

Bird surveys by A Rocha Australia at Hart Road Wetlands Aldinga Beach, South Australia, in 2020

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Introduction

The project is located at Hart Road Wetlands, Aldinga Beach, South Australia, which is a system of artificial wetlands to treat urban stormwater. The property is owned and managed by the City of Onkaparinga. Habitats include open water and beds of cumbungi *Typha* sp., reed *Phragmites australis*, sedges (e.g. *Juncus* sp.) swards of nardoo *Marsilea* sp., tussocks of cutting grass *Gahnia filum* and clumps of lignum *Duma florulenta*. A few old gum trees and dead trunks occur. Dry land has been planted with mixed woodland including mallee species or is mowed grassland.

Surveys were conducted in six sites (plots), each of 2.0 hectares, of irregular shape but designed to include distinct wetland and/or woodland units, to inform property management. Refer to the map below. All sites were surveyed in every visit and there were several incidental records. The '2.0 ha, 20 minute' method of BirdLife Australia was applied and records were documented in the Birddata app; the data are publicly available online. The lead observer and number of observers varied between surveys, but this is not considered to have greatly influenced the survey results.



Red lines indicate site (plot) boundaries; each site covers 2.0 hectares.
Other coloured lines represent typical routes followed by observers during surveys.

Results from 2020

1. Number of survey efforts (property visits) in 2020 = 6, comprising two in summer, one in autumn, one in winter and two in spring. Thus, a seasonal bias in the unadjusted data.
2. Total number of surveys conducted = 36 standardised surveys and 2 incidental surveys.
3. Total number of bird records = 593.
4. Total number of species recorded, from all surveys = 66.
 - Includes non-indigenous (introduced) species¹ = 7.
 - Nationally Threatened² Species = 0.
 - Migratory³ Species = 0.
5. Total number of species found breeding⁴, from all surveys = 7.
6. Number of species, and breeding, by site:

Site (plot)	species recorded	Species found breeding
NW	34	Purple Swamphen, Pacific Black Duck, Eurasian Coot.
CN	39	Purple Swamphen, E. Coot, Fairy Martin, Common Starling.
NE	30	
SE	31	
CS	38	Crested Pigeon.
SW	47	Purple Swamphen, Dusky Moorhen.

7. Species of ornithological interest due to occurrence at margins of known range, unusual in this habitat, or secretive behaviour (not commonly detected):
 - Peregrine Falcon
 - Baillon's Crake
 - Spotless Crake
 - Crescent Honeyeater
8. Most frequently recorded species:

rank	species	No. of records
1	New Holland Honeyeater	32
= 2	Purple Swamphen	29
= 2	Red Wattlebird	29
4	White-plumed Honeyeater	27
5	Superb Fairy-wren	24
6	Welcome Swallow	23
= 7	Australian Magpie	21
= 7	Eurasian Coot	21
= 7	Little Grassbird	21
= 7	Common Starling *	21

* introduced species

¹ For this report, species listed as Black Duck-Mallard hybrid or Domestic Duck are considered one 'species'.

² Under the Commonwealth's EPBC Act 1999; a Matter of National Environmental Significance (MNES).

³ Under the Commonwealth's EPBC Act 1999; a Matter of National Environmental Significance (MNES).

⁴ Includes behaviour suggestive of breeding; but in practice mainly adults with dependent young.

9. Most abundant species, based on cumulative tally of individuals across all surveys:

rank	species	No. of individuals
1	New Holland Honeyeater	148
2	Galah	145
3	Common Starling *	119
4	Purple Swamphen	115
5	Superb Fairy-wren	101
6	Crested Pigeon	95
7	Welcome Swallow	90
8	Red Wattlebird	85
9	Little Corella	80
10	White-plumed Honeyeater	72

10. Analysis of data by season:

The number of seasonal samples is too small at this stage to conduct robust analysis. But some preliminary indications of seasonality may eventually prove to be meaningful:

- 7 species were recorded only in summer, e.g. Baillon's & Australian Spotted Crakes.
- 2 species were recorded only in autumn, e.g. Red-browed Finch.
- 2 species were recorded only in winter, e.g. Crescent Honeyeater.
- 2 species were recorded only in spring, e.g. Black-tailed Native-hen.

11. Information on waterbird usage of particular sites (sections of the wetland park):

The number of samples by site is too small at this stage to conduct robust analysis. But some preliminary indications of preference may eventually prove to be meaningful:

- Australian Spotted Crake, Baillon's Crake, Australian Wood Duck and Dusky Woodswallow were recorded only in site SW.
- Hoary-headed Grebe, Spotted Pardalote and White-browed Scrubwren were recorded only in site CS.
- Spotless Crake was recorded only in sites CN and SW, in dense reedbeds. Elegant Parrot was only in sites SW and CS, in some cases drinking at the water edge.
- Crescent Honeyeater and Yellow Thornbill were recorded only in the dryland woodland sites NE and SE. Red-browed Finch was seen only in site SE.
- Species recorded in all six sites were Pacific Black Duck, Purple Swamphen, New Holland Honeyeater, White-plumed Honeyeater, Red Wattlebird, Willie Wagtail and Superb Fairy-wren.
- Waterbird (wetland-dependent) species recorded in all four wetland sites were Eurasian Coot, Little Pied Cormorant, Australian Reed-Warbler and Little Grassbird.

12. Comments on the results:

- Further surveys will strengthen our capacity to draw strong conclusions about how birds use different habitats and sectors at Hart Road Wetlands.
- Secretive crakes were recorded only in the two sectors with the most extensive beds or reeds and cumbungi but smaller areas of this habitat are in all four wetland sites.
- Scarcity of drying bare mud and small size of open areas likely prevented the occurrence of migratory shorebird species at the Wetlands, in these surveys.
- Clearly the Hart Road Wetlands support a diversity of bird species which has been and will remain attractive to birdwatchers and other visitors.
- Further information on potential development of visitor facilities such as bird hides and signage may be provided to Council separately.

List of species recorded to date

Common Name	Scientific Name
Australasian Darter	Anhinga novaehollandiae
Australian Hobby	Falco longipennis
Australian Magpie	Gymnorhina tibicen
Australian Reed-Warbler	Acrocephalus australis
Australian Spotted Crake	Porzana fluminea
Australian White Ibis	Threskiornis moluccus
Australian Wood Duck	Chenonetta jubata
Baillon's Crake	Zapornia pusilla
Black Duck-Mallard hybrid / Domestic duck) *	
Black-faced Cuckoo-shrike	Coracina novaehollandiae
Black-fronted Dotterel	Elseya melanops
Black-tailed Native-hen	Tribonyx ventralis
Brush Bronzewing	Phaps elegans
Common Blackbird *	Turdus merula
Common Bronzewing	Phaps chalcoptera
Common Starling *	Sturnus vulgaris
Crescent Honeyeater	Phylidonyris pyrrhopterus
Crested Pigeon	Ocyphaps lophotes
Crimson Rosella	Platycercus elegans
Dusky Moorhen	Gallinula tenebrosa
Dusky Woodswallow	Artamus cyanopterus
Eastern Rosella	Platycercus eximius
Elegant Parrot	Neophema elegans
Eurasian Coot	Fulica atra
European Goldfinch *	Carduelis carduelis
Fairy Martin	Petrochelidon ariel
Galah	Eolophus roseicapilla
Grey Shrike-thrush	Colluricincla harmonica
Grey Teal	Anas gracilis
Hoary-headed Grebe	Poliiocephalus poliocephalus
Horsfield's Bronze-Cuckoo	Chalcites basalis
House Sparrow *	Passer domesticus
Little Corella	Cacatua sanguinea
Little Grassbird	Poodytes gramineus
Little Pied Cormorant	Microcarbo melanoleucos
Little Raven	Corvus mellori
Little Wattlebird	Anthochaera chrysoptera
Magpie-lark	Grallina cyanoleuca
Masked Lapwing	Vanellus miles
Mistletoebird	Dicaeum hirundinaceum
Musk Duck	Biziura lobata
Musk Lorikeet	Glossopsitta concinna
New Holland Honeyeater	Phylidonyris novaehollandiae
Pacific Black Duck	Anas superciliosa
Peaceful Dove	Geopelia placida
Peregrine Falcon	Falco peregrinus
Purple Swamphen	Porphyrio porphyrio
Rainbow Lorikeet	Trichoglossus moluccanus
Red Wattlebird	Anthochaera carunculata
Red-browed Finch	Neochmia temporalis
Rock Dove *	Columba livia
Silvereye	Zosterops lateralis
Singing Honeyeater	Gavicalis virescens
Spotless Crake	Zapornia tabuensis
Spotted Dove *	Streptopelia chinensis
Spotted Pardalote	Pardalotus punctatus
Striated Pardalote	Pardalotus striatus
Superb Fairy-wren	Malurus cyaneus
Weebill	Smicronis brevirostris
Welcome Swallow	Hirundo neoxena
White-browed Scrubwren	Sericornis frontalis
White-faced Heron	Egretta novaehollandiae
White-plumed Honeyeater	Ptilotula penicillata
Willie Wagtail	Rhipidura leucophrys
Yellow Thornbill	Acanthiza nana
Yellow-rumped Thornbill	Acanthiza chrysorrhoa

* introduced species