Roy Jessop · Peter Collins

VWSG BULLETIN

JOURNAL OF THE VICTORIAN WADER STUDY GROUP

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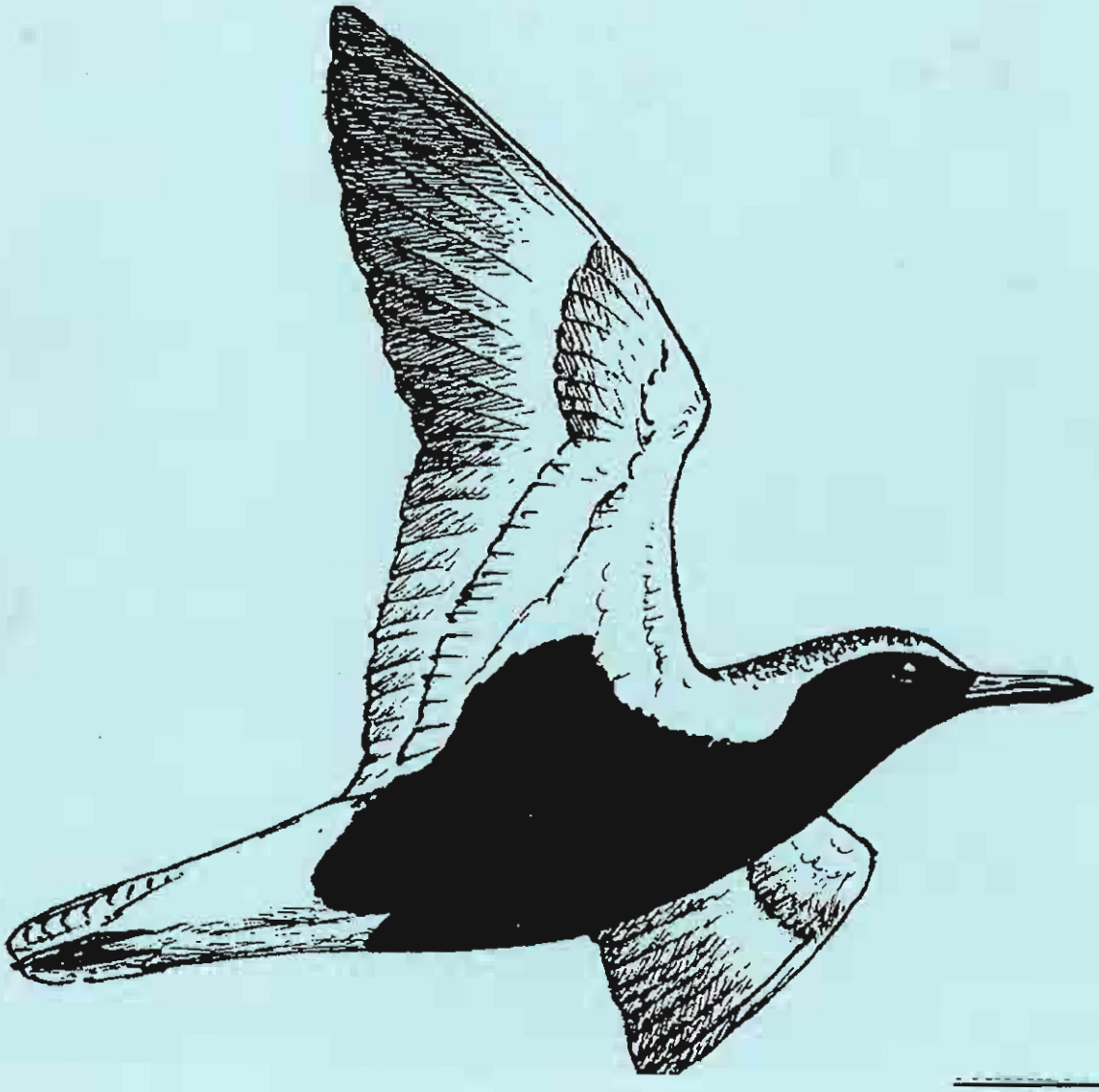

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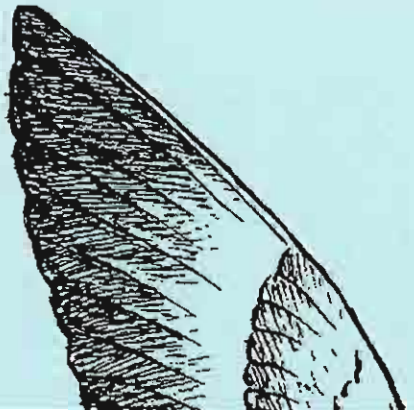

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Contributions are welcome. Please consult the editor or assistant editor on questions of format.

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VWSG CONGRATULATES CLIVE ON BECOMING A FELLOW OF THE RAOU

On members day 30 May 1998 the following citation (prepared by Norman Wettenhall) recommending that Clive be made a Fellow of the RAOU was read by Brian Snape, President of Birds Australia and passed with enthusiastic applause.

Dr Clive Minton, MA, PhD, born 7 October 1934 has always been fascinated by birds and is an outstanding amateur ornithologist with an international reputation.

At Oundle School from 1947-1953 he studied the local reedwarblers and other nesting birds, and during holidays first became interested in trapping and banding birds. From 1953 to 1960 he was at Cambridge University where he completed his Natural Science honours degree and obtained a PhD in Metallurgy in 1960. It was there that he became interested in the migratory waders in the Wash, and he became the founder Chairman of the Wash Wader Ringing Group which is still the largest wader banding group in the world. Clive introduced the use of mist nets there in association with Dr Eric Ennion, and then rocket nets which in turn were supplanted by cannon nets in 1967. He also took part in many other studies of birds in Britain, especially mute swans, Canada Geese, Sand Martins, thrushes and finches, and became involved with European birds as a consultant and adviser.

His business career was with IMI Ltd, and in 1978 he was sent to Australia as Managing Director, IMI Australia where he turned an ailing business into a very profitable one. Not surprisingly, he at once took up his old interest in waders and joined the Victorian Wader Study Group revitalising its activities by the introduction of cannon-netting. This was so successful he was invited to show the technique in other States, which in turn led in 1980 to a meeting of representatives from all States and New Zealand, and thus the formation of the Australasian Wader Studies Group with Clive as founding Chairman. In the same years expeditions for the Atlas of Australian Birds were being undertaken, one result of which was the discovery of the importance of Broome as a site where hundreds of thousands of migratory waders entered and departed from Australia each year.

The Broome Bird Observatory was established by the RAOU in 1988, since when Clive has been there on 17 occasions leading the now internationally famous NW Australia Wader Expeditions. The peak of these was in 1996 when 83 people from 16 countries were involved.

The recognition of Broome as a major wader migratory route has led to many international advances. The establishment of the Asian Wetland Bureau, the recognition of the East-Asian Flyway through Malaysia and China to Siberia have in turn led to the Japan-Australia Migratory Birds Agreement, the China-Australia Migratory Birds Agreement, and soon with Russia where a majority of the waders nest.

In all these development Clive has played the leading role, especially with cannon-netting and observation of bird movement. The birds have been banded (and more recently had coloured flags attached to their legs), weighed and measured, and the stage of moult determined. As a result it is known how much weight birds gain before migration, the routes they follow, and the duration of their flight. For instance Knots fly direct 5000 km to Shanghai probably in about 3 days.

All this work is internationally recognised and acclaimed and the Ramsar Convention in Brisbane in 1996 was a direct result of this appreciation.

Summary of VWSG Activities in 1997 and the First Half of 1998

Clive Minton

1997 was a good year - and the first half of 1998 has been the greatest ever! This is not just measured by catching success - quantity and quality - but in many other ways such as recovery reports, flag sightings, team support, equipment performance etc. Details follow.

The annual report - the VWSG Bulletin - seeks to present a comprehensive set of "results" with appropriate comments which enable both members and other readers to understand the significance of data emerging from our activities. It also acts as a permanent record of achievements. For example past Bulletins have been extremely valuable when preparing scientific papers or assisting with requests for information (eg. on breeding tern numbers over the last 20 years).

This Bulletin summarises the fieldwork activities for 1997 and the first half of 1998, and gives details of all recoveries and leg flag sightings which have been reported since the last Bulletin (July 1997).

Catching and Banding

5461 waders were caught in 1997 - just a little below the 6407 average over the last 19 years, but 5568 have been caught in the first half of 1998 - more than in any previous first half of a calendar year. Details are provided in the accompanying tables, some of which are shown for the first time.

Highlights of the first half of 1997 were described in the last Bulletin. In the second half of the year there were some further notable successes - and failures. Eastern Curlew proved hard to catch at The Gurdies - disappearing off to roost on French Island just when a catch seemed imminent. A consolation prize however - on one of three field attempts at Eastern Curlew - was 27 Red-necked Avocet, on 6 September. These were colour flagged and three were subsequently seen a few weeks later at Werribee Sewage Farm.

The "Snipe Project" at Belmont Common in Geelong started its third season with 76 Latham's Snipe (Japanese Snipe) caught in two nights mist netting in mid-September and mid-October. However the daytime roosting area - and presumably the surrounding night feeding areas - dried up because of the drought and snipe populations plummeted to less than 50 for the rest of the season, making further catching uneconomical.

18 October was a bonanza. At long last we really caught up with the Red Knot roost on Swan Bay. A catch of 473 birds contained 308 Red Knot, 31 Great Knot and 23 Grey Plover - the first and last of these being record VWSG catches for the species. The timing was also perfect with many of the Red Knot being non-moulting, fattening birds on their way to non-breeding areas in New Zealand. This was proved by the capture of a New Zealand banded bird - our first - and the recapture of two birds in New Zealand just over a month later. On the latter occasion a relay of phones/faxes managed to get the Australian banding data back to the New Zealand banding team whilst they were still in the field with the Aussie birds in their hands!

The 18 October catch was also famous for containing two Ruddy Turnstones banded together ten years previously and already also retrapped together three times - thus making it five times they have been caught together (and never singly) over a ten year period. They even had consecutive band numbers!

New ventures were 48 Sanderling caught in October at Sandy Point near Wilson's Promontory - a new site watched and counted regularly over the previous year by Susan Taylor (NRE Yarram) and Jim Wilson - and 35 Ruddy Turnstone at a site discovered by Penny John at West Head, Flinders. The latter catch contained our first ever Japanese banded Ruddy Turnstone. These sties are welcome additions to the portfolio; the VWSG has mainly had to rely on annual "expeditions" to the south east of South Aaustralia to obtain data on these species in the past.

The now annual(?), visit to French Island to catch Common Greenshank found them more elusive than in 1996. The situation wasn't helped by an over-enthusiastic "button-pusher" who fired the net even when the "countdown" was stopped because the birds had flown. However one of the three "slow off the mark" Greenshank caught turned out to be the oldest Australian record (albeit only $10^1/_2$ years old).

The Inverloch visit in early December was the start of a "purple patch" which saw the group catch 7800 waders over a $4^1/_2$ month period to mid-April 1998. Good catches of Red-necked Stints were made at most of the four main "monitoring" sites - Werribee SF, Sand Island/Swan Bay (Queenscliff), Yallock Creek/Stockyard Point/The Gurdies (Western Port) and Anderson's Inlet (Inverloch) - over the "stable" December to February period. One of the main purposes of these catches is to measure the proportion of young in the population - a measure of the previous Arctic summer's breeding success. It appears that Curlew Sandpipers bred particularly successfully in 1997 and, unusually, Red-necked Stints less so. Ruddy Turnstone and Sanderling also appeared to have very successful breeding seasons in 1997.

"Best ever" catches were made in a delightful visit to South Australia in January (240 Ruddy Turnstone and 232 Sanderling). These were followed by more catches in Victoria including 81 Ruddy Turnstone at Flinders on 19 March and all 130 Sanderling at Sandy Point on 7 April, giving half yearly totals for both species (346 Ruddy Turnstone and 399 Sanderling) which exceeded any previous whole year total.

Our first ever significant visit to catch waders on Mud Islands - in late January/early February - was a moderate success. It would have been better if the leader hadn't got his wires crossed at a critical moment (firing the wrong, and empty net!). Modest numbers of Red Knot (64), Bar-tailed Godwit (28) and Great Knot (20) were caught - all species hard to get to grips with in Victoria. Some nice old retraps were pleasing - two $16^1/_2$ year old Bar-tailed Godwits, a $14^1/_2$ year old Red Knot, and a 14 year old Fairy Tern.

The five day visit to Nooramunga National Park - "Corner Inlet" - was a real "blow out". The first three days were ruined by sandstorms. When half the team had gone home 1244 birds were caught in two catches on the Monday/Tuesday. The highlight of these was 350 Curlew Sandpipers, one of which was a minimum age of $19^2/_3$ years old (a world record for this species). Later the same day a $20^1/_4$ year old

colour banded Pied Oystercatcher was seen. And whilst on the subject of old birds a $19^1/_2$ year old (minimum) Red-necked Stint was recaptured at Werribee SF on 27 December (in front of television cameras from four different channels!).

The first of April was a memorable day (and night). We failed to obtain departure weight data on Bar-tailed Godwits at Barry Beach due to a surging tide. The Bar-tailed Godwits equally failed to depart on migration in spite of trying strenuously against an abating north westerly gale. As a consolation (others had other words for it) we made a catch of 1291 birds (1179 Red-necked Stints) late in the day and did most of the banding and weighing in the dark (for which we were well prepared) and got home at one am the next day (very tired). It was the first ever catch over 1000 birds after February (see table of large catches). Some valuable weight pre-migratory data was obtained on Red-necked Stints, as well as a good comparison between departure dates of adult Curlew Sandpipers and Red-necked Stints. There were practically no adult Curlew Sandpipers still present whereas the Red-necked Stints were predominantly adults (the proportion of immature birds being only a little higher than the average summer figure).

Processing

A proportion of birds captured are weighed and measured (bill length, total head length, wing length) because such data can add considerably to the knowledge gained from banding a bird. "Size" can reflect different population or sexes - which may be behaving differently (eg. in timing of migration). Weight can be an indicator of migratory strategy (eg. high weights equate to long non-stop journeys) or habitat/population/food supply balance.

A table is published annually in the Bulletin showing the numbers of individuals of each species processed in each month (all years added together). Ideally each monthly sample should be at least 50 birds of each age group (for statistical accuracy). Opportunities are always sought to fill such gaps in the data; this is one of the parameters which determines the planned fieldwork programme. Because the table is updated each year it is not easily apparent where progress has been made. The most important new samples processed in 1997 were

- 137 Common Greenshank in February (previously zero)
- 49 Sanderling in October (previously one)
- The first Sooty Oystercatchers in February
- 27 Red-necked Avocets in September (previously two)

Recoveries and recaptures

One of the many exciting aspects of our studies is the steady flow of reports of birds we have banded which have been recovered elsewhere in the flyway. These, together with leg flag sightings, are gradually enabling us to build up knowledge of the migration routes and stopover sites used by each species-a fundamental base for determining habitat conservation priorities. Value comes from "more of the same" as well as from recoveries breaking new ground, though the latter of course tend to be highlighted.

The most notable recoveries during the past year include:-

- the capture of our first Japanese-banded Ruddy Turnstone and Red-necked Stint,

- an Eastern Curlew whose band number was read on the live bird with a telescope in Japan,
- two Curlew Sandpipers from Westernport recovered on the same day on the breeding grounds in Arctic Siberia,
- an exchange of Red Knots with New Zealand (leaving the score 21:1 in their favour!).
- one year old Curlew Sandpiper and Red-necked Stints moving as far as N.W.Australia.

Long distance movements are however just one aspect of the information deriving from banding. Measurement of mortality rate - or, more cheerfully, the converse (survival rate) - is another fundamental parameter which needs to be determined for each species if population dynamics are to be understood. This requires a mass of systematically collected retraps over a prolonged period of time - something our fieldwork programme tries to achieve.

One tangible outcome of this is the recapture of older individual birds. The age to which an individual can live is not so scientifically valuable as the determination of the average life expectancy. But it is certainly exciting when one comes across birds which have achieved life spans which one would initially not have dreamed were attainable in birds subject to the hazards of 25,000 km round trip annual migrations. During the last year a Red-necked Stint and a Curlew Sandpiper over 19 years old have been recaptured - apparently as healthy as ever. These individuals will have flown over 450,000 km on migration alone during their lifetime - further than from the earth to the moon (380,000 km)!

Bar-tailed Godwits and Red Knots over 16 years old have been recaptured. And amongst the resident species we have a 13 year old Hooded Plover and a 14 year old Fairy Tern still going strong. But the oldest bird is a Corner Inlet Pied Oystercatcher which is now over 20 years old and is still carrying its original colour band as well as its metal band.

[Editor's Note:- we have just had a 21 and one half year old Pied Oystercatcher re-sighted at Werribee Sewage Farm by Jon Fallaw and Becky Haywood. Over the period it has been seen 15 times (recognised by colour bands) but only captured twice.!]

Flag sightings

The past year has seen a bonanza in sightings of waders leg flagged in Victoria. A total of 264 are listed in this Bulletin. This compares with 25 recoveries of banded birds in the same time period. As stated several times previously the results of the colour flagging programme have exceeded expectations by a large margin!
The data is extensively discussed in the "Flag Sightings" section but some highlights were:-

- 132 VWSG birds (5 species) in Hong Kong, 10 (five species) in Korea and 22 (three species) in Japan.
- 12 overseas sightings of Bar-tailed Godwits from four countries- a species which we only catch in small quantities,
- two Eastern Curlew from Korea (first)
- Great Knot from Taiwan and Korea (both firsts)
- 28 Red Knot in New Zealand, including one on the Chatham Islands.

Pied and Sooty Oystercatcher study.
This study is now in its tenth year. Good data has now been collected on movements in general - much greater than expected - and the study is now focussing on movements between banding breeding sites and non-breeding locations in particular. As a result of a mammoth effort by Pete Collins and Ros Jessop all records (nearly 5000) are now on the data bank. This enables the full history of a bird to be examined for each new sighting of an individually colour banded bird.

Each "season" (February to August) the group tries to catch a minimum of 200 Pied and Sooty Oystercatchers when the birds are gathered together in moulting /wintering flocks. This is to keep the population of colour marked birds "topped up", but also serves as an opportunity to replace discoloured or degenerating colour bands on retraps.

In 1997 138 Pied Oystercatchers (including 60 retraps) and 68 Sooty Oystercatchers (eight retraps) were captured ie. the target was just achieved. Up to the end of June 1998 136 Pied Oystercatchers (53 retraps) and 53 Sooty Oystercatchers (15 retraps) had been caught. Planned fieldwork for July 1998 should enable the target to again be met.

Some longer distance movements, including all inter-state ones, are detailed in the "Recoveries" section. New South Wales, South Australia and Tasmania all again feature, the longest movement being from Corner Inlet to Botany bay (686 km).

Tern Studies
Tern studies - both local coastal breeding species and of visitors from the Northern Hemisphere - continued to be an integral part of VWSG activities. Effort is mainly concentrated in the December/January period when chicks are hatching and when maximum numbers of migrants are present.

1997 - 98 was not such a good season for our studies - or for the terns - as our record breaking achievements during the previous summer. Nevertheless 1283 tern chicks (3 species) and 185 adult terns (3 species) were banded and many recoveries and sightings of colour marked birds were reported. These are detailed in later sections of this Bulletin.

The colour marking programme of yearly cohorts of Crested Tern chicks at Mud Islands is continuing, though the full quota of 1000 was not achieved due to the poor breeding season. Based on the current evidence it is likely to be December 2000 before the first (1995) colour marked birds appear in the breeding population, but major searches will be made in each breeding season from 1998 onwards.

Coast Care/Coast Action
The VWSG completed on time, and to budget, the three programmes for which it received Coast Care/Coast Action funding ($20,550) in 1997.

These were
- Fox control (baiting) in Nooramunga National Park (Corner Inlet)
- An aerial survey of breeding Pied Oystercatchers in Corner Inlet
- A keeping cage re-equipment programme, and other equipment items

Some results were detailed in the last Bulletin and a fuller report on the fox control work by Bruce Atkin is included in this Bulletin.

Further Coast Care/Coast Action funding ($15,595) was received for 1998 to continue the fox baiting programme and to repeat and complete the Pied Oystercatcher breeding survey at the optimum time. The latter was most successful, illustrating the extreme importance of the Corner Inlet complex as a Pied Oystercatcher breeding area. It also showed that breeding census' for this species in that area must be completed by very early December at the latest, if a true figure is to be obtained. The full results will be published in the next VWSG Bulletin (and elsewhere).

The fox control programme in 1998 is also on schedule, with approximately half the funds being utilised by mid-year. We are well on the way to ridding Dream Island completely of foxes, but will have to get craftier and persevere until at least the end of 1999 to be sure of sustained eradication (and consequent benefits to breeding Pied Oystercatchers, Hooded Plovers and terns).

Equipment

It is an ongoing major task to keep the Group's equipment in good order and to improve it when new ideas have been tested. Many people - too numerous to mention here - contribute to this and their thoughts and physical efforts are greatly valued.
The most notable new developments in the last year or so have been

- new keeping cages made of shade cloth(as opposed to hessian which gets damp and rots) and to a narrower more easily accessible shape.
- A small mesh (also small size, two cannon) net, from which all birds can be extracted very easily. This permits catches which would otherwise be nearly impossible (eg. below high tide, small teams etc.).
- An electronic balance and, most recently, plastic tubes and metal holders in which the birds can readily and comfortably be weighed.

Also large sheets of shadecloth have now completely replaced hessian as the covering material placed over birds in the net after capture. It has the advantage of letting more air through and not absorbing water.

Finances

The VWSG financial report for the year to 30 June 1998 is given in detail at the end of this Bulletin.
The Group remains in a satisfactory financial position. Expenditure exceeded income in the period by $2,601.23, but this was mainly an artefact of the timing of the income/expenditure of the CoastCare/Coast Action programme (which covers calendar years).
These large "programme" moneys now dominate the accounts. However the Group does not benefit financially from them-except for the direct grant of $1,800 for new equipment in 1997-as all moneys have to be spent externally.

If all Coast Care/Coast Action items are taken out of the accounts the result for 1997/1998 would be:

Income	$6,494.80
Expenditure	$6,352.88
Balance	$141.92

ie. close to "break even". Of the group's total reserves of $19,659.88 at 30 June 1998 around $7,000 is obligated to be spent during the second half of 1998 on the fox control programme.

Membership

Names of members of the VWSG are given at the end of the Bulletin. There are 120 names on the list (counting husband and wife as one as only one subscription is required!) of which 100 were fully paid up to date at 30 June 1998.

Members contribute to the Group's success in a whole variety of ways not just by active participation in the field work. Nevertheless, the size of the pool helps enormously in getting an adequate sized team together (10-25, depending on the target), especially when there is an intensive sustained fieldwork programme as in the 1997/98 summer. And, having an ever growing number of retirees (who don't like being called the "mid-week geriatric cannon netting team") has contributed to recent successes by enabling fieldwork to be conducted on the optimum tides (not just weekend tides).

Acknowledgments

I could fill a whole Bulletin if I were to mention everyone who has helped the VWSG during the past year! But I'll have to be brief(unknown!).

First and foremost, I'd like to thank the enormous number of people who have taken part in our fieldwork activities over the past year. Without their ready, willing and able help we could have done nothing. And it has been a great pleasure, for the first time in our 20 year history, not to have to phone 20 to 30 people before each session in order to get an adequate team . Now people commit themselves ahead and phone me to advise on their availability. Thanks everyone.

Another critical group to our success are the landowners who allow us to go onto their land to undertake our study programmes. Again without their generosity we could not operate. Many thanks to all.

Many of the sites where we catch and count waders necessitate access for both people and equipment by boat. This continues to all be provided in a most ready and supportive and helpful way by Parks Victoria (Foster, Queenscliff and San Remo), Department of Natural Resources and Environment (Yarram and Bairnsdale) and by Rotamah Bird Observatory. They are all gratefully thanked.

Members of the Group themselves contribute "behind the scenes" with generous contributions and activities on behalf of the Group. Some of the members/ areas of help are:-

Malcolm Brown and Doris Graham and many others	Leg flag manufacture
Rosemary Davidson	House at Yanakie, Corner Inlet
Allan Clarke	Hardware manufacture
Marj Reni	Little Tern decoys
Thomas Putt and Doris Graham	Oystercatcher decoys
Roger Richards	Plasticine (courtesy "Windmill")
Peter Anton	Weighing cones and holders etc.
Graeme Rowe	Electrical repairs (galore)
Jeff Campbell	Plastic bags, and other equipment at cost
Iain Stewart and family	A home and welcome to South Australia
Nick Walton, Bruce Atkin, Thierry Rolland, Angie Gutowski	Fox baiting
Rosemary Davidson	Keeping our accounts in order
Roz Jessop, Pete Collins and Doris Graham	Typing and editing the Bulletin and numerous other tasks during the year

All are greatly thanked. And I'm not finished yet! We would also like to thank

- The Defence Department at Queenscliff and ICI Australia for the storage of black powder.
- Parks Victoria French Island for provision of camping facilities.
- Box Hill, Frankston and Werribee TAFE/University classes who participated in some of our fieldwork.
- And, as always, apologies to all those I've forgotten, and not had space to mention. Thanks to everyone for your contribution.

Conclusion

May 1998-99 be as productive and enjoyable as 1997-98.

AUSTRALASIAN WADER STUDIES GROUP CONFERENCE

PHILLIP ISLAND, VICTORIA

12TH TO 13TH JUNE 1999.

SEE ANNOUNCEMENT ON THE INSIDE BACK COVER

Numbers of waders processed by the VWSG each month to December 1997 Processing includes measuring wing length, bill length and or total head length (as appropriate) and weight; also recording full details of primary feather moult (if any). Additional wing moult has been gathered on some birds which were not fully processed. The table below is used to plan fieldwork, with the object of obtaining useable data (preferably on at least 50 birds of each group) for each month of the year for all the main wader species.

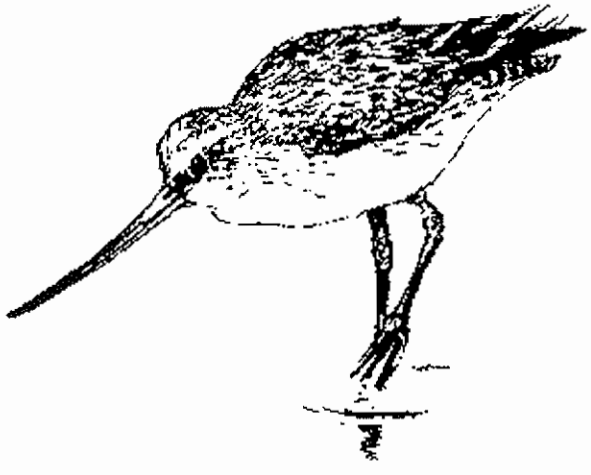
	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
Latham's snipe	51	44	0	0	0	0	0	0	106	97	35	57	390
Short-billed Dowitcher	0	0	0	0	0	1	0	0	0	0	0	0	1
Black-tailed Godwit	0	0	0	0	0	0	0	0	0	1	1	0	2
Bar-tailed Godwit	269	11	308	14	0	195	18	0	64	88	203	271	1441
Whimbrel	0	0	16	0	0	1	0	0	0	2	0	0	19
Eastern Curlew	16	27	1	0	22	17	2	43	147	99	148	100	622
Common Greenshank	1	135	120	0	0	0	0	0	0	0	156	59	471
Terek Sandpiper	13	2	0	1	2	0	0	1	0	1	1	12	33
Grey-tailed Tattler	31	0	0	3	0	3	0	0	0	0	1	0	38
Ruddy Turnstone	107	307	229	27	1	7	0	1	12	21	464	113	1289
Great Knot	132	1	7	0	0	0	0	0	16	89	40	129	418
Red Knot	406	68	181	34	2	57	151	81	76	543	264	183	1892
Sanderling	16	406	242	0	0	0	0	0	0	49	242	161	1116
Little Stint	1	0	0	0	0	0	0	0	0	0	1	1	3
Red-necked Stint	2396	1185	4491	1871	507	598	608	488	463	1398	2994	2661	19600
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	1182	762	118	2	0	0	0	9	519	342	344	1232	4510
Curlew Sandpiper	822	947	1164	144	222	125	215	413	178	954	888	969	7041
Broad-billed Sandpiper	1	2	0	0	0	0	0	0	0	0	0	0	3
Pied Oystercatcher	83	103	175	220	376	867	262	123	102	37	11	29	1890
Sooty Oystercatcher	3	6	40	27	68	125	72	19	0	1	0	0	361
Black-winged Stilt	0	6	0	0	0	0	0	0	0	4	2	6	18
Red-necked Avocet	39	0	0	0	0	0	0	67	29	46	46	36	263
Pacific Golden Plover	40	27	30	1	0	0	0	0	0	28	47	39	212
Grey Plover	1	14	4	3	0	2	0	0	2	64	17	0	107
Red-capped Plover	39	79	55	114	203	100	65	17	8	11	18	7	716
Double-banded Plover	0	2	145	257	755	920	958	926	1	0	0	0	3964
Lesser Sand Plover	54	1	12	7	3	2	2	0	0	0	15	12	108
Greater Sand Plover	21	0	3	0	0	1	1	0	0	0	1	0	27
Black-fronted Dotterel	0	7	0	0	11	16	6	9	2	0	4	8	63
Hooded Plover	0	0	0	0	0	15	0	0	0	0	0	0	15
Red-kneed Dotterel	0	10	0	20	0	44	11	16	12	8	22	1	144
Masked Lapwing	4	6	77	0	0	13	0	0	1	5	21	11	138
Cox's Sandpiper	0	0	0	0	0	0	0	0	0	0	1	0	1
													47919

VWSG Wader Catches 1975 to 31 December 1997

Species	New	Retrap	Total
Pied Oystercatcher	1322	577	1899
Sooty Oystercatcher	318	44	362
Masked Lapwing	138	3	141
Grey Plover	100	8	108
Pacific Golden Plover	196	21	217
Red-kneed Dotterel	134	11	145
Hooded Plover	16	1	17
Lesser Sand Plover	114	10	124
Double-banded Plover	3138	968	4106
Large Sand Plover	24	3	27
Red-capped Plover	584	178	762
Black-fronted Plover	53	4	57
Black-winged Stilt	18	0	18
Red-necked Avocet	261	3	264
Ruddy Turnstone	1046	244	1290
Eastern Curlew	580	42	622
Whimbrel	19	0	19
Grey-tailed Tattler	36	2	38
Common Greenshank	413	58	471
Terek Sandpiper	31	1	32
Latham's Snipe	345	14	359
Short-billed Dowitcher	1	0	1
Black-tailed Godwit	2	0	2
Bar-tailed Godwit	1428	67	1495
Red Knot	2024	165	2189
Great Knot	382	35	417
Cox's Sandpiper	1	0	1
Sharp-tailed Sandpiper	4877	174	5051
Pectoral Sandpiper	2	0	2
Little Stint	3	0	3
Red-necked Stint	61643	18169	79812
Long-toed Stint	1	0	1
Curlew Sandpiper	19250	3767	23017
Sanderling	939	179	1118
Broad-billed Sandpiper	3	0	3
35 Species	**99442**	**24748**	**124190**

Wader Banding Totals - VWSG 1997

Species	New	Retrap	Total
Pied Oystercatcher	78	60	138
Sooty Oystercatcher	60	8	68
Masked Lapwing	6	0	6
Grey Plover	21	2	23
Red-kneed Dotterel	1	0	1
Hooded Plover	1	0	1
Double-banded Plover	58	7	65
Red-capped Plover	30	1	31
Red-necked Avocet	26	1	27
Ruddy Turnstone	194	44	238
Eastern Curlew	35	3	38
Grey-tailed Tattler	1	0	1
Common Greenshank	132	6	138
Latham's Snipe	72	4	76
Black-tailed Godwit	1	0	1
Bar-tailed Godwit	18	1	19
Red Knot	278	30	308
Great Knot	30	1	31
Sharp-tailed Sandpiper	172	8	180
Pectoral Sandpiper	1	0	1
Red-necked Stint	2579	735	3314
Curlew Sandpiper	425	70	495
Sanderling	147	69	216
23 Species	**4366**	**1050**	**5416**



Wader Banding Totals - VWSG January - June 1998

Species	New	Retrap	Total
Pied Oystercatcher	83	53	136
Sooty Oystercatcher	38	15	53
Hooded Plover	3	0	3
Lesser Sand Plover	4	0	4
Double-banded Plover	78	4	82
Greater Sand Plover	2	0	2
Red-capped Plover	2	0	2
Ruddy Turnstone	303	43	346
Bar-tailed Godwit	23	5	28
Red Knot	48	22	70
Great Knot	17	3	20
Sharp-tailed Sandpiper	173	6	179
Red-necked Stint	3128	310	3438
Curlew Sandpiper	723	83	806
Sanderling	272	127	399
15 species	**4897**	**671**	**5568**

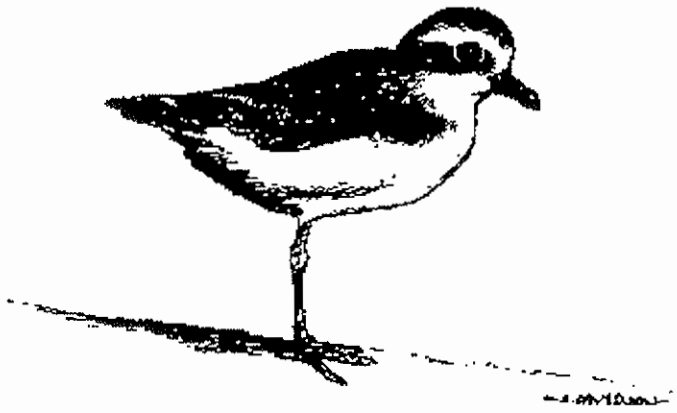
Location of Waders Caught in Victoria and South Australia

	to Dec. 96	1997	Total
Victoria			
Werribee	43893	916	44809
Westernport	28956	894	29850
Queenscliff/Swan Bay	19945	1565	21510
Anderson Inlet (Inverloch)	13029	651	13680
Corner Inlet	9460	727	10187
Altona	955	0	955
Killarney Beach	426	0	426
Geelong (Point Henry / Belmont Common)	179	78	257
Bendigo SF	143	0	143
Seaford Swamp	98	0	98
Braeside/Croyden	79	0	79
Sandy Point/Shallow Inlet	0	48	48
Mud Islands	35	0	35
Gippsland Lakes	19	1	20
Toowong	10	0	10
South Australia			
Canunda/ Carpenter Rocks/ Brown Bay	1547	536	2083
Total	**118774**	**5416**	**124190**

Annual Wader Banding Totals by VWSG

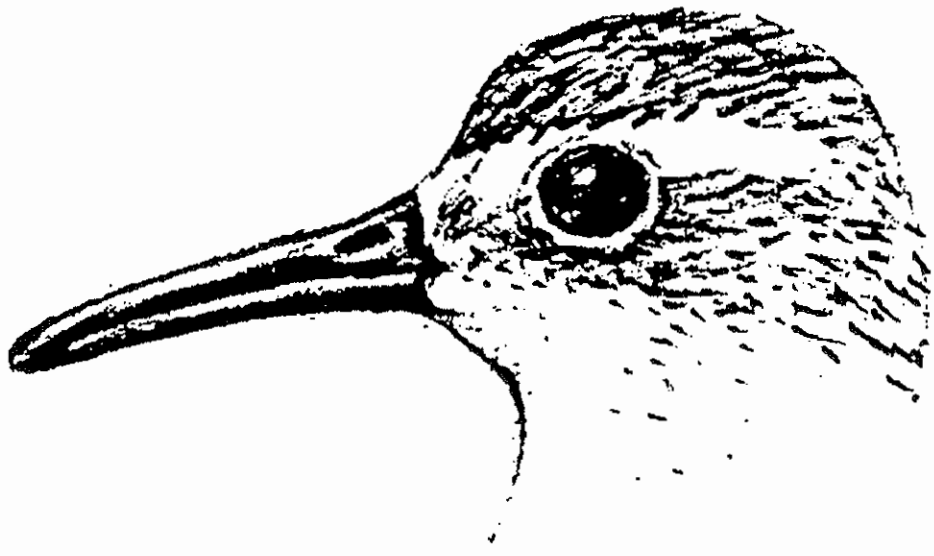
Calender Year	New	Retrap	Total
1975	9	0	9
1976	616	4	620
1977	482	12	494
1978	1296	42	1338
1979	7436	486	7922
1980	6121	1206	7327
1981	4561	869	5430
1982	3774	796	4570
1983	2875	628	3503
1984	4272	1045	5317
1985	4073	1051	5124
1986	7144	2057	9201
1987	5350	1559	6909
1988	8019	2697	10716
1989	5437	1584	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
Totals to end 97	**99442**	**24748**	**124190**

Average annual total for '79-97 6407



VWSG Catch Record

Calender Year	Jan to June	July to Dec.	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		5568



VWSG catches of more than 1000 birds

Location	Date	Number of birds
Yallock Creek	13/02/93	1886
	25/12/79	1500
	15/10/88	1177
	14/02/88	1144
	03/01/94	1123
	26/12/84	1071
	12/01/91	1029
	01/01/90	1003
Werribee SF	30/12/90	2784
	26/01/80	1804
	29/12/93	1422
	27/12/94	1331
	31/12/88	1175
	30/12/89	1158
Inverloch	20/11/93	2563
Corner Inlet (off Manns Beach)	29/01/89	1309
Barry Beach	01/04/98	1291
Queenscliff	20/02/88	1045

18 Catches of 1000 or more (five in period Feb. 1988 to Jan. 1989). The catch on 01/04/98 was the first since December 1994 and the first in any April (remainder in October to February period).

Fieldwork Programme 1998

The programme of fieldwork to be undertaken in 1998, is listed overleaf. Anyone requiring a copy of the programme, or able to take part in fieldwork activities, should contact Clive Minton on 03-9589-4901 (phone or fax).

VWSG FIELDWORK PROGRAM — January - December 1998

DATE	PLACE & OBJECTIVES	HIGH TIDE TIME	HEIGHT (metres)
Sat 3 to Sun 4 Jan	**Western Port** - Yallock Creek/Stockyard Point	0515 1713 0577 1802	3.0 2.6 6.0 2.6
Wed 14 to Tues 20 Jan	**South Australia** - Brown Bay, Canunda NP and Carpenters Rocks Ruddy Turnstone and Sanderling	1350 to 1630	1.12 to 1.27
Sat 24th to Mon 26 Jan	**Lakes National Park** Common Tern & Little Tern		
Sat 31 Jan to Wed 4 Feb	**Mud Islands** **Mist net and Cannon netting** Red Knot, Great Knot, Grey Plover, Bar-tailed Godwit, Lesser Sand Plover and small waders	1506 on 31st to 0550 on 4th at Pt Phillip Heads	1.37 to 1.56
Fri 20 Feb to Tues 24 Feb	**Corner Inlet** Red Knot, other large waders & Pied Oystercatchers	06.38 to 0852	2.31 to 2.36
Sun March 1	**Queenscliff** - Pied Oystercatchers	1655	1.45
Thurs 19 March	**Flinders** - Ruddy Turnstone	1818	2.7
Sat 21 March	**Sandy Point** - Sanderling	1853	2.3
Sun 29 March	**Stockyard Point** - Pied Oystercatcher	1344	2.7
Mon 30 March	**Werribee SF** - Pied Oystercatchers	1642	0.9
Wed 1 April	**Barry Beach** - Pied Oystercatchers	1555	2.6
Tues 14 April	**Tortoise Head, French Island** Pied Oystercatchers	1507	2.7
Sat 18 April	**Hastings** - Pied Oystercatchers	1732	2.9
Sun 26 April	**Rhyll** - Pied Oystercatchers	1215	2.6
Sat 13 June	**Rhyll** - Pied & Sooty Oystercatchers	1536	3.0
Tues 23 June to Sun 28 June	**Corner Inlet** Winter wader count 23rd Pied & Sooty Oystercatchers	1038 to 1542	2.4 to 2.6
Fri 10 July	**Flinders** - Ruddy Turnstone	1333	2.77
Sat 12 July	**Stockyard Point - Pied Oystercatchers**	1512	2.9
Tues 14 July	**Barry Beach** Pied & Sooty Oystercatchers	1539	2.5
Sat 18 July	**Annual General Meeting** at Clive & Pat Minton's House	10.00 am to 10.00 pm	
Sat 12 Sept	**The Gurdies/Yallock Creek** Eastern Curlew	1711	2.8
Sat 10 Oct	**The Gurdies** Eastern Curlew	1604	2.8
Sun 22 Nov	**Sandy Point** - Sanderling	1453	2.0
Sat 28 Nov to Sun 29 Nov	**Inverloch** Small Waders and Eastern Curlew	0659 1859 0733	2.5 2.2 2.5
Sun 6 Dec	**Flinders** - Ruddy Turnstone	1527	2.6
Sat 12 Dec to Sun 13 Dec	**Queenscliff** Ruddy Turnstone and small waders	0706* 1926 0747	1.4 1.2 1.3
Sun 20 Dec	**Mud Islands** - Crested Tern chicks	1334*	1.2
Sun 27 Dec to Tues 29 Dec	**Werribee** Small waders	0926 1004 1046	0.9 0.9 0.9

* at Port Phillip Heads

Wader Recovery Reports 1997/98

Clive Minton

Pied Oystercatcher

Band	Age	Date banded	Location banded	Date seen	Location found	km moved
100-99532	2	210392	Manns Beach	170997* (also 3 times in 1996/97)	Bithry Inlet NSW	361 NE
101-04049	4+	120895	Barry Beach Corner Inlet	230997*	Burrill Lake NSW	514 NE
101-03604	1	070393	Manns Beach	081097*	Moruya Estuary NSW	
101-04647	2+	190596	Stockyard Pt, Western Port	231197*	Tathra NSW	432 NE
101-04676	3+	210596	nr Foster Corner Inlet	020198*	Botany Bay NSW	686 NE
101-03636	3+	080593	Manns Beach	080198*	Nelson Bay, Tathra NSW	355 NE
?	?	1988 or before	Queenscliff	090697*	King Island Tasmania	181 S
101-03968	3	110994	Stockyard Pt, Western Port	161197#	Bluff Hill Point Tasmania	305 S
101-04643	2+	180596	Stockyard Pt, Western Port	051097*	Nene Valley SA	c.408 W
100-99435	2+	290991	The Gurdies, Western Port	051097*	Nene Valley SA	c.409 W
100-99404	2+	230691	Stockyard Pt, Western Port	051097*	Nene Valley SA	c. 408 W
101-03961	2+	110994	Stockyard Pt, Western Port	150198*	Pedders Rocks SA	c. 450 W
101-04689	3+	210596	Roussac Pt Corner Inlet	150198*	Brown Bay SA	c.422 W
?	?	?	Stockyard Pt Western Port	020298*	Pelican Pt SA	c. 550 NE
?	?	210596	Roussac Pt Corner Inlet	011197*	Jervis Bay ACT	
101-03689	3+	090794	Altona	000696#	Mornington	42 SE
101-03582	3+	270393	Werribee SF	130598#	Altona	35 NE
100-82024	2+	130681	Queenscliff	281097#	Brighton	50 NNE
100-82097	2+	141181	Yallock Creek Western Port	050797**	off Manns Beach	130 ESE
100-82035	3+	140681	Queenscliff	010398**	Queenscliff	local
?	2+	301297	Manns Beach	200298*	Mann Beach	local

* indicates bird seen alive in the field ** indicates retrapped # indicates found dead

Another good set of reports, many deriving from the use of colour bands. Movements up the NSW coast (as far as Botany Bay) and to King Island and the northern Tasmanian coast are again apparent. Some of these relate to birds which appear to have permanently emigrated from Victoria, with repeated sightings at the new location.

The list contains some very old birds, although exact ages are not known because birds were of unknown age at banding. Minimum ages are:

100-82097	$17^1/_2$ years
100-82024	18 (or 19) years
100-82035	$19^1/_4$ years
? (last bird on recovery list)	$20^1/_4$ years

The latter is the oldest Pied Oystercatcher on the Australian Bird and Bat Banding Schemes files. However Mike Newman, who has carried out a long term study of breeding Pied Oystercatchers around Hobart, has apparently had even older birds.

Hooded Plover

Band	Age	Date banded	Location banded	Date seen	Location found	km moved
051-18440	2+	220686	Inverloch	regularly to 081297	Inverloch	Local

This bird, recognised by individual colour bands, is regularly observed in the Pt Smythe area by Jim and Anthea Whitelaw. It is now a minimum of 13 years old.

Double-banded Plover

Band	Age	Date banded	Location banded	Date seen	Location found	km moved
B 52378 or B 52382	2+	271084	Wilberforce River NZ 43^0 11' S, 171^0 24' E	210697	Tortoise Head, French Island	2252 W
unknown	2+	Sept/Oct 1992	Akuriri River or Ohau/Tekapo River NZ	200398	Sandy Point nr Wilson's Prom	c. 2100 W

Both birds were recognised by their colour bands (incomplete in the second case). The first bird was a minimum age of $13^1/_2$ (see 1997 VWSG Bulletin for other very old birds).

Ruddy Turnstone

Band	Age	Date banded	Location banded	Date captured	Location found	km moved
Japan 5A 26377	2+ F	150897	Furen Lake Hokkaido, Japan 48^0 16' N, 145^0 27' E	271197	Flinders, Western Port	9088 S

This is the first recovery of a Japanese banded Ruddy Turnstone in Victoria.

Band	Age	Date banded	Location banded	Date retrapped	Location found	km moved
051-15472 and 051-15473 (2 birds)	2+	280387	Sand Island, Queenscliff	181189 181190 021295 181097	Swan Island Swan Island Swan Island NW Swan Bay	local local local local

These two remarkable birds (with adjacent band numbers) were caught together five times over a period of ten years. The "togetherness" was finally broken when only 051-15472 was mist netted on Mud Islands on 2 February 1998.

It is noteworthy that over the years these birds have been captured at all of the four main high tide roosting sites of waders inhabiting the Swan Bay/Swan Island/Sand Island/Mud Islands complex.

Eastern Curlew

Band	Age	Date banded	Location banded	Date retrapped	Location found	km moved
091-26469	2+	101294	The Gurdies Western Port	220397	Imazu, Fukuoke, Japan 33^0 38' N, 130^0 15'E	8155 N

The band number was read, with a telescope, on this live bird at this stopover location in Japan. It is interesting that it was already that far north by 22 March since Eastern Curlew do not normally start to depart from Victoria until around 7 March each year.

Common Greenshank

Band	Age	Date banded	Location banded	Date retrapped	Location found	km moved
061-57107	2+	110389	Warneet	211197	Bullock Swamp French Island	6 S

This retrap is the oldest Australian record so far for this species. But with a minimum age of only $10^1/_2$ years this is most likely a result of infrequent banding. A wader of this size is likely to have a potential maximum lifespan of at least 15 years based on data collected by VWSG on other comparable sized species.

Bar-tailed Godwit

Band	Age	Date banded	Location banded	Date retrapped	Location found	km moved
071-51187	3+	101283	Swan Island Queenscliff	010298	Mud Islands	Local
071-51188	3+	101283	Swan Island Queenscliff	020298	"	"

These two birds, with consecutive band numbers, were mist netted only one day apart on Mud Islands. Both are a minimum age of $16^1/_2$ years - a VWSG record, but not quite an Australian record.

Red Knot

Band	Age	Date banded	Location banded	Date retrapped	Location found	km moved
NZ C49896	2+	201096	Miranda, Firth of Thames NZ	181097	Swan Bay Queenscliff	2688 W
051-60303 & 051-60350 (2 birds)	2+	181097	Swan Bay Queenscliff	291197	Kaipara, NZ	2618 E
051-40690	1	140196	Stockyard Pt Western Port	291197	Kaipara, NZ	2540 E
051-60426	3+	101097	Swan Island Queenscliff	040498	Bynoe West, Gulf of Carpentaria 17^0 33' N, 140^0 37'E	c. 2300 N
051-15429	2+	210287	Swan Bay Queenscliff	000498 (killed)	Yangtze Estuary China 31^0 10'N, 122^0 0'E	8067 N

Four of the above records derive from a wonderful catch of 308 Red Knot on the NW shore of Swan Bay on 18 October 1997. The first three birds were adults on passage through Victoria to their non-breeding location in New Zealand. C49896 is the first NZ banded Red Knot caught by VWSG, which corresponds markedly (and embarrassingly!) with the 21 VWSG banded Red Knot caught by the NZ Wader Study Group! It is not known of course, if the fifth bird on the list had also been in NZ in the non-breeding season. Whether it came from there or from Victoria it was clearly using the south east corner of the Gulf of Carpentaria as a stopover site on northward migration.

051-40690 is another example of the tendency of Red Knot which spend their fist year in Australia to adopt New Zealand as their non-breeding area in later years.

Great Knot

Band	Age	Date banded	Location banded	Date retrapped	Location found	km moved
061-12280	2+	010996	Nudgee Beach Queensland	181097	Swan Bay Queenscliff	1442 SSW

This control (live recapture of a bird banded elsewhere) was clearly on passage through Queensland to Victoria when it was first banded near Brisbane.

Red-necked Stint

Band	Age	Date banded	Location banded	Date retrapped	Location found	km moved
Japan 2C85624	J	300892	Gamou, Sandai-Shi, Miyagi, Japan 38^0 15' N, 141^0 1' E	271297	Werribee SF	7520 S
032-77286	2+	201286 041288* 311288* * retrapped	Werribee SF	end 0390 (killed)	Nanan, China 24^0 58' N, 118^0 23' E	7520 NNW
034-58566	1	280293	Yallock Creek Western Port	000498 (killed)	Yangtze Estuary China 31^0 10' N, 122^0 0' E	8088 NNW
033-43661	1	270288	Werribee SF	000498 (killed)	"	8045 NNW
041-95287	1	060796	Barry Beach Corner Inlet	210997	Broome, WA	3269 NW
034-57683	1	300494	Broome WA	271297	Werribee SF	3099 SE
033-71255	2+	181189	Swan Island Queenscliff	010298 (dead)	Mud Islands	8 E
032-20218	2+	181179	Werribee SF	271297	Werribee SF	Local

After the dearth of recoveries the previous year this is an especially interesting and varied crop. The Japanese bird is the first to be caught in Victoria from that country. The Chinese recoveries further illustrate the key role of that country as a major stopover location on northward migration. It is interesting that the Nanan bird had already reached 25^0 N, before the end of March.

Two further exchange of birds between Victoria and NW Australia illustrate the role of the latter as a stopover point on both northward and southward migration. 034-57683 is particularly interesting as it was banded as a first year bird at Broome on 30 April. Since all other banding data suggests most birds return to the same location each year it is probable that this was an example of a Victorian bird which had travelled as far as NW Australia in its first year. There is growing evidence from retraps and leg flag sightings, including on Curlew Sandpipers also, that some one year old birds may travel this far - although none are known to return to their breeding grounds.

033-71255 was a rare example of a wader found dead in Australia (albeit eight years after banding). Very few migrant waders seem to die in Australia (there are no cold winters or dramatic food shortages as can occur in the Northern Hemisphere). Predation - birds of prey and ground predators - accounts for some mortality but little is left to be found after such events. So finding a dead wader, especially a banded one, is an unusual occurrence.

The last bird on the list is the live recapture of Australia's oldest Red-necked Stint - 18 years and one month since banding and a minimum age of $19^1/_2$ years.

Curlew Sandpiper

Band	Age	Date banded	Location banded	Date retrapped	Location found	km moved
041-24668 041-24668	2+	030187	Queenscliff	240487 150189	Hong Kong Queenscliff	7446 NNW 7446 SSE
041-61762	1	090292	Yallock Creek Western Port	020697 (dead)	Yakutia, Verkhoyanskey District, Russia 67^0 33' N, 134^0 25' E	11795 N
041-90103	2+	111294	Stockyard Pt Western Port	020697 (dead)	"	11812 N
041-70461	1	020795	Broome WA	030198	Stockyard Pt Western Port	3188 SE
040-97056	2+	281279	Manns Beach Corner Inlet	240298	where banded	Local

As for Red-necked Stint, a fascinating and varied selection of recoveries. The first only recently came to light when checking on retraps of previously recovered birds. It is a rare example of a "double-journey recovery" , being banded at Queenscliff, recaptured in Hong Kong and then retrapped again back at Queenscliff.

Two recoveries on the Russian breeding grounds (at the same place and on the same day) is also a rare, but most valuable event. These bring to seven the number of recoveries of Victorian banded Curlew Sandpipers on the breeding grounds (surprisingly there are none yet from NW Australia banded birds). They show a strong preference for the NE part of the breeding range (Yakutia) but some do also breed in the Taimyr Peninsula towards the western end of the breeding areas (see paper in *The Stilt* 32: 28-40, April 1998).

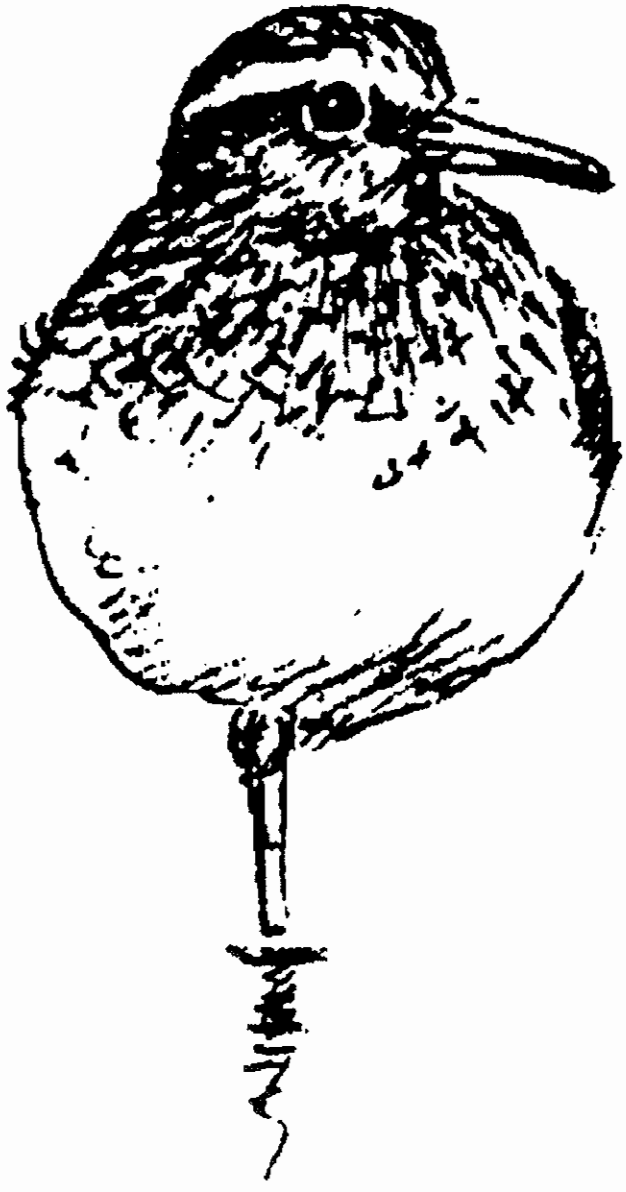
The Broome/Stockyard Point record probably relates to a bird which normally spends the non-breeding season at Stockyard Point but which moved as far as Broome in its first "winter" (see also comments under Red-necked Stints). One wonders why such birds find it desirable or necessary to make this 3000 km journey across the continent if they are not intending to travel all the way back to the breeding grounds.

040-97056 is the world's oldest recorded Curlew Sandpiper. It was retrapped at the Corner Inlet banding location 18 years 2 months after it was originally banded there. Its age was at least 19 $^2/_3$ years. Maybe we'll find a 20 year old one soon!

Sanderling

Band	Age	Date banded	Location banded	Date seen	Location found	km moved
041-91768	2+	060295	Brown Bay, Pt MacDonnell SA	281097	Sandy Point, Wilson's Prom.	471 E
041-60338	2+	020391	Killarney Beach, Port Fairy	190198	Brown Bay SA	135 W
041-60353	2+	"	"	"	"	"
041-60384	2+	"	"	"	"	"
041-60522	2+	"	"	"	"	"
041-60542	2+	"	"	"	"	"

These are further examples of the mobility of Sanderling between favoured locations along the shores of Victoria and SE South Australia (see earlier VWSG Bulletins and also Flag Sightings Reports). There were many additional movements of significance, but lesser distance, within the South Australian part of the study area.



Tern Recovery Report 1997/98

Clive Minton

Caspian Tern

Band	Age	Date banded	Location banded	Date of recovery	Location found	km moved
091-25070	chick	151290	Mud Islands	300897	Stockyard Point	69 E

At 6 $^{3}/_{4}$ years old this is the VWSG's oldest recovery yet for this species. The oldest Australian record is 16 years.

Common Tern

There have been no recoveries reported since the last VWSG Bulletin. However there have been further reports of birds carrying an orange flag on the tarsus, all of which will have been originally marked in the Gippsland Lakes National Park during the last seven years.

Date of sighting	Location found	Observer	km moved
260697	Kagoshima, Kyushu, Japan 31^{0} 07' N, 131^{0} 05' E	Nagai Kensuke	7872 N
061297	Kurnell, NSW	J. Pegler	713 NE
181197 (2 birds)	Botany Bay, NSW	G. Ross	c.710 NE
040398	Ballina, NSW	J. Harris	1293 NE
050498 (3 birds)	South Ballina, NSW	B. Totterman	1284 NE
260498	"	"	"
270398	Hastings Point, NSW	A. & S. Keates	c1300 NE
070298 (6 birds)	Nooramunga NP, Corner Inlet	C. Minton et al.	c120 SW

The report from Japan is a first. The bird was in breeding plumage, but was not thought to be breeding (small scale breeding has recently commenced in Japan). Most of the remainder of the sightings show the timing of migration along the NSW coast of birds on their way to, or from, the Gippsland Lakes.

The onward movement or dispersal of Gippsland Lakes birds to the Corner Inlet complex is normal. However the presence of six birds in one flock is more than previously recorded.

Fairy Tern

Band	Age	Date banded	Location banded	Date of retrap	Location found	km moved
040-68692	Chick	311283	Werribee SF	010298	Mud Islands	29 SE

This bird was retrapped at night in a mist net when wader banding. It is the VWSG's oldest Fairy Tern - 14 years 1 month since banding. It is interesting that

the bird was still in Port Phillip Bay even though there are now no known breeding colonies of Fairy Terns there.

Little Tern

No overseas reports were received (although we have been informally advised that some are "in the pipeline" from Japan). However a correction needs to be made to the Japanese recoveries listed in the 1997 VWSG Bulletin (P. 21). 041-92158 was seen in Japan on 190597 (not 190596).

Little Tern movements deriving from sightings of birds individually colour flagged on the Gippsland Lakes are detailed below.

Band	Age	Date banded	Location banded	Date of sighting	Location found	Finder	km moved
041-91599	2+	260196	Albifrons Island	100198 & 250198	Manly Boat Harbour Qld	A. &. S. Keates	1271 NNE
041-90190	2+	280195	"	110398	Ballina NSW	J. Harris	1148 NNE
041-91593	2+	260198	"	110398	"	J. Harris	1148 NNE
041-90195	2+	280196	"	240297	Barry Beach Vic	R. Clark	130 SW
041-92088	2+	260196	"	"	"	"	"
041-92177	2+	260196	"	"	"	"	"

It would appear that the Manly record relates to a Little Tern which had changed its non-breeding area from the Gippsland Lakes to Moreton Bay. The Ballina records also probably relate to birds of Japanese origin, but on this occasion they would have been on northward migration back from the Gippsland Lakes.

Small numbers of Little Terns marked in the Gippsland Lakes flocks have previously been reported in the Corner Inlet complex. As with these three records they are mostly in the late summer.

Crested Tern

Recoveries of chicks banded at Mud Islands, Port Phillip Bay

Band	Date of banding	Method of recovery	Recovery date	Recovery location	km moved
071-95293	171288	Dead	000897	Sandringham	41 NE
071-84129	171288	"	010398	Phillip Island	42 SE
071-36212	181293	Retrap	150498	French Island	49 ESE
072-47178	181294	Dead	010298	Sorrento	9 S
072-65789	171295	Dying	060296	St Albans	59 N
?	171295	Seen	011197	South Ballina NSW	1321 NE
?	171295	"	010398	Seaford	37 NE
?	171295	"	150498	Croajingalong NP	c.400 E
?	211296	"	240297	Barry Beach	150 ESE
?	211296	"	020397	Gippsland Lakes	268 E
072-66527	"	Alive	090797	Bonny Hills NSW	1045 NE
072-66571	"	Dead	200797	Pt Cartwright Qld	1507 NE
072-66847	"	Dying	150997	Newhaven	59 ESE
072-72076	"	Dead	181097	Rhyll	53 ESE
072-66548	"	"	211097	Brighton	49 NNE
072-72430	"	"	031197	Koonya	11 S
072-73031	"	"	111197	Geelong	33 WSW
?	"	Seen	231297	Hobart, Tas.	557 SSE
072-71971	"	Dead	261297	Culburra NSW	652 NE
072-66949	"	Dying	271297	Malua Bay NSW	559 ENE
072-66945	"	Dead	020198	Encounter Bay SA	662 WNW
072-72471	"	"	180198	Fairhaven	62 WSW
? (2 birds)	211297	Seen	030998	Bon Beach	10 S

The above recoveries and colour band sightings largely reflect the normal pattern of movements. However 072-66571 was at the northern extremity of areas in SE Queensland reached in winter by birds from Victoria. And the sighting in Hobart, Tasmania, was the furthest south so far for a bird from Victoria. The movement of 072-66945 to Encounter Bay, SA was unusually marked westward movement.

Most recoveries of Crested Terns are reported in their first year (or two) of life. It is pleasing therefore that the first two birds on the list survived for around nine years (there are records from elsewhere of Crested Terns reaching more than 20 years old).

In addition to the table of recoveries there were other valuable reports during the year of birds banded at Mud Islands:

1. On 140398 four orange banded (171295) and three blue banded (211296) Crested Terns were seen in a flock of 30 birds at Lorne. The same day there was one orange, four blue and one yellow (2112987) bird in a flock of 120 at Apollo Bay.

This is further evidence of some westward dispersal in late summer/early autumn, before the main migration eastwards (and then northwards).

2. On 211297 five birds with bands were among 13 birds found dead, entangled in fishing line, in the Mud Islands breeding colony. They had all been banded there as chicks and were presumably breeding there at the time of their deaths. Their banding dates were:

Band Number	Date of banding
071-84118	171288
071-95113	171288
072-15067	151290
072-15170	151290
072-22730	141291

3. Four Crested Terns banded as chicks at Mud Islands were recaptured (by hand net) breeding in other colonies.

Band	Date of banding	Recapture date	Recovery location	km moved
071-95410	171288	181297	The Nobbies, Phillip Island	42 SE
071-97480	161289	181297	"	"
071-95139	171288	060198	Clonmel Island Corner Inlet	187 E
072-16364	141291	060198	"	"

Recoveries of chicks banded off Manns Beach, Corner Inlet

Band	Date of banding	Method of recovery	Recovery date	Recovery location	km moved
072-49098	130195	Retrap	260198	nr Lochsport	107 NE
072-66319	110196	Dead	220297	Footscray	197 WNW
072-41896	230197	Dead	221097	Dream Island	Local
072-73991	230197	Alive	010198	Peterborough	345 W
072-86171	060198	Dead	210298	Wilson's Prom lighthouse	60 SSW

Recoveries of chicks banded at the Nobbies, west end of Phillip Island

Band	Date of banding	Method of recovery	Recovery date	Recovery location	km moved
072-49169	160195	Dead	280198	Somers	15 N
072-73710	220197	Dead	170997	Torquay	73 W
072-73797	220197	Retrap	280698	off Woolongong NSW	696 NE

There are three significant westward movements in the above lists - the less usual direction. All were birds around one year old.

Other recoveries of Crested Terns

Band	Date of banding	Where banded	Recovery date	Recovery location	km moved
072-25801 (chick)	151294	Frederick Henry Bay, Tas	260198 Retrapped	Lochsport Lakes NP	545 N
072-71164 (chick)	141296	Edithburgh, SA	200298 Died	Lakes NP	942 ESE
072-05098 (2nd year)	130190	Lakes NP	060198 Breeding	Manns Beach Corner Inlet	112 SW

Age of first breeding

Fifty three banded adults (including the five dead ones detailed above) were recovered (the remainder retrapped by hand net) in breeding colonies in the 1997/98 season. Forty-three were at the Mud Islands colony, eight at Clonmel Island (Corner Inlet) and two at The Nobbies (west end of Phillip Island).

Their ages were:

Age	Number of recaptures
11	3
10	7
9	19
8	9
7	4
6	6
5	4
4	1

This supports the data from earlier years which suggests that many Crested Terns do not commence breeding until they are six years old (see previous VWSG Bulletins). The four year old bird is the first to be re-captured at that age.

Silver Gull

Band	Age	Date banded	Location banded	Date of sighting	Location found	km moved
082-07588	Chick	091088	Mud Islands	260697	Albert Park, Melbourne	50 NNE
082-63099	Chick	240190	West end Phillip Island	260697	"	76 N

Both these band numbers were read on live birds by a visiting ornithologist - Klaus Hein - from Germany.

Sightings of Leg-flagged Waders from Victoria
Report number 6.

Clive Minton and Rosalind Jessop

An orange plastic leg-flag has been placed on the right tibia of most migrant and some resident waders banded in Victoria since 1990. This has led to a significant increase in the rate at which data has been generated on migration routes and key stopover regions in the flyway.

Lists of sightings of orange flagged birds away from the banding areas have been published in past VWSG Bulletins (and in the AWSG bulletin *The Stilt).* During the past year the rate of reporting has increased dramatically as a result of sustained "flag-watch" programmes introduced at various important locations. Massive totals of birds flagged in Australia (Victoria, NW Australia and Queensland) and New Zealand have been seen eg. 196 In Hong Kong (March to May 1998), 82 in the Republic of Korea (April to May 1998) 77 in Japan (August to September 1997), and 51 in New Zealand (mid 1997 to mid 1998). This will in due course permit quantitative analysis of the data, giving a much better insight into the routes and locations used by different species and different populations on migration through Asia (and Australia). The efforts of everyone who recorded these birds in the field and reported them to us are very greatly appreciated. A comprehensive list of all sightings of orange-flagged (VWSG) birds which have been reported since the 1997 Bulletin is given below.

Grey Plover

A bird seen with an orange flag by Brett Lane at North Spit, Werribee SF on 24 December 1997 was probably one of 23 marked in NW Swan Bay on 18 October 1997. No Grey Plover have actually been flagged at Werribee SF, and few anywhere else either.

Lesser Sand Plover

160297	Manly Boat Harbour, Moreton Bay, Qld.	A. Keates
300397	"	A. Keates, L. Agnew
080298	"	A. Keates
041097	Kurnell, NSW	J. Pegler

This species has turned up in four consecutive years in Moreton Bay in the February to April period. Considering the very small number flagged in Victoria (55) it is possible that the same bird is involved. It is also possible that the bird has permanently moved from Victoria to Queensland, but if this is the case it is surprising that the sightings are not made at other times of the year.

The Kurnell record is obviously a bird on southward migration making a stopover part way down the east coast of Australia on its way back to Victoria.

Greater Sand Plover

110498	Mai Po Nature Reserve, Hong Kong 22^0 29N 114^0 19'E	R.W. Lewthwaite & C. Ma

This is the third sighting of a Victorian Greater Sand Plover in Hong Kong on northward migration.

Red-necked Avocet

101097 (1) 261097 (3)	Werribee SF	B. Swindley.

These birds were probably part of the catch of 27 made at the Gurdies, Western Port, on 6 September 1997. A similar local movement of a flagged Red-necked Avocet was recorded in 1993.

Ruddy Turnstone

291297	Seal Rocks, Phillip Island	R. Kirkwood

This Ruddy Turnstone was probably one of those banded at our newly discovered site at West Head, Flinders on 12 November 1997. Although normally site faithful this one had clearly commuted across the western entrance of Western Port.

Eastern Curlew

280797	Kanghwa Island, Republic of Korea 37^0 35N 126^0 25'E	Jeong-Yeon Yi
300797	"	Jin-Young Park

These are the first reports of Victorian Eastern Curlew in south Korea. It appears that Eastern Curlew from SE, NE and NW Australia all mix together in south Korea and Japan.

Grey-tailed Tattler

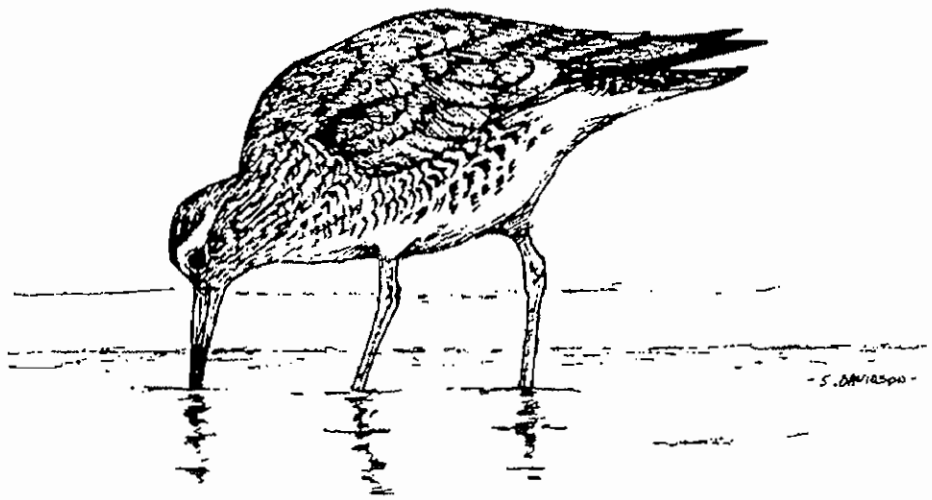
021097	Manly Harbour, Moreton bay, Qld	J. Harris

This must have been one of three Grey-tailed Tattlers colour flagged off Manns Beach, Corner Inlet on 18 January 1996. It was probably on passage down the east coast back to Victoria.

Bar-tailed Godwit

190598	Liaoning Province, China 40° 49N 121° 33'E	M. Barter, J. Wilson
110498	Asan Bay, Republic of Korea 36° 54N 126° 54'E	Ki-Seop Lee, Ok-Sik Jung, Kyung-Kyu Lee
240498	Yongjong Island, Republic of Korea 37° 30N 126° 30'E	Jin-Young Park, Jeong-Yeon Yi
250498 3 birds	Namyang Bay, Republic of Korea 37° 05N 126° 45'E	Jeong-Yeon Yi
170497	Yatsu Tidal Flat, Chiba, Japan 35° 40N 139° 55'E	Sei Akutsu
180497	"	Tatsuo Tomioka
190497 to 050597	"	Tsutomu Ishikawa
260497	"	Miyako Nakamura
231197	Manukau Harbour, NZ	T. Habraken
121297	Kaipara Harbour NZ	G. Pulham
220197	Broadwater, Queensland	G. Miller & L. Bowden
131297	Manly Boat Harbour, Moreton Bay, Qld.	A. Keates
141097 2 birds	Botany Bay, NSW	G. Ross

An excellent collection of records of birds migrating northwards through Japan and Korea, and one probably fattening up in northern China at its last major stopover location before the breeding grounds. But where do the birds go on southward migration? Recoveries show a similar lack of July, August and September reports. Maybe they do fly non-stop all the way from the Sea of Okhotsk, eastern Siberia, to the northern Australia coastline! (8000 km).
Onward movements to New Zealand are reported in most years. However the two Queensland records would appear to relate to birds which had changed their non-breeding areas from Victoria to Queensland.



Red Knot

260498	Asan Bay, Republic of Korea 36^0 54N 126^0 54'E	Jin-Young Park
240897	Tainan, Taiwan 23^0 01N 120^0 07'E	Taiwan Banding Scheme
030197 (3 birds)	Miranda, Firth of Thames, NZ	R. & P. Rowe
200197	"	R. Mavor
210197	Waipu Cove, Northland, NZ 35^0 59 S 174^0 29'E	G. Pulham
070297	Manawatu, NZ	S. & J. Slack
260797	Manukau Harbour, NZ	T. Habraken
161097	"	R Clough
151197	Kaipara, NZ	G. Grant
151197	Manukau Harbour, NZ	R Clough
291197 (3 birds)	Kaipara, NZ	A. Reigan
021297	Manawatu, NZ	I. Saville
061297	Kaipara, NZ	G. Pulham
010198 (2 birds)	Waipu Cove, Northland, NZ	K. Hansen
010298 (2 birds)	Kaipara, NZ	A. Reigan
090198 (2 birds)	Waipu Cove, Northland, NZ	G. Pulham
060298	Portland, Whangarei Harbour, Northland, NZ	G. Grant & M. Twyman
060298	Karewa, Te Whango Lagoon, Chatham Islands, NZ 43^0 45 S 176^0 27'E	M. Bell
280298 (3 birds)	Manukau Harbour, NZ	T. Habraken
030398	"	R. Clough
270698	"	P. Agnew
210997	Lytton, Qld	A. &. Keates
300997	Toorbul, Pumicestone Passage Qld	J. Harris
301297	Kangaroo Island, Tasmania	T. Reid

This is probably the best ever crop of Red Knot sightings. In part this may have resulted from the excellent catch of birds at Swan Bay, Queenscliff on 18 October 1997. Many of these were clearly on their way to New Zealand (see recoveries section in this Bulletin) And at least one went to Tasmania!

The sighting in Korea is the first of a Victorian Red Knot, but there has previously been a recovery. The sighting in Taiwan was on southward migration. It is rare to get sightings or recoveries of medium/large waders in Asia on their way south.

Overall pride of place for the unexpected must go to the sighting in the Chatham Islands - out in the Pacific some 800 km east of Christchurch, South Island, New Zealand. It was in a flock of 760 Red Knot and was accompanied by a Red Knot with a yellow flag (from NW Australia). It must be rather hazardous aiming for a

small group of islands in the South Pacific each year! But it must be worthwhile or they wouldn't do it.

Great Knot

160597	Hua-Lien Estuary Taiwan 25^0 58'N 121^0 35E	Taiwan Bird Banding Centre
040997	Mankyung Estuary, Republic of Korea 35^0 52'N 126^0 43E	Jeong-Yeon Yi

Most Australian recoveries are from China - as a result of intense hunting there - so it is particularly valuable to receive flag sightings from other stopover locations. Reports on southward migration (one of the above) are also not common in Asia.

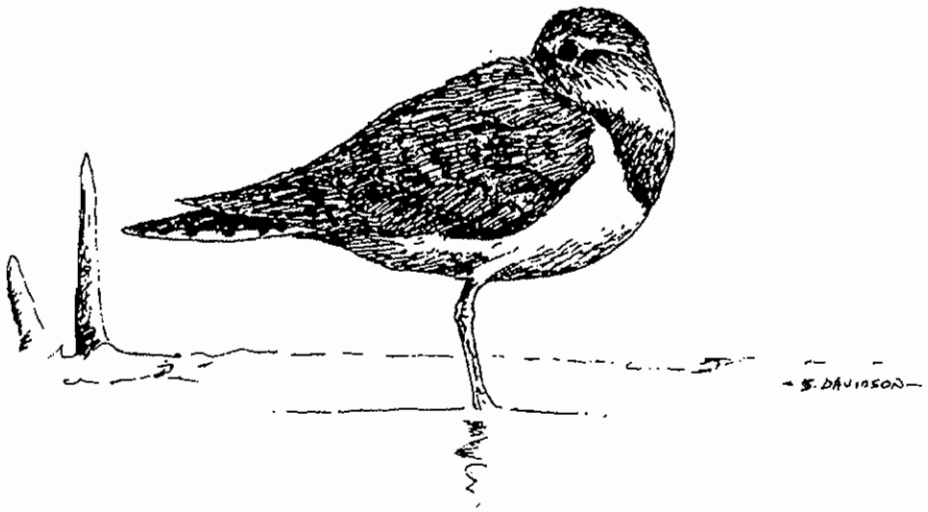
Both of the above are the first reports in each country of Great Knot banded in Victoria.

Sharp-tailed Sandpiper

270498	Mankyung Estuary, Republic of Korea 35^0 52'N 126^0 43E	Jeong-Yeon Yi
270498	Mai Po Nature Reserve, Hong Kong 22^0 29N 114^0 19'E	G. Carey & P. Leader
110498	Kooraggan, Newcastle, NSW	E. Vella
070597	Lake Alexandrina, SA	W. Syson
011197	Edithvale Wetlands	B. Brown

These are the first Victorian Sharp-tailed Sandpipers to be reported from Hong Kong and Korea.

The SA bird was in non-breeding plumage and may have been intending to "overwinter". Edithvale Wetlands is at least 40 km from any site where Sharp-tailed Sandpipers have been colour flagged. This species has a tendency to be less "site faithful" than most other migrant species.



Red-necked Stint

190597	Sakhalin, Russia 47° 27'N 142° 45E	V. Zykov
240597	Watari, Miyagi, Japan 38° 02'N 140° 55'E	Hiroshi Ikeno
071097	Alas Purwo National Park, Indonesia 8° 31'S 114° 15'E	M. Grantham
071197 181197 030198 220298 140498 170498 180498 departed	Lake Ellesmere NZ 43° 43S 172° 30'E	C. Hill et al.
02&041097	Darwin Sewage Ponds	J. Izzard
200497 (2 birds)	Wyndham WA	J. Lewis
270497	"	"
280398	"	"
050498	"	"
090498	"	"
020598 (2 birds)	"	"
241097	Broome WA	D. Rogers
221097 to at least 011197	Eyre Bird Observatory WA	Eyre Wardens
060297	Mirapool Qld	B. Baker & J. Thompson
081197 (2 birds)	Maroom Qld	E. Kleiber & R. Lamb
060797	Murray River Mouth SA	D. Robertson
181097	King Island, Tasmania	C. Lester
151197 (2 birds)	nr Hobart, Tasmania	T. Reid
281297	Georgetown Tasmania	T. Reid
180997	Lake Linlithgow (western Vic.)	S. Clark

Sightings of orange leg flagged Red-necked Stints at Mai Po Marshes, Hong Kong (22° 29N 114° 19'E) were made on the following dates:

Date	Number of birds	Date	Number of birds
040597	1	010598	1
090498	1	080598	3
190498	1	100598	3
200498	3	110598	1
230498	1	120598	3
240498	2	160598	1
250498	5	230598	1
270498	3	080698	1
280498	3		

This incredible series of sightings at Mai Po and a similar long list of Curlew Sandpipers was put together by Geoff Carey and Paul Leader. Others who contributed to the field observations were J. Hackett, I. Tyzzer, E.M.S. Kilburn, V.B. Picken, J.G. Holmes, R.W. Lewthwaite, C. Ma, D.S. Melville, P. Stevens, Wai Ping Lam and M.R. Leven.

The remainder of the list is another most valuable and varied list of sightings. The one in Russia is rather further north east than any previous record from SE Australia. Maybe there isn't the divide between NW and SE Australian birds suggested in the recoveries/flag sightings analysis presented in the April 1997 edition of *The Stilt!*

The sighting in Indonesia is only the second. Most species seem to overfly in both their northward and southward migrations.

This is the sixth year in which one (or more) orange leg-flagged Red-necked Stints has inhabited the shores of Lake Ellesmere on the east coast of South Island, New Zealand. It is tempting to think that most records relate to an individual which returns there each year.

The sightings in Hong Kong are the most comprehensive set yet (see also under Curlew Sandpiper sightings). The median date for the 1998 records is 28 April. This is only four days later than for Curlew Sandpipers even thought the first orange-flagged Red-necked Stints arrived two weeks later than the first Curlew Sandpiper from Victoria. Red-necked Stints also linger longer into May, with one late record even in June.

The sightings within Australia, but away from the coastal Victoria marking sites, largely refer to birds on passage through northern Australia to and from non-breeding areas in SE Australia. There is also some passage on to Tasmania. However the Mirapool (Queensland) record appears to be a bird which has changed its non-breeding area and the Murray River record probably relates to a wandering one year old non-breeding bird.

A Red-necked Stint with a blue leg flag, from Lake Furen, Hokkaido, Japan was seen at Inverloch by Jim Whitelaw on 2 December 1997. This is the first sighting of a Japanese leg-flagged Red-necked Stint in Victoria. Later in the month one was retrapped at Werribee SF (see Recoveries section).

Curlew Sandpiper

120997 (2 birds)	Pei-Mon Taiwan 23^0 16N 120^0 07'E	Taiwan Banding Centre

An almost daily search for colour flagged birds at Mai Po Marshes, Hong Kong (22^0 29N 114^0 19'E) between late March and the end of May 1998 resulted in 96 sightings of orange flagged Curlew Sandpipers.

Dates of sightings were:

Date	Number of birds	Date	Number of birds
260398	3	240498	6
270398	3	250498	6
030498	1	260498	2
040498	1	270498	11
090498	5	280498	11
100498	3	290498	2
110498	3	300498	2
120498	3	010598	2
130498	5	020598	2
160498	1	030598	2
170498	4	100598	1
190498	4	120598	1
200498	9	160598	1
230498	2		

The median date is 24 April - almost exactly the same as in previous years (which were however based on less data - see April 1998 Edition of Stilt). It is surprising that some birds from Victoria have already reached Hong Kong before the end of March even though departures are not thought to commence until the second week of March.

This incredible series of sightings was mainly achieved through the efforts and dedication of Geoff Carey and Paul Leader. For the names of others who contributed to the sightings see under Red-necked Stint.

220397	Wyndham WA	J. Lewis
020598 (2 birds)	Broome WA	C. Hassell, N. Grenfell
260598	"	C. Hassell
030997	Boonooroo, Qld	C. Barnes
130298	Ballina NSW	J. Harris
141097	Botany Bay NSW	G. Ross
070198	Price Saltfields SA	P. Walker
170197	Georgetown Tasmania	R. Cooper
080298	"	"

Many of the sightings within Australia probably relate to birds stopping over on migration to/from Victoria. However the Ballina, Adelaide and Georgetown records appear to refer to birds which have changed their non-breeding area away from Victoria. One of the birds seen at Broome on 2 May was in non-breeding plumage, as was the bird on 26 May (possibly the same individual although the sites were 3 km. apart). This is further evidence (see Recoveries section) that some one year old birds from SE Australia may move as far as NW Australia in their first year, even though they do not return to their breeding grounds.
In addition to the above records a Curlew Sandpiper with a green flag, from Queensland, was seen at Barrallier Island, Westernport, on 16 November 97 by Jon Fallaw and Becky Hayward.

Sanderling

240797	Ichinomiya Estuary, Chiba, Japan 35° 23'N 140° 24E	Kaita Kaneko
050897	Tokachi, Hokkaido, Japan 42° 42'N 143° 42E	Kazunori Noro
100897 (6 birds)	Sousa, Chiba, Japan 35° 37'N 140° 34E	Tatsu Sato
240897 (3 birds)	Ichinomiya Estuary, Chiba, Japan 35° 23'N 140° 24E	Kenzo Tomiyo, Tomio Tanaka Akihiko Mine
300897 (5 birds)	"	Yasuo Suzuki
110997	"	Kaita Kaneko
240897	Taichung, Taiwan 24° 11'N 120° 29E	per Taiwan Bird Banding Centre
020598	Mai Po Nature Reserve, Hong Kong 22° 29'N 114° 19'E	G. Carey & P. Leader
040997	Alas Purwo NP, East Java, Indonesia 8° 31'N 114° 15E	M. Grantham
270997	South Ballina, NSW	Bo Totterman
040298 (2 birds)	Nora Greina, SA (between Robe and Beachport)	R. Schulz

Another amazing collection of overseas sightings of Sanderling, including our first from Taiwan, Hong Kong and Indonesia. This list brings the number of sightings in Japan to 44. It is incredible there has not yet been an overseas recovery of a Sanderling banded in Australia (or vice versa).

Most sightings in Japan (including all the 1997 records) are on southward migration. There must be a high concentration of birds heading for south east Australia with six individuals located at the same time at one site and five at another.
The sightings in South Australia were at least 40 kilometres from the nearest site at which they were banded. In addition there have been sightings (details not yet available) at sites even further west, along the coast of the Coorong right up to the mouth of the Murray River.

The tendency of Sanderlings to move more freely than most migrant waders along the coast of SE Australia is further illustrated by systematic records collected at Sandy Point (near Wilson's Promontory) by Susan Taylor and Jim Wilson. They have seen Sanderlings with orange leg flags on the right tarsus (indicates South Australian origin) on seven occasions between October 1997 and June 1998 (during the course of monthly Hooded Plover surveys) - with up to three such birds seen on each occasion. Also most of the 22 Sanderlings with colour flags (out of 103 birds examined) seen by Chris Lester at Killarney Beach on 17 January 1998 had the flag on the tarsus.

Tern Banding 1997/8
Clive Minton

The objectives of the long term tern study programme were detailed in the 1997 VWSG Bulletin (Number 21, July 1997, pp31-33). This note summaries results since then.

Breeding Colonies 1997/8

Crested Tern

In contrast to the record breeding numbers and success in the previous year the 1997/98 summer was poor - in fact disastrous at the Nobbies (Phillip Island) and not far short of that at Mud Islands. The total number of young reared to fledging in Victoria was probably lower than in any year since 1987/88, which was before the Mud Islands colony started to increase as a result of our enhancement of the breeding habitat.

At Mud Islands the 800 breeding pairs was less than half the average breeding population of the last five years. Of the 697 chicks banded on 21 December thirty-two were found dead there in early February, indicating a significant mortality of chicks also.

At the Nobbies, Phillip Island, the colony was only 120 pairs (compared to 800 pairs the year previous summer). All 100 chicks banded (on 18 December) are thought to have perished before fledging.

In contrast the colony at Nooramunga National Park (Corner Inlet) - on the west end of Clonmel Island again - increased to 550 pairs (from the usual 400 to 450). Some early failed clutches seem to have been replaced and 460 chicks were banded and thought to have fledged successfully.

The cause of the Crested Tern breeding problems at Mud Islands and the Nobbies is thought to be a lack of food. There was a mammoth die-off of pilchards in the 1995/96 summer and this is considered to be the reason for a major lack of small fish in 1997/98. The Little Penguins at the Phillip Island breeding colonies had the lowest breeding success in thirty years of monitoring (per P. Dann & R. Jessop). It was apparent when handling the tern chicks for banding that they were not blessed with the normal full stomachs. Presumably the food situation was more satisfactory to the east of Wilson's Promontory. The increased population at Clonmel appears to have at least in part been due to the transfer of birds from further west, two out of eight banded adults caught in the colony on 6 January having been banded between six and nine years previously at Mud Islands.

The age cohort colour used this year on (697) chicks at Mud Islands was yellow (colour bonded onto the metal band). Previous colours used were blue (1996/97) and orange (1995/96).

Location	Nests	Chicks banded
Mud Islands	800	697
The Nobbies	120	100
Corner Inlet	550	460
Total	**1470**	**1257**

Caspian Terns

The number of pairs of Caspian Terns breeding at Nooramunga National Park - again on the west end of Clonmel Island - was back to the more normal level of 58 in 1997/98 after the 90 pairs recorded the previous year. Although the birds continue to leave themselves prone to flooding by nesting on almost flat sand, instead of low emergent dunes, they did have a rather better breeding success than in several recent years. At least 42 chicks are considered to have fledged (22 being banded).

The Mud Islands colony remained at a low level of 12 pairs and only three chicks are known to have fledged (one banded). A pair again bred on Rams Island (off French Island) and two chicks were banded on the early date of 19 November.

Although Caspian Terns seem to have low average breeding success this must be offset by good longevity as populations on the whole have been stable in Victoria over the last 20 years. A further indication of longevity is the still very small proportion of breeding adults which carry bands, in spite of systematic chick banding over the years.

Most Victorian birds seem to move up to the south-east coast of Queensland for the winter. The origin of birds which spend the winter in Victoria is not known. None of the 13 Caspian Terns cannon netted (with Pied Oystercatchers) at Rhyll, Phillip Island, on 13 June 1998 was previously banded.

Fairy Terns

After a brief success the previous summer the Fairy Terns at Nooramunga National Park returned to their normal dismal breeding failure in 1997/98. They looked in early December as if they were going to nest at a new location, on the east end of Clonmel Island, and later (in early January) as if they would nest again on the west end of Clonmel. But the only colony of eggs actually found was in mid January on the east end of Dream Island (traditionally one of the most favoured sites). The 34 nests were mostly destroyed by severe storms on 25-26 January. Only one chick survived (banded). Although re-nesting looked likely at the same site in early February no eggs were actually laid.

Murray Portbury checked out the Fairy Tern colony which has bred at Rams Island, just off French Island. About 20 pairs laid eggs in late November/early December. Eggshell remains in early February suggested at least some had hatched successfully, but no estimate of breeding success is available.

Little Terns

This species does not normally feature in the "breeding" section. But in early February a nesting pair, with two eggs, was reported at Sand Island, Queenscliff. Mike Carter checked it out on 6 February and found two newly hatched young, confirming at the same time that the adults were indeed Little Terns.

Apart from one to two breeding pairs of Little Terns in Nooramunga NP about ten years ago this is the only breeding record in the last 20 years west of the Gippsland Lakes colonies, near Lakes Entrance, (although there are occasional reports of a "few pairs" breeding western Victoria).

Cannon netting, January 1998, Gippsland Lakes
Clive Minton

This was a great disappointment. Having resolved to concentrated on Little Terns - at the expense of Common Terns - and with reports of 500+ Little Terns roosting on Albifrons Island during the previous week expectations of a record catch of Little Terns were high. Hopes were further boosted by some superb Little Tern decoys, crafted and painted by Marg Reni (from display cabinet samples kindly loaned by NRE).

On the first day (24th) catches of 25 or so were repeatedly turned down because potential catches of 50, or even 100, looked imminent. In the end, after hours of waiting and twinkling, we eventually had to settle for a consolation catch of 106 Common Terns and **four** Little Terns! "A bird in the hand .....".

The only highlight of the day was provided by a superb White-bellied Sea Eagle which dropped out of the sky to seize one of the papier-mache decoys in the catching area. The surprise - and disappointment - on its face had to be seen to be believed!

Matters went from bad to worse. Torrential rain and westerly gales arrived overnight and made boat transport on the lakes impossible over the next two days. Those members of the team whose tents and bedding were still dry persevered on "mainland" sites and made three small catches - two at a "new" site, Trouser Point on the north side of Spermwhale Head between the Emu Bight camp and Point Wilson. This brought the total of Little Terns caught to eighteen, including six locally bred juveniles.

A summary of the total catches over the 24 to 26 January period is given below:

Species	New	Retrap	Total
Common Tern	117	32	149
Little Tern	18	0	18
Crested Tern	16	2	18
	151	**34**	**185**

The weather can't be as bad in 1999! And we'll remember that four catches of 25 Little Terns may be more easily achieved that one of 100.

Fox Baiting Program
Nooramunga Marine and Coastal Park, South Gippsland, Victoria
March 1997-March 1998

Bruce Atkin

Abstract

A fox baiting program designed to reduce the threat to shore nesting birds was conducted on several islands in Nooramunga Marine and Coastal Park during 1997 and 1998. The Park is listed on the Register of the National Estate and is a RAMSAR wetland. The program, funded under a Coastcare/Coast Action Grant obtained by the Victorian Wader Study Group (VWSG), was successful in achieving a substantial reduction in fox numbers. This report provides a description of the techniques employed, some practical problems encountered, and recommendations for future action including the need for further work in order to capitalise on the gains made.

Aim

To improve the breeding success of shore nesting birds by eradicating or substantially reducing the population of Red Fox (*Vulpes vulpes*) on islands in Nooramunga Marine and Coastal Park (M&CP) including Box Bank, Dream (or Hummock), Little, Mangrove Roots, Saint Margaret, Clonmel, Snake and Little Snake Islands (Map 1.).

Introduction

Nooramunga M&CP is a complex system of sandy islands, channels and intertidal sand and mudflats which are exposed at low tide. The Park is generally bounded by the mainland to the north and Bass Strait to the south. The islands range in size from a few hectares to several thousand. Snake Island (the largest), Clonmel Island, Box Bank and Dream Island form a barrier to the ocean. Between each is an entrance to Bass Strait. The largest entrance, to the west of Snake Island, separates Nooramunga from Wilsons Promontory National Park and Corner Inlet Marine and Coastal Park. There is relatively easy access to some of the islands from the mainland at low tide; likewise distances across water between some islands are short enough to allow access for some mammals.

The area is of international significance for its population of migratory wading birds, which utilise the mudflats for feeding. The sandy islands are important daytime and night time high tide roosts for up to 30,000 waders (Minton, 1997).

The Corner Inlet/Nooramunga area has possibly the largest breeding concentration of Pied Oystercatchers (*Haematopus longirostris*) in Australia. The islands are also known breeding areas (author, pers. obs.) for the species listed in Table 2, which are considered threatened in Victoria (DCNR, 1995):

Table 1: *Species considered threatened in Victoria which use the islands of Nooramunga Marine and Coastal Park for breeding.*

Common Name	Latin binomial	Status in Victoria
Hooded Plover	*Thinornis rubricollis*	vulnerable,
Caspian Tern	*Hydroprogne caspia*	restricted colonial breeding or roosting
Crested Tern	*Sterna bergii*	restricted colonial breeding or roosting
Fairy Tern	*Sterna nereis*	vulnerable

Predation by Red Fox is recognised as a threat to the conservation of many native fauna including shore nesting waders and terns in Australia. It is listed on Schedule Three of the

Flora and Fauna Guarantee Act 1988 as a Potentially Threatening Process to the conservation of wildlife in Victoria (DCNR, 1993). It is also mentioned in Action Statements for a number of threatened species such as the Hooded Plover as a factor contributing to their decline (DCNR, 1992).

The impact of predation by foxes was illustrated during an aerial survey of breeding Pied Oystercatchers in the Nooramunga area in December 1996. The density of breeding pairs was "huge...on Sunday Island and the associated Drum Island...where foxes and cats were exterminated many years ago" (Minton 1997b). In fact it is possible that Sunday Island has the highest density of breeding Pied Oystercatchers in the world (Minton, pers. comm.). The density on Snake and Little Snake Islands, known to be heavily populated with foxes was "lower than might have been expected" (Minton 1997b). Further, during the aerial survey, chicks were observed on Box Bank, Sunday Island and Clonmel Island (free of foxes) but not on Dream or Snake Islands (where foxes were known to be present).

In December 1996, the Victorian Wader Study Group (VWSG) obtained funding through the Coastcare/Coast Action grants scheme to carry out a fox baiting program on selected islands within the Park. The funds were to be used for salaries for the personnel carrying out the work, and for purchase of baits. Co-operation with Parks Victoria, the managers of the Park, was an essential component of the scheme. They provided boat transport, a vehicle for use on Snake Island and assisted in the initial establishment of the program. The VWSG's role was to monitor, on both a short and long term basis, the breeding populations and breeding success of terns and shorebirds on the islands treated and to compare this with current fox free islands. The funding was renewed in December 1997 to allow work to continue in 1998.

Soon after the commencement of the program, a number of ground surveys on Clonmel Island and Box Bank found no evidence of fox presence, leading to the conclusion that these two islands are free of foxes.

Methods

The program commenced on Snake Island in February 1997 and on Dream and Saint Margaret Islands in June. Bait stations baited with 'free feeds' were set up. The stations were initially located at 500m intervals adjacent to tracks, along the ocean beaches, and where accessible, along the 'inland' shore of the islands - terrain which is regularly and preferentially used by foxes (Williamson, pers. comm.)

Each bait station consisted of a marker, initially a wire pigtail with plastic tape attached, and the 'free feed'(an unpoisoned *Foxoff*™ bait - a 25mm cube of fatty synthetic meat), which was buried to a depth of between 60 and 100mm. A wooden skewer was placed through each bait and after burial, projected above the ground about 150mm. The skewer provides rapid detection of undisturbed baits, as well as facilitating safe bait handling. Placement, treatment and handling of baits was consistent with Department of Natural Resources and Environment policies Vermin Pac 10PO11 and 13PO13.
An identifying number was recorded on the plastic tape. The location of each station was recorded on a map and details were noted on record sheets. Weatherproof signs warning that 1080 poison was being used were posted at strategic locations on the islands and at the boat ramps at Port Welshpool, Manns Beach and McLoughlins Beach.

The bait stations were inspected after one week and those which had been taken by foxes were replaced. Any which showed evidence of attack by non-target species were discontinued. At the next visit, 'free feeds' were removed and relaced with *Foxoff* baits containing 3mg of Sodium fluoroacetate (1080). The bait stations were inspected on an ongoing weekly basis, and any baits which were taken by foxes were replaced. Details

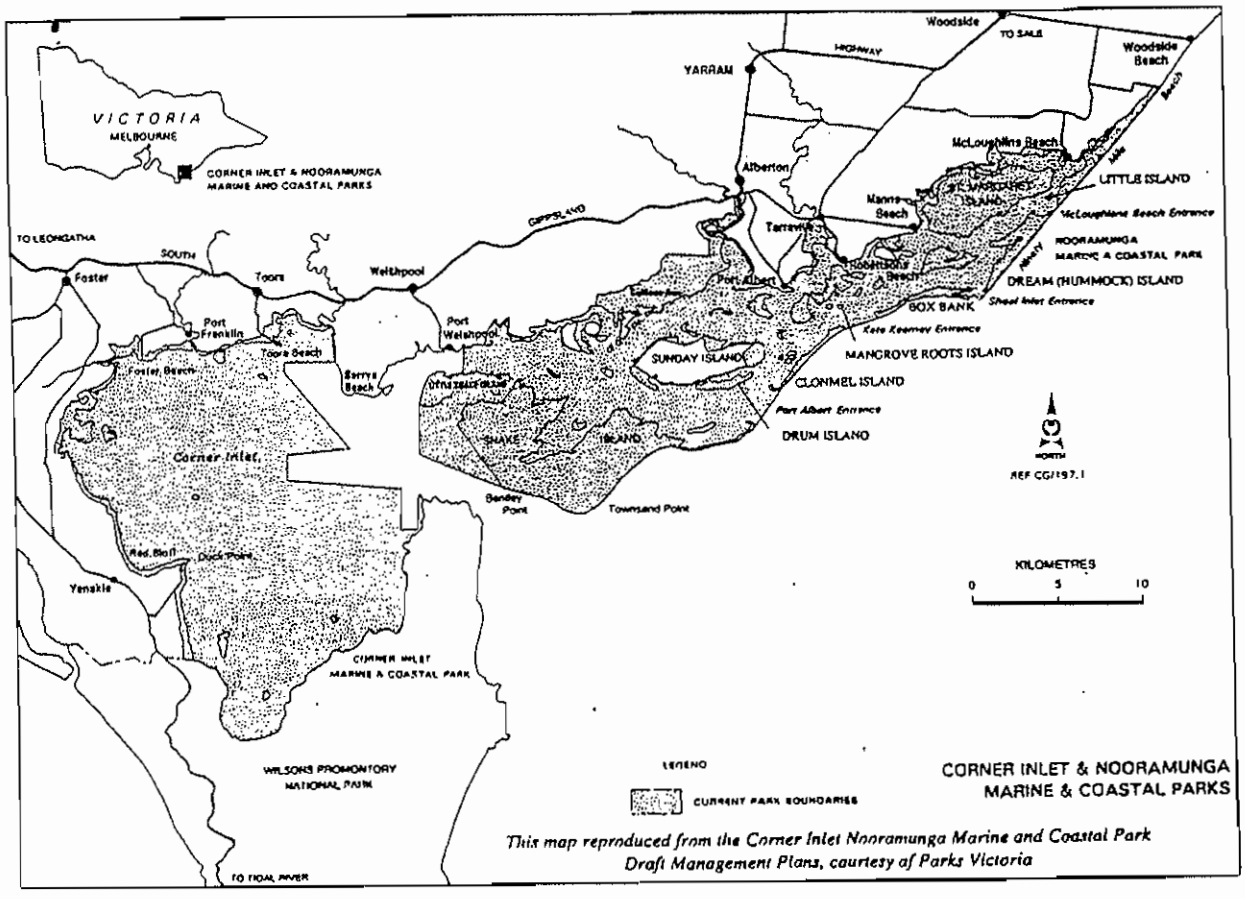
were entered on the record sheets, including date, species which took the bait, any other disturbance, and whether the bait was replaced or the station discontinued.
At subsequent visits, as the initial take declined, improvements were made to the programme including:

- adding tuna oil to the *Foxoff* baits as an attractant;
- replacing the wire pigtails which proved less than ideal (tape pulled off by animals, numbers on tapes faded, wires easily knocked over by cows) with painted wooden stakes 25mm square x 1.2m high, with an identifying number;
- relocating many bait stations to points where obvious animal runways intersected tracks, or where fox prints had been observed, and
- placing baits at 1000m intervals to reduce the incidence of foxes taking more than one bait.

Individual *Foxoff* baits were not left in the ground for longer than three weeks; if there had been any rainfall between visits, they were replaced at the next inspection (ie weekly). Old baits were disposed of by burying at a depth of not less than 800mm.

In an attempt to address the problem of foxes ignoring *Foxoff* baits, a trial of alternative bait was used on Snake Island. Liver cut into 25mm cubes was injected with 1080 and laid in the same manner as the *Foxoff*.

The program was suspended in March 1998 when bait takes had dropped to a low level, to most effectively utilise the remaining funds. Baiting will recommence in late winter, when it is hoped that foxes' food supply may be more limited thus causing them to be less wary, and will continue in spring approaching the birds' breeding season.



Results

The number of baits taken on Snake, Saint Margaret and Dream Islands is recorded in Table 2, and illustrated in Figures 1, 2, and 3. In general the rate of uptake of fox baits is highest initially, then tapers off very slowly over time. This implies an initial high kill rate which declines as the fox population declines.

Table 2. *Number of Foxoff baits taken.*

Insp'n Number	No. of baits taken: Snake Island	No. of baits taken: Saint Margaret Is.	No. of baits taken: Dream Island
1	78	5	1
2	45	4	4
3	49	3	8
4	34	2	6
5	23	7	7
6	12	7	10
7	13	2	7
8	30	3	10
9	12	5	5
10	19	0	6
11	25	0	1
12	25	6	2
13	17	2	9
14	17	6	3
15	26	7	3
16	18	3	
17	28	1	
18	17	0	
19	10	0	
20	11	2	
21	12		
22	9		
23	6		
24	8		
25	5		
26	4		
27	7		
TOTAL	560	65	82

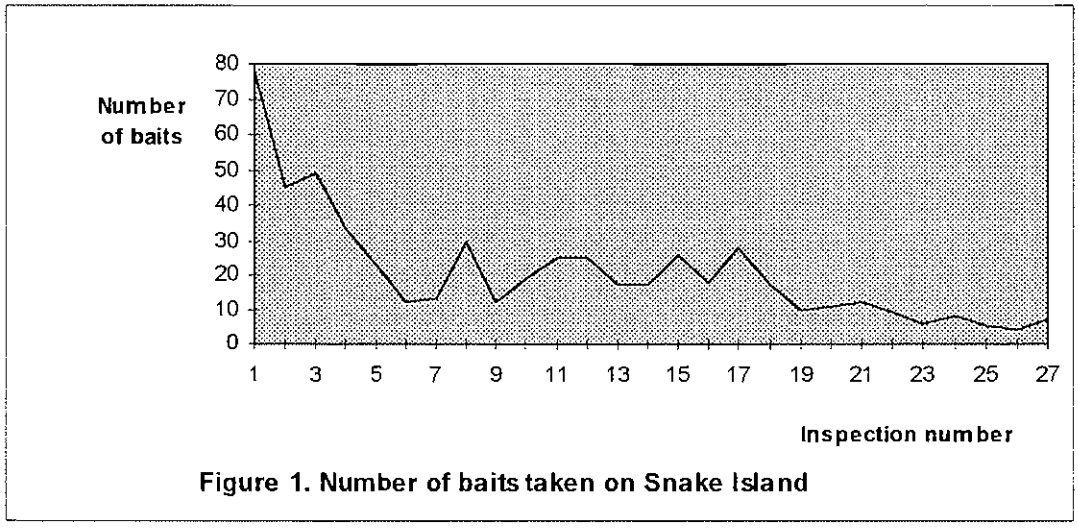


Figure 1. Number of baits taken on Snake Island

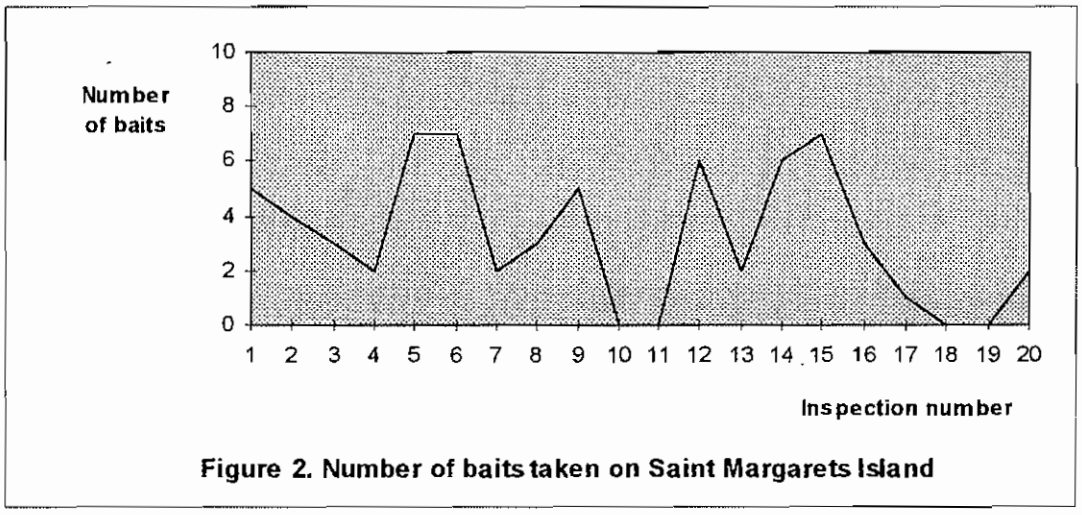


Figure 2. Number of baits taken on Saint Margarets Island

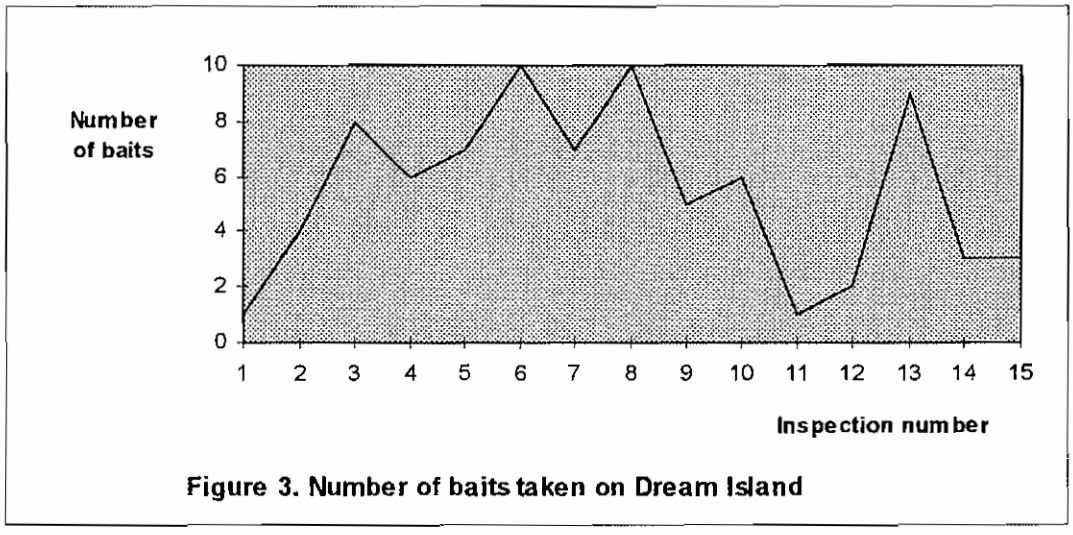


Figure 3. Number of baits taken on Dream Island

Seven bait stations were established on Little Snake Island; these were not inspected on a systematic basis and records are not included here.

Baits were also initially placed on Little Island (between Saint Margaret and Dream Islands) and on Mangrove Roots Island near Robertsons Beach, however none were taken.

Table 2 does not provide any indication of the degree of 'clustering' of bait takes. This phenomenon, frequently observed, is where several adjoining baits have been taken. They may however have been taken by just one fox - either consumed or removed and cached. Furthermore, a low number of baits taken can disguise the fact that there may still be a number of 'bait-shy' foxes present; a zero take does not necessarily imply that foxes are no longer present - fox prints were frequently seen close to bait stations where baits were not taken.

Discussion

Decisions on which islands were to be treated were based on the importance of the island (determined by the VWSG) for breeding birds, and the presence of foxes. The sizes of the fox populations were not determined prior to commencement of this baiting program. Presence/absence information was obtained by informal ground surveys conducted opportunistically by Marine Parks staff and VWSG members.

Indications of the presence of foxes include sightings, footprints and scats. The dense nature of the vegetation on some of the islands and the inconvenience of access, (boat

transport required, difficulty in negotiating mudflats on foot) means that the opportunity for sightings is limited. To accurately measure the success of the baiting program in terms of a reduction of total fox numbers, would require a systematic survey, both before and after baiting. Count of carcases was not possible due to the fact that several hours elapses between consumption of the bait, and death (Staples, undated); during this time the animals presumably seek cover in their dens as very few are found, even in farmland (author, pers. obs.).

It is also impossible to derive an accurate figure of the number of foxes killed from the number of baits taken. While the manufacturers claim that "a single *Foxoff* bait is lethal to the largest fox", it takes up to four hours for signs of poisoning to appear (Staples, undated). It is commonly accepted that foxes are able to take more baits during this period. This is a sound reason for not placing baits too close together. Furthermore there was evidence of foxes caching baits. During the last weeks of the baiting program on Snake Island, a significant 'cluster' of baits was repeatedly taken along one four kilometre section of the ocean beach. Caching is the only explanation for this phenomenon (McPhee, pers. comm.). It is impossible to estimate how many baits were cached. A rough rule is that for every three baits taken one fox is killed (McPhee, pers. comm.). Thus, cautious estimates for Snake, Saint Margaret and Dream Islands, are that at least 185, 20 and 25 foxes respectively have been destroyed, a total of over 230.

In the long term, success of the program will be indicated by monitoring of the breeding success of Pied Oystercatchers and the threatened species listed in Table 1, on the islands where baiting has taken place. Two pairs of Hooded Plovers were regularly observed during their breeding season in separate areas of the Snake Island foreshore. Their obvious presence on the beach during the weekly inspections highlighted their vulnerability to fox predation. Monitoring of Hooded Plover breeding success on Snake Island in subsequent years could easily be incorporated in the baiting program.

Concern developed during the course of the program, over the fact that footprints of foxes were frequently observed very close to bait stations while the baits remained untaken. In an effort to make the baits more attractive, tuna oil was added to them during inspection number 7 on Snake Island. Following the commencement of this practice, there was a small increase in the rate of baits taken - whether this was a direct result of the addition of the oil is not conclusive but further investigation into the practice is warranted. Addition of tuna oil to the baits became standard practice for the remainder of the program. During August 1997 most of the stations on Snake Island were baited with liver injected with 1080 in the hope that it would prove more attractive than *Foxoff*. However there was no detectable increase in the rate of uptake.

Although baits were placed on Mangrove Roots Island, where fox footprints had been regularly observed (Minton, pers. comm.), none were taken. The size of this island (less than 2 ha) and lack of fresh water suggest that foxes would be unlikely to be resident but are regular visitors. It was included in the program because it has suitable nesting sites for Pied Oystercatchers, and because it is a wader roost site. Little Island, also very small, is a logical 'stepping stone' from Saint Margaret to Dream Island and was targeted for this reason; again no baits were taken. Either no foxes visited these islands during the period of baiting, or the baits were ignored.

The program was temporarily suspended in March 1998, to resume in winter preceding the Pied Oystercatchers' breeding season. In March there was still some evidence of fox presence on Snake, Saint Margaret and Dream Islands, despite the fact that few baits were being taken. McPhee (pers. comm.) claims that in any population of foxes, there are some (possibly up to 10%) that will not take baits. In view of this it would be logical to initiate some alternative forms of control. One possibility is shooting; foxes can be attracted

by use of a fox whistle and shot at night with the assistance of a spotlight. While the density of the vegetation in the interior of Snake, Saint Margaret and Dream Islands precludes shooting, there is scope for carrying it out on the beaches. Beaches appear to be attractive to foxes - footprints frequently show evidence of foxes 'patrolling' the high tide mark in search of beach washed food. Another alternative is carbon monoxide fumigation of dens. The most difficult aspect of this technique is locating dens in the dense vegetation found on Dream, Saint Margaret and Snake Islands. This technique should be attempted on Dream Island, the smallest of these.

The possibility of recolonisation of the islands is worth noting. If a consistent effort resulted in elimination of foxes from these islands, the ability of foxes to swim could mean that eventually new populations may establish. This highlights the need for regular surveys for evidence of fox distribution and for Parks Victoria and managers of surrounding land, both public and private, to adopt a co-operative approach to fox control, in order to limit the number seeking new territories.

Conclusion

This fox baiting program has resulted in a substantial reduction of numbers of foxes present on most of the islands treated. While it is probably unrealistic to expect to permanently eliminate foxes from all islands, the fox free nature of Clonmel Island, Box Bank and the privately owned Sunday Island is encouraging. It is vital that fox baiting continue and that alternative methods be introduced. Dream Island should be regarded as a high priority for 1998, as elimination of foxes there would provide a substantial increase in safe breeding areas available to shore-nesting birds. Parks staff and the VWSG should continue to monitor breeding success to determine the extent to which the original aim of this program has been achieved. Funding must be made available either through Coastcare/Coast Action, the Department of Natural Resources and Environment or Parks Victoria to continue fox control beyond 1998, or the gains made to date will be wasted.

Recommendations

- that bi-annual monitoring of fox distribution be conducted indefinitely on Box Bank, Dream, Little, Mangrove Roots, Saint Margaret, Clonmel, Snake and Little Snake Islands;
- that the baiting program continue to be carried out for at least part of each year on any of these islands where evidence of fox presence is observed;
- that Dream Island be treated as a priority with a view to achieving eradication of foxes in 1998 and that complementary forms of control be attempted;
- that landowners and public land managers on the mainland be actively encouraged to undertake fox control, and
- that surveys of the breeding success of Hooded Plovers, Pied Oystercatchers and Caspian, Crested and Fairy Terns continue and that the results be compared with data relating to fox presence/absence.

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Personal Communications

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Williamson, Ross. Ranger-in-charge, Corner Inlet and Nooramunga Marine and Coastal Parks.

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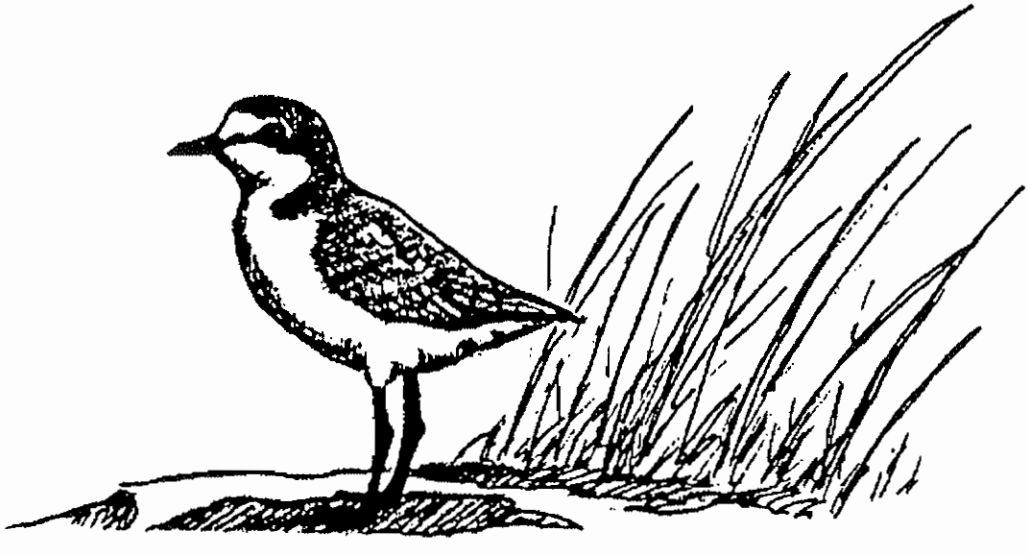


Co-operative wader studies between Australia and Korea

Rosalind Jessop and Peter Collins

Introduction

During May 1998 we visited Korea to undertake the training component of a project entitled "Cooperation for migratory shorebird conservation in the Republic of Korea" which was fully funded by Environment Australia through Wetlands International - Oceania.

The Republic of Korea (South Korea) became a contracting party to the Ramsar Convention in 1997. It occupies a central position in the East-Asia Australasian flyway. The tidal mudflats along the west and south coasts occupy 3% of the Korean land area (2800 km^2) and are some of the most extensive in the world. Approximately 15% of South Korea's western tidal flats have already been reclaimed and another 30% is currently under development. By 2001 480,000 ha of inter-tidal land involving 155 estuaries and bays will have been reclaimed. All key sites in South Korea are threatened by reclamation.

Three key areas of training were to be undertaken during our visit:

- Shorebird Survey: site assessment and shorebird counts
- Cannon-netting: Preparation, setting nets, firing, after firing, extraction, keeping cages, banding and processing, equipment and public relations
- Colour flagging: development of the colour flagging protocol, production of flags, flag attachment, field observations and reporting.

Training activities were to be implemented in cooperation with Dr Kim Jin-Han of the Wildlife Division, Forestry Research Institute, Forestry Administration, Seoul, Korea.

During our visit to Korea we participated in shorebird counting, leg-flag workshops and mist-netting. A demonstration cannon-net firing was also undertaken.

Shorebird Survey

Staff of the Forestry Research Institute and students at the Kung Hee University have been conducting counts of important estuaries on the west coast of Korea since 1993. Counts are mainly undertaken by Jin-Han Kim, Jeong-Yeon Yi, Hwa-Chung Kim, Sewg-Keu Park and Jin-Young Park.

We participated in counts of estuaries on Kum, Mankyung, and Tonjin Rivers, Asan Bay, Namyang Bay and Kanghwa Island. Ms Hwa-Chung Kim also counted Simwon-myon and Jin-Young Park islands to the north of Kanghwa Island (few waders).
Details will be published elsewhere, however, to give an idea of how important these areas are the following have been extracted from various sources to give some idea of the numbers that occur in the main areas that we visited.

Kangwha Island; Bar-tailed Godwit (1880), Eastern Curlew (1047), and Dunlin (10800).
Kum Estuary; Spotted Redshank (109), Common Greenshank (200), Red-necked Stint (18850), Black-tailed Godwit (2049) and Dunlin (5665)
Mankyung Delta; Bar-tailed Godwit (5522), Eastern Curlew (460), Nordmanns Greenshank (52), Terek Sandpiper (2284), Great Knot (29797), Dunlin (15891), Grey Plover (2181) and Lesser Sandplover (1580).
Asan Bay; Black-tailed Godwit (18,282), Whimbrel (692(, Eastern Curlew (392), Great Knot (34000), Dunlin (14000) and Grey Plover (952).

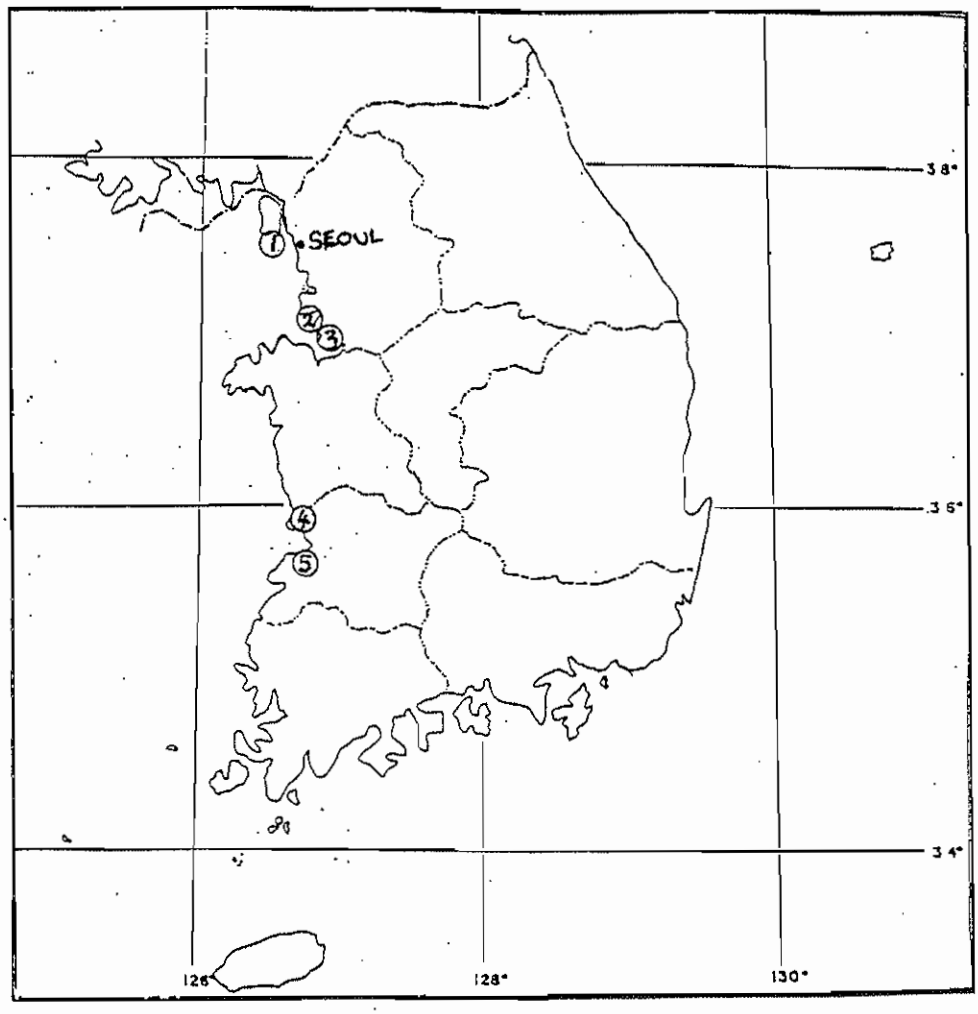
Namyang Bay

A typical counting exercise took part at Namyang Bay om 17/05/98 where Jeong-Yeon Yi, Hwa-Chung Kim, P. Collins, R. Jessop braved the traffic and the elements.

After finishing a count of Asan Bay it was planned to count Namyang Bay on the afternoon tide. Many of the rice paddies between Asan Bay and Namyang Bay were frequented by Black-tailed Godwit (300). Wood Sandpiper (50) and Sharp-tailed Sandpiper. Birds were seen at least 3.5 km from the coast and were scattered over a wide area making it difficult to get an accurate count of these species.

After waiting until 17.00 for the count to begin we eventually had to abandon it due to heavy drizzle accompanied by fog. Reclamation work was still being carried out at Namyang bay. An attempt was made on the 19/05 to redo this count but it was again affected by heavy fog. We seemed to have hit a run of bad weather during our stay but although the weather was damp it did not affect the enthusiasm of the people.

Map of the Republic of Korea: 1= Kangwha Island, 2= Namyang Bay, 3 = Asan Bay, 4 = Kum Estuary, 5 = Mankyung/Tonjin Estuary



Due to the relatively small number of experienced counters it was not possible to undertake simultaneous counts of all areas of the Tonjin/Mankyung estuary at one time. Counts are only possible on intermediate high tides when birds remained on the estuaries. Due to reclamation at higher high tides sea water reaches the sea walls and birds move into the rice paddies where they are difficult to locate. All bays and river mouths on the west coast of Korea have undergone or will undergo extensive reclamation in the next 20 years. Tides move in and out relatively quickly due to the flat topography and even at high tides birds were absent from the flats for only an hour. Smaller species such as Red-necked Stint, Spoon-billed Sandpiper and some Lesser Sand Plover continued to feed throughout the high tide cycle if mud was exposed.

Mist-netting

We participated in four nights mistnetting at an active saltworks near Kunsan. Two nights mist-netting were lost to heavy rain. Over 40,000 birds used the saltworks to roost at high tide. The timing of field work was not ideal as it was full moon, however the birds only move from the estuary on the highest tides so this could not be avoided.

Date: 13 to 15 May 1998.
Site: Ok-gu Saltpan, Kunsan City, North Cholla Province
35^0 52' N 126^0 43' E
Participants:

- Kim, J.H., Yi, J.Y. *(Wildlife Division, Forestry Research Institute)*
- Im, S.C. and 2 persons *(Wildlife Survey Staff, Forest Environment Institute, North Cholla Province)*
- Shin, K.H. and 2 persons *(Wildlife Survey Staff, Forest Environment Institute, South Cholla Province)*
- Collins, P. and Jessop, R. *(Australasian Wader Studies Group)*

	1997 Autumn Total caught	1998 May Number of birds flagged	1998 May Total caught
Black-tailed Godwit	3	0	0
Bar-tailed Godwit	19	4	4
Whimbrel	19	2	2
Eastern Curlew	1	0	0
Common Redshank	1	0	0
Common Greenshank	1	0	0
Wood Sandpiper	1	0	0
Terek Sandpiper	214	25	25
Common Sandpiper	1	0	0
Grey-tailed Tattler	6	0	0
Ruddy Turnstone	15	2	2
Great Knot	25	5	5
Red Knot	5	1	1
Red-necked Stint	72	24	31
Long-toed Stint	4	0	0
Sharp-tailed Sandpiper	3	12	12
Dunlin	7	11	12
Curlew Sandpiper	1	5	5
Spoon-billed Sandpiper	1	0	0
Broad-billed Sandpiper	9	5	5
Grey Plover	7	1	7
Little Ringed Plover		0	0
Kentish Plover	22	3	3
Lesser Sand Plover	41	26	26
Greater Sand Plover (?)	3	0	0
Total	481	122	130

Cannon-netting

The cannon-net owned by the Wildlife Division was purchased from Wildlife Materials Inc, USA. It is a modified Miller Net, the cannons were about 20 inches long of the nonnac

style. The net was approximately 16m x 13m of heavy mesh and was probably designed for waterfowl.

On 10th May PC inspected a potential cannon-net site found by Mr Kim. The area although suitable for cannon-netting had a difficult substrate being rather soft. Catches of 50 to 100 birds can be made in the future.

On the last day of our field trip to Kunsan we conducted a test firing of the cannon-net for the local participants.

Colour flagging

Before departing for Korea equipment for leg-flag making was purchased in Australia. Members of the Victorian Wader Study Group supplied orange Darvic in the form of blanks.

A workshop was held to instruct participants in the manufacture of leg flags. Enough leg flags were made to flag all birds caught after the 10th of June.

After emptying a complete hotel room leg flags can now be made. Mr Yi, Ms Kim, Mr Kim, R. Jessop, a mystery guest it's probably his room and Mr. Park.

(This is especially for Jeff Campbell and Chris Hassell, eat your hearts out boys.)

Yellow leg, orange and white leg flags were relatively easy to identify. However green Queensland leg flags were much harder to identify in the field (see table below for colour bands located).

Date	Location birds were observed	Species	Finder	Flag colour and banding origin
12/05/98	Mankyung Estuary 35^0 53'N 126^0 40'E	Bar-tailed Godwit	Jeong-Yeon Yi	Yellow (NW Australia)
13/05/98	Mankyung Estuary 35^0 53'N 126^0 40'E	Great Knot (x2) + one band only	P. Collins & R. Jessop	Green (Queensland)
16/05/98	Asan Bay 36^0 55'N 126^0 48'E	Bar-tailed Godwit	P. Collins	Green (Queensland)
16/05/98	Asan Bay 36^0 55'N 126^0 48'E	Terek Sandpiper	P. Collins	Yellow (NW Australia)
19/05/98	Kanghwa Island 37^0 34'N 126^0 23'E	Bar-tailed Godwit	P. Collins & R. Jessop.	Yellow (NW Australia)
19/05/98	Kanghwa Island 37^0 34'N 126^0 23'E	Bar-tailed Godwit (different bird)	Jin-Young Park,	Yellow (NW Australia)
19/05/98	Kanghwa Island 37^0 34'N 126^0 23'E	Bar-tailed Godwit	P.Collins	Green (Queensland)

The use of two leg flags one on the tibia and one on the tarsus of the same leg for each bird was easy to see on small species such as Red-necked Stint and Terek Sandpiper. However, on larger species such as Whimbrel, the lower flag was difficult to see as the bird spent much to its time in the water. It is therefore recommended that species such as Bar-tailed Godwit and larger should have both flags on the same tibia.

Highlights

The main sources of enjoyment was the people who were very helpful and welcoming. Eating with chopsticks always difficult for Pete caused great but polite hilarity as did the search for the fork which became a sort of tradition. In small cafes he would often end up with a fork displaying well known Disney characters simply because the children up to 5 years old also had difficulties with thin bits of metal.

Standing at dawn when 80,000 birds flew at no more than 2 metres above our heads.

Seeing two Black-faced Spoonbills and Pete being supercool though his heart rate was close to Formula one standards.

Seeing Spoon-bill Sandpiper at close quarters feeding with Red-necked Stints, just in case one turns up in Broome we can know identify them by feeding action.

Seeing the sun every three days.

Bird watching with the only Korean twitcher and getting heaps of ticks including Tricolour Flycatcher.

Although it was only a short trip we would both welcome the chance to return next year, and if possible in World Cup year as well.

You Can Make a Difference

Malcolm Brown

Do you ever hear a report in the media about an animal that is endangered and you think to yourself, "how could I help....could I really make a difference"? Well you can. It is possible to make a difference in the battle to save native animals that are threatened or declining. The following is a story about Hooded Plovers on the Mornington Peninsula. A native animal that is listed on the Flora and Fauna Guarantee Act.

When I first moved to Rye I became involved in the Friends of the Hooded Plover. The Friends Group counts Hooded Plover, their nests, eggs, chicks, people, dogs and other birds on the back beaches of the peninsula every two weeks in the summer and once a month in the non breeding season. Occasionally the Friends would get together for a "Plover Watch", an intensive exercise carried out when a Hooded Plover nest was located in an area where protection from the public could be initiated. The friends would stand watch over the newly hatched chicks and advise people to keep away from the area where the chicks were located. These events were a good means to educate the public directly and did provide some protection, however success at fledging chicks was limited.

As the years passed the number of Hooded Plover chicks raised each year on the entire Mornington Peninsula remained in the order of four to none. The Friends of the Hooded Plover were watching the population disappear in front of their eyes.

But they persisted. They continued to count the declining population, monitor the survival of chicks, count dogs on the beaches and confront those people who let their dogs run amuck. All this even though motivation within the friends was waning. I believe the most important aspect of the monitoring program was the credibility of the data collected by the group. The data was considered to be a true reflection of what was happening to the Hooded Plover on the Peninsula.

Another positive aspect of the monitoring program was the good relationship between the friends and the parks staff. Even though the friends were watching the population decline, the working relationship between the staff and the friends stayed positive and professional.

Just when all seemed lost, changes in park management and continued poor breeding figures resulted in the staff increasing the level of enforcement of the dog regulations, fox baiting in sections of the park and an increase in signage on beaches where Hooded Plovers were known to nest. Rangers even threatened to cancel a national iron man event if regulations were not observed.

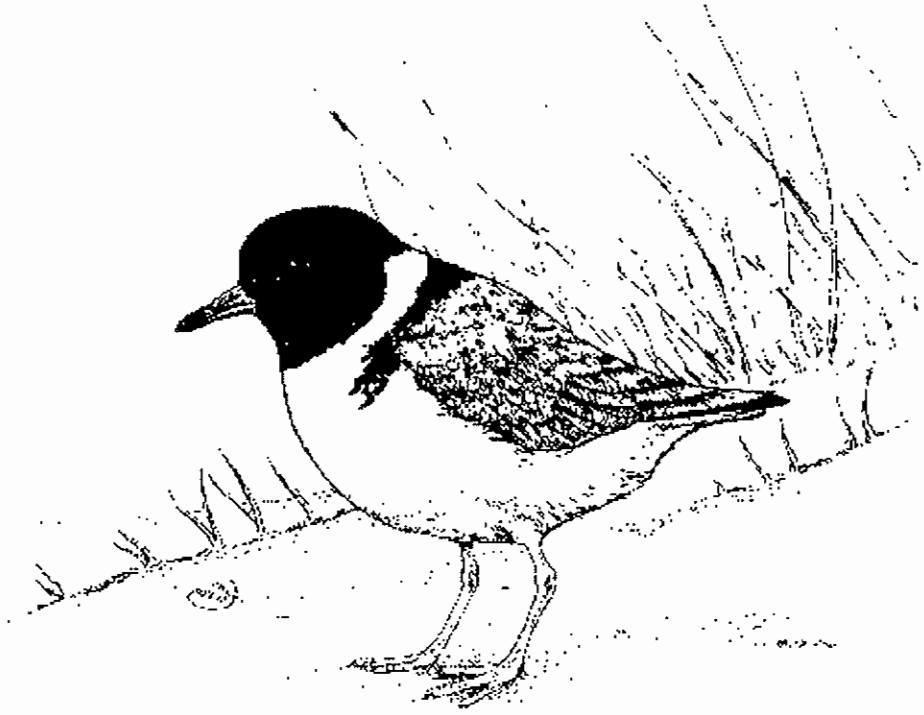
The results were spectacular to say the least. Thirteen Hooded Plover chicks fledged in the season of 1996/97, (Dowling 1998). Naturally many thought this was a blimp and would be unlikely to happen again, however it did. In the last breeding season, 1997/98 eleven chicks were fledged from the back beaches of the Mornington Peninsula, (Dowling 1998). In two years twenty four chicks joined the ranks of adults on the beaches. That is half the population of all the Hooded Plovers on the Mornington Peninsula.

Can the same happen again next breeding season? No one can say but the most important aspect of this story I believe is two important principles.

1. Persist in collecting accurate and relevant information, even when things are looking grim.

2. Develop and carry out a professional and rational working relationship with those people who manage the natural resource in question.

Hopefully this positive result can be transferred to other beaches in other regions of South Eastern Australia. Not only for Hooded Plovers but for other birds or animals that are suffering from disturbance and predation from exotic species, including humans. Most importantly one should realise that by persisting with organised monitoring programs and working with government agencies "**you can make a difference**".

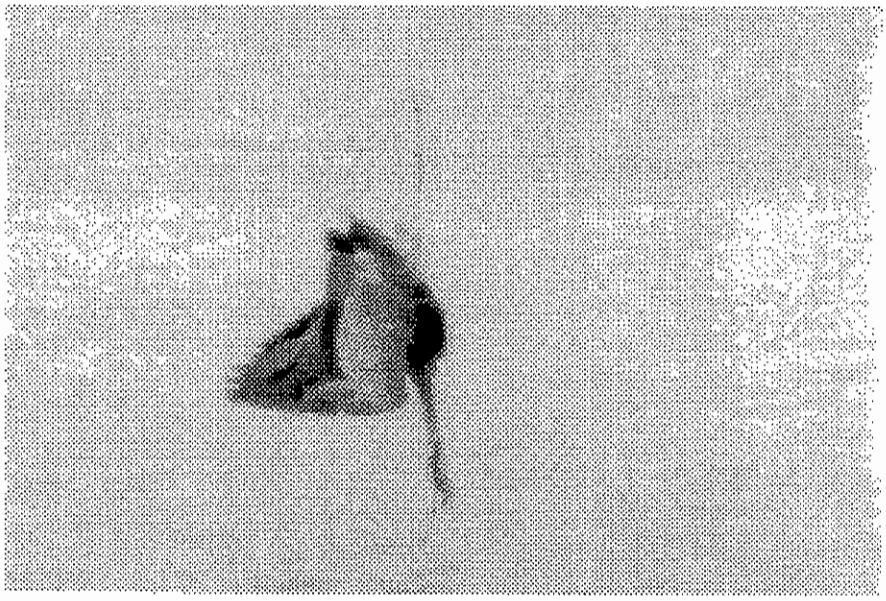


More on fishing line - and another barbed hazard.

Jeff Campbell

Peter Collins' report on fishing line entanglement in the 1997 VWSG Bulletin brings to mind various instances of a similar nature which I have witnessed over the years. These involved not just shorebirds, but also other types of birds such as the cormorants, and even such an unlikely species as an Apostlebird found dead in a tree after being caught up in fishing line.

The most amazing incident of fishing line entanglement that I have seen, did however involve a shorebird and a gull, in one episode! Whilst walking towards the spit at Point Smythe near Inverloch in March 1994 I noticed an Eastern Curlew calling in an agitated manner, with one leg stretched out behind, apparently unable to fly or run away. On closer inspection the bird had a hook attached to a length of fishing line embedded in its leg. The real surprise was that the other end of the line was down the gullet of a dead Silver Gull which was partly buried under sand! The fact that the gull had swallowed the hook is not really surprising, but how the extra hook came to be embedded in the Eastern Curlew's leg is a mystery..



In addition to fishing hooks another spiked hazard facing birds is barbed wire used for fencing.

Although this is probably not often a danger for birds, I have seen a dead White-faced Heron caught on a barb of one of these fences at Lake Nearie Nature Reserve, some 80 km north of Wentworth (NSW) in 1984 (see photo). Presumably this bird had landed on the fence, become entangled in the barb, and was then unable to take off, thus starving to death.

Visit to South Australia - 13 to 20 January 1998

Ken Gosbell

An intrepid group set off on Tuesday 13 January to make another sojourn into South Australia revisiting the same areas in the South East to those of the last few years. On meeting at Brown Bay, Port MacDonnell Clive had already spotted our first target of 220 Sanderling. However in what was to become a familiar site, this flock took off and flew some 7km to the East. Our next few days utilised the idyllic location of the 'fisherman's cottage' as a base for catching in the area.

At first light on Wednesday the Sanderling were observed close to the cottage in an ideal position but a raptor upset our plans for catching them on this occasion. We relocated to Stoney Point where there was a good mix of waders on the rocks at low tide. Our catch here yielded 38 birds comprising 15 Red-necked Stint, 8 Curlew Sandpiper, 8 Ruddy Turnstone and 6 Sharp-tailed sandpipers. Thursday saw us again preparing to outsmart the Sanderling at first light only to have them demonstrate the sixth sense these birds have and see them disappearing into the rising sun! Undaunted we spent the day near Danger Point where we successfully set and made two catches, the first being 57 birds and the second 151 birds. In total these were 94 Turnstone, 38 Curlew Sandpiper, 34 Red-necked Stint, 31 Sanderling, 9 Sharp-tailed Sandpiper and 2 Pied Oystercatcher.

One of the privations suffered on this trip is having to cope with the local hospitality, in particular Paul the owner of the Cottage who is a cray fisherman extraordinaire and is insistent on having us sample some of his produce - crayfish you wouldn't see the like of around Melbourne (not most of us anyhow). A wonderful entree enjoyed by all - Clive getting double value by scavenging the discarded morsels of legs!

We drove on through Millicent to Rendelsham on Thursday evening where it was great to get to the Stewart farm and catch up with Sandy and Iain and their wonderful children Sallie, Anna and James - and a hot shower and to camp on some green grass. Clive declared Friday an 'R and R' day - at least for the morning! Iain offered to lead us into the Canunda National Park through the sand dunes so we set off in 7 4WD's looking like something from the 'Leyland Brothers'. The trip through the hinterland of the park, the beauty of the dunes and the wild and expansive Canunda beach was an experience that will be long remembered by us all - particularly some of the drivers! In the vicinity of Pedders Rock we set and caught 18 Sanderling, 13 of which were retraps from our last visit there. Later in the day we drove out to Beachport where we set nets on heavy seaweed adjacent to the town beach and caught 69 Ruddy Turnstone.

On Saturday we drove to Carpenter Rocks where in unpleasantly hot weather we caught 85 Turnstone. A leisurely start on Sunday took us north past Beachport to Lake George from which we were escorted in 4WD's over the dunes by a member of the 'buggy club' to an area known as 10 Mile Creek. Very few waders but Iain was able to band his first Hooded Plover as part of his recently approved project into this species. That evening was 'party night' where Iain and Sandy spoilt us once more with a huge spread of crayfish caught by Iain, ably assisted by Sandy, at nearby Southend. It is always a great opportunity to meet many of the local faces who are so invaluable in reccies and being part of the team. I'm sure Nicholas, Chris and Harry will remember their presentation 'sanderling' for a long time.

We still had that unresolved challenge of catching those 220 Sanderling so Monday saw us taking the long journey back to Port MacDonnell. The sight of 400 birds at Green Point

encouraged us to succeed. Despite several net shifts we finally got our catch of 183 Sanderling which included 93 retraps and 45 juveniles - a wonderful finale to the trip.

The total number of birds caught and processed for the trip was 618 which was 80 more than our previous best in early 1997 - including our first Hoodie. The group varied over the 7 days but included Clive and Pat, Nicholas and Christopher, Rosemary and Harry, Pam Walker (Adelaide), Roger R.,Thierry, Pete, Liz and Stuart, Doris, Graeme, Margaret and Michael R., Meg and Donald, Danny, Jim and myself. The assistance of the locals was invaluable and it was good to have Ren and Norma, Maureen, Adrian, Mary, Victoria and Meredith and others join us over the few days and of course it all couldn't happen without the wonderful hospitality of the Stewart family.

Species	New	Retraps	total
Turnstone	217	23	240
Sanderling	121	111	232
Red-necked Stint	65	1	66
Curlew Sandpiper	47	3	50
Sharp-tailed Sandpiper	27	-	27
Pied Oystercatcher	2	-	2
Hooded Plover	1	-	1
Totals	480	138	618

Journey

The birds made formation over the water.
They were off to Siberia, a cold and desolate no-where.
A stop in the Gulf is a must, three thousand kilometres.
Slowly the Stint moves to the no-where land, a 25,000 kilometres round-trip.
For a bird that will fit in the palm of your hand,
We decided it wasn't a bad effort.

So here I am in a hide hoping the birds arrive safely. I hope the birds don't get lost, I hope.

These birds need hope, luck. In 25,000 kilometres, a lot could go wrong.

Boom! The net is fired, and up I get out of the hide.
The rest of the team follows; We run.
The huge drab brown net is pulled out of the water and extraction begins.

1200 tiny 29 gram parcels is the final count.
Weight, beak length and wingspan are recorded;
A tiny band is placed gently around each leg,
Before the bird is thrown into the unknown,
To fly to the no-where land

By Webley Hirt.

Waders at Pakenham Sewerage Treatment Plant 1997-98

Graham Beal

For over 8 years now I have been keeping an eye on the Sewage Treatment Plant at Pakenham, located east of Melbourne's suburbs and approximately 13 km north of one VWSG's regular spots of Yallock Creek on Western Port.

Like most sewage farms it is a haven for bird life. I have recorded 11 species of waterfowl there, of which Chestnut Teal and Pink-eared Duck are regular breeders in small numbers utilising the 6 nest boxes provided, which they have to compete for with the Indian Mynahs! This year, unfortunately, I also found a dead Cape Barren Goose. Whiskered Terns are regular spring passage visitors and on the 14 October 1997 I saw a Caspian Tern there for the first time. A highlight on the 16 October 1991 was a visit by a Glossy Ibis.

Masked Lapwing gather there in large flocks at the end of each summer, up to 75 one year, and Latham's Snipe are annual visitors to any wet spots, with an early return, one year, on the 14th August. Interestingly I didn't see any this year. Black-fronted Dotterel are resident there with 2 or 3 pairs breeding regularly.

The farm consists of two large ponds, one with a large causeway jutting into it, which is where a majority of the birds congregate, and seven smaller ones. In the winter of 97 they created four 'sludge ponds' which looked ideal to attract waders, so with anticipation I waited for spring. They were soon frequented by the local Magpie Larks, Black-fronted Dotterels, Masked Lapwing and Chestnut Teal and on the 14th October I was pleased to find a pair of Australian Shoveller, a pair of Pinked-eared Duck with 3 young, 14 Chestnut Teal, a Richard's Pipit, 2 Whiskered Terns picking insects off the surface of the water, 5 Black-fronted Dotterels and, yes, a dozen Sharp-tailed Sandpipers, their numbers soon rising to the low twenties.

My dreams , however, were short lived as with the dry summer the ponds soon dried up. Up until now most of my observations had been through the perimeter cyclone fence, so I gained permission to enter the plant. I soon found a pair of Black-winged Stilts, which were joined by another two in June, on two of the smaller concrete rimmed ponds, and a small number of "Sharpies", all managing to find food around the edge or in the case of the Stilts in deeper water. On the 24th February I noticed a darker looking " Sharpie " with brighter legs and sharply defined chest and belly, acting aggressively towards the other sandpipers . This was of course a Pectoral Sandpiper. The following day I returned with another VWSG member, Laurie Living, and we found at the same spot a Double-banded Plover and a Common Sandpiper. The Pectoral Sandpiper was last seen on the 3 March, after the "sharpies" had departed, the Double-banded Plover stayed about a week and the Common Sandpiper until about the 21 April.

One mid-day , at the beginning of April, I was sitting quietly in my car when a single Red-necked Stint came towards me, busily feeding, along the edge of a pond. I thought for a moment that I was dreaming as I was still recovering from a couple of days previously when we had spent the evening at Barry's Beach banding about 1300 of them, none of us getting home until the early hours of the morning!

With the occurrence of the Pectoral Sandpiper, I wondered if they had been as prominent this summer as they had been in the last. So as a post script to the article I wrote for last year's Bulletin, I would like to add that, according to Fred Smith, expert wader spotter, that they probably were not, with a group of 12 seen at Werribee as opposed to 20 last year.

Although I may have overlooked these waders in other years, by not having access to the property, I will again wait with anticipation to see what turns up in the future, especially if the sludge ponds stay wet and attractive to the birds through the summer months. The numbers may not be spectacular but I think you will agree that there was quite an interesting variety seen.

Hopefully it will become a useful feeding place for more birds with so many places disappearing or under threat these days

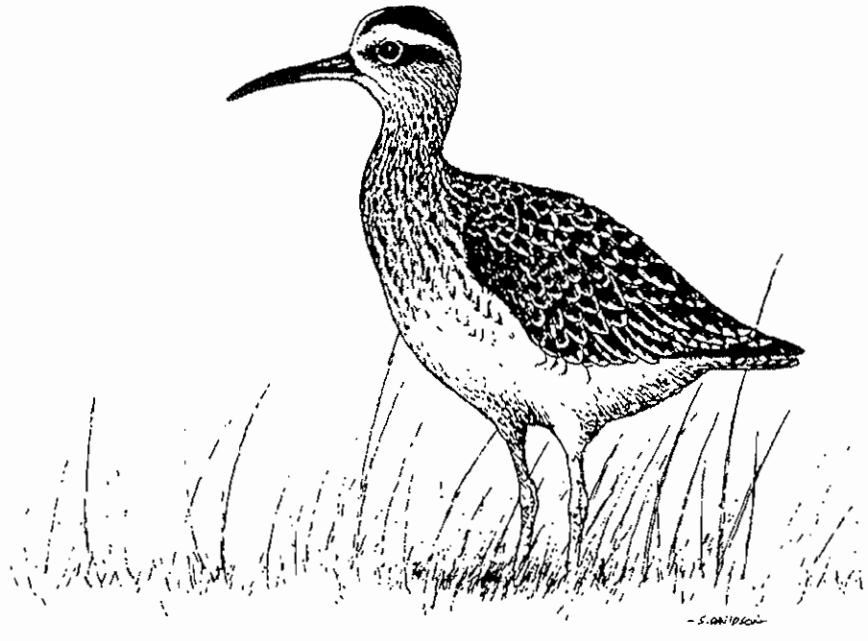
The Ruff

Graham Beal

During the field trip to French Island in Western Port, late last year, the VWSG participants were surprised to find a Ruff *(Philomachus pugnax)* at Buloke Swamp. One was also seen, probably the same bird, a short while later at Chillcott Rocks, on the west side of the island.

Ruffs are so called because of the ruff or collar of feathers the males grow in the spring. They gather on a dancing ground known as a ' Lek' and spend all day displaying to each other. Those with dark ruffs fight with each other for the best position on the lek. The smaller female known as a 'Reeve' usually picks the male with the best dancing spot to mate with. Males with white or light tan ruffs don't usually gain a dancing position and wait for a chance to mate while the other males are busy showing off.

Ruffs breed from northern Eurasia to NE Siberia. They are rare but regular summer visitors to Australia each year.



Five days on Mud Islands

Doris Graham

After participating in several of the VWSG annual tern and pelican banding, and tern breeding site clearing days on Mud Islands I was excited by Clive's plan for a five day trip there in late January 1998.

On 31 January a small team of VWSG personnel supplemented by two Friends Of Mud Islands and three very enthusiastic and energetic year-10 Tasmanian students, assembled at the Queenscliff wharf in mid-morning. There we loaded food, water, camping and personal gear onto two boats organised by Lachie Jackson, Parks Victoria. The weather was calm and sunny and visibility was perfect. We set off in high spirits not quite knowing what the following days held for us. First we called by the two Australasian Gannet colonies on Pope's Eye and Wedge Light where there were still quite a few chicks. By now there were only a few that were snowy white and fluffy, since most were moulting into speckled immature plumage. We had good views of the Cape Gannet on Wedge Light, then headed for Mud Islands - well that was the plan, but after some distance with our destination looming on the horizon, we noticed that the other boat was heading for Melbourne at a fast rate. "Where -- --- -------- ----- are they going ?"asked Clive. "I have no idea" said Lachie, The driver said he knew the route."
So we waved and shouted and headed for our own usual landing site. Eventually the other group saw the error of their direction and turned to join us. Then began an exhausting 30 minutes unloading cannon and mist netting equipment, camping gear, boxes of food and large and small containers of water onto the rubber ducky which Lachie had also obtained for our use. When our "water sherpa" was full to the gunnels we loaded each other with rucksacks and excess equipment and made for the shore. Pete, Malcolm and Mark guided the loaded ducky towards the shore but due to the low tide it was soon stuck fast. Abandoning ship they joined us to ferry all our other goods along the beach to a clearing in the saltbush 100 m before the creek/outlet of the lagoon, which Clive had found on previous trips. Here we set up tents, and a shelter-a la Eighty Mile Beach during AWSG expeditions - which created the "dining "area with one small table, a chair, stools, water containers and boxes of food, and outside this the cooking area was set up. By this time the tide had risen and the rubber ducky afloat again so it was pulled along to our camp site and unloaded. A brief luncheon break was taken while Clive outlined plans for our stay. We would be visited everyday or two by the ranger, so could evacuate if required, and two of us had mobile phones so the wonderful feeling of isolation was tempered by modern means of communication. The plan was to cannon net during the day and mist net at night--who needs to sleep when in such a marvellous place?

Off we set to recce the lagoon and get our bearings so that we could find our way back to camp in the darkness of the very early mornings to come. Out on the lagoon we found the pair of Oystercatchers - which we had found on the December 1997 tern banding day, one was a Pied and the other looked like a hybrid. There were a few waders feeding in shallow water but we were hoping for around 3,000 at high tide. Back to camp for an early dinner then to the lagoon to set then close 10 mist nets.

Darkness fell and the stars came out against a beautiful clear sky. We felt very far from civilisation but in all directions groups of lights on the horizons showed that we were in fact within 100-150 km of the majority of Victorians. However the peace of the islands and the sounds of the sea within 10 m of our tents were all pervasive and sleep came quickly--this was just as well as my alarm was set for 1.50 am as my job was to arouse Clive, Pete and Malcolm at 2 am. Together, and quietly, we left camp and made our way to the 2 poles set up to mark base camp on dry sand opposite the centre of our mistnets. We opened these at approximately 2.30 am and sat huddled together for warmth. We were inwardly excited,

as this was the first time VWSG had mistnetted birds on Mud Islands and we were hoping that we would catch some birds at least. The morning was chilly with a moderate breeze and Clive poured us a most welcome coffee. After ten minutes we checked the nets, and found several birds had been caught. Despite failing in my first attempt to extract birds from mist nets in total darkness I was very happy to ferry bags containing the birds from the extractors, being careful not to fall flat on my face or worse in the increasingly deep water, which was now streaming into the lagoon.

Another ten minutes and round two found more birds in the nets. Now we were really excited and when the rest of the team appeared we had sufficient birds for them to be taken back to camp and put into keeping cages We maintained this regimen till dawn - checking the nets, extracting birds and relaying them to camp until the magic of sunrise enabled the birds to see our nets and we dismantled them and retreated to camp.

Breakfast was most welcome, and the day already seemed quite elderly. Processing is always such a reward, but that morning for me anyway, it was somehow special. To be in such a place, remote yet near to my home-town, to have arisen after about four hours of much deserved sleep, and participated in a first for the VWSG, seen the dawn come and hear Port Phillip Bay begin its day with the ferry resuming its run from Queenscliff to Sorrento and then to be processing 73 beautiful waders and one Fairy Tern in the early morning before most people even knew the new day had begun, seemed such a privilege and quite magical. All the species caught during the next four days except Little and Common Terns were represented in that first morning's catch - Red Necked Stint, Bar-tailed Godwit, Great Knot, Red Knot, Curlew Sandpiper, Ruddy Turnstone, Sharp-tailed Sandpiper and Fairy Tern.

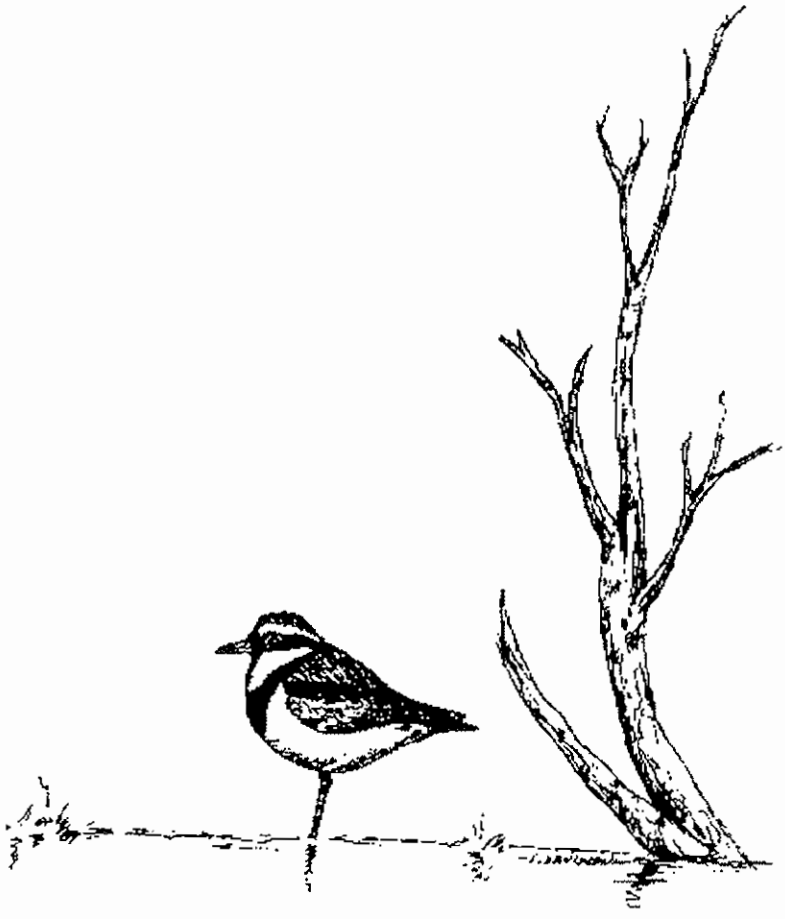
Our Fairy Tern retrap was the most exciting bird caught. Clive immediately remembered the ID number as being one of our very early banded Fairy Terns. He then rang his wife Pat to ask her to contact the Banding Office in Canberra to request precise details of the date and place of banding. Within minutes the answer came back, and we all joined in Clive's excitement at the confirmation that this bird was banded by VWSG at Werribee on 31 December 1984, thus being 14 years 1 month since first caught-- may this perfect small bird live for many more years.

Then began our cannon netting series. Four hours before high tide we set two small nets on the lagoon and returned for a couple of hours of sleep. When wakened Clive exclaimed, "I was not conscious that I went to sleep" After lunch we fired one small net and caught 195 birds. There were several thousands of birds in the lagoon at high tide flying in from the Queenscliff areas, as Clive had predicted. Processing was followed by dinner, then back to the lagoon to set up then close 8 mist nets for the morning catch, this would be the last time we could mist net as dawn then overtook high tide.

Next morning I was allowed to join the late sleeping half of the team and rose at 3.30 am. As arranged I then spoke by radio to Clive, Pete and Malcolm out on the lagoon in the darkness. They reported that fewer birds had been caught than yesterday, and that we could all have a quick pre-breakfast munch before joining them. The morning was milder than the day before, but the trip out into the lagoon to locate base camp in darkness was always a challenge--walk along the beach, turn left beside the creek, avoid the deep pool, then head for base camp to the left of the mist nets by walking towards the second bright light, on the left of the brightest one, way off on the Mornington Peninsula!!! I always felt that arriving there without going up to our thighs in the deep part of the creek or being caught in the mist nets was quite a feat as was the trip back to camp, where directions were similarly based on bright lights seen above the saltbush around our camp.

Fewer birds were caught on the second morning but two each of Fairy, Little and Common Terns in the 16 birds caught were of considerable interest. We had two more successful cannon netting catches, but the numbers caught, 21 and 8, were fewer than we had hoped for. By the third day it seemed that the birds had become aware that their marvellously pristine, virtually people-free roost sites had in fact been "invaded", as it did seem that they knew where we had set the last two nets and they positively avoided these areas. We caught 356 birds of 7 species of waders and 3 of terns, which pleased us all being our first mini-expedition to these fascinating islands, and again to quote Clive "We have learnt a lot on which we can build on another occasion."

On the morning of the fifth and hottest day we spent about four hours clearing the Crested Tern nesting site of *Atriplex*. Moderately exhausted we returned to camp for the last time, packed our goods, loaded the rubber ducky and made our respective ways to the boats moored in the usual spot. As the boats turned for Queenscliff I am sure we all had very mixed feelings. We had had many unforgettable experiences; especially did this apply, to the teenaged Tasmanian girls whose youthful energy and enthusiasm persisted throughout the trip-they ran everywhere, swam at every opportunity, and must have gained much from the trip and we all enjoyed their company enormously. For me the remoteness, the tremendous storm which flooded parts of Melbourne and nearly blew our tents away but which dropped little rain on us, the ever changing colours and textures of sea and sands in the lagoon, the stillness and darkness of the pre-dawn mornings and the gentleness of first light, the magnificent sunsets, the ships passing close along the deep water channel on their way to and from the Port of Melbourne and the brightly lit ferry regularly crossing the southern end of the Bay, and the birds in flight and landings, made this one of my many memorable VWSG experiences.



Cannon Netters and High Seas

(from the Little Tern Taskforce News Sheet No 4, Feb 1998)

Jim Reside

The Wader Study Group's annual pilgrimage to the Gippsland Lakes is always an. action packed event and this year was certainly no exception.

The gods (and odds) were against us, birds were elusive, the weather played up, camps were washed out, cannon netters were injured, babies were parcelled up and shipped back to the safety of the home. All in the space of just three days.

Saturday dawned fine and balmy, belying what was ahead. A full crew was shipped very efficiently across the lakes to Albifrons Island, courtesy of the chartered lakes cruiser, the Gull.

Common Terns and Little Terns were in abundance and the quickly established camp was full of optimism. After consultation with the locals, nets were set in the middle of the island facing north where the Little Terns had been roosting in recent weeks. The catchcry was "lets go for a big catch of Little Terns this year". However this was soon to prove our undoing. Several times during the day 20-30 Little Terns and similar numbers of Common Terns were catchable, but the firing was delayed in the hope of twinkling similar numbers which remained frustratingly just beyond the nets.
To avoid wasting the day the net was eventually fired in the mid afternoon and 97 Common Terns and 13 Little Terns were snared.

During the traditional sprint to the net after firing, one of our fledgling Little Tern workers, Emma, collapsed with a gammy ankle (maybe she was losing the race).

An unforgettable experience for all was the sudden appearance of a sub adult (4th or 5th year) White-bellied Sea-Eagle which made a low swoop over the island. I'm not sure who was the most surprised, the cannon netters or the Sea-Eagle, at what happened next. The Sea-Eagle certainly couldn't believe his luck when a small group of tern remained on the beach (he hasn't heard of decoys!). He quickly circled and stooped low and with outstretched talons succeeded in knocking over the Common Tern decoy! I was first on the scene to check on the health of our decoy but unfortunately there were no marks to embellish the facts.

Saturday evening a small contingent checked out the food supply for the Terns and enjoyed a late supper of crustaceans. Later that night thunderstorms and heavy rain lashed the Emu Bight campsite, tearing at tent poles and flooding some sites, dampening spirits. We were awoken on Sunday morn by the stentorian tones of our intrepid leader, "all those still in bed stay in bed...". Collective sighs of relief were heard from across the camp ground.

Further news was soon forthcoming that revealed that our cannon nets and associated gear was marooned in Paynesville. Our runabouts were unable to navigate the high seas in such treacherous conditions. Displaying his trademark organising skills, Clive soon had the situation rectified and our gear was ferried to Point Wilson by the Gull.

The Sunday was spent waiting and hoping that a miracle could be achieved on the almost extinct sand bar at Point Wilson. Unfortunately it was not to be and the catch of 4 Common Terns and 2 Little Terns was the tally.

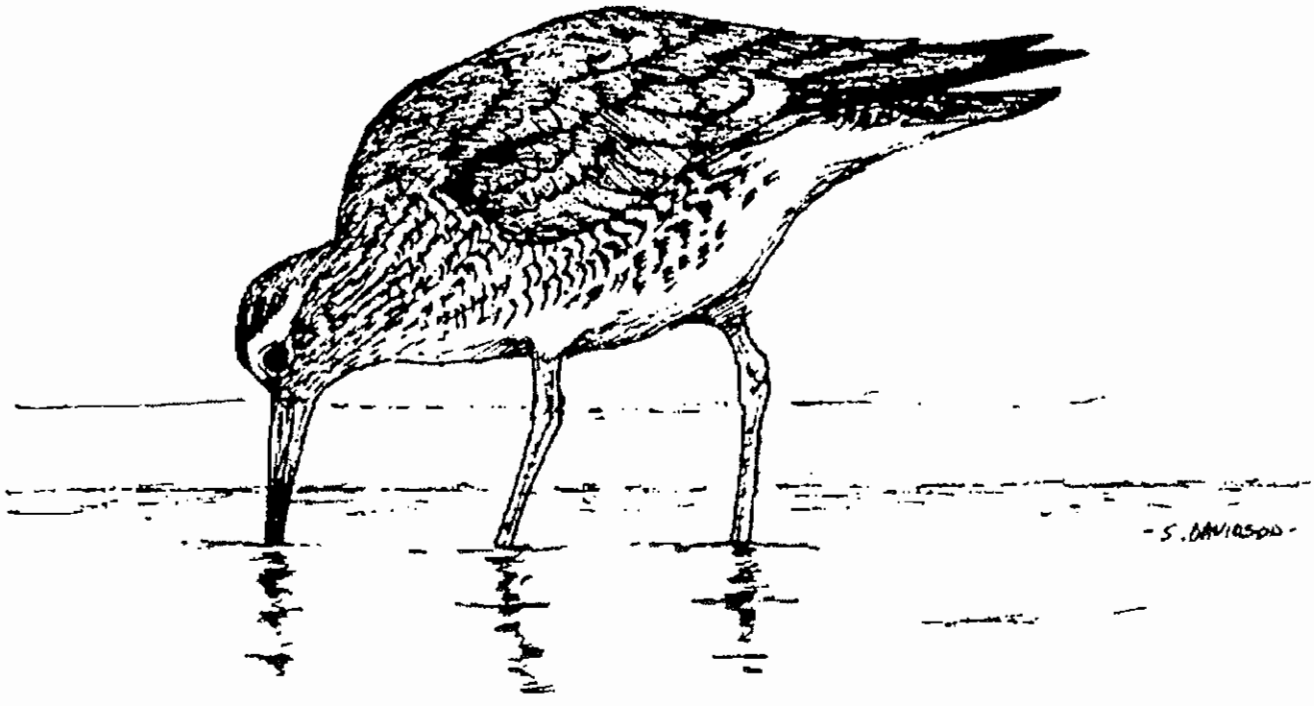
The weather worsened Sunday night to what could only be described as atrocious and Monday morning was miserable. Again our leader showed the way and a bedraggled and depleted crew made its way this time to Trouser Point, a new location on the shore of Lake Victoria only about a kilometre east of Emu Bight.

In strong winds and driving showers of rain an amazing two catches were made totalling 39 Common Terns and 12 Little Terns. Hypothermia was narrowly avoided as was swimming by both of the Rolland crew.

Another new member, both to the mad antics of cannon netters and the Australian shores, was Kristen from New Zealand. She complained of a blistered foot on Sunday and wondered how people could run across the sand in bare feet. Poor old Kristen (actually 16) and her foot were ignored until Monday night when it was suddenly realised that it was no ordinary blister. Some creepy crawly (spider?) had in fact bitten Kristen. The first diagnosis from a visiting locum was Bairnsdale ulcer, yuk! The end result was two nights in Bairnsdale Hospital recovering from the bite and subsequent infection.

The efforts of the weekend brings our tally from 10 years of banding to 2,281 Common Terns and 702 Little Terns.

This cannon netter would like to experiment with some radical form of camouflage for the nets. One idea is to have a strip of adhesive paper the length of the net sprinkled with sand and layed over the net. Another is conditioning the birds by placing decoy lines of seaweed along the beach for a couple of weeks prior to netting. Any other ideas ?



News from Crescent Island, Gippsland Lakes 1997/98

Peter Mitchell and Barbara Moss, Rotamah Island Bird Observatory

We have been monitoring bird numbers around Crescent Island once each week since October 1997, and began daily monitoring of the breeding sites in mid-November. We were assisted in our monitoring by Shane and Alex McDermott, two volunteers who stayed with us and paddled to the site each day from late December into January.

Breeding of Little Terns and Fairy Terns began in mid-November on the usual site at Crescent Island. We had placed marker pegs on the island so that we could identify each nest site each day. This was worthwhile - early in December, we were able to detect the loss of nests at one end of the site, and shortly after we saw a Forest Raven take an egg. As nests were gradually being lost, action was needed. NRE staff shot one raven - and no more nests were lost. Shortly after this, the first chicks appeared.

In mid-December, we noticed some birds sitting on Little Island - a low sand island just east of the Crescent Island site. By mid-January, there were 70 nests on the islands, and several chicks. We were expecting a large number of hatchings by the end of January. But one day we went to the island, and there were only 12 nests left, and many of the young chicks were also missing. This time it was Silver Gulls gradually working from the edges of the colony. We estimate that 30-40 clutches were lost over 24 hours. By the time we returned early next morning, only 4 birds were sitting. This time, five birds were shot by NRE. We had our doubts that this would be effective, given the number of gulls in the lakes, but since then the gulls have stayed away. It may be that storms and strong winds forced the gulls into the colony, and that started the process. We watched two little chicks just hatched while the gulls were in action - one disappeared while we were watching, the other survived and is now running about. It was not a happy event - and the solution was a compromise between doing something fairly savage and doing nothing.

Unfortunately - the last straw -Ravens again attacked the Crescent Island colonies at the beginning of February. All eggs and chicks were eaten.

Despite these events, the season has been successful, with many Little Terns fledged from the Crescent Island area. We are still assessing the numbers. Fairy Terns were less successful - only small numbers were seen on nests, and these seem to suffer the brunt of the first and second raven attacks with few successful fledglings.

Hooded Plovers were less common - 2-3 pairs only - and we have not recorded any breeding success. Pied Oystercatchers were abundant, but breeding was very early, and only one pair seems to have been successful. Red-capped Plovers bred on Crescent Island - a few chicks were reared

We have had some "fun" counting all the birds each week. Many of the breeding birds and fledgling Littles and Fairies from Rigby Island, plus non-breeding birds and other tern species all congregated in the Crescent Islands during January. On one occasion, Albifrons Island had about 1500 Common Tern, 500 Little Tern (fledglings, breeding and non-breeding birds), Fairy Terns (fledglings and adults), Crested Terns, Caspian Terns and White-winged Black Terns - all in one large group. We may have slightly miscounted - maybe there were 1501 Common Terns.

Interesting sightings of other birds included 60-70 young pelicans fledged from the colony on Albifrons Island, one Grey Plover, Eastern Curlews, Ruddy Turnstones, Sharp-tailed

Sandpipers, Curlew Sandpipers, Red Knot (still showing some red in November), one Whiskered Tern and lots of Red-necked Stints.

Wise Nine

Nine black shapes,
mysterious,
held the headland
like a coven of witches
brooding.

Red beaks darting,
the sooty shapes plunder the pools,
oblivious to the thunderous crash of the surf.
They splash and dab, bob and plunge,
until afloat on tidal lace.
Beyond the brown crags of shore platform
a green glissade of glass rises,
poised,
mountainous,
glistening in its crystal awesomeness.
Menacingly
it crashes against rock,
cascading over the lip,
throwing spume high
and icing the rock with runnels and rivulets of white.
Another green comber smokes,
to churn the bay into a froth of foam.
But the oystercatchers disdain the furore,
jumping the shallow ripples,
fluttering fast-dry wings.
The coven surmounts an outcrop
to perch,
ebony coral-lipped,
as if to mesmerise and stay the breaker.
Resistant,
they await low tide,
masters of the roiling cauldron.

Terry Allen
Back Beach 05/07/1993.

Suffer the Little Oicks (with Apologies to Little Children) or a bird worth suffering for?

Peter Collins

When the magic phrase "catching Oystercatchers" appears on the activities list it conjures up pictures of biting winds straight from the Antarctic, pouring rains and if you are unlucky terminal hypothermia. The hardy bunch of people that are involved in winter work must sometimes wonder what they are doing it all for. Hopefully this short article will renew enthusiasm and give reasons why you should be ready for the next winter.

For those people that are not familiar with catching Oystercatchers in sunny Australia there are a few sites that would bear description. Barry's Beach for instance has always struck me as the Gormangast of the wader world with lightning flickering continually and a gale would seem like blessed relief. This does not take into account the precipitation which can range from a deluge, when the local supply of Gopher wood is used up overnight for the easy assembly Arks, to hailstones the size of which can do instant damage to anybodies cranial appendage. Small sub-tropical islands in Corner Inlet where gentle zephyrs threaten to push you into the middle of next week and you are faced with a kilometre walk with a wet net. Roussac farm where the climate is mild but the water is cold, the Spit at Werribee where the boat has to be towed by hand over rocks and though thigh deep mud, just think of the fun you could have. The list can go on but I think that most people have a rough idea that apart from getting cold and wet, you have no reasonable certainty of a reward at the end. To make matters worse exercise, which is to be avoided at all costs under normal conditions, is extremely necessary to keep body parts, vital to life, vaguely warm.

Before a catch is made or when we have missed a catch it can look like the aftermath of England v Argentina or any Hawthorn game. If you support England or Hawthorn, with glum faces but that grim determination that dammit I am going to enjoy myself.

The two species of Oystercatchers in Australia are just two of a world wide family that has 11 members. If you look at the plates in Peter Haymans Shorebirds book the first thing that strikes the casual observer is that they all look the same except some are all black and the others are black and white. To the fluttering tertial brigade, that is twitchers, the varying amount of white or the occasional brown feather is the major distinguishing marks of the Pied group. The black group are, well black, unless you are a Variable Oystercatcher which is, well, variable as it can be pied or black. Interesting stuff.

The European Oystercatcher is probably the best known of the lot as it has been studied from every angle and has had reams of paper dedicated to it. The poor old Oick of England has been poked and prodded in every orifice and an expert can safely tell you how fast a flatulent Oystercatcher of the Wash can fly if the wind is in the north. In contrast its Australian cousins are birds of mystery and allurement. In the past few years approximately 1021 Pied Oystercatchers have been banded and individually colour banded so that some of the mysteries can be solved. So far with the assistance of a lot of individuals from all over the south west and Tasmania the data base has expanded to over 4,000 records. 3,803 for Pied and 489 for Sooty, this is sightings, retraps and new birds. This in turn creates mysteries such as where do Sooty Oystercatchers go to as there are very few sightings of colour banded Sooties. If anybody goes into Bass Straight and visits the islands keep a look out for breeding Sooties and if you are brave enough to venture out in the winter the same applies doubly.

So what does this show us about our Oystercatchers, number 1 is that they travel further than suspected, in fact all around the south west coast and even overseas - apologies to

Tasmanians. They live a long time, over 20 years in one case, and they can be aged and probably sexed. They do not seem to have a regular wintering site on the whole indeed they can swap between Port Phillip Bay and Western Port as well as having a degree of flexibility about which flock they join for the winter. It also seem that adults and juveniles go around in a mixture, is this a case of parents showing junior the way to survive or just random? They do appear to have a lot in common with the European Oiks though they are a lot more uncommon, about 10,000 in Australia for Pied and 4,000 for Sooties. For example methods of feeding subtle and unsubtle.

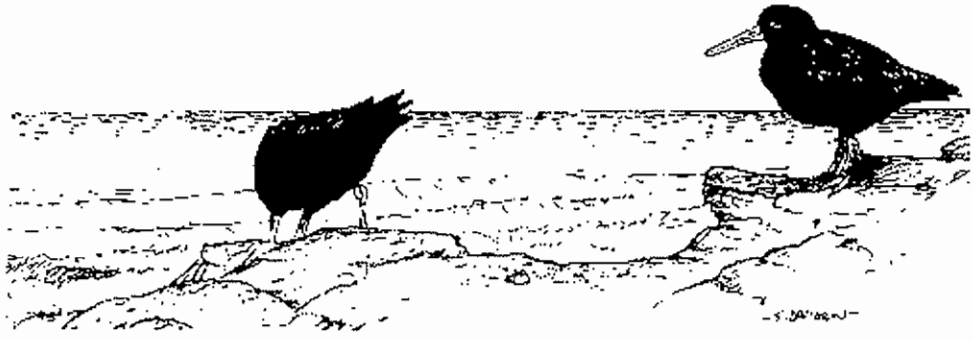
Interesting side lines that have emerged, for instance the time it takes for the colour bands to become unrecognisable due to wear and tear, UV light and probably chemical changes in the plastic. We have also in the course of events diagnosed at least one case of Daltonism, that's the posh way of saying blue and green look the same to a colour blind person, in a bird watcher which is a bit of a handicap. Oystercatchers are also gifted with a supernatural sense of wrongness and will tease and flirt with the catching area before flying off to some remote area.

There is a lot more to learn before we get down to minutiae such as feeding at night by putting mercury trip switch's on their back to discover how many times they bend over, presumable to pick up an oyster or two. If you want to see the video it will be shown in Broome over the next three months or if you insist I can probably get a copy.

So far we have just scratched the surface of how Oystercatchers function. The next stage in the whole scheme of things is to investigate breeding, longevity, breeding success and try to pick up patterns throughout their life cycles. By colour banding we have the ability to identify individual birds, which in turn, can show the places they go for breeding, overwintering and the age, direction and sometimes speed with which they disperse without having to catch them again, which as many of you will probably have guessed, this is a case of once caught twice, shy. For instance, what we have shown so far, thanks to your efforts are that birds travel much further than previously suspected, and it appears that juveniles go much further than adults. Adults swap bays with gay abandon and go on 'holiday' to the Prom. Your wintering flock of Oystercatchers are in fact a dynamic population with a lot of coming and going almost daily. Check for yourselves note the colour bands then recheck the following week, which ones have stayed, which ones have gone, who has joined. Don't forget to send in the sightings to Clive Minton at the address in the front of the Bulletin.

Hooded Plovers go through divorces do Oystercatchers? The next stage is to check breeding birds for several seasons to find out if they are not only site faithful but also mate faithful. Does the gene pool get a good stir or is it stagnant? The biometrics are being used to sex birds hopefully, to gain an insight into the health of the population after all the future is bleak for a female dominated society or indeed a male dominated one.

The thought I will leave on is this if Oystercatchers don't catch oysters why aren't they called Musselcatchers?



Bird banding

Angus Macaulay, Yarram High School

On Monday the 23d of February at 5.55am, the bird banding team of experts and volunteers (including myself), set off for New Island, off the coast of Manns Beach. 1 had come on the Friday before and we had had an unsuccessful day but 1 was very fortunate and Clive Minton invited me back. Over twenty people went out in 4 boats.

As soon as we arrived we put all our bags and the equipment in a pile and cleaned the nets which had been set up the afternoon before. Everyone stood in a line and picked up a small portion of net each and shook it out. We then split ourselves in to two groups the group I was in set up the hides and the other group started setting up the cannons. The large hide had everyone's bags and the remainder of the equipment behind it, and a small hide was set up closer to the nets so that a few people could fire the nets and get to them quickly When we had finished we opened up the covering material which would be placed over the nets to calm the birds. Once all this was done we helped the other group,. they had nearly finished but we had to clean out the cannons.

While most of us sat behind the large hide and kept ourselves amused with books, cards and food for half an hour, three "twinklers" slowly -sneaked up on the birds so that the ones on the outer edges of the group would move in to the net area. A few minutes before the nets were fired I was told what I had to do,. my confusion must have been showing because Susan Taylor told me to run over to the nets ' then watch everyone else for thirty seconds. The jigglers were jiggled to get the birds out of the way of the cannons and then.

POOMPF

The cannons were..... not like a starting gun for a 100 metre sprint surprisingly, They went POOMPF not BANG, but I only had a few seconds to ponder this because everyone was running round like mad and shouting a lot. Once I had arrived at the nets a few of us made sure none of the birds were caught under the net in the water and by then the keeping cages had arrived as well as the covering material. The covering material was opened over the net and the experts started carefully extracting the birds, making sure that they did not harm them, 1 was then shown how to hold the birds, one in each hand and take them to the keeping cages When all the birds were in the cages, the large hide was set up around the cages. Everybody's bag was moved and the nets were laid out on higher ground, then we stopped for lunch (mine included nuts covered in the now melted chocolate).

After lunch we split into small groups which worked as production lines. Two Groups worked on all the birds that were not Red Necked Stints (I was in one of these), one person weighed all the birds, another group worked on the stints, and another put all the orange flags on the birds. In our group one person put on a metal tag, then got another bird, the next person measured the wingspan and the age, the next (me) measured the beak length and the beak to back of the head length, and the last person wrote everything down, including weight, and time (the birds lose approximately two grains per hour so it is important for scientists to know how long the birds were captured for). When we had finished the group working on stints was still going so I acted as a runner, taking birds from the cages, to the scales and to the flagging team while others moved in to either tagging or flagging teams. Later I swapped with a flagger, had to open up the flag then put it on the bird get a dab of glue put on and hold it for two minutes, before double checking the age of the bird and letting it go (the best bit), and 1 got the very last bird. There were 389 birds

including 280 Red Necked Stints, Ruddy Turnstones, Curlew Sandpipers, Sharp-tailed Sandpipers, Greater Sandplovers, Lesser Sandplovers and Sanderlings.
The last thing we had to do was set up the nets for the next day. I helped load the cannons, This included; disassembling the cannon, taking out the used cartridge, cleaning everything out, covering everything in a gooey waterproofing and reassembling it. I then took the cannons over to the nets and Katrina (who happens to know my sister from Orinond College) and I made sure the canons were set at the right angle and covered them over. When I had helped set up the nets and pack up all the equipment it was time to go home . I lugged a pile of stools across the from one island to another island (or the same one, I'm not sure) to where the boats were anchored and set off home.

THE STINT

Peter Steyn.

When Bleriot the Channel flew,
The people made a great to-do
They came in thousands just to stare
At this great conqueror of the air
Who'd flown from France to England's shore
A flight of twenty miles or more.
"How great the aeroplane!" they said,
"And what a noise the engine made,
"And-how could Bleriot know that he
"Would find his way across the Sea
"Where none had ever flown before?"
And so they wonder more and more
Until at last their hats they raise.
And cheer to their great hero's praise.

Yet I when called to make my flight
Have slipped off in an Arctic night
And rightly flown o'er land and sea,
The only engine carrying me
My heart, no larger than a shilling,
Which for twelve thousand miles is willing.
Less than two ounces is my weight,
No petrol tanks increase my freight,
No chart nor compass 'neath my eyes
To mark a track through trackless skies.

Until untiring to the verge
Of Australasia's ocean surge
From North Siberia's coast I fly,
Spanning the globe unerringly.

No cheering thousands when I land,
No startling posters in the Strand,
No praise is heard - no wondering word,
But then - I only am a bird.

Membership List at June 30th 1998

Rick Aitchison
Richard & Margaret Alcorn
Khalid Al Dabbagh
Charles Allen
Terri Allen
Stephen Ambrose
Mark Anderson
George Appleby
Allen Archbold
Bruce Atkin
Lisa Barter
Mark & Terry Barter
Graham & Jenny Beal
Rob & Gail Berry
Pat Bingham
Adrian Boyle
Malcolm & Judy Brown
Prue Brown
Anna & Paul Buchorn
Margaret Cameron
Jeff & Sarah Campbell
Peter Carr
Jo Chadwick & Anthony Mitchell
June Cherrey
Maureen Christie
Allen Clarke & Marj Reni
Rohan Clarke
Mike Connor
Dave Cropley
Amanda Dalgleish
Steve Darby
Rosemary Davidson
Steven Davidson
Michael Dawkins
John Dawson
Ren De Garis
Vero, Mary, Meridith & Victoria Dharmarajah
Lee Duclos
Andrew Dunn
Dianne Emslie
Jon Fallaw & Becky Hayward
Dave Gerrard
Gail, Colin & Heather Gibbs
Peter & Melanie Gibbs
Ken & Carlene Gosbell
Andrew & Kath Gosden
Doris Graham
Nicole Grenfell
Tim Gunn & Petina Pert
Angie Gutowski
Sue Harris
Neville Hatten
Peter & Heather Haughton
Vivian Holyoake
Peter Houston &
Marguerite Cordell
Tania Ireton
Penny & Murray Johns
Angela Jessop
Ros Jessop & Pete Collins
Irma Kluger
Leona Knight
Brett Lane
Rowena Langston
Janet Lim
Laurie Living
Moira Longden
Sue & Andy Longmore
Richard & Debby Loyn
Donald & Meg MacMillan
Ellen McCulloch
Pat McWhirter
Jan Mangan
Krystii Melaine
David Melville
Clive & Pat Minton
Ida Minton
Chris & Helen Morris
Emma Moysey
John Munro
Brenda & Mick Murlis
Luke Naismith
Rory O'Brien
Priscilla Park
Hugo Phillipps
Heather Phillipson
Murray Portbury
John Pratt
Phillip Pratt
Thomas Putt
Jim, Jenny, April & Shane Reside
Roger Richards
Ken, Annie & Danny Rogers
Thierry & Joanne Rolland
Diane & Bob Ross
Oliver Rosznay
Neville & Nancy Roussac
Graeme, Margaret, Chris & Michael Rowe
Liz & Steward Sarrailhe
Ira Savage
Clinton Schipper
Charles Silveira
Howard Simco
Jenny Skewes
Terry & Vicki South
Will & Angela Steele
Iain & Sandy Stewart
Tony Stokes
Bob Swindley
Sally Symonds
Susan Taylor
Pavel Tomkovich
Dale Tonkinson
Lyn Turner
Jim Vadolas
Mark Walker
Pam Walker
Diane & Nick Walton
Mike Weston
Norman Wettenhall
Ross Williamson
Jim Wilson

Copies are also sent to

Arthur Rylah Institute
Australian Bird & Bat Banding Schemes
Australasian Wader Studies Group
Barren Grounds Bird Observatory
Birds Australia (RAOU)
Bird Observers' Club of Australia Library
Broome Bird Observatory
CSIRO Library, ACT
Environment Australia
Eyre Bird Observatory
NRE, Victoria
NSW Wader Study Group
Queensland Wader Study Group
Rotamah Bird Observatory
Senckenbergische Bibliothek
Victorian Ornithological Research Group
Wash Wader Ringing Group

and landowners on whose properties the group operates in Victoria

Financial statement from 1st July 1997 to 30th June 1998 - Victorian Wader Study Group Inc.

INCOME	***$***	***EXPENDITURE***	***$***
Subscriptions	1545.00	Printing Bulletin	873.00
Bank Interest	823.19	Postage, stationary & photocopying	391.46
Sale of cannon net to Canada	3642.00	Incorporation charge	32.00
Hire of radios to Ecology Australia	150.00	Miscellaneous expenses	48.00
Sales of fuses to Charles Sturt University	108.00	Bank charges & government charges	117.72
French Island barge payments by participants	55.00	**Sub-total**	**1462.18**
Sale of leg flags to WA	60.00		
		Equipment	
Sale of leg flags for Little Terns to NRE	86.00	Trailer registration & repairs, cable winder, batteries, shackles, grease, stool repairs, glue etc	638.23
Coast Action Grant 1998	15595.00	Cartridges, cannons, projectiles	1048.75
Corner Inlet Hall hire surplus	19.70	Netting for new cannon net	296.00
		Keeping cage material	453.93
		Shadecloth for covering birds	163.50
		Spanner, nuts and sockets for cannons	156.44
		Colour bands and flags	526.05
		Guillotine	125.00
		Fuses	622.00
		Balance (electronic)	353.80
		Firearms licence	150.00
		Equipment for Korean Expedition (to be repaid)	77.00
		Sub-total	**4610.70**
		Barge to French Island	280.00
		***Coast Action* expenses**	
		Helicopter survey of Corner Inlet	1830.00
		Fox Baiting Project - labour	16401.50
		Phone calls both projects	100.74
		Sub-total	**18612.24**
TOTAL INCOME	**22083.89**	**TOTAL EXPENSES**	**24685.12**
Cash Balance 01/07/97		**Cash Balance 30/06/98**	
Petty cash	8.76	Petty cash	16.19
Advantage Saver Acc.	681.83	Advantage Saver Account	50.18
Macquarie Account	21570.52	Macquarie Account	20014.51
		Less unpresented cheques	(M41 296.00) (M42 125.00)
TOTAL CASH	**22261.11**	**TOTAL CASH**	**19659.88**
TOTAL	***44345.00***	***TOTAL***	***44345.00***

Rosemary Davidson - Hon. Treasurer

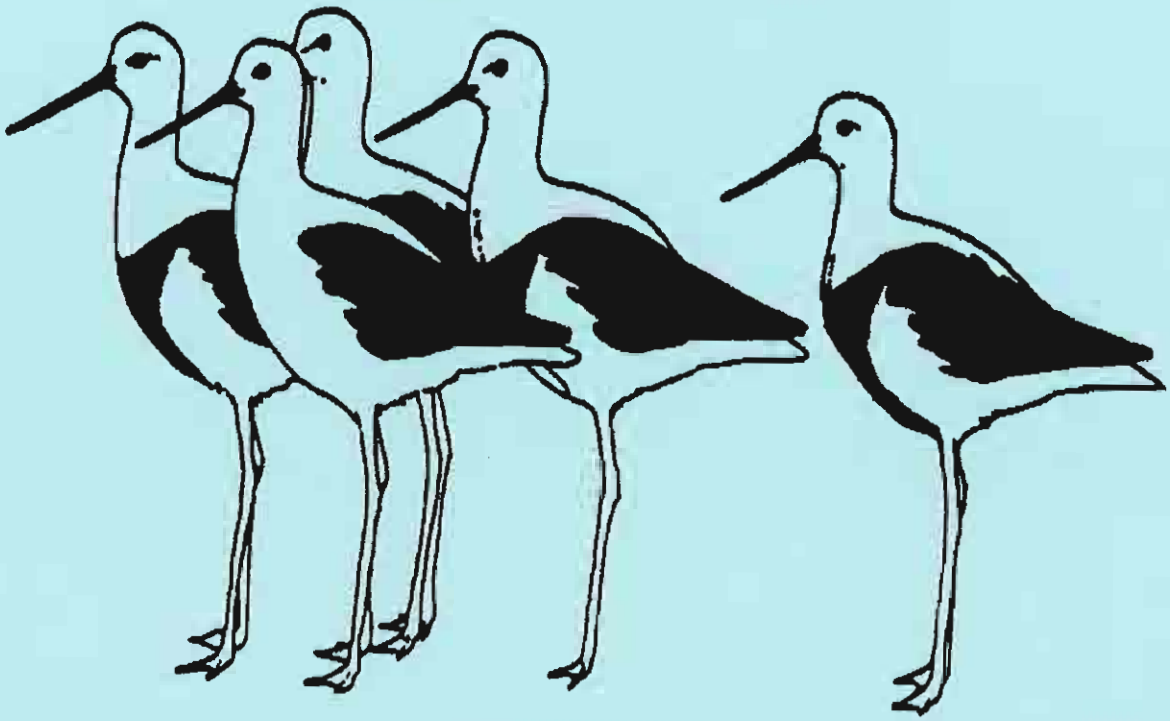
AUSTRALASIAN WADER STUDIES GROUP CONFERENCE

AT

PHILLIP ISLAND
VICTORIA

12TH TO 13TH JUNE 1999.

Registration also available 11th June
Field trips also available 14th June



We invite you to share your interests, ideas and knowledge of waders by attending and presenting an oral or poster paper. The program will consist of papers on the conservation of waders and their habit in the East Asian - Australasian Flyway.

Further details available from
Peter Collins or Ros Jessop,
VICTORIA

12TH TO 13TH JUNE 1999.

Registration also available 11th June
Field trips also available 14th June

Journal of the Victorian Wader Study Group

Bulletin Number 22 1998

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