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THE BIRDS OF MOUNT ISA

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INTRODUCTION

The bird fauna of the Mount Isa region is basically that of the arid interior of north-west Queensland, but is also markedly influenced by the changes in the environment which have followed the development of the mining complex since the Mount Isa mineral field was discovered in 1923. Development was slow until the late 1940's and Mount Isa's population was then only 3000. A rapid increase in population followed the post-war demand for lead and the subsequent expansion into copper production.

In the early years the township was dependent on bore water, supplemented in 1929 by the small Rifle Creek Dam, approximately 40 km upstream on the Leichhardt River. In 1957 this supply was replaced by the larger Lake Moondarra Dam, constructed a few kilometres downstream from Mount Isa.

With the establishment by 1958 of the uranium mining township of Mary Kathleen, 50 km to the east, another sizable and readily accessible dam was constructed on the nearby Corella River. In 1960 a small reserve dam was completed on the East Leichhardt River, 40 km from Mount Isa, but is only accessible from a poorly maintained road.

These permanent water sites maintain a population of water birds and encourage a larger population of bush birds in the relatively luxuriant fringing vegetation than in the surrounding countryside.

To the west and south of the mine are several waste or tailings dams which, when they are first established, tend to attract a number of water birds but subsequently do not necessarily sustain the same population.

Although Carruthers' unpublished list of birds has been circulated widely, the published accounts of birds in the Mount Isa area are limited to certain groups: water birds (Marshall, 1933;

Carruthers, 1964; Horton, 1972a); waders (Marshall, 1933; Liddy, 1955, 1960; Gill, 1962; Carruthers, 1968; Horton, 1972b); the grass-wren (Carruthers, *et al.*, 1970; Parker, 1972; Glass, 1973); and honeyeaters (Liddy, 1961).

THE LOCALITY

Mount Isa is a city of approximately 30,000 people based on a mining complex located in a rugged range of hills (altitude 520 m) in north west Queensland (139°27'S, 20°47'E) approximately 400 km south of the Gulf of Carpentaria and 200 km from the Northern Territory border (Figure 1.).

The heavily dissected and faulted assembly of hills stretch north west from the Selwyn Ranges, west of Winton, to the Nicholson River catchment at the Northern Territory border close to the Gulf of Carpentaria. The range is a mixture of rounded and rugged hills with little soil cover, rocky gorges, and winding valleys - a drainage network that results in a quick run-off of water in the wet season into the creeks and rivers. The main river, the Leichhardt, rises about 50 km to the south and flows through the area to the Gulf of Carpentaria in the north; to the west a network of creeks join the Templeton and finally the south flowing Georgina River; 60 km to the south the Wills River rises to drain southward; to the east the Malbon, Corella and Dugald Creeks drain north east to join the Cloncurry River en route to the Gulf.

The ranges are bordered by black soil plains - to the north west by the Barkly Tableland; to the east by the extensive Cloncurry, Julia Creek, Winton plain; and to the south east by the Channel country plains of the Diamantina beyond Boulia.

To the south are the nearer small black soil plains leading to Dajarra and beyond, to the south and south west, the gibber plains and the Simpson Desert.

The Mount Isa area is arid with a very variable annual rainfall, ranging between 100 mm and 750 mm, which mostly falls between December and March. Temperatures range from a maximum of 43°C to a minimum of 6°C, while the evaporation rate reaches 3500 mm per year. In general, the summer can be very hot and humid, while the winter is normally dry and pleasant.

THE VEGETATION

The predominant feature of the Mount Isa hills is spinifex *Triodia* spp. which grows in small clumps on the hillsides and in larger clumps on the flat, alluvial areas.

On the rocky hills the spinifex is interspersed with small shrubs and herbs, *Acacia* spp., the widespread Snappy Gum *Eucalyptus brevifolia* and, less commonly, *Terminalia aridicola*, and on granite the Kurrajong

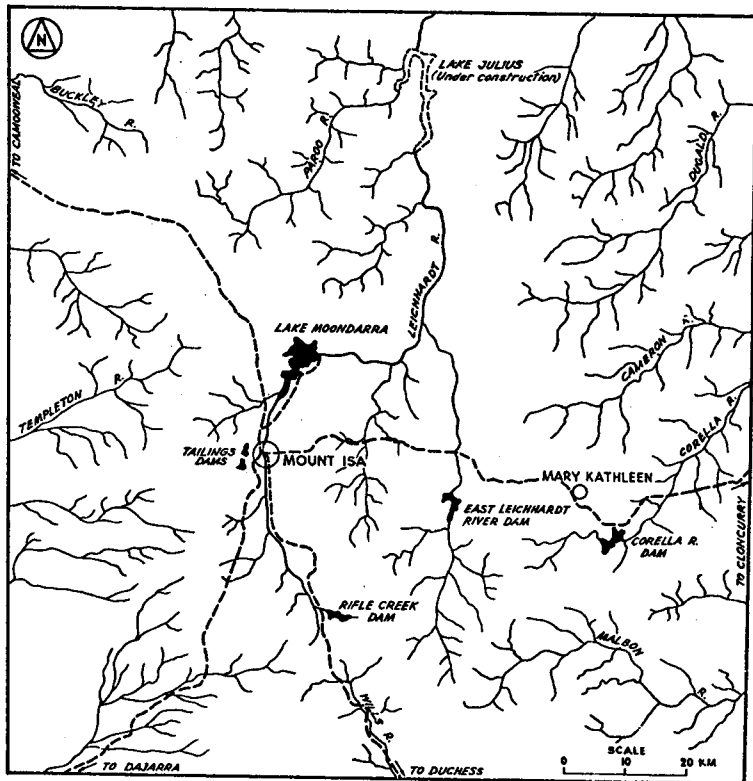


Figure 1. Map of the Mount Isa locality.

Brachychiton australe. On the slopes and flatter areas are the Western Box *E. argillacea*, Whitewood *Atalaya hemiglauca*, Beefwood *Grevillea striata*, Western Bloodwood *E. terminalis*, stands of *Gidyea* *Acacia cambagei*, and shrubs of *Cassia* spp., *Acacia* spp., *Hibiscus* spp. and others.

Larger trees, mostly River Red Gums *E. camaldulensis*, Northern Swamp Box *Tristania grandiflora*, and, less commonly, the Bat's Wing Coral tree *Erythrina vespertilio*, follow the course of the river and larger creeks, while the smaller creeks are bordered by *Melaleuca* spp. and the nectar rich annual legume, *Sesbania* sp.

The quantity and quality of the flowers and seed vary considerably from year to year depending on the rainfall.

THE BIRDS

The pattern of observations over the period covered by this list would have changed from coverage of local areas on foot with occasional but thorough checks of Rifle Creek Dam, to a wider coverage of the developed areas with only rarer visits to the less accessible Rifle Creek Dam.

The list of birds has been prepared from observations made by the following resident bird observers - Mr R.K. Carruthers 1949 - 1968, Mr J. Liddy 1954 - 1958, Mr W. Horton 1961 - 1973 and Mrs G.J. Glass from 1969.

The list contains 213 species of birds recorded mainly within a 35 km radius of the city. The species order and nomenclature follow CSIRO (1969).

In the period over which observations have been made there have been major seasonal changes. In particular, the early 1960's were wet years, with a decline to severe drought conditions in 1970, followed by abundant rains in 1971 and 1972. The resultant effect of both good and bad seasons on the bird population was marked, both in the decline and in the build up in numbers and species. One noticeable effect of the dry periods in the late 1960's was the small number of migratory waders passing through the area compared with the 1963 - 1966 period. In the sheltered gullies and creeks around Lake Moondarra, the growth of vegetation has been prolific, with a resultant build up in bird species and numbers. Even in a "good" year the relatively shallow lake loses height rapidly after the wet season and the water recedes from the sheltered creeks and gullies favoured by the smaller passerines. The drop in numbers and species is marked but where the birds move to is not known.

The, often extreme, changes in the conditions of localised areas, together with the larger scale seasonal changes that occur in the surrounding regions, must cause movement of normally sedentary species as well as more extensive movements of migratory or nomadic species. Alternatively, some movement could be over lesser distances to areas not regularly visited by observers.

Before any of the dams were built, that is prior to 1929, there would not have been any permanent water in the area as even the

larger waterholes in the upper river system would have virtually disappeared in dry times. The population, in numbers and species, of water birds and even bush birds, under these harsh conditions would have been very small indeed.

In recent years observers have listed the Great Crested Grebe, Freckled Duck, Marsh Crake, Dusky Moorhen, Australian Painted Snipe, Common Sandpiper, Banded Plover, and more rarely the Black Bittern, Magpie Goose, Black Swan, Mountain Duck, Mongolian Sand-dotterel, Long-toed Stint, Little Grassbird and Spotted Crake, birds whose presence may be attributed to the availability of new habitat at these large dams.

Liddy in his relatively short stay in the area between 1954 and 1958 has recorded the Red Goshawk, Grey Falcon, Red-tailed Thornbill, Western Warbler and Yellow Chat - species not seen by subsequent observers (the Yellow Chat was seen in the Lake Moondarra area when the dam first started filling). Subsequent lists also include rarities such as the Spotted Harrier, Square-tailed Kite, Black-breasted Buzzard, Black Falcon, Tree-martin, Northern Fantail, Pied Honeyeater, Painted Honeyeater, White-fronted Honeyeater, Dusky Wood-swallow, and Great Bower-bird, sightings which could be attributed partly to chance and partly to the greater period of time and numbers of observers involved. The Black-eared Cuckoo too may well have gone unsighted if it had not been for bird banding activities.

The Mount Isa ranges are an interface or meeting place of north/south river systems. They are also the dividing line between the relatively wet fertile Gulf country to the north and the dry plains to the south. In addition, the ranges stretch for more than 450 km with a spread of at least 120 km - a large ecosystem within which considerable variations of habitat conditions could be expected.

The records shown for Yellow-tinted Honeyeater, Banded Honeyeater, Crimson Finch, Pictorella Finch, Northern Fantail and Great Bower-bird are examples of Gulf country birds moving into the dry hills to the south when conditions are suitable. Rufous-throated Honeyeaters move up the Leichhardt River System from the Gulf area in large numbers, following *Tristania* spp. and *Eucalyptus* spp. blossom in summer. It seems probable that the Yellow-tinted Honeyeater and Banded Honeyeater do likewise, but in smaller numbers.

The records of some of the raptors, Banded Plover and Flock Pigeon are probably examples of birds from the nearer black soil plains areas drifting into, or being forced into, the adjacent ranges.

LIST OF SPECIES

Key to abbreviations

Status : the following abbreviations indicate the status of species, however because of the nature of the terrain, climate and seasonal effects they need to be accepted with some reservation.

C - common or conspicuous species.

MC - moderately common; may be localised or erratic in occurrence.

U - uncommon or inconspicuous species.

R - rare.

Lake - refers to Lake Moondarra throughout the list.

Emu, *Dromaius novaehollandiae*

R - north and west of the Lake. Breeds May and June.

Australian Pelican, *Pelecanus conspicillatus*

C - the Lake and other dams. Numbers variable, up to 100 at times. Does not breed.

Darter, *Anhinga rufa*

C - Lake and other waters, generally in small numbers. Breeds from February to August.

Black Cormorant, *Phalacrocorax carbo*

R - up to eight present 31 July to 3 September 1954; one found shot September. Other single records. Several present in winter 1966, three in September 1974, and at least 50 in June 1975 on a new tailings dam.

Little Black Cormorant, *Phalacrocorax sulcirostris*

C - always present, tends to disperse in the wet season. Breeds from March to November.

Pied Cormorant, *Phalacrocorax varius*

U - regular single birds 1954-55, several each year from 1965-68. Two at a nest on the Lake, August 1968.

Little Pied Cormorant, *Phalacrocorax melanoleucos*

C - always present, tends to disperse in the wet season. Breeds from May to August in small numbers. Major breeding in 1968.

Little Grebe, *Podiceps novaehollandiae*

C - always present. Breeds July to December. Young sighted in April 1955.

Hoary-headed Grebe, *Podiceps poliocephalus*

MC - irregular visitor. One to five present from March to May 1958. Common throughout 1966, in January and February 1968 and 1972, and in September and December 1974. In breeding plumage in March 1972.

Great Crested Grebe, *Podiceps cristatus*

C - in small numbers. Breeds from August to October.

- White-necked Heron, *Ardea pacifica*
C - on pools anywhere in the area. Numbers variable.
- White-faced Heron, *Ardea novaehollandiae*
C - on pools anywhere in the area. Tends to be more common than the White-necked Heron. Breeds from February to May.
- Cattle Egret, *Bubulcus ibis*
R - recorded in the World Bird Day List for 1952, and an unconfirmed report in 1973. Sighted outside the area at Gunpowder, 120 km to the north, about 1970, but they have not yet established themselves in the area.
- White Egret, *Egretta alba*
C - always present in small numbers. One in breeding plumage in February 1971
- Little Egret, *Egretta garzetta*
MC - usually some present. One in breeding plumage in January 1975.
- Plumed Egret, *Egretta intermedia*
U - the least common of the egrets. Rare in the 1950's.
- Nankeen Night Heron, *Nycticorax caledonicus*
MC - numbers seem variable. No nest records but immature birds are frequently seen.
- Black Bittern, *Dupetor flavicollis*
R - at the Lake and other dams.
- Jabiru, *Xenorhynchus asiaticus*
MC - usually one or two birds in the area.
- White Ibis, *Threskiornis molucca*
U - individual birds, occasionally flocks of up to 20.
- Straw-necked Ibis, *Threskiornis spinicollis*
MC - absent in very dry periods, but numbers can build up to several hundred in good seasons.
- Glossy Ibis, *Plegadis falcinellus*
MC - usually present. Numbers can build up to several hundred in the wet season.
- Royal Spoonbill, *Platalea regia*
MC - usually a few present, sometimes with Yellow-billed Spoonbills. More common in spring and early summer. Some in breeding plumage in February 1971.
- Yellow-billed Spoonbill, *Platalea flavipes*
MC - usually a few present but numbers are more variable than the Royal Spoonbill. More common in spring and early summer.
- Magpie Goose, *Anseranas semipalmata*
R - one at the Lake, June 1974.
- Water Whistling Duck, *Dendrocygna arcuata*
R - irregular flocks, mostly in late spring.

Grass Whistling Duck, *Dendrocygna eytoni*

MC - flocks of several hundred present from late winter to early summer.

Black Swan, *Cygnus atratus*

R - two in spring 1964, one in April 1967, one from December to February 1971.

Freckled Duck, *Stictonetta naevosa*

R - one flock of about 70 at the Lake in August 1966, and another in February 1969.

Mountain Duck, *Tadorna tadornoides*

R - two present from May to August 1966, three in February 1971.

Black Duck, *Anas superciliosa*

C - always present; many hundreds from May to December. Some breeding from March to May.

Grey Teal, *Anas gibberifrons*

C - always present; many hundreds from May to December. Some breeding from March to November.

Pink-eared Duck, *Malacorhynchus membranaceus*

MC to U - many hundreds present in the late 1950's and from May to December in the early 1960's. Disappeared in the prolonged dry season of 1969-70. No records since.

White-eyed Duck, *Aythya australis*

C - numbers variable. Up to several hundred present from winter to summer. Some breeding April to May.

Wood Duck, *Chenonetta jubata*

C - always present, many hundreds from spring to early summer. One breeding record in July 1973.

Green Pigmy Goose, *Nettapus pulchellus*

U - four to six at Rifle Creek Dam in January, February and August 1958. A small flock in January 1967 and August 1970 on the Lake, also two birds in November and three in December 1974.

Black-shouldered Kite, *Elanus notatus*

MC to U - one sighting in March 1957. More regular sightings since 1969, but only a few birds in the area.

Fork-tailed Kite, *Milvus migrans*

C - always present near habitation. Flocks can build up to 2000. Breeds from February to May, earlier in the Lake area.

Square-tailed Kite, *Lophoictinia isura*

R - one in September 1966, one in April 1969, one in June 1975.

Black-breasted Buzzard, *Hamirostra melanosterna*

R - one in August 1973.

Whistling Eagle, *Haliastur sphenurus*

C - always present, more common near waterways. Breeds in March and April away from dams, and from August to November near dams.

Australian Goshawk, *Accipiter fasciatus*

U - probably always present.

Collared Sparrowhawk, *Accipiter cirrocephalus*

U - probably always present. Breeds from August to October near dams.

Red Goshawk, *Erythrotriorchis radiatus*

R - one sighting at Rifle Creek Dam, 26 July 1958.

Australian Little Eagle, *Hieraetus morphnoides*

R - probably always present.

Wedge-tailed Eagle, *Aquila audax*

U - a small conspicuous population in a wide area.

White-breasted Sea Eagle, *Haliaeetus leucogaster*

U - sometimes one seen on one of the dams. Nesting attempted in 1962.

Spotted Harrier, *Circus assimilis*

U - vagrant. Irregular sightings.

Swamp Harrier, *Circus approximans*

U - vagrant. Sightings in September 1966, March 1968 and October 1970.

Osprey, *Pandion haliaetus*

R - the dried body of an Osprey was found in the East Leichhardt River dam area in May 1967, apparently shot.

Black Falcon, *Falco subniger*

R - vagrant. Sightings in January 1967, April 1972, July 1974 and June 1975.

Peregrine Falcon, *Falco peregrinus*

U - vagrant.

Little Falcon, *Falco longipennis*

U - apparently more common than the Peregrine Falcon.

Grey Falcon, *Falco hypoleucos*

R - two on local creek on 19 April 1955, and two on the Leichhardt River on 25 June 1955.

Nankeen Kestrel, *Falco cenchroides*

C - some always present in the area. Breeds from August to October.

Brown Hawk, *Falco berigora*

C - some always present in the area, numbers very variable. Nestlings sighted on 2 November 1957.

Stubble Quail, *Coturnix pectoralis*

R - vagrant. The Lake and river frontages only.

Brown Quail, *Synoicus ypsilophorus*

R - vagrant. One sighting in January 1968 on golf course.

Little Quail, *Turnix velox*

MC - widespread, plentiful after a good season. Breeds from January to March.

Brolga, *Grus rubicunda*

MC - one or two birds usually present on the Lake.

Marsh Crane, *Porzana pusilla*

U - only found in cumbungi beds in the soak below the East Leichhardt River Dam.

Australian Spotted Crane, *Porzana fluminea*

R - vagrant. One on the edge of the Lake, March 1966.

Black-tailed Native Hen, *Tribonyx ventralis*

C - present at the Lake area each summer - sometimes in flocks totalling several hundred.

Dusky Moorhen, *Gallinula tenebrosa*

MC - mainly found in cumbungi beds in the soak below the East Leichhardt River dam wall.

Swamphen, *Porphyrio porphyrio*

U to MC - numerous sightings in 1963, 1964, 1968 and 1969. Rare or absent in other years.

Coot, *Fulica atra*

C - always present but numbers are very variable. Breeds from August to October.

Australian Bustard, *Eupodotis australis*

U - present throughout the area in small numbers during spring and summer. Breeding in October has been reported.

Australian Painted Snipe, *Rostratula benghalensis*

R - sightings in 1963, October 1969, March and April 1972.

Spur-winged Plover, *Vanellus novaehollandiae*

U - with the Masked Plover, intermediate types reported.

Masked Plover, *Vanellus miles*

C - present all the year. Breeds from August to November around dams, and from February to May elsewhere.

Banded Plover, *Vanellus tricolor*

U to MC - vagrants. Present at the Lake in 1964, 1971 and 1972. Successful breeding in March 1972.

Red-kneed Dotterel, *Charadrius cinctus*

C - numbers variable but always present in spring and summer, and sometimes to much later in the year. Breeds in early or late summer.

Red-capped Dotterel, *Charadrius alexandrinus*

C - usually arrive in large numbers in July and August and depart from January to March. Breeds from September to December.

Mongolian Sand-dotterel, *Charadrius mongolus*

R - migrant. One sighting in January 1967 on the wet airport, with Australian Pratincoles.

Black-fronted Dotterel, *Charadrius melanops*

C - always present but more common from August to March. Breeds from September to December near dams, and from March to April elsewhere.

Oriental Dotterel, *Charadrius veredus*

MC - a regular migrant from September to December, numbers variable.

Australian Dotterel, *Peltohyas australis*

R - an irregular visitor sighted in November and December 1963, October to January 1967 and in 1968.

Eastern Golden Plover, *Pluvialis dominica*

R - one in eclipse plumage on 2, 10 and 12 October 1954.

Japanese Snipe, *Gallinago hardwickii*

R - probably a regular migrant in small numbers. Sightings in September and October 1954, November 1967 and August 1969.

Little Whimbrel, *Numenius minutus*

R - an infrequent summer migrant. A large influx into town parks and other recreational areas in 1962.

Little Greenshank, *Tringa stagnatilis*

C - a regular migrant - flocks up to 12. Arrives in August and September, and leaves in April and May.

Greenshank, *Tringa nebularia*

MC - a regular migrant, singly or in pairs, arriving in September and leaving in March and April.

Wood Sandpiper, *Tringa glareola*

MC - a regular migrant, occasional flocks up to six or eight. Arrives in August and September and leaves up to May.

Common Sandpiper, *Tringa hypoleucos*

U - a regular migrant, singly or in pairs, arriving in August and September and leaving in March and April.

Tattler, *Tringa* sp.

R - sightings from 9 to 18 October 1954, and on 3 and 23 November 1956. Species was not determined.

Sharp-tailed Sandpiper, *Calidris acuminata*

C - a regular migrant, often in large numbers. Arrives in August, departs by March or April. Numbers decrease from December to February.

Red-necked Stint, *Calidris ruficollis*

MC - a regular migrant in small numbers from August to January. Usually not seen once wet season starts.

Long-toed Stint, *Calidris subminuta*

R - an irregular migrant in small numbers. One in 1963, several in 1964, fairly common in 1966. Arrives in September and October, not seen after December.

Curlew Sandpiper, *Calidris ferruginea*

U - a regular migrant but numbers variable. Usually seen early in the season from August to October in flocks of 6-50.

Black-tailed Godwit, *Limosa limosa*

MC - a regular migrant in small numbers. Normally only present from September to November.

White-headed Stilt, *Himantopus himantopus*

C - birds always present but numbers variable. Breeds from August to December.

Avocet, *Recurvirostra novaehollandiae*

R - an irregular visitor, usually in early summer.

Southern Stone Curlew, *Burhinus magnirostris*

R - heard on several occasions at night, but not sighted. Two instances of injured birds found locally and kept as pets.

Australian Pratincole, *Stiltia isabellae*

C - present from August to April or May. Breeds from September to December near dams, and from January to March elsewhere.

Oriental Pratincole, *Glareola pratincola*

R - migrant, one to five present 11 to 18 November 1954. An influx of thousands in December 1967 disappeared after a storm in late December.

Silver Gull, *Larus novaehollandiae*

MC - some always present, but not more than 50 - 100. Breeds with Caspian Terns but chicks sighted only in the 1971-2 season.

Whiskered Tern, *Chlidonias hybrida*

C - probably always a few present but common in spring and summer with flocks of several hundred. Some adopt breeding plumage, but no evidence of breeding.

Caspian Tern, *Hydroprogne caspia*

C - nesting colony of up to 200 pairs in the Lake. Breeds from May to September. Very few birds are present during the wet season, December to March. The level of Lake Moondarra was raised in 1973 and now normally covers the breeding island. An alternative site was prepared, but was not used in 1974 or 1975.

Gull-billed Tern, *Sterna nilotica*

MC - numbers are very variable, up to 100. Few present during the wet season. No evidence of breeding.

Domestic Pigeon, *Columba livia*

C - a large resident population in the city area.

Peaceful Dove, *Geopelia striata*

C - present all the year. Breeding and numbers are dependent on rain. Breeds in spring and summer near dams. Numbers variable.

Diamond Dove, *Geopelia cuneata*

C - present all the year in greater numbers than Peaceful Doves. Breeding and numbers very dependent on rain. Breeds in spring and early summer near dams. A population explosion in the first half of 1971 after a good wet season following a series of dry years.

Common Bronzewing, *Phaps chalcoptera*

MC - a small stable population in wet years, probably nomadic in the dry season. Breeds from January to April.

Crested Pigeon, *Ocyphaps lophotes*

MC to C - always present and numbers variable. Breeds from May to October.

Plumed Pigeon, *Lophophaps plumifera*

C - sedentary, present throughout area. Breeds from January to May.

Flock Pigeon, *Histriophaps histrionica*

R - vagrant, irregular appearances and usually in small numbers.

Varied Lorikeet, *Psitteuteles versicolor*

C - numbers very variable. A large number of flocks occur in winter and spring when the Bloodwood *Eucalyptus terminalis* is in bloom.

Red-tailed Black Cockatoo, *Calyptorhynchus banksi*

R - reported by older residents as being present in the 1950's, and has been sighted at the West Leichhardt Station, 15 km downstream from Lake Moondarra where the Cadgeput paperbark *Melaleuca leucadendron* start - a habitat which is not represented in the study area.

Sulphur-crested Cockatoo, *Cacatua galerita*

R - nomadic, more common to the north of the area.

Little Corella, *Cacatua sanguinea*

C - present all the year and usually in large flocks. Breeding variable, nests sighted in April and October.

Galah, *Cacatua roseicapilla*

C - present all the year and usually in large flocks. Nests sighted in January.

Cockatiel, *Nymphicus hollandicus*

C - numbers very variable, usually more common from November to April or May. Breeds in August and September, and possibly into late summer.

Red-winged Parrot, *Aprosmictus erythropterus*

MC to U - apparently nomadic and numbers variable but a few always present.

Ringneck (Cloncurry) Parrot, *Barnardius barnardi*

MC to U - local subspecies is *B. b. macgillivrayi*. Probably fairly sedentary and numbers variable. Breeds from February to May or June.

Budgerygah, *Melopsittacus undulatus*

C - numbers extremely variable. May be absent in some months, particularly from July to September. Breeds in August and September, near artificial streams and dams, and from February to June elsewhere.

Pallid Cuckoo, *Cuculus pallidus*

MC - migrant. Arrives August to November and departs in April or May. Juvenile sightings indicate breeding from September to February.

Black-eared Cuckoo, *Chrysococcyx osculans*

R - probably a regular migrant in small numbers. Sightings in May 1964, April 1966 and August 1972.

Horsfield Bronze Cuckoo, *Chrysococcyx basalus*

MC - numbers variable, some present for most of the year. Apparently breeds August to February and juveniles are present from spring to summer.

Koel, *Eudynamis scolopacea*

MC - migrants arrive from November to December and depart in March or April. Breeds in January and February. Foster parents observed were the Little Friar Bird and Yellow-throated Miner.

Channel-billed Cuckoo, *Scythrops novaehollandiae*

MC - migrants arrive in November and December and depart in March. Prefers heavily timbered sections of main streams.

Barking Owl, *Ninox connivens*

R - heard on several occasions.

Boobook Owl, *Ninox novaeseelandiae*

MC - some present all the year. Juveniles sighted in December 1974.

Tawny Frogmouth, *Podargus strigoides*

U - probably sedentary. Breeds from August to February.

Owlet-nightjar, *Aegotheles cristatus*

U - probably sedentary and present all the year.

Spotted Nightjar, *Eurostopodus guttatus*

U - probably nomadic but present all the year.

Fork-tailed Swift, *Apus pacificus*

R - a summer migrant. Two birds in January and March 1957, 20 on 29 March 1958, small numbers in February 1962, January 1968 and February 1969.

Blue-winged Kookaburra, *Dacelo leachi*

MC - small numbers, more frequently seen in spring and summer along water courses.

- Red-backed Kingfisher, *Halcyon pyrrhopygia*
MC - some present all the year, mainly in the winter.
Breeds in winter and spring.
- Sacred Kingfisher, *Halcyon sancta*
MC - a summer visitor but present all the year. Breeds
from January to March.
- Rainbow Bee-eater, *Merops ornatus*
C - probably migratory, but present all the year, often in
large numbers. Breeds from August to November near dams, and
from December to February elsewhere.
- Dollar-bird, *Eurystomus orientalis*
MC - a summer migrant in small numbers.
- Singing Bushlark, *Mirafra javanica*
R - a summer visitor in very small numbers - suitable habitat
is not plentiful.
- White-backed Swallow, *Cheramoeca leucosternum*
R - most numerous sightings in September 1966 and July to
December 1974.
- Welcome Swallow, *Hirundo neoxena*
R - irregular sightings only.
- Tree-martin, *Petrochelidon nigricans*
U - a regular migrant from May to July.
- Fairy Martin, *Petrochelidon ariel*
C - a migrant, often in large numbers. Arrive in July and
August, depart in March and April. Breeds from August to
November at the Lake and in December and January elsewhere
after rains.
- Australian Pipit, *Anthus novaeseelandiae*
C - especially in summer. Breeds, but no records.
- Ground Cuckoo-shrike, *Pteropodocys maxima*
U - present all year but probably more common in spring and
summer.
- Black-faced Cuckoo-shrike, *Coracina novaehollandiae*
C - probably migratory but some present all the year. Breeds
in spring and summer.
- Papuan Cuckoo-shrike, *Coracina papuensis*
R - usually in small numbers. More common in the summer of
1971-72.
- White-winged Triller, *Lalage sueurii*
C - numbers very variable. Breeds from January to March.
- Grey-crowned Babbler, *Pomatostomus temporalis*
C - sedentary throughout the area, but may become nomadic in
dry years. Breeds from winter to spring.
- Spinifex Bird, *Eremiornis carteri*
MC - sedentary and widespread. Breeds in August and September.

Little Grassbird, *Megalurus gramineus*

R - in Cumbungi beds in the soak below the East Leichhardt River dam wall.

Tawny Grassbird, *Megalurus timoriensis*

R - sparsely distributed in grassed areas along permanent water.

Reed Warbler, *Acrocephalus stentoreus*

MC - present mainly from September to March, particularly in Cumbungi beds in the soak below the East Leichhardt River dam wall.

Brown Songlark, *Cinclorhynchus cruralis*

R - an irregular visitor from October to March.

Rufous Songlark, *Cinclorhynchus mathewsi*

MC to U - numbers vary from year to year. More common after the wet season.

Blue and White Wren, *Malurus leuconotus*

U to R - sighted on several occasions. Regular sightings on the edge of the area at Galah Creek on the Dajarra Road to the south.

Variiegated (Purple-backed) Wren, *Malurus lamberti*

MC - relatively sedentary and present all the year. Breeding from June to October.

Red-backed Wren, *Malurus melanocephalus*

MC - relatively sedentary, present all the year, often with the Variiegated Wren. Breeding from February to April.

Western Warbler, *Gerygone fusca*

R - one sighting only in December 1957.

Weebill, *Smicromnis brevirostris*

C - widespread. Breeds from December to March.

Red-tailed Thornbill, *Acanthiza apicalis*

R - one sighting at a waterhole, 30 May 1957.

Yellow-rumped Thornbill, *Acanthiza chrysorrhoa*

MC - small flocks. Breeds from December to March.

Western Grass-wren, *Amytornis purnelli* (*A. textilis*)

U - local race *A. p. ballarae* (Carruthers 1970; Parker 1972) probably relatively sedentary and widespread in the rugged hills. Breeding records for March and August.

Crimson Chat, *Epthianura tricolor*

MC - numbers extremely variable; present from late winter to early summer.

Orange Chat, *Epthianura aurifrons*

MC to U - often with the Crimson Chat, but in much smaller numbers.

Yellow Chat, *Epthianura crocea*

R - one sighting when the Leichhardt River Dam commenced filling, 24 March 1958.

Jacky Winter, *Microeca leucophaea*

MC - always present in small numbers. Feeding young in October and January.

Red-capped Robin, *Petroica goodenovii*

U - migrant, present from April to July in small numbers.

Hooded Robin, *Petroica cucullata*

U - some present throughout the year.

Grey Fantail, *Rhipidura fuliginosa*

R - present in small numbers from May to September.

Northern Fantail, *Rhipidura rufiventris*

R - vagrant. Present from February to May on three occasions. More common to the north of the area.

Willie Wagtail, *Rhipidura leucophrys*

C - numbers variable, always present. Breeds from September to December near dams and waterholes, and from January to April elsewhere.

Restless Flycatcher, *Seisura inquieta*

U - numbers variable, usually some present all the year. One breeding record for September.

Rufous Whistler, *Pachycephala rufiventris*

C - present all the year. Breeds from November to January.

Grey Shrike-thrush, *Colluricincla harmonica*

MC - present in small numbers at all times, mainly along water courses. Breeds in January and February. The Brown Shrike-thrush, *C. brunnea*, was believed to be present in the area but whether these two species actually overlap here still has to be confirmed.

Crested Bell-bird, *Oreoica gutturalis*

U - widespread, in small numbers.

White-winged Sittella, *Neositta leucoptera*

R - very nomadic in small numbers.

Black-tailed Tree-creeper, *Climacteris melanura*

MC - apparently sedentary, widespread in small numbers. Breeds from January to March.

Mistletoe Bird, *Dicaeum hirundinaceum*

MC - widespread in small numbers. Breeds from January to April.

Black-headed Pardalote, *Pardalotus melanocephalus*

MC - widespread in small numbers. Breeds from May to September.

Red-browed Pardalote, *Pardalotus rubricatus*

MC - widespread in small numbers. Breeds from May to September.

Brown Honeyeater, *Lichmera indistincta*

C - widespread, numbers very variable, always present.
Breeds from July to September.

Black Honeyeater, *Myzomela nigra*

R - sighted in town gardens in September 1962, February 1968 and May 1969.

Banded Honeyeater, *Myzomela pectoralis*

U - a regular summer visitor in very small numbers. More common to the north.

Pied Honeyeater, *Certhionyx variegatus*

R - an irregular summer visitor. Sighted in 1961, 1963 and 1967.

Singing Honeyeater, *Meliphaga virescens*

U - widespread, relatively sedentary in small numbers, in low Eucalypt and Acacia stands.

Yellow-tinted Honeyeater, *Meliphaga flavescens*

R - probably a regular summer visitor from the north.

Yellow-fronted Honeyeater, *Meliphaga plumula*

C - widely distributed. Breeding variable, but mainly in winter and spring.

Grey-headed Honeyeater, *Meliphaga keartlandi*

MC - widely distributed in rugged habitats. Breeding variable but mainly in winter and spring.

White-plumed Honeyeater, *Meliphaga penicillata*

C - tends to be sedentary, widespread, common in the town. Breeding variable but mainly in winter and spring.

White-gaped Honeyeater, *Meliphaga unicolor*

R - Marshall records this bird as fairly common on the Leichhardt River in 1932, but more recent recordings have only been north of the present area, e.g. on the Leichhardt River at West Leichhardt Station which is 15 km downstream from the Lake, and on Paroo Creek near Gunpowder.

Golden-backed Honeyeater, *Melithreptus laetior*

MC - relatively sedentary, always present in small numbers. Breeds from August to October.

Little Friar-bird, *Philemon citreogularis*

C - always present, numbers variable, more common from October to March. Breeds January and February.

Silver-crowned Friar-bird, *Philemon argenticeps*

MC - numbers variable, more common from September to January.

White-fronted Honeyeater, *Phylidonyris albifrons*

R - an irregular summer visitor in very small numbers.

Rufous-throated Honeyeater, *Conopophila rufogularis*

C - a summer visitor from the north in large numbers. Breeds from January to March.

Painted Honeyeater, *Conopophila picta*

R - an irregular visitor, sighted in September 1962, relatively numerous in July and August 1965.

Yellow-throated Miner, *Manorina flavigula*

C - widespread, always present, common in the town. Breeds from August to December.

Spiny-cheeked Honeyeater, *Anthochaera rufogularis*

C - more common in spring and summer.

Painted Finch, *Emblema picta*

C - always present. Breeds from July to October.

Crimson Finch, *Neochmia phaeton*

R - an irregular visitor from the north in small numbers.

Long-tailed Finch, *Poephila acuticauda*

U - sedentary, not widespread, small flocks. Breeds from March to May.

Banded Finch, *Poephila bichenovii*

U - small relatively sedentary populations. Breeds from March to May.

Zebra Finch, *Poephila guttata*

C - large seasonal variations in population. Breeds any time of the year with suitable conditions.

Pictorella, *Lonchura pectoralis*

R - an irregular summer visitor in small numbers in 1964, 1965 and 1975.

House Sparrow, *Passer domesticus*

C - resident in the town area. Arrived in 1964-65. Breeds throughout the year.

Olive-backed Oriole, *Oriolus sagittatus*

U - usually some present.

Magpie Lark, *Grallina cyanoleuca*

C - numbers variable. Breeds from August to December near dams and other waters, and from January to March elsewhere.

White-breasted Wood-swallow, *Artamus leucorhynchus*

U - probably migratory, but some are always present, more common from September to April. Breeds in November and December in the town area and later elsewhere.

Masked Wood-swallow, *Artamus personatus*

MC - nomadic, numbers very variable, associated in flocks with the White-browed Wood-swallow from July to April. Has bred during the wet season.

White-browed Wood-swallow, *Artamus superciliosus*

MC - nomadic, numbers very variable, associated in flocks with the Masked Wood-swallow from July to April, but White-browed Wood-swallow usually leaves earlier.

Black-faced Wood-swallow, *Artamus cinereus*

C - widespread, numbers variable but some present. Breeds from December to March.

Dusky Wood-swallow, *Artamus cyanopterus*

R - vagrant. One caught in the town area in 1964, one flock sighted at the Lake in 1966.

Little Wood-swallow, *Artamus minor*

MC - numbers variable but some present all the year. Breeds after rain from August to January.

Pied Butcher-bird, *Cracticus nigrogularis*

MC - widespread, some present all the year. Breeds from September to November.

Black-backed Magpie, *Gymnorhina tibicen*

MC - widespread, present all the year. Breeds from September to December.

Spotted Bower-bird, *Chlamydera maculata*

MC - widespread, present all year. One breeding record for January.

Great Bower-bird, *Chlamydera nuchalis*

R - irregular visitor from the north.

Australian Raven, *Corvus coronoides*

U - numbers variable. Breeds from September to November.

Crow, *Corvus* spp.

U to R - crows have been identified, by call, by visitors but more specific identification has not been made.

ACKNOWLEDGEMENTS

I am grateful to Mr R.K. Carruthers whose draft list has been used as the basis for this article, and to Mrs Gloria Glass for notes on her observations, particularly those covering 1974 and 1975. In particular I would like to thank Mr John Liddy for searching out his records for the 1950's and for his helpful comments on the first draft of the article.

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OBSERVATIONS OF WATER BIRDS IN SOUTH WEST QUEENSLAND

GREG J. ROBERTS

The period 26 December 1971 to 5 January 1972 was spent with Chris Corben and Greg Czechura at the "Lakes" station, Dynevor Downs, 35 km east of Thargomindah, south-west Queensland (28°05'S, 144°20'E). Chris Corben, Glen Ingram, Anita Smyth and I visited the same area during the period 24-30 December 1974, to make further observations.

During the first visit, conditions were dry and extensive mud-flats were exposed around the lakes. At that time the series of lakes at Dynevor Downs was discontinuous. Conditions were considerably different for the second visit as a result of heavy rain throughout Queensland in January 1974. The lakes were much more extensive and were linked. Mudflats were correspondingly much less extensive, and breeding was noted in several species.

Corben (1972) has discussed species from Order Charadriiformes recorded during the first visit.

An annotated list of water birds (Orders Podicipediformes, Ciconiiformes, Anseriformes, Pelecaniformes, Gruiformes, Charadriiformes) observed on both visits is presented: in particular

differences in frequency between visits are noted. Nomenclature follows CSIRO (1969). Definitions of frequency are as follows:

- Abundant - seen regularly, usually in flocks of hundreds.
 Common - seen regularly, usually in small flocks or in singles or pairs.
 Uncommon - seen sporadically, with usually only a few individuals or an occasional small flock being noted.

LIST OF SPECIES

- Australian Pelican, *Pelecanus conspicillatus*
 1971-72 : large flocks of 50 or more.
 1974 : not recorded.
- Darter, *Anhinga rufa*
 1971-72 : occasional single birds.
 1974 : similar frequency.
- Black Cormorant, *Phalacrocorax carbo*
 1971-72 : not recorded.
 1974 : single birds were among flocks of Little Black Cormorants.
- Little Black Cormorant, *Phalacrocorax sulcirostris*
 1971-72 : one small flock.
 1974 : small numbers throughout the area, including a flock of 50 or more.
- Pied Cormorant, *Phalacrocorax varius*
 1971-72 : uncommon, small numbers.
 1974 : one was recorded.
- Little Pied Cormorant, *Phalacrocorax melanoleucos*
 1971-72 : common.
 1974 : common, evidence of breeding.
- Little Grebe, *Podiceps novaehollandiae*
 1971-72 : not recorded.
 1974 : common and breeding extensively.
- Hoary-headed Grebe, *Podiceps poliocephalus*
 1971-72 : two small flocks of six to eight birds.
 1974 : common and breeding extensively.
- Great Crested Grebe, *Podiceps cristatus*
 1971-72 : not recorded.
 1974 : common and breeding, particularly in flooded lignum.
- White-necked Heron, *Ardea pacifica*
 1971-72 : occasional single birds.
 1974 : similar frequency.
- White-faced Heron, *Ardea novaehollandiae*
 1971-72 : uncommon, mostly seen singly or in pairs.
 1974 : common, flocks of up to 30 or more.

- White Egret, *Egretta alba*
 1971-72 : two individuals only.
 1974 : common.
- Plumed Egret, *Egretta intermedia*
 1971-72 : not recorded.
 1974 : common, flocks of up to 40 or more.
- Nankeen Night Heron, *Nycticorax caledonicus*
 1971-72 : not recorded.
 1974 : two juveniles were flushed from flooded lignum.
- White Ibis, *Threskiornis molucca*
 1971-72 : a few individuals.
 1974 : common.
- Straw-necked Ibis, *Threskiornis spinicollis*
 1971-72 : not recorded.
 1974 : small numbers were in the vicinity of the lakes and at Thargomindah airport.
- Glossy Ibis, *Plegadis falcinellus*
 1971-72 : small flocks of up to 15.
 1974 : similar frequency.
- Yellow-billed Spoonbill, *Platalea flavipes*
 1971-72 : two individuals.
 1974 : common.
- Black Swan, *Cygnus atratus*
 1971-72 : common, flocks of up to 500 or more.
 1974 : similar frequency, many pairs were attending young.
- Black Duck, *Anas superciliosa*
 1971-72 : abundant and widespread
 1974 : similar frequency.
- Grey Teal, *Anas gibberifrons*
 1971-72 : abundant and widespread.
 1974 : similar frequency with breeding in evidence.
- Blue-winged Shoveler, *Anas rhynchotis*
 1971-72 : ten individuals.
 1974 : two individuals.
- Pink-eared Duck, *Malacorhynchus membranaceus*
 1971-72 : common.
 1974 : common and breeding.
- White-eyed Duck, *Aythya australis*
 1971-72 : abundant and widespread.
 1974 : abundant though less numerous.
- Wood Duck, *Chenonetta jubata*
 1971-72 : common.
 1974 : similar frequency, with juveniles present.
- Green Pigmy Goose, *Nettapus pulchellus*
 1971-72 : not recorded.
 1974 : three seen on two separate occasions.

Blue-billed Duck, *Oxyura australis*

1971-72 : not recorded.

1974 : about 10-12 were near and among flooded lignum.

Musk Duck, *Biziura lobata*

1971-72 : not recorded.

1974 : small numbers among flooded lignum.

Brolga, *Grus rubicunda*

1971-72 : uncommon, mostly in pairs and small parties.

1974 : common, one flock of 50 or more.

Australian Spotted Crake, *Porzana fluminea*

1971-72 : not recorded.

1974 : at least 6 were foraging on exposed mud patches among flooded lignum.

Black-tailed Native-hen, *Tribonyx ventralis*

1971-72 : one localised breeding colony of 500 or more along a drain which was inundated in 1974.

1974 : widely scattered in small flocks among flooded lignum.

Dusky Moorhen, *Gallinula tenebrosa*

1971-72 : not recorded.

1974 : common and breeding.

Coot, *Fulica atra*

1971-72 : common.

1974 : common and breeding.

Australian Painted Snipe, *Rostratula benghalensis*

1971-72 : one individual.

1974 : not recorded.

Spur-winged Plover, *Vanellus novaehollandiae*

1971-72 : uncommon, mostly in scattered pairs.

1974 : common, flocks of up to 50 or more.

Banded Plover, *Vanellus tricolor*

1971-72 : scattered pairs.

1974 : common, one flock of 30 or more.

Red-kneed Dotterel, *Charadrius cinctus*

1971-72 : uncommon.

1974 : not recorded.

Red-capped Dotterel, *Charadrius alexandrinus*

1971-72 : common and breeding, mostly in pairs scattered around the shores of the lakes.

1974 : one flock of 300 or more was concentrated on an exposed sand spit.

Black-fronted Dotterel, *Charadrius melanops*

1971-2 : common.

1974 : common, but much more concentrated, one flock of 100 or more.

- Oriental Dotterel, *Charadrius veredus*
 1971-72 : two flocks of four and seven were seen.
 1974 : not recorded.
- Australian Dotterel, *Peltohyas australis*
 1971-72 : not recorded.
 1974 : one was alone on an exposed sandy spit.
- Eastern Golden Plover, *Pluvialis dominica*
 1971-72 : two were seen.
 1974 : not recorded.
- Little Greenshank, *Tringa stagnatilis*
 1971-72 : one flock of eight.
 1974 : not recorded.
- Greenshank, *Tringa nebularia*
 1971-72 : common.
 1974 : one seen.
- Wood Sandpiper, *Tringa glareola*
 1971-72 : at least 7.
 1974 : not recorded.
- Sharp-tailed Sandpiper, *Calidris acuminata*
 1971-72 : abundant, flocks of thousands.
 1974 : not recorded.
- Red-necked Stint, *Calidris ruficollis*
 1971-72 : uncommon.
 1974 : one small flock of 10-15.
- Long-toed Stint, *Calidris subminuta*
 1971-72 : one individual.
 1974 : not recorded.
- Black-tailed Godwit, *Limosa limosa*
 1971-72 : one flock of 23.
 1974 : not recorded.
- White-headed Stilt, *Himantopus himantopus*
 1971-72 : abundant, thousands were feeding in shallow water.
 1974 : uncommon, isolated pairs.
- Avocet, *Recurvirostra novaehollandiae*
 1971-72 : small numbers.
 1974 : not recorded.
- Australian Pratincole, *Stiltia isabella*
 1971-72 : common.
 1974 : common, though less numerous. It was also at Thargomindah airport.
- Silver Gull, *Larus novaehollandiae*
 1971-72 : common.
 1974 : similar frequency.

- Whiskered Tern, *Chlidonias hybrida*
 1971-72 : common, several large flocks.
 1974 : uncommon, a few small flocks.
- White-winged Black Tern, *Chlidonias leucoptera*
 1971-72 : two pairs on separate occasions in flocks of Whiskered Terns.
 1974 : not recorded.
- Caspian Tern, *Hydroprogne caspia*
 1971-72 : uncommon, though regularly seen singly or in pairs.
 1974 : similar frequency.
- Gull-billed Tern, *Sterna nilotica*
 1971-72 : uncommon, though regularly seen singly or in pairs.
 1974 : similar frequency.

DISCUSSION

It is interesting to note that several species which were common in one season were not noted in the other. The Dusky Moorhen, Little Grebe and Great Crested Grebe, for example, were breeding in large numbers in 1974 but none were seen in 1971-72.

The flocking in 1974 of some species which were observed as scattered individuals or pairs in 1971-72 was another conspicuous feature. The only record of the Red-capped Dotterel in 1974 was one flock of at least 300 but in 1971-72 pairs were scattered widely around the lake shores. The paucity of wader records generally in 1974 was almost certainly due to inundation of suitable mudflats by the January rains.

A number of my records represent extensions of the Queensland range indicated by Storr (1973):

- Green Pigmy Goose - occurs "... south ordinarily to the Nicholson, lower Leichhardt and middle Cloncurry (rarely to Mount Isa and Maxwellton).", (Storr, 1973 pl7), and has been recorded on the coast to the south-east corner of the state. This species does not normally occur on inland waters and the record represents a significant range extension.
- Blue-billed Duck - not previously recorded west of Chinchilla, indicating an extension of range of approximately 550 km. (Slater (1970), however, includes south-west Queensland in his distribution map.)
- Dusky Moorhen - has not been recorded west of the Condamine drainage basin or in southern Queensland, approximately 550 km east of Dynevor Lakes.
- Oriental Dotterel - previously known only from northern Queensland "... south to Camooweal, Mount Isa, Julia Creek, Stamford,

- Clermont, Lake Elphinstone and Townsville." (Storr, 1973, p36).
- Greenshank - not recorded from this area, although it has been noted west to Longreach and Taroom.
- Wood Sandpiper - not previously recorded from south-west Queensland, known previously from the Townsville-Innisfail district and the south-east and north-west corners of Queensland.
- Long-toed Stint - previously known in Queensland from a few observations at Mount Isa and one at Coen.
- Black-tailed Godwit - known in Queensland from coastal areas and the "... northern interior (inland to Camooweal, Mount Isa, Georgetown and Atherton)..." (Storr, 1973, p37).
- White-winged Black Tern - primarily a species of the coast and in Queensland is known from "northern and eastern seas, coasts, and coastal plains" (Storr, 1973, p44). Its occurrence at Dynevor Lakes represents an extraordinary extension of range.

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REQUEST FOR INFORMATION

WADER MARKING PROGRAMME

In order to determine the movements and migratory patterns of Palearctic and Australasian waders by means of visual observation, a colour marking programme was initiated in 1974 in New South Wales and Victoria. In addition to a numbered band, birds were also colour marked by different colour dyes.

Last year over 600 birds involving 14 species were colour marked using this technique, however as yet no sightings have been reported. This year these studies will be continued and Dr Dorwood and Mr Van Gessel request the assistance of any ornithologist observing a colour banded or colour marked wader to contact them stating details and particulars of species, colours and place of observations. Their addresses are:

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