

## BIRDS AT THE 'WASHPool', SELLICKS BEACH, AN EPHEMERAL DEGRADED SWAMP, PRIOR TO PLANNED RESTORATION

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### ABSTRACT

One hundred and three species of bird, including 92 native species, were recorded from 1978 to 2000 at the ephemeral, degraded wetland known as the 'Washpool' at Sellicks Beach in the southern Mt Lofty Ranges and Fleurieu Peninsula region, 47 kilometres south of Adelaide. The Washpool's area of inundation is approximately six hectares. Fifty-nine species were either waterbirds (45) or birds with a preference for a habitat near water (14). Thirteen species were recorded breeding at the Washpool. A number of the species are listed as vulnerable or rare in the schedules of the South Australian *National Parks and Wildlife Act 1972*. Three are now rarely seen so close to Adelaide, namely Australasian Bittern *Botaurus poiciloptilus*, Spotless Crake *Porzana tabuensis* and Latham's Snipe *Gallinago hardwickii*. This ephemeral wetland is the remnant of a once permanent series of lagoons and marshland extending over approximately three kilometres. Restoration of the southern-most area, the Washpool of historical aboriginal significance, is proposed by the City of Onkaparinga. Such development should retain and enhance vegetation and other features that have proved their worth for refuge, feeding and breeding of species recorded in this survey.

### INTRODUCTION

The 'Washpool' (35°20'S, 138°27'E) lies about 2 km N of Sellicks Beach township, in the southern Mt Lofty Ranges and Fleurieu Peninsula region, 47 km S of Adelaide (Figure 1). It is situated behind coastal dunes and its area of inundation (up to 0.3 m deep centrally) is approximately 6 ha. It soon fills to this level after seasonal rains by June and, with a silt clay base, stays so until October before gradually drying out by November unless replenished by late rain, when it may remain wet into January. Before European occupation a system of lagoons and marshland extended north along the eastern and part of the northern sides of the Aldinga Scrub, forming a barrier to early European settlers as well as enhancing aquifers for the benefit of the Scrub (Gardiner 1989). After World War II drains were constructed to alleviate flooding of agricultural land (and recently the Silver Sands housing estate and nearby). A drain along Main South Road was led to one running south-westerly to Norman Road, thence south to spill into the Washpool, and finally, with deepening of the natural exit, to the sea through dunes and beach shingle (see Fig. 1). The Washpool's

original depth of several metres was gradually diminished by deposition of silt from tilled land, whilst a similar area with similar water depth, the 'Blue Lagoon' to the north, was starved of water by a channel bypassing it (Gardiner 1989). G. Gardiner recalls, 'the Blue Lagoon covered with ducks (Black, Mountain, Wood and Teal), Eastern Swamp hens, small water hens, swans, plovers, ibis, spoonbills and Cape Barren Geese...one resident said, "When disturbed the ducks would darken the sky", and Mr Dickensen considered 400–500 ducks would take off at one time' (Gardiner 1989).

In the 1980s a proposal, supported by an Environmental Impact Statement (E.I.S.), was made for the inclusion of the Washpool in a development proposal for a marina, breakwater and housing complex. The E.I.S. (Willunga District Council 1988, p. 239) stated, 'the Washpool area does have birds, however, to identify the area as having special features in this regard would require observation over a number of years'.

The marina proposal subsequently was rejected and the area has since remained open space under the control of the City of Onkaparinga. In mid-2001 notices were placed on either side of Button Rd declaring the area a 'Conservation Area'.

In response to my recent enquiry about planned restoration of the Washpool area, the City of Onkaparinga (*in litt.* 12/9/01) highlighted the importance of the Aboriginal community as a primary stakeholder, 19 plant species of conservation significance, an option to consolidate ownership of the site, an option to relocate Button Rd, and significant links to a Coast Park concept and network of upstream water bodies to improve the quality of catchment water. The City considered that the Washpool area (including the Blue Lagoon) should not be excavated beyond its original profile due to the Aboriginal significance of the site.

This paper summarises information on the birds of the Washpool collected over 22 years, including recent observations (also see Ashton 1985, 1987 and 1996). In addition it provides some recommendations on its management to

enhance the area's value as a habitat for bird life.

### METHODS

A total of 630 visits was made to the area, averaging 20 minutes duration and in 165 months. Observations were mostly from the raised eastern fence line and from Button Rd where my car acts as a hide (see Figures 2a-c), also less often from the western edge of grassland and dunes, and occasionally from water intrusions. Visits were from 1978 to 2000, mostly in June–October when most water is present (440 visits, averaging one a week). Only 10 visits were made during 1987–1991. Most visits were in the years 1983 (84), 1984 (77), 1985 (70) and 1999 (57). A status

classification was accorded the species recorded, thus:

- *Resident*—present throughout the observation period (here the ephemeral nature of the swamp excludes waterbirds);
- *Seasonal*—strong seasonal bias (dry land species and some water-preferring species);
- *Periodic*—present for periods longer than four months without seasonal bias;
- *Temporary*—present for two–four months without seasonal bias;
- *Occasional*—isolated records only;
- *Flying over*—flying over the area only; and
- *Heard*—heard only (for species with an unmistakable call).

### Vegetation

Washpool water has been considered brackish (Fenner and Cleland 1935) and may have been after rare entry of sea water driven by tides and gales, but the author has always found it potable.

Samphire *Salicornia* spp. occupy much of the central area but this vegetation was severely damaged from the use of the area for approved vehicular parking for a motor bike beach race re-enactment in January 1986. Clubrush *Bolboschoenus caldwellii* is prominent (in yearly regrowth) in the north-east and edging the north side of Button Road where it crosses the southern end of the swamp. A line of saw-sedge *Gahnia* sp. occurs prominently along much of the eastern side with one bush of lignum *Muehlenbeckia florulenta* (see Figs 2a-c). Amongst low vegetation at the edges are *Frankenia* sp., silky wilsonia *Wilsonia humilis* and creeping brookweed *Samolus repens*. Edging exotic plants include African boxthorn *Lycium ferocissimum* and artichoke thistle *Cynara cardunculus*.

### RESULTS AND DISCUSSION

One hundred and three bird species were recorded, of which 92 were native. Fifty-nine were either waterbirds (45) or birds with a habitat preference for proximity to water (14). Thirteen species were recorded breeding in the area. Many of the remainder have been recorded breeding in the nearby Aldinga Scrub Conservation Park (Ashton 1987). Several species are listed in the schedules of the South Australian *National Parks and Wildlife Act 1972*, with Australasian Bittern *Botaurus poiciloptilus* and Latham's Snipe *Gallinago hardwickii* listed as vulnerable, and

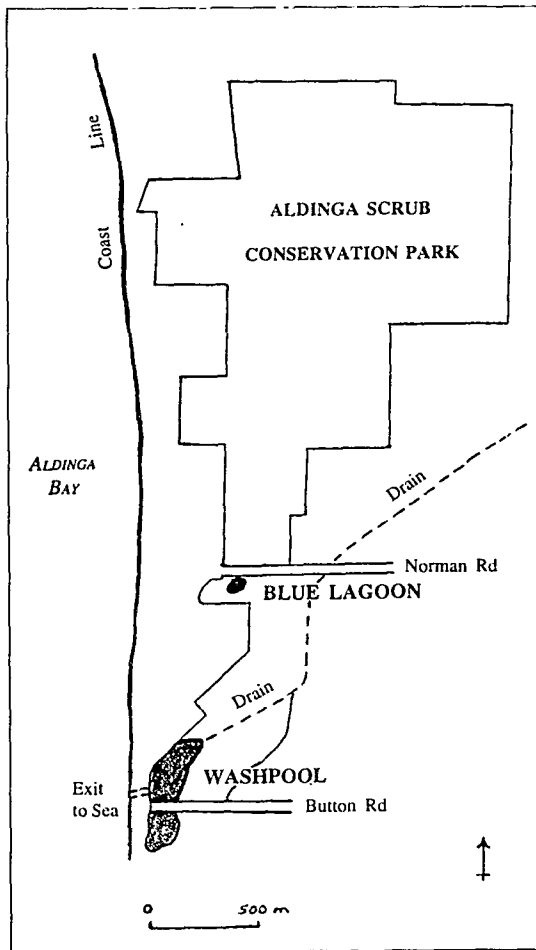


Figure 1. Map of the Washpool and surrounding area including Aldinga Scrub Conservation Park to the north.

Australasian Shoveler *Anas rhynchotis*, Cape Barren Goose *Cereopsis novaehollandiae*, Rock Parrot *Neophema petrophila* and Golden-headed Cisticola *Cisticola exilis* as rare. In addition G. Carpenter recorded Baillon's Crake *Porzana pusilla* in October 1999 and November 2000, and Painted Snipe *Rostratula benghalensis* in November 2000 (Carpenter 2001). Both are listed as rare in the above schedules. The Appendix provides an annotated list of birds recorded by the author at the Washpool from 1978 to 2000.

### Waterbirds

Grey Teal *Anas gracilis* and Black-winged Stilt *Himantopus himantopus* appeared regularly within a few days of significant flooding and remained until near drying out. In the greatest numbers among the most frequently present species were White-faced Heron *Ardea novaehollandiae* (a maximum of 60 in June 1994; rarely not recorded when any water present), Black Swan *Cygnus atratus* (a maximum of 24 in August 1987; recorded on most visits when water, even shallow, present) and Silver Gull *Larus novaehollandiae* (a maximum of 150 in October 1985; rarely not recorded when any water present). Cape Barren Goose appeared in moderate numbers in some years. Eight species of native duck were represented. Proximity to the sea explains the presence of some seabirds not usually at swamps, e.g. Australasian Gannet *Morus serrator* and Crested Tern *Sterna bergii*. Of four species of cormorant, three illustrated their skill in swimming beneath the surface of shallow water amongst samphire. Cormorants used the many old fence posts surrounding or in the swamp for roosting or wing drying. Some waterbirds were notable for an appearance so close to Adelaide, viz. Australasian Bittern, Spotless Crake *Porzana tabuensis*, and Latham's Snipe, although they have been recorded in the Onkaparinga estuary near Pt Noarlunga and at Greenfields Wetlands, Salisbury, for example.

Four waterbirds were recorded breeding, namely Pacific Black Duck *Anas superciliosa* (adult seen with 13 dependent ducklings), Black-winged Stilt (18 nests), Red-capped Plover *Charadrius ruficapillus* (four nests on shingle on the swamp side of the dunes), and Black-fronted Dotterel *Elseyaornis melanops* (one nest on the shingle). The Black-winged Stilt nests consisted of 15 in 1983–5, plus three aborted attempts after sitting (on eggs presumably) in October

1995, nesting being delayed until the emergence of samphire above the water-line allowed sitting to begin on 3 October. The last nest was abandoned by 30 October. No further attempts at nesting have been made by stilts as the samphire here has not since shown any further recovery to pre-interference height or density (the interference being vehicular parking in 1986).

Amongst larger waterbirds in small numbers were White-necked Heron *Ardea pacifica*, Little Egret *Ardea garzetta*, Great Egret *Ardea alba*, Royal Spoonbill *Platalea regia*, Yellow-billed Spoonbill *Platalea flavipes*, Purple Swamphen *Porphyrio porphyrio*, Eurasian Coot *Fulica atra*, Banded Stilt *Cladorhynchus leucocephalus* and Red-necked Avocet *Recurvirostra novaehollandiae*. Medium to small waders preferring shallow water or mud edges were in small numbers except for Sharp-tailed Sandpiper *Calidris acuminata* which were in flocks of up to 40. Those in small numbers were Common Greenshank *Tringa nebularia*, Ruddy Turnstone *Arenaria interpres*, Red-necked Stint *Calidris ruficollis*, Curlew Sandpiper *Calidris ferruginea*, Red-capped Plover, Black-fronted Dotterel and Red-kneed Dotterel *Erythrogonys cinctus*.

### Other birds which occur near water

The most numerous species was Welcome Swallow *Hirundo neoxena*, followed by Tree Martin *Hirundo nigricans* and Fairy Martin *Hirundo ariel*—the latter breeding in nearby culverts. White-fronted Chat *Epthianura albifrons*, a resident breeding species with a preference for samphire habitat, was sometimes moderately common.

Grazing cattle were accompanied by Cattle Egret *Ardea ibis* briefly. One to two Swamp Harriers *Circus approximans* were recorded quartering the wetland in 13 separate months. Small numbers of Black-tailed Native-hen *Gallinula ventralis* appeared seasonally in 1984–1988 inclusive and also in 1991, 1997 and 2000, staying from one to four months between April and November. Latham's Snipe was recorded once in November 2000. Banded Lapwing *Vanellus tricolor* appeared seasonally in some years to breed in grazed paddocks north and south of the Aldinga Scrub Conservation Park, including once near the Washpool. Paton, Carpenter and Sinclair (1994) reported a scarcity of this species on the Fleurieu Peninsula. Masked Lapwing *Vanellus miles*, also resident, bred on dry land at





Figures 2a-c. *2a (top)*. A dry Washpool north of Button Rd on 8/12/00 with clubrush at front and samphire behind. This, the site of all earlier recorded stilt nesting, remains degraded since vehicular parking here in January 1986, as is most obvious in the foreground. *2b (middle)*. Black Swan and Royal Spoonbill at the Washpool in year 2000 north of Button Rd. *2c (bottom)*. A dry Washpool south of Button Rd on 8/12/00 with saw-sedge at left (east) and samphire in the central area. (Photographs by Colin Ashton.)

the edge of the Washpool (three nests recorded).

### Other birds

Of the remaining 44 species, which included eight exotic species, 16 were classed as resident. Brown Songlark *Cinchoramphus cruralis* was notable for its regular seasonal occurrence arriving June–September each year and departing January–March (1998 excepted).

Singing Honeyeater *Lichenostomus virescens* was recorded as resident in or near the dunes, as is its characteristic around the coast of Fleurieu Peninsula (Paton, Carpenter and Sinclair 1994). New Holland Honeyeater *Phylidonyris novaehollandiae* was only occasionally reported until the last two years, when it was commonly recorded in the dune vegetation, following a recent influx to the Aldinga Beach area.

Despite proximity to Aldinga Scrub Conservation Park, few woodland species were recorded. Exceptions were one or two records of Hooded Robin *Melanodryas cucullata* and Dusky Woodswallow *Artamus cyanopterus*. The passage of hundreds of Budgerigar *Melopsittacus undulatus* to the Aldinga Beach area on 19 November 1983 included the Washpool area. Rock Parrot was recorded in December–February of three years at the Washpool dune edge. It was not reported elsewhere along eastern Gulf St Vincent south of Adelaide in either Bird Atlas of the Adelaide Region (SAOA 1977; Paton *et al.* 1994).

### Observations on faunal and physical aspects of restoration programs

During this survey period 1978–2000 the most important habitats for birds were:

(a) A plentiful area of samphire with a suitable water level to allow the nesting of Black-winged Stilt (Breeding ceased when car parking damaged the samphire and it required 10 years to regrow to a level for a further breeding attempt. With lack of success further attempts at breeding have not been made.). These samphire flats are also important to many of the smaller waterbirds and to White-fronted Chat.

(b) Saw sedge and clubrush which provided refuge for many species. The latter presents no problem in growth but saw sedge takes longer for establishment and needs to be above the water level. Breeding has occurred with Little Grassbird and breeding would be expected to increase and to include other species if water was permanent.

(c) Dotterel and plover have bred on the spreading beach shingle to the swamp side of the dune at the southern end of the Washpool, so this shingle should remain a feature.

(d) Inclusion of the Blue Lagoon in the planned Washpool restoration project (City of Onkaparinga *in litt.* 12/9/01) adds a fine stand of aged lignum where the Washpool has but one bush.

(e) Permanent water would allow many wetland birds to become resident, a greater depth would suit some ducks, and there would be security that young Black-winged Stilt would reach maturity. At present many juvenile stilts perish.

### ACKNOWLEDGMENTS

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## APPENDIX

Annotated list of avifauna at the Washpool recorded by the author during 1978–2000. A species' association with the wetland is denoted by: + = species dependent on water and wetland vegetation; and \* = other species which occur near water. Breeding is denoted by: B = species nested at the Washpool; B(Y) = dependent young seen; and b = bred at adjacent Aldinga Scrub (Ashton 1987). Each species' status during this period is indicated by: R = resident, S = seasonal, P = periodic, T = temporary, O = occasional, F = flying over only, H = heard, and E = exotic species (see Methods). Where a species' count varied during a specified period, the minimum and maximum numbers are given as a range.

Species	Wetland	Bred	Status	Comments
Stubble Quail <i>Coturnix pectoralis</i>			R	Three in samphire Dec. 1980 and occasionally a single bird. More often heard and more common in adjacent grassland.
Black Swan	+		T	1–24 each year when water present. When water shallow may appear to be swimming when 'slogging' partly in mud.
Cygnus atratus				
Domestic Goose	+		E, O	1 in Oct. 1997, 1 in July–Aug. 1999 and 2000. Considered to be escapees.
<i>Anser anser</i>				
Cape Barren Goose	*		P	Appears at some time most years, though usually not staying longer than two months, except Aug.–Dec. 1999.
<i>Cereopsis novaehollandiae</i>				
Australian Shelduck	+		T	Recorded in all months except June and July. 1–64 mostly feeding in peripheral green grass, rarely swimming. Appeared most years in numbers to 5.
<i>Tadorna tadornoides</i>				
Australian Wood Duck	+		O	At grassland periphery. In small numbers except for 140 in April 1989.
<i>Chenonetta jubata</i>				
Mallard	+		E, O	Single sighting of two in Aug. 1999.
<i>Anas platyrhynchos</i>				
Pacific Black Duck	+	B(Y)	P	Present yearly in numbers to 20. One with 13 ducklings in Sept. 1985.
<i>Anas superciliosa</i>				
Muscovy Duck	+		E, O	1 in Aug. 1982.
<i>Cairina moschata</i>				
Australasian Shoveler	+		T	Recorded in small numbers to eight in 13 of the visits.
<i>Anas rhynchos</i>				
Grey Teal	+		P	Appeared each year within 1–2 days of significant filling of the Washpool. In numbers to 200.
<i>Anas gracilis</i>				
Chestnut Teal	+		T	Recorded most years in small numbers, though 30 present in Oct. 1995.
<i>Anas castanea</i>				
Pink-eared Duck	+		O	One in Sept. 1985, six in July 1986, and one in Sept. 1995.
<i>Mallacorhynchus membranaceus</i>				
Hardhead	+		O	A male in Sept. 1984, 2–4 in July 1987. A female in Sept. 1995.
<i>Aythya australis</i>				
Australasian Grebe	+		T	Though a distinction between the two grebe species was clear when occasionally a bird was in breeding plumage, not often could a close enough approach be made to distinguish them with certainty. Present in small numbers to seven in 20% of visits.
<i>Tachybaptus novaehollandiae</i>				

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## APPENDIX continued

Species	Wetland	Bred	Status	Comments
Hoary-headed Grebe	+		T	See comments for Australasian Grebe.
<i>Polyocephalus poliocephalus</i>				
Australasian Gannet	+		F	One in stormy weather in Aug. 1984.
<i>Morus serrator</i>				
Little Pied Cormorant	+		O	Sightings in 10 months (0.15% of visits).
<i>Phalacrocorax melanoleucos</i>				
Pied Cormorant	+		O	One in Aug. 1982.
<i>Phalacrocorax varius</i>				
Little Black Cormorant	+		O	1-5 in Sept.-Oct. 1998 and 1999.
<i>Phalacrocorax sulcirostris</i>				
Great Cormorant	+		O	50 flying over in June 1979, 1-2 in Nov. 1994 and Aug. 1995 (when one seen feeding half submerged in shallow water) and Oct.-Nov. 2000.
<i>Phalacrocorax carbo</i>				
Australian Pelican	+		O	Nine in Feb. 1980, 1 in July 1982, 1 flying over in March 1989, 1-10 in June and Sept. 1989-90. One flying over in Aug. 1992, 1 in Sept. 2000 (found dead the next day).
<i>Pelecanus conspicillatus</i>				
White-faced Heron	+	b	P	Present at most times when water present; especially numerous as swamp dries; in numbers to 60. Sometimes in remnant pools of outlet channel when all else dry. Breeds in eucalypts in nearby Aldinga Scrub Cons. Park.
<i>Ardea novaehollandiae</i>				
White-necked Heron	+		O	One in Aug.-Nov. 1979, 1 in Aug. 1980 and 1986, 1 in Oct. 1991 and Nov. 1992, 1-3 (2 immature) Sept.-Nov. 2000.
<i>Ardea pacifica</i>				
Little Egret	+		O	One in Nov. 2000.
<i>Ardea garzetta</i>				
Great Egret	+		O	One in June 1981, 1 in July and Oct. 1984, 1 in Aug.-Oct. 1998, 1999 and 2000.
<i>Ardea alba</i>				
Cattle Egret	*		O	Two in May 1985 in field with cattle bordering the Washpool.
<i>Ardea ibis</i>				
Australasian Bittern	+		T	One in July-Oct. 1998.
<i>Botaurus poiciloptilus</i>				
Australian White Ibis	*		O	One in Aug. 1980, 1 in Sept.-Oct. 1981, 2 in July-Aug. 1983, 1 in Oct. 1984, 2-4 in Sept.-Oct. 1985, 1 in Sept. 1995, 6 in Sept. 1999, 1-15 in Oct.-Nov. 2000.
<i>Threskiornis molucca</i>				
Straw-necked Ibis	*		T	Recorded in 17 of the survey months in numbers to 100 at edge of the Washpool.
<i>Threskiornis spinicollis</i>				
Royal Spoonbill	+		O	One in Aug.-Sept. 1980, 1-7 in Aug.-Sept. 1984 and 1985 (1 in Aug. 1995 was in breeding plumage), 2-10 in Oct.-Nov. 2000.
<i>Platalea regia</i>				
Yellow-billed Spoonbill	+		T	1-3 recorded in 13 of the survey months of June-Nov. when water present.
<i>Platalea flavipes</i>				
Black-shouldered Kite		b	R	Seen on most visits and in each month, usually 1-3 birds, but 4 in Aug. 1980 and 12 (including 8 immature birds) in Oct. 1980.
<i>Elanus axillaris</i>				
Spotted Harrier			O	One in Aug. and Dec. 1980, May 1981, March and April 1983, Dec. 1985, but not since.
<i>Circus assimilis</i>				

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## APPENDIX continued

Species	Wetland	Bred	Status	Comments
Swamp Harrier	*		O	1-2 recorded in 13 of the survey months, but not since Sept. 1992.
<i>Circus approximans</i>				
Brown Falcon		b	P	1-3 in 26 of the survey months especially June-Sept., but only 5 records of a single bird in the last 10 years when the species has much decreased in numbers on the Willunga Plains.
<i>Falco berigora</i>			O	Recorded as a single bird in 11 months for April-Aug. scattered through observation period except for a record for Jan. 1998.
Australian Hobby			O	One in April-June 1983, 1 in Jan. 1995.
<i>Falco longipennis</i>				
Black Falcon			O	
<i>Falco subniger</i>				
Nankeen Kestrel	b		R	1-3 recorded on most visits.
<i>Falco cenchroides</i>				
Australian Spotted Crane	+		O	One in Sept. 1985 using a dumped pile of prunings on samphire mud flat as refuge, one in Sept. 1988 predated by Black-shouldered Kite (remains identified by SA Museum).
<i>Porzana fluminea</i>			O	1-2 in Sept.-Oct. 1999 using saw-sedge as refuge. When flushed seen on occasion to run to nearby vegetation and on another to fly heavily 100 m across to the other side of the Washpool.
Spotless Crane	+		O	One in Sept.-Oct. 1998 in common reed. Also recorded by H. Laybourne-Smith during 1964-71 (pers. comm.).
<i>Porzana tabuensis</i>				
Purple Swamphen	+		O	
<i>Porphyrio porphyrio</i>				
Black-tailed Native-hen	*		S	In years when irrupt to southern South Australia: 3-9 in July-Oct. 1984, 1-3 in April-May and 5-8 in Sept.-Oct. 1985, 4 in May 1986, 3 in Sept. 1991, 3 in Nov. 1997. Use saw-sedge fringing the SE portion for refuge. Several at casual water at lagoon at Blue Lagoon in Aug. 1978.
<i>Gallinula ventralis</i>			O	
Eurasian Coot	+		O	
<i>Fulica atra</i>				
Latham's Snipe	*		O	One in Nov. 2000, at the side of a narrow rivulet in grassland on dune side of the Washpool.
<i>Gallinago hardwickii</i>				
Common Greenshank	+		O	One in Jan. 1981, 1 in Sept. 1985, 1-3 in Nov. 1992 and 1994, 1 in July 1995, 1 in Nov.-Dec. 1999.
<i>Tringa nebularia</i>				
Ruddy Turnstone	+		O	Two in Sept. 1983 (one in breeding plumage). Near shingle at beach outlet.
<i>Arenaria interpres</i>				
Red-necked Stint	+		O	Three in Sept. 1985-1986.
<i>Calidris ruficollis</i>				
Sharp-tailed Sandpiper	+		T	Recorded in most years in Aug.-Oct. 1-40. Also 1 in July 1987 and 7 in Nov. 1999.
<i>Calidris acuminata</i>				
Curlew Sandpiper	+		O	One in July 1983.
<i>Calidris ferruginea</i>				
Black-winged Stilt	+	B	P	Up to 80 yearly coming within a week of significant water appearing. Bred in 4 years with 15 nests in 1983-85 on samphire judged high enough to be above the maximal filling potential of the Washpool, though once early in brooding when eggs were inundated for seven days, brooding resumed with successful hatching of 4 young. Breeding ceased after flattening of samphire by one day's car parking for a beach event. It was resumed 10 years later when samphire had sufficiently regrown (3 nests in 1995). However the Washpool dries out in most years before juveniles appear to be ready to leave with parents. One juvenile seen with adults at a dam 0.5 km distant.
<i>Himantopus himantopus</i>				

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## APPENDIX continued

Species	Wetland	Bred	Status	Comments
Banded Stilt	+		O	One in Oct. 1981. Also recorded by H. Laybourne-Smith in 1964-71 surveys (pers. comm.).
<i>Cladorhynchus leucocephalus</i>				
Red-necked Avocet	+		O	One in Nov. 1997.
<i>Recurvirostra novaehollandiae</i>				
Red-capped Plover	+	B	P	1-5 recorded in half the years June-Oct., occasionally to Jan. Bred four times between July and Dec. on shingle. One record for Jan. 1993 when late rains kept water present beyond the usual drying-out time.
<i>Charadrius ruficapillus</i>				
Black-fronted Dotterel	+	B	P	1-4 in most years July-Nov. but 12 in June-July 1987. 1 in Dec. 1992-Jan. 1993 after late rain. One breeding record on shingle.
<i>Elsevornis melanops</i>				
Red-kneed Dotterel	+		O	One in Aug. 1979, 1 in Oct. 1984, 3 in Aug. 1985, 2-10 in July-Aug. 1992, 3 in Oct. 1995, 1 in Nov. 1999.
<i>Erythronyx cinctus</i>				
Banded Lapwing		B	O	Ten in April 1981, 2 in June 1982, 2-4 in July-Aug. 1983 (when bred), 2-4 in July and Sept. 1989 and 1991, one in Nov. 2000. The species is suited by grazed grassland adjoining the Washpool.
<i>Vanellus tricolor</i>				
Masked Lapwing	*	B	R	Numbers increase when there is water in the Washpool: usually up to 8, but 20 in April 1983. Three nests with eggs recorded, but nests probably often overlooked, as when a sitting bird was seen only after rising to drive off a Swamp Harrier. Two breeding events in Oct.-Nov. 2000.
<i>Vanellus miles</i>				
Silver Gull	+		R	Recorded at most visits when water or damp ground present, in numbers to 150.
<i>Larus novaehollandiae</i>				
Caspian Tern	+		O	1-2 in Sept. 1983, 1984 and 1986, 2 in Aug. 1985, 1 in July 1986, 2-3 in Sept. 1991 and 1992, 2 in Oct. 1995, 1 in Nov. 1999, 2 in Sept. 2000.
<i>Sterna caspia</i>				
Crested Tern	+		O	Two in Oct. 1986.
<i>Sterna bergii</i>				
Whiskered Tern	+		T	1-41 in Sept.-Oct. 1983 and 1985, 1-3 in July and Sept. 1986, 12 in Sept. 1988 (one dead in water), 1 in Oct. 1997, 1 in Sept. 1998, 1-9 in Sept.-Nov. 1999, 1-2 in Sept.-Oct. 2000.
<i>Chlidonias hybridus</i>				
Rock Dove			E, R	Frequent records of 1-250 around the Washpool area and adjacent fields.
<i>Columba livia</i>				
Spotted Turtle-Dove		b	E, R	1-12 peripheral to the Washpool.
<i>Streptopelia chinensis</i>				
Crested Pigeon		B	R	1-10 regularly near the Washpool but 50 in June 1997. Nest with 2 young, Jan. 1983.
<i>Ocyphaps lophotes</i>				
Galah		b	R	1-90 adjacent to Washpool and occasionally feeding on samphire at the Washpool.
<i>Cacatua roseicapilla</i>				
Little Corella			F	2-14 in Oct. 1985, 1998 and 2000.
<i>Cacatua sanguinea</i>				
Sulphur-crested Cockatoo			O	One flying over in June 1994, 1 in adjacent field in Nov. 1999.
<i>Cacatua galerita</i>				
Rainbow Lorikeet			F	150 in 3 groups in Jan. 2000.
<i>Trichoglossus haematodus</i>				
Purple-crowned Lorikeet			F	30 in Feb. 1985, 5 in Jan. 1995, 3 in Jan. 2000.
<i>Glossopsitta porphyrocephala</i>				

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## APPENDIX continued

Species	Wetland	Bred	Status	Comments
Budgerigar <i>Melopsittacus undulatus</i>			F	48 in Nov. 1983 when there was an influx to Aldinga Beach and the author counted 584 birds from a central point on the dunes all passing northwards in 59 groups during 1200–1400 h on 19/11/1983; 4 in Oct. 1985. 2–12 April–Sept. 1984, 1–6 in May–July 1985, and 1 in May 1986.
Elegant Parrot <i>Neophema elegans</i>	b	b	O	3–12 in Dec. 1982 and Feb. 1983, 3 in Feb. 1985. Seen feeding on berries of ruby saltbush <i>Enchylaena tomentosa</i> on dunes edging the Washpool. Also recorded by H. Laybourne-Smith between 1964 and 1971 as at Washpool dune in January (pers. comm.).
Rock Parrot <i>Neophema petrophila</i>			O	One in June 1983 and 1991, 1 in Oct. 1991 and 1 in Aug. 1999.
Pallid Cuckoo <i>Cuculus pallidus</i>	b	b	H	One in July 1985, and 1 in Jan. 1999.
Horsfield's Bronze-Cuckoo <i>Chrysococcyx basalis</i>	b	b	O	In Aug. 1996 and June 1997.
Laughing Kookaburra <i>Dacelo novaeguineae</i>	b	b	H	A flock of 20 at northern boundary in Jan. 1995 and 2 in Nov. 2000.
Red Wattlebird <i>Anthochaera carunculata</i>	b	b	O	
Singing Honeyeater <i>Lichenostomus virescens</i>	B	B	R	1–5. Seen feeding juvenile in Jan. 1983, nest with eggs and fledglings Sep. 1983 in coastal daisy bush <i>Olearia axillaris</i> in a dune at Washpool's edge. Seen going to nest in African boxthorn on eastern swamp edge. Not recorded more than 0.5 km from dunes. Feeds on the fruit of many dune plants and on African boxthorn berries. One in April 1983 seen feeding at flowers of African boxthorn.
White-plumed Honeyeater <i>Lichenostomus penicillatus</i>	b	b	O	
New Holland Honeyeater <i>Phylidonyris novaehollandiae</i>	b	b	P	Recorded only occasionally, e.g. 1 in June 1983, 3 in Jan. 1998, 5 in May 1998, 10 in Dec. 1994, 4 in Dec. 1998, but now quite frequently seen in the dune vegetation following a recent influx of this species to Aldinga Beach.
White-fronted Chat <i>Ephitanura albifrons</i>	*	B	R	Seen mostly at samphire in numbers to 20 on most visits throughout the year. Breeds near ground in low vegetation. Commoner when water present.
Hooded Robin <i>Melanodryas cucullata</i>	b	b	O	A female in July 1992 adjacent to the Washpool.
Magpie-lark <i>Grallina cyanoleuca</i>	B	B	R	1–24. Though having a widespread distribution, this species shows here its partiality for being near water. Not recorded in February in the only nine visits made in that month. Bred successfully at nest on fence post in the Washpool in Oct.–Nov. 2000.
Willy Wagtail <i>Rhipidura leucophrys</i>	b	b	P	1–2 nearby on many visits.
Black-faced Cuckoo-Shrike <i>Coracina novaehollandiae</i>	b	b	O	1–3 seen at or adjacent on 3% of visits.
Dusky Woodswallow <i>Artamus cyanopterus</i>	b	b	O	Four in Feb. 1982, nine in April 1984 adjacent to the Washpool.
Australian Magpie <i>Gymnorhina tibicen</i>	b	b	R	1–30 in adjacent fields or flying over the Washpool.
Little Raven <i>Corvus mellori</i>	b	b	R	1–100 in adjacent fields or flying over the Washpool.

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## APPENDIX continued

Species	Wetland	Bred	Status	Comments
Singing Bushlark <i>Mirafra javanica</i>			P	Two in April, 2-12 in July-Sept. 1980, 1-11 in June-Aug. 1982, 2-14 in March, April and June 1983, 1-11 in May-Sept. 1984, 2-6 in July-Oct. 1985 and 1986, 1 in Sept. 1987. Not recorded in Nov.-Feb. In small flock mostly and two such in April 1984.
Skylark <i>Aldaia arvensis</i>			E, R	1-15 in adjacent grassland and occasionally samphire.
Richard's Pipit <i>Anthus novaeseelandiae</i>		b	P	1-30 in adjacent grassland and occasionally samphire. A steady fall in numbers coincided with widening of Button Rd and removal of already sparse road-edge trees about 8 years ago, until only occasionally recorded in last three years.
House Sparrow <i>Passer domesticus</i>		b	E, R	Common; numerous at times, e.g. 300+ in Aug. 1982 in adjacent grassland.
European Greenfinch <i>Carduelis chloris</i>			E, R	1-35 in adjacent grassland.
European Goldfinch <i>Carduelis carduelis</i>		b	E, R	1-60 in adjacent grassland.
Welcome Swallow <i>Hirundo neoxena</i>	*	B	R	1-200. Bred in broken Fairy Martin nest under adjacent culvert, which it converted to a conventional nest (Ashton 1987).
Tree Martin <i>Hirundo ariel</i>	*	b	S	Recorded in numbers to 18 (usually 1-5) when water present (not infrequently with Fairy Martin) on 10% of visits.
Fairy Martin <i>Hirundo nigricans</i>	*	B	S	Regular visitor in most years 1980-1994, then again in 1999-2000. At Washpool in numbers to 30 (usually 2-10). Bred under culverts (one at northern end of the Washpool) Aug.-Jan., departing in Jan.-Feb. all together, abandoning young from second broods which cannot fly, e.g. 12 dead feathered young were below nests in the above culvert on 22 Feb. 1989.
Little Grassbird <i>Megalurus gramineus</i>	*	B	P	1-4. Elusive in saw-sedge and clubrush; bred in clubrush in Nov. 2000.
Brown Songlark <i>Cinclooramphus cruralis</i>			S	Arrived in June-Sept. each year (1998 excepted), departing Jan.-March 1-4. In adjacent grassland.
Golden-headed Cisticola <i>Cisticola exilis</i>	*		O	1-2 in Aug.-Sept. 1985, 3 in Jan. 1995, 3 in July 1996, 2 in May and Dec. 1998. In reeds of Washpool and nearby tall grass of roadside.
Silvereye <i>Zosterops lateralis</i>		b	O	4-6 in April and June 1983.
Common Blackbird <i>Turdus merula</i>		b	E, O	One in April 1985, 1996 and 1999, 1 in Sept. 1998 in peripheral field.
Common Starling <i>Sturnus vulgaris</i>		b	E, R	Numerous at all times at swamp and (oftener) peripheral fields. 400-2000+ in June and Aug. 1998.

Note: In addition to the above species, Graham Carpenter flushed a Baillon's Crake *Porzana pusilla* from flooded clubrush near the inlet drain on 8 October 1999 and recorded three feeding on green algal mats in flooded samphire adjacent to clubrush on 3 November 2000 (Carpenter 2001). He flushed a female Painted Snipe *Rostratula benghalensis* from flooded samphire on 3 November 2000 (Carpenter 2001).