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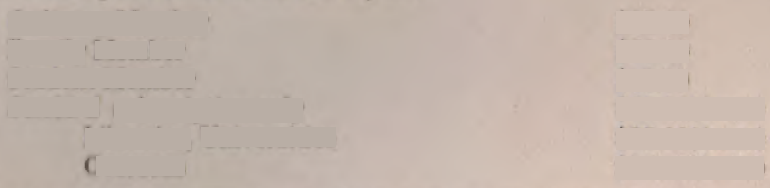

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THE SUNBIRD

Volume 24 No. 3 September 1994

THE CHARADRIIFORMES OF THE LOWER ENDEAVOUR AND ANNAN RIVERS, NORTH QUEENSLAND

J.A. McLEAN

ABSTRACT

Between June 1983 and May 1993, forty-five species of Charadriiformes were recorded by the author in the Cooktown region. A further species recorded by another author and two beachwashed specimens are listed, making forty-eight species in all, four of which were breeding.

INTRODUCTION

Regular observations were made near Cooktown (15°28'S, 145°17'E) between June 1983 and May 1993, with a focus on the Endeavour and Annan rivers, including their associated wetland and littoral habitats. Cooktown, with a population of about 1500 people, lies between these two systems, which are approximately 7 km apart. Overall, the study area is of about 215 km^2, in the form of an oblique rectangle extending about 18 km from Walker Bay north to Mount Milman (see Fig. 1).

CLIMATE

Cooktown has well-defined wet and dry seasons, with the majority of the average annual rainfall of 1784 mm occurring between November and April (Tracey 1982). Maximum daily temperatures range from 16°C in July to 33°C in December (Anning 1980). The prevailing wind is a south-east trade of moderate strength, with lighter and more variable winds during summer.

STUDY AREA AND METHODS

The major of the two river systems is the Endeavour River, which enters the Coral Sea between Grassy Hill and Point Saunders as a perennial river approximately 1 km in width. Close to the mouth, numerous drying sand and mud banks extend upstream for several kilometres. Some of these feeding

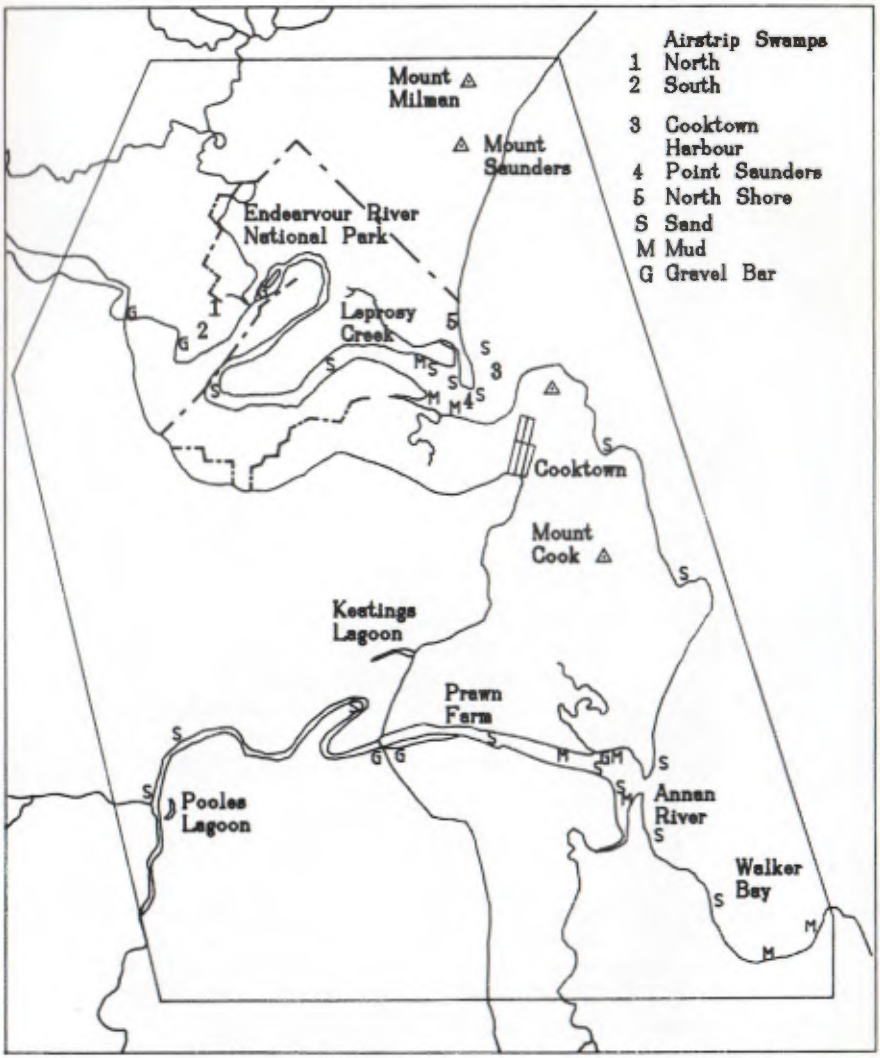

Fig. 1. The study area from Walker Bay to Mount Milman.

grounds for Charadriiformes are exposed for slightly longer periods during ebb and flood tides than are the corresponding but smaller areas at the Annan River. Extensive stands of mangroves border the river complex from the mouth upstream for at least 16 km. The predominant family is the Rhizophoraceae, particularly *Rhizophora stylosa, R. apiculata, Ceriops tagal* var. *tagal, C. tagal* var. *australis* and *Bruguiera gymnorrhiza*, while the more scattered *Avicennia eucalyptifolia* is also prevalent (Bunt *et al.* 1982). There are two small swamps, approximately 13 km upstream from the mouth, within 0.5 km of each other near the southern end of the airstrip. The most northerly is a shallow mangrove swamp influenced by spring tides, while the other is an ephemeral freshwater swamp fringed with *Melaleuca* spp.. The portion of river from Point Saunders to the southern end of the airstrip falls within the 1840 ha Endeavour River National Park.

The Annan River has a narrow entrance 120m wide at its mouth. It supports similar mangrove species to those found in the Endeavour River, but they gradually diminish about 12 km upstream, giving way to thickets of *Hibiscus tiliaceus* bordered by tall terrestrial vegetation. Gravel bars exposed at low water are found in the upper reaches of both rivers. There are three important wetland areas associated with the Annan River, including a Prawn Farm which consists of nineteen oblong (chiefly saltwater) ponds. Most of these ponds measure 450 m by 90 m, with a depth of about 2 m. Keatings Lagoon is the largest of the freshwater bodies in the study area, measuring 1.5km by 10-120m. Tall *Melaleuca* spp. border the lagoon, while floating *Nymphaea* spp., *Eleocharis* reeds and various sedges are widespread throughout the lagoon. Pooles Lagoon is about one-quarter of the size of Keatings Lagoon, and it supports similar vegetation. Other than drying mudflats at the southern end of Walker Bay, coastline areas consist mainly of either sandy beaches or rocky shoreline.

Field observations were conducted intermittently during the first 6.5 years of this project, then each month or more frequently during the remaining period. The most frequented areas were lower Leprosy Creek, Point Saunders and Cooktown Harbour. Both rivers were visited by boat and on foot, the Endeavour receiving more attention. Pooles Lagoon was not visited regularly before November 1991.

BRIEF ORNITHOLOGICAL HISTORY

The earliest records available appear to be those taken during the seven weeks it took to repair the barque 'HMS Endeavour' while it was anchored at the mouth of the Endeavour River during mid-1770. Lieutenant James Cook's party made several significant observations of both flora and fauna. Cook, Banks and Parkinson all noted some bird-life at the Endeavour River. Parkinson, who was the principal artist, provided a detailed account of the soft part colours of both

Sooty Oystercatcher and Comb-crested Jacana (Whittell 1954). More recent contributions of published material covering Charadriiformes from Cooktown are Storr (1953), Wheeler (1967), Kikkawa (1976) and Blakers *et al.* (1984). Scientific names of all bird species are given in Appendix 1.

RESULTS AND DISCUSSION

Large gatherings of waders and terns are not a feature of the area, although the diversity is impressive. It is perhaps surprising that, of the 46 live species detailed in Appendix 1, only the Large Sand Plover, Whimbrel and Crested Tern occurred in flocks in excess of 100 birds. Oriental Plover, Red-necked Avocet, Little Curlew, Sanderling, Broad-billed Sandpiper, unidentified Jaeger, Whiskered Tern, Common Noddy and Black Noddy were rarely seen and may be described as vagrants. Another 34 species were found in small flocks or as single individuals on a regular basis and could be considered common, uncommon or occasional visitors.

It is instructive to mention other Queensland Charadriiformes data for comparison with the Cooktown data presented here. Storr (1953) documented 21 species from Cooktown, including the only record of the Oriental Plover, while Blakers *et al.* (1984) listed only 11 species from the block at 15°25'S, 145°15'E. Kikkawa (1976) detailed 43 species for an area extending from just south of Cooktown to Princess Charlotte Bay, 160 km north. Garnett & Bredl (1985) recorded 41 species from the west coast of Cape York, in the vicinity of Edward River at 14°52'S, while Ingram (1976) detailed 30 species from some Torres Strait islands. Blakers *et al.* (1984) included 53 species for the Cairns area and 58 species from Moreton Bay, and Longmore (1978) detailed 45 species from the Rockhampton region. The 14 species documented here which are additional to those in earlier Cooktown accounts are Grey Plover, Red-necked Avocet, Ruddy Turnstone, Little Curlew, Great Knot, Curlew Sandpiper, Sanderling, Broad-billed Sandpiper, Jaeger sp., Whiskered Tern, Little Tern, Lesser Crested Tern, Common Noddy and Black Noddy. Breeding records were confirmed for Comb-crested Jacana, Bush Thick-knee, Masked Lapwing and Red-capped Plover.

The larger area of intertidal feeding grounds available in the Endeavour estuarine area probably accounts for the somewhat higher numbers of waders, gulls and terns per visit than were found at comparable Annan sites. At the Endeavour River, flock sizes for Large Sand Plover, Red-capped Plover, Common Sandpiper, Bar-tailed Godwit and Silver Gull were usually noticeably larger than flocks at the Annan River. In contrast, counts from the Annan River were higher for both Sharp-tailed Sandpiper and Gull-billed Tern. Waders most often encountered in the uppermost reaches of the two rivers were Masked Lapwing, Whimbrel, Grey-tailed Tattler and Common Sandpiper. The most prominent discrepancy which existed between these two major river systems involved a scarcity of Bar-tailed Godwits at the Annan River. This unexpected

paucity is perhaps linked with the more extensive areas of soft mud and other exposed feeding areas at the Endeavour River, although this species is a versatile or tolerant feeder which exploits several types of habitat (Evans 1975).

The freshwater environment at Keatings Lagoon provided many of the sightings of Red-kneed Dotterel, Black-fronted Plover, Black-winged Stilt and Marsh Sandpiper. These birds were also visitors to the nearby Prawn Farm ponds, which at times contained areas of fresh water and brackish water additional to the extensive areas of salt water. The last three species also frequented the airstrip swamps. Pooles Lagoon was only occasionally host to a few waders, but generally supported a few more Comb-crested Jacanas than did Keatings Lagoon. The regular pattern of occurrence of Common Sandpiper, involving up to 15 birds in all months except June is noteworthy. According to Blakers *et al.* (1984), the first birds arrive in Australia in August, but at Cooktown these first dates fall in the 19-25 July period, once as early as 7 July.

Four species of waders have been observed eating Soldier Crabs *Mictyris longicarpus* at sandy, estuarine, low tide sites, namely Beach Thick-knee, Large Sand Plover, Whimbrel and Common Sandpiper. Typically, Large Sand Plovers and Common Sandpipers remove and eat the legs from one side of the carapace, then the opposite side, and finally consume the carapace itself. Smaller crabs are swallowed whole. The Large Sand Plover has also been seen to eat Fiddler Crabs *Uca vomeris* from muddy estuarine terrain. The Mongolian Plover has been seen removing and consuming small *Polychaete* worms at mixed mud and sand substrates, chiefly at the Annan River at low tide.

The ratio of the numbers of Mongolian Plover and Large Sand Plover at Cooktown is of interest when it is compared with that from two offshore coral cays. The mainland counts are always greatly in favour of Large Sand Plover, typically about 12:1, whereas the reverse is found at Three Isles and Low Wooded Island, 43 km to the north north-east, where the ratio is usually 20:1 in favour of Mongolian Plover (pers. obs.).

Fortunately the study area has not undergone anywhere near the same degree of development by man's activities as have many other coastal areas in Queensland, particularly those to the south. The portion of river which lies within the Endeavour River National Park (see Fig. 1) should help to provide future protection for valuable feeding and resting grounds for many Charadriiformes. The vital freshwater body at Keatings Lagoon, which fronts onto the main Cooktown Developmental Road, has been prone to some indiscriminate shooting of its waterbirds for some years. Fortunately this lagoon was gazetted as an Environmental Park in 1989, and it is now substantially protected. Pooles Lagoon and the airstrip swamps are on private land and they are secure in the short term.

ACKNOWLEDGEMENTS

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APPENDIX 1

ANNOTATED SPECIES LIST FOR THE LOWER ENDEAVOUR AND ANNAN RIVERS

Four basic habitat types are recognised. They are:

B all beach, rock and bay areas along the coastline;

G all grassland areas, including the airstrip, racecourse, paddocks and mowed lawns;

T all tidal areas of rivers creeks and saltpans, usually with sand and/or mud substrates present, and often associated with mangroves;

W all non-littoral areas.

Four basic definitions of species status have been used:

Common easily located throughout the year or a defined part of the year (e.g. a Palaearctic migrant in summer);

Uncommon usually located over the majority of the year or a defined part of the year (e.g. a Palaearctic migrant in summer);

Occasional visitor a few sightings each year or every few years;

Rare only one, two or three records since 1983.

Comb-crested Jacana *Irediparra gallinacea* **W.** Common breeding resident; 1-12 individuals during the second half of the year at areas of *Nymphaea* spp. lilies at Keatings and Pooles lagoons. Otherwise only 1-3 are usually recorded. Downy chicks were noted during autumn and winter at both lagoons.

Bush Thick-knee *Burhinus magnirostris* **G**. Common breeding resident; pairs occur in more open areas with wooded vegetation. It nests during spring close to town.

Beach Thick-knee *Burhinus neglectus* **B T**. Common resident; singly, in pairs and occasionally in threes.

Pied Oystercatcher *Haematopus longirostris* **B T**. Occasional visitor; singly or in pairs, usually resting at spits or beaches, often with other waders.

Sooty Oystercatcher *Haematopus fuliginosus* **B**. Occasional visitor; 1-3 birds resting on large granite boulders at less sheltered beaches; always by themselves.

Masked Lapwing *Vanellus miles* **G T W**. Common breeding resident; up to 10 birds together, occasionally up to 25 in summer. Groups often feed at estuarine mud flats at low tide; nests in summer near the airstrip.

Grey Plover *Pluvialis squatarola* **T B**. Uncommon summer migrant; up to 6 at Point Saunders, Leprosy Creek and Northshore beach; not annual; single individuals sometimes winter.

Lesser Golden Plover *Pluvialis dominica* **G T W**. Uncommon summer migrant; singly or in small flocks; occasionally up to 45 in a single flock, particularly at the airstrip during inclement weather. Winter counts involve 1-3 at estuarine sites.

Red-kneed Dotterel *Erythrogonys cinctus* **W**. Occasional summer visitor; 1-4 recorded from November to February at Keatings Lagoon, the Prawn Farm and the airstrip swamps; a pair at Keatings Lagoon, 22-26 July 1992.

Mongolian Plover *Charadrius mongolus* **B T**. Uncommon summer migrant; 1-4 birds noted each August-May, occasionally up to 25 in summer and always in association with the next species.

Large Sand Plover *Charadrius leschenaultii* **B T**. Common summer migrant; singly or in flocks of up to 110 birds during spring and summer; winter counts of up to 25 birds in a single flock.

Oriental Plover *Charadrius veredus* Rare vagrant; a single bird at the mouth of the Endeavour River on 22 September 1948 (Storr 1953).

Red-capped Plover *Charadrius ruficapillus* **B T W.** Common breeding resident; often associates with *C. mongolus* and *C. leschenaultii*. Also seen independently, feeding at flooded saltpans and open beaches in flocks of up to 50 birds; summer nesting recorded at the Prawn Farm.

Black-fronted Plover *Charadrius melanops* **T W.** Uncommon summer visitor; up to 13 birds, mainly at Keatings Lagoon, the Prawn Farm and the airstrip swamps; pairs and single individuals in some other months.

Black-winged Stilt *Himantopus himantopus* **T W.** Occasional visitor; up to 17 birds, primarily at Keatings Lagoon, the Prawn Farm and the airstrip swamps during spring and summer. Pairs or single individuals are sometimes seen resting at estuarine spits in winter.

Red-necked Avocet *Recurvirostra novaehollandiae* **W.** Rare vagrant; a pair at Keatings Lagoon, 2-8 December 1991, and four there on 2 December 1992; two at a partly drained Prawn Farm pond on 1 September 1992.

Ruddy Turnstone *Arenaria interpres* **B T.** Occasional visitor; one or two individuals near river mouths, August-January.

Eastern Curlew *Numenius madagascariensis* **T.** Common summer migrant; counts throughout the year are more consistent than for other large migrant waders; 1-18 in summer and 1-14 in winter.

Whimbrel *Numenius phaeopus* **B T.** Common summer migrant; numbers peak during the arrival and departure months of September and March when 120-180 birds may be present in a single flock. Typical summer counts at estuaries are of 40-50 birds in summer and 7-42 birds in winter.

Little Curlew *Numenius minutus* **T.** Rare vagrant; two records of resting birds at Point Saunders, involving two on 28 September 1986 and a solitary individual on 25 October 1986.

Grey-tailed Tattler *Tringa brevipes* **B T W.** Common summer migrant; 1-5 birds often seen at high tide roosts on the looping roots of mangroves *Rhizophora stylosa*. This species is far more numerous at nearby offshore islands.

Common Sandpiper *Tringa hypoleucos* **G T W.** Common summer migrant; excepting 1992, when a bird appeared on 7 July, the first individuals were noted between 19 July and 25 July each year. Feeding and roosting independently from other waders, they are always most vocal at dusk. By September, flocks of 5 birds occur, and in summer 10-15 birds roost together at dusk on unoccupied

vessels at Cooktown Harbour, on dead limbs of trees at Leprosy Creek, and on a small sandbank in the upper Endeavour River. Numbers taper off during April, and a record on 14 May 1992 is exceptional.

Greenshank *Tringa nebularia* **T W.** Uncommon summer migrant; singly or in small flocks of up to 12 birds, mainly October-January; 1 or 2 are occasional in other months. Most records are from the Endeavour River estuary, Keatings Lagoon, the Prawn Farm or the northern airstrip swamp.

Marsh Sandpiper *Tringa stagnatilis* **T W.** Occasional summer migrant; singly or in pairs, rarely up to 12 birds, September-February; Keatings and Pooles lagoons, the northern airstrip swamp and the Prawn Farm.

Terek Sandpiper *Tringa terek* **B T.** Occasional summer migrant; 1-7 during summer, single individuals in some winter months; Leprosy Creek, Point Saunders and the Annan River estuary.

Latham's Snipe *Gallinago hardwickii* **G T W.** Occasional summer migrant; a solitary bird at the southern airstrip swamp on 26 August 1985; otherwise sporadic sightings are of 1-2 from October to April at a variety of moist habitats including mangroves.

Bar-tailed Godwit *Limosa lapponica* **B T.** Common summer migrant; flocks of up to 27 birds, while winter counts at the Endeavour River involve 10-20 birds.

Red Knot *Calidris canutus* **T.** Occasional summer migrant; 1-4 with other waders at both estuaries, September-January.

Great Knot *Calidris tenuirostris* **T.** Occasional summer migrant; 1-3 birds, September-November; there are March-May records in some years.

Sharp-tailed Sandpiper *Calidris acuminata* **T W.** Common summer migrant; flocks of up to 90 birds, August-March, with peak numbers in September. At the Annan River, they often feed and rest amongst short Couch Grass *Sporobolus virginicus* and under 1 m high mangroves.

Red-necked Stint *Calidris ruficollis* **B T W.** Common summer migrant; small flocks each August-April, occasional during winter; often feeds and rests with small plovers. A banded bird with an orange tag on its left leg (from anterior) at Leprosy Creek on 29 September 1992 was probably tagged in Victoria.

Curlew Sandpiper *Calidris ferruginea* **T W.** Occasional summer migrant; most sightings are of single birds, September-October and February-March, at the northern airstrip swamp, Point Saunders, the Annan River and the Prawn

Farm.

Sanderling *Calidris alba* **B T.** Rare vagrant; a single bird feeding actively at the water's edge at Northshore beach, and later resting at Point Saunders, on 12 September 1987.

Broad-billed Sandpiper *Limicola falcinellus* **T.** Rare vagrant; a single bird feeding near the mouth of the Annan River on 9 November 1992; another at the same site on 12 February 1993, resting with a small flock of Red-necked Stints; and one bathing at Point Saunders on 14 December 1992.

Arctic/Pomarine Jaeger *Stercorarius parasiticus/pomarinus* **B T.** Rare vagrant; a solitary juvenile of the pale morph at Northshore for a week from 12 March 1991. It rested alone at Point Saunders and periodically flew along Northshore beach. On one occasion it failed an attempt to swallow whole a 16 cm Ditchelee Herring *Pellona ditchela*. The only observation of kleptoparasitism involved a Crested Tern. For more details see McLean (1991).

Silver Gull *Larus novaehollandiae* **B T.** Uncommon resident; 1-2 from March to June; up to 17 birds together in other months, usually in association with Crested Tern.

Whiskered Tern *Chlidonias hybrida* **T.** Rare nomad; a pair in nuptial plumage flying over the Prawn Farm ponds on 7 November 1988.

Gull-billed Tern *Gelochelidon nilotica* **B T.** Uncommon visitor; 1-14 birds, mainly at the Annan River during winter and spring; fewer by December and usually absent from January to April.

Caspian Tern *Hydroprogne caspia* **B T.** Uncommon resident; up to 5 birds in most months.

Common Tern *Sterna hirundo* **B T.** Occasional summer visitor; 1-3, September-April, seldom in winter. A banded bird with a red and white tag on its right leg (from anterior) and a white tag on its left leg on 4 October 1991 was banded three years earlier in Victoria (The Victorian Wader Study Group).

Roseate Tern *Sterna dougallii* **B.** Rare vagrant; one beachwashed specimen at Northshore on 29 October 1985.

Sooty Tern *Sterna fuscata* **B.** Rare vagrant; a beachwashed specimen at Northshore on 26 July 1990.

Bridled Tern *Sterna anaethetus* **B T**. Occasional summer visitor; up to 26 birds, mostly feeding at Walker Bay, December-March. Associated with Cyclone Winifred on 30 January 1986, there were 40 birds over Cooktown Harbour. A flock of 60 birds was feeding between the mouth of the Endeavour River and Finch Bay on 17 February 1993. They are sometimes seen at offshore Walker Bay reefs in April-May.

Little Tern *Sterna albifrons* **B T**. Uncommon summer visitor; up to 25 birds, mostly November-March, occasional individuals during winter. Birds are conspicuous and active during inclement weather when they feed at the two river mouths and over Walker Bay. Some summer records involve birds in nuptial plumage.

Crested Tern *Sterna bergii* **B T**. Common resident; counts at Point Saunders involve up to 200 birds in winter and up to 92 birds in summer; typically feeds over Walker Bay and at both river mouths.

Lesser Crested Tern *Sterna bengalensis* **B T**. Occasional summer visitor; 1-5 birds, September-April, usually associated with Crested Terns. At Point Saunders there were 21 resting with Silver Gulls and Crested Terns on 9 December 1992.

Common Noddy *Anous stolidus* **B**. Rare vagrant; single individuals near the Endeavour River mouth on 18 March 1986 and at Northshore on 6 March 1989 were resting in the aftermath of severe storms.

Black Noddy *Anous minutus* **B**. Rare vagrant; a single bird in flight near the Endeavour River mouth on 17 April 1988.

CLAMOROUS REED-WARBLERS FEEDING IN THE CANOPY OF EUCALYPTS

IAN C. GYNTHER

The Clamorous Reed-Warbler *Acrocephalus stentoreus* is usually a secretive bird of wetlands (Prince 1982, Slater *et al.* 1989). As Courtney-Haines (1991) states, it "is an inveterate skulker, keeping to the dense cover of reeds, rushes, papyrus and other rank vegetation." Often the only indications of the species' presence in an area are its calls, particularly its rich varied song, but occasionally birds can be glimpsed as they fly low over the tops of swamp vegetation or perch on exposed stems. On 8 October 1993, while conducting a fauna survey of an area bordering Collingwood Park and Redbank Plains, south-east Queensland, I was surprised to see Clamorous Reed-Warblers leave the cover of a swamp's rank growth to forage in the open in adjacent eucalypts, in one instance to a height of 30 m. The birds were observed feeding on lerps, which were most abundant high in the trees.

STUDY SITE

The swamp where these observations were made lies close to Goodna Creek in Redbank Plains (27°37'40"S, 152°52'00"E). It is approximately 0.2 ha in area and thickly vegetated with 3-m bulrushes (*Typha* sp.). On its western and southern sides is an extensive cleared area of grassland, weeds and scattered eucalypts (mostly Forest Red Gum *Eucalyptus tereticornis* and Narrow-leaved Ironbark *E. crebra*). The disturbed woodland to the north and east of the swamp is dominated by Spotted Gum *E. maculata*, with many regenerating eucalypts, including Gum-topped Box *E. moluccana*, and acacias *Acacia* sp. in the understorey. At its north-western corner, the swamp drains via several channels into Goodna Creek. Here, tall Forest Red Gums and Narrow-leaved Ironbarks grow as emergents through a stand of Swamp Oaks *Casuarina glauca*. The closest of these eucalypts was 3 m from the bulrushes.

OBSERVATIONS

At least four Clamorous Reed-Warblers were present in the swamp, based on a count of individuals seen or heard simultaneously. The actual population was undoubtedly greater, but the nature of the vegetation and the habits of the bird made an accurate census difficult. Any adults concealed on nests would not have been counted.

As I stood near the southern edge of the swamp during the late morning, my attention was attracted by a Clamorous Reed-Warbler flying steeply down into the dense vegetation. Its flight angle suggested the bird had come from a point

much higher than the 3-m bulrushes. Shortly afterwards this was confirmed when a reed-warbler flew from the bulrushes into a young Forest Red Gum, 7 m from the south-western corner of the swamp. With 8x30 binoculars from a distance of 10 m, I watched the bird move through the branches, picking lerps off the foliage. It reached the tree's upper branches, about 10 m above ground, before returning to the bulrushes at the same steep angle I had witnessed previously. During an observation period totalling 30 minutes, at least two other visits to this particular tree were made by a Clamorous Reed-Warbler.

In another instance, a reed-warbler was observed at a height of about 6 m in a Swamp Oak adjacent to the bulrushes at the swamp's north-western corner, some 30 m from where I stood. Over several minutes, it hopped higher and higher in the tree before transferring to the branches of a neighbouring Narrow-leaved Ironbark. Frequently it uttered single harsh *chack* calls typical of the species (see Courtney-Haines 1991). The bird continued to move upwards through the foliage of the ironbark, apparently searching for arthropod prey. It eventually reached the uppermost branches, some 30 m above ground, and from there crossed into the adjacent foliage of a Forest Red Gum at the same height. Its behaviour and movements were reminiscent of those of a Rufous Whistler *Pachycephala rufiventris*. The Clamorous Reed-Warbler was still in the canopy when I left the area after about 10 minutes of observation.

I made two subsequent visits to the site, both times under similar weather conditions to the first occasion (i.e. fine, 25-28°C). Observations were made from the same vantage point each time. On 7 November 1993, Clamorous Reed-Warblers were observed to venture away from the bulrushes into nearby eucalypts only twice during the period from 10:25a.m. to 12:05p.m.. One bird flew into a low acacia and then on to a 7-m Forest Red Gum. With a tripod-mounted 25x77 spotting scope, I watched the bird remove lerps from the new foliage at the top of the young tree. It returned to the bulrushes after about 5 minutes. A second individual visited a 10-m Forest Red Gum which was heavily infested with mistletoe (Loranthaceae). I lost sight of the bird behind a dense clump and failed to locate it again.

During this visit to the swamp, Clamorous Reed-Warblers were observed on at least ten occasions making short feeding forays into the air above the bulrushes. Birds flew up to catch insects and then either glided back to the rushes or flew further on over the swamp before dropping out of sight. This "aerial-feeding" was not noticed on the previous visit.

On a third, 2-hour visit to the site commencing at 2:40p.m. on 22 November 1993, I watched Clamorous Reed-Warblers make 11 trips into the Swamp Oaks and eucalypts near the bulrushes. Using the spotting scope, birds were observed catching arthropods, sometimes returning immediately with them to the rushes

and at other times continuing to search the foliage while holding the prey in their bills. Foraging individuals uttered single soft notes rather than the harsh *chack* calls heard previously. They reached heights of between 8 m and 14 m during these trips, and the four feeding forays timed ranged from 1.5 minutes to 3 minutes duration. In contrast to my earlier visits, no lerps were visible on any of the eucalypts, so this source of food was apparently not available to the reed-warblers. Birds searched for prey amongst clumps of mistletoe in the eucalypts more often than had been noticed on the previous occasion. Aerial forays above the bulrushes were uncommon during this third visit.

DISCUSSION

Combining data from the three visits, during just over four hours of observation, Clamorous Reed-Warblers were noted making a total of 17 feeding forays into trees adjacent to the swamp. These forays lasted from 1.5 minutes to at least 10 minutes, during which time birds reached heights of between 7 m and 30 m. Presumably many other such feeding forays were missed because of my failure to notice birds leaving the swamp. As an indication of this, on several occasions I only realized that reed-warblers had been foraging in a particular tree when I noticed them flying back to the bulrushes. The low number of forays to neighbouring trees noted on my second visit to the swamp may have been a consequence of the high incidence of aerial-feeding and related to a greater abundance of flying insect prey above the bulrushes on this day.

Observations of Clamorous Reed-Warblers feeding high in eucalypts or other trees have not been reported previously. It is well documented that they will leave the cover of reeds, rushes or other swamp vegetation, the species having even been recorded in gardens more than 6 km from the nearest reed bed (Courtney-Haines 1991). Clamorous Reed-Warblers have been observed in Weeping Willows *Salix babylonica*, River Red Gum *E. camaldulensis* regrowth and waterside bushes (Prince 1982, Courtney-Haines 1991, Pizzey 1991), and in tidal areas on the Red Sea and in India they visit mangroves (Courtney-Haines 1991). However, such vegetation probably never exceeds a height of 12 m.

My observation of Clamorous Reed-Warblers in the canopy of trees, as much as 30 m above ground, would seem to be unusual. This feeding behaviour might previously have escaped notice because many of the swamps where Clamorous Reed-Warblers are found are in low-lying, marshy areas which lack adjacent tall trees. Another possible explanation is related to the unobtrusive nature of the birds as they move through the branches. Unless one was alerted to its presence in a tree by its single syllable calls, it would be easy to overlook the plain-coloured Clamorous Reed-Warbler amongst the foliage. To compound this, seeing an individual high in a eucalypt, away from its usual habitat, may cause some confusion as to its identity.

The diet of the Clamorous Reed-Warbler includes a wide variety of insects and spiders, but lerps, the sugary protective coatings secreted by psyllid nymphs, have not been recorded before (Barker & Vestjens 1991). During my visits to this site, I observed Clamorous Reed-Warblers feeding on lerps on several occasions. Psyllids appeared to be concentrated on the eucalypts' new growth, much of which was high up in mature trees. Birds may have needed to forage to the extreme height I noted to fully exploit this resource. Longer periods of observation, particularly during October when lerps were abundant, may have revealed many more feeding forays to canopy level.

Interestingly, lerp-feeding has been documented in two other members of the Sylviidae, the Golden-headed Cisticola *Cisticola exilis* and the Rufous Songlark *Cinclorhamphus mathewsi* (Barker & Vestjens 1991). The cisticola, like the Clamorous Reed-Warbler, is often associated with areas of tall dense grassland, rushes and other rank vegetation around swamps (Pizzey 1991), but must also visit suitable trees to search for lerps.

Another aspect of the reed-warblers' feeding behaviour which deserves mention is that birds were observed spending considerable time foraging amongst clumps of mistletoe during visits to eucalypt trees. However, I was not able to determine whether the mistletoe offered a higher yield of arthropod prey than the eucalypt's own foliage.

The present observations corroborate the adaptability of the Clamorous Reed-Warbler in different environments. For example, Courtney-Haines (1991) describes the species in India visiting bungalows to search the thatched roofs for spiders. In the light of such findings, it is perhaps not surprising that, where trees grow in close proximity to a swamp, Clamorous Reed-Warblers make full use of them and their associated arthropod fauna.

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OBSERVATIONS ON THE ECOLOGY OF THE GREEN-BACKED HONEYEATER *GLYCICHAERA FALLAX* AT IRON RANGE, CAPE YORK PENINSULA

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The Green-backed Honeyeater *Glycichaera fallax* occurs in New Guinea and the Aru Islands, and on Cape York Peninsula, Queensland (Longmore 1991a). The biology of this species is poorly understood and detailed field observations dealing with identification, behaviour and diet are limited to the account of Holland (1972). Brief references to this species are given in several publications on the avifauna of Iron Range (Forshaw & Muller 1978, Geeves & Horton 1988, Johnson & Hooper 1973, Pavey 1991), and in two of several papers on the bird community of lowland rainforest at Brown River, Papua New Guinea (Bell 1982a, 1982b).

There is no published description of this species' nest and eggs (Longmore 1991a). Macgillivray (1915) dissected several specimens, the state of the sexual organs leading him to suggest a summer nesting season, after the commencement of the wet season. The RAOU Atlas contains a report of adults feeding dependent young in June 1981 (Blakers *et al.* 1984). Recent research on the nesting biology of the avifauna at Iron Range during the late dry season (November and December) found no evidence of nesting Green-backed Honeyeaters (Frith & Frith 1993).

The Green-backed Honeyeater's range on Cape York Peninsula is not clearly defined. Most references (Blakers *et al.* 1984, Garnett 1992, Holland 1972, Storr 1984) restrict it to the Claudie River rainforests at Iron Range. However, Schodde & Tidemann (1986) state, apparently incorrectly, that it also occupies other rainforest patches at the tip of Cape York Peninsula, south to the McIlwraith Range at 13°30'S, 143°18'E. There are Queensland Museum specimens from Iron Range and the McIlwraith Range (Longmore 1991b). It is not known whether the species occurs between these two areas or between Iron Range and the tip of Cape York Peninsula.

This paper provides data on group size, foraging height, feeding behaviour, habitat and food of the Green-backed Honeyeater at Iron Range. Observations were undertaken on several occasions between July 1992 and July 1993, including periods which were dry with very little standing water (July 1992, November 1992), the wet season proper (February 1993), and post wet season with plentiful standing water (July 1993).

Five observations of Green-backed Honeyeaters were of sufficient duration to allow examination of foraging behaviour, foraging height and group size. The

data are summarised in Table 1. The number of individuals recorded ranged from one to three birds (three single birds, two birds together and a group of three). These group size records are similar to those of Holland (1972), who observed five single birds, 12 'pairs' and two groups of three. This suggests that Pavey's (1991) records of at least ten birds on 9 July 1986 and five on 11 July 1986, and the groups reported by Johnson & Hooper (1973) and Geeves & Horton (1990), are atypical. All observations of larger groups have been in July and August, which suggests that these small flocks might be a winter (dry season) phenomenon.

TABLE 1. Summary of observations of foraging Green-backed Honeyeaters at Iron Range, Cape York Peninsula.

Date	Bird numbers	Observation period (min)	Foraging height (m)	Habitat
13/7/92	2	2-3	5-10	regrowth vine forest, 100m from forest edge
30/11/92	3	40	2-20	vine forest along dry bed of Gordon Creek
16/2/93	1	3-4	10-15	vine forest along road
21/2/93	1	4-5	3-10	vine forest 10m from road
11/7/93	1	3	8-20	vine forest along road

The foraging height varied from 2 to 20 metres, agreeing with the data in Holland (1972). All sightings were within lowland vine forest (rainforest) near the Claudie River and its tributaries. Two sightings were along the road to Portland Roads, and another was within 10 m of the road to the Rainforest Camp in Iron Range National Park. A further record from the dry bed of Gordon Creek indicates that the Green-backed Honeyeater forages at the edges of gaps (both natural and man-made) in vine forest. The remaining observation of foraging birds was from regrowth vine forest at the base of Lamond Hill. Bell (1982b) considered the species to be largely restricted to secondary vegetation (i.e. roadside rainforest) at Brown River, although he also trapped it in primary forest there and at other localities in Papua New Guinea (Bell 1970).

The dominant foraging strategy involved gleaning invertebrates from the foliage, as described previously (Holland 1972). The three birds observed for 40 minutes in November 1992 fed only from the foliage of trees, obtaining most invertebrates from the undersurface of leaves. They did not search for prey around the flowers which were present on some of the trees visited. The maximum distance moved by any of the three birds during the entire 40 minute observation period was 30 m (observations began when the first bird was sighted

and continued until they moved away from the area). The longest single flight to a new feeding location was of about 20 m. The foraging birds usually remained within one to five metres of each other, and a soft contact call was heard frequently.

This honeyeater is believed to be almost exclusively insectivorous (Blakers *et al.* 1984, Longmore 1991a). The individual observed for 4-5 minutes on 21 February 1993 spent a portion of this time (exact duration not recorded) feeding on berries from an unidentified vine forest tree. There are no previous reports of such behaviour in this species. The berries were 1 to 2 mm in diameter and dull red in colour. They appeared to be swallowed whole.

Bell (1982c) did not record the Green-backed Honeyeater as a member of mixed-species feeding flocks at Brown River. This was also the case during the present study at Iron Range. However, Holland (1972) noted a feeding association between the honeyeater and the Rufous Fantail *Rhipidura rufifrons*, and to a lesser extent the Fairy Gerygone *Gerygone palpebrosa* and Lemon-bellied Flycatcher *Microeca flavigaster*.

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RECOVERY OF A BANDED SOUTHERN GIANT-PETREL IN NORTH QUEENSLAND

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The Southern Giant-Petrel *Macronectes giganteus* is known to breed from the Antarctic continent north to islands near the Antarctic Convergence (50°55'S) (Blakers *et al.* 1984). Adult birds appear to remain close to their breeding grounds, and most birds reaching Australia are immatures that disperse northward from their breeding colonies, thence eastward with the prevailing westerly winds. Some cover long distances rapidly. A bird from South Orkney (60°S, 45°W) reached South Australia in 10-12 weeks (Blakers *et al.* 1984).

Pizzey (1989) describes immatures and sub-adults as common winter and spring migrants to the southern Australian coast, ranging north to Point Cloates in Western Australia and to the tropics in Queensland. However, there are few actual records from North Queensland, and it is a vagrant north of about 24°S (Marchant & Higgins 1990). Wieneke (1988) reported a juvenile at Magnetic Island, off Townsville, in June 1987, while Palliser (1985) reported an unidentified *Macronectes* at Michaelmas Cay, off Cairns, on 30 June 1984. A bird recovered in Papua New Guinea, banded as a nestling at South Georgia (55°S, 35°W), appears to be exceptional (Blakers *et al.* 1984).

In August 1993 the corpse of a large bird was found on Upolu Cay (16°40'S, 145°56'E). This small uninhabited coral cay, sparsely vegetated and 2.4 m in height, lies 34 km off Cairns. A metal leg band removed from the bird bore the inscription CEMAVE C.P. 34 BRASILA V20866. Details were forwarded to the Australian Bird and Bat Banding Scheme which notified The Brazilian Banding Centre. Subsequent data confirmed that the banded specimen was *M. giganteus*. This Southern Giant-Petrel had been banded on 9 March 1993 as a nestling at Elephant Island (61°20'S, 55°20'W), South Shetlands, Antarctica. The bird had moved a distance of at least 11 139 km on bearing 201 degrees true (Australian Bird and Bat Banding Scheme *in litt.*). The maximum time between banding and recovery was approximately 5 months. Whether the bird perished on Upolu Cay or was beachwashed could not be ascertained at the time of recovery.

Storr (1984) cites Queensland banding recoveries from South Shetlands and three other Antarctic breeding sites. Nevertheless, according to the Australian Bird and Bat Banding Scheme (*in litt.*), the bird reported here is the only Queensland recovery which includes proper data on banding site and date.

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CORRESPONDENCE: SILVEREYES AND JACARANDAS

In his recent paper (*Sunbird* 23:73-74) on the use of "non-traditional" nest material by the Silvereye *Zosterops lateralis*, Cobcroft (1993) described the failure of a Silvereye nest in a Jacaranda Tree *Jacaranda mimosifolia* as a result of leaf-drop in this deciduous species in late September. I have seen two similar occurrences which may be of interest.

In September 1992, a pair of Silvereyes nested in a Jacaranda Tree in my garden at Gatton, south-east Queensland. As in Cobcroft's case, the birds chose this tree in preference to several apparently suitable native trees and shrubs growing nearby. The nest was slung between two adjacent petioles which were later dropped by the tree, spilling two young chicks to the ground where they perished. In October 1993, a pair of Mistletoebirds *Dicaeum hirundinaceum* constructed a nest in the same tree. Partial collapse of the supporting petiole caused the nest to tilt and spill a clutch of four eggs. In neither case did the birds involved attempt to rebuild nests in the Jacaranda, no doubt deterred by the ongoing process of leaf-drop prior to flowering.

It would appear that the birds were attracted to the moderately dense canopy of compound leaves of the Jacaranda, and unable to predict the occurrence of leaf-drop in the introduced tree during the nesting period. The Jacaranda, widely planted in parks and gardens, is becoming naturalised on the Toowoomba Range (pers. obs.). Its delightful show of flowers may be countered by a threat to urban and periurban populations of some birds.

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