

Bird Surveys in Saltwater National Park

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Surveys at Saltwater National Park in northern New South Wales over 2009-2015 have recorded 123 species. Only ten species had Reporting Rates above 70%; mostly these were birds that favour rainforest understorey habitat, which is abundant in the National Park. Frugivorous species were often present, in particular Regent Bowerbird *Sericulus chrysocephalus*, Australasian Figbird *Sphecotheres vieilloti* and Wonga Pigeon *Leucosarcia picata*. Nine species classified as threatened in NSW were recorded, notably Australian Pied Oystercatcher *Haematopus longirostris* and Wompoo Fruit-Dove *Ptilinopus magnificus* several times.

INTRODUCTION

Saltwater National Park (NP) lies at the mouth of Khappinghat Creek, in the Manning Valley near Wallabi Point, approximately 10km south of Old Bar in New South Wales. The Park, which is centred at 32°0'30" S 152°33'54" E, has habitats which include littoral rainforest, an estuary, a rocky cape, and open areas used for picnics and camping. Saltwater NP also has important local indigenous significance (Anon. 2012). The 33 ha Park is managed separately from the much larger (3,514 ha) Khappinghat NP which adjoins it (see **Figure 1**).

At the time of writing, 66 surveys have been conducted since 2009. The surveys are ongoing, but it seemed timely to review the initial results.

METHODS

The surveys have been conducted at approximately monthly intervals, except for January each year (when the Park is used by many indigenous campers). The starting time was variable, because the timing of each visit has been fitted between visits to nearby high-tide roost sites to survey them for shorebirds (Stuart 2014b). The visits to Saltwater NP have occurred mostly in the morning, although sometimes late morning and less frequently in the afternoon.

All species detected (either seen or heard) were recorded, including any birds flying over or occurring to within ~100m offshore, and the numbers for each species present were estimated. The overall survey, which took about 90 minutes on average to carry out, encompassed an area of approximately 500m radius.

The results from each survey have been entered into BirdLife Australia's Atlas database (Birdata) as a "500m area survey" (with site ID 253616).

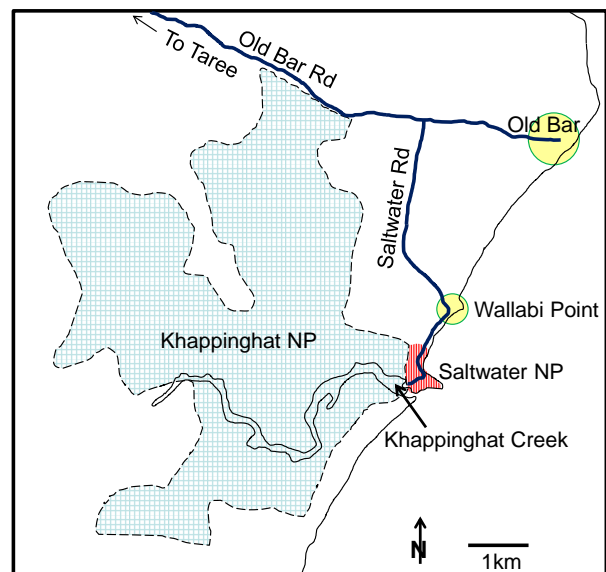


Figure 1. Saltwater NP and nearby locations

RESULTS AND DISCUSSION

123 species have been recorded including 30 species (25% of the total biodiversity) for which there was only one record. The full list is provided in the **Appendix** along with the Reporting Rate (RR) for each species. The RR is the percentage of times that the species has been recorded during the surveys (the number of times recorded, divided by total number of surveys). An indication of the number of birds for each species (when present) is also given in the **Appendix**.

Common Species

Only ten species had RRs greater than 70% (shown in **Bold** in the **Appendix**). Eight of those favour rainforest understorey, which is abundant at Saltwater NP. The two others, Laughing Kookaburra *Dacelo novaeguineae* and Australian Magpie *Cracticus tibicen* are readily detected birds of more open areas.

Species which exhibit cryptic behaviour or which only have small populations within the Park, and hence not always intersected with, may have been overlooked in some surveys. However, species such as Red-browed Finch *Neochmia temporalis*, Superb Fairy-wren *Malurus cyaneus*, White-browed Scrubwren *Sericornis frontalis* and Yellow-throated Scrubwren *S. citreogularis* usually are readily detected when present. An interpretation is that Saltwater NP does not permanently support many species; instead, that it offers them an extended range for foraging, based on territories in parts of the nearby Khappinghat NP. This speculation has been partially confirmed for some species. Usually Lewin's Honeyeater *Meliphaga lewinii*, Little Wattlebird *Anthochaera chrysoptera* and White-cheeked Honeyeater *Phylidonyris niger* are vocal and readily located within Saltwater NP, and present in good numbers. However occasionally when they have not been detected during a survey, it has been established that the birds were instead in nearby areas of the adjoining Khappinghat NP. It is assumed that the driver for this movement is food-related.

Threatened Species

Nine species classified as threatened under the NSW *Threatened Species Conservation Act 1995* were recorded in Saltwater NP; they are indicated in the **Appendix**. For most of those species, there were single records. The Wompoo Fruit-Dove *Ptilinopus magnificus* was recorded in six surveys, as single birds feeding or resting in the large fig trees (unknown *Ficus* species) that are a feature of the National Park. Possibly their presence has been overlooked sometimes; they have only twice been heard to call and it can be difficult to spot a stationary bird high in the foliage. One to two Australian Pied Oystercatchers *Haematopus longirostris*, both adult birds and apparently a pair, have mostly been present in the winter months (24 records). It appears that they move elsewhere to breed. Little Terns *Sternula albifrons* have been recorded six times, always in late summer. Birds in breeding and non-breeding plumage have been observed. The timing corresponds to the end of the

breeding season of the colony at Old Bar (Fawcett & Thomas 2012) and presumably those present at Saltwater NP have been dispersing birds. It is noted that all gull and tern species have been absent from the Park or only present in very low numbers, outside of summer.

Sooty Oystercatchers *Haematopus fuliginosus* were recorded three times; notably however, this included a pair with a juvenile bird in summer 2015.

Frugivorous Species

Saltwater NP contains many large fig trees and also other rainforest trees. These attract frugivorous species, which were often recorded in the Park. Regent *Sericulus chrysocephalus* and Satin Bowerbird *Ptilonorhynchus violaceus*, Green Catbird *Ailuroedus crassirostris*, Australasian Figbird *Sphecotheres vieilloti* and Wonga Pigeon *Leucosarcia picata* all had RRs in the range 25-60%. In the most favourable circumstances, 20+ Figbirds and 10-15 each of Regent and Satin Bowerbirds were present. Several other fruit-eating pigeons and doves have been recorded, albeit less frequently.

Species of Regional Interest

Some records appear noteworthy in a regional context (based on Stuart 1994-2014a):

- Crescent Honeyeater *Phylidonyris pyrrhopterus* in June 2009. This species is generally considered to be confined locally to high altitude parts of the Gloucester Tops. There is only one other low altitude record for the Hunter Region, at Arcadia Vale near Lake Macquarie in October 2006 after strong westerly winds (Stuart 2007). There is also one record from a mid-altitude location (Raine 2014).
- Noisy Pitta *Pitta versicolor* recorded May 2011 and August 2013. Coastal winter records may be increasing.
- Russet-tailed Thrush *Zoothera heinei* recorded August 2011. Coastal records are quite uncommon.
- Spectacled Monarch *Symphoricarphus trivirgatus* was first recorded in December 2010, and with several more records in subsequent years. This seems to be associated with a southerly extension of the coastal range for the species. Its RR at Saltwater NP is much higher than for the regionally more common Black-faced Monarch *Monarcha melanopsis*, which

appears to be a casual visitor to the Park. Both species are considered to be summer migrants to the Hunter Region (Stuart 2014a); thus the RR of 16.7% for Spectacled Monarch, present for only ~6 months of the year, compares favourably to RRs at Saltwater NP for more sedentary species such as White-browed Scrubwren *Sericornis frontalis* and Satin Bowerbird. A similar situation applies for the Spangled Drongo *Dicrurus bracteatus*, with an RR of 36.4% despite it being absent in summer.

Breeding Records

There are two confirmed breeding records:

- A pair of Yellow-throated Scrubwrens had a nest with young February 2010 (also, a pair was nest-building September 2012).
- A pair of Brown Thornbills *Acanthiza pusilla* had a nest with young September 2013 (M. Kearns pers. comm.).

Indications that other species may have bred in the National Park include observations of:

- Australian Brush-turkey *Alectura lathami* tending a mound August and November 2009.
- Regent Bowerbird feeding fledged young October 2012.
- Eastern Yellow Robin feeding fledged young September 2010 (P. Drake-Brockman pers. comm.).

The lack of breeding records may at least in part be a consequence of the survey method. The main

goal of area surveys is to obtain an inventory of birds present. There is less opportunity for the detailed observation of individual birds that is normally required to monitor breeding activity effectively.

CONCLUSIONS

123 species have been recorded in Saltwater NP although 25% of those are one-off records. Relatively few species appear to be solely dependent upon the small National Park for their survival. Frugivorous species often are present in good numbers.

REFERENCES

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APPENDIX

The Birds of Saltwater National Park

Species	Scientific Name	RR	Estimated Population*
Australian Brush-turkey	<i>Alectura lathami</i>	66.7%	4-8
Brown Quail	<i>Coturnix ypsilophora</i>	1.5%	<5
Black Swan	<i>Cygnus atratus</i>	4.5%	1-2
Chestnut Teal	<i>Anas castanea</i>	3.0%	1-2
Pacific Black Duck	<i>Anas superciliosa</i>	1.5%	1-2
White-headed Pigeon	<i>Columba leucomela</i>	22.7%	1-3
Brown Cuckoo-Dove	<i>Macropygia amboinensis</i>	4.5%	1-2
Emerald Dove	<i>Chalcophaps indica</i>	3.0%	1-2
Crested Pigeon	<i>Ocyphaps lophotes</i>	9.1%	1-2

Note: * When Recorded

Appendix: The Birds of Saltwater National Park cont.

Species	Scientific Name	RR	Estimated Population*
Peaceful Dove	<i>Geopelia striata</i>	1.5%	1
Bar-shouldered Dove	<i>Geopelia humeralis</i>	16.7%	1-2
Wonga Pigeon	<i>Leucosarcia picata</i>	39.4%	2-3
Wompoo Fruit-Dove ^V	<i>Ptilinopus magnificus</i>	9.1%	1
Rose-crowned Fruit-Dove ^V	<i>Ptilinopus regina</i>	1.5%	1
Topknot Pigeon	<i>Lopholaimus antarcticus</i>	10.6%	2-10
Tawny Frogmouth	<i>Podargus strigoides</i>	1.5%	2
White-throated Needletail	<i>Hirundapus caudacutus</i>	7.6%	Flying over
Fork-tailed Swift	<i>Apus pacificus</i>	1.5%	Flying over
Wedge-tailed Shearwater	<i>Ardenna pacifica</i>	1.5%	5-10
Australasian Gannet	<i>Morus serrator</i>	15.2%	1-2
Little Pied Cormorant	<i>Microcarbo melanoleucos</i>	10.6%	1-2
Great Cormorant	<i>Phalacrocorax carbo</i>	22.7%	1-5
Little Black Cormorant	<i>Phalacrocorax sulcirostris</i>	12.1%	5-15
Pied Cormorant	<i>Phalacrocorax varius</i>	28.8%	1-5
Australian Pelican	<i>Pelecanus conspicillatus</i>	13.6%	1-2
Great Egret	<i>Ardea alba</i>	4.5%	1-2
Striated Heron	<i>Butorides striata</i>	4.5%	1
White-faced Heron	<i>Egretta novaehollandiae</i>	45.5%	1-2
Little Egret	<i>Egretta garzetta</i>	6.1%	1
Eastern Reef Egret	<i>Egretta sacra</i>	1.5%	1
Nankeen Night-Heron	<i>Nycticorax caledonicus</i>	22.7%	1-5
Australian White Ibis	<i>Threskiornis molucca</i>	1.5%	1-2
Osprey ^V	<i>Pandion haliaetus</i>	16.7%	1-2
White-bellied Sea-Eagle	<i>Haliaeetus leucogaster</i>	18.2%	1-2
Whistling Kite	<i>Haliastur sphenurus</i>	31.8%	1-2
Brahminy Kite	<i>Haliastur indus</i>	10.6%	1-2
Grey Goshawk	<i>Accipiter novaehollandiae</i>	1.5%	1
Little Eagle ^V	<i>Hieraetus morphnoides</i>	1.5%	1
Nankeen Kestrel	<i>Falco cenchroides</i>	1.5%	1
Australian Hobby	<i>Falco longipennis</i>	1.5%	1
Beach Stone-curlew ^{CE}	<i>Esacus giganteus</i>	1.5%	1
Australian Pied Oystercatcher ^E	<i>Haematopus longirostris</i>	36.4%	1-2
Sooty Oystercatcher ^V	<i>Haematopus fuliginosus</i>	4.5%	1-3
Red-capped Plover	<i>Charadrius ruficapillus</i>	13.6%	1-2
Black-fronted Dotterel	<i>Elseyornis melanops</i>	6.1%	1-2
Masked Lapwing	<i>Vanellus miles</i>	10.6%	2-4
Bar-tailed Godwit	<i>Limosa lapponica</i>	1.5%	1-2
Little Tern ^E	<i>Sternula albifrons</i>	9.1%	5-10
Common Tern	<i>Sterna hirundo</i>	12.1%	5-10
Crested Tern	<i>Thalasseus bergii</i>	33.3%	20-50
Silver Gull	<i>Chroicocephalus novaehollandiae</i>	39.4%	10-30
Yellow-tailed Black-Cockatoo	<i>Calyptorhynchus funereus</i>	1.5%	1-5
Galah	<i>Eolophus roseicapillus</i>	7.6%	1-2
Rainbow Lorikeet	<i>Trichoglossus haematodus</i>	15.2%	2-6
Scaly-breasted Lorikeet	<i>Trichoglossus chlorolepidotus</i>	42.4%	4-10
Australian King-Parrot	<i>Alisterus scapularis</i>	3.0%	1-2
Eastern Rosella	<i>Platycercus eximius</i>	1.5%	1-2
Eastern Koel	<i>Eudynamis orientalis</i>	16.7%	1-2
Channel-billed Cuckoo	<i>Scythrops novaehollandiae</i>	1.5%	1
Shining Bronze-Cuckoo	<i>Chalcites lucidus</i>	9.1%	1-2
Fan-tailed Cuckoo	<i>Cacomantis flabelliformis</i>	13.6%	1-2
Brush Cuckoo	<i>Cacomantis variolosus</i>	1.5%	1
Azure Kingfisher	<i>Ceyx azureus</i>	1.5%	1-2
Laughing Kookaburra	<i>Dacelo novaeguineae</i>	86.4%	2-4
Sacred Kingfisher	<i>Todiramphus sanctus</i>	6.1%	1-2

Note: *When Recorded; Species shown in **Bold** have RRs of greater than 70%
 NSW Threatened Species: V: Vulnerable E: Endangered CE: Critically Endangered

Appendix: The Birds of Saltwater National Park cont.

Species	Scientific Name	RR	Estimated Population*
Rainbow Bee-eater	<i>Merops ornatus</i>	4.5%	1-2
Dollarbird	<i>Eurystomus orientalis</i>	12.1%	1-2
Noisy Pitta	<i>Pitta versicolor</i>	3.0%	1
Regent Bowerbird	<i>Sericulus chrysocephalus</i>	57.6%	4-10+
Satin Bowerbird	<i>Ptilonorhynchus violaceus</i>	28.8%	2-8+
Superb Fairy-wren	<i>Malurus cyaneus</i>	59.1%	4-10
Red-backed Fairy-wren	<i>Malurus melanocephalus</i>	1.5%	1-2
Variigated Fairy-wren	<i>Malurus lamberti</i>	24.2%	2-5
Yellow-throated Scrubwren	<i>Sericornis citreogularis</i>	43.9%	4-6
White-browed Scrubwren	<i>Sericornis frontalis</i>	34.8%	4-6
Large-billed Scrubwren	<i>Sericornis magnirostris</i>	19.7%	2-4
Brown Gerygone	<i>Gerygone mouki</i>	84.8%	10-20
Striated Thornbill	<i>Acanthiza lineata</i>	1.5%	5-10
Yellow Thornbill	<i>Acanthiza nana</i>	15.2%	5-10
Brown Thornbill	<i>Acanthiza pusilla</i>	71.2%	10-20
Spotted Pardalote	<i>Pardalotus punctatus</i>	12.1%	1-2
Eastern Spinebill	<i>Acanthorhynchus tenuirostris</i>	43.9%	2-5
Lewin's Honeyeater	<i>Meliphaga lewinii</i>	87.9%	5-15
Yellow-faced Honeyeater	<i>Lichenostomus chrysops</i>	31.8%	2-6
Little Wattlebird	<i>Anthochaera chrysoptera</i>	83.3%	5-20+
Red Wattlebird	<i>Anthochaera carunculata</i>	3.0%	1-2
Scarlet Honeyeater	<i>Myzomela sanguinolenta</i>	40.9%	5-10
Brown Honeyeater	<i>Lichmera indistincta</i>	1.5%	1
Crescent Honeyeater	<i>Phylidonyris pyrrhopterus</i>	1.5%	1
White-cheeked Honeyeater	<i>Phylidonyris niger</i>	47.0%	5-15
Noisy Friarbird	<i>Philemon corniculatus</i>	13.6%	2-4
Eastern Whipbird	<i>Psophodes olivaceus</i>	77.3%	2-4
Black-faced Cuckoo-shrike	<i>Coracina novaehollandiae</i>	25.8%	1-2
Crested Shrike-tit	<i>Falcunculus frontatus</i>	1.5%	1
Golden Whistler	<i>Pachycephala pectoralis</i>	74.2%	5-10
Grey Shrike-thrush	<i>Colluricincla harmonica</i>	10.6%	1-2
Australasian Figbird	<i>Sphecotheres vieilloti</i>	45.5%	5-20+
Olive-backed Oriole	<i>Oriolus sagittatus</i>	4.5%	1-2
White-breasted Woodswallow	<i>Artamus leucorhynchus</i>	3.0%	2-4
Grey Butcherbird	<i>Cracticus torquatus</i>	6.1%	1-2
Pied Butcherbird	<i>Cracticus nigrogularis</i>	47.0%	1-2
Australian Magpie	<i>Cracticus tibicen</i>	75.8%	2-4
Pied Currawong	<i>Strepera graculina</i>	27.3%	1-2
Spangled Drongo	<i>Dicrurus bracteatus</i>	36.4%	1-8+
Rufous Fantail	<i>Rhipidura rufifrons</i>	19.7%	1-2
Grey Fantail	<i>Rhipidura fuliginosa</i>	72.7%	5-10
Willie Wagtail	<i>Rhipidura leucophrys</i>	65.2%	2-4
Forest Raven	<i>Corvus tasmanicus</i>	63.6%	2-4
Leaden Flycatcher	<i>Myiagra rubecula</i>	1.5%	1
Black-faced Monarch	<i>Monarcha melanopsis</i>	6.1%	1-2
Spectacled Monarch	<i>Symposiachrus trivirgatus</i>	16.7%	1-2
Magpie-lark	<i>Grallina cyanoleuca</i>	24.2%	1-2
Rose Robin	<i>Petroica rosea</i>	1.5%	1
Eastern Yellow Robin	<i>Eopsaltria australis</i>	74.2%	5-10
Silvereye	<i>Zosterops lateralis</i>	54.5%	2-10
Welcome Swallow	<i>Hirundo neoxena</i>	22.7%	2-10
Tree Martin	<i>Petrochelidon nigricans</i>	1.5%	2-10
Bassian Thrush	<i>Zoothera lunulata</i>	1.5%	1
Russet-tailed Thrush	<i>Zoothera heinei</i>	1.5%	1
Mistletoebird	<i>Dicaeum hirundinaceum</i>	3.0%	1-2
Red-browed Finch	<i>Neochmia temporalis</i>	47.0%	5-10

Note: *When Recorded; Species shown in **Bold** have RRs of greater than 70%
 NSW Threatened Species: V: Vulnerable E: Endangered CE: Critically Endangered