



Banded Finch at nest.

Photo. by John Warham

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## Cockatoo Island Birds

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During a tour of the West Kimberley district in 1956, my wife and I were fortunate in being able to spend a short period on Cockatoo Island; we were there on July 28 and again from July 30 to August 7 inclusive. During this stay 40 species of birds were identified on or around the island, five of which were breeding at the time. This avifauna has not been reported on previously although Messrs. A. Douglas and K. Buller, both of the West Australian Museum, have paid brief visits to the island, but it is hoped that the present preliminary survey may stimulate someone resident there to undertake a more extensive review during his or her term of duty in this interesting and, ornithologically speaking, little-known corner of Australia.

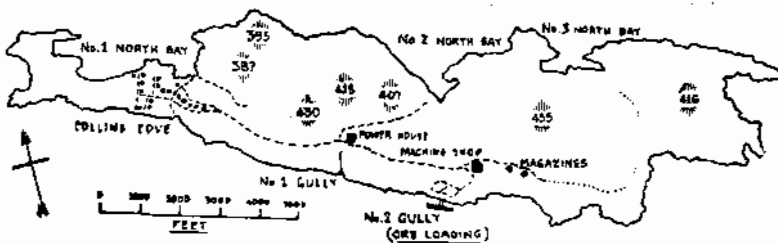
The only other island of the region the birds of which have been studied is that of Sunday Island (Söderberg, 1918), about 30 miles to the south-west and one of the biggest hereabouts. Sunday Island appears to be very similar in geology and form to Cockatoo, being rocky and high and composed of red tertiary sandstone, but it has some fresh water, groves of pandanus palms, and extensive mangrove thickets along the ebb-zone. Söderberg was there for two months during January and February 1911, and, as might be expected, his bird list includes a number of species not noted at Cockatoo Island. These occurrences are given at the end of the present paper for comparison.

### DESCRIPTION

Cockatoo Island is one of many islands comprising the Buccaneer Archipelago and lies at approximately 16° 06' S, 123° 37' E; it is separated from the mainland by about 4 miles of deep water comprising Yampi Sound. The island is roughly 3½ miles long by about ¾ mile wide at its broadest point and its long axis lies in a WNW/ESE direction. As can be seen from the sketch map, the coastline is very indented, and the beaches are few and subjected to the high tides com-

mon to the West Kimberley coastline. Coral reefs surround the island and are exposed at times of low tide.

Cockatoo Island currently carries a population of 180 people consisting of employees of Australian Iron and Steel Ltd., and their families, a company which is engaged in exploiting the extensive iron-ore deposits. The island is serviced by an 80-foot motor vessel, the *Yampi Lass II*, which visits Derby to collect mail, stores and passengers once weekly. The settlement is situated towards the west end of the island grouped around a low neck of land between No. 1 North Bay and Collins Cove (see map) and from here a gravel road runs east along the top of the island to the power house, main ore workings, machine shop and magazines. Several survey and side tracks have also been carved roughly across the stony surface of the island.



Map of Cockatoo Island.

The island is very hilly and in most parts rises steeply from sea level to reach heights of 400 to 450 feet. There is practically no surface soil but there are a few sand-filled gullies. The rocks are mostly similar to those of the adjacent mainland but iron-bearing strata occur throughout; the south side contains the main ore body and consists of the Mosquito Creek series of sandstones, shales and schists.

#### WEATHER

Cockatoo Island lies in the dry monsoon belt receiving rain from December to March and the fall is doubtless similar to that of Derby and Point Leveque, that is about 30 inches annually. There is no natural permanent fresh water on the island, a well in the so-called Pump House Gully that in pre-war days served the then small settlement is now saline and drinking water is brought as ballast by ore ships from Newcastle and Port Kembla, N.S.W. A certain number of natural catchments in the rocks hold a little water following rains and garden sprinklers serve the water requirements of some birds living around the township.

## PLANT LIFE

Despite the aridity and stony nature of the terrain, Cockatoo Island is by no means barren. The dominant trees are woolly-butts (*Eucalyptus miniata*) growing to about 40 feet high in some places, but cabbage gums (*E. confertiflora*) are also important members of the flora, and at least two other eucalypts are present—*E. tectifica* and *E. perfoliata*. There are good growths of wattles in the gullies (mostly *Acacia tumida*), two kurrajongs (*Brachychiton caudatum* and *B. paradoxum*), a wild grape (*Cissus oblonga*), three grevilleas, and two figs (*Ficus orbicularis* and *F. leucotricha*). There are also many kinds of smaller plants, grasses, etc., and the more exposed slopes are covered with porcupine grass (*Triodia*). There are a very few mangroves on the shore line and only a single stunted pandanus palm.

This flora is very similar to that of the adjacent coast and the bird fauna is likewise an extension, though somewhat impoverished, of the life to be found on the mainland. Owing to its rocky 'continental' character, Cockatoo Island, together with others of a similar pattern along the north-west coast (Serventy, 1952), has little or no appeal to sea-birds for nesting although several kinds fish the surrounding waters.

## BIRDS OBSERVED

**Geopelia humeralis.** Bar-shouldered Dove.

These birds were fairly plentiful both near the township and on higher ground in the main body of the island.

**Geopelia striata.** Peaceful Dove.

The commonest dove on the island and plentiful in the gardens of the township.

**Fregata ariel.** Lesser Frigate-bird.

These birds frequently sailed past or over the island and on one occasion we saw three circling watchfully above a school of porpoises.

**Sula leucogaster.** Brown Gannet.

Like the Frigate-birds, these Boobies were commonly seen above the waters around the island.

**Sterna bergii.** Crested Tern.

These were the only terns noted along the coastline and they were not common.

**Larus novaehollandiae.** Silver Gull.

A flock of about 100 seemed to be in permanent residence and clamoured for scraps at the rear of the cookhouse.

**Hæmatopus fuliginosus.** Sooty Oyster-catcher.

These attractive birds were seen on the rocks on several occasions and may perhaps breed here.

**Burhinus magnirostris.** Southern Stone-Curlew.

Curlews were not seen, but their weird cries were often heard at dawn.

**Demigretta sacra.** Reef-Heron.

Reef-Herons were always about at low tide; dark phase birds appeared to outnumber white by about 2 to 1.

**Haliæetus leucogaster.** White-breasted Sea-Eagle.

These magnificent birds often sailed across the island and particularly over the township. A juvenile bird in brown plumage was also

seen and we were told that the Sea-Eagles nested on a crag on the north side of the island but we lacked the time to get there ourselves.

**Haliastur indus.** Red-backed Sea-Eagle.

Commonly seen flying around the island or perched in the trees on-shore.

**Hamirostra melanosterna.** Black-breasted Buzzard.

One was seen sailing out at sea off the east end of the island on August 7.

**Pandion haliaetus.** Osprey.

Another common bird which was watched fishing the reefs on several occasions.

**Ninox nova-seelandiae.** Boobook Owl.

These were heard at night and a pair roosted in a thick gum sucker by Pump House Gully throughout our stay.

**Kakatoë sanguinea.** Corella.

Doubtless the island gets its name from its resident flock of these Cockatoos. There were about 200 present at the time of our visit. They are said not to nest on the island itself but to repair to an isolated rocky outcrop off the south-west of the island called 'The Piccaninnies'. Many residents have boats and visits to this rock are made quite often. We were told that one pair had eggs on May 18 which hatched about May 20, but that at the time of our visit most nests held young. We were unable to get to the Piccaninnies ourselves.

**Aprosmictus erythropterus.** Red-winged Parrot.

After the Corellas, these Red-winged Parrots were the commonest psittacine birds seen and individuals sometimes passed over the settlement.

**Platycercus venustus.** Northern Rosella.

Rosellas were much less common than the previous species and there were probably only two pairs on the island during our stay. They were seen most frequently in the area from the Power House to the Magazines. The Pale-headed Rosella was the only species noted on Cockatoo Island that we had not previously encountered on the mainland.

**Halcyon pyrrhopygia.** Red-back Kingfisher.

A bird of this species was often found perched on power wires beside the road from the township to the ore workings.

**Halcyon chloris.** Mangrove Kingfisher.

Mangrove Kingfishers were noted singly on the rocks by the shores at the west end of the island, not elsewhere.

**Merops ornatus.** Bee-eater.

Bee-eaters were plentiful during our stay but it is rather doubtful whether they are permanent residents or breed here in view of the rocky nature of the surface which is mostly unsuitable for burrowing.

**Centropus phasianinus.** Pheasant Coucal.

These large birds are still quite plentiful on the island and their 'coop, coop . . .' call was a feature of the dawn song most mornings. According to the 'old hands' these birds—'Japanese Pheasants' as they are called here—used to be abundant, hopping around the workers' tents, but the inevitable cats which have since been brought on to the island are said to have reduced the Coucal's numbers in recent years. Birds of both light and dark phases were noted.

**Rhipidura rufiventris.** Northern Fantail.

A single bird was seen near the township on July 31.

**Rhipidura leucophrys.** Willie Wagtail.

Several pairs were about and as usual they were most in evidence around the settlement. One bird was watched mobbing a Coucal.

**Myiagra rubecula.** Leaden Flycatcher.

Birds of both sexes were present and the males were singing vigorously.

***Seisura inquieta*. Restless Flycatcher.**

A few birds were present at the time of our visit.

***Grallina cyanoleuca*. Magpie-Lark.**

'Mudlarks' were plentiful in the township where there was an abundant water supply from the sprinklers; in view of the natural lack of water these may be comparatively recent additions to the island's avifauna and it is noteworthy that Söderberg found the species absent from Sunday Island where conditions would appear to be much more favourable.

***Coracina novæ-hollandiæ*. Black-faced Cuckoo-Shrike.**

One of the commoner birds, groups of four or more being often seen perched on overhead cables.

***Artamus minor*. Little Wood-Swallow**

A small flock was seen: this too was a species prone to perching on power lines.

***Dicaeum hirundinaceum*. Mistletoe-bird.**

Mistletoe-birds were fairly numerous and at least one species of mistletoe (*Loranthus benthami*) grows here.

***Pardalotus melanocephalus*. Black-headed Pardalote.**

Perhaps the commonest small bird, nesting freely within holes in termite mounds, in natural banks and in the sides of cuttings. Man's activities here have increased the potential nesting sites and the bird appears to be taking advantage of these additional opportunities. The characteristic 'pick-wicker' calls were constantly heard.

***Melithreptus albogularis*. White-throated Honeyeater.**

A common species to be seen both around the houses feeding on garden blooms and on the blossoms of the woolly-butts.

***Melithreptus laetior*. Golden-backed Honeyeater.**

Few birds of this species were noted. It is bigger and yellower than the previous bird and has similar feeding habits and calls.

***Gliciphila indistincta*. Brown Honeyeater.**

Perhaps the commonest honeyeater on the island and in full song at the time. Mr. A. Douglas tells me that during October 1955 he noted a bird of this species impaled on the sticky seed-pod of the caustic goose-leaf (*Goeneclea pyramidalis*) which grows commonly on the island.

***Conopophila rufogularis*. Rufous-throated Honeyeater.**

Another common bird, easily mistaken for the foregoing species until the rufous throat patch is seen.

***Myzantha flavigula*. Yellow-throated Miner.**

Miners were plentiful and as usual drew attention to their activities by their noisy calls and flocking habits. One pair was nesting at the top of a cabbage gum near the Power House.

***Philemon argenticeps*. Silver-crowned Friar-bird.**

These big honeyeaters were common and appeared to be feeding mainly from the flowers of the woolly-butts and from the insects attracted to these blooms. One pair was tending a nest with two eggs placed in a cabbage gum by a group of occupied tents in the settlement.

***Philemon citreogularis*. Little Friar-bird.**

Much less common than the former species.

***Steganopleura bichenovii*. Banded Finch.**

The only finch noted on the island, plentiful and breeding. These birds belonged to the black-rumped form found throughout the Kimberleys.

***Chlamydera nuchalis*. Great Bower-bird.**

Bower-birds were one of the most obvious avian residents since they perched freely on trees and wires in the township and along the roads and filled the air with their noisy, hissing cries. We saw no bowers but were told that one had been observed on the island.

*Cracticus nigrogularis*. Black-throated Butcher-bird.

A few birds of this species were noted.

#### OTHER VERTEBRATES

Cockatoo Island supports no large mammals. Quite a number of bats hawked insects at night but fruit bats do not appear to venture here in any numbers. A rabbit rat (*Mesembriomys*), common along the Kimberley coastline, also lives on the island. Reptiles were fairly common and ground goannas and several species of snakes were observed.

#### DISCUSSION

The foregoing list of birds would doubtless be greatly extended were sustained observations made at all seasons. Some obvious absentees are many of the mainland honey-eaters and wood-swallows, the Grey-crowned Babbler and Diamond Dove. Small ground and scrub feeding insectivorous birds like wrens, warblers and thornbills are missing. The rather arid nature of the few beaches probably accounts for the lack of waders.

It is perhaps worth-while to note the birds found by the Swedish 1911 expedition on Sunday Island that were not seen at Cockatoo. These are—

*Sterna dougallii*—Roseate Tern  
*S. anæthetus*—Bridled Tern (breeding)  
*Orthorhamphus magnirostris*—Beach Stone-Curlew  
*Pelecanus conspicillatus*—Australian Pelican  
*Halcyon sanctus*—Sacred Kingfisher  
*Eurostopodus guttatus*—Spotted Nightjar  
*Micropus pacificus*—Fork-tailed Swift  
*Micræca leucophæa*—Brown Flycatcher  
*Myiagra latirostris*—Broad-billed Flycatcher  
*Piezorhynchus alecto*—Shining Flycatcher  
*Pachycephala rufiventris*—Rufous Whistler  
*Artamus personatus*—Masked Wood-Swallow  
*Zosterops lutea*—Yellow Silvereye  
*Myzomela pectoralis*—Banded Honeyeater  
*Meliphaga flavescens*—Yellow-tinted Honeyeater  
*Taniopygia castanotis*—Zebra Finch.

On the other hand, Cockatoo Island birds not recorded on Sunday Island include the Magpie-Lark, Black-throated Butcher-bird, Brown Booby, Lesser Frigate-bird, Little Wood-Swallow, Northern Rosella, Red-winged Parrot, Red-backed Kingfisher, Bee-eater, White-throated Honeyeater, Golden-backed Honeyeater, Rufous-throated Honeyeater, Black-breasted Buzzard and Boobook Owl. Surprising omissions in Söderberg's Sunday Island list are the Brown Honeyeater, Black-faced Cuckoo-Shrike, Banded Finch and the Yellow-throated Miner.

#### ACKNOWLEDGEMENTS

Our work on Cockatoo Island was greatly facilitated by help given to us by the Island Superintendent, Mr. Murray Phillips, and his staff, to whom we tender our best thanks. We are grateful too to Mr. J. F. Milsom, Perth manager for Broken Hill Pty., of which Australian Iron and Steel is a subsidiary, through whom the necessary permission for our

visit was obtained. Identification of the flora is based on reports furnished by Mr. W. Bateman, Forestry Officer for the Northern Territory, which were kindly made available to us by Mr. Phillips.

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**Mutual 'Delousing' by Birds.**—On February 24, 1957, at Yanko Creek, north of Jerilderie, New South Wales, my attention was drawn to twelve Dusky Wood-Swallows (*Artamus cyanopterus*) perched on a horizontal, dead branch at the top of a red gum. The birds were packed so tightly together that I had difficulty at first ascertaining exactly how many there were. When I had at last sorted heads from tails, I was able to see that the birds were all busy going through the actions of preening, or apparently so. Some birds were rummaging in their own plumage but, for the most part, each bird's main interest seemed to be centred in its neighbour. One bird would busily probe with its bill in the feathers of its neighbour. The throat, breast, back of the neck and the crown of the head all received attention. When the first bird finished the second would reciprocate. At times a bird would try to probe under its neighbour's wing or reach a more inaccessible part of the other's body. Invariably the awkward action combined with the pressure of the other birds caused one of the pair to fall out. It would then instantly take up position at the end of the line of birds, shuffling in as tight as possible, until to the naked eye, it lost its separate identity and then commenced the feather probing again on its new neighbour. The weather at the time was hot and there was no necessity for such close snuggling.

Obviously the birds were 'delousing' each other in the same way as the Grey-crowned Babblers (*Pomatostomus temporalis*) mentioned by me in *The Emu*, vol. 55, p. 313. Since the publication of that note I have recorded identical behaviour in the Chestnut-crowned Babbler (*P. ruficeps*) and White-browed Babbler (*P. superciliosus*), as well as the Apostle Bird (*Struthidea cinerea*). It is possible the habit occurs in all species which have similar communal behaviour to the latter birds. These habitually nest and roost together and could easily fall into the way of assisting in each other's toilet. The clustering of Wood-Swallows at roost is frequently recorded, and is a probable explanation of how the habit of mutual 'delousing' originated in the Dusky Wood-Swallow.—JOHN N. HOBBS, Finley, N.S.W., 7/5/57.