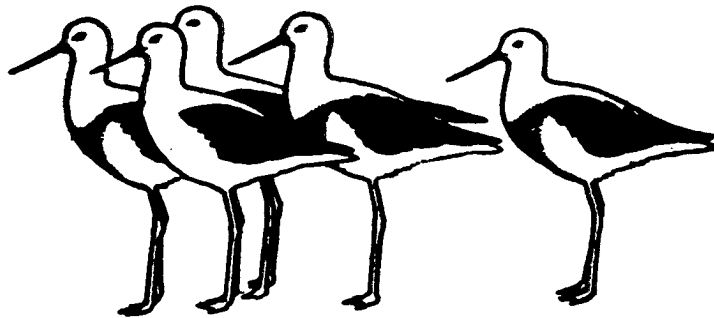


The Stilt



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**BULLETIN OF THE AUSTRALASIAN WADER STUDIES GROUP
OF THE
ROYAL AUSTRALASIAN ORNITHOLOGISTS UNION**

NO 3

SPRING 1982

THE STILT

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EDITORIALWATCHERS AND BANDERS

One of the most encouraging features of recent wading activities in Australia is that we do seem to be gradually overcoming a legacy of so many "wader people" having been polarised into one of two camps of equally fervent enthusiasm: the watchers on one shore and the banders on the other.

Like other two-party systems, this has often seemed to fit in pretty well with human nature but it doesn't tend to be an ideal arrangement under which to get things done. Both approaches are certainly very enjoyable and continue to reveal a lot of basic information (and often a lot of basic ignorance) about the birds in question, but they do so in quite different although complementary ways. I doubt that either approach is implicitly more skilful, objective or scientific than the other. These attributes depend much more upon the aims, methods and documentation that characterize the activities of any group or individual interested in waders. Carried out thoughtlessly, or sometimes perhaps just unluckily, both sorts of investigations can disturb many waders and sadly even cause the death of a few. Even so, I remain convinced that losses and harrassments caused by such wader studies are insignificant as factors constraining the populations. Just as for other specialised animals, it is the conservation of high quality habitats that counts in the long run.

Through recent AWSG counts and surveys, we are beginning to have some idea of where exactly these habitats evidently exist within Australia. I say "evidently" because at this stage we can often only assume that localities at which impressive numbers gather are actually particularly useful to waders. Uncovering some of the mystique of the north-west has been a major achievement and I think the hundred or more people who have been lucky enough to experience the flocks found there, such as the one photographed by Bert Wells in *SWANS* vol.12 No. 2, deserve to be congratulated for their efforts. In operations such as these, seasoned banders have found themselves identifying and counting the less-familiar species massed on the beaches. Conversely, experienced wader-watchers have gone through a bit of mind-stretching when being required to deal quickly and efficiently with quantities of several species in the hand, each of which requires some rapid re-learning when encountered at such close quarters for the first time.

I hope everyone will watch out for the waders that were dye-marked this September during the last expedition to the Broome/Port Hedland areas. Birds with yellowy orange underparts could turn up anywhere, so do check out any odd glimpse of tangerine amid the wheeling flock.

Finally, I would like to see rather more "short notes" appearing in *THE STILT*. Not nearly enough has been documented about the everyday features of waders' lives in Australia. Come on, all you lucky people who've been watching Asiatic Dowitchers, examining Broad-billed Sandpipers and listening to the Sandpipers. What can you tell us about them?

Peter Curry.

1983 AWSG NATIONAL WADER COUNTS, February 12-13, July 9-10 and 16-17

Please put aside at least half a day during these weekends and participate in these important events. Contact your state or regional representatives or the co-ordinator for details. Remember, everyone is needed for the success of the counts.

AWSG WADER EXPEDITION IN NORTH-WEST AUSTRALIA AUGUST/SEPTEMBER 1982

by Clive Minton.

Introduction

The data collected during this expedition (and a brief follow up visit in November 1982) are currently being analysed in detail and a full report will appear in the next edition of THE STILT. However a brief summary of the highlights of the expedition and the main achievement is given below.

The expedition was a major success. The timing proved particularly propitious to monitor the arrivals of migrant waders from the north. Banding was most successful, with almost daily catches throughout the month-long period the expedition was in the field. The logistics of the expedition all went according to plan and costs were kept within budget. Altogether 66 people took part with an average of 35 people being in the field at any one time. Participants came from all States of Australia except Queensland and the Northern Territory, and there were two expedition members from overseas - Kiyooki Ozaki, the wader specialist from the Yamashina Institute for Ornithology in Tokyo, and Charles Francis from Malaysia (an AWSG member who was in Australia for a year to July 1981).

Counts

A comprehensive programme of ground and aerial surveys of the wader population along the 700 km of coastline between Broome and Port Hedland was carried out. The main concentrations of waders were in Roebuck Bay (near Broome), along the central 50 km of 80 Mile Beach, and at the Leslie Saltworks (30km north-east of Port Hedland).

The first counts, made soon after the expedition commenced on 13 August, indicated an "over-wintering" wader population of about 50 000 birds (split roughly 1:3:1 at the above three locations respectively). These birds were all in non-breeding plumage and the majority were presumably one-year-old birds which were not yet mature enough to return to their Siberian breeding grounds.

The first migrant birds, showing extensive breeding plumage, began to arrive on 15 August and by 21 August the wader population had already doubled at most sites. The rate of increase was such that noticeable differences could be detected almost daily. There were marked differences in the timing of arrivals of different species e.g. adult Curlew Sandpipers arrived well ahead of adult Red-necked Stints. Large Sand Plovers were the earliest arrivals whereas Oriental Plovers did not appear until early September. A few juvenile Large Sand Plovers were present from late August, but the juveniles of other species had still not started to arrive when the expedition finished on 11 September. By this date the total wader population in the area had increased to around 300 000.

As first discovered during the 1981 exploratory expedition, species such as Great Knot and Large Sand Plovers were present in previously unexpected numbers (totals still being worked out). Of the less common species it was pleasing to find an adult Red-necked Phalarope and a Redshank at the Port Hedland saltworks, and Asiatic Dowitchers (totalling about 100) at several locations.

The repeat counts carried out by six participants - again both ground and aerial surveys - between 13 and 19 November indicated a further considerable increase in the wader populations to a total of 564 000!! These were distributed -

105 000	Roebuck Bay, Broome
330 000	80 Mile Beach
60 000	Port Hedland Saltworks
Remainder	intervening sections of coastline.

Whilst the numbers had gone up by some 50% from early September in the main habitats, the numbers in intervening sections of coastline had increased five-fold. This suggests that it will be necessary to resurvey all those coastal sections of north-west Australia which had previously only been covered in late August/early September. The species compositions were noticeably different e.g. relatively fewer of the small waders and many more of species such as Oriental Plovers. There were many juvenile birds present in the populations (this was confirmed by a sample of about 100 birds which was mist-netted). Rough estimates of the populations of three particularly interesting species were

20 000	Oriental Plover
70 000	Large Sand Plover
90 000	Great Knot

Catches

A total of around 4000 birds was caught and banded, and all were also colour dyed (yellow). Red-necked Stints and Curlew Sandpipers (with around 1000 of each) were the most numerous but around 500 Large Sand Plovers and Great Knots were also caught. The total also included over 300 Whiskered Terns. Almost all birds were also fully "processed".

Two interesting recaptures were made. A Curlew Sandpiper banded at Werribee, Victoria, in November 1979 was mist-netted at the Port Hedland Saltworks in late August. A Red-necked Stint banded at Hobart, Tasmania, also in November 1979, was caught at Anna Plains (80 Mile Beach) in early September. This same bird was subsequently seen, and then recaptured, back in Hobart in early October. In addition to the above there have already been 18 sightings of colour-dyed birds away from the banding area. Three yellow-dyed Curlew Sandpipers were seen on the Adele Islands - 200 km north of Broome - in early September (what were they doing going in this direction?).

In addition to the bird seen (then caught) in Hobart there have been 14 sightings of colour-dyed Red-necked Stints and Curlew Sandpipers in Victoria (mainly at Werribee) between 24 September and 4 December. It seems from the above information that many of the smaller waders at least are using the evidently prolific food resources of the shores of north-west Australia to replenish their fat reserves prior to undertaking the last stage of their migration to their destinations in south-east Australia. These movements are also further evidence that waders probably regularly undertake migratory flights directly across the continent of Australia.

THE FUTURE

Consideration is currently being given to the optimum means of furthering wader studies in northern Australia. Current thoughts are that the next main visit to north-west Australia should be at a different period of the year to the previous late August/early September visits. It would seem most beneficial for a major banding expedition to return to the Broome/80 Mile Beach/Port Hedland area in late October/early November 1983 - to coincide with probable maximum population levels associated with the arrival of juvenile birds. It would also be desirable to link in with this a further aerial survey of the whole of the coastline between Darwin and Shark Bay.

Further details on future plans will be circulated in the next edition of THE STILT.

Expedition organisers were :

Clive Minton	John Martindale
Grant Pearson	Ken Rogers
Brett Lane	

Preliminary list of species captured during the Spring 1982 North-West Wader Expedition

Species	
Red-necked Stint	996
Curlew Sandpiper	863
Large Sand Plover	582
Great Knot	429
Sharp-tailed Sandpiper	165
Red-capped Plover	145
Terek Sandpiper	98
Red Knot	72
Banded Stilt	71
Pied Stilt	69
Grey-tailed Tattler	60
Oriental Plover	44
Turnstone	25
Mongolian Plover	24
Broad-billed Sandpiper	18
Bar-tailed Godwit	4
Greenshank	3
Avocet	2
Black-tailed Godwit	1
Masked Lapwing	1
Black-fronted Plover	1
Red-kneed Dotterel	1
	3674
	22 species

[Many thanks to Grant Pearson for compiling the above list. ED.]

NEW JOURNAL TAKES AUSTRALIA BY STORM!!!

In October, 1982, the Tasmanian Shorebird Study Group published its first edition of "An Occasional Stint". This new publication, to be issued irregularly, runs to 72 pages, and is full of interesting information on wader, tern and gull studies in Tasmania. Contents of No. 1 are:

- Wader studies in Tasmania - past and future, by O.M.G. Newman
- Wader and shorebird banding in southern Tasmania up to 30/6/82, by Ken Harris
- A survey of the wader population of Barilla Bay, by R.M. Patterson
- Studies of palaeartic waders at George Town, Tasmania, by D. Henderson
- Fairy Terns at Mortimer Bay, by Wm. Wakefield
- Birds and their habitats in the South Arm area, by Bird Observers Assoc. Tas.
- Marion Bay and Blackman Bay, by L.E. Wall
- Dispersal of Pied Oystercatchers in the Hobart area, by O.M.G. Newman
- Little Musselroe Bay, by Ralph Cooper
- Sooty Oystercatcher - evaluation of Hobart area count data 1964 - 1982, by O.M.G. Newman.

"An Occasional Stint" is available from Bird Observers Association of Tasmania, P.O.Box 68A, G.P.O., Hobart, 7001, Tasmania

ERROR IN AERIAL SURVEYS OF WADING BIRDS by Stephen Garnett and Ian Carruthers

Observations along the coast of northern Australia have revealed a major overwintering ground for migrating waders. Much of the coast, however, is inaccessible to conventional vehicles and too extensive for adequate coverage from the ground. The only way in which the coastline can be surveyed is from the air and over the last few years many waders have been located and counted from light aircraft. One of the problems of aerial surveillance, however, is the estimation of errors. Although it is possible to obtain an impression of the major concentrations of birds, it is difficult to put a figure on those seen because there is no accurate count on which to base the estimate. Logistical problems usually preclude simultaneous assessment from land and air, so on a recent count an attempt was made to quantify the errors with the use of photographs.

Surveillance is usually undertaken at 180 to 200 meters altitude, preferably about 10m out from the edge of the water. Any higher and there is a chance that some of the smaller species will not flush and so may be missed; any lower and the beach passes too quickly, making it impossible to count if the mudflat is broad. From 180m up small to medium sized waders appear as black dots usually clustered at the water's edge in feeding flocks. In flight they can be detected by their shadows moving beneath them or their white underparts as they turn. Larger waders are more easily seen and it is often possible to identify the species. Our airspeed is usually about 160 kph, which means that each flock is visible for, at most, 5 seconds, usually only 3 seconds.

Each of the eleven volunteers was asked to estimate the number of waders present on each of 18 photographs that were deemed to be of sufficient likeness to what is seen from an aircraft. The photographs included both standing and flying flocks of between 100 and 1000 birds both densely packed and widely scattered across the mud flats. Although the slides closely approximated to the appearance of standing flocks, the flying flocks were less visible than would be seen when moving. Each was flashed up on the screen for five seconds at a time. The numbers actually present were then counted accurately. Five of the volunteers were experienced bird watchers, of whom three had flown on aerial surveys, while the other six, although biologists, had had little experience with counting birds.

The errors in the estimates are shown in Table 1. The absolute error is the mean difference, positive or negative, between the estimate and the actual number on the slide, divided by the actual number. The cancelled error is the difference between the total number of birds on the slides and the number estimated divided by the total. There was such a big difference between the experienced and inexperienced observers that the more detailed analysis was confined to the estimates of the former. Inexperienced observers consistently underestimated the number on the slides regardless of the size, density or behaviour of the flock illustrated. The only flock type consistently overestimated by experienced observers was large, dense and standing on the ground. Most other groupings were underestimated by about 10%, except for the small scattered groups in flight. By chance, the errors of the estimates of all five experienced observers almost cancelled out when totalled.

Table 1. Errors in the estimates of wader numbers seen from the air.

Error Type	Inexperienced Observers	Experienced Observers	Flock Type						
			Scattered Flying		Dense				
			>300	>300	>300	>300	>300	>300	>300
% Absolute Error	53	32	27	31	31	32	34	32	33
% Cancelled Errors (overestimates +ve underestimates -ve)	-47	-2	-5	-23	-12	-10	-12	+24	-1
% Estimates negative	96	66	60	90	70	60	70	34	80
n	6	5	1	4	2	3	4	3	1

There are probably three major sources of error in wader counting. The major error is undoubtedly failure to observe. For those waders on the coastal swamps away from the surveyed beach no estimate of the errors can be made. In northern Australia aerial surveys done during the wet season will miss a lot of birds in this way, especially late in season as the swamps begin to dry out. However many of the birds on the coast will also be missed. Even with an animal as large as a kangaroo, Caughley (1977) estimated that he saw only 50% of those present in the 200m wide transect he flew at 160kph. Using his formula, a 5m wide strip along the edge of the sea would give estimated figures only 70% of the number actually there. Of course waders are less cryptic and solitary than kangaroos and are on a very exposed habitat. Nevertheless, when the altitude exceeds 180m, one becomes aware that the smaller birds can be detected only through binoculars. With the transect system of flying along the coast there is no second chance. When viewing slides of birds scattered across the mud, it is likely that the observers simply do not detect them all in the time available for viewing. In the field it is possible, with low bird densities, to spend a little more time looking for birds on the favourable habitats as the aircraft travels past. It is also far easier to detect the birds when they are moving over the mud than when they are stationary. On slides the flying birds are more obvious than their standing counterparts, because their wings are outstretched, but they are still less visible than from an aircraft.

The second major source of error is shadows. From the air flying flocks of birds that are brown above are often detected by their shadows moving across the mud beneath them. Standing birds are far more difficult to distinguish from their shadows. When first flying aerial surveys we sometimes found it necessary to halve the estimate of a flock size after it had flushed. The presence of shadows could account for the overestimation of dense, standing flocks.

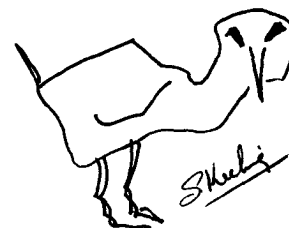
The third source of error is simple miscounting. The art of putting a number to a pattern of birds requires experience. Experienced observers know what a hundred birds look like, inexperienced observers have no such familiarity. An initial error is likely to be compounded in later estimates which can be compared only with a few earlier counts. However not all the experienced observers had flown on surveillance flights and a flock of a hundred from the air looks smaller than it does from the ground which may account for some of the underestimation. The three observers who had experience of aerial counting were consistently more accurate in their estimates than those who had not.

The use of photography to standardise observer error is one of the routine tasks listed by Norton-Griffiths (1975), but it was impossible to estimate the number on the mud and record it on film simultaneously. Estimating the number on slides is something of a poor substitute, but it does confirm the observation of Minton and Martindale (1982) that underestimation is the common direction of error for most flocks. It also provides training for new observers and emphasises the need to record, where possible not only the number thought to be present but their behaviour as well.

References

1. Caughley, G. (1977) Design for aerial censuses. Australian National Parks and Wildlife Service Special Publication 1:15-23.
2. Norton-Griffiths, M. (1975) Counting Animals. African Wildlife Leadership Foundation Handbook 1:22-28.
3. Minton, C.D.T. and Martindale, J. (1982) Report on wader expedition to North-West Australia in August/September 1981. The Stilt 2:14-26.

Mongolian Plover
Charadrius squintus



FURTHER COLOUR-MARKING SCHEMES APPROVED BY THE AUSTRALIAN BIRD-BANDING SCHEME

The following schemes are in addition to those detailed in *STILT* 2, pp.43-45:-

RED-KNEED DOTTEREL and
 BLACK-FRONTED PLOVER
 Victorian Wader Study Group (Bendigo Sewage Farm)
 30.vi.82-31.xii.82
 Left Tibia: 1 red band
 Right Tibia: 1 metal band
 and 1.i.83-30.vi.83
 Left Tibia: 1 white band
 Right Tibia: 1 metal band.

HOODED PLOVER
 John Bransbury (S.E. South Australia)
 Right tarsus - 1 metal band
 Left tarsus - 2 coloured bands (white, dark blue, light green or black)

HOODED PLOVER: IS TASMANIA THE REAL STRONGHOLD?

by Mike Newman.

In the first national wader count in February, 1981, 87% of the Hooded Plover records were from the south-east of South Australia and Western Victoria. John Martindale¹ concluded that these areas were the stronghold of this species. My view is that this conclusion may prove to be premature. In Tasmania, the estuarine areas, which support the bulk of the migrant waders, were surveyed and no attempt was made to census the ocean beaches or offshore islands. The 18 Hooded Plovers recorded for Tasmania are not representative of the Tasmanian population as illustrated by autumn 1981 records of 74 on Hunter Island, which lies off north-west Tasmania, and a flock of 33 at Marion Bay on the east coast of the mainland. Inspection of RAOU Atlas data further indicates that the Hooded Plover is a widespread inhabitant of Tasmanian beaches.

Atlas data for the Hooded Plover is compared in the following table with similar information for seven other species of waders. The comparison is made in terms of the number of record sheets (submitted prior to 12 Sept. 1981) containing Hooded Plover records, comparing both Tasmanian totals and national totals. The distribution of the species within Tasmania is reflected by the number of 10' grid blocks for which the species has been recorded.

Species	No. of Atlas record sheets containing records		Ratio $\frac{\text{National}}{\text{Tasmanian}}$	No. of 10' blocks within Tasmania in which each was recorded	
	National	Tasmanian		Observation	Breeding
Common Sandpiper	1721	151	11.4	31	
Turnstone	1454	181	8.0	47	
Red-necked Stint	2866	366	7.8	68	
Sooty Oystercatcher	2269	542	4.2	110	13
Pied Oystercatcher	4248	1212	3.5	136	39
Red-capped Plover	5253	668	7.9	109	27
Hooded Plover	1382	563	2.5	112	25
Double-banded Plover	824	224	3.7	68	

The national/Tasmanian ratio of Hooded Plover records is lower than for any other wader species.

Within Tasmania the Hooded Plover is a widespread breeding species being recorded in 112 10' blocks: a total that is exceeded by only one of the other seven common wader species, the Pied Oystercatcher. It is interesting that the Hooded Plover, Pied Oystercatcher and Sooty Oystercatcher are evidently much more widely distributed on the coast of Tasmania than the other species. The reason is that these three species favour the ocean beaches. The overall length of Tasmania's coastal perimeter is larger in proportion to the area of its land than is the case for the mainland. Although Tasmania is relatively small and well endowed with beach habitats, it unfortunately does not possess sufficient manpower for an effective beach census.

It is interesting that species like the Curlew Sandpiper and the Red-necked Stint, which have a more restricted distribution favouring estuarine habitat in particular, have a national/Tasmania record sheet observation ratio of about 8:1. This might reflect the fact that although Tasmania has a long shore line it does not have an abundance of estuarine habitats comparable to the well-surveyed and

atlassed areas of the SE mainland. Another important consideration is that of Tasmania's geographical position, at the distant southern end of the geographical range available to the Palaearctic-breeding waders. Possibly such terminal areas are somehow limited in their usefulness to migrant waders or are only populated when other more proximal areas approach saturation population densities.

The data for the two other plover species warrants brief comment. While the Red-capped Plover is as widely distributed within Tasmania as the Hooded Plover it is not a beach specialist, more often frequenting estuarine and inland areas. Compared with the Australian mainland Tasmania is not disproportionately well-endowed with Red-capped Plover habitat and hence the high ratio of national/Tasmanian Atlas record sheet observations for this species is to be expected.

Finally, the Double-banded Plover which has an apparently restricted distribution within Tasmania being recorded in only 68 10' blocks, the same number as the Red-necked Stint. However the ratio of national/Tasmanian Atlas record sheet observations, 3.7:1, is very much lower than the value of about 8 which is typical of the Palaearctic breeding migrant waders. Thus the Tasmanian region appears to be the Australian stronghold of the Double-banded Plover as well as the Hooded Plover, but in this case it is suggested that the proximity of Tasmania to the species' New Zealand breeding grounds is the dominant factor rather than a relatively high proportion of suitable habitat compared to adjacent mainland areas.

This very crude and over-simplistic treatment of Tasmanian records suggests that the RAOU Atlas data bank can be used to complement wader survey data.

Reference

Martindale, J. (1981). AWSG Wader Counts in Australia. The Stilt 1:9-11.

WHAT THE BANDING GROUPS HAVE BEEN CATCHING

Letter codes for groups and banders are given at the bottom of the table

There are two additions to the list:-

M Berrice S. Forest, Seaford Swamp, Vic.
N Ken Mills, Great Southern District, W.A.

Among the VWSG catches, the incidence of birds retrapped (for those species totalling at least 30 trapped) were as follows:

	retraps/Total	%
Pied Oystercatcher	18/36	50
Red-kneed Dotterel	0/43	0
Mongolian Plover	1/41	2
Double-banded Plover	1/61	2
Red-capped Plover	21/62	34
Sharp-tailed Sandpiper	2/60	3
Red-necked Stint	343/1807	19
Curlew Sandpiper	19/201	9

WADER CATCH TOTALS FOR THE PERIOD 1.1.82 to 30.6.82

Species	A	B	C	D	E	F	I	K	M	N	TOTAL
Pied Oystercatcher			36		6						42
Sooty "	1		2								3
Masked Lapwing		2	19								21
Grey Plover						1				3	6
Red-kneed Dotterel			43		2		1				44
Hooded Plover			3								3
Mongolian Plover			41								41
Double-banded Plover	3		61								64
Large Sand Plover			11	3						1	15
Red-capped Plover	16		62	1	137	1				23	240
Black-fronted Plover	2		16					4			22
Black-winged Stilt					1					2	3
Red-necked Avocet			3								3
Ruddy Turnstone			15		1	7					23
Tattler sp.				1							1
Common Sandpiper			1								1
Greenshank	2									4	6
Terek Sandpiper			2					1			5
Latham's Snipe							9	13	29		51
Bar-tailed Godwit					4						4
Red Knot			1					3			66
Great Knot					7						11
Sharp-tailed Sandpiper			60							2	11
Red-necked Stint	324	13	1807		145	46		3	21	4	88
Curlew Sandpiper	194	1	201		1			5		162	2497
Sanderling			11		11						402
TOTAL	542	16	2394	8	315	119	10	29	50	201	3684

A = B.O.A.T. Shorebird Study Group, Hobart Area; B = David Henderson, Tamar Estuary, Northern Tasmania;
 C = V.W.S.G. Victorian Coast; D = Tony Hertog, Darwin Area; E = W.A.W.S.G., south-western Australia;
 F = S.A.O.A. Wader Study Group, South Australian Coast; I = Alan Leishman, Sydney Area; K = Bill Lane,
 Western Australia. M = Berrice Forest, Seaford Swamp, Victoria; N = Ken Mills, Great Southern District,
 Western Australia.

AGEING CRITERIA OF SANDERLINGS IN AUSTRALIA

by Steve Davies

The following discussion is based mainly on an examination of twenty Sanderlings *Calidris alba* cannon-netted by W.A. members of A.W.S.G. at Brown Bay, Garden Island, W.A. on 13 December 1981, and on another thirteen, two of which were retraps from the previous catch, cannon-netted at the same site on 8 March 1982. There is an obvious danger in basing conclusions on such a small sample, but the absence of published data on ageing criteria for this species in Australia, where only three had been banded in Australia prior to 1981, suggests that there is a need for comment. The following remarks should be read as tentative suggestions rather than as confirmed observations.

Speed and calendar timing of moult in adults

Thirteen of the birds captured in December were in primary moult and displayed the plumage characters of adult birds (thin, whitish edging to coverts, etc.). The unmoulted primaries of these birds were moderately heavily worn. The moult of the right wing was scored in the usual way: 0 = old feather, 1 = feather missing or in pin, 2 = feather up to 1/3 grown, 3 = feather 1/3-2/3 grown, 4 = more than 2/3 grown and still showing waxy sheath, 5 = new feather with no sheath; score of 50 indicating complete moult. The range of moult scores was 30 to 42 points with the mean at 34 points.

The Guide to the Identification and Ageing of Holarctic Waders,¹ (G.I.A.H.W.), suggests that in South Africa adult Sanderlings moult between mid-October and the end of February.

It is known that the usual progress of moult against time is a sigmoid curve rather than a linear progression. Paton and Wykes² studied the moult of Red-necked Stints *Calidris ruficollis* in Australia.

Using the same scoring system, they calculated that in the early and middle stages, stints moulted at a rate of 0.55 points/day/wing, and in the slower, later stages at 0.25 points/day/wing. If we assume that Sanderlings moult at similar rates, with the faster rate before mid-December and the slower rate after mid-December, it can be calculated that the birds captured at Garden Island must have begun their moults in mid-October and must have finished their moults around mid-February. That is, if Sanderlings moult at the same rate as Red-necked Stints and the adults we captured are representative of adult Sanderlings in general in Australia, it appears that adult Sanderlings moult in Australia at the same time as they moult in South Africa.

All the birds captured in March which had undergone a complete primary moult had by then finished that moult, including one adult that had a moult score of 30 on 13 December.

Characteristics of immature birds

All of the non-moulting and presumably non-adult birds captured in December had noticeably fresh primaries. They also showed the broad buff edging and notches on inner median coverts and tertials which, as described in G.I.A.H.W., characterise birds in their first southern summer (F.S.S.). These birds were very easily distinguished from adult birds, apart from the fact that the latter were in moult. The F.S.S. birds had faded brown centres to the median coverts, whereas the centres of the median coverts were grey in adults. This made the contrast between the very black lesser coverts and the median coverts much more striking in the F.S.S. birds. Wear on the outer median coverts of adult birds was even, whereas F.S.S. birds showed notches on the outer median coverts where the buff tips had abraded. Thus, the brown and buff wings of the F.S.S. birds were unmistakably different from the grey and whitish wings of moulting adults.

These plumage-characters were so strongly marked that they were apparent in the field at medium range, even when the wings were closed.

The *G.I.A.H.W.* suggests that, as the southern summer progresses, only a few buff tips (on inner medians and the fifth tertial) are retained by F.S.S. birds. It notes that, in the southern hemisphere, there is a complete or partial moult commencing between January and July. Two of the March birds were in partial moult; in both, the outer four primaries were being renewed. The partial moult was indicated by a colour contrast between the "old" inner and the new outer primaries, the latter being darker; less obvious was the slight wear of the inner primaries by comparison with the pristine outer primaries. The moult scores of the right wings of these birds stood at 16 and 14 (partial moult would finish at 20 points). Using the slower rate of moult indicated above, one can guess that these birds probably commenced their partial moult towards the end of January and ended it by the end of March or early April. As confirmation of the theory that birds in partial moult at this time are in their F.S.S., one of these birds was a retrap of a bird banded and aged as F.S.S. in December.

Neither of the birds in partial moult retained any trace of buff tipping to coverts or tertials, nor was buff tipping recorded on any other birds in the March catch. F.S.S. birds having finished a partial moult at this time should always be distinguishable from adults by the colour contrast between the inner and outer primaries. One other bird in the March catch showed such a contrast between the inner seven and outer three primaries. Other F.S.S. birds that have not commenced a partial (or complete) moult, or which do not moult as they approach age one year, should be distinguishable from adult birds at this time by the slightly paler (browner) colour of their primaries and by the slight to moderate wear of the outer primaries. However, these characters can be difficult to apply, especially where the primaries are disarrayed or wetted during capture and handling. Both known adult and F.S.S. birds showed rather heavy wear on median coverts and tertials at this time, but it was thought (from examination of the F.S.S. birds in partial moult) that the inner medians and tertials of F.S.S. birds are more pointed than those of adults. This is what one might expect, since adults abraid the even, whitish edge whereas F.S.S. birds quickly abraid the broader buffish edge to form a notch on either side of the feather's end in the case of median coverts and tertials. On these characters it was thought that a further two birds in the March catch might have been F.S.S. birds. Of the remaining eight birds, one was a known adult (retrap), and the others appeared to be indistinguishable from it. Certainly none of the birds in the March catch was in the early stages of complete primary moult. If the *G.I.A.H.W.* is correct in saying that some F.S.S. undertake a complete primary moult which continues through the southern winter, then these birds may not commence that moult before early March.

The *G.I.A.H.W.* suggests that birds in their second southern summer (S.S.S.) might be recognisable early in their second summer by having two moults in progress - presumably the ending of a complete first-year moult and, in synchrony with full adults, the beginning of a complete second-year moult commencing about mid-October.

One would expect S.S.S. birds that underwent a complete southern winter moult to have finished it by mid-December. It is not surprising, therefore, that none of the birds captured in December showed signs of simultaneous, dual moults. More noteworthy was the fact that none of the December birds in primary moult had entirely fresh outer primaries, whilst all the non-moulting birds showed the plumage characteristics of F.S.S. birds. So there was no indication of the presence of S.S.S. birds in the December catch. Nor was there any sign of such birds in the March catch, although one would not expect them to be distinguishable from full adults at that time anyway. One is faced, then, with

with two alternative hypotheses: either S.S.S. birds are indistinguishable from adults by mid-December, or no S.S.S. birds were captured in December.

Alternative moult strategies in First Southern Summer birds

A F.S.S. Sanderling might adopt one of four moult strategies in the southern hemisphere. It might attempt

- (A) a partial moult of the outer primaries, probably beginning in January;
- (B) no primary moult at all;
- (C) a complete primary moult, probably beginning after January;
- (D) an arrested moult (i.e. moult of the inner but not the outer primaries), probably beginning after January.

The *G.I.A.H.W.* mentions that strategy (C) is a possibility for F.S.S. Sanderlings, in which case strategy (D) might also occur. Nevertheless, it may not be unreasonable to assume that a majority of F.S.S. Sanderlings in Australia, like Red-necked Stints and Curlew Sandpipers, adopt strategy (A) and that a few birds (late arrivals) adopt strategy (B).³

It is known that the vast majority of F.S.S. Curlew Sandpipers adopt moult-strategy (A). My own experience suggests that the same is true of Red-necked Stints. I have come across no evidence to suggest that either of these species adopt strategies (C) or (D). The *G.I.A.H.W.* mentions various moult-strategies for F.S.S. Curlew Sandpipers in South Africa, but without suggesting that they attempt a full primary moult; nor is it suggested in the *G.I.A.H.W.* that F.S.S. Red-necked Stints attempt a full primary moult.

Conclusion.

Adult birds should be distinguishable from S.S.S. birds until about December. By the end of December S.S.S. birds will then be indistinguishable from full adults. During December only a few S.S.S. should be ageable as such; the remainder would be classed as Adult/S.S.S.

F.S.S. Sanderlings should be distinguishable from adult S.S.S. birds throughout the year, except where disarray and wetting of the plumage sometimes experienced during trapping operations make the determination of feather wear and colour contrasts difficult to assess.

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- ²Paton, D.C. and Wykes, B.J. (1978) Re-appraisal of moult of Red-necked Stints in southern Australia. *Emu* 78:54-60.
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EVALUATING THE QUALITY OF WADER SITES

by David Close

When describing a site as "good for waders" we mean not only the number of birds and of species, but also the rarity of some of those species. As rarity is relative, how can one quantify it?

Here is one method: allot each species a number of points, on a scale from one to five, according to its rarity in the State or region concerned. Thus the status "abundant" scores one; "common" scores two; "fairly common" scores three; "rare" scores four; and "vagrant" five. There is some case for giving higher scores to a first State record (6) and a first Australian record (7). Technically, however, these bonus categories have the same status (and indeed about the same twitching value) as vagrants, so their inclusion would tend to distort our evaluation of a site. Of course in most of Australasia this scale will need revision as our knowledge of wader status improves. "Decremental creep" is something we have to live with, as vagrants prove to be merely rarities; rarities fairly common, and so on. For this reason it would probably be worth having a "Wader Points Review Committee" in each State.

With these criteria, we can begin to draw up a list of the best wader sites in Australasia. In South Australia there are two outstanding candidates. Price Saltfield in Gulf St. Vincent has on one occasion (17 March 1979) scored 54 wader points for 26 species of wader, and at least 13,500 (probably over 17,000) birds. ICI Saltfields near Adelaide (and so also in Gulf St. Vincent) scored 43 wader points for 21 species on 6 February 1980, when there were at least 20,000 birds (which is the number counted three days earlier in similar conditions).

It will be interesting to hear how sites elsewhere compare with these.

[Do other observers, or indeed would the waders themselves, agree with these criteria? ED.]

HOW MANY WADERS HAVE THEY FOUND IN JAPAN?

The results of two recent counts held by the Wild Bird Society of Japan in 1980 make some very interesting comparisons with recent Australian figures. Here are the raw totals given in the 1981 journal of the Wild Bird Society -

	15.9.80	29.4.80		15.9.80	29.4.80
Painted Snipe	43	19	Eastern Curlew	377	255
Pied Oystercatcher	-	2	Whimbrel	1017	6291
Ringed Plover	6	-	Bristle-thighed Curlew	1	-
Little Ringed Plover	801	804	Little Whimbrel	2	-
Long-billed Ringed Plover	258	162	Woodcock	2	1
Kentish Plover	17396	5709	Common Snipe	1054	1396
Mongolian Plover	1376	2532	Swinhoe's Snipe	2	2
Large Sand Plover	16	5	Latham's Snipe	121	54
Lesser Golden Plover	2513	3049	Jack Snipe	1	-
Grey Plover	1285	1169	Black-winged Stilt	12	-
Grey-headed Lapwing	2547	502	Grey Phalarope	1	174
Lapwing	-	2	Red-necked Phalarope	229	18
Turnstone	609	1926	Oriental Pratincole	121	17
Red-necked Stint	3234	3788	Waders sp.	1414	6313
Long-toed Stint	76	47	Totals	56450	100868
Temminck's Stint	13	10			
Baird's Sandpiper	2	1			
Sharp-tailed Sandpiper	65	334			
Dunlin	6032	54377			
Curlew Sandpiper	26	12			
Knot	40	124			
Great Knot	684	645			
Sanderling	1481	516			
Spoon-billed Sandpiper	17	3			
Ruff	105	23			
Broad-billed Sandpiper	58	10			
Spotted Redshank	115	3072			
Redshank	16	3			
Marsh Sandpiper	36	6			
Greenshank	1158	487			
Spotted Greenshank	4	-			
Green Sandpiper	145	58			
Wood Sandpiper	5169	2386			
Wandering Tattler	1	5			
Grey-tailed Tattler	2350	1224			
Common Sandpiper	857	547			
Terek Sandpiper	2528	270			
Black-tailed Godwit	452	84			
Bar-tailed Godwit	422	2312			
Curlew	160	122			

The spring glut of Dunlins accounts for much of the difference in overall numbers between the two counts. Other points that catch my eye include the relative scarcity of all three stints, Curlew Sandpipers and both knots; the four snipe species and the change in seasonal status shown by the phalaropes.

(ED.)

REPORT ON THE FIRST AERIAL SURVEY OF WADERS IN N.E. AUSTRALIA, DECEMBER, 1981

by Roger Guard and Stephen Garnett

6th December

The coastal surveillance Nomad departed Cairns at 0820 hrs on surveillance to Cape Grenville and then to ferry to Weipa for overnight stop. This day was very disappointing as far as waders were concerned and we left the definitive count of the east coast until our return trip. The reason for this was the unfavourable tidal conditions. However, it also appears that the east coast is comparatively poor in wader populations when compared with the lower Gulf of Carpentaria. The reason for this appears to be that waders like areas where at low tide large expanses of either sand or mud flats are exposed. Most of the east coast consists of a comparatively steep land drop with many rocky headlands. Tidal rise and fall are also less than on the Gulf and west coasts of Australia. Areas at the bottom and west sides of Princess Charlotte Bay plus Trinity Inlet at Cairns do provide sand and mud expanses at low tide and these areas provided the greatest number of waders.

Our first day's flight was also somewhat marred by air sickness. The Nomad is very rough and noisy and the intercom is required for communication between crew and observers.

When at Weipa, we conducted a ground inspection of waders in Albatross Bay. Pied Oystercatchers, Common Sandpipers, stints, Beach Stone-curlews, Greenshanks, sandplovers and Whimbrels were noted.

7th December

We changed planes and joined the Executive Air Aerocommander from Normanton. After leaving Weipa, waders were relatively few, but the further south we went the larger the numbers we encountered. Highest numbers were at Fitzmaurice point and near the mouth of the Smithburn River. Here we were forced to group them in units of 10,000. Black-tailed Godwit was the predominant wader and accounted for many tens of thousands.

We departed Normanton at 0800 hrs. The weather was fine and moderately hot. Our plan was to fly first to Borroloola direct at 8000 feet and there to exchange planes with the Gove plane, since this aircraft was due for servicing. This plan also fitted better with the tides since low tide was at approximately 11 a.m. Due to a slight navigational error we missed Borroloola and overflew by the extent of approximately 25 kms to the south. We then turned and followed the Daly Waters to Borroloola road in to Borroloola. Vanderlin Island has rocky beaches and low savannah scrubland and provided us with very few waders.

Back on the mainland again, we started to get significant wader counts. Most wader groups were flushed by the plane and were readily seen but were difficult to classify to any degree. The N.T. coast before the Queensland border consisted of low sand dunes and a few minor salt flats. Pandanus was prominent among the vegetation, reminding one of the vegetation around Darwin. After crossing the border, the further we went into Queensland, the greater the density of wader populations. We left the mainland coast at Bayley Point to go across to Mornington Island via Forsyth Island. The north coast of Mornington Island had only a thin sand beach. The vegetation was flat savannah lands similar to Vanderlin Island. The coast provided very few waders. We left this coast at the pilot's suggestion, to visit Rocky Is. and Manowar Island. From Pt. Parker to Karumba the coast provided the richest wader area for the day. The waders were generally situated on sand bars and more spread out than on the previous day thus our counting accuracy probably improved.

Wednesday, 9th December.

We started coastal surveillance at 10.40 a.m. at Cape Grenville. The coast is very variable in nature. The weather conditions on this day were perfect and the tide was low. South of Cape Direction we began counting. The plane flew at 500 feet and provided excellent viewing.

This trip illustrated the expanded use that can and should be made of the coastal surveillance flights. These flights might well be used to do other wildlife surveys such as an annual check on the Torres Strait Pigeon rookeries and surveys of dugong. This could be done without interfering with the quarantine duties of the flight and would be making more use of existing coastal surveillance flights.

The numbers of waders seen are as follows:

<u>Section of coast</u>	<u>Date counted</u>	<u>Estimated no. of waders</u>	<u>Density (W/km)</u>
Mowbray R.-Cape Melville	9 Dec	573	2.9
C. Melville-Campbell Pt.	"	3203	15.4
Campbell Pt.-C. Grenville	"	286	1.8
Total east coast		<u>4062</u>	<u>7.2</u>
Weipa-Nassau R.	7 Dec	1582	4.1
Nassau R.-Gilbert R.	"	16385	210.1
Gilbert R.-FitzMaurice R.	"	169600	2019.0
FitzMaurice R.-Karuma	"	6000	187.5
Total west coast		<u>193567</u>	<u>334.3</u>
Karumba-Disaster Inlet	8 Dec	14880	135.3
Disaster Inlet-Pt. Parker	"	19878	159.0
Bayley Pt.-Qld./N.T. Border	"	8669	77.4
Qld./N.T. Border-Pelican Pt.	"	357	3.2
Total south coast (excl. Pt. Barker-Bayley Pt.)		<u>43784</u>	<u>95.8</u>
Wellesley Islands (excl. south coast Mornington Is.)	"	798	5.7
Vanderlin Is.	"	32	1.0
Total Gulf of Carpentaria		<u>238149</u>	<u>197.1</u>
TOTAL - NORTH QUEENSLAND COAST		<u><u>242211</u></u>	<u><u>136.5</u></u>

REPORT ON THE SECOND AERIAL SURVEY OF WADERS IN N.E. AUSTRALIA, FEBRUARY 1982
By Stephen Garnett and Ian Carruthers

The following report gives an idea of the areas covered and the results obtained.

After leaving Cairns at 1100 hrs on the 12th February we spent five days counting waders from surveillance planes between Cairns and Gove. The results of the survey are shown in the table. The initial section of coast was eclipsed by rain and it was not before Cape Bedford that true surveying could be done. Actually the east coast of Cape York has little good wader habitat. The immense white beaches of Cape Flattery and Cape Grenville are generally devoid of birds and only rarely is it possible to detect the poised form of a plover or a pair of oystercatchers. Much of the coast is also rocky and if there are birds there they are indistinguishable unless they fly. The best part is Princess Charlotte Bay but on this trip the tide was high and lapping the mangroves. We managed to see some flocks of small waders on the extensive salt flats behind but flushed few birds from amongst the trees where we suspect they were roosting.

The coast immediately south of Weipa is also pretty poor for waders. The tide was right for us this time, the crew of the surveillance plane had been good enough to wait awhile in Weipa until it had receded, but beneath the bauxite cliffs and on the steep shell grit beaches there is little good mud. South of the Nassau, however, the area of exposed mud increased and flocks of birds began to peel off beneath us continuously. Still there were fewer than last time, although the south-east of the Gulf still held over 52% of all birds seen, and it is possible that many birds are feeding at this time of year on the salt flats inland rather than the beach.

Usually these extensive bare areas of salt and mud are dry but when there are king tides and there has been much rain they suddenly become productive. They could well be vital for some species of wader on their migration north. We were fortunate in Normanton to be the guest of a most experienced observer in aerial surveillance, Mr. John Woodburn. He has made many pertinent observations of birds in the SE Gulf area and had noted that the numbers of waders fluctuate greatly. He estimated that the number we saw on the day we surveyed was half that of a week earlier. He also noticed that soon after we had seen vast numbers in December - 170,000 birds in 80 kilometres - there was hardly a wader to be seen on that coast. And this situation continued until a fortnight before we next came through. Still much to be learnt!

There were also fewer birds on the run to Borrooloola but we did locate a good area on the southern side of Mornington Island, Charlie Bush Bay, a place that had not been surveyed for waders before. On the southern coast of the Gulf the best mud occurs just west of Karumba and as one goes further west the shore becomes progressively more sandy and waders are seen only at the mouths of creeks. We stopped surveying at MacArthur River and ferried north with the surveillance crew based at Gove.

At Gove, Nabalco (the company which has the lease for mining bauxite on the peninsula) provided us with board and accommodation and transport to

visit possible good wader areas while we were on the ground. Nabalco has offered to support wader surveillance in this way for the next three years which should allow a good coverage of this remote but important area. On the two afternoons we were in Gove we were shown around by Barry Owen, of the Company, and Bill Pretty and although we found few waders in the immediate vicinity, the wet season blocking more extensive travel, we did find a flock of dotterel in which there were more Large Sand Plovers than Mongolian. The opposite ratio occurs on the eastern shores of the Gulf.

Much of the coast around NE Arnhem Land is either cliff or sandy beach; very beautiful, especially at this time of year when there are countless waterfalls dropping into the sea and all the land is green, but devoid of waders. However several bays have shallow mud. One, Arnhem Bay, had over fifty crocodiles wriggling in the shallows - and few waders, - but Buckingham Bay, and probably Castlereagh Bay, although there the tide was high and the birds were scattered over the mudflats inland, are good areas for waders. The tide was also high in Cadell Strait, a narrow passage of water between Elcho Island and the Napier Peninsula lined at low tide with mud and mangrove, but at the northern end were some large flocks clustered on the remnants of sand banks.

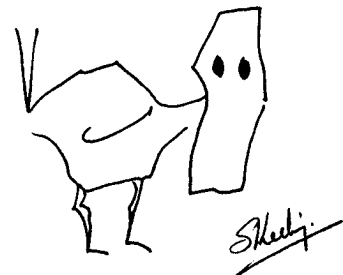
The flight south from Gove was marred by high tides and rain so that in Blue Mud Bay, where we were told by the observers to expect large flocks, there was only water lapping at mangrove roots. However south of the Roper River towards Bing Bong the mangroves were thinner and several large flocks were seen in sand banks. Largely Black-tailed Godwits there but it was difficult to record them as such on the tape recorder because there was simply not enough time. By the time you have decided on the species, or even on the general size, and told the tape recorder, you may have missed another flock. Only where there is a paucity of birds is it possible to concentrate on identification.

The last area surveyed was between the Flinders River and Karumba. Because of bad weather we had omitted this section on our way west but on the way back better weather enabled us to count an extra ten thousand birds. We returned to Cairns the following day on a DC3, a tame aircraft after the Shrike Commanders that had been serving us so well.

<u>Section of coast</u>	<u>Date counted</u>	<u>Estimated no. of waders</u>	<u>Density of waders /km flightline</u>
Mowbray R.-Cape Melville	12.ii.82	183	0.9
C. Melville-Campbell Pt.	"	625	3.0
Campbell Pt.-C. Grenville	"	61	0.4
Total east coast Cape York		869	1.5
Weipa-Nassau R.	13.ii.82	1054	2.7
Nassau R.-Cape Gilbert	"	7934	101.7
Gilbert R.-FitzMaurice R.	"	21129	251.5
FitzMaurice R.-Karumba	"	26279	821.2
Total west coast Cape York		56395	97.4
Karumba-Disaster Inlet	14.ii.82	21168	192.4
Disaster Inlet-Pt. Parker	"	12070	96.6
Bayley Pt.-Qld/N.T. Border	"	5526	49.3
Qld/N.T. Border-Pelican Pt.	"	33	0.3
Bing Bong-Roper River	16.ii.82	14413	96.1
Total south coast Gulf (excl. Pt. Parker-Bayley Pt., Pelican Pt.-Bing Bong)		53210	87.7
Mornington Is. (S. coast only)	14.ii.82	3521	50.3
Vanderlin Is.	"	7	0.2
Roper R.-Gove (excl. Grindall Bay-Binangor Pt.)	16.ii.82	699	2.3
Total Gulf of Carpentaria (Weipa-Gove)		113832	71.6
Gove-Milingimby	15.ii.82	20457	30.5
(Buckingham Bay)	"	9893	549.6
(Cadell Strait)	"	7007	467.1
TOTAL FOR SURVEY		<u><u>131631</u></u>	<u><u>46.8</u></u>

Hooded Plover

Charadrius
kluxus



A SIMPLE WADER CATCHING TECHNIQUE

by A.J. Tree, Zimbabwe

On reading the first issue of *THE STILT* (No. 2) to reach me a couple of points become very obvious: (a) the sparse scattering of wader ringers and (b) the small number of Australian indigenous species that are banded. In Africa, we are very much in a similar position and those few banders who are prepared to brave the nights, mud, mosquitoes, crocodiles or whatever usually go for the larger concentrations of palearctic waders. Indeed, on coming out from Ireland I was very inclined to do the same but although I still actively band these species I concentrate far more on our indigenous species, about which much less is usually known. I would suggest that there is tremendous scope for studies of this kind in Australia. As the only wader bander in Zimbabwe I must set my cap to suit the situation and operate within the scope of a loner's limitations and amongst species that only flock to a limited extent and it is here that I would like to suggest that some Aussies may like to take up an albeit old method to catch birds, that of the torch and handnet. This method is ideal for those species that are scattered and invaluable for catching pulli.

Equipment

A 12v hand held torch, available in at least two Japanese makes; at least two 12v motorcycle batteries (size 12 N9 - 4B 1 is the best) but if going on a long trip away from civilization more may be needed. Each battery gives about two hours continuous use; a small battery charger; a butterfly net of about a metre diameter with 36 to 50 mm mesh fishing net and allowing only a little slack, a lightweight hollow aluminium pole of two to three metres length. The battery is carried in a small, preferably plastic, backpack. Quite a few cotton bird bags stuck in one's belt. A small ringing kit may be also carried to process breeding birds and their young immediately after capture. Wear silent clothing and preferably short trousers. When the bird is put in the bag hang the bag in your belt behind your back as birds are kept restless and noisy by the torchlight if kept in front.

Species best suited for this technique

This should be the best catching technique for thickknees, Painted Snipe, Masked and Banded Lapwings, most small plovers, snipe, pratincoles and allied species while jacana, oystercatchers, stilt, avocet, Turnstone are a little more difficult. For all other species this technique is very variable with good catches occasionally but usually a few or none would be the result. Large flocks of any species usually explode and scatter when torched but scattered individuals should then be sought.

Conditions

Dark nights or nights with very small moon or moon heavily obscured by cloud are the best. The ideal conditions also incorporate warm, overcast pre-rainstorm weather when one's eyes start playing tricks long before the catchable birds run out. Nightjars are best caught on moonlit nights.

I've enjoyed these lone nocturnal rambles and learnt much also about the less known nocturnal mammal species as well as being able to creep up to within a metre or two of large crocodiles! A normal evening's catch should vary from 10 to 50 birds per person.

OPEN NOTEBOOKLittle Ringed Plover (*Charadrius dubius*) near Hobart

'At approximately 1530 hrs on 29 March 1982, a calm and overcast day, I visited Gould's Lagoon at Granton, about 15 km. N.W. of Hobart and found three small waders there (a rare occurrence) and I was able to approach within 20 metres of them. Only on two previous occasions have I seen small waders there: on one occasion a Double-banded Plover, on the other a Black-fronted Plover. On this day, two of the small waders were Black-fronted Plovers while the third bird was a stranger to me.

The following description is taken from my field notebook -

length about 17 cm, bill brown and about half as long as the tarsus; legs flesh pink; uppersurface medium brown (without any mottling); white chin and throat with complete white collar, below which was a fairly narrow black band which began on the upper breast and extended to meet on the upper back; face black; broad white forehead enclosed with black; buff line enclosed a brown crown and there was a clear buff orbital ring; underparts white.

When I disturbed the bird it flew to the other end of the lagoon and I heard it utter a weak high-pitched double note. It showed no wing-stripe, the sides of the rump were dull white and the centre of the rump and the tail were brown, as was the back. I noted that the wings were narrower and its flight was faster than that of the Black-fronted Plover.

Upon reaching home I satisfied myself that this stranger was a Little Ringed Plover and alerted other observers to its presence. Several who had known this species in the British Isles were able to confirm my identification.

On the morning of 30 March I re-visited the lagoon and was able to obtain a number of photographs using an 800mm telephoto lens.

During the following weekend unsuccessful efforts were made to mist-net this bird in the hope of determining its sub-specific status, and it disappeared immediately thereafter.

Len E. Wall.

[There are now at least 11 other published records of this species in Australia: Roger Jaensch reviewed the details of these recently. The usual leg colour evident on these birds has been yellow (including bright-yellow to orange), this first Tasmanian bird apparently the first to display flesh-pink legs.

The plumage of the Gould's lagoon bird suggests that it was an adult: in Australia, adults and immatures have been recorded in approximately equal proportions to date. ED.]

AUSTRALIAN BIRD-BANDING SCHEMERECOVERIES OVERSEAS OF CHARADRII BANDED IN AUSTRALIA

The following recoveries were reported during the period 4.iv.82-8.x.82:-

Large Sand Plover

051-15876 Adult 2/9/81 Roebuck Bay, W.A. (18°04'S., 122°19'E.)
WAWSG (=Western Australian Wader Study Group).
'Bought at market' 12/8/82 Beihai, Grangxi,
PEOPLE'S REPUBLIC OF CHINA (21°29'N., 109°10'E.)

Grey-tailed Tattler

051-00412 lyr. old 30/8/81 Roebuck Bay, W.A. WAWSG.
'Caught' 21/5/82 Tsankiang, Guang-dong, PEOPLE'S
REPUBLIC OF CHINA (21°10'N., 110°20'E.)

Bar-tailed Godwit

082-43963 Adult Female 20/3/81 Botany Bay, N.S.W. (33°57'S.,
151°11'E.) S.G. Lane.
Found on beach (partly decayed) 10/5/82 Mokpo,
SOUTH KOREA (34°47'N., 126°23'E.)

RECOVERIES IN AUSTRALIA OF CHARADRII BANDED OVERSEAS

The following recoveries were reported during the period 25.iii.81-8.x.82:-

Red Knot

NEW ZEALAND C-31629 First-year bird 17/8/80 Taramaire, Firth of Thames,
NEW ZEALAND. Flew into light tower, Sandy Cape Lighthouse,
Fraser Island, Qld. (24°42'S., 153°15'E.)

Red-necked Stint

BRITISH TRUST FOR ORNITHOLOGY HB 19517 2 yr+ 12/5/80 San Tin,
HONG KONG (22°30'N., 114°04'E.)
Retrapped 27/3/82 Queenscliff, Victoria (38°15'S., 144°40'E.).

RECOVERIES IN AUSTRALIA OF CHARADRII BANNED IN AUSTRALIA(ONLY MOVEMENTS IN EXCESS OF 25KM ARE INCLUDED)

The following recoveries were reported during the period 5.iv.82-8.x.82:-

Pied Oystercatcher

- 100-83680 Adult Male 12/7/81 Aerial Lagoon, Lauderdale, Tas. (42°56'S., 147°29'E.) SSG (BOAT) (= Shorebird Study Group Bird Observers' Association of Tasmania). Dead several months 23/1/82 Cloudy Bay, South Bruny Island, Tas. (43°28'S., 147°13'E.) 64 km SSW.
- 100-82079 Adult 8/3/80 Werribee, Vic. (38°03'S., 144°32'E.) VWSG (= Victorian Wader Study Group) Retrapped 14/6/81 and 28/3/82 Queenscliff, Vic. (38°15'S., 144°40"E.) 24km SSE.
- 100-82043 1 yr. old 21/2/82 Werribee Vic. VWSG. Retrapped 28/3/82 Queenscliff, Vic. 25km SSE.
- 100-81798 Free-flying 21/11/79 Lauderdale, Tas. (42°55'S., 147°29'E.) O.M.G. Newman. Dead 4/6/82 Ocean Beach, Bruny Island, Tas. (43°09'S., 147°21'E.) 28km. SSW.

Red Knot

- 051-08046 Juvenile 10/3/79 Werribee, Vic. VWSG. Retrapped 19/12/81 Queenscliff, Vic. 25km SSE.

Red-necked Stint

- 032-28907 Juvenile 7/2/81 South end Pipeclay Lagoon, Tas. (42°59'S., 147°31'E.) SSG (BOAT). Retrapped 31/10/81 North Spit, Werribee, Vic. 610km NNW.
- 032-24004 Juvenile 28/12/79 Manns Beach, Corner Inlet, Vic. (38°41'S., 146°50'E.) VWSG. Retrapped 20/12/81 Yallock Creek, Koo-Wee-Rup, Vic. (38°13'S., 145°28'E.) 130km WNW.
- 032-26205 Adult 8/11/80 Werribee, Vic. VWSG. Retrapped 20/12/81 Yallock Creek, Koo-Wee-Rup, Vic. 85km ESE.
- 031-91132 Free-flying 6/11/78 Werribee, Vic. S.G. Lane. Retrapped 27/3/82 Queenscliff, Vic. 25km SSE.
- 032-25237 Juvenile 17/5/80 Werribee, Vic. VWSG. Retrapped 27/3/82 Queenscliff, Vic. 25km SSE.
- 032-28749 Adult 7/12/80 Lauderdale, Tas. SSG (BOAT) Retrapped 29/11/81 Pipeclay Lagoon, Tas. 8km SSE. Retrapped 27/3/82 Queenscliff, Vic. 585km NNW (from previous retrap site).

Curlew Sandpiper

- 040-71813 Free-flying 20/9/80 Kooragang Island, N.S.W.
(32°54'S., 151°47'E.) F.W.C. van Gessel.
Retrapped 20/3/81 Botany Bay, N.S.W. (33°57'S., 151°11'E.)
130km SSW.
- 040-94005 Free-flying 16/2/79 Stockton, N.S.W. (32°56'S., 151°47'E.)
S.G. Lane.
Retrapped 7/2/81 Pipeclay Lagoon, Tas. 1200km SSW.
Retrapped 15/11/81 Ralphs Bay, Tas. (43°01'S., 147°26'E.)
10km WSW (from previous retrap site).
- 040-96843 Adult 22/12/79 Yallock Creek, Koo-Wee-Rup, Vic. VWSG.
Retrapped 22/12/81 and 23/1/82 Kooragang Island, N.S.W.
810km NE.
- 040-96278 Adult 16/12/79 Werribee, Vic. VWSG.
Retrapped 27/3/82 Queenscliff, Vic. 25km. SSE.
- 040-96975 Juvenile 22/12/79 Yallock Creek, Koo-Wee-Rup, Vic. VWSG.
Retrapped 27/3/82 Queenscliff, Vic. 74km W.

Our thanks to the various banding groups and individuals who provided the banding and recapture data and to David Purchase, Secretary of the Australian Bird-Banding Scheme, CSIRO Division of Wildlife Research for compiling these lists for *THE STILT* (Ed.).

AUSTRALASIAN WADER STUDY GROUPStatement of Receipts and Payments
for the period 1st August 1981 -
30th June 1982

	<u>RECEIPTS</u>		<u>PAYMENTS</u>
Subscriptions	685.93	Cheque Book	1.00
Donations	20.00	Subscription refunds	18.00
Bank Interest	9.15	"Stilt" No. 1	134.71
		Stamp duty	1.60
		Balance c/f	559.77
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	\$715.08		\$715.08
	=====		=====

Bank Reconciliation as at 30th June, 1982

Balance as per bank statement	\$559.77
Balance as per Cash Book	\$559.77

Editor: Peter Curry
Collator: Brett Lane
Typist: Ellen Pole
"The Stilt" insignia designed by Jim MacNamara &
Perry de Rebeira.

THE STILT, No. 4 * * *

contributions to Brett Lane by 31st January, 1983.

CORRIGENDA: *STILT* 2.

p.5, Table 4, column 1, Victoria. Wood Sandpiper, 4; Tattler sp. 5, should be replaced by Tattler sp. 9, and the Wood Sandpiper records omitted.

Column 6, Tasmania. Unfortunately, southern Tasmania totals were not included. These should be as follows: Pied Oystercatcher, 681; Sooty Oystercatcher, 77; Masked Lapwing, 427; Eastern Golden Plover, 1; Hooded Plover, 20; Mongolian Plover, 1; Double-banded Plover, 172; Large Sand Plover, NONE; Red-capped Plover 419; Black-fronted Plover, 21; Turnstone, 41; Eastern Curlew, 2; Tattler sp., 1; Greenshank, 9; Bar-tailed Godwit, 33; Red-necked Stint, 342; Curlew Sandpiper, 7; TOTAL: 2254.

Percentage and total rows and columns should be changed accordingly.

p.29, after "thousands of" insert "adult"

p.65, under New Zealand, read Miranda Naturalists Trust for Miranda Field Naturalists Trust.

AUSTRALASIAN WADER STUDIES GROUP

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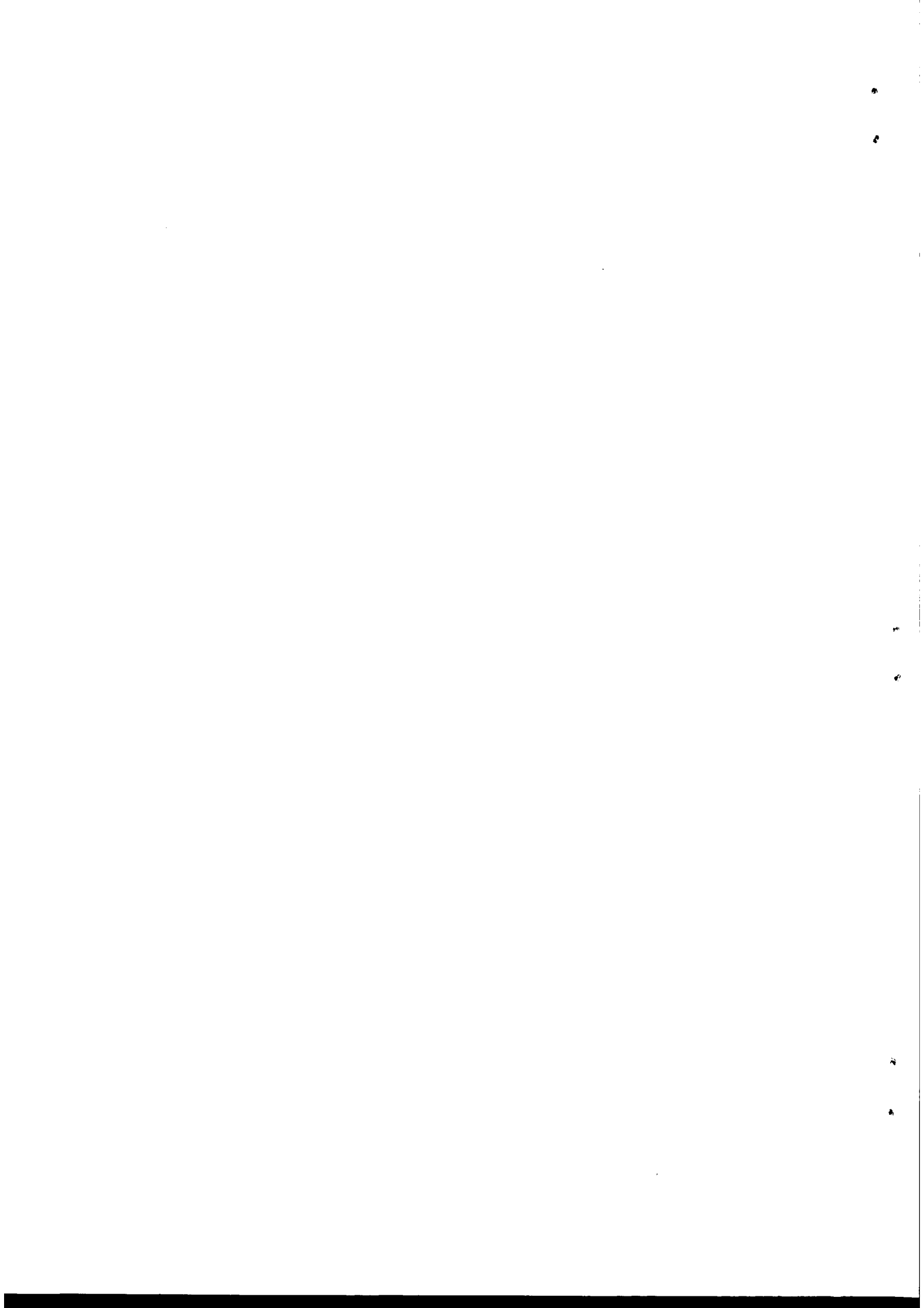
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