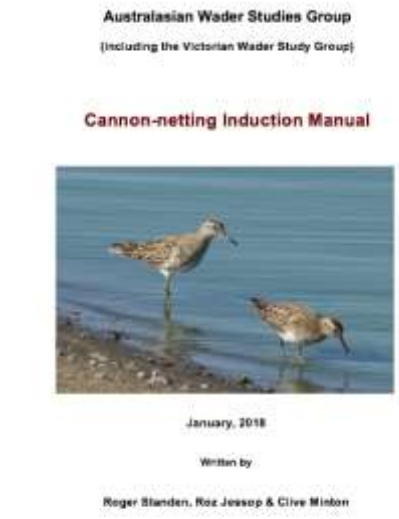
We were delighted to be selected as joint winners of our section, along with a project on Victorian Marine Park Habitat Mapping and Monitoring run by Deakin University, Parks Victoria and The University of Melbourne. The award was presented to us on May 17, 2018 by The Hon Lily D'Ambrosio MP, Minister for Energy, Environment, and Climate Change.

Congratulations are due to every member of the VWSG, both past and present, for winning this award.

VCC Chair, Dr Anthony Boxshall (L), with VWSG Chair, Rog Standen (photo supplied by VCC)

New Operation Manual compiled

Many years ago, a Canon-netting Induction Manual was compiled to allow new members to better understand what was ahead of them when it came to field activities with the VWSG. The terms and processes we use can be confusing to the uninitiated so explaining them before and after being in the field was seen as an advantage to all team members.


Australasian Wader Studies Group

(including the Victorian Wader Study Group)

Cannon-netting Induction Manual

January, 2018

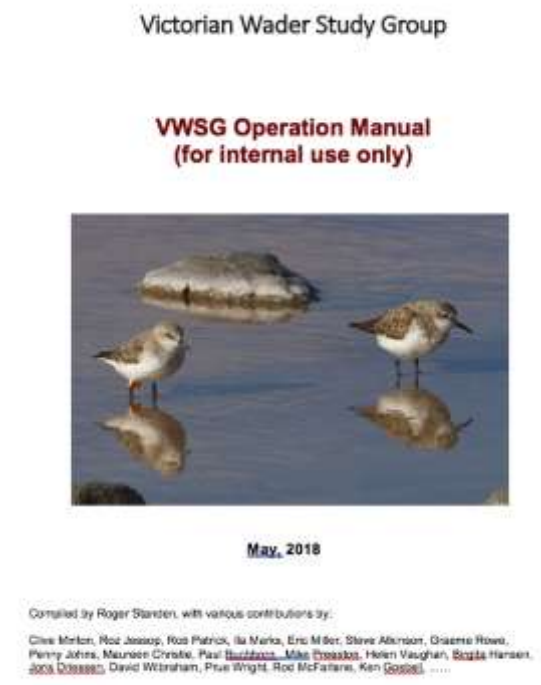
Written by

Roger Standen, Roz Jessop & Clive Minton

Showing how we went about our business was also a public demonstration that there were consistent practices being followed in the pursuit of catching and marking the waders and terns. This document has become the Canon-netting Induction Manual for both the VWSG and AWSG and remains a public document available for download from our website. This document is added to as new developments occur in relation to the field practices and it effectively has become our procedures manual to refer outside organisations to.

(http://www.vwsg.org.au/PDFs/AWSG%20Induction%20manual%20final%20v3_7.pdf)

When Clive relinquished the reins of the organisation, there were many facets of the running of the group that were known only to Clive, so a comprehensive VWSG Operation Manual was compiled. This brings every procedure and policy that the VWSG needs to run into this new manual. Everyone who does something for the group has documented or will have their procedure documented and these will be updated as techniques/procedures change over time.


Victorian Wader Study Group

VWSG Operation Manual
(for internal use only)

May, 2018

Compiled by Roger Standen, with various contributions by:

Clive Minton, Roz Jessop, Rob Patrick, Ila Marks, Eric Miller, Steve Atkinson, Graeme Rowe, Penny Johns, Maureen Christie, Paul Rushbrook, Mike Freeston, Helen Vaughan, Birgita Hansen, Jons Dressen, David Wilbraham, Prue Wright, Rod McFarlane, Ken Gosbell, ...

Due to the content of this new Operation Manual with its financial and personal information, it will remain an internal VWSG document, limited in access to the VWSG Committee. Details on the mechanics of storage and update are still being determined, but the membership should be aware that there is a comprehensive document that draws all operating procedures and policies together in the one place. If there are any queries about any aspect of this, please get in touch with me or one of the Executive Committee.

Rog Standen

VWSG Policy on data access and use
(December 18, 2017)

Background:

The VWSG and its partners have invested an enormous amount of resources (both physical and financial) into the generation of the huge database on banding, recovery and sighting information about waders.

Wherever possible the members and partners are analysing and reporting through various publications on the outcomes of this data. However, there is also ample opportunity for others to get involved in assisting in this analysis and publication.

Over the years the management of this has been handled appropriately by Clive and others but under the new management of the VWSG it has been considered appropriate that we formulate a policy on this subject so that we are all clear on the basis on which people may seek to access this data.

The following policy is intended to meet that need.

VWSG Data Access Policy:

That VWSG make data available to potential users provided:

1. The person/s requesting data provides the VWSG with a brief (1-2 paragraph) summary of their planned project or data exploration. *

2. When substantial data are involved, VWSG become a co-author (through relevant individual/s). If no co-authorship, then due acknowledgement be given to VWSG.

3. VWSG get an opportunity to review how data are used to ensure it is being used appropriately.

4. Where data are being utilised in a funded project or for commercial uses, a financial contribution would be expected to offset some of the costs in accumulating the data. #

5. Access to the data does not conflict with other ongoing analyses or publications.

6. A summary of the finished publication (and full version where possible), be made available for circulation to VWSG members and for reporting against permits.

7. There remains the flexibility for the VWSG to grant access to data by interested and trusted people who seek to explore and better understand what the data is telling us i.e. an applied outcome is not always essential.

* This summary should be extensive enough for us to understand what they have in mind, but also brief enough to be circulated around the VWSG committees.

Charges may be for data management and extraction and/or field operations. In some instances, other particular costs may need to be recouped. Ultimately this will be a negotiated outcome between the VWSG and the data seeker.

Protocols for the use of VWSG data

To assist in the practical execution of the above principles, the following protocols will apply:

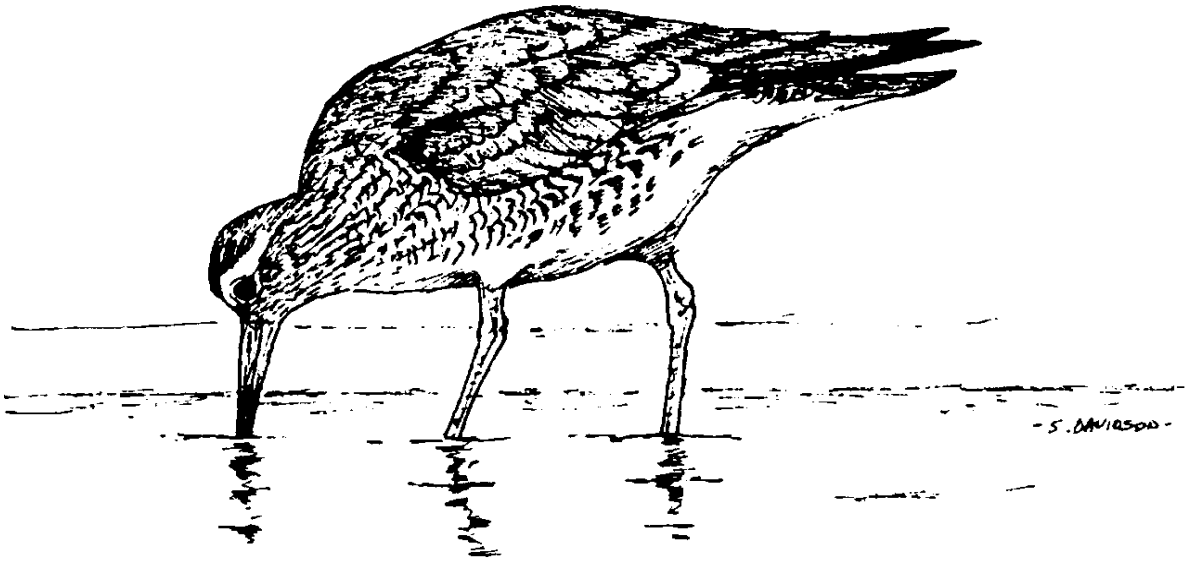
1. Any requests for the use of data held by VWSG shall be made to the Chair of the Scientific Advisory Committee (SAC), Currently (2018) this is Danny Rogers. Upon receipt of a request Danny will seek advice from other SAC members where needed. If there is disagreement over the use of the data, the full SAC will be involved in developing a majority view on how to handle the request.

2. The SAC will oversee the data supply (generally through the Database Manager (Joris Driessen)) as well as the review of analyses and draft publications This will be done through the SAC Chair in the first instance. Any limitations or possible misinterpretations with the use of the data will be clarified at this stage.

3. Co-authorship is encouraged as it recognises significant contributions in at least two of the following areas:
    1. Conception/genesis and experimental design of the project
    2. Collection of the data
    3. Analysis and interpretation of the data
    4. Writing the paper
    5. Revision of the manuscript in a significant way

4. Agreement on co-authorship will be reached at the initial stage (usually prior to analysis) and will be documented.

5. A list of current papers being worked on will be maintained by the SAC. An annual review of progress toward paper publication will be conducted by the SAC with a view to encouraging further work, offering support where needed or to reassign the task if needed/possible.



Dave Cropley, a missed VWSG member

It was with great sadness that Clive informed the VWSG that Dave Cropley died suddenly, after a major heart failure, on Saturday November 25, 2017. When attending the AGM a few months before, Dave was his quiet, friendly self, contributing his occasional wisecracks.

Dave was one of the longest standing members of VWSG, having first joined us in the early 1980s. He was an extremely regular participant in fieldwork in those early days, and in recent years he has also been particularly responsible for many of the recces carried out before the fieldwork activities.

As anyone who has been out in the field when he has been part of the team will well know, he was a great contributor of ideas and full of enthusiasm. We all remember fondly those times when Clive would be half way through an eloquent, informative introduction to a catch when Dave would lob a ‘grenade’ over the top that was a complete diversion and could throw Clive right off his thought process. But Dave was one whose attitude was, “If you think something should be said, you should say it.”

Known to Heidi as “my friend” because he always made time for her, Dave was a kind and helpful person who would help out whenever he felt the need.

Over the past decade or more, he made major contributions through ‘twinkling’ with his beloved hovercraft. The hovercraft’s capability to carry all sorts of equipment saved many backs and uncomfortable walks. He could get to many places which we were unable to reach to fetch birds and he could also get there a lot more quickly. Many a catch was made solely due to the efforts of Dave on his hovercraft. That is not say it always worked. We all recall how he could wander off on his own without checking on the game plan resulting in a call over the radio to find out what he was up to or to request him to get out of there!

We will greatly miss the contribution of his hovercraft twinkling and the increased efficiency it gave us. Even more we will greatly miss the man, his ready smile and quips of humour.

Thanks, Dave, for all you did for the VWSG over the last 35 years.

Dave on his hovercraft (photo Rob Patrick).

WADER BREEDING SUCCESS IN THE 2017 ARCTIC SUMMER, BASED ON JUVENILE RATIOS OF BIRDS WHICH SPEND THE NON-BREEDING SEASON IN AUSTRALIA

Clive Minton, Roz Jessop, Chris Hassell, Rob Patrick, Robyn Atkinson & Ila Marks

INTRODUCTION

The populations of waders which breed in the northern hemisphere and migrate to spend the northern hemisphere winter in south-east Australia or north-west Australia recorded their worst ever breeding season in 2017. This is based on 40 years of annual monitoring in south-east Australia and 20 years in north-west Australia (NWA). Furthermore, the bad news extended further with a powerful cyclone greatly reducing the planned fieldwork period in north-west Australia and human errors, equipment failure and 'bad luck' impinging on our fieldwork results in south-east Australia (SEA). 2017/18 was probably the year we 'had to have' (especially after we had been so lucky with weather conditions in most other recent years), but it was certainly a year we'd like to forget! Similar fieldwork programmes are carried out in SEA and NWA each year to try to obtain the best estimates we can of the proportion of juveniles of each species in wader populations in Australia during the November-March period. In north-west Australia the fieldwork is concentrated into a three-week Expedition (NWA 2018, on this occasion, running from February 12 to March 6, 2018). This was planned to give ten days cannon netting at 80 Mile Beach and six days at Roebuck Bay, Broome. A powerful cyclone, which eventually passed straight over our base at Anna Plains Station, caused us to return prematurely to Broome after only three days fieldwork at 80 Mile Beach. When we were eventually able to resume catching activities, at Broome, though greatly restricted by torrential rain making access to some locations impossible. We thus lost seven out of the ten planned catching days at 80 Mile Beach and had only six quite restricted catch days at Broome. In spite of the difficulties we were still able to obtain adequate samples of all our main monitor species in NWA and all but one in SEA.

METHODS

As usual all birds used in the percentage juvenile calculations were caught by cannon netting, mainly at high tide roosts on coastal beaches. In SEA this was carried out at the usual range of locations along the central coast and bays of Victoria, plus the west coast of King Island (Tasmania) and the south-east corner of South Australia. In NWA weather disruptions restricted catching to three attempts on 80 Mile Beach (two at 51 km and 13km south of Anna Plains Station, and six at Roebuck Bay, Broome, mostly at the west end of Quarry Beach etc.). Birds were aged using criteria based on plumage and primary moult.

RESULTS & DISCUSSION

The 2017/18 data is presented, in Tables 1-4. These are drawn up in the same format as is previous years, except that the average percentage juveniles in Tables 3 and 4 now includes the current year. In south-east Australia some of the comparative data goes back for 40 years but in north-west Australia comprehensive data has only been collected for the last 20 years.

In spite of various practical difficulties, the total number of birds contributing to our assessment of the success of the 2017 Arctic breeding season was 1,802 in SEA and 1,252 in NWA. Although these are well down on the usual ballpark totals of 3-4,000 birds in each area, it is still sufficient to give a reasonable estimate of the proportion of juveniles in all except one of the species (Sanderling – SEA) monitored annually in the two regions (Tables 1 & 2). A total catch of at least 20 individuals is considered necessary to give a worthwhile estimate of the percentage of juveniles.

The past year is notable not only for its sampling difficulties but also as a year when the breeding success of most of the wader populations seems to have been the worst experienced during the course of the study. All eight species in NWA which could be assessed were recorded as having 'poor' breeding success in the 2017 Arctic breeding season. This is the first time NWA populations have been so uniformly poor in their apparent reproductive success. Only one of the main species monitored in NWA reached 10% juveniles, and that was Greater Sand Plover, with 13.2% juveniles in 2017/18 compared with a long-term average of 21.7%.

The outcome for wader populations spending the non-breeding season in SEA was almost as bad, with four out of six species having their 2017 breeding performance classed as 'poor' or 'very poor'. The stand-out exception was Sharp-tailed Sandpiper which appears to have had a very good breeding season, with 27.8% juveniles. Bar-tailed Godwit were also classed as having a good breeding season. This population of Bar-tailed Godwits breeds in Alaska, whereas those in NWA breed in Yakutia, in northern Siberia.

Overall, it appears that SEA and NWA have had more than their fair share of poor breeding results in recent years. In SEA it now means that in two of the last three breeding seasons there have now been very poor breeding outcomes. This is certainly not what is needed considering that the wader populations in the East Asian-Australasian Flyway are also suffering a severe impact from the reduced food supplies on migration. This is due to the huge losses of feeding habitat in the Yellow Sea caused by extensive land reclamation over the last 30 years.

In NWA Great Knot seem to be having a particularly bad run of breeding seasons, with 6.6% juveniles only being bettered once in the last seven breeding seasons. Even Greater Sand Plovers, which used to reliably have 20-30% juveniles in their populations during the non-breeding season, have now had three successive poor breeding outcomes, with percentage juveniles only 10-13%. In NWA Terek Sandpipers and Grey-tailed Tattlers also seem to be having a bad period, with three successive poor breeding years.

CONCLUSION

With the 2017 Arctic breeding season being apparently the most unsuccessful since our detailed recording of the percentage juveniles began (40 year ago in SEA and 20 years ago in NWA) it is to be hoped that the 2018 breeding season brings a marked turn-around in fortunes. The critical events will mostly take place in the Arctic in June and July 2018, but we will have to wait until the bulk of the wader populations have reached Australia in November/December 2018 before we will really start to have an idea of 2018 breeding outcomes. Let us hope that there is a marked improvement to celebrate. Let us also hope for more conducive catching conditions in the next non-breeding season in Australia!

ACKNOWLEDGEMENTS

We are extremely grateful to the fieldwork teams of the Victorian Wader Study Group in SEA and the AWSG NWA 2018 team for all the fieldwork effort they have put in to try to obtain the best possible samples for breeding season outcome assessments in our wader populations. Their perseverance under often unsympathetic weather conditions was remarkable.

The authorities who granted the necessary ethics and banding permits in Victoria, Tasmania, South Australia and Western Australia are thanked.
Financial assistance in NWA by the WA Parks and Wildlife Department was greatly appreciated. The Global Flyway Network are thanked for supporting Chris Hassell.

Table 1. Percentage of juvenile (first year) waders in cannon-net catches in south-east Australia 2017/2018.

Species	No. of catches		Total caught	Juveniles		Long term median* % juvenile (years)	Assessment of 2017 breeding success
	Large (>50)	Small (<50)		No.	%		
Red-necked Stint *Calidris ruficollis*	4	6	946	36	**3.8**	16.0 (39)	Very Poor
Curlew Sandpiper *C. ferruginea*	2	5	259	14	**5.4**	10.6 (38)	Poor
Bar-tailed Godwit *Limosa lapponica*	0	1	49	10	**20.4**	17.3 (28)	Good
Red Knot *C. canutus*	0	2	21	7	**33.3**	58.0 (21)	Poor
Ruddy Turnstone *Arenaria interpres*	1	18	345	24	**7.0**	10.0 (27)	Poor
Sanderling *C. alba*	0	2	6	1	**-**	12.6 (25)	-
Sharp-tailed Sandpiper *C. acuminata*	1		176	49	**27.8**	15.0 (35)	Very Good

All birds cannon-netted in the period 2th November to 25th March except Sharp-tailed Sandpiper and Curlew Sandpiper to end February only and some Ruddy Turnstone and Sanderling to early April and one Sanderling catch in late April (2015).

*Does not include the 2017/2018 figures.

Table 2. Percentage of juvenile (first year) waders in cannon-net catches in north-west Australia in 2017/2018.

Species	No. of catches		Total caught	Juveniles		Assessment of 2017 breeding success
	Large (>50)	Small (<50)		No.	%	
Great Knot *Calidris tenuirostris*	4	3	661	16	2.6	Poor
Bar-tailed Godwit *Limosa lapponica*	2	2	133	4	3.0	Poor
Red-necked Stint *C. ruficollis*	0	3	73	5	8.1	Poor
Red Knot *C. canutus*	0	4	74	4	5.4	Poor
Curlew Sandpiper *C. ferruginea*	1	2	62	5	8.1	Poor
Ruddy Turnstone *Arenaria interpres*	0	3	8	1	(12.5)	-
Non-arctic northern migrants						

Table 3. Percentage of juvenile birds in wader catches in south-east Australia 1998/1999 to 2017/2018.

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	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	*Average (20yrs)*
Ruddy Turnstone	6.2	29	10	9.3	17	6.7	12	28	1.3	19	0.7	19	26	10	2.4	38	17	2.3	28.6	7.0	*14.4*
Red-necked Stint	32	23	13	35	13	23	10	7.4	14	10	15	12	20	16	22	17	19	6.0	31.3	3.8	*17.0*
Curlew Sandpiper	4.1	20	6.8	27	15	15	22	27	4.9	33	10	27	(-)	4	3.3	40	5.1	1.9	47.6	5.4	*16.8*
Sharp-tailed Sandpiper.	11	10	16	7.9	20	39	42	27	12	20	3.6	32	(-)	5	18	19	16	8.9	(-)	27.8	*18.5*
Sander-ling	10	13	2.9	10	43	2.7	16	62	0.5	14	2.9	19	21	2	2.8	21	14	6.8	17.5	(-)	*14.7*
Red Knot	(2.8)	38	52	69	(92)	(86)	29	73	58	(75)	(-)	(-)	78	68	(-)	(95)	(100)	(100)	90.3	33.3	*58.8*
Bar-tailed Godwit	41	19	3.6	1.4	16	2.3	38	40	26	56	29	31	10	18	19	45	15	26.7	12.5	20.4	*23.2*

All birds cannon-netted between 15th November and 25th March, except Sharp-tailed Sandpiper and Curlew Sandpiper to end February only and some Ruddy Turnstone and Sanderling to early April and one Sanderling catch in late April (2015). Averages (for 20 years) exclude figures in brackets (small samples) and include 2017/2018 figures

Table 4. Percentage of first year birds in wader catches in north-west Australia 1998/1999 to 2017/2018

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**	**10/11**	**11/12**	**12/13**	**13/14**	**14/15**	**15/16**	**16/17**	**17/18**	**Average (20yrs)**
Red-necked Stint *Calidris ruficollis*	26	46	15	17	41	10	13	20	21	20	10	17	18	24	15	19	10	11.1	17.2	6.8	*18.8*
Curlew Sandpiper *C. ferruginea*	9.3	22	11	19	15	7.4	21	37	11	29	10	35	24	1	1.9	23	18	0.7	40.3	8.1	*17.4*
Great Knot *C. tenuirostris*	2.4	4.8	18	5.2	17	16	3.2	12	9.2	12	6	41	24	6	6.6	5	6	5.7	9.0	2.6	*10.7*
Red Knot *C. canutus*	3.3	14	9.6	5.4	32	3.2	(12)	57	11	23	12	52	16	8	1.5	8	13	2.7	21.6	5.4	*15.8*
Bar-tailed Godwit *Limosa lapponica*	2.0	10	4.8	15	13	9.0	6.7	11	8.5	8	4	28	21	8	7.6	17	5	10.3	11.0	3.0	*10.4*
												Non-arctic northern migrants									
Greater Sand Plover *Charadrius leschenaultii*	25	33	22	13	32	24	21	9.5	21	27	27	35	17	19	28	21	20	10.5	12.4	13.2	*21.7*
Terek Sandpiper *Xenus cinereus*	12	(0)	8.5	12	11	19	14	13	11	13	15	19	25	5	12	15	12	9.2	5.8	3.8	*12.5*
Grey-tailed Tattler *Heteroscelus brevipes*	26	(44)	17	17	9.0	14	11	15	28	25	38	24	31	20	18	16	19	8.9	14.5	7.3	*18.9*

All birds cannon-netted in the period 1 November to mid-March. Averages exclude figures in brackets (small samples) but include 2017/2018 figures.

VWSG Financial Report 2017/2018

The 2017/2018 financial year was one of increases - in income, in field expenses and in reserves.

The increase in income came about largely on the back of non-recurring events. Deakin University, which partners the VWSG on tracking of Ruddy Turnstone and Curlew Sandpiper, and which directly purchases the geo-locators, also contributed $10,400 (for the 1,040 birds it was able to use for avian disease testing). Xenia Dennett again sent a generous cheque, as did Jim and Jenni Reside who made a significant donation.

Coast Australia donated $500 after fieldwork at Werribee was organised to facilitate filming that raises the awareness of our studies and the lives of the shorebirds.

Despite income this year being just over $28,000, the income that realistically can be expected each year is much lower, so we must continually explore possible additional sources of funding.

The Group was again fortunate to receive a grant from CoastCare (this year $5086) for the long-term study of waders and terns. The money is deployed to assist with fieldwork and equipment costs, which increased by almost $5000, to almost $9000. Last year, for a number of reasons, the amount spent was abnormally low.

Engraved flags were the largest purchase, and have been becoming increasingly expensive, because they are paid in US dollars. We also apply engraved flags to a wider range of species now than in the past. It was necessary for the first time to pay for the transport of a vehicle to King Island. It has also been decided to make the Annual Bulletin in hard copy more widely available and thus costs will potentially double. If there is a need to purchase geo-locators, that would be a significant expense, as these are in the order of $200 each.

Raising the membership subscription would be one option for increasing funds, but that would raise little in relation to needs. Additionally, it is recognised that much of the expenditure incurred is borne in-kind by the members themselves, and thus do not appear in the accounts. Many thousands of dollars are spent each year on air travel, and fuel costs to reach catching sites. The VWSG ‘office’ operates out of a number of private homes, with the associated costs of phone, computer and stationery. Maintenance work is done in home workshops where equipment is often bought to undertake various tasks.

Donations are a potential source of income, and to this end the committee will investigate whether the Group would be an eligible organisation for personal income tax deductibility.

The new financial year starts with an asset base of $72,849.50. In recent years expenditure has sometimes outpaced income, and the continuing use of reserves would not be viable long-term, particularly as developments in technology, which improve research outcomes, also increase the cost of the research.

Nonetheless, the fiscal rigour of past years has enabled the VWSG to be in a most satisfactory financial position.

Helen Vaughan

Victorian Wader Study Group Inc. ABN 12 794 488

Income and Expenditure Statement for the year ended 30 June 2018

Income		**Expenditure**	
Subscriptions	3875.00	Printing of Bulletins	1001.00
Donation, Xenia Dennett	5000.00	Permits/licences	80.00
Donations, other members	1100.00	Secretarial Assistance	5453.00
Grant, CoastCare	5086.00	Bank Charges	67.17
Donation, Coast Australia	500.00	Incorporation Fee	56.90
Interest, cheque account	19.74	Website	71.40
Interest, cash reserves	184.60	Trailer Registration	58.10
Interest, term deposit	1580.15	Mann's Beach costs	70.00
Deakin University	10400.00	Postage, admin supplies	135.13
Sub-total	**$27745.49**	**Sub-total**	**$6992.70**
Excess, AGM meals	9.20	Engraved Flags	3056.01
Raffle, auction, sales (at AGM)	444.00	Black Powder	895.00
		Fuses	1207.80
		Cannon/projectile maintenance	834.20
		New radios	776.46
		Vehicle ferry, King Island	872.40
		Rubbers	179.55
		Calipers	98.00
		Netting / dye	130.00
		Solvent, adhesives, grease	221.76
		Trailer Repair	64.97
		Chairs	269.00
		Miscellaneous	134.35
Sub-total	**$453.20**	**Sub-total**	**$8739.50**
TOTAL INCOME	**$28198.69**	**TOTAL EXPENDITURE**	**$15732.20**

Cash balance at 01/07/2017		*Cash balance at 30/06/2018*	
Westpac Cheque Account	12077.98	Westpac Cheque Account	12714.39
Westpac Cash Reserve	12193.60	Westpac Cash Reserve	22377.20
Westpac Term Deposit	35864.63	Westpac Term Deposit	37444.78
Macquarie Cash Account	231.80	Macquarie Cash Account	228.63
Petty Cash	15.00	Petty Cash	84.50
NET TOTAL	**$60383.01**	**NET TOTAL**	**$72849.50**

VWSG Membership List 2017

Ruby Albury	Joris Driessen	Tania Ireton	Lorraine Moore	Charles Silveira
Heather Alexander	Graham Duell	Roz Jessop	John Newman	Hannah Smith
Charles & Jocelyn Allen	James Dunlop	Penny & Murray Johns	Maureen, Paul, Jordan, O'Neill	Mark & Mem Smith
Malcolm Allen	Dianne Emslie	Steve Johnson	Priscilla Park	Roger Standen
Mark Anderson	Alice Ewing	Greg Kerr	Graham & Vicki Parkyn	Jonathon Stevenson
Peter Anton	Jon Fallaw, Becky Hayward	Debbie King	Penelope Pascoe	Iain & Sandy Stewart
Robyn & Steve Atkinson	Maureen & Robin Fitzgerald	Marcel Klaassen	Rob & Linda Patrick	John Stoney
Rose Baulch	Andrea Fullagar	Irma Kluger	Reece Pedler	Bob Swindley
Graham & Jenny Beal	Amelia Formby	Tessa & Angus Lamin	Sara Petrovic	Naoko Takeuchi
Robert Brinkman	Colin & Angela Gibbs	Brett Lane	Hugo Phillipps	Laura Tan
Andy Bennett, Kate Buchanan	Don & Joyce Gillespie	Bruce Lavender	Heather & Jim Phillipson	Christine Taylor
Margaret Bennett	Kate Gorringe-Smith	Hannah Lee	Alan & Wendy Pilkington	Susan Taylor
Rob & Gail Berry	Ken & Carlene Gosbell	John Lesku	Mike Preeston	Deryn Thomas
Steve Bianchi	Andrew & Kath Gosden	Sally Leonard	Thomas Putt	Lyne Thomas
David Billinghurst	Olivia Gourley	Mark Lethlean & family	Susan Quirk	David & Wendy Trudgen
Malcolm & Judy Brown	Doris Graham	Simeon Lisovski	Ann Renkin	Connor Van Doorn
Andrew Browne	Nathan Gregory	Janet Limb	Jim & Jenni Reside	Mary-Ann Vantrigt
Sue Bryson	Nicole Grenfell	Moira Longden	Roger & Annabel Richards	Inka Veltheim
Paul & Anna Buchhorn	Patrick-Jean Guay	Richard & Debbie Loyn	Alice Risely	Dan Weller
Margaret Cameron	Jim & Surong Gunn	Callum Luke	Don & Jude Ripper	Andrea West
Jeff & Sarah Campbell	Angie Gutowski	John & Susie Lyons	Bruce Robertson	Mike Weston
Mervyn & Ann Chappel	Petra Hanke, Chris Scholz	Meg Macmillan	Ken & Annie Rogers	David & Jean Wilbraham
Rob Clemens	Birgita Hansen	Clare McCutcheon	Danny Rogers	Michelle Wille
Richard Chamberlain	Neville Hatten, Robin Borland	Joan McDonald	Don & Greta Robertson	David Wilson
Smathie Chong	Peter Hermans	Rod McFarlane, Helen Vaughan	Neville & Nancy Roussac	Jeannine Wilson
Maureen Christie	Oki Hidayat	Pat Macwhirter	Matt Rowan	Jack Winterbottom
Allan Clarke & Marj Reni	Jenny Hiscock	Grace Maglio	Graeme & Margaret Rowe	Sharon Woodend
Bretan Clifford	David & Margaret Hollands	Ila Marks, Eric Miller & Heidi	Michelle Sabto	Prue Wright
Pete Collins, Holly Sitters	Vivien Holyoake	Brian Martin	Sonia Sanchez Gomez	Meijuan Zhao
Mike Connor	Andrej Hohmann	Gary Matthews	Liz Sarrailhe	Elizabeth Znidersic
Michael Dawkins	Patsy Hohnen	Golo Maurer		
Bob Dawson	Yvonne Honey	David Melville		
Xenia Dennett	Tracey-Ann Hooley	Clive & Pat Minton		

Bulletins are also sent within Australia to:

Australian Bird and Bat Banding Scheme
Australasian Wader Studies Group
Birdlife Australia
Broome Bird Observatory
Coastcare
CSIRO Library, ACT
Dept of Environment, Land, Water and Planning (Vic)
Dept of Environment and Energy
Dept of Natural Resources (SA)
Eyre Bird Observatory
Melbourne Water
National Library, Australia
Parks Victoria (Foster, French Island, Queenscliff, Wonthaggi)
Phillip Island Nature Park
State Library, Victoria
Victoria Museum
Victorian Ornithological Research Group
Wader Study Groups (NSW, NWA, Qld) and landowners on whose property the VWSG operates

And overseas to:

Alaska: Shorebird Working Group
China: National Bird Banding Centre of Chongming Dongtan National Nature Reserve
Institute of Biodiversity Science
Hong Kong: Hong Kong Birdwatching Society
Mai Po Nature Reserve
Indonesia: Wetlands International
Japan: Bird Migration Research Centre
Korea: National Institute of Biological Resources
New Zealand: New Zealand Wader Study Group
Russia: Zoology Museum of Moscow University
Singapore: Sungei Buloh Wetland Reserve
United KIngdom: Highland Ringing Group
Wash Wader Ringing Group
and a number of individuals who advise leg flag sightings