# *VWSG BULLETIN*

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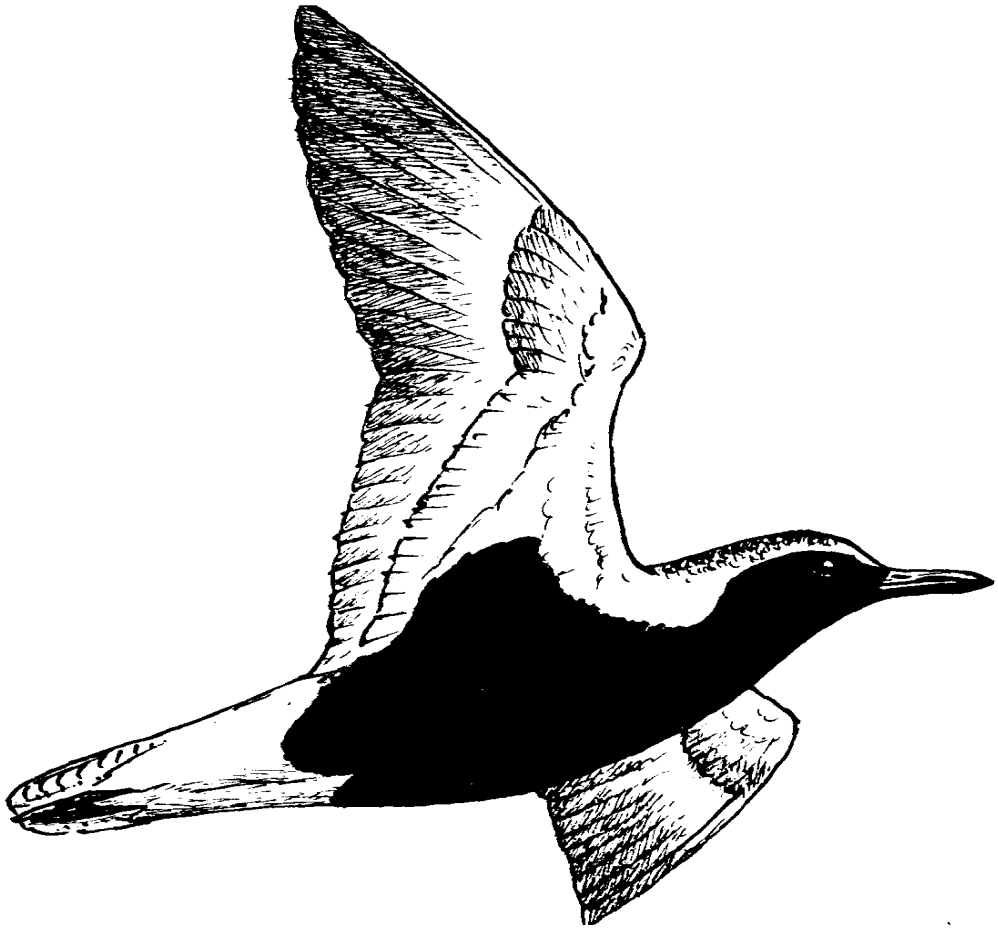

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# VICTORIAN WADER STUDY GROUP INC.

## 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 South-eastern Australia 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.

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Subscriptions for 2021/22 (payable in advance on 1 July 2021)

| | |
|---|---|
| Full Member | $30.00 |
| Student | $15.00 |

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Views and opinions expressed in the VWSG Bulletin are those of the author(s) and not necessarily those of the VWSG.



VWSG WEB SITE www.vwsg.org.au
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## Report from the Chair of the VWSG 2020/21

The Year in Review: Terrifying, tumultuous, interspersed with stultifying boredom. All better words than unprecedented which is incorrect as there are plenty of precedents in history to this ongoing Pandemic.

And despite it all, we have still managed to get out there and catch birds and deploy and recover geolocators. Our work has continued, albeit at a reduced level in the field due to restricted movement and assembly rules, but also behind the scenes in re-organising our committee structure and formalising training through the work of our Leadership, Teams and Training (LTT) sub-committee.

The first training day organised by the LTT sub-committee, for more advanced members wishing to learn from our Cannon netting team leaders, was a great success apart from the Grand Finale where one of the cannons didn't fire, which lead to an impromptu lesson in forensic examination. An exercise that we had to repeat twice more on our King Island trip.

The LTT sub-committee has been active in reviewing, and bringing up to date, our Field Operations manual. Their work on this has highlighted the need for the VWSG to move to a "Cloud" storage model to ensure that work is not lost when a member's computer ceases to function or the member is unavailable to retrieve the data.

Our Field Operations sub-committee has had a particularly hard time of late, trying to find suitable dates between lockdowns (another word that has entered our lexicon), only to discover during the "recce" that the birds no longer use that traditional roosting site. This is occurring across Port Phillip Bay and Westernport as well as Corner Inlet. Typical reasons appear to be rising tides and storms have swept away traditional spits or modified them so much that catching is now too difficult to achieve safely (either for the birds or for us). Vegetation, such as mangroves, is also encroaching on some sites, altering sight lines and making the roost undesirable from a wader's perspective. Efforts to find where the waders are now roosting are ongoing, but a recent project by Professor Marcel Klaassen at Deakin University, using short range trackers that allow the data to be retrieved by mobile phone, without recapturing the bird, offer one possible solution. Watch this space.

It must now be obvious that the VWSG has moved beyond being an organisation where all knowledge and decision making power resided in a single individual, to a decentralised model where members contribute to all decisions by collaborating through a committee structure. It has been pleasing to watch members utilising their accumulated wisdom and organising themselves and taking the VWSG forward, and not standing idly by, waiting for someone else to take charge, as so often happens when a strong, dominant leader departs an organisation. Thus, we become a stronger, more resilient body, which will allow our work to continue long after we are no longer able.

And finally, no organisation seems complete these days without a Social Media and Web presence and accompanying merchandise. To this end I must thank Birgita Hansen and Michelle Wille. In Michelle's case she has added fashion designer to her activities and a new VWSG T-shirt will be unveiled at the AGM. If academia loses it shine, a stellar career in the fashion industry awaits! I look forward to seeing you, both in the field and hopefully in-person at the AGM.

Steven E Atkinson. Chair. Victorian Wader Study Group

**VWSG: Total Number of Waders Caught, by Species, 2020**

| | New | Retrap | Total |
|---|---|---|---|
| | | | |
| Latham's Snipe | 5 | 2 | 7 |
| Ruddy Turnstone | 63 | 13 | 76 |
| Red-necked Stint | 378 | 246 | 624 |
| Sharp-tailed Sandpiper | 100 | 3 | 103 |
| Curlew Sandpiper | 106 | 70 | 176 |
| Pied Oystercatcher | 6 | 1 | 7 |
| Sooty Oystercatcher | 1 | 0 | 1 |
| Black-winged Stilt | 26 | 0 | 26 |
| Red-necked Avocet | 5 | 0 | 5 |
| Double-banded Plover | 6 | 1 | 7 |
| Hooded Plover | 13 | 0 | 13 |
| 11 Species | **709** | **336** | **1045** |

Table prepared by Helen Vaughan

The number of species and individuals caught was again reduced in 2020.

VWSG: Total Waders Caught, by Species

1975 to December 2020

| Species | New | Retrap | Total | % retrap |
|---|---|---|---|---|
| | | | | |
| Latham's Snipe | 533 | 39 | 572 | 7 |
| Australian Painted Snipe | 1 | 0 | 1 | - |
| Black-tailed Godwit | 4 | 0 | 4 | - |
| Bar-tailed Godwit | 5965 | 831 | 6796 | 12 |
| Short-billed Dowitcher | 1 | 0 | 1 | - |
| Whimbrel | 49 | 6 | 55 | 11 |
| Eastern Curlew | 875 | 90 | 965 | 9 |
| Marsh Sandpiper | 2 | 0 | 2 | - |
| Common Greenshank | 542 | 64 | 606 | 11 |
| Terek Sandpiper | 37 | 1 | 38 | 3 |
| Grey-tailed Tattler | 38 | 3 | 41 | 7 |
| Ruddy Turnstone | 6960 | 3857 | 10817 | 36 |
| Great Knot | 704 | 89 | 793 | 11 |
| Red Knot | 5366 | 746 | 6112 | 12 |
| Sanderling | 5991 | 2158 | 8149 | 26 |
| Little Stint | 9 | 0 | 9 | - |
| Red-necked Stint | 132942 | 36058 | 169000 | 21 |
| Long-toed Stint | 1 | 0 | 1 | - |
| Pectoral Sandpiper | 2 | 0 | 2 | - |
| Sharp-tailed Sandpiper | 11478 | 490 | 11968 | 4 |
| Curlew Sandpiper | 28641 | 5491 | 34132 | 16 |
| Cox's Sandpiper | 1 | 0 | 1 | - |
| Broad-billed Sandpiper | 7 | 0 | 7 | - |
| Red-necked Phalarope | 1 | 0 | 1 | - |
| Sth Island Oystercatcher | 1 | 0 | 1 | - |
| Pied Oystercatcher | 3549 | 1762 | 5311 | 33 |
| Sooty Oystercatcher | 1121 | 422 | 1543 | 27 |
| Black-winged Stilt | 85 | 0 | 85 | - |
| Banded Stilt | 2112 | 8 | 2120 | - |
| Red-necked Avocet | 928 | 132 | 1060 | 12 |
| Pacific Golden Plover | 270 | 26 | 296 | 9 |
| Grey Plover | 201 | 33 | 234 | 14 |
| Red-capped Plover | 804 | 188 | 992 | 19 |
| Double-banded Plover | 4175 | 1045 | 5220 | 20 |
| Lesser Sand Plover | 115 | 11 | 126 | 9 |
| Greater Sand Plover | 31 | 3 | 34 | 9 |
| Black-fronted Plover | 61 | 4 | 65 | 6 |
| Hooded Plover | 122 | 12 | 134 | 10 |
| Red-kneed Dotterel | 136 | 11 | 147 | 7 |
| Masked Lapwing | 200 | 5 | 205 | 2 |
| **40 Species** | **214061** | **53585** | **267646** | |

Table prepared by Helen Vaughan

This table now includes Latham's Snipe data collected as part of a collaborative project commenced in 2015 with Federation University Ballarat.

| VWSG: New and Retrapped Waders Caught Each Calendar Year | | | |
|---|---|---|---|
| **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 | 5924 | 1176 | 7100 |
| 2016 | 3092 | 839 | 3931 |
| 2017 | 2672 | 1053 | 3725 |
| 2018 | 1622 | 645 | 2267 |
| 2019 | 1526 | 650 | 2176 |
| 2020 | 709 | 336 | 1045 |
| **Totals to end 2020** | **214064** | **53582** | **267646** |

Average annual total for 1979- 2020 = 6314 *excluded from average

This table now includes Latham's Snipe data ( 2015 to present ) collected in a collaborative project with Federation University Ballarat.

Table prepared by Helen Vaughan

The total of 1045 birds caught in the calendar year is the lowest since the VWSG began cannon-netting shorebirds. Annual catch totals have declined in recent years, in part because the catching program has been reduced to more focused targets, and in part because declining numbers at several sites have made catching more difficult.

The proportion of retrapped birds (32.1%) was the highest annual proportion ever recorded, greatly exceeding the long-term average of 20.0%

## VWSG: Total Waders Caught Each 6 Months 1979 - 2020

| Calendar Year | January to June | July to December | Total |
|---|---|---|---|
| 1975 | | | 9 |
| 1976 | | | 620 |
| 1977 | | | 494 |
| 1978 | | | 1338 |
| 1979 | 4289 | 3633 | 7922 |
| 1980 | 4127 | 3200 | 7327 |
| 1981 | 2113 | 3317 | 5430 |
| 1982 | 2394 | 2176 | 4570 |
| 1983 | 2882 | 621 | 3503 |
| 1984 | 2654 | 2663 | 5317 |
| 1985 | 3972 | 1152 | 5124 |
| 1986 | 5000 | 4201 | 9201 |
| 1987 | 3135 | 3774 | 6909 |
| 1988 | 5235 | 5481 | 10716 |
| 1989 | 3854 | 3167 | 7021 |
| 1990 | 1661 | 4383 | 6044 |
| 1991 | 2376 | 1698 | 4074 |
| 1992 | 3357 | 2156 | 5513 |
| 1993 | 5287 | 6132 | 11419 |
| 1994 | 2789 | 3803 | 6592 |
| 1995 | 1521 | 1812 | 3333 |
| 1996 | 1802 | 4496 | 6298 |
| 1997 | 1913 | 3503 | 5416 |
| 1998 | 5568 | 3923 | 9491 |
| 1999 | 4142 | 3964 | 8106 |
| 2000 | 5987 | 6957 | 12944 |
| 2001 | 3851 | 2308 | 6159 |
| 2002 | 8174 | 4409 | 12583 |
| 2003 | 3033 | 8316 | 11349 |
| 2004 | 1288 | 5046 | 6334 |
| 2005 | 5003 | 3210 | 8213 |
| 2006 | 5192 | 2951 | 8143 |
| 2007 | 3646 | 1967 | 5613 |
| 2008 | 3812 | 2116 | 5928 |
| 2009 | 2726 | 2070 | 4796 |
| 2010 | 2136 | 1629 | 3765 |
| 2011 | 1967 | 3154 | 5121 |
| 2012 | 3199 | 1268 | 4467 |
| 2013 | 3270 | 2218 | 5488 |
| 2014 | 2768 | 1944 | 4712 |
| 2015 | 4651 | 2449 | 7100 |
| 2016 | 1988 | 1943 | 3931 |
| 2017 | 2880 | 845 | 3725 |
| 2018 | 1480 | 787 | 2267 |
| 2019 | 1907 | 269 | 2176 |
| 2020 | 605 | 440 | 1045 |
| **Totals to end 2020** | **139634** | **125551** | **267646** |

Table prepared by Helen Vaughan
Note: Six month data are not available for years 1975 - 1978.

This table now includes Latham's Snipe data (2015 to present) collected in a collaborative project with Federation University, Ballarat.

In general, the VWSG catches more birds in the first six months of the year than in the last six months. This is because the largest catches are made in the mid to late summer in order to assess age ratios. In 2020, the number of birds captured in the perod June-December was particularly low, in part due to COVID-19 restrictions and in part because catching at the Western Treatment Plant proved to be so difficult; traditionally large catches at this site are made between Christmas and New Year.

## Location of Waders caught in Victoria, South Australia, Tasmania & ACT

| | To Dec 2019 | 2020 | Total |
|---|---|---|---|
| Werribee | 74954 | 174 | 75128 |
| Western Port/Flinders | 72599 | 767 | 73366 |
| Queenscliff/Swan Bay | 31975 | 0 | 31975 |
| Corner Inlet | 33198 | 0 | 33198 |
| Anderson Inlet (Inverloch) | 22319 | 0 | 22319 |
| Sandy Point/Shallow Inlet | 2788 | 0 | 2788 |
| Laverton | 956 | 0 | 956 |
| Mud Islands | 757 | 0 | 757 |
| Killarney Beach | 512 | 1 | 513 |
| Port Fairy | 141 | 0 | 141 |
| Barwon Heads | 845 | 0 | 845 |
| Other | 628 | 0 | 628 |
| | | | |
| **South Australia** | 20799 | 96 | 20895 |
| | | | |
| **Tasmania** | 4157 | 0 | 4157 |
| | | | |
| **ACT** | 63 | 7 | 70 |
| | | | |
| **Total** | 266691 | 1045 | 267736 |

Other includes Geelong (Point Henry/Belmont), Bendigo Sewage Farm, Seaford Swamp, Braeside/Croydon, Gippsland Lakes and Toowong.
This table now includes Latham's Snipe data (2015 to present) collected in a collaborative project with Federation University, Ballarat.
Catch numbers were moderate in Victoria in 2020. The catching program was impeded by COVID-19, as it was in the previous year, and it again proved difficult to make catches in Corner Inlet and at the Western Treatment Plant.

| Number of birds processed by the VWSG each month to December 2020 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **J** | **F** | **M** | **A** | **M** | **J** | **J** | **A** | **S** | **O** | **N** | **D** | **TOTAL** |
| Latham's Snipe | 97 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 115 | 158 | 107 | 87 | 614 |
| 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 | 938 | 1513 | 831 | 99 | 24 | 842 | 292 | 286 | 77 | 335 | 294 | 566 | 6097 |
| Whimbrel | 3 | 2 | 41 | 0 | 0 | 1 | 0 | 0 | 1 | 4 | 3 | 0 | 55 |
| Eastern Curlew | 26 | 181 | 24 | 0 | 24 | 18 | 21 | 76 | 175 | 149 | 180 | 100 | 974 |
| Common Greenshank | 69 | 135 | 123 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 178 | 60 | 606 |
| 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 | 3565 | 2305 | 39 | 23 | 77 | 103 | 138 | 230 | 1793 | 1093 | 10592 |
| Great Knot | 198 | 87 | 26 | 0 | 0 | 30 | 21 | 6 | 16 | 118 | 78 | 131 | 711 |
| Red Knot | 930 | 418 | 317 | 216 | 47 | 491 | 479 | 139 | 96 | 1012 | 566 | 318 | 5029 |
| Sanderling | 376 | 1654 | 2229 | 883 | 0 | 0 | 1 | 5 | 0 | 265 | 893 | 725 | 7031 |
| Little Stint | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 9 |
| Red-necked Stint | 3385 | 1931 | 7450 | 3049 | 546 | 749 | 1097 | 988 | 1140 | 2144 | 3733 | 4449 | 30661 |
| 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 | 1863 | 1158 | 268 | 3 | 0 | 0 | 0 | 16 | 635 | 564 | 748 | 3686 | 8941 |
| Curlew Sandpiper | 1844 | 1726 | 2054 | 289 | 223 | 128 | 335 | 528 | 348 | 1140 | 943 | 1973 | 11531 |
| 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 | 173 | 268 | 417 | 648 | 827 | 1053 | 887 | 517 | 235 | 41 | 43 | 71 | 5180 |
| Sooty Oystercatcher | 23 | 110 | 87 | 220 | 255 | 386 | 312 | 144 | 0 | 1 | 9 | 3 | 1550 |
| Black-winged Stilt | 6 | 9 | 0 | 0 | 0 | 0 | 1 | 12 | 0 | 4 | 2 | 50 | 84 |
| Banded Stilt | 107 | 50 | 12 | 41 | 59 | 0 | 0 | 0 | 15 | 0 | 0 | 162 | 446 |
| Red-necked Avocet | 345 | 0 | 0 | 0 | 14 | 0 | 26 | 78 | 279 | 171 | 47 | 94 | 1054 |
| Pacific Golden Plover | 40 | 27 | 62 | 2 | 0 | 0 | 0 | 0 | 0 | 28 | 66 | 65 | 290 |
| Grey Plover | 38 | 14 | 15 | 7 | 0 | 9 | 0 | 0 | 2 | 102 | 44 | 5 | 236 |
| Red-capped Plover | 46 | 90 | 70 | 124 | 210 | 110 | 77 | 35 | 12 | 25 | 41 | 50 | 890 |
| Double-banded Plover | 0 | 4 | 268 | 375 | 757 | 984 | 1165 | 1032 | 1 | 0 | 0 | 0 | 4586 |
| 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 | 5 | 0 | 11 | 16 | 7 | 9 | 2 | 0 | 4 | 8 | 69 |
| Hooded Plover | 14 | 3 | 12 | 5 | 2 | 15 | 0 | 1 | 2 | 3 | 7 | 4 | 68 |
| 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 | 11094 | 10259 | 17990 | 8315 | 3048 | 4921 | 4817 | 3994 | 3302 | 6552 | 9844 | 13755 | 97891 |
| Table prepared by Helen Vaughan | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| *"Processed " means that two or more of the following were recorded for a bird : bill length, total head length, wing length, weight or primary moult.* | | | | | | | | | | | | | |
| This table now includes Latham's Snipe data (2015 to present) collected in a collaborative project with Federation University, Ballarat. | | | | | | | | | | | | | |

## Numbers of Waders Leg-flagged by VWSG

| | 1989-2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Latham's Snipe | 278 | 0 | 0 | 0 | 0 | 0 | 13 | 42 | 86 | 29 | 11 | 5 | 464 |
| Australian Painted Snipe | 0 | 0 | 1 | 0 | 0 | 0 | 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 | 3162 | 308 | 243 | 207 | 10 | 153 | 87 | 191 | 14 | 47 | 91 | 0 | 4513 |
| Whimbrel | 44 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| Eastern Curlew | 552 | 0 | 38 | 9 | 0 | 4 | 0 | 0 | 0 | 0 | 2 | 0 | 605 |
| Marsh Sandpiper | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Common Greenshank | 456 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 1 | 0 | 0 | 463 |
| 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 | 2673 | 348 | 455 | 170 | 317 | 375 | 259 | 131 | 259 | 256 | 315 | 51 | 5609 |
| Great Knot | 385 | 0 | 4 | 5 | 0 | 2 | 0 | 2 | 0 | 1 | 1 | 0 | 400 |
| Red Knot | 3818 | 17 | 50 | 75 | 4 | 20 | 73 | 27 | 39 | 13 | 2 | 0 | 4138 |
| Sanderling | 2652 | 277 | 439 | 280 | 159 | 179 | 78 | 26 | 128 | 5 | 97 | 0 | 4320 |
| Little Stint | 6 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| Red-necked Stint | 59968 | 1496 | 2043 | 497 | 1943 | 1856 | 991 | 1054 | 875 | 66 | 125 | 0 | 70914 |
| Pectoral Sandpiper | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Sharp-tailed Sandpiper | 5479 | 11 | 110 | 99 | 135 | 106 | 553 | 14 | 39 | 473 | 123 | 100 | 7242 |
| Curlew Sandpiper | 10504 | 382 | 47 | 235 | 381 | 120 | 575 | 292 | 371 | 213 | 257 | 0 | 13377 |
| Cox's Sandpiper | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Broad-billed Sandpiper | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| Red-necked Phalarope | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Black-winged Stilt | 26 | 0 | 2 | 0 | 5 | 0 | 2 | 0 | 0 | 0 | 6 | 26 | 67 |
| Banded Stilt | 152 | 54 | 332 | 15 | 1097 | 53 | 74 | 0 | 0 | 0 | 0 | 0 | 1777 |
| Red-necked Avocet | 140 | 0 | 0 | 199 | 63 | 169 | 105 | 0 | 0 | 14 | 1 | 5 | 696 |
| Pacific Golden Plover | 64 | 0 | 2 | 1 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 70 |
| Grey Plover | 107 | 0 | 1 | 0 | 0 | 10 | 3 | 4 | 1 | 0 | 0 | 0 | 126 |
| Red-capped Plover | 108 | 5 | 7 | 21 | 4 | 19 | 28 | 23 | 1 | 3 | 2 | 0 | 221 |
| Double-banded Plover | 424 | 11 | 37 | 72 | 17 | 121 | 75 | 13 | 52 | 71 | 9 | 6 | 908 |
| 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 | 2 | 1 | 7 | 0 | 3 | 8 | 7 | 9 | 11 | 5 | 0 | 9 | 62 |
| Black-fronted Dotterel | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 6 |
| Red-kneed Dotterel | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Masked Lapwing | 37 | 0 | 1 | 2 | 0 | 1 | 3 | 0 | 4 | 0 | 0 | 0 | 48 |
| | | | | | | | | | | | | | |
| **Total** | **91142** | 2910 | 3820 | 1889 | 4138 | 3201 | 2932 | 1829 | 1880 | 1201 | 1042 | 202 | 116186 |

Table prepared by Helen Vaughan

This table includes all waders leg-flagged by the VWSG in Victoria, South Australia, King Island and the ACT since leg-flagging commenced.

**VWSG: Waders by Species 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 | 2018 | 2019 | 2020 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Latham's Snipe | 0 | 0 | 4 | 0 | 0 | 0 | 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 | 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 | 0 | 0 | 0 | 29 |
| Common Greenshank | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 0 | 0 | 1 | 0 | 0 | 7 |
| Ruddy Turnstone | 234 | 226 | 73 | 193 | 76 | 141 | 74 | 258 | 84 | 141 | 96 | 109 | 268 | 45 | 117 | 322 | 254 | 103 | 72 | 48 | 122 | 51 | 3107 |
| Great Knot | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 0 | 0 | 0 | 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 | 0 | 0 | 0 | 33 |
| Sanderling | 63 | 420 | 2 | 315 | 328 | 76 | 220 | 250 | 506 | 244 | 87 | 261 | 439 | 268 | 159 | 211 | 85 | 29 | 129 | 5 | 97 | 0 | 4194 |
| Red-necked Stint | 126 | 383 | 22 | 319 | 163 | 93 | 174 | 465 | 54 | 90 | 179 | 208 | 356 | 92 | 369 | 390 | 124 | 166 | 17 | 66 | 125 | 0 | 3981 |
| Sharp-tailed Sandpiper | 0 | 2 | 0 | 27 | 7 | 73 | 27 | 21 | 0 | 15 | 0 | 0 | 74 | 40 | 1 | 23 | 5 | 0 | 0 | 2 | 0 | 0 | 317 |
| Curlew Sandpiper | 24 | 11 | 0 | 190 | 13 | 2 | 103 | 8 | 21 | 33 | 1 | 4 | 15 | 0 | 7 | 8 | 0 | 0 | 3 | 0 | 0 | 0 | 443 |
| Broad-billed Sandpiper | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 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 | 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 | 0 | 0 | 0 | 36 |
| Grey Plover | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 5 | 4 | 1 | 0 | 0 | 0 | 20 |
| Red-capped Plover | 0 | 0 | 1 | 7 | 5 | 0 | 7 | 4 | 1 | 0 | 0 | 2 | 3 | 8 | 0 | 18 | 14 | 14 | 1 | 0 | 0 | 0 | 85 |
| Double-banded Plover | 0 | 0 | 4 | 5 | 1 | 0 | 0 | 27 | 2 | 0 | 1 | 5 | 29 | 12 | 0 | 3 | 0 | 0 | 0 | 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 | 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 | 5 | 0 | 9 | 75 |
| Masked Lapwing | 0 | 0 | 0 | 0 | 4 | 2 | 2 | 4 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 17 |
| **Total** | **447** | **1045** | **106** | **1062** | **599** | **396** | **623** | **1395** | **670** | **523** | **365** | **644** | **1524** | **495** | **1660** | **1060** | **505** | **336** | **245** | **127** | **344** | **60** | **14231** |

Table prepared by Helen Vaughan and Maureen Christie

**VWSG Field Work Programme June to Dec 2021**

Please find below the VWSG Fieldwork schedule for the rest of 2021 (download from link)

VWSG FIELDWORK PROGRAM

| *DATE* | *PLACE AND OBJECTIVES* | **Tide time and height (m)** | |
|---|---|---|---|
| **Tues 22 June to Thurs 24 June** | **Corner Inlet**<br>Overwintering Bar-tailed Godwit & Red Knot<br>Set net Tues 22 Jun<br>Stay overnight on 22 and 23 at Yanakie | 1047<br>to<br>1207 | 2.43<br><br>2.51 |
| **Sun 11 July** | **Stockyard Point**<br>Pied Oystercatchers | 1411 | 2.98 |
| **Sun 1 August** | **Cannon net training at Yallock Creek** | 1201 | 1.01(low) |
| **Sat 28 August** | **A.G.M.** Details to come. | | |
| **Thurs 9 September** | **Stockyard Point or Rhyll**<br>Pied Oystercatchers | 1435<br>(Sunset approx. 1805) | 2.88 |
| **Wed 6 to Fri 8 October** | **Corner Inlet Flag sightings** (Need to be on the mudflat at least three hours before high tide)<br>Subject to PV availability | 1234<br>1344<br>1449 | 2.19<br>2.22<br>2.30 |
| **Fri 29 October to Thurs 4 November** | **South Australia, Carpenter Rocks**<br>Retrieve and deploy geolocators on Ruddy Turnstone.<br>Fri 29 Oct and Thurs 4 Nov are travelling days to and from S.A. | 1015<br>1103<br>1132<br>1152<br>1209 | 0.83<br>0.89<br>0.92<br>0.92<br>0.88 |
| **Wed 10 November** | **Mud Islands**<br>Caspian Tern chicks & Crested Tern adults | 1015 | 0.58 (low) |
| **Thurs 11 to Sat 13 November** | **Yallock Creek**<br>Retrieve geolocators from Curlew Sandpiper and Red-necked Sint<br>Set net Thurs around 2pm. Catch early Fri. If no catch attempt again Sat morning. Overnight at Harewood House | 0724<br>0809<br><br>(sunrise approx.. 0603) | 3.01<br>2.85.<br> |
| **Wed 17 to Fri 26 November** | **King Island** Retrieve and deploy geolocators on Ruddy Turnstones. | 1101 to 1700 | 1.31 to 1.35 |

| | | | |
|---|---|---|---|
| **Wed 8 December** | **Mud Islands**<br>Caspian & Crested Tern chicks | 0914 | 0.62(low) |
| **Mon 27 to Thurs 30 December.** | **Western Treatment Plant (Werribee S.F)** *Set net Monday afternoon*<br>Red-necked Stint, Curlew Sandpiper and Sharp-tailed Sandpiper | Tues 0945<br>Wed 1018<br>Thurs 1057 | 0.91<br>0.91<br>0.90 |

**Please Note:**

Additional fieldwork may be added for this period and you will be advised accordingly

**Participant arrangements:**

The meeting time is normally 5 hours before high tide.

Please try and let **Penny** or **Rob** know, by email or by phone, several days before each fieldwork activity if you are planning to participate. This greatly helps reduce the number of phone calls which organizers have to make to complete a satisfactory team for each activity.


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0408 429 944


# Note:

# Coronavirus (COVID-19)

We ask that you continue to follow public health measures and stay informed here www.vic.gov.au/coronavirus

## Sightings of Waders Leg-flagged in Victoria, South Australia and King Island, Tasmania in 2020/2021

**Joris Driessen**

### Introduction

This year's report contains a near-comprehensive set of engraved 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 (engraved leg flags or ELFs) that were seen between July 1, 2020, and June 30, 2021. A total of 788 resightings of engraved flags were processed for this report.

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 resighting rates it is considered the vast majority of data has been received for 2020/2021. Note that many of the sightings are of the same birds many times over, particularly in areas where dedicated wader watchers are active.

### Victoria

A total of 388 VIC-flagged resightings were reported, of which 153 observations involved birds seen overseas. Bar-tailed Godwit make up the bulk of overseas observations (Table 1), largely as a result of efforts in South Korea (Andreas Kim) and New Zealand (Adrian Riegen, Tony Habraken *et al.*).

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

| Species | Australia | Indonesia | Japan | Mongolia | New Zealand | PR China | South Korea | Taiwan |
|---|---|---|---|---|---|---|---|---|
| Bar-tailed Godwit | 27 | | 2 | | 23 | 3 | 109 | |
| Black-winged Stilt | 23 | | | | | | | |
| Curlew Sandpiper | 124 | 1 | | 1 | | | | 6 |
| Double-banded Plover | 10 | | | | | | | |
| Far Eastern Curlew | 1 | | | | | | | |
| Red Knot | 2 | | | | | 1 | | |
| Red-necked Avocet | 29 | | | | | | | |
| Ruddy Turnstone | 2 | | | | | | | |
| Sharp-tailed Sandpiper | 17 | | | | | 3 | | 3 |
| Total | **235** | **1** | **2** | **1** | **23** | **7** | **109** | **9** |

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

**Indonesia**

Curlew Sandpiper Orange AY was recorded on East Java in November 2020 by Alfa Hardjoko. AY was banded as an adult in January 2015 at the Western Treatment Plant (WTP) and has been recorded – almost exclusively - every year between 2015 and 2018 at the same location.

**Japan**

Bar-tailed Godwit Orange HVX was recorded twice from Japan in April 2021, at Higashiyoka-higata (Nobuhiro Hashimoto) and a week later 100 km further south at Arao-higata (Yasuhiro Nakamura). Although only equipped with HVX in February 2019, this bird has promptly racked up five resightings during northward migration in 2020 and 2021, every time in the same area. At the time of sighting HVX was 15 years old, given that it was first captured in Corner Inlet in February 2007 at age 1.

**Mongolia**

For the second year running an exciting resighting was received from Mongolia: Silas Olofson saw Curlew Sandpiper Orange CVN at Gun Galuut Nature reserve (Tuv province) on 13 July 2020. CVN was banded as an adult at Yallock Creek in January 2019.

**New Zealand**

Adrian Riegen once again reported the arrival of Bar-tailed Godwit Orange AU in New Zealand, where it has been recorded every year since 2013. Last recorded this past season in March 2020 by Sue Cook and Marie Ward at Omaha, North Auckland, at the time of writing Adrian Riegen reported the safe arrival of AU at the same location on 21 September 2020.

The oldest godwit reported from New Zealand this season was Orange 95, banded age 1 in June 2009 in Corner Inlet. Seen by Adrian Riegen at Miranda in September 2020 this bird was 12 years old at the time

**South Korea**

Andreas Kim recorded a number of Victorian-flagged Bar-tailed Godwits in April/May 2021. One of the older birds among these was Orange P1, banded at Corner Inlet (age 1) in June 2009, which has by now quite a colourful past, having been recorded on an island in the Bering Sea, on New Zealand's South Island near Nelson and regularly at Aphea Island in South Korea. This latest record comes 3 years after it was last seen by Andreas in April 2018.

For the second year in a row Andreas Kim managed to photograph the metal band inscription on a Bar-tailed Godwit at Aphae Island in April 2021. Godwit '07301529' was first banded at age 1 in Corner Inlet in June 2005, making the bird 17 years old at the time of sighting. This was only a few days after Andreas read another metal band, this time on Orange '07301745', which was banded in Corner Inlet in February 2006 (age 1), making it 16 years old at the time of sighting.

**Taiwan**

Reports from Taiwan involved Curlew Sandpiper (6) and Sharp-tailed Sandpiper (3). The oldest of the bunch was Curlew Sandpiper Orange V0, originally banded in January 2014 on Barralliar Island (age 1) and not recorded since.

All other Curlew Sandpiper sightings were particularly valuable as they all involved birds seen for the first time since banding at the WTP between 2015 and 2016.

### Within Australia

Over half of Victorian-flagged shorebirds seen in Australia were reported by Maarten Hulzebosch (134). A ten year-old Curlew Sandpiper (Orange 1A) and an 11 year-old, Red-necked Avocet were among the highlights.

### South Australia

A total of 203 SA-flagged resightings were reported, of which 25 observations (Table 2) were reported from overseas.

**Table 2. Sightings of SA-flagged waders seen overseas and across Australia**

| Species | Australia | Hong Kong | Japan | Malaysia | PR China | Taiwan |
|---|---|---|---|---|---|---|
| Grey Plover | 2 | | | | | |
| Red-necked Stint | | | | 1 | | |
| Ruddy Turnstone | 156 | 3 | 8 | | 2 | 1 |
| Sanderling | 20 | | 7 | | 3 | |
| **Total** | **178** | **3** | **15** | **1** | **5** | **1** |

### Japan

Five observations were received from Japan: 7 Sanderling and 8 Ruddy Turnstone.

In the previous season Ruddy Turnstone Orange/Yellow WUL was recorded by Hitoshi Osuga in August 2019 on Hiraiso Beach, and clearly made it safely to Australia as it was seen near Carpenter Rocks (SA) in January 2020 and again in early April 2020. WUL was recorded again on southward migration at Hiraiso Beach in August 2020, where it was recorded several times between 1 and 10 August (Hitoshi Osuga, Hiroyuki Akita).

Sanderling Orange/Yellow 7M was reported for the first time since banding in southeast SA in November 2011 as an adult - Sakai Masashi reported 7M in August 2020 from the Shinkawa Estuary on Hokkaido, Japan.

Tied in age with 7M as the oldest Sanderling recorded this season was Orange/Yellow J8, banded at Yanerbie in November 2011 as an adult. J8 seems to favour beaches in Asahi-shi, where it has been recorded four times during southward migration between 2013 and 2020.

### Malaysia

Dave Bakewell put in a magnificent effort by taking sufficient photographs of the metal band on an SA-flagged, Red-necked Stint to allow identification at the individual level. Seen at Kuala Baram Wetlands, Miri, Sarawak, on 7 May 2021, this bird was banded as an adult on 12 April 2019 at Nene Valley, South Australia.

**Tasmania**

A total of 197 TAS-flagged resightings were reported, the vast majority of which involved birds recorded on the main banding site (King Island), primarily collected during the VWSG expeditions.

**Table 3. Sightings of King Island (TAS) flagged waders seen overseas and across Australia**

| Species | Australia | Japan | PR China | South Korea | Taiwan | Total overseas | Total sightings |
|---|---|---|---|---|---|---|---|
| Ruddy Turnstone | 176 | 1 | 5 | 1 | 14 | 4 | 197 |
| **Total** | **176** | **1** | **5** | **1** | **14** | **4** | **197** |

Orange/Blue ZTW was the oldest Tasmanian Ruddy Turnstone among those reported this season. First banded in March 2008, age 1, ZTW was 14 years old when Marcel Klaassen spotted it on King Island in March 2021.

UCL Blue/Orange (flagged 9 December 2018) with URE Orange/Yellow and UUV Orange/Yellow in Gerloff Bay, South Australia 7 August 2019. All three regularly seen at Cape Banks Lighthouse, South Australia, April 2020. Photo: Helen Bawd.

## Sightings of Waders Leg-flagged elsewhere and then seen in Victoria, South Australia or Tasmania in 2020/2021

**Joris Driessen**

This season, a total of 14 waders banded overseas or interstate were recorded. Six records were from Victoria and eight were from South Australia, with none from Tasmania. There were few reports compared with 159, 97, 98 and 82 in the past four seasons. No doubt this was largely due to restrictions on travel imposed in response to the COVID-19 pandemic.

### Victoria

Sightings of one wader flagged interstate and five flagged overseas were reported from Victoria (Table 1).

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

| Species | Hong Kong | New Zealand | Taiwan | Total overseas | Australia | | Total AU | Total |
|---|---|---|---|---|---|---|---|---|
| | | | | | Tas | SA | | |
| Curlew Sandpiper | 2 | | | 2 | | | 0 | 2 |
| Red Knot | | 1 | | 1 | | | 0 | 1 |
| Sanderling | | | | 0 | | 1 | 1 | 1 |
| Sharp-tailed Sandpiper | | | 2 | 2 | | | 0 | 2 |
| **Total** | **2** | **1** | **2** | **5** | **0** | **1** | **1** | **6** |

*Origin of Sharp-tailed Sandpiper unknown, seen with plain white flag, presumably lost rest of flag combination

Despite the small number of reports received this past season, as usual, the Western Treatment Plant (WTP) provided some interesting sightings. Curlew Sandpiper LA, banded at Mai Po, Hong Kong in April 2019 was reported twice by Maarten Hulzebosch. Sharp-tailed Sandpiper 4L, banded in Taiwan in August 2019, was reported by John Daniels and Dean Ingwersen. Both birds have been recorded at the Western Treatment Plant on two consecutive summers.

### South Australia

Sightings of seven waders flagged interstate and one flagged overseas were received from South Australia (Table 2).

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

| Species | China | Total overseas | Australia | | Total AU | Total |
|---|---|---|---|---|---|---|
| | | | Tas | Vic | | |
| Red Knot | | 0 | | 1 | 1 | 1 |
| Red-necked Avocet | | 0 | | 1 | 1 | 1 |
| Ruddy Turnstone | 1 | 1 | 5 | | 5 | 6 |
| **Total** | **1** | **1** | **5** | **2** | **7** | **8** |

Of particular interest was an observation of Ruddy Turnstone with plain Green/Blue flags (Jiangsu, China) in the Ceduna area (Andrew Brooks) and Red-necked Avocet Orange CLT (Mary-Ann van Trigt). CLT's sighting is only the second one since the bird was banded in October 2015 at Yallock Creek (VIC).

### Tasmania

No sightings of foreign or interstate-flagged shorebirds were reported from Tasmania for the 2020/21 season.

## Sightings of Oystercatchers Leg-flagged in Victoria, South Australia and King Island, Tasmania in 2020/2021

**Joris Driessen**

### Introduction

The tables below list all reported sightings of all three oystercatcher species flagged in Victoria, South Australia and Tasmania between 1 July 2020, and 30 June 2021. These birds were identified by individual colour bands and engraved leg flags.

After receiving fewer reports than usual in the 2019/2020 season oystercatcher reports are flowing in again. The tally of 477 sightings across the three species is the second-highest tally of the past five years. Special mention needs to go to Roz Jessop with 212 flag sightings this season. Grainne Maguire and Amy Adams of BirdLife Australia provided flag sightings collected during ongoing seasonal surveys of beach-nesting birds at Corner Inlet, Victoria.

### Victoria

A total of 463 observations of Pied and Sooty Oystercatchers flagged in Victoria, including the famous 'Syd the SIPO' (South Island Pied Oystercatcher) - were reported from across south-east Australia (Table 1).

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

| Species | Victoria | King Island | New South Wales | South Australia | Tasmania | Total sightings |
|---|---|---|---|---|---|---|
| Pied Oystercatcher | 428 | | 18 | 1 | 1 | 448 |
| Sooty Oystercatcher | 9 | 1 | | | 1 | 11 |
| South Island Pied Oystercatcher | | | 4 | | | 4 |
| **Total** | **447** | **1** | **22** | **1** | **2** | **463** |

<u>Pied Oystercatcher</u>

This season, the Victorian-flagged Pied Oystercatcher seen the furthest to the west was Red 99. It was recorded in March 2021 by Jeff Campbell at Port MacDonnell, South Australia. This bird was banded as a 2 year-old at Stockyard Point, Westernport in September 2012. It was seen near the banding location on several occasions until May 2014. Since then it seems to have settled near the Victorian/South Australian border with sightings from the Glenelg River Estuary, Nelson, Victoria, in late 2014 and Finger Point near Port MacDonnell, South Australia, in 2017.

Pied Oystercatcher Yellow 8K was the bird seen furthest to the south this season. It was recorded by Eric Woehler and Laura Smith at Patriarch's Inlet, Flinders Island, Tasmania in November 2020. It was banded in August 2006 at Barry Beach, Corner Inlet, and had not been reported since.

Pied Oystercatcher Yellow VW, the bird seen the greatest distance east was seen by Silas Darnell near Harrington, New South Wales, just over 900 km from its Corner Inlet banding location.

BirdLife' s Beach-nesting Birds Team, which recorded the oldest Pied Oystercatcher this season. Yellow YK was seen at Box Bank, Corner Inlet, in December 2020. Yellow YK was first banded as a 2 year-old at Stockyard Point, Westernport, in September 1994, so was at least 28 years old at the time of this most recent sighting. Originally this bird was colour-banded as WPN/RRM. It had been seen only once, in 1998, until retrapped in Corner Inlet in June 2015. The colour-bands were then replaced with a flag, Yellow YK. Subsequently, the bird has been recorded as a breeding bird at Corner Inlet in 2016, 2017, 2019 and 2020.

Sooty Oystercatcher

Seventeen sightings of Sooty Oystercatchers were reported in the past season. Most were from South East South Australia and Corner Inlet or Wilsons Promontory. During a shorebird count at Corner Inlet in late February 2021, Dan Weller, Steve Klose and Joris Driessen recorded Sooty Oystercatcher Yellow AP. This bird was first banded in June 1997 at Roussac's Farm, Corner Inlet, aged 3+, and equipped with colour bands BGB/YYM. It was subsequently retrapped at the banding location during late autumn or early winter in 1998, 2003 and 2015. In 2015 the colour-bands were replaced with an engraved leg flag, Yellow AP The bird was not reported again until 2021, at which time it was at least 27 years old!

South Island Pied Oystercatcher

South Island Pied Oystercatcher Red 1N ("Syd the SIPO") was seen on four occasions between July 2020 and February 2021 at Harrington and Worimi Conservation Lands, New South Wales.

**South Australia**

Seven Pied oystercatchers and four Sooty Oystercatchers flagged in South Australia were reported (Table 2). All were local breeding birds and were recorded within the state.

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

| **Species** | **South Australia** | **Total sightings** |
|---|---|---|
| Pied Oystercatcher | 7 | 7 |
| Sooty Oystercatcher | 4 | 4 |
| **Total** | **11** | **11** |

**Tasmania**

Two observations of Tasmanian-flagged Sooty Oystercatchers were reported from King Island and one Pied Oystercatcher was recorded in Victoria (Table 3).

Pied Oystercatcher Black N6 was seen by Gary Matthews at Stockyard Point on 19 March 2021. Black N6 was first banded as an adult near Manuka, King Island in February 2015 and had not previously been reported.

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

| Species | King Island | Victoria | Total sightings |
|---|---|---|---|
| Pied Oystercatcher | 0 | 1 | 1 |
| Sooty Oystercatcher | 2 | 0 | 2 |
| **Total** | **2** | **1** | **3** |

Pied Oystercatcher 99 near Port MacDonnell. Photo: Sarah Campbell

## Tern Flag Sighting Report 2020/21

### Joris Driessen

Twenty-nine tern sightings were reported for the 2020/21 season. This year, for the second consecutive year, the number of sightings reported was much lower than the average 50-60 reports. This is likely to be due to travelling restrictions imposed in response to the COVID-19 pandemic. All reports were of Caspian Terns. No reports of sightings of other flagged tern species were received. Many thanks to all observers involved and in particular to Phil Cross, QWSG, for his diligent efforts to pass on data.

**Caspian Tern**
All reports of sightings involved orange-flagged Caspian Terns. These were marked at either the Mud Islands or Corner Inlet breeding colonies in Victoria. All these records resulted from the successful reading of engraved flags, which identified the birds to be identified individually.

Sightings were received predominantly from Queensland (13), in particular from around Toorbul and Bribie Island, from Victoria (11) and from New South Wales (5).

This year, for the second consecutive year, three birds which for many years had been reported multiple times from their overwintering quarters, and which are by far the most reported of all VWSG-banded terns, were not reported. These were: Orange 37 and 47 which previously were reported from Queensland, and Orange 28 which previously was reported from New South Wales. The only 'old' bird with a double numerical digit engraved flag recorded this season was Orange 86. It was seen by Ann Lindsey at Stockton Sandspit in the Hunter Estuary, New South Wales, on 30 August 2020. This bird was banded at Corner Inlet, Victoria in February 2013 as a chick and has been recorded at Stockton in most years since.

This season, the bird seen at the greatest distance from its banding location was orange U5, banded as a chick at Corner Inlet, Victoria in January 2017 and was seen by Dean Ingwersen on 28 September 2020, at Hervey Bay, Queensland, over 1,500 km from its banding location.

Caspian Tern non-breeding
Photo: Sarah Campbell

## Tern Breeding and Banding Report 2020/21

**Ila Marks, Roz Jessop, Robyn Atkinson**

Tern banding and breeding details have been difficult to source this year. The main problems were the COVID-19 restrictions, boat availability and the weather. Our yearly trip to Corner Inlet was called off after the tern colonies there were washed out, however we managed two successful trips to Mud Islands, Corner Inlet, the first in November and the second in early December.

### Caspian Tern

In December 2020, the Caspian Terns colony at Mud Islands, Victoria, was found close to a peninsular on the islands north-west, further along the island than in previous years. Five chicks were banded, two of which were fitted with engraved leg-flags. One small chick in a nest was not banded. Five nests with two eggs, and one nest with one egg were counted. Twenty-four adult birds were seen flying and/or sitting on nests. The banding and counting was managed without disturbing the birds sitting on nests in the nearby Fairy Tern colony.

In October 2020, a BirdLife survey on Clonmel Island, Corner Inlet recorded 182 Caspian Terns and 50 nests. The colony later failed due to tidal inundation.

### South-Eastern Australia: Caspian Tern

| Location | Breeding Pairs | Chicks Banded |
|---|---|---|
| Mud Islands | 28 | 5 |
| Corner Inlet Clonmel Island | 50 | 0 |
| Totals | 78 | 5 |

### Crested Tern

On our first trip to Mud Islands in November the team was limited to two people, because of COVID-19 restrictions. Although this team was far smaller than the teams of over ten people of previous years, we were able to count the Crested Tern colony of 3,500 breeding pairs, band 50 chicks and re-trap 52 adult birds The band numbers of the re-traps indicated that 26 of the birds had been banded at the Nobbies, Phillip Island, 25 had been banded at Mud Island, and one was banded from off Manns Beach, Corner Inlet. Exchange of birds between colonies at the Nobbies and Mud Islands had been known in the past and, aware that the breeding colony at the Nobbies had dispersed in recent years, it was expected that some birds banded at the Nobbies would find their way to Mud Islands.

On our second trip to Mud Islands in early December we hired a local dive boat able to accommodate a team of ten people. On Mud Islands we were joined by two further people who had come from Sorrento. The colony was at its usual location but spread along the top of the raised sandbank for several hundred metres. Small groups of chicks were moved slowly into a corral, quickly banded, and released, where they were met by a protective parent. We banded at total of 1,291 birds.

The Crested Tern colony at Corner Inlet numbered 500 birds on Clonmel Island and 31 birds on Box Bank. Thanks to Dr Amy Adams, BirdLife, for supplying this information. Unfortunately when Parks Victoria Ranger Jonathon Stevenson did a recce a couple of days prior to our scheduled field trip he reported that the colonies had been washed out.

This year there was no Crested Tern breeding colony at the Nobbies, Phillip Island. However, there was again a large colony on nearby Seal Rocks with 2,017 birds on nests. These were counted by volunteers from drone photos taken on 18 November 2020. Thanks to Ross Holmberg, Phillip Island Nature Park, for this information.

Due to COVID-19 restrictions the bi-annual expeditions to King Island in March and November 2020 were cancelled. However, local bird watchers reported that the Crested Tern colony had bred successfully near Manuka, having moved from its former site in Currie Harbour. The remnants of the colony were visible during our visit in March 2021.

**South East Australia (includes Little Dip NP South Australia and King Island Tas)**
**Crested Tern**

| Location | Breeding Pairs | Chicks Banded | Re-trapped Banded Adults |
|---|---|---|---|
| Mud Islands Vic | 3,500 | 1341 | 52 |
| The Nobbies Vic | 0 | 0 | 0 |
| Seal Rock Vic | 2,017 | 0 | 0 |
| Corner Inlet. Clonmel and Box Bank Vic | 531 | 0 | 0 |
| King Island Tas | Unknown number | 0 | 0 |
| Little Dip NP SA | 0 | 0 | 0 |
| Total | 6,048 | 1,341 | 52 |

**Fairy Tern**
At Mud Islands, in December 2020, we did not want to disturb the Fairy Tern colony by undertaking a count when we banded the Caspian Tern colony nearby. However, Dr Amy Adams, Birdlife, counted 46 Fairy Terns and 22 nests on 27 November 2020. Unfortunately, the colony failed most likely due to the tide washing through the colony.

Similarly, an employee at Phillip Island Nature Parks reported that the small colony at Observation Point, Phillip Island, also failed due to high tides .

In 2019 we reported a Fairy Tern colony at The Obelisk, South Australia. They were not there this year. However, five Fairy Terns and one nest were seen at Number Rocks, Canunda National Park, South Australia.

Thanks to the Department of Environment, Water, Land and Planning, Parks Victoria (Port Phillip and Gippsland Regions) and Southend Dive Charter for assistance with boats, and to Jonathon Stevenson and Amy Adams for reccies and bird counts.

## Recovery Reports
## Received since the 2020 Bulletin.
**(Including historical recoveries received in the past year and not previously reported)**
**Ila Marks, Roz Jessop**

Recovery reports refer to birds that are seen in the field and reported to the Australian Bat and Bird Banding Scheme (ABBBS). The ABBBS forwards these reports to the VWSG. These reports provide details of each bird, including band number, description of any engraved leg flag, where the bird was seen whether it was alive, injured or dead, location of first banding and age at the time of banding. These reports do not include those sightings reported directly to VWSG via the portal. Refer to the Sightings Report elsewhere in this Bulletin.

### Caspian Terns
There were 17 reports of recoveries of Caspian Terns. All were banded as chicks at their breeding colonies in Victoria. Seven were banded off Manns Beach, Corner Inlet and nine at Mud Islands, Port Phillip Bay. Two of the birds from Mud Islands were reported from Lake Connewarre on the Bellarine Peninsula, south-west of Geelong, Victoria, 24 kilometres from Mud Islands. They were banded on 17 December 2015, both were four year-olds when reported. The bird seen furthest from its breeding colony was another bird from Mud Islands, reported from Port Hocking, New South Wales, 737 km from Mud Islands. It was a three-year old. Eleven of the reports of recoveries were from Albifrons Island, Gippsland Lakes, Victoria. In past years there have been several reported from this area.
With one exception the birds reported this year were young birds, from two to four years old. The exception was an eight year-old bird reported from Pykes Creek Reservoir, Myrniong, near Bacchus Marsh, Victoria, 84 km from its breeding colony.

### Crested Tern Recoveries for 2019/20
Last year we reported that no recoveries had been received from New South Wales or Queensland. However, we have since received 118 reports from the ABBBS. These were all from the Ballina/Brunswick Heads area, New South Wales in July 2019. We thank Steve McBride for these records. All these birds were from Victorian breeding colonies: 73 from the Nobbies, Phillip Island; 29 from off Manns Beach, Corner Inlet, and 16 from Mud Islands, Port Phillip Bay. The oldest bird was a 31.5 year-old, and one of the oldest birds among recovery reports. Nine were between the ages of 21 and 30, and 35 were in the 15 to 19 age-group. Nine were dead or injured.
Eight reports received from Victoria were of Victorian-banded birds and aged from under one year to 15 years old. All except one were reported from within 60 km of where they were banded, and all were found injured or dead. One dead bird was reported from South Australian. It had been banded at Little Dip, South Australia and was found 20 km from where it was banded.

### Crested Tern Recoveries for 2020/2021
To date we have received 15 recovery reports for Crested Tern. As twelve of these referred to the previous year, it might be necessary to include an up-date for 2020/2021 in next year's Bulletin. Twelve were recoveries of dead birds. One bird, banded off Manns Beach, Corner

Inlet and reported from Double Island Point, Queensland, was found tangled in fishing line. It was untangled and released alive with a band.

**Common Tern, Fairy Tern, Little Tern, Whiskered Tern, White-winged Tern**

We have had no recovery reports of Common, Fairy, Little, Whiskered or White-winged Terns this year.

**Oystercatchers**

Tables 1 and 2 provide numbers of recovery reports from each state in years 2019/2020 and 2020/2021 respectively.

**Table 1. Amended Recoveries of Victorian-flagged oystercatchers in SE Australia 2019/20**

(This table appeared in the 2020 Bulletin and has been amended as we have received additional recoveries.)

| Species | Victoria | King Island | New South Wales | S. Australia | Tasmania | Total |
|---|---|---|---|---|---|---|
| Pied Oystercatcher | 11 | 9 | 6 | 1 | 1 | 27 |
| Sooty Oystercatcher | | | | | | Nil |
| **Total** | 11 | 9 | 6 | 1 | 1 | 27 |

**Table 2. Recoveries of Victorian-flagged Oystercatchers seen in SE Australia 2020/21**

| Species | Victoria | King Island | New South Wales | S. Australia | Tasmania | Total |
|---|---|---|---|---|---|---|
| Pied Oystercatcher | 9 | | 21 | 1 | | 31 |
| Sooty Oystercatcher | 1 | | | | 2 | 3 |
| **Total** | 10 | | 21 | 1 | 2 | 34 |

**Pied Oystercatcher**

Pied Oystercatcher recoveries ranging from Ballina, New South Wales to Flinders Island, Tasmania have been received. Table 3 sets out the locations of reports and of banding. Five of the birds were banded at Brown Bay, South Australia. Three of these were seen in New South Wales, one at Mallacoota, Victoria, and one at Discovery Bay, Victoria, close to the border of South Australia. The oldest bird reported was at least 22 years 8 months old. It was banded at Swan Bay, Victoria at Point Lonsdale only seven kilometres from Swan Bay . This is an exceptionally long-lived bird as it was in its third year or older when banded.

## Table 3. Pied Oystercatcher recoveries 2020 – 2021

| Recovery date | Location of Recovery | Banded | Time B/T Recovery and banding Y/M | Distance km |
|---|---|---|---|---|
| 19/07/2020 | Currarong Beach, NSW | Off Manns Beach Vic | 8.00 | 540 |
| 28/07/2020 | Currarong Beach, NSW | Stockyard Point Vic | 8.00 | 600 |
| 17/08/2020 | Cave Beach Booderee NP, NSW | Off Manns Beach Vic | 5.60 | 520 |
| 23/08/2020 | Camel Rock Beach, Bermagui, NSW | Stockyard Point Vic | 14.11 | 458 |
| 28/08/2020 | Conjola Beach, NSW | Roussac's Farm Vic | 18.30 | 544 |
| 2/09/2020 | Korogoro Creek Estuary, Hat Head, NSW | Roussac's Farm Vic | 6.00 | 1059 |
| 7/09/2020 | Culburra Beach Rock Platform, NSW | Roussac's Farm Vic | 3.10 | 509 |
| 18/09/2020 | Brisbane Water, NSW | Off Manns Beach Vic | 4.20 | 707 |
| 20/09/2020 | Korogoro Creek Estuary, Hat Head, NSW | Roussac's Farm Vic | 6.00 | 1059 |
| 21/09/2020 | Indented Head Beach, Port Phillip Bay Vic | Stockyard Point Vic | 9.40 | 77 |
| 23/10/2020 | Lake Brou, Bodalla NSW | Off Manns Beach Vic | 8.40 | 407 |
| 30/10/2020 | Lake Wollumboola, NSW | Off Manns Beach Vic | 8.40 | 544 |
| 9/11/2020 | Broulee Beach, NSW | Stockyard Point Vic | 3.60 | 498 |
| 14/11/2020 | Conjola Beach, NSW | Barry Beach Vic | 14.30 | 528 |
| 18/11/2020 | Patriach Inlet Flinders Isl. Tas | Barry Beach Vic | 14.30 | 207 |
| 29/11/2020 | Wagonga Inlet, Nartooma, NSW | Roussac's Farm Vic | 17.30 | 447 |
| 30/11/2020 | Point Lonsdale, Vic | Swan Bay Vic | 22.80 | 7 |
| 14/12/2020 | Lake Wollumboola, NSW | Off Manns Beach Vic | 8.50 | 544 |
| 18/12/2020 | Kingsford Smith Park, Ballina, NSW | Roussac's Farm Vic | 5.40 | 1291 |
| 20/12/2020 | Discovery Bay Coastal Park, Vic | Stockyard Point Vic | 4.40 | 384 |
| 20/12/2020 | Discovery Bay Coastal Park, Vic | Brown Bay SA | 6.00 | 384 |
| 28/12/2020 | Circular Beach Port Fairy, Vic | Stockyard Point Vic | 9.70 | 286 |
| 21/12/2020 | Lake Wollumboola, NSW | Off Manns Beach Vic | 8.60 | 544 |
| 7/01/2021 | Bithry Inlet, Mimosa Rocks NP, NSW | Brown Bay SA | 11.70 | 395 |
| 12/01/2021 | Comerong Isl. Beach, NSW | Brown Bay SA | 12.80 | 574 |
| 21/01/2021 | Durras Lake entrance, NSW | Brown Bay SA | 10.50 | 486 |
| 25/01/2021 | Lake Wollumboola, NSW | Off Manns Beach Vic | 8.70 | 544 |
| 8/03/2021 | Mallacoota Inlet, VIC | Roussac's Farm Vic | 7.90 | 321 |
| 8/03/2021 | Betka River Mouth, Mallacoota, Vic | Brown Bay SA | 14.70 | 335 |
| 9/03/2021 | Lighthouse Beach, Seal Rocks, NSW | Roussac's Farm Vic | 6.60 | 905 |
| 15/04/2021 | Marlow Estuary, Vic | Roussac's Farm Vic | 7.10 | 229 |
| 24/04/2021 | Candlagan Creek, NSW | Stockyard Point Vic | 4.00 | 498 |
| 16/05/2021 | Betka Beach, Mallacoota Vic | Off Manns Beach Vic | 7.10 | 282 |

**Sooty Oystercatcher**

Three recovery reports were received for Sooty Oystercatchers. All banded at Roussac's Farm, Corner Inlet, Victoria. One was found dead at Seal Island, Wilson's Promontory, Victoria. The other two were seen at Dyas Bay, Cape Barren Island, Tasmania.

**Hooded Plover**

A recovery report was received for a Hooded Plover, banded at Danger Point, Brown Bay, near Port MacDonnell, South Australia. The bird was a five year-old, and 323 kilometres from where it had been seen on 31 August 2020 at Barwon Heads, Victoria.

**Sanderling**

Three reports were received of Sanderling banded at Danger Point, Brown Bay, near Port MacDonnell, South Australia. Two were seen in China. The first was seen at Nanhui, Shanghiseen on 20 August 2020 It was aged five years or older. The second was seen on 24 June 2020 at the Tiaozini Mudflat, Jiangsu, China. It was aged eight plus years. The third was seen at Sandy Cape, Fraser Island, Queensland. It was aged seven years or older.

**Sharp-tailed Sandpiper**

There are two reports for Sharp-tailed Sandpipers. Both were banded at Western Treatment Plant, Werribee, on 29 December 2018. They were seen there from the bird hide, 11 months later.

**Ruddy Turnstone**

Studies have found that turnstones have strong site loyalty, being known to return to the same beach each summer. It is not surprising that six of these ten reports were of birds seen where they were banded. The report from Fujian, China on 3 May is of an eleven year-old or older bird at a stop-over on its way to its breeding ground in Siberia.

**Ruddy Turnstone Recoveries 2020/2-21**

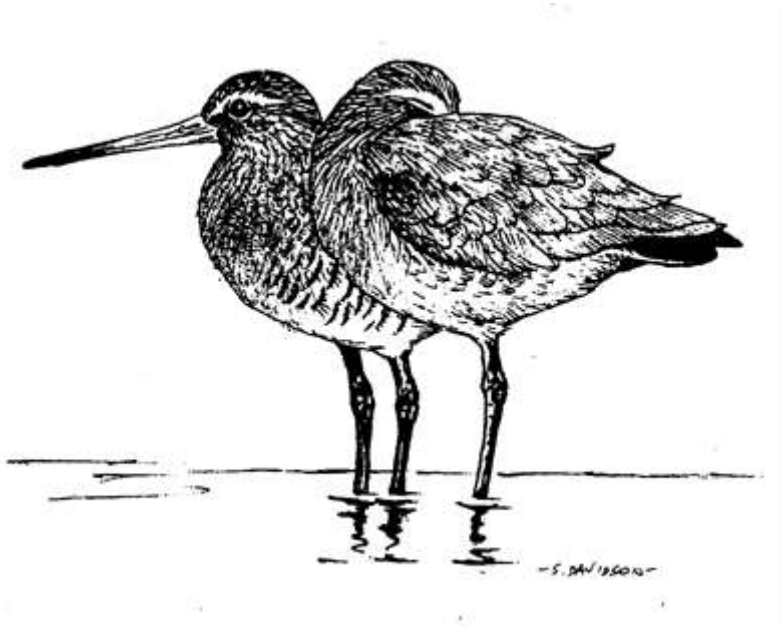
| Date of Recovery | Location of Recovery | Location and date banded |
|---|---|---|
| 9/11/2019 | Burgess Bay, Currie, King Island, Tas | Curries King Island Tas 28/3/2019 |
| 9/11/2019 | Burgess Bay, Currie, King Island, Tas | Currie King Island Tas 18/11/2016 |
| 9/11/2019 | Burgess Bay, Currie, King Island, Tas | Currie King Island Tas 2/4/2013 |
| 10/11/2019 | Yellow Rock Beach, King Island, Tas | Porky Bay King Island Tas 29/3/2019 |
| 3/5/2020 | Xiangan Xiamen, Fujian, China | Blackfellows Caves SA 28/9/10 |
| 15/9/20 | Cape Euler, Tumby Bay, Eyre Peninsula SA | Whistler Point King Island Tas 13/2/2025 |
| 25/9/2020 | Moorland Point, Moorland Beach, Tas | Surprise Bay King Island 10/12/18 |
| 19/10/2020 | St Andrews Beach, Rye, Vic | Manuka North Bay King Island 24/3/2019 |
| 9/11/2020 | Burgess Bay, Currie, King Island ,Tas | Currie King Island Tas 30/11/2015 |
| 11/11/2020 | Thompsons Beach, South Australia | Thompsons Beach SA 14/11/2018 |

**Curlew Sandpiper**

Six recovery reports were received for Curlew Sandpiper. Four were reported at or near the place where they were banded. One was reported a short time after banding. The others were seen two to eight years after being banded. This is a clear indication of site loyalty. Two birds were seen long distances from where they were banded. A bird banded at Yallock Creek, near Koo-Wee-Rup, Victoria on 12 December 2019 was reported from Stockton Sandspit New South Wales on 19 January 2021, and a bird banded at Western Treatment Works, Werribee, Victoria, on 30 December 2017 was seen at Lake Wollumboola New South Wales.

**Bar-tailed Godwit**

The seven recovery reports for Bar-tailed Godwit included an historical report, from Kuluk Bay, Adak Island, Aleutians, West Alaska, USA, of an Australian-banded bird seen on 15 May 2017. This bird was banded off Manns Beach, Corner Inlet, Vic on 10 February 2010, aged three years or older. The remaining six reports were all from Observation Point, Rhyll Inlet, Victoria on 30 March 2020. All six birds had been banded at Rhyll Inlet. The oldest bird was 16 years old being a first-year bird when banded 15 years ago. The others were aged from six to eleven years old.



## The VWSG Geolocator program 2020-21 – An interrupted year

**Ken Gosbell, Robyn Atkinson, Roz Jessop, Ila Marks, Maureen Christie, Simeon Lisovski, Marcel Klaassen**

### Introduction

Due to COVID-19 restrictions and other issues, this last year has been a difficult one all round. However, despite these problems, the geolocator program was able to proceed and produced some useful results. The following is a summary of our activities and some of the outcomes for the year – our 12th year of the program.

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.

### Deployment and retrievals of geolocators by VWSG

The table below shows the summary of deployments and retrievals by VWSG since 2009. In summary, 763 geolocators have been deployed on Ruddy Turnstone, 68 on Sanderling, 23 on Eastern Curlew, 187 on Red-necked Stint and 170 on Curlew Sandpiper making a total of 1,211 fitted to shorebirds expected to migrate to the northern hemisphere to breed. From the start of the program, we have concentrated on Ruddy Turnstone. Notably the focus on this species on King Island has contributed to a longitudinal study spanning 12 years to date. It is of interest that we now have 294 viable tracks for Ruddy Turnstone showing indications of changing migratory behaviour in the face of the changes along their flyway (more on this below).

There was only one visit to King Island and that was in March 2021. A total of four geolocators were retrieved during this visit and these were again replaced with new geolocators. Additionally, a further 41 geolocators were placed on birds which had not previously carried them, thus 45 geolocators in total were deployed. With only one visit possible during this non-breeding season instead of our normal two, our retrieval rate was only 20%, well short of our long-term average of 42% for this site. To a large extent the weather conditions contributed to the low numbers retrieved.

In Victoria, the focus was again on Red-necked Stint and Curlew Sandpipers at Yallock Creek. A total of 12 geolocators were retrieved from Red-necked Stint and seven from Curlew Sandpipers.

The South Australian team did a great effort in deploying 38 geolocators and retrieving five from Ruddy Turnstone. A team from Victoria assisted the SA group in April 2021. Although the bird BBD was not caught, it was regularly seen in 2020 at the Cape Banks Lighthouse.

Ruddy Turnstone BBD photographed at Mai Po, Hong Kong, 3 May 2021
Geolocator deployed Nene Valley, South Australia, 1 April 2018

Photo: John Holmes

**Geolocators deployed/ retrieved each year by VWSG in SEA to 05/2021**

| Year | Ruddy Turnstone | | Sanderling | | Eastern Curlew | | Red-necked Stint | | Curlew Sandpiper | | TOTAL | | % retrieved by year |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | On | Off | On | Off | On | Off | On | Off | On | Off | On | Off | |
| 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 | 52 | | | | | | 14 | | | 88 | 66 | 75 |
| 2017 | 86 | 31 | | | | | | 4 | 60 | | 146 | 35 | 24 |
| 2018 | 79 | 41 | | | | | 60 | 1 | 60 | 10 | 199 | 52 | 26 |
| 2019 | 30 | 23 | | | | | 50 | 9 | 41 | 8 | 121 | 40 | 33 |
| 2020 | 83 | 9 | | | | | 16 | 12 | 9 | 7 | 108 | 28 | 26 |
| TOTAL | 763 | 297 | 68 | 18 | 23 | 8 | 187 | 40 | 170 | 25 | 1211 | 388 | 36 |
| % | | 39 | | 26 | | 35 | | 23 | | 15 | | | |

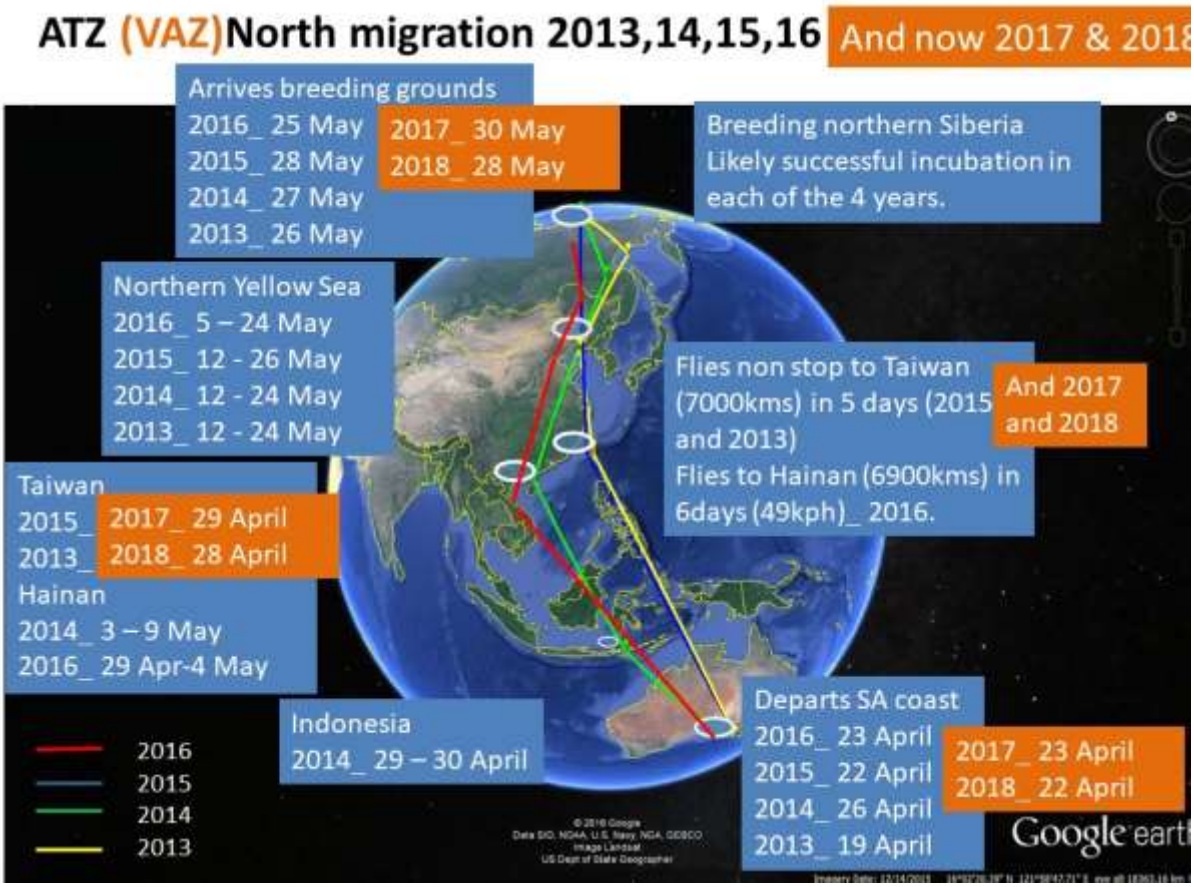
**Several interesting results from our geolocator program in 2020/21**

A major outcome from the Yallock Creek program on Red-necked Stint and Curlew sandpipers was the publication of the following paper: *Lisovski S, Gosbell K, Minton C, Klaassen M. Migration strategy as an indicator of resilience to change in two shorebird species with contrasting population trajectories. J Anim Ecol. 2020;00:1–10. https://doi.org/10.1111/1365-2656.13393*.

This compared the migration strategies of these two very closely related shorebird species, migrating from the same non-breeding site in Australia to similar breeding sites in the high Russian Arctic. Furthermore, it discusses why these two species demonstrate differential resilience to rapid changes within their flyway resulting in different population trajectories in recent times.

Of particular interest from two Curlew Sandpipers geolocators retrieved in 2021 were the remarkable deviating migrations from the general pattern. BQ877 (KAP) is the first tracked shorebird from the EAAF migrating west of the Himalayas during southward migration. This bird flew south in the Central Flyway and appears to make a stopover in NW Sri Lanka before returning to Yallock Creek. Another bird, DKH, remained in Borneo for the non-breeding season 2019, not at all bothering to come back to Western Port, before migrating back north to the breeding site.

Another interesting result came from South Australia where Maureen and her team retrieved Ruddy Turnstone VAZ in November 2020. This is the same bird ATZ for which we already had four tracks, 2013,14,15,16. The latest geolocator provides us with two further tracks, 2017,2018. Unfortunately, the logger failed on the breeding grounds 30/5/18. However, this makes it six northward migration tracks; the most we have from any bird on which we have deployed a geolocator! See diagram that previously showed key dates for this bird in which tracks for 2017 and 2018 have been inserted, again showing the consistency of year to year strategies.




**Publications**

The scientific papers published so far based on the results of our geolocator studies were listed in the 2020 Report in the Bulletin. Further analyses are in train and additional papers will be published in the future.

**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. Twelve 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.

Curlew Sandpiper in full breeding plumage and carrying a geolocator from Yallock Creek photographed at Nanpu, China, in May 2021.

Photo Shengcheng Yi

Red-necked Stint with geolocator at Yallock Creek

KG

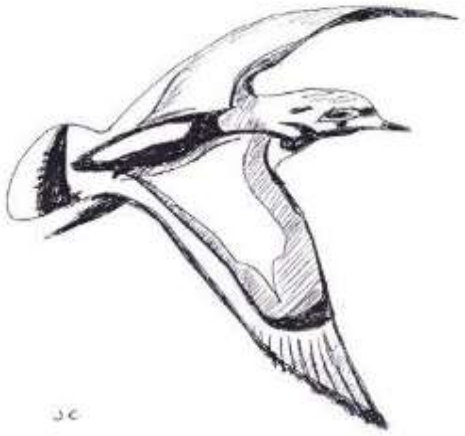
## Costs

The geolocators have been purchased at an average cost of close to $230 each. With 1200 units deployed over the last ten years this equates to a cost of around $280,000.

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 to VWSG and Australian Research Council and Australian Geographic Society to Deakin University collectively enabling this program. Moreover, 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.

## Conclusion

The VWSG's geolocator program commenced 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 almost 1,200 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. Particular thanks to the field team leaders and also Ila and Eric for the work they do in mounting the geolocators on leg flags.



## Can technology help save our migrating shorebirds?

**Ken Gosbell**

Humans have known about bird migration for thousands of years, even if they didn't understand the cause. Basic questions about the life histories of migratory birds have confounded scientists for generations. The Greeks got some of it right; Aristotle suggested that while some birds like cranes, migrated to Egypt, others hid themselves in holes in the ground. In the mid-1700s the British naturalist, Gilbert White, was tying cotton to a swallow's leg to see if these birds returned to the same nesting site. This was likely to be one of the first steps in understanding bird migration, at a time when migration versus hibernation as an explanation for where birds went in winter was strongly debated. It wasn't until the late 19C that systematic bird banding began in Europe followed by ringing schemes in Britain in 1909.

Fast forward to today where we are experiencing a new era in the migration biology of shorebirds, and the factors that drive their very existence. Migratory shorebirds make some of the longest non-stop migrations known to humans but are declining worldwide. The situation is particularly dire in the East Asian–Australasian Flyway (EAAF). This is the most species rich flyway, and yet it has a number of shorebird species listed as threatened or near threatened.

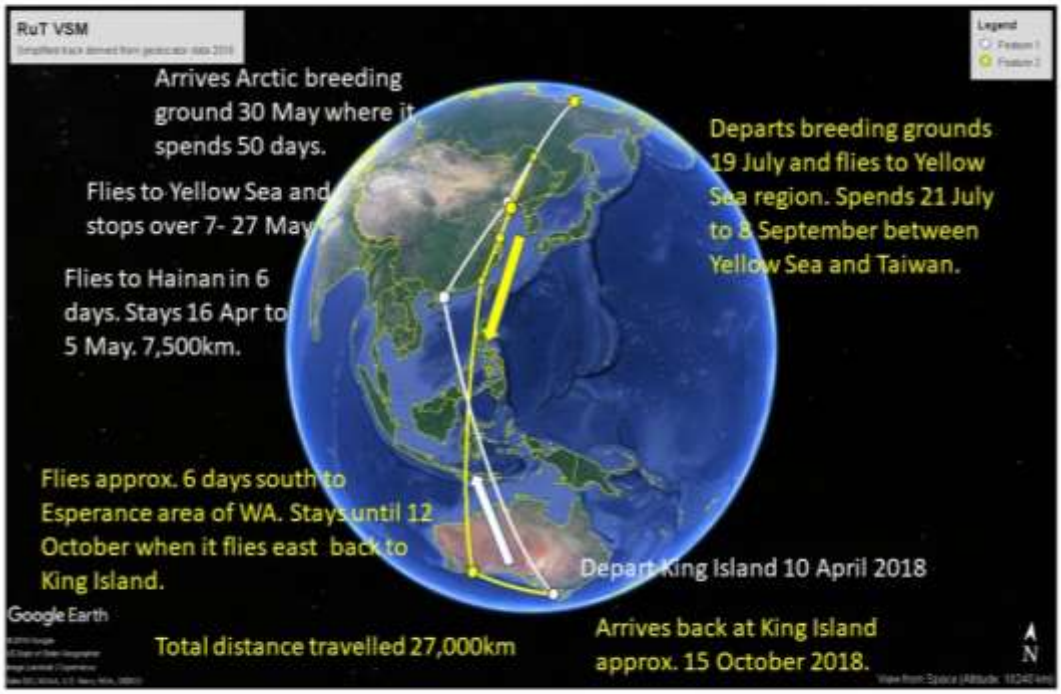
To address this, the need for information to help our understanding of processes and impacts is critical. We have known for over a decade that many coastal habitats in East Asia are being degraded, and shorebird populations relying on these habitats have shown rapid declines. There are, however, further questions to be answered if we are to fully understand the ongoing and future threats to these amazing migrants. Some of these include, understanding the migration tracks and key stopover sites for each migrating species and how the dynamics of these sites are changing. In addition, there is the need to understand the impact of climate change related to breeding activities in the Arctic and in the non-breeding areas.

There are now a number of technologies that can help contribute to solving some of these questions. In the past, information about migratory routes and connectivity was derived from sparse and idiosyncratic band returns. Important as this information is, we now have an array of technology tools that allow us to visualize bird movements from the scale of the species migration routes throughout a flyway to individual local movements within a site.

Australia was one of the first countries to utilise light-level geolocators for tracking the movements of migratory shorebirds. Since 2009 these instruments have been used on a range of species at non-breeding locations around the country, including coastal Victoria, King Island (Tasmania), SE South Australia, NW Western Australia, and SE Queensland. This extensive program has gathered a wealth of information on the movements of nine of Australia's long-distance migratory species. The migratory tracks obtained, including multi-year tracks, allow us to detail both spatial and temporal strategies of several species in the EAAF. In addition, they have also enabled assessment of breeding locations and incubation strategies, many of which were unknown given the remote, low density breeding sites used by these species. By studying sites where multi-year data is available, the potential changes in migration behaviour in response to global change processes is within reach. As a prime example of this, a longitudinal study of geolocator carrying Ruddy Turnstones that spend the non-breeding season on King Island, Tasmania, has revealed that turnstones appear to have changed their behaviour, such as the timing of migrations, based on data obtained annually over the past decade.

In addition to movement data, information about breeding characteristics that has been derived from geolocator studies has been of great interest. Because these loggers record light and dark, in the arctic breeding period where there is 24-hour daylight, birds sitting on eggs or chicks produce a signal of darkness in the geolocator data. Looking for these patterns of light and dark during the bird's time in the Arctic signified a high likelihood of breeding and incubation.

The following diagram indicates the migration tracks of a Ruddy Turnstone from King Island (Tas) derived from data downloaded from the 0.7g geolocator. The typical first leg is a 7,500km non-stop flight to Hainan or Taiwan where they refuel before moving up the Jiangsu coast then flying the final leg to the breeding grounds in northern Siberia. After returning to King Island, their total round trip has covered 27,000km.




One of the disadvantages of geolocators is that it is an archival system and requires catching the bird to retrieve the geolocator. Satellite-based tracking methods are appealing because they permit (near) real time acquisition of location data, which is relatively accurate compared to the coarser geolocator data. The main disadvantage associated with satellite systems is their high cost and weight. Over recent years the AWSG and VWSG have fitted satellite transmitters (5g and 2g) to a range of species including Grey Plover, Little Curlew, Whimbrel, Eastern Curlew and Oriental Plover. They have also been fitted to Latham's Snipe (4g). At the cutting edge of technology, 1.6g solar-powered satellite tags were deployed on the critically endangered Spoon-billed Sandpiper in Russia. Dr Nigel Clark, scientific advisor to the Spoon-billed Sandpiper Task Force, said: "*We need to know where the birds breed, stop over on migration, and over-winter, and satellite tagging might provide the answers. Conservation efforts to protect habitats and prevent hunting will be hampered unless we can find out where the birds are."* In addition, it is now possible to fit three-dimensional accelerometers which allows answers to key questions, such as how birds navigate during their migration and how they mitigate adverse weather conditions.

In 2019, five Oriental Pratincoles were fitted with 2-gram solar-powered transmitters on the shores of Eighty Mile Beach. Although recently discovered to be abundant in north Australia, there was a complete lack of any knowledge of their ecology, whether they migrated and if so, where. While two of these birds appeared to breed in Cambodia, one bird was recorded in the Central Asian Flyway on breeding grounds in south-west India.

When highly accurate positions are needed, GPS tags are the most appropriate solution as they can provide high precision fixes which are accurate down to a few metres or less. GPS is becoming more widely used and can be found in devices weighing about 1g upwards, thus enabling a better understanding of the movements of smaller species. Downloading data remotely is obviously a huge advantage and makes tracking studies much easier. Devices now use various technologies, including the mobile phone network, satellites (e.g. ARGOS or telecommunications satellites) or VHF radio to download to a base station that collects the data as a bird passes it. The Motus Network is an international collaborative research network that uses a coordinated automated radio telemetry array to track the movement and behaviour of small species. The automated receivers operate 24/7 and receive the signal of coded transmitters. Where enough receiving stations are present in a bird's range, they can provide information about broader spatial scale of movement. This array has been established in the Americas and recently in Europe. It has successfully helped track large insects, bats, small and large migratory birds. It's feasibility in the EAAF is currently being assessed.

Of course, each of these tools has its pros and cons in terms of weight, power requirements, cost, ease of data acquisition and location accuracy. The choice of any tracking technology should be guided by the relevant research questions and inevitably the relative cost vs effectiveness. Nevertheless, the growth in tracking studies has been extraordinary. In 2012, Movebank was launched to help researchers manage, share, analyse and archive their animal movement data and is an extremely valuable tool for the analysis of movement data on a global scale. As of March 2021, there were 234 curated, publicly archived datasets containing over 100 million locations describing movements and behaviour of over 11,000 animals and representing 170 species in the Movebank system (https://www.movebank.org/cms/movebank-content/data-repository ). Results from these studies have been used in Australia and key locations in the flyway, such as China and Korea, to help land managers develop conservation strategies.

With the expansion of renewable energy facilities such as wind and solar farms, particularly in Asia where coastal locations are favoured, the data gathered from the programs outlined here will be valuable for undertaking sensitivity mapping to ensure impacts to shorebirds and other wildlife are minimised.

Only with new technology can we answer fundamental questions like the one that perplexed those ancient observers and address the critical issues now being faced by shorebirds in our flyway as well as challenges such as the impacts of climate change on those amazing migrating shorebirds and biodiversity in general. There is already widespread recognition of the importance of technology for improving the outcomes for shorebirds and related species in general. Already the 'returns' are helping deliver more effective conservation in a troubled flyway.

## King Island Ruddy Turnstones front and centre in two peer-reviewed publications about viruses

**Michelle Wille**

Marie Bashir Institute for Infectious Diseases and Biosecurity, School of Life and Environmental Sciences and School of Medical Sciences, The University of Sydney, Sydney, NSW 2006, Australia.

As part of a long-standing collaboration between Deakin University and the VWSG, blood and swab samples were collected from Ruddy Turnstones during the biannual expeditions on King Island since 2011. These samples are collected for an array of purposes, including research on bacteria, viruses, the immune responses, and pollution load. This year two research papers were published using samples collected during these expeditions.

The first study describes an outbreak of avian influenza A virus (1). Avian influenza viruses are divided into two general categories: low pathogenicity avian influenza viruses and highly pathogenic avian influenza viruses. Low pathogenicity avian influenza viruses are common in wild birds, particularly ducks, some waders and gulls. These viruses are believed to have co-evolved with wild birds, and as a result don't cause any obvious signs of disease (2) (Figure 1). It is these low pathogenicity avian influenza viruses that were found in the Ruddy Turnstones. Highly pathogenicity avian influenza viruses cause disease and death in birds. Generally, if a low pathogenicity avian influenza virus is introduced to poultry (chickens, turkeys), it rapidly spreads. The virus accumulates certain mutations, or changes, and the result can be a virus that is  virus that deadly (3) (Figure 1). It was a highly pathogenicity influenza virus that caused the large avian influenza outbreak in poultry in Victoria last year (4).

As a result of research in Delaware Bay (5) Ruddy Turnstones are known to be important hosts for avian influenza viruses, in the study lead by Dr Bethany Hoye at the University of Woolongong, and formerly at Deakin University, three subtypes were found (H3N5, H6N6, H10N8) (Figure 1, Figure 2). When comparing the genetic sequences of these three viruses with those previously described they found that some genes were similar to those found in avian influenza viruses in Australian wild birds, but some were distantly related. Some genes were similar to avian influenza viruses from Eurasia and others were similar to avian influenza viruses from North America (Figure 3). This clearly demonstrates the important role in long distance bird migration in moving viruses around the world.

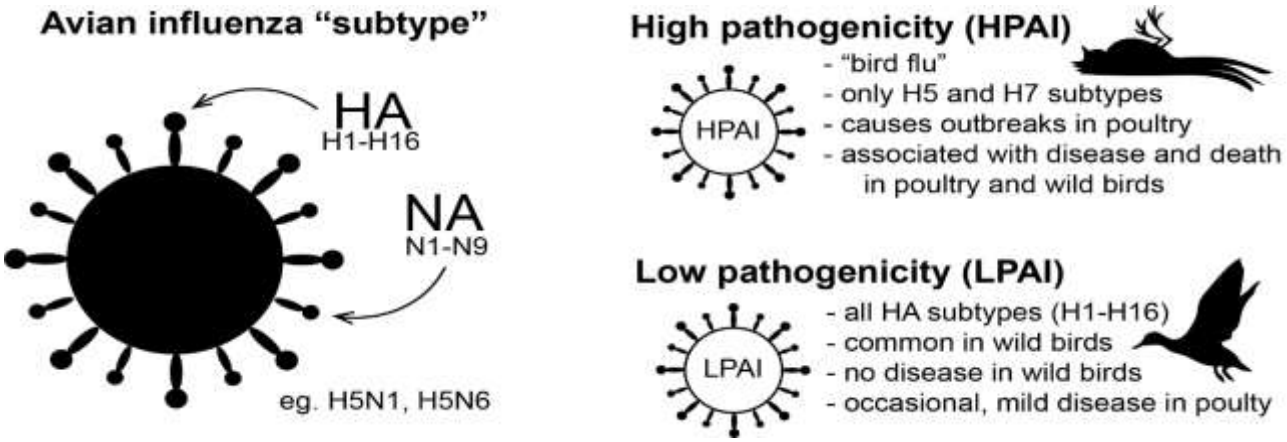


*Figure 1. Different classifications of avian influenza viruses. Avian influenza viruses are classified into "subtypes" based on different forms of the HA and NA proteins. So H5N1, means type 5 of the HA gene and type 1 of the NA gene. Viruses are also discussed in terms of pathogenicity, with high pathogenicity viruses responsible for outbreaks in poultry. Low pathogenicity viruses are common in wild birds. Figure generated by Michelle Wille, and modified from [https://theconversation.com/nearly-half-a-million-poultry-deaths-there-are-3-avian-influenza-outbreaks-in-victoria-should-we-be-worried-145325](https://theconversation.com/nearly-half-a-million-poultry-deaths-there-are-3-avian-influenza-outbreaks-in-victoria-should-we-be-worried-145325)*

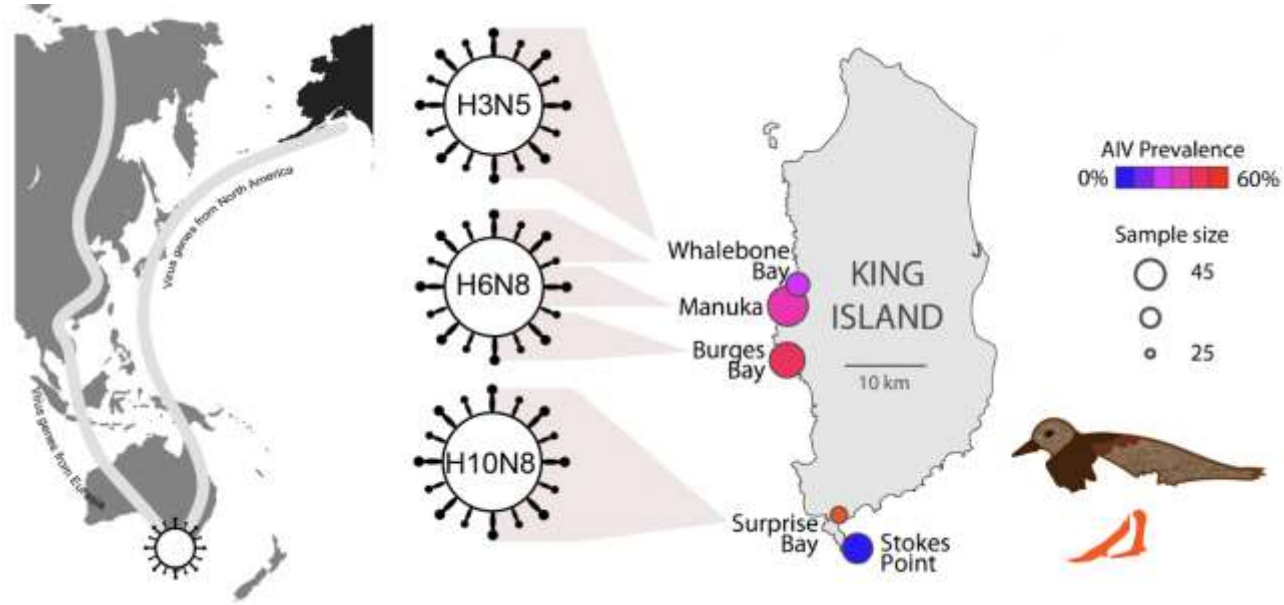



*Figure 2. Up to 60% of Ruddy Turnstones sampled on King Island were positive for avian influenza virus. A detailed genetic analysis showed 3 different subtypes, and that these viruses contained genes of North American and Eurasian origin, in addition to genes that had been previously circulating in viruses in Australia. Figure generated by Michelle Wile, and King Island map figure modified from Hoye et al. 2021*

The second research paper published this year used samples collected on King Island from Ruddy Turnstones to reveal the entire virus community and to test whether juvenile birds had a higher diversity and abundance of viruses than the adult birds (6). The number of viruses described is likely a drop in the ocean (7). Until very recently the focus has been on disease causing viruses. For example, in birds, whenever poultry started producing fewer eggs or birds were sick and dying, there was an attempt to identify the cause of disease. It is only recently that we have come to appreciate that apparently healthy wild birds, *i.e.* those without obvious signs of disease, may be infected with viruses. In this study using a new sequencing technology, 14 different viruses were identified (Figure 3). The vast majority of viruses we found have never been described before but belong to virus families known to infect birds.

Of interest is the detection of two different coronaviruses (Figure 3). The first coronavirus ever described was Infectious Bronchitis Virus in chickens almost a century ago (8). Since 2005 an array of coronaviruses have now been described in wild birds. These viruses are distantly related to SARS-CoV-2 (causing COVID-19) and don't pose a risk to humans. These viruses also don't appear to cause disease in birds (8). The first coronavirus, Duck coronavirus 2714, has been detected in wild birds all around the world. The strain we found was similar to *Duck coronavirus 2714* strains we found in Australian waders in a previous study by Chamings *et al.* (9). The second coronavirus we found doesn't have an official name, and we named it Shorebird coronavirus. To date, this virus has been found in waders in Australia and the USA (8).

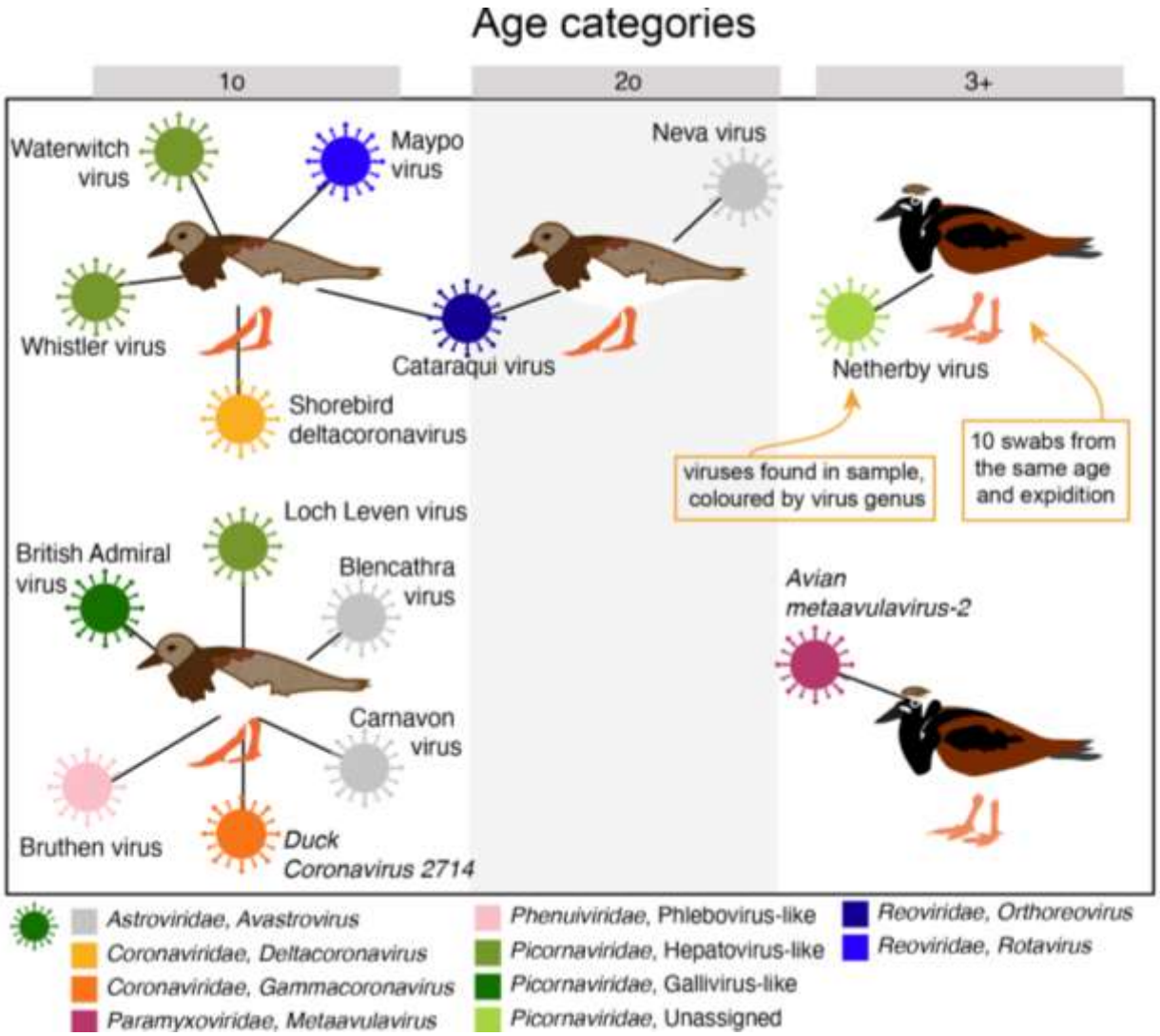



*Figure 3: Viruses found in Ruddy Turnstones, King Island. Each bird silhouette comprises 10 swabs samples that were pooled together and sequenced. Each virus symbol comprises a virus that was found in the pooled sampled. The colours correspond to the virus taxonomy (e.g. orange refers to coronaviruses). Samples are arranged by age from left (1o birds), to right (3+) birds. We detected ~5 viruses in 1o birds compared to 1 virus in 3+ birds from the same expedition. Figure generated by Michelle Wille and is modified from Wille et al. 2021, distributed under a CC-BY-4.0 licence.*

The aim of this study was to understand whether juvenile birds have more viruses than adults. We know that for viruses like avian influenza, juvenile birds have a much higher burden of infection as compared to adults (10). In humans, children are infected with a huge abundance and diversity of viruses. In our study, we described 10 viruses (with complete genetic sequences) in juvenile birds and only 2 in adult birds! (Figure 3) Other indicators, such as virus abundance (the proportion of the sequences in the sample attributed to viruses) and alpha diversity metrics (Richness [the count of viruses] and Shannon Diversity [the weighted diversity]) also suggested a higher abundance and diversity of viruses in juvenile birds as compared to adults, although were not significant (6).

This study may provide some clues as to why juvenile waders don't migrate north in their first year. The hypothesis of "migratory culling" is defined as the combined physiological effects of migration and infection mitigation that may remove individuals from the population (11). Annual migrations are undertaken by adult shorebirds, in which we revealed a lower

diversity of viruses as compared to juveniles. It is therefore possible that increased virus susceptibility, itself due to lower age-dependant immunity, is one reason why juvenile birds do not undertake a northward migration in their second year. Even without overt disease, the infection status and intensity of some viral infections may have negative effects on body stores, refuelling capacity, movement, phenology and survival.

Wille M, et al. RNA virome abundance and diversity is associated with host age in a bird species. Virology. 2021:doi: https://doi.org/10.1016/j.virol.2021.06.007.

**Acknowledgements**
We are grateful to all the volunteers of the VWSG, without whom we would not be able to do these important studies.

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**VWSG King Island Visit Report**
**15 – 24 March 2021**
**Robyn Atkinson, Roz Jessop, and Rob Patrick**

The Victorian Wader Study Group (VWSG) has been visiting King Island, Tasmania, once or twice per year since 2007. The main interest is in the Ruddy Turnstone population which spends its non-breeding season there. This is the fifteenth year and 24th visit of this long-term study. Unfortunately, due to border closures due to the pandemic the two proposed visits in 2020 could not take place. Our objectives for the trip were:

1. to carry out a population count of Ruddy Turnstone on the entire west coast of the island.
2. To evaluate the breeding success of Ruddy Turnstone the 2020 Arctic breeding season by measuring percentage of juveniles in catches.
3. To deploy and retrieve geolocators on Ruddy Turnstone.
4. To facilitate Deakin University's research project on the presence of avian diseases.

Below is a more detailed report on the ten days of fieldwork. It is intended that the twice-yearly visits (November/December and March/April) be continued into the future to extend our current fifteen-year dataset on the Ruddy Turnstones of King Island.

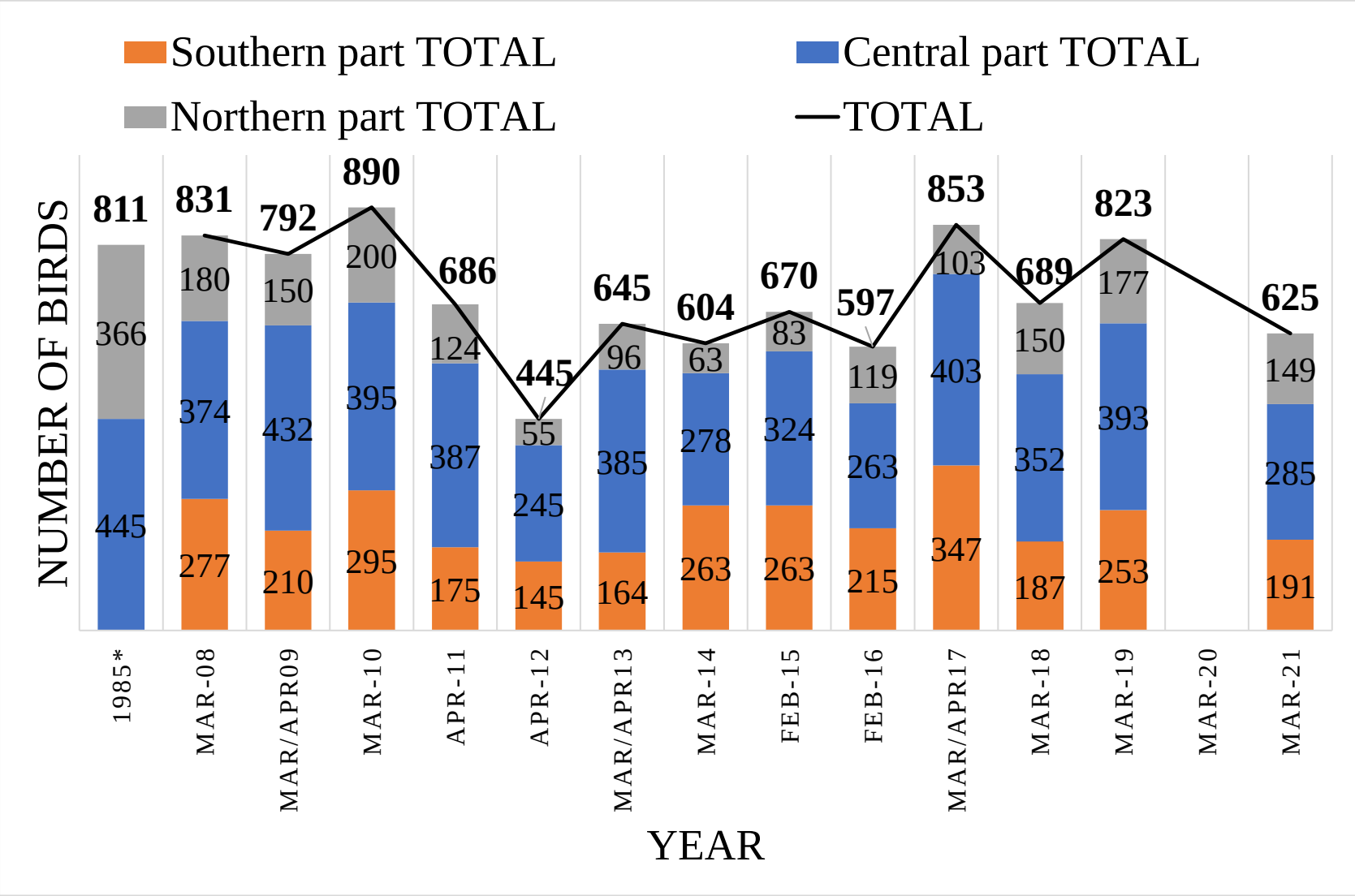
**Population Count**
As usual, all the known locations for Ruddy Turnstone along the complete west coast of King Island were counted over the high tide period on 15 March. Fortunately, the wind was not quite as strong on the count day as on the following days. Nowhere did we see as many birds as we saw on the first day.

A total of 643 Ruddy Turnstone were observed during the count. This is a return to the lower levels seen from 2012 to 2016 before the two years of high breeding success in 2017 and 2019. Unfortunately, no counts were possible during 2020 due to the pandemic. (Figure 1 and Table 1).

**Catching**
Over the years we have had some pretty bad weather on King Island, but it usually only lasts a couple of days. This trip a strong wind blew from the east for eight of the ten days we were on the island. In spite of this we attempted to catch every day.

After an absence of 15 months, we returned to King Island with a team of eleven people and high hopes of retrieving some of the 20 geolocators we had deployed in November 2019, and to deploy more. Unfortunately, we were plagued by problems including a strong easterly wind which blew for almost the entire visit. Although it is not unusual for King Island to be very windy, the prevailing winds are from the south and west. The Ruddy Turnstone seemed to be constantly unsettled, and with little to no kelp on the beaches, we saw very few feeding hot spots. Birds of prey were much more active than we have previously experienced, with one attempted catch at Central Manuka interrupted five times by five different birds. A very aggressive Hooded Plover with chick derailed our attempted catch at Whalebone beach and two cannon misfires at Whalebone and Burgess Bay saw our quarry fly away. Despite these problems we retrieved four geolocators and caught a total of 64 Ruddy Turnstone, one Sooty and one Pied Oystercatcher and deployed 45 new geolocators.

**Figure 1: Population counts for Ruddy Turnstone on King Island's west coast.**




(* count by C. Whitchurch 1985)

**Table 2: VWSG Catch Details: King Island Visit 15-24 March 2021**

| **Date** | **Location** | **Species** | New | Retrap | **Total** | Juv | **% Juv** | **Male** | **Female** | % Male |
|---|---|---|---|---|---|---|---|---|---|---|
| **17-Mar-21** | **Manuka South**<br>3 geolocators retrieved, 16 deployed | Ruddy Turnstone | 10 | 13 | **23** | 4 | **17.4** | 9 | 9 | 50.00 |
| **18/03/2021** | **Manuka Central**<br>15 deployed | Ruddy Turnstone | 6 | 11 | **17** | 1 | **5.9** | 5 | 9 | 35.71 |
| **20/03/2021** | **Porky Beach**<br>1 retrieved, 13 deployed | Ruddy Turnstone | 13 | 10 | **23** | 1 | **4.3** | 11 | 8 | 57.89 |
| | | Sooty Oystercatcher | 1 | 0 | **1** | 0 | | | | |
| **23/03/2021** | **Burgess Bay**<br>1 deployed | Ruddy Turnstone | 1 | 0 | **1** | 0 | **0.0** | 0 | 1 | 0.00 |
| | | Pied Oystercatcher | 1 | 0 | **1** | 0 | | | | |
| | | **TOTAL TURNSTONES** | 30 | 34 | **64** | 6 | **9.4** | **25** | **27** | 48.08 |

**Table 3: Catches on King Island 2007-2021**

| 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 | 71 | 71 |
| April 2011 | 8 | 197 | 211 |
| November-December 2011 | 3 | 115 | 117 |
| April 2012 | 7 | 118 | 118 |
| November 2012 | 5 | 132 | 132 |
| March-April 2013 | 10 | 255 | 285 |
| November 2013 | 2 | 54 | 55 |
| March 2014 | 6 | 173 | 181 |
| November-December 2014 | 6* | 147 | 151 |
| February 2015 | 5* | 119 | 154 |
| November-December 2015 | 5 | 120 | 158 |
| February 2016 | 4 | 74 | 78 |
| November 2016 | 4 | 112 | 114 |
| March-April 2017 | 7 | 218 | 229 |
| December 2017 | 5 | 123 | 128 |
| March 2018 | 9 | 149 | 160 |
| December 2018 | 5 | 191 | 193 |
| March 2019 | 10 | 249 | 252 |
| November-December 2019 | 4 | 132 | 133 |
| March 2020 | 0 | 0 | 0 |
| November 2020 | 0 | 0 | 0 |
| March 2021 | 4 | 64 | 66 |
| **15 years (24 visits)** | **141** | **3907** | **4166** |
| **Average individual catch size:** | | **28** | |
| **Average catch total per visit:** | | **163** | |

*Excludes 2 catches of Silver Gulls.
24 visits - 14 in February-April 10 in November-December

**Percentage Juveniles**

Due to the pandemic and closed state borders no estimate of percentage juveniles and subsequent breeding success was possible for the 2019-2020 Feb-Apr period and 2020-2021 Nov-Dec period. For the Feb-Apr 2021 period the number of birds caught was very small. From these we obtained a percentage of juveniles of 9.4%. (Table 4).

**Table 4: Comparison of percentage of juveniles in Turnstone catches on King Island in Nov-Dec period to Feb-Apr period**

| | Nov-Dec period | | | Feb-Apr period | | |
|---|---|---|---|---|---|---|
| **Year** | **Total** | **% Juv** | | **Total** | **% Juv** | |
| 2006-07 | - | - | | 241 | 0% | 0% |
| 2007-08 | - | - | | 419 | 17.7% | 17.7% |
| 2008-09 | - | - | | 223 | 0% | 0% |
| 2009-10 | - | - | | 211 | 14.2% | 14.2% |
| 2010-11 | 71 | 18.3% | | 197 | 14.7% | 15.7% |
| 2011-12 | 115 | 9.6% | | 118 | 15.3% | 12.4% |
| 2012-13 | 132 | 2.3% | | 255 | 1.2% | 1.6% |
| 2013-14 | 54 | 42.6% | | 173 | 30.6% | 33.5% |
| 2014-15 | 147 | 17.7% | | 119 | 14.3% | 16.2% |
| 2015-16 | 120 | 1.7% | | 74 | 1.4% | 1.5% |
| 2016-17 | 112 | 20.5% | | 218 | 31.2% | 27.6% |
| 2017-18 | 123 | 5.7% | | 149 | 2.7% | 4.0% |
| 2018-19 | 191 | 40.8% | | 249 | 25.3% | 32.0% |
| 2019-20 | 132 | 16.7 | | nil | - | - |
| 2020-21 | nil | - | | 64 | 9.4% | - |
| **TOTAL** | **1197** | | | **2710** | | |
| Based on Feb/Apr data Poor Arctic breeding years were 2006, 2008, 2012, 2015 and 2017.<br>Very good Arctic breeding years were 2013, 2016 and 2018. | | | | | | |

Sex Ratios

The ratio of males to females can be determined during a March/April visit because the birds are already showing much of their breeding plumage and there are distinct differences between that of the male and female birds.

In almost all years there has been a predominance of females in the populations caught. This year 27 females and 25 males were present in the catches giving a male percentage of 48.1% which is similar to the long-term average of 46.8% (Table 5).

**Table 5: Sex ratios of Turnstone catches on King Island in Feb-Apr period 2007 to 2021.**

| 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** | - | - | **-** | - |
| **2016** | 19 | 28 | **47** | 40.3 |
| **2017** | 70 | 79 | **149** | 47.0 |
| **2018** | 59 | 86 | **145** | 40.7 |
| **2019** | 82 | 104 | **186** | 44.1 |
| **2020** | - | - | **-** | - |
| **2021** | 25 | 27 | **64** | 48.1 |

## Weights

Table 6 gives a quick comparison of mean weights at two sites common to both the 2018 and 2021 visit. These visits were on very similar dates and show much lower weights this year, possibly reflecting the noticeable lack of kelp on the beach.

**Table 6. Mean weights of adult Turnstones at two sites on King Island in 2018 and 2021.**

| Site | 17-26 March 2018 | 15-24 March 2021 |
|---|---|---|
| South Manuka | 158.5 | 122.4 |
| Central Manuka | 159.8 | 136.7 |

## Geolocators

Our last visit was in November 2019 when 20 replacement geolocators were deployed on birds caught already carrying geolocators. A total of four geolocators were retrieved this visit and these were again replaced with new geolocators. Additionally, a further 41 geolocators were placed on birds which had not previously carried them. Thus 45 geolocators in total were deployed. With only one visit possible during this non-breeding season instead of our normal two, our retrieval rate, of only 20%, well short of our long-term average of 42%.

## Flag-sightings

Opportunities were taken to record the engraved flags on birds in the field whenever possible. This was particularly successful at locations where we spent a lot of time waiting to fire the net. A total of 183 sightings were recorded in the field. Some of these birds were also subsequently cannon netted.

## Deakin University study on Avian Pathogens

As in other years Deakin University again collected fecal swabs and blood samples to test for the presence of avian diseases or their antibodies.

**Acknowledgments**
The VWSG would like to thank the following for their contribution towards another successful visit to King Island.

King Island locals Graham and Margaret Batey and Lizzie Cambra for their invaluable support and local knowledge without whose help it would be extremely difficult to organize the visit.

Heather and Roger Camm for very generously allowing us to use their house in Naracoopa as our base for this visit.

Margaret Bennet and Gary Baker for again very kindly allowing us to store our field equipment in their shed.

Tasmanian Parks and Wildlife again kindly loaned their trailer.

Katherine Leung for her expertise in providing the tables and figures for this report.

**The March 2021 King Island Team**

Robyn Atkinson, Steve Atkinson, Graeme Beal, Roz Jessop, Steve Johnson, Marcel Klaassen, Ila Marks, Eric Miller, Rob Patrick, Michelle Wille, Prue Wright and local King Island participants, Graeme and Margaret Batey and Lizzie Cambra.

Well grown chicks moulting into their adult plumage. This colony of Crested Tern nested at Manuka on the central west coast of King Island January 2021. Photo Margaret Bennett.

## Appendix 1. Daily log of Field Activities.

**Day 1. 15 March 2021**

The team arrived in Currie on the usual 0730 flight with King Island Airlines from Moorabbin airport. As the team was staying in Naracoopa not Currie for this visit, and two vehicles were to be picked up from the dock at Grassy, the arrangements on arrival were more complicated than usual. Thanks to the help of Graeme and Margaret Batey and Lizzie Cambra, the cars were collected, luggage and equipment delivered to Naracoopa and four teams were off to do a high tide count of the entire west coast of the island after a stop at the bakery in Currie for lunch.

*Naracoopa (photos Roz Jessop)*

**Day 2. 16 March 2021**

A net was set at South Manuka but the birds remained out of the catching area at the side of the net and bathing in the creek. A decision was made to move the net closer to the creek and return in the morning for another try. There was a flock of at least 40-50 turnstone in the area.

*Net set 1 Manuka South (Photos Roz Jessop)*

**Day 3. 17 March 2021.**

Arriving early we made a catch at South Manuka of 23 Ruddy Turnstones, retrieved three geolocators and deployed 16. In the afternoon we set a net at Central Manuka in the usual place  but the birds failed to return.

*Processing Manuka South (Photo Roz Jessop)*

**Day 4. 18 March 2021.**

Arriving early at Central Manuka we again had no luck with the net we had set so a decision was made to set a half net in the northern corner of Central Manuka bay, where turnstone were seen feeding. This position is  not safe to catch when the tide is high as the water is quite deep at the base but at low tide it is quite a nice catching area.  Unfortunately  although birds were in the area, they did not walk into the catching area and the net was taken up once the water had risen too high for safety. Finally on the afternoon high tide a catch of 17 Ruddy Turnstone was made and 15 geolocators were deployed.

*Net set Manuka Central (Photo Roz Jessop)*

*Setting the half net (Photo Roz Jessop*)

**Day 5. 19 March 2021**

We set off with high hopes for Stokes Point the most southerly point on the island. A net was set and subsequently fired but the net did not go all the way out on its jump ropes and as the birds were at the limit of the catching area we unfortunately missed them all. Subsequently we decided to give it another go the following morning. This was taking a chance, as it is usually not possible to catch in the same area in the days following a net firing as the birds are reluctant to return, and this proved to be the case.

*Stokes Point (Photos Roz Jessop)*

**Day 6. 20 March 2021**

After another attempt at Stokes Point in the morning we decided to pull up the net and head for Porky Beach where a flock had been regularly seen in the same area by Lizzie and Margaret before our arrival and had again been sighted during the count. A net was set in front of Turnstone House and all was going really well with 40 to 50 birds close to the catching area, but again luck was not with us, and although we thought we had the access to the beach blocked a family suddenly appeared at the entrance to the beach from a track we had not realised was there – we had spoken to them when we set the net but they thought we had gone! Although they were a long way away and in no danger we quickly decided to take what we had in the catching area and fired before the birds decided to fly. A catch of 22 Ruddy Turnstone and one Sooty Oystercatcher with one geolocator retrieved and 13 deployed. (22 Ruddy Turnstone in the hand is better than 50 flying away.)

*Porky Beach Recce (Photos Roz Jessop)*

**Day 7. 21 March 2021**

The winds were predicted to be very strong and the only place where it was possible to find a bit of shelter was Duck Bay. The count had found 94 Ruddy Turnstone in the area, so it was worth a try, but although the area was a little sheltered the wind was still very strong and the birds were very unsettled. Again we had problems with disturbance from birds of prey. No catch was possible and we left the net overnight to return early the next morning.

*Duck Bay net set (Photos Roz Jessop)*

**Day 8. 22 March 2021**

Returning to Duck Bay we found very few birds in the area and after many attempts to twinkle birds into the bay we packed up the net and moved to Whalebone Bay. On our last visit in November 2019 this was the beach where many of the geolocators were deployed, so it was an obvious site to try and catch, but due to the small amount of weed on the beach, there were no obvious hot spots for feeding and the turnstone were spread out across the whole beach.

We laid a net in the northern corner of the bay, and although turnstone frequently returned to the catch area, an extremely aggressive Hooded Plover protecting a well grown chick quickly moved them on. This was very disappointing as there were five or six geolocators in the area.

Team members remained behind to try to catch and band the Hooded Plovers as BirdLife now has a permit to catch them on King Island. They managed to catch two birds, an adult and a juvenile.

*Whalebone Beach (Photos Roz Jessop)*

**Day 9. 23 March 2021**

Could the weather get any worse?  Apparently yes. It rained all day.

Returning to Whalebone Bay a qualified team member was asked to get his Hooded Plover under control. With a bit of encouragement, the adult and juvenile were moved to an adjacent small embayment around the corner so the turnstone landing on the beach were not disturbing them.  Attempts to twinkle birds into the bay failed and finally it was decided to take what was in the net, which was six Pied Oystercatchers. The net was fired but the end cannon failed to fire and the oystercatchers flew away.

Undeterred, we then set a net in the rain at Burgess Bay. It was a new site below the water stand. The birds were feeding in the soft weed where the spring flows into the bay. All went according to plan, the turnstone returned to their feeding position not long after the net was laid. Surely our luck had changed.  The net was fired, and again the end  cannon failed to fire and all but one turnstone and one Pied Oystercatcher flew away. The turnstone was given a geolocator and we packed up some very wet equipment. Lizzie very kindly offered to let us hang the net in her garage for the night to try and dry it out before we stored it away in Margaret's shed  for our next visit.

*Net set Burgess Bay (Photo Roz Jessop)*

## VWSG South Australian Expedition – Easter 2021

**Bretan Clifford**

Team Leader:  Maureen Christie

With 2020 behind us, Victorian VWSG members particularly anticipated this opportunity to join their South Australian team members on the Easter VWSG SA Expedition 2021.  On arrival, late afternoon of the 29 March at our Carpenter Rocks base attendees variably set up camp or moved into the accommodation generously provided by Maureen.

The South East South Australian team had already contributed to the work program with their advance reconnaissance of the distribution and abundance of the primary target species Ruddy Turnstone.  Maureen informed us that the program was likely to be challenging considering that Ruddy Turnstone were moving in relatively small flocks, between multiple feeding sites, and the predicted fine weather was expected to attract numerous tourists to the beaches.

The primary aim of the expedition was to deploy 24 geolocators on Ruddy Turnstone.  A specific priority was to maximise the recovery of geolocators, with those birds having documented previous migrations receiving a replacement geolocator.  Additional aims were to assess the percentage of juvenile birds' present (a surrogate for breeding success) and bird survival rates (using recapture data).  Further information on survival rates and site loyalty were obtained by numerous sightings and recording of engraved flags during twinkling activities and while waiting for suitable tidal conditions for the catch.

Ruddy Turnstones on beach wrack at Beachport – Photograph Jennifer Hiscock

Day 1: 30 March 2021

Reconnaissance indicated our first priority was the northern most site, Stinky Bay Nora Creina. Observations there included 40 Ruddy Turnstone, at least three with geolocators. After a relatively long drive in foggy conditions, a detailed induction, and associated documentation the team was raring to go, in clearing sunny conditions.

A 4-cannon large mesh net was set on this wide beach at the observed high tide feeding site. Additional non-targeted species included 50+ Silver Gulls, 50+ Crested Terns, 100 Sanderling, a pair of Hooded Plovers with a fledgling, a Pied Oystercatcher, and a pair of aggressive Sooty Oystercatchers. Few tourists were present to disturb the birds and the wait for high tide was only interrupted by a flyby of a White-breasted Sea-Eagle that put the birds into the air briefly.

Our efforts for the day proved unsuccessful. The Ruddy Turnstone had been feeding well on the beach wrack adjacent to the northern rocky headland while the tide was rising. Attempts to twinkle this well-fed flock resulted in their movement to the identified high tide feeding roost, but the net was set too high up the beach and the birds could not be encouraged to move into the catch zone. Attempts to move the birds those few precious metres resulted in their retreat to the informally named off shore “Dog Rock”. A friendly diver swam to their roost and disturbed them, sending them north around the headland rather than to the beach. Score: Birds 1 vs Team 0.

Day 2: 31 March 2021

Our observations from day one confirmed that the northern Stinky Bay site remained our priority site. The lesson from day one was that additional width of the catch zone was required. Accordingly, two nets were set, a 4-cannon large mesh net and an adjacent small mesh 3-cannon net covering a substantial portion of the high tide feeding roost. Observations confirmed similar geolocator and Ruddy Turnstone numbers to those on the previous day.

Non-target species included similar numbers of gulls and terns, a reduced number of Sanderling and a pair of Pied Oystercatchers. Tourists increased, with vehicles including campervans, creating substantial disturbance of the birds. The position of near off shore fishermen was closely monitored as they drifted past the net zone. No birds of prey disturbed the flock. Additional reinforcements for the team arrived from Adelaide, with Mary-Ann photographing Elegant Parrots and an aggressive snake on the trip to Nora Creina, on Powell Road.

Attempts to twinkle the Ruddy Turnstone from their feeding zone on the beach wrack adjacent to the northern rocky headland indicated they were too well-fed and resulted in their movement to the off shore “Dog Rock”. Jenny demonstrated her swimming prowess and dislodged the birds, but they flew northward and could not be located. Score: Birds 2 vs Team 0.

Day 3: 1 April 2021

The team members refused to be despondent with their current score verses a wily adversary. Given the importance of geolocator recoveries, a last attempt at Stinky Bay was conducted on this last day before a predicted substantial tourist influx. A tactical change involved setting the 3-cannon small mesh net on the high tide feeding zone and the 4-

cannon large mesh net lower on the beach. A catch in advance of high tide, before the Ruddy Turnstone became too well fed, was the intent.

Beach and near offshore activities by tourists substantially increased. In addition to drifting fishing boats, a diving boat required constant monitoring. Substantially more vehicles were driving on the beach. The dark colored vehicles in particular were detrimental to the birds settling, with the disturbance of the non-targeted gulls, terns and Sanderling unsettling the Ruddy Turnstone. The latter departed to the north mid-afternoon but returned at 1600 hours. The 4-cannon net was moved twice in response to tidal movements. Again, we were unsuccessful in twinkling the unsettled Ruddy Turnstone into the catch zone. Score: Birds 3 vs Team 0.

Day 4: 2 April 2021

The arrival of additional team members from both Victoria and South Australia had lifted the team numbers to 17 persons. The team met at Blackfellows Cave where a substantial number of dog walkers and vehicles were active. A decision was made to divide into two teams. A 2-cannon net was set at Blackfellows Cave with Jeff Campbell as leader. The selected site was a high tide feeding zone where tourist beach activity could be readily monitored. Maureen and a team of eight deployed to Nene Valley Beach, just east of Black Rock, where tourist activity was at a lower level. A 4-cannon large mesh net was deployed in a high tide feeding zone.

Tourist disturbance proved too great at Blackfellow Caves, with no birds approaching the catching zone. By contrast, the lower levels of beach activity at Nene Valley Beach allowed a small flock of Ruddy Turnstone to feed on the beach before high tide. A pair of Hooded Plover with a fledgling joined the feeding, positioning themselves closer to the net and requiring careful observation of the safety zone. A decision was taken to concentrate efforts on the Nene Valley site, with Jeff and Sarah to be the only team members to remain with the Blackfellows Cave net.

A small catch of seven adult Ruddy Turnstone was achieved, with the by-catch of the Hooded Plover fledgling. Three of the Ruddy Turnstone had been previously banded. The relatively small catch numbers allowed the less experienced members of the team to be instructed on long-wing extraction techniques. All of the seven Ruddy Turnstone were of a suitable age and condition for the deployment of geolocators, successfully initiating the program. Score: Birds 3 vs Team 1.

Later, Maureen admitted struggling with organizing two teams with at least one team member becoming separated from their gear (and food!). A post-catch treats of Orange Polenta Cake had us reminiscing of a famous catch at Nene Valley when base camp feasted on cake and freshly brewed coffee. This time the twinklers didn't miss out on the feast. Thank you, Mary-Ann, both for the memories – and the cake!

Processing the catch at Nene Valley beach – Photograph Jennifer Hiscock

Day 5:  3 April 2021

With many tourists on the beaches, catch site selection was substantially reduced.  A site was selected at the eastern end of the Blackfellows Caves beach for a 2-cannon large mesh net.  A small sandy beach was bounded by rocks, including flat rocks at the ten-metre mark. Widespread twinkling was conducted on beaches to the east and west, but, on multiple occasions the Ruddy Turnstone flew past the selected site after a brief inspection.

One of the twinkling teams alerted us to birds attracted to a feeding zone on beach wrack at Livingston Bay.  Campers were present at the beach entrance but were not utilizing the beach and there was no beach traffic. A rapid relocation of the team, involving some setting the 4-cannon large mesh net at Livingston Bay, and others packing the 2-cannon net, followed.

Our efforts were rewarded shortly after with the firing of the net at Livingston Bay.  The wet catch was well executed by the mixture of experienced and well-briefed, inexperienced team members.  The catch included a total of 28 Ruddy Turnstone, with 13 retraps and two geolocators recovered.  One retrap required re-banding due to band wear.  A review of the database indicated that bird 052-23776 was originally banded at Green Point, SA on 12 March 2003.

The birds were processed on an area adjacent to the beach entrance road.  Seven juvenile Ruddy Turnstone were identified. Interesting moults were photographed to be added to the library of moult photos that we began compiling on the November expedition. The deployment of eight geolocators was less than expected from a catch of this size, with minimum weights of birds a critical consideration. Still, a substantial step forward in achieving the expedition aims!  Score:  Birds 3 vs Team 2.


Day 6: 4 April 2021

The decision was made that the elusive northern flock of Ruddy Turnstone with three known geolocators remained a high priority. Advanced reconnaissance in the morning indicated extreme beach tourism at Stinky Bay, precluding an attempt. A secondary site south of Beachport was selected. Multiple flocks of Ruddy Turnstone were observed between Beachport and Southend, with substantial beach wrack deposits providing good feeding sites. While beach tourism was at a very high level, the selected site was an area lower than that travelled by the majority of the tourist 'convoys' on this section of the beach.

The 4-cannon large mesh net was set in a high tide feeding site with abundant morsels to attract the Ruddy Turnstone. Twinkling teams were sent to the north and south and the arrival of a substantial flock (40+) of Ruddy Turnstone confirmed the site selection. Unfortunately, the birds focused on wrack 'islands' on the shoreline, well out of range of the net. Several disturbances by tourists required additional twinkling to get the birds to return. Ultimately the team was beaten by poor light conditions, shortly after the last tourist disturbance of the birds. On completion of the packing of the net a flock of 40+ Ruddy Turnstone landed on the beach to farewell (or laugh at) us. Score: Birds 4 vs Team 2.

The VWSG SA Expedition 2021 achieved the successful deployment of 15 geolocators on Ruddy Turnstone. Two geolocators were retrieved. There remained nine geolocators for Maureen and the SE South Australian team to deploy. Flag observations by Jennifer Hiscock and Mary-Ann van Trigt included three Sooty Oystercatchers, one Pied Oystercatcher and 127 Ruddy Turnstones (16 multiple sightings). This documentation requires substantial ongoing analysis, but a summary can be provided.

The numerous Ruddy Turnstone flag sightings are dominated by SE South Australian-banded birds. Seven birds were banded in 2006-2010, 45 banded in 2011-2015 (2 with geolocators) and 58 banded 2016-2021 (4 with geolocators). Many of these have been

sighted multiple times in SE South Australia. Ruddy Turnstone XVZ was first banded at Nora Creina in 2008 and, in addition to five sightings in SE South Australia, there was a sighting in Bohai, China in 2008. Of special note is Ruddy Turnstone XUN that was first banded at Beachport in April 1999 and has been re-trapped four times in SE South Australia.

Five of the Ruddy Turnstones were banded during the period 2017-2019 at Manuka, King Island, Tasmania. The oystercatchers were banded between 2009 and 2016 and have been recorded locally at SE South Australia, multiple times.

A substantial number of team members gained the new experience of catching and deploying geolocators on Ruddy Turnstone. The South Australian 'Limestone Coast' exhibited its finest weather, although resulting tourist numbers suggest we might wish for a wet and windy 2022 Easter for the next VWSG SA expedition.

**Late Press:** It has been reported that Maureen and the SE South Australian team have been successful in deploying the outstanding nine geolocators before the end of the season and retrieved one geolocator. An additional SE South Australian team member was involved in the post-expedition catch, Cassie Hlava. Mission Accomplished!

**Reconnaissance Team:** Maureen Christie (leader)
Cath Bell, Jeff Campbell, Phil Cole, Jenny Hiscock, Vicki Natt, Holly Prest, Barry Schriever, Iain Stewart, and Mary-Ann van Trigt. Most expedition members conducted reconnaissance during the expedition.

**Expedition Team:** Maureen Christie (leader)
Max Arney, Kelsey Bennett, Jeff Campbell, Sarah Campbell, Bretan Clifford, Phil Cole, Tim Collins, Mel Greenslade, Jenny Hiscock, Angus Langsmith, Ila Marks, Anne McMillan, Eric Miller, Heidi Miller, Declan Spoor, Iain Stewart, Sandy Stewart, and Mary-Ann van Trigt.

## Report on the VWSG South East South Australian Field Trip 27 October to 3 November 2020.

**Jenny Hiscock**

Goal: Retrieval and deployment of geolocators for Ruddy Turnstone and percentage juvenile data.

Background

With the Easter expedition cancelled because of COVID-19, this field trip was the first VWSG trip since Easter 2019. Due to ongoing COVID-19 Restrictions, all participants were from South Australia with no Victorians able to attend. Theoretically it was possible for Sally Leonard to join us from NSW, but the detour around Victoria made it unrealistic. In addition, catching equipment available were those items that were already located in South Australia. This meant available nets were a large mesh 2 cannon net, and a small mesh 3 cannon net. The activities of the group for this field trip, were subject to Audit.

Regular beach surveys by local residents had indicated that good flocks of Ruddy Turnstone were present along the coast from Port MacDonnell to Carpenter Rocks, and also north along the coast from Nora Creina to Wright Bay. Sightings of leg flags and geolocators had been made.

Methods:

High tides were in the middle of the day. Previous high tide reports of feeding birds were used as a guide for choosing a catch site.

On Day 1 (Wednesday 28 October), Blackfellows Caves beach east of the settlement was chosen. Ruddy Turnstones were on the beach at 8:30 am, feeding up high. By 9.00 am, we were all on the beach and Maureen began with instructions for the day so that responsibilities were established. Jeff provided a printout of weather and tide data and the net was set where feeding was seen. High tide of 0.88m was forecast at around noon. The net was set but there were delays with issues with the firing circuit. This was sorted by 11 am and participants were sent west and east to bring the Ruddy Turnstone flock to the net area.

It was a sunny day; winds were light until they increased at midday and came from south-west. A cool change was expected within 48 hours, so a high pressure system was present and may have been the reason that the tide did not really rise much during the day. A flock of some 110 birds was in the area and were able to be twinkled towards the net. When they flew east towards Black Rock, it was possible to return them to the net. When they flew west around the corner, they were also twinkled back to the area of the beach where the net was located but would not move from the water's edge. The net was moved closer to the water's edge at 3:18 pm, but by this time, the tide had fallen further and many reefs were exposed and when the birds flew, they were not retrievable. At 4:40 pm, the beach was abandoned for the day.

Three birds with geolocators were seen with the scope and a number of leg flags were read. Mary-Ann was seated on the dune with her scope and VAZ (aka ATZ) was identified. This Ruddy Turnstone has four migration tracks already recorded and was high on Maureen's list to catch! We would return to this site another day.

On Day 2, Thursday 29 October, we met at the east end of Livingston Bay at 8:30 am. It was pouring with rain and 12 degrees C with the temperature not expected to improve. The rain radar was consulted and the current rain band, and another later in the morning, were seen. It was decided to have a lay day and prepare for going to Nora Creina region on Friday. Maureen and Jenny took the opportunity to visit the Port MacDonnell Maritime Museum where FoSSE have been invited to mount a Shorebird Display. A copy of Jenny's film "Wrack or Ruin?" will be incorporated into the display.

On Day 3, Friday 30 October. Reports on bird sightings on Thursday evening led to the decision to meet on Friday morning at Boatswain Point, the western end of Long Beach, at 8:30 am. Leaving Carpenter Rocks and Mt Gambier at 6:30 am, we met other FoSSE members Vicki Natt, Cath Bell, Iain Stewart and Max Arney at 8:30 am. No birds were seen at Boatswain and following previous evening reports of sightings at Wright Bay, all convened at this location.

At the Wright Bay beach, an unusual bird was spotted. This separated the twitchers from the banders as twitchers went off in pursuit of photographs for ID. The Banders began the unloading of the gear.

Photo: Mary-Ann Van Trigt – a Whimbrel (a tick for some)

The large mesh 2 cannon net was set on the beach to the east of the southern point of Wright Bay; the 12 m marker located where the tide was expected at 12 noon. Flocks of turnstones were found to the east and west of the net area. Those to the west were lost, but Vicki and Cath walked a flock of 45 from the east. The net was fired at 12 noon and 15 Turnstones were caught. Only 1 was a retrap, XAL banded 15.4.2014 at Beachport.

With a smallish number of birds, the opportunity to band was given to three C Class learner participants. There were no geolocators deployed here.

Other highlights were two Fairy Tern pairs with bands (photographed) that were presenting fish to each other. One of the birds (043-10624) was caught by David Paton's team as an

adult in the Coorong in January 2019, while the other (042-98902) was caught as an adult in the Coorong in December 2011 (Fiona Paton). And a trip to Robe to see Latham's Snipe at

Lake Fox with the added bonus of a lone Sanderling on the beach (another tick for some). We were able to return to Carpenter Rocks just before 6 pm in time to collect Maureen's mail.

Day 4 saw the group of Maureen, Iain, Graham, Phil, Jeff, Sarah, Jenny and Keith return to Blackfellows Caves beach at 8:30am. The cold front was settled in with cold winds and the temperature 13 degrees. There were turnstones feeding high along with 100 plus Silver Gulls, 4 Sooty and 1 Pied Oystercatcher. Anticipating that the turnstone would continue feeding high, the net was set above where high tide would go and all was ready to begin at 11.00am. Graham and Iain were doing the twinkling from the west, and twice bought the turnstones back quietly along the shore to in front of the net. This included some cold water walks from one small rocky point to the next.

Photo: Jenny Hiscock

The net was moved further forward after high tide, but although the birds returned to the shoreline, they were no-longer interested in feeding high, instead preferring to roost in the weed at the very edge of the water. Birds with two white geolocators and one with yellow were seen, one bird being VAZ.

While waiting, we were treated to an aggressive display from a Pied Oystercatcher J9, who flew in and attacked the Sooty and Pied Oystercatchers that had been feeding in the area.

Day 5 saw the group back at Blackfellows Caves armed with the experience of yesterday. At 8:30am, some 100 plus Ruddy Turnstones were present at the beach. Although the birds were feeding up high early in the morning, once they were moved, they would only return to the water's edge. It was warmer than yesterday and the wind was not as strong. High tide expected at 12:30pm so net set on the back of the beach 'hump' where the tide not expected to reach, but close enough to encourage birds to the area. With twinkling, the birds were able to be bought to the area in front of net but not up the beach. There was an issue with a fisherman anchoring about 50m offshore -some 100m from the net. He drifted around for about ¾ of an hour in front of the net. It was a great relief when he motored around the corner to the west. It was one thing to walk into the water, but to swim out to that boat in the very cold water was not really viable.

When the tide was falling, at 2 pm, the net was reset on the sea side of the beach 'hump'. The birds were clustered behind any piece of kelp that was on the beach near to the water's edge and were stubborn about efforts to bring them up. Graham did a marvellous job of keeping them in the area. We thought we really needed a big wave to bring them up – at 2:45 pm, such a group of waves did just that. The birds streamed up the beach, ran straight into the net area, and the net was fired at 3 pm. It was a dry catch. Everyone was quickly onto the beach with the covering material. Some 61 Ruddy Turnstones and 1 Sooty Oystercatcher were caught. The keeping cages were in a sheltered section adjacent to the beach track. Two birds with geolocators were caught, including VAZ – now for its sixth geolocator! Amazing to catch this bird again. No team from Victoria also meant that we only had 1 tube of glue. So, how best to organise our small team to get everything done by 7 pm? Phil in charge of keeping cages and ensuring we were running to schedule and that all retraps went to the geo team. Sarah, Iain and Mary-Ann processing turnstone with Jenny photographing moults. Graham and Maureen geos. Jeff and Keith processing the oystercatcher, doing all gluing and all releasing. There was absolutely no doubt that Keith clocked up his 10,000 steps for the day! 14 Geolocators were deployed, including the two recoveries, all birds were fully processed, and photographs were taken of 50 moults.
A very satisfying day for all.

Photo: Jenny Hiscock

Where to go on Day 6? Graham reported 70 turnstones at the east end of Livingston Bay from his daily early beach check. Max Arney had missed the great catch of the previous day and was back. Ross Anderson also attended. We met at 8:30 am at the eastern end of Livingston Bay. The two cannon net was set to catch on the rising tide; this was forecast to be at 1.15 pm and 0.8m.

Ruddy Turnstones had moved to the east while we were net setting; we were ready for them at 10 am and they were retrieved twice by Graham and Ross. The tide rise never really occurred (high pressure system again?) The net was moved along the beach to where birds had been feeding. However, while turnstones were being nicely moved along, a raptor flew

over and the flock flew out to sea a long way and turned west. Twinklers were sent east and west – a small flock from the east was bought near but diminished to none over distance. In the west, Jenny went to Pelican Point where some 70 turnstones were found. The tide was falling and birds could easily move from side to side of the lagoon they were adjacent to, and when two other people came to assist, the birds went further out to the sand at the spit of Pelican Point.
At 2 pm, participants were asked if they wanted to wait until 3 pm – there was a possibility that birds would return to Livingston Bay to feed. It was agreed to wait. No birds returned. Maureen's car was de-bogged, the beach cleared of equipment and we returned to Carpenter Rocks for debrief and pack-up. Maureen organised a lovely evening meal of seafood and a small party to end a successful Field Trip.

Participants: Maureen Christie, Max Arney, Cath Bell, Jeff Campbell, Sarah Campbell, Phil Cole, Jennifer Hiscock, Keith Jones, Vicki Natt, Graham Parkyn, Iain Stewart, Mary-Ann Van Trigt, Ross Anderson.

Catches

| Date | Location | Species | New | Retrap | Total | Juv. | Geos (retrieved) deployed | Comments |
|---|---|---|---|---|---|---|---|---|
| 28.10.20 | Blackfellows Caves | Ruddy Turnstone | | | | | | 1 net set (twice), not fired |
| 29.10.20 | Livingston Bay | | | | | | | No net set, rain |
| 30.10.20 | Wright Bay | Ruddy Turnstone | 14 | 1 | 15 | 0 | | |
| 31.10.20 | Blackfellows Caves | Ruddy Turnstone | | | | | | 1 net set (twice), not fired |
| 1.11.20 | Blackfellows Caves | Ruddy Turnstone | 49 | 12 | 61 | 2 | (2); 14 | |
| | | Sooty Oystercatcher | 1 | | 1 | | | |
| 2.11.20 | Livingston Bay | | | | | | | 1 net set (twice), not fired |
| | **TOTAL TURNSTONE** | | 63 | 13 | 76 | 2 | | |

Most Interesting retrap:

VAZ. Originally flagged 4X on 4.3.2006 as a juvenile, then ATZ on 2.11.2013, then VAZ 27.11.2016. Captured a total of 12 times, all but once being in the Nene Valley/Blackfellows Caves area. Retrieved five geolocators, giving six northern and five southern migrations. Now carrying its sixth geolocator.

Most interesting resighting:
CKZ. Originally flagged JE on 30.5.2006 as a juvenile. Captured a total of five times, always in the Nene Valley/Blackfellows Caves area.

Both hatched July 2005, so now aged 15 years.

Friends of Shorebirds SE

## South Australian Team Report – 1 September 2020 to 31 July 2021

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

With Shorebirds celebrating their birthday on 1 August and the VWSG AGM usually being late August, it seemed logical for SA team reports to be for the year ending 31 July. But COVID-19 has put paid to that. Last year our report was for 13 months and this year it is for 11. The table is for the period 1 August 2019 to 31 July 2021.

**Local team catches, geolocators and VWSG visits.**
Despite COVID-19 restrictions, and interstate team members not always being able to join us, we conducted a full season of catching. Detailed reports of the November and Easter expeditions are elsewhere in this Bulletin, so remarks here are brief. Borders were closed in November, but an enthusiastic South Australian-only team was successful in retrieving two, and deploying 14, geolocators. The South East South Australian team sallied forth on four occasions during March, targeting flocks where geolocators had been observed. Unfortunately, we only fired the net once, catching five Ruddy Turnstone and seven Red-necked Stint. None of these birds carried geolocators.

With borders open we welcomed team members from Victoria for the Easter expedition. Catching proved challenging, but we managed to retrieve two and deploy 14 geolocators. Having inherited eight geolocators from King Island, this left us with nine still to deploy. Fortunately, the Beachport flock which we had failed to catch during the expedition, was still in Rivoli Bay. Despite challenging tides and weather, a small team managed a magnificent catch of 28 turnstone on 9 April, retrieving one more geolocator and deploying all nine.

Thank you to everyone who has helped make this season so successful despite everything that was stacked against us. We deployed a total of 38 geolocators:14 in November 15 at Easter, and nine on our last catch of the season in April. We retrieved five, one being from Ruddy Turnstone ATZ /VAZ, a bird with a record of five return journeys and a sixth Northward migration. It is rewarding to see how many South Australian volunteers are becoming experienced cannon-netters.


Photo: Paul Taylor. Bald Hill. 29 April 2021
We recorded a particularly interesting movement of a juvenile turnstone during this year: SEZ banded on 3 April at Livingston Bay, photographed at Bald Hill on 29 April, and then observed on Nene Valley Beach 18 May. We have long known that juveniles are fairly mobile during winter, but this is the first recording of one moving away from the South East of South Australia and returning later in the season. This is a journey of around 500 km each way.

Catching over winter is dependent on a good breeding season the preceding year. This winter there are two flocks of Ruddy Turnstone, with a total of approximately 100 birds, on the Nene Valley beaches. During the winter months, the VWSG has caught a total of fewer than 250 Ruddy Turnstone. The most recent winter catch was in 2006. We had a small catch of 10 on 21 May, since then a combination of unsettled, unpredictable turnstones, extremely high tides and bad weather have, so far, prevented us from attempting another catch.

**Beach Nesting Birds.**
Because of COVID-19 restrictions there was very little human disturbance on our beaches early in the breeding season. This was to change when at Easter our beaches were over-run with 4x4 drivers, many of whom drove recklessly with no consideration for other beach users, let alone for birdlife. However, the early lull may have contributed to our count of 24 fledged Hooded Plovers, our best count in recent years.

We continue monitoring and protecting nests of all beach nesting species where possible. Unbelievably, the pair at this site (left and right below) managed to hatch two chicks, although we do not know whether the chicks survived.

A highlight was the successful fledging of three chicks; offspring of the Long Beach, Robe pair. These were flagged on 20 January, when on the point of fledging (left).

Photos: Cath Bell

**Crested Tern**

Crested Terns did not nest on the islet in Little Dip Conservation Park this season. However, our attention was drawn to the colony on Penguin Island, off Beachport. This is the colony where Max Waterman banded almost 20,000 Crested Tern chicks from 1955-1987. We banded 92 chicks there in January 2012. Exceptionally fine weather is needed to allow us to land on this island. It was decided to attempt a drone survey similar to what is done on Seal Rocks in Phillip Island Nature Park. Unfortunately, the quality of the images obtained was poor.

There are several sites in the Carpenter Rocks area that appear to be suitable for nesting. This year, on 12 January, four pairs were observed copulating on the beach at the Cape Banks Lighthouse. However, yet again, we found no evidence of eggs or chicks in the area.

**Fairy Tern**

Number 2 Rocks, Canunda, was the only site where we found evidence of Fairy Tern breeding this season. This site was a very small site, with five the highest number of individuals counted. There was at least one nest. Staff of the Department of Environment and Water (DEW) erected temporary fencing as a combination of COVID-19 restrictions and bad weather had delayed the erection of the permanent fence. Naracoorte and Mount Gambier Four Wheel Drive Clubs and DEW joined FoSSE members on 13 and14 February for a long planned, and much deferred, working bee. Materials for the fence were purchased through a grant from the Coastal Protection Board. It was fantastic to have the enthusiastic and willing support of the Four Wheel Drive Club members. The fence was erected in less than a full day. The morning of the following day was spent on a beach clean-up where two trailer-loads of rubbish were collected.


Photos: Sarah Campbell

**Our Coorong / Our Coast (OC/OC)**
A continuing low uptake of bait is an indication that the fox baiting program is having an impact. A lot of our time has been taken up with the Site Action Plans being prepared by BirdLife Australia. A face-to-face meeting of stakeholders in May was a refreshing change from the many Zoom meetings. With finalisation of the plans not far off, the OC/OC team is already working on plans to prioritise implementation of recommended actions. Already the proposal to investigate putting a regulator on Drain L to increase shorebird habitat in Lake Hawdon North has been taken up by the much larger 'Healthy Coorong, Healthy Basin' project. The Limestone Coast Landscape Board has engaged Tania Rajic as a Project Officer with a focus on Community Engagement to ensure that key stakeholders are consulted during the investigation phase of this project. There will be opportunities for us to have input into the design work.

**Work with schools**
There were two visits to Newbery Park Primary this year. One visit for an afternoon in the class-room and another for day at Lake George and Beachport. The children were very excited to see a flock of turnstone in Rivoli Bay.

Waterwatch at Piccaninnie Ponds has morphed into an annual event. The ASTO Shorebird Competition for primary students created quite a bit of local interest. We are aware of two schools that are submitting entries themed around the Piccaninnie Ponds Conservation Park. On their outing in early May, the children from St Martins Lutheran School came equipped with ID sheets for shorebirds they might see, as well as with wetland vegetation sheets. They had already viewed on the Internet the Curlew Sandpiper migration graphic that had been created from geolocator data.

Canunda and Beachport Friends have run 'March into May' for many years. This year we were invited to have a shorebirds station on the shores of Lake Bonney. Despite the inclement weather, it was a successful day and we hope to participate again next year.

March into May, Canunda National Park.  Photo: Limestone Coast Landscape Board

**The Glenelg Estuary and Discovery Bay Ramsar Site.**
Our commitment to this project continues, COVID-19 restrictions made it difficult to synchronise counts with BirdLife. They counted the Victorian section of the Bay, and we counted the South Australian section as close to the same time as we could.  A large flock of Sanderling, one of the target species, was discovered in the Piccaninnie Ponds/ Green Point area on the day of the November Hooded Plover count.

Photo: Helen Bawden

We found a flock of 2,000 Sanderling at Stony Drain on 18 November. There were very few birds with flags in the flock, but we read five. One bird was banded in Canunda, three at Danger Point and one at Stony Drain.  A return visit was planned for the next day, but this was foiled by the sudden announcement of a COVID-19 lock-down.

Hopes remain high that the Sanderling tracking project outlined in last year's Bulletin will go ahead. An application was submitted in March by the South-west Environment Alliance based out of Portland, for a Department of Environment, Land, Water and Planning Volunteering Action Grants program.

**Beachwrack harvesting**

There continues to be very little evidence of beachwrack harvesting. An application has been made to harvest beach-cast seagrass and marine algae wrack from an area north of The Granites (EP0016). Of particular concern is that the use of a rubber tracked vehicle with a modified grapple, and with a gross vehicle mass of 6.5 tonnes, would be permitted. FoSSE made comment and also forwarded the call for comment to like-minded groups.

EP0003 Exploratory Permit mid Rivoli Bay to the Victorian Border expired on 30 June. At the time of writing we have not been able to ascertain whether it has been renewed or not.

The current export permit for the South Australian Beach-cast Marine Algae Fishery is valid until 21 September 2021. For the permit to be renewed, PIRSA must, once again, convince the Federal Department of Agriculture, Water and the Environment that the fishery is conducted in a sustainable and environmentally responsible manner. FoSSE was involved in in this same process during 2014 to 2016, and which resulted in us taking the Federal Minister for the Environment to the Administrative Appeals Tribunal in order to achieve protection for migratory shorebirds. At the time we achieved much more protection for both migratory and resident shorebirds than was proposed in the original Assessment, but some matters that are cause for concern remain. However, it should be noted that conditions that were the outcome of conciliation at our appeal have been implemented in this particular proposal. Comment closed 16 August.

**Conservation.**

In addition to topics discussed in this report, comment was made on the following:

District Council of Grant Rural Living boundaries and Dog By-Laws.
Conversation with Robe Council on dogs on Long Beach (Hooded Plover nesting site)
Port MacDonnell Dredging – Land and Water Consultancy.
Support for Nature Glenelg Trust Coast and Marine After School Care grant application.
Limestone Coast Landscape Board Regional Plan on three occasions.
Signed the Toondah Harbour Campaign joint letter to the Minister of Environment
Gave evidence at the Parliamentary Committee on the Coast Management Board.

There have been several interviews on local ABC radio, and occasional articles in the local press. A presentation was made to the Port MacDonnell Probus Club.

**Port MacDonnell Maritime Museum**

We continue to assist the Museum Committee to set up their dedicated shorebird display. The plan is for it to focus on migration, with emphasis on Ruddy Turnstone ATZ. It will be designed around screens and posters consistent with the 'old fashioned' feel of the museum. Thank you to Ken Gosbell for helping with geolocator information and Kate Gorringe-Smith for general advice.

**General.**

As part of their support of Friends Group's, DEW has given us six new UHF radios. Hopefully that means I will not have a repeat of the recent situation:-
'3…2….1….FIRE……SILENCE, and a firing box operator waving a malfunctioning radio.
Thanks to the Department.

We continue to be involved in various counts and projects. Hooded Plover were counted from The Granites to the Victorian border in November and April. A summer count of Lake Hawdon South, and summer and winter counts of Lake Bonney SE were also completed. Also counts at our traditional sites of Port MacDonnell, Carpenter Rocks and Lake George were successfully completed. Once again, we assisted in Latham's Snipe counts and the state-wide spring Wetlands and Waterfowl Survey, The Waterfowl Survey is held in November and this year at Lake Hawdon South there were 1,200 Whiskered Terns, but virtually no waders.

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Whiskered Tern roosting on up-turned thrombolites, Lake Hawdon South. Photo: M Christie

Jeff continues as both the count and the Beach Nesting Birds Co-ordinator. Now that we are involved in the Our Coorong / Our Coast project these co-ordinating roles involve much more reporting than we have needed to do in the past.

We collaborated with VWSG and Michelle Wille to design and produce a new tee shirt. We did a trial run of eight shirts. Maureen wore one to a conservation gathering in Adelaide where it was a huge success.

A very successful AGM was held at the Campbell family home in Mount Gambier in February. Gold Passes and 10-Year Certificates were awarded to eligible members. Mark de Jong, Senior Environmental Officer, Drainage Operations, Water & River Murray Division, DEW, gave a thought provoking talk on "Managing Drains and wetlands in the region – What will the future bring?"

Thank you to the members of the group who have worked hard to produce these results. Thank you too, to the Our Coorong / Our Coast team and other members of Limestone Coast Landscape Board and the Department of Environment and Water, who have provided encouragement and practical help. 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 01.08.2019 TO 30.06.2021**

| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 13.01.2020 | Little Dip Conservation Park | | | | | | | | | | | | | | | | 257 | 257 |
| 2020 Resident Permit | various ** # | | | | | | | | 6 | | | | | | 13 | | | 19 |
| 14.03.2020 | Nene Valley & Livingston | | | | | | | | | | | | | | | | | 0 |
| 16.3.2020 | Nora Creina* | | | | | | | | | | | | | | | | | 0 |
| 17.3.2020 | Nora Creina* | | | | | | | | | | | | | | | | | 0 |
| 15.03.2021 | Woolwash, Port MacDonnell | | 5 | | | 7 | | | | | | | | | | | | 12 |
| 09.04.2021 | Beachport | | 28 | | | | | | | 1 | | | | | | | | 29 |
| 21.05.2021 | Nene Valley east & west | | 10 | | | | | | | | | | | | | | | 10 |
| 2021 Resident Permit | various ** # | ... | | | | | | | 3 | | | | | | 7 | | | 10 |
| SA team this period | | | 43 | | | 7 | | | 9 | 1 | | | | | 20 | | 257 | 337 |
| B/F SA team | 26.11.00 – 31.7.2019 | | 648 | 13 | 106 | 536 | 107 | 18 | 60 | 11 | 1773 | 0 | 44 | 25 | 83 | 3 | 1004 | **4431** |
| **SA TEAM TO DATE** | | | **691** | **13** | **106** | **543** | **107** | **18** | **69** | **12** | **1773** | **0** | **44** | **25** | **103** | **3** | **1261** | **4768** |
| | | | | | | | | | | | | | | | | | | |
| **special geo trips** | | | | | | | | | | | | | | | | | | |
| 28 Oct - 2 Nov 2020 | multiple net sets SA only | | 15 | | | | | | | | | | | | | | | 15 |
| 30.10.2020 | Wright Bay | | | | | | | | | | | | | | | | | 0 |
| 01.11.2020 | Blackfellows Caves | | 62 | | | | | | | 1 | | | | | | | | 63 |
| geo trip this year | | | 77 | | | | | | 0 | 1 | | | | | | | | 78 |
| B/F geo trips | 23.4.2009 - 31.7.2019 | | 464 | | 648 | 346 | 82 | 13 | 3 | 4 | | | 3 | | | 1 | 7 | 1571 |
| **GEO TRIPS TO DATE** | | | **541** | | **648** | **346** | **82** | **13** | **3** | **5** | | | **3** | | | **1** | **7** | **1649** |
| | | | | | | | | | | | | | | | | | | |
| **Thompson Beach** | | **18** | **31** | **21** | | **61** | **42** | **1** | **6** | | | **21** | **10** | | | **13** | **31** | **255** |
| | | | | | | | | | | | | | | | | | | |
| **Eyre Peninsula** | | | **68** | | **262** | **393** | **23** | **8** | **12** | **4** | **15** | | **21** | | | **2** | **1** | **809** |
| | | | | | | | | | | | | | | | | | | |
| **GRAND TOTAL SA TEAM** | | **18** | **1331** | **34** | **1016** | **1343** | **254** | **40** | **90** | **21** | **1788** | **21** | **78** | **25** | **103** | **19** | **1300** | **7481** |

*net set, no catch; ** chicks/'runners; #noose mat.

20.01.2020 Kilarney, Victoria Rescue of Pied Oystercatcher

**TOTAL TO DATE - TERNS**

| | SE | Yanerbie | T.Beach | Totals |
|---|---|---|---|---|
| Crested | 1010 | 1 | 1 | 1012 |
| Fairy | 233 | | 5 | 238 |
| Caspian | 1 | | 11 | 12 |
| Whiskered | 6 | | 14 | 20 |
| Little | 18 | | . | 18 |
| **TOTAL TERNS** | 1268 | 1 | 31 | 1300 |

**TOTAL TO DATE - OTHER**

| | SE | Yanerbie | T.Beach | Totals |
|---|---|---|---|---|
| Black-fronted Dotterel | 3 | | . | 3 |
| Golden Plover | 1 | | 1 | 2 |
| Broad-billed Sandpiper | | 1 | . | 1 |
| Common Greenshank | . | | 7 | 7 |
| Great Knot | . | | 6 | 6 |
| **TOTAL OTHER** | 4 | 1 | 14 | 19 |

**SOUTH AUSTRALIAN TEAM CATCHES - Month Waders Caught in 1.12.200 TO 30.06.2021**

| | Jan | Feb | March | April | May | June | July | Aug | Sept | Oct | Nov | Dec | TOTALS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ruddy Turnstone | 6 | | 16 | 266 | 48 | 16 | 46 | 87 | 98 | 1 | 107 | | 691 |
| Red Knot | | | | 1 | | 12 | | | | | | | 13 |
| Sanderling | | 17 | 2 | 82 | | | | 5 | | | | | 106 |
| Red-necked Stint | | 34 | 41 | 107 | 4 | 20 | 49 | 93 | 122 | 43 | 7 | 23 | 543 |
| Sharp-tailed Sandpiper | | | | | | | | | 6 | 101 | | | 107 |
| Curlew Sandpiper | | | | | | 2 | 7 | 6 | | 3 | | | 18 |
| Pied Oystercatcher | 25 | 4 | 1 | 1 | 1 | | | 2 | | | 10 | 25 | 69 |
| Sooty Oystercatcher | 3 | | 2 | 4 | 2 | | | | | | 1 | | 12 |
| 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 | 28 | 7 | 14 | 4 | 2 | | | 1 | 5 | 7 | 19 | 16 | 103 |
| Little Tern | 17 | 1 | | | | | | | | | | | 18 |
| Fairy Tern | 59 | 172 | 2 | | | | | | | | | | 233 |
| Crested Tern | 1010 | | | | | | | | | | | | 1010 |
| TOTALS | 1361 | 413 | 106 | 829 | 57 | 108 | 531 | 730 | 232 | 162 | 145 | 94 | 4768 |

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

# WADER BREEDING SUCCESS IN THE 2020 ARCTIC SUMMER, BASED ON JUVENILE RATIOS OF BIRDS WHICH SPEND THE NON-BREEDING SEASON IN SOUTH EAST AUSTRALIA

Roz Jessop, Rob Patrick, Robyn Atkinson, Maureen Christie, & Ila Marks

## INTRODUCTION

Each year wader banders in Australia attempt to collect 'percentage juvenile' data to measure the annual breeding success of wader populations which spend the non-breeding season in south-eastern Australia (SEA). The Victorian Wader Study Group (VWSG) aims to monitor breeding success for seven species. All birds are caught by cannon netting between mid-November and March/early April (depending on the species) on the Victorian coast, on coasts in the south-east of South Australia (around Port MacDonnell to Nora Creina) and on the Bass Strait island of King Island, Tasmania.

In SEA, birds were caught at a range of sites, mostly the same sites each year. The Coronavirus disease (COVID-19) pandemic in 2020/21 negatively impacted on the field season and no data were collected for Bar-tailed Godwit and Red Knot. This was because it was not possible to make field trips due to state travel and group size restrictions and closure of study sites within lands managed by Parks Victoria (Government body) and restrictions on in-kind support such as boat transport.

The Australian State Governments restrictions prevented the usual field trip in November 2020 to King Island, Tasmania, however a local team carried out some limited field work in South Australia to sample Ruddy Turnstone

## METHODS

In SEA sampling took place between December 2020 and April 2021. The usual techniques for catching/ageing birds etc. were employed (Minton *et al.* 2005). A sample of between 100 and 220 birds is the minimum used for percentage juvenile figures, this gives a juvenile fraction error range of 0.1 to 0.15 (Rogers & Standen 2019).

## RESULTS AND DISCUSSION

### South-eastern Australia (SEA)

A total of 1565 birds, of the seven species targeted for annual monitoring were caught in SEA in the sampling period (Tables 1 and 2). As usual, Red-necked Stint topped the species catch total with 1068 individuals caught during the mid-November to early April monitoring period. The percentage of juveniles (18.5%) was lower than last year (24.3%) and similar to the long-term average (17.2%) (Minton el al. 2020). It should be noted that the catches used in this estimate, as for last year, were made at Yallock Creek in Victoria, a location where juveniles are known to be at a higher percentage than at the other sites usually sampled (VWSG unpublished data). Due to entry restrictions in response to the Covid-19 pandemic, and changes in habitat management at the other major catch site, (the Western Treatment Plant), no significant catches of Red-necked Stint were made there. This site typically has a lower percentage of juveniles than Yallock Creek (VWSG unpublished data).

Curlew Sandpipers (18.2%) had about average breeding success in 2020 compared to the long term average breeding success of 16.9% (Table 1). This follows the two poor breeding years in 2017/18 and 2018/19 but is slightly less than that of 2019/20 (Table 2). (Minton et al. 2020).

Sharp-tailed Sandpipers (10.0%) appear to have had improved but less than the long-term average success in 2020 (Table 1) following on from last year's poor breeding success (2.0% juveniles; Table 2) (Minton et al. 2020).

We always find Red Knot the hardest species to catch and monitor and in the 2020/21 non-breeding season we were not able to catch enough birds in the VWSG field sites. Similarly, we did not catch enough Bar-tailed Godwits or Sanderling to report on percentage juveniles in the populations.

A total of 208 Ruddy Turnstone were caught. The breeding season appeared to be slightly below average (13.0% Table 1) and follows last year's good breeding success for this species (17.4%; Table 2) (Minton et al. 2020).

Overall, for south-east Australia, breeding success in the Arctic summer of 2020 was average or slightly below average for all but one of the four species successfully monitored, Sharp-tailed Sandpiper was the one species which had low breeding success.

## ACKNOWLEDGEMENTS

All the relevant wildlife authorities are also thanked for granting ethics, scientific and banding permits in Victoria, South Australia and Tasmania. The Australian Bird and Bat Banding Scheme issued a project permit and supplied metal bands.

VWSG acknowledge the Traditional Owners of the land on which we conduct field research and we pay our respects to their Elders past and present.

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**Table 1**. Percentage of juvenile (first year) waders in cannon-net catches in south-east Australia 2020/21

| **Species** | **No. of catches** | | | **Juveniles** | | **Long-term average*** | | **Assessment of 2019 breeding success** |
|---|---|---|---|---|---|---|---|---|
| | **Large (>50)** | **Small (<50)** | **Total caught** | **No.** | **%** | **% juvenile (no. years)** | | |
| Red-necked Stint *Calidris ruficollis* | 6 | 2 | 1068 | 198 | **18.5** | 17.2 | (23) | Slightly above average |
| Curlew Sandpiper *C. ferruginea* | 1 | 5 | 181 | 33 | **18.2** | 16.9 | (22) | Slightly above average |
| Bar-tailed Godwit *Limosa lapponica* | | | 0 | | | | | |
| Red Knot *C. canutus* | | | 0 | | | | | |
| Ruddy Turnstone *Arenaria interpres* | 1 | 9 | 208 | 27 | **13.0** | 15.0 | (23) | Slightly below average |
| Sanderling *C. alba* | | | 0 | | | | | |
| Sharp-tailed Sandpiper *C. acuminata* | 1 | 1 | 108 | 11 | **10.2** | 18.7 | (22) | Low |

All birds cannon-netted in the period 2 November to 25th March except Sharp-tailed Sandpiper and Curlew Sandpiper to end February only some Ruddy Turnstone and Sanderling to early April and one Sanderling catch in late April (2015).
*Includes the 2019/2020 figures.

**Table 2.** Percentage of juvenile (first year) birds in wader catches in south-east Australia 1998/1999 to 2020/21.

| 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 | 18/19 | 19/20 | 20/21 | Average (last 23yrs) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ruddy Turnstone *Arenaria interpres* | 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 | 25.7 | 17.4 | *13.0* | *15.0* |
| Red-necked Stint *Calidris ruficollis* | 32 | 23 | 13 | 35 | 13 | 23 | 10 | 7.4 | 14 | 10 | 15 | 12 | 20 | 16 | 22 | 17 | 19 | 6.0 | 31.3 | 3.8 | 9.5 | 24.5 | *18.5* | *17.2* |
| Curlew Sandpiper *C. ferruginea* | 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 | 9.9 | 23.9 | *18.2* | *16.9* |
| Sharp-tailed Sandpiper *C. acuminata* | 11 | 10 | 16 | 7.9 | 20 | 39 | 42 | 27 | 12 | 20 | 3.6 | 32 | (-) | 5 | 18 | 19 | 16 | 8.9 | (-) | 27.8 | 45.9 | 2.0 | *10.2* | *18.7* |
| Sanderling *C. alba* | 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 | (-) | 11.6 | (-) | (-) | *14.9* |
| Red Knot *C. canutus* | (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 *Limosa lapponica* | 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 | 3.0 | (-) | (-) | *22.5* |

All birds cannon-netted between 15th November and 25th March, except Sharp-tailed Sandpiper and Curlew Sandpiper to end February only. Some Ruddy Turnstone and Sanderling to early April and one Sanderling catch in late April (2015). Averages (for 22 years) exclude figures in brackets (small samples) and include 2020/21 figures.

## Minton Medal Citation: Ken Gosbell

### Steve Atkinson

Ken Gosbell is the quiet achiever of the Australasian shorebird community. He has played a large role in studies of the migrations of our shorebirds, identifying the threats that they face, and bringing the urgency of these threats to the attention of both public and government.

Although Ken has written or co-authored a number of important scientific papers about shorebirds in the East Asian – Australasian Flyway, he is not formally trained as an ecologist or ornithologist. He qualified as a civil engineer and had a long and varied career in the public service.

In 1995, recently retired and seeking a conservation-oriented hobby, Ken joined the Victorian Wader Study group (VWSG) on one of their regular cannon-netting catches. He was immediately captivated by shorebirds and has been studying them ever since. In the early stages he learned a great deal about shorebirds and cannon-netting techniques from Clive Minton, the enthusiastic leader of the VWSG. Ken became one of Australia's few licensed cannon-netters, and a stalwart of the VWSG. But his interests went beyond cannon-netting and the migration questions it largely addresses. He also spent a great deal of time learning about monitoring methods and threatened habitats in Asia where most of our shorebirds stage, learning in particular from Jim Wilson and the late Mark Barter, and from self-funded expeditions to count shorebirds with local teams in China, South Korea and Kamchatka.

Ken's first shorebird publication was a detailed study of the biometrics and moults of Sanderling, and for many years he led annual expeditions to count all the shorebirds in the Coorong, maintaining the effort until sufficient local and government interest had been built up for the counts to continue without his direct involvement. Since 2007, the main focus of Ken's shorebird research has been in geolocator studies of shorebirds. Geolocators are tiny electronic devices that measure and log light levels, and concurrently record the time. Careful analyses of these data can reveal (approximately) where the bird has been. However it is labour intensive. Ken trained himself as the local technical expert , playing the leading role in working out how to attach the devices safely to shorebirds, how to download the data and analyse it. A flow of publications has resulted, hugely enhancing our understanding of migration in this flyway and making the Ruddy Turnstone the focus of a migration and disease study at Deakin University. Ken was one of the first researchers to realise that the light levels recorded by geolocators on the breeding grounds could be used to tell when shorebirds were incubating, as the geolocators of shorebirds (mounted on leg-flags) are only concealed from 24-hour Arctic light when the birds are sitting. The technique can now be used as a low-cost tool to study breeding behaviour of shorebirds without ever setting foot in the Arctic! It can be used as an indication of breeding success and has demonstrated more frequent re-nesting by Arctic shorebirds than was previously expected. It has also contributed to a Nature publication on inter-specific variation in the incubation schedule of shorebirds.

Ken's behind-the-scenes contribution has been greater still. He has served on the Australasian Wader Studies Group (AWSG) Committee since 1997 – initially as secretary and later as treasurer – so by the time he became Chairman of the group (2006-2010) he had a very full understanding of the inner workings and capacity of the group. Under his chairmanship the group increased its already substantial conservation and international outlook. With Mike Weston and Danny Rogers he conceived and initiated the Shorebirds 2020 program, hosted at Birdlife Australia – a program that has greatly increased the coverage, rigour and long-term sustainability of shorebird monitoring in Australia. The huge

database consolidated and maintained by the Shorebirds 2020 program has been critical in documenting the decreases in populations of migratory shorebirds in Australia.

Ken was also a co-leader of the Saemangeum Shorebird Monitoring Program, a project to document and publicise the effect of a huge tidal-flat reclamation project on the west coast of South Korea. Although Saemangeum could not be saved, the projects have had some positive conservation outcomes, including preservation of the threatened Geum Estuary in South Korea, a Korean Government announcement that it would not initiate any more major tidal flat reclamation projects, and broad acceptance by national governments that shorebird populations are declining, largely because of habitat loss on their Asian staging grounds.

Still further behind the scenes are innumerable other activities by Ken that didn't result in headlines but were and are essential to maintain shorebird studies in Australia. An example is the banding database of the AWSG and VWSG, the foundation of hundreds of publications; it became a major internal problem when the software that drove it became obsolete. Ken quietly took the issue on, established a team to find and implement a software solution and another team to maintain the continuity of data input. It was a typical Ken contribution: carefully considering the problem, so that when the moment arrived, he was prepared to implement the solution seamlessly. Another example is Ken's role as former chair of the Shorebird Working Group of the Flyway Partnership, an affiliation of governments and non-government organisations to advance shorebird conservation in this flyway. Many shorebird related activities are fun. This kind of liaison work is not. But it is essential that people with a good understanding of shorebird biology attend the meetings, guide their discussions, bring the ever-changing cast of bureaucrats up to speed and remain patient and committed when the complex workings of between-government negotiations move at seemingly glacial pace.

There are still many challenges in shorebird conservation, but it is thanks to a handful of people like Ken that it is gradually rising higher on government agendas.

Finally, it is difficult to measure the impact that Ken has had simply in recruiting shore-birders to the cause. A count, conference or a shorebird catch can seem intimidating to a newcomer, thrown into the thick of activities with a team of variably excitable experts who are very focussed on the task at hand. Ken is a reassuringly calm and welcoming presence in those circumstances, genuinely interested in what newcomers have to say and always ready to share his huge shorebird knowledge.

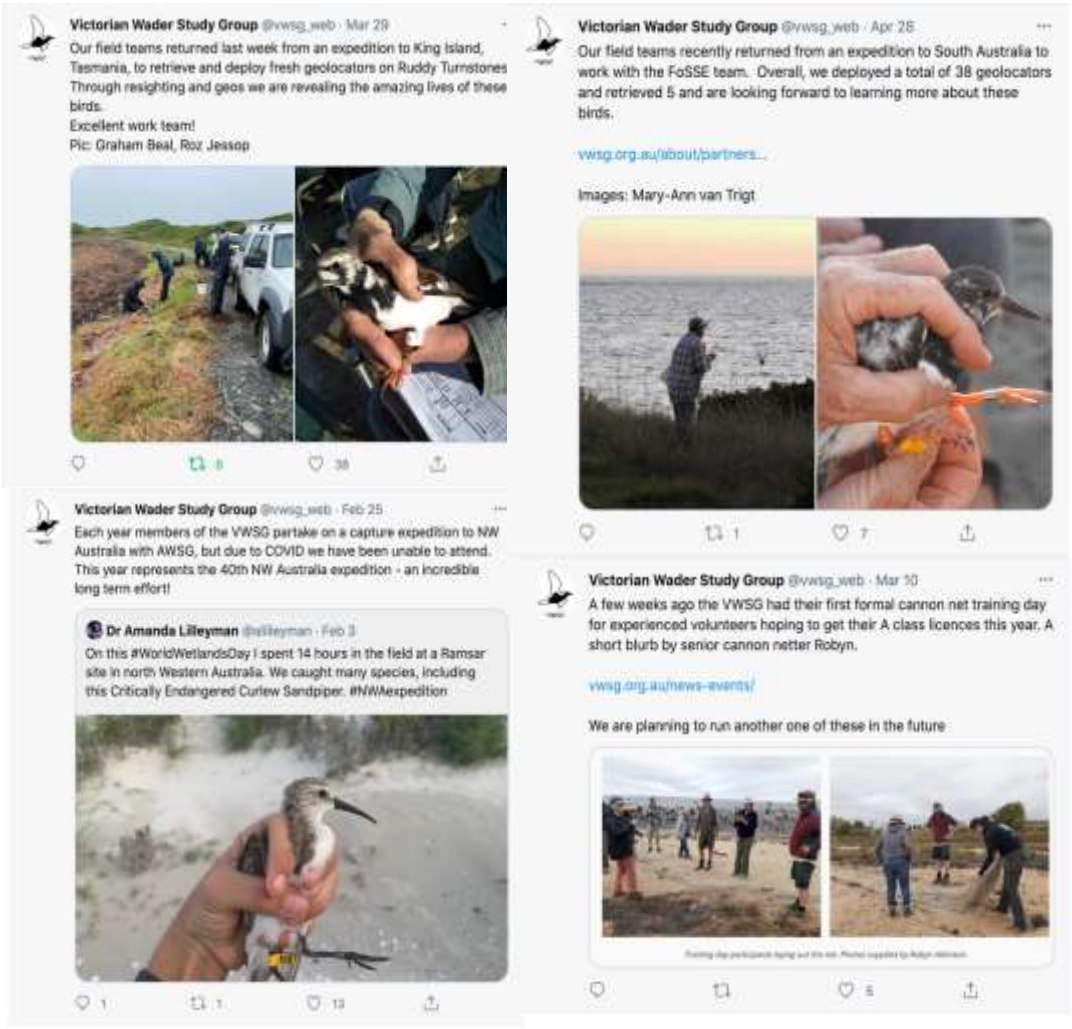
This citation is an edited version of that written by Danny Rogers for the 2017 BirdLife Australia J.N. Hobbs Medal Citation.

Ken at the Medal presentation

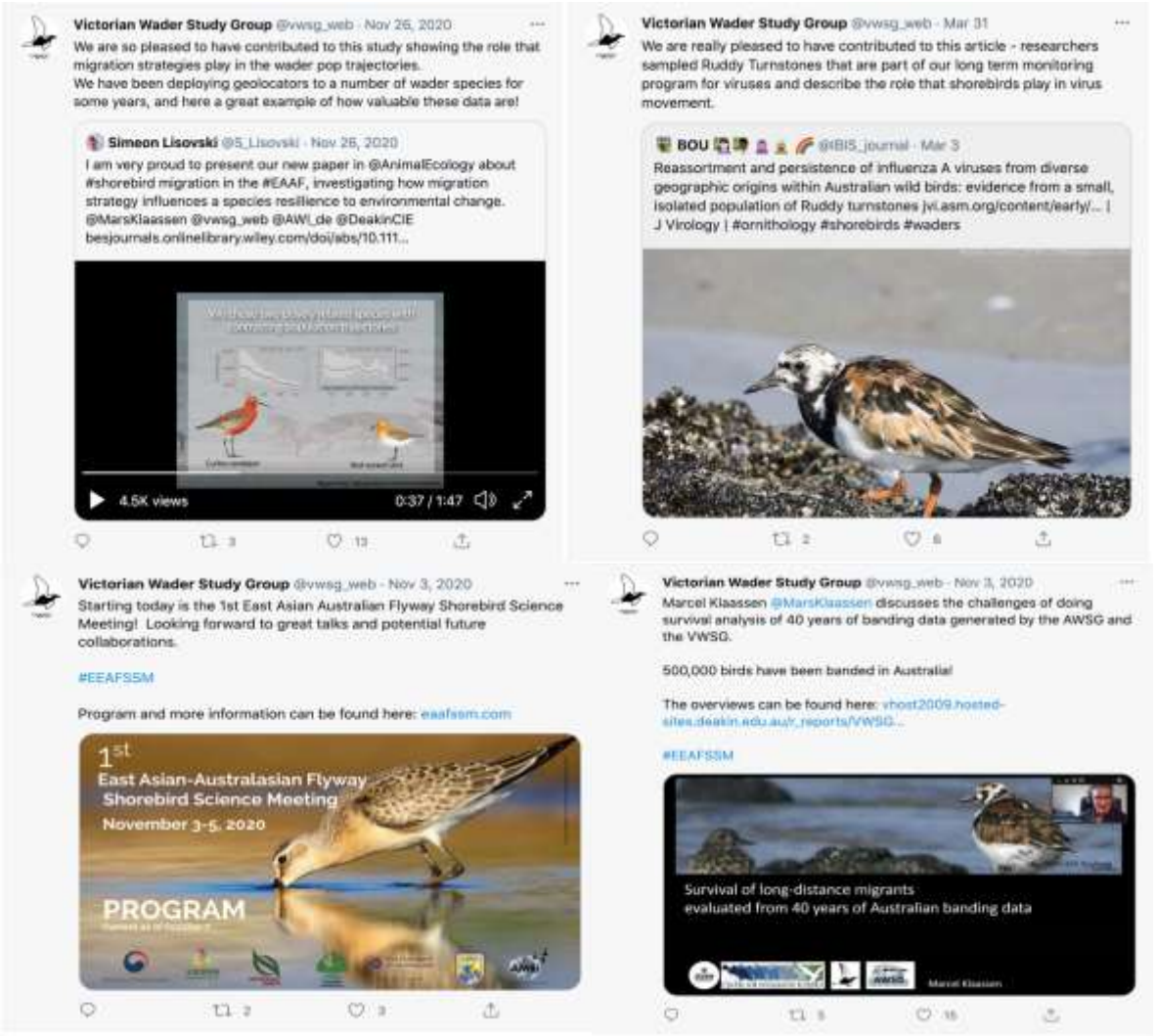
## Highlights from the VWSG Twitter account
**Michelle Wille**

Twitter remains a great way for the VWSG to share the work we do with the community. We share a variety of content, all limited to 280 characters. You are welcome to follow our account on Twitter @vwsg_web

To highlight our capture program, the account shares short snippets from expeditions and catches including the King Island expedition, South Australia expedition, Cannon net training day, and many other catches. Despite not being able to attend the NW Australia expedition, we shared tweet from expedition member Amanda Lilleyman.




The scientific community are very active on Twitter, so we are delighted to be able to share and promote the scientific studies we contribute to, both as journal article but also conference presentations




We are grateful to all those who have shared their images and observations. If you have a cool observation that you think would be suitable, please be in touch!

## Vale Ken Rogers

### Danny Rogers

My father, Ken Rogers, died in his sleep on 18 February 2021. He was 81.

Dad made a very substantial contribution to Australian shorebird studies over the years. He was a regular participant in the VWSG field program in the 1980's (along with the rest of the Rogers family). From 2003 to 2006 he was editor of Stilt, his period at the helm culminating in Stilt 50, a bumper edition (325 pages) which provided a broad (and sobering) overview of shorebird status throughout the flyway. It is still a very useful publication, and it played a role in the increasing emphasis on international shorebird conservation by the AWSG.

Dad's greatest contribution was less visible. He was a statistical modeller in his working life, and he brought these skills to the Australasian shorebird scene at a time when shorebirds were not a focus of Australian academia. Analysing and publishing the already enormous datasets of the AWSG fell on the shoulders of amateurs, and it was a serious challenge in those days. Dad's ability to design and carry out rigorous analyses made a huge difference. Moreover, he was very generous with his time, and great fun to work with. He wrote or co-authored quite a lot of papers in the 1990's and 2000's. There were many more papers in which Dad's work was done behind the scenes, helping others to get their work to publication standard.

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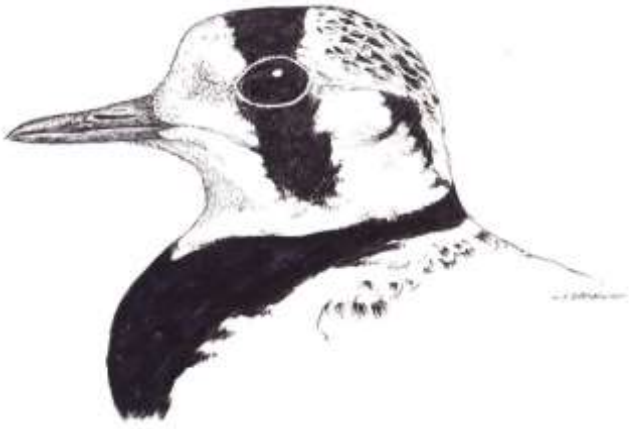
Just one of the recent publications with Ken as a co-author is: Favourable inland wetland conditions increase apparent survival of migratory shorebirds in Australia. Robert S. Clemens, Danny I. Rogers, Clive C. D. Minton, Ken G. Rogers, Birgita D. Hansen, Chi-Yeung Choi and Richard A. Fuller. Emu – Austral Ornithology, DOI: 10.1080/01584197.2021.1901596. (Ed.)



## The Overwintering Project
**Kate Gorringe-Smith**

On March 6, 2021, the Overwintering Project: Western Port opened at the Mornington Peninsula Regional Gallery in Melbourne's south-east. The culmination of two year's work, the exhibition featured work by over 300 artists from around Australia, including fourteen works made in response to the Western Port environment. As well as celebrating Western Port's amazing biodiversity and significance as migratory shorebird habitat, the exhibition was dedicated to the life and legacy of Dr Clive Minton, father of Australian shorebird research. To this end, we had a special viewing with Victorian Wader Study Group (VWSG) members on Saturday March 13, including Pat and Roger Minton. I am so glad that they were able to visit, and to see that the exhibition's dedication to Clive was reflected in the gallery signage, as well as in some personal thanks in some works (e.g. by Dr Simeon Lisovski and Dr Amanda Lilleyman) and in the beautiful video footage by Cathryn Vasseleu.

It was only fitting to dedicate this exhibition to Clive, as his support and the support of the VWSG and shorebird experts around Australia has been absolutely integral to the Overwintering Project's mission and success. Launched in 2017 to engage Australia's art community with migratory shorebirds and their habitat, the Overwintering Project invites artists to find out where their local habitat is, to visit it, and to make a piece of art in response to it. In the Project Description, I encourage artists to enlist a shorebird expert to help them in this endeavour, as many of my artists are not (yet!) birdwatchers and well do I know the frustration of being a rookie birdwatcher and trying to identify, or even spot, shorebirds. In response, the shorebird community has been incredibly generous with their time, taking out eager artists and revealing the wonders and mysteries of our migratory shorebirds.

Since the Project's launch, there have been 29 exhibitions in every state and territory of Australia and two in New Zealand, with over 300 participating artists. Many of the artists donate original prints to the Overwintering Project Print Portfolio, and through their generosity and the sale of prints we have been able to donate $37,000 to the Australasian Wader Studies Group. Future exhibitions are scheduled for New South Wales, South Australia and Western Australia.  Today, from its beginnings as primarily a printmaking project, the Project has grown to include the Pukorokoro Miranda Shorebird Centre's community art project, The Flock, a shorebird drawing competition for primary students run by the Australian Nuclear Science and Technology Organisation, a community print project called The Wall of Wings, and a performance aspect called 'Stories of Home' which links human migration stories with the birds' migrations.

If anyone would like to join the Project (there is an ongoing Open Call for prints), or involve a local gallery or community, please contact me at overwinteringproject@gmail.com ).

Khue Nguyen's shorebird images

Photos from the exhibition

Penny, Kate and Ken

## VWSG t-shirts

The Victorian Wader Study Group has a new t-shirt, designed by Michelle Wille. These fantastic t-shirts showing flagged birds of the East-Asia Australasia Flyway, are now available. They will be for sale at the AGM. We hope there will be no Covid restrictions and people will be able to attend. The t-shirts will also be available when we are in the field banding. We have a range of colours and sizes in stock in both women's and men's styles, for any inquiries contact Ila Marks, ila@melbpc.org.au. The t-shirts are reasonably priced at $35.00 each. There are also matching stickers $2.00 and $5.00 depending on size. For the FoSSE version contact Maureen Christie twinpepperccorns@gmail.com.


VWSG Financial Report 2020/2021

The impact of COVID 19 this last year has seen a significant reduction in all VWSG activities.

Although total income was similar to the 2019/2020 year, its sources were quite different. Membership subscriptions increased considerably and are now above $4000. Likewise donations are much higher. Many members add a donation to their subscription, especially those unable to give of their time and effort . Thank you especially to Xenia Dennett, and Jenni and Jim Reside, who together made donations totalling $7500. In the absence of grants, and the income usually generated at the Annual General Meeting, this has meant that revenue, apart from that obtained for special projects, has remained relatively stable.

Melbourne Water, not able to provide the normal on-site accommodation for the end-year catches at the Werribee Treatment Plant, generously refunded the cost of motel accommodation. And the AWSG contributed to the cost of the development of BirdMark, a project completed the previous year.

Clearly, expenditure was down, and apart from the purchase overseas of engraved flags, and of T-shirts, costs were confined to routine administrative activities. The T-shirts will be for sale, and recoup costs. It is expected that this next year there will be a requirement to invest in equipment and maintenance.

The VWSG is an entirely volunteer organisation, and could not operate without the tens of thousands of hours which members contribute. Beyond this, many members make in-kind donations, too many, and many unknown, to list.

Consideration has been given in the past to applying for Donor Gift Recipient status (personal income tax deductibility for donations). Given the added administrative requirements it was decided at that time not to proceed.

Reserves remain above $60,000. The challenge, as always, is to raise the revenue each year to meet recurrent expenditure requirements.

Helen Vaughan

**Victorian Wader Study Group Inc** **ABN 12 724 794 488**

Income and Expenditure Statement for the year ended 30 June 2021

| Income | | Expenditure | |
|---|---|---|---|
| Subscriptions | 4025.00 | Incorporation fee | 59.20 |
| Donations | 8340.00 | Trailer Registration | 60.50 |
| Interest, cheque account | 3.83 | Engraving, Minton medallion | 30.00 |
| Interest, cash reserve | 14.51 | Postage | 34.10 |
| Interest, term deposit | 661.60 | International transfer fees | 64.00 |
| | | Accommodation, Werribee | 1440.00 |
| | | Boat hire (Mud Islands) | 350.00 |
| | | T-shirts | 792.60 |
| **Sub-total** | **$ 13044.94** | **Sub-total** | **$ 2830.40** |
| AWSG, support to BirdMark | 1000.00 | Engraved Flags | 1821.80 |
| Refund, Werribee accomm. | 1440.00 | | |
| Guided bird walk, Flinders | 40.00 | | |
| Sale, bird print | 170.00 | | |
| Sub-total | $ 2650.00 | Sub-total | $ 1821.80 |
| **TOTAL INCOME** | **$ 15694.94** | **TOTAL EXPENDITURE** | **$ 4652.20** |
| Cash balance at 30/06/2020 | | Cash Balance at 30/06 2021 | |
| Westpac Cheque Account | 7664.51 | Westpac Cheque Account | 18014.34 |
| Westpac Cash Reserve | 22705.78 | Westpac Cash Reserve | 17720.29 |
| Westpac Term Deposit | 38917.38 | Westpac Term Deposit | 44578.98 |
| Petty cash | 100.90 | Petty Cash | 117.70 |
| **GRAND TOTAL** | **$ 69388.57** | **GRAND TOTAL** | **$ 80431.31** |

**VWSG Membership 2021**

Bev & Geoff Abbott
Charles & Jocelyn Allen
Mark Anderson
Basil Artimedes
Robyn & Steve Atkinson
Ryan Barnaby
Graham & Jenny Beal
Robert Brinkman
Andy Bennett & Kate Buchanan
Margaret Bennett
Rob & Gail Berry
David Billinghurst
Amanda Breidahl
Stephen Brend
Malcolm & Judy Brown
Andrew Browne
Sue Bryceson
Paul & Anna Buchhorn
Ian Cairns
Jeff & Sarah Campbell
Mervyn & Ann Chappel
Smathie Chong
Maureen Christie
Allan Clarke & Marj Reni
Prue Clements
Bretan Clifford
Mike Connor
Julian Correia
Jackie Dargaville
Mike Dawkins
Xenia Dennett
Jenna Diehl
Joris Driessen
James Dunlop
Dianne Emslie
Alice Ewing
Jon Fallaw & Becky Hayward
Rory Ferguson
Maureen & Robin Fitzgerald
Brett Gardner
Kate Gorringe-Smith
Ken & Carlene Gosbell
Andrew & Kath Gosden
Olivia Gourley
Doris Graham
Nathan Gregory
Jim & Surong Gunn
Susie Guthrie
Angie Gutowski
Petra Hanke & Chris Scholz
Birgita Hansen
Susan Harris
Jenny Hiscock
Trevor Hodson
David Hollands
Andrej Hohmann
Vivien Holyoake
Yvonne Honey
Tania Ireton
Roz Jessop
Penny & Murray Johns
Steve Johnson
Geoff Jones
Keith Jones
Gregg Kerr
Debbie King
Marcel Klaassen
Steve Klose
Irma Kluger
Tessa & Angus Lamin
Brett Lane
John Lawson
Hannah Lee
Sally Leonard
Amanda Lilleyman
Janet Limb
Moira Longden
Gabriel Low
Richard Loyn
Anne McMillan
Meg Macmillan
Alex McQueen
Pat Macwhirter
Piper Mangan
Ila Marks, Eric Miller & Heidi
Gary Matthews
Pat Minton
Lorraine Moore
Lynn Murdoch
Bridget Nicholson
Maureen O'Neill
Graham & Vicki Parkyn
Ian Pascoe
Rob & Linda Patrick
Reece Pedler
Hugo Phillipps
Alan & Wendy Pilkington
Mike Preeston
Thomas Putt
Ann Renkin
Jim & Jenni Reside
Laura Rhodes
Roger & Annabel Richards
Don & Jude Ripper
Bruce Robertson
Danny Rogers
Toby Ross
Graeme & Margaret Rowe
Luke Rozek
Liz Sarrailhe
Charles Silveira
Sue & Rod Slater
Hannah Smith
Mark & Mem Smith
Bell Snow
Roger Standen
Kieran Stephenson-Banks
Ian Stevenson
Jonathon Stevenson
Iain & Sandy Stewart
James Stockton
John Stoney
Bill Steele
Bob Swindley
Naoko Takeuchi
Christine Taylor
Susan Taylor
Deryn Thomas
Lyne Thomas
Claire Tingate
Amy Tipton
David & Wendy Trudgen
David Van Veldhuisen
Mary-Ann Vantrigt
Helen Vaughan & Rodney McFarlane
Inka Veltheim
Doug Watkins
Will Webster
Mike Weston
David & Jean Wilbraham
Michelle Wille
Jennifer Williams
Ross Williamson
Annette Willis
Jack Winterbottom
Bob & Dianne Winters
Jerry Wong
Sharon Woodend
Prue Wright

**Bulletins are 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 overseas to:**

Alaska: Shorebird Working Group
China: National Bird Banding Centre of China
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

Vignettes by Stephen Davidson (2) & Jeff Campbell (1)