

CONCENTRATIONS OF RARE WATERBIRDS AT BOOL LAGOON

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During the period 5 December 1980 to 22 December 1981, observations of waterbirds were made at 94 areas of wetland in the South-East of South Australia by C. Auricht and myself. Our investigations at many wetlands were limited to visits of one or two days but more prolonged surveys were undertaken at several important localities.

Thirteen visits were made to the wetland complex at Bool Lagoon. Counts of waterbirds were compiled from careful searches of parts of the complex known to support regularly particular species or concentrations of birds. In addition, co-ordinated surveys were executed by teams of up to 12 observers from the South Australian Ornithological Association.

Results for the Intermediate Egret *Ardea intermedia* and Pectoral Sandpiper *Calidris melanotos* were especially valuable in adding to our knowledge of the status of these species in South Australia.

INTERMEDIATE EGRET *Ardea intermedia*

Parker *et al.* (1979) remarked that the Intermediate Egret would appear to be mainly an uncommon non-breeding visitor to South Australia, breeding occasionally at Bool Lagoon. They lamented the absence of descriptions from many early published records of this species. The SAOA ascribed the status 'rare' to the Intermediate Egret in its Field List (SAOA 1981) and indicated that most localities for published records were in the Adelaide Plains, Murray Mallee and South-East regions of the State.

My observations of this species in South Australia have included four at Coongie Lake on 27-30 August 1979 (with L. Pedler *et al.*, photographs obtained), one at the lake in Buckland Park on 13 December 1980 and a number of sightings at Bool Lagoon, e.g. one on 6 March 1980 (with D. Close).

Counts of the Intermediate Egret at Bool Lagoon during the 1980-81 study were:

- two on 5-6 December 1980,
- 26 on 25-27 February 1981,
- 18 on 7-8 March 1981,
- 23 on 21-23 March 1981,
- one on 6 July 1981 and
- 17 on 8-10 August 1981.

In addition, one pair bred at Bool Lagoon in 1981 (exact date uncertain) and at least three nests at two sites were found in November 1983: one with three eggs, one with two adults in attendance and two others, each with nestlings (J. Bourne, pers. comm.).

The following field characters were used by me to differentiate all *A. intermedia* that I have seen in South Australia from the Great Egret *A. alba*, Little Egret *A. garzetta* and Cattle Egret *Bubulcus ibis* (cf Cox 1973).

Proportions intermediate between *alba* and *ibis* and similar to *garzetta*: *garzetta* always has a slender black bill (bill yellow on *intermedia*), and more spindly neck than *intermedia*. Total length less than *alba*.

Fully extended neck equal to or slightly less than main part of body in length and without pronounced kink of *alba*. Neck tapered in shape, merging smoothly into main part of body, unlike spindly necks of *alba* and *garzetta*. Bulge of folded neck ('keel') much less prominent in flying *intermedia* than in flying *alba*.

Head more rounded than head of *alba* due to steeper forehead and more conspicuous jowl, though jowl not as obvious as on *ibis*.

Soft parts (non-breeding). Bill stouter and brighter yellow-orange than bill of *alba*, but not as short as bill of *ibis*. Legs black, not greyish as in *ibis*.

Both *intermedia* and *alba* generally secure their food by employing stealthy manoeuvres, whereas *garzetta* uses actions which are more energetic. The three 'lesser' egrets frequently shift position by making short 'jump-flights', a habit rarely displayed by the Great Egret. In flight, *intermedia* tends to flap its wings at a more rapid rate than *alba* but not as often as *garzetta* or *ibis*. Little and Cattle Egrets have a less rigid, more relaxed style of flight.

In most instances, the Intermediate Egrets seen at Bool Lagoon in 1981 were in loose but discrete flocks. They were sometimes mixed within aggregations of Great Egrets; the Great Egrets reached a peak number of 157 birds on 7-8 March.

On one occasion, all four species of egret were seen feeding together in flooded fields near the inflow of Mosquito Creek to Hack's Lagoon. Otherwise, the Intermediate and Great Egrets were found in the northern parts of Bool

Lagoon in vast areas of ribbon-weed *Triglochin procera* and short fine rush growing in shallow water (typically 0.2-0.5 metres in depth).

PECTORAL SANDPIPER *Calidris melanotos*

In support of the 'rare' status in Australia of the Pectoral Sandpiper (e.g. SAOA 1981), the *Atlas of Australian Birds* (Blakers *et al.* 1984) contrasts 2912 records from 296 one degree blocks for the Sharp-tailed Sandpiper *C. acuminata*, with 113 records (4% of 2912) from 32 one degree blocks for *melanotos*.

Pectoral Sandpipers were observed on six visits to the Bool Lagoon wetland complex from 5 December 1980 to 9 April 1981. All birds were located in Little Bool Lagoon and a peak of ten birds was noted by J. Reid and myself from 25-27 February and again from 21-23 March by several observers.

The ten *melanotos* were amongst more than 200 *acuminata* in a shallow drying pond (0.5 ha) which was largely devoid of vegetation apart from some close-cropped grass. Often within a few metres of each other, the ten *melanotos* tended to wade in deeper water than most *acuminata*, in the fashion of the Curlew Sandpiper *C. ferruginea*.

Pectoral Sandpipers were separated from Sharp-tailed Sandpipers by the following field characters:

More slender neck, longer bill and smaller head than *acuminata*. Yellowish colour at base of bill in some individuals of both *acuminata* and *melanotos*, but always more conspicuous on bill of *melanotos*.

Fine dark line linking bill and eye of *melanotos* but no clear brown stripe behind eye as in *acuminata*. More striking white stripes on crown of *melanotos*, especially when viewed from front. No rufous on crown of *melanotos*. Shape of crown from eye to eye less rounded in *melanotos*.

Dense blackish streaks on chest and neck terminated by sharp demarcation in mid-chest of *melanotos*; some *acuminata* were heavily streaked on the chest but usually with brown marks. White abdomen generally cleaner than in *acuminata*, and *melanotos* was unique in the absence of streaks on its under-tail coverts.

Individuals of *melanotos* could be recognized by neat notches or projections in the terminal line of chest markings, or by variations in size, or length and colour of bill, or shape of body.

The distinctive *krrupp* calls of the Pectoral Sandpiper were frequently heard above the babble of calls of feeding waders in the concentration at Little Bool Lagoon. I have mainly heard this call made by birds in flight.

DISCUSSION

Intermediate Egret

Observations in 1980-81 have reaffirmed that Bool Lagoon is the stronghold for the Intermediate Egret in South Australia. Intermediate Egrets were not observed at the other 93 wetlands of the South-East which were visited by C. Auricht and myself in 1980-81.

There is some evidence for regular migratory movements by this species within Australia (Blakers *et al.* 1984). Birds visiting South Australia might be associated with the nearest large breeding colonies of Intermediate Egrets, in the Southern Murray-Darling basin (e.g. Koondrook, up to 500 pairs : Blakers *et al.* 1984). Breeding records at Bool Lagoon, such as those noted by J. Bourne, might account for some individuals seen in South Australia outside the breeding season.

Reporting rates (*sensu* Blakers *et al.* 1984) of greater than 40% for Intermediate Egrets only occurred in northern and north-eastern Australia in the *Atlas of Australian Birds*. Several ornithologists have commented (pers. comm.) that the Intermediate Egret is uncommon to rare in southern and western Victoria. Indeed, only three records totalling seven individuals were listed for that State in 1981 by Robinson (1982). Bool Lagoon may well be the most important wetland for the Intermediate Egret in the southern extremities of its range in Australia.

Pectoral Sandpiper

National counts of waders have been conducted by the Wader Studies Group of the Royal Australasian Ornithologists Union since 1981. Totals for the Pectoral Sandpiper in Australia have always been of less than 50 birds, e.g. 22 in 1981 (AWSG 1981), 48 in 1983 (Lane & Jessop 1983) and 19 in 1984 (Lane and Jessop 1984). Several groups of five or more *C. melanotos* were recorded for Victoria by Robinson (1982, 1983), but I am not aware of any published accounts of concentrations of more than 10 birds of this species in Australia. Sightings of this species were made at only two of the other 93 wetlands of the South-East in the 1980-81 study. Clearly the sightings of ten Pectoral Sandpipers together at Little Bool Lagoon in 1981 were of national significance.

Little Bool Lagoon was frequented by a host of uncommon waders in the autumn of 1981, including a Little Ringed Plover *Charadrius dubius* (Jaensch 1982), two Long-toed Stints

Calidris subminuta and a Ruff *Philomachus pugnax* (pers. obs.). Unlike most of the Bool complex, Little Bool Lagoon was largely free of dense plant growth in 1981 due to controlled grazing by stock. Maintenance of this practice might ensure that Little Bool Lagoon remains an important site for migratory waders.

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