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A Note on the Female Plumage of the Leaden Flycatcher

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Attention is drawn to a generally overlooked phase of the female plumage of the Leaden Flycatcher *Myiagra rubecula* showing distinct white external edging and white tips to tail feathers. The range of the Broad-billed Flycatcher *M. ruficollis* on the eastern coast of Queensland requires definition. Satin Flycatchers *M. cyanoleuca* in the Queensland Museum collection are significantly larger than the Leaden Flycatchers, but most recent texts indicate that they are of similar size.

Five *Myiagra* flycatchers occur in Australia, three of which exhibit very similar plumages, viz. both sexes of the Broad-billed Flycatcher, and the female plumage of the Leaden Flycatcher and Satin Flycatcher (Macdonald 1973; Slater 1974). The Restless Flycatcher *M. inquieta* and Shining Flycatcher *M. alecto* are distinctive in all plumages. Immature males of both Leaden and Satin Flycatchers resemble the female. The tail colourations of the three similar species are

given in several publications, and these are summarized in Table 1.

Slater (1974) further emphasised the differences in tail colouration as a diagnostic feature for the Broad-billed Flycatcher:

'Distinguished from female Leaden and Satin Flycatchers by the white in the tail'.

It is shown below that some female plumaged Leaden Flycatchers have white edges and tips in

TABLE 1
Tail colouration of three *Myiagra* flycatchers.

Authority	Female Leaden Flycatcher	Female Satin Flycatcher	Broad-billed Flycatcher
North (1901-14)	'brown'	'... brown, the central feathers having a blackish wash'	'... dusky-brown ... externally marginated with leaden-grey'
Oliver (1969)	'brown'	'brown'	'... dusky-brown ... edged and tipped with white'
MacDonald (1973)	'brownish'	not described	'... narrow white margins and tip; ...'
Slater (1974)	'dark-brownish grey'	'all dark'	'... edged and tipped white'

the tail, and hence this feature is not reliable for differentiating between Leaden and Broad-billed Flycatchers.

Mathews (1921) describes two female Leaden Flycatchers. The first bird, from Kiama, N.S.W., is partly described as:

... tail dark hair-brown or more or less fringed with a slate-blue towards the base and becoming paler on the outer edges, especially towards the tips, with obsolete cross-bars: ...

The tail of the second female, from Derby, W.A. is described as:

... tail-feathers dark brown with whitish edges at the tips and along the outer web of the outermost feather on each side: ...

Both birds are figured in Plate 405.

In the late spring of 1975 mist netting commenced in the mangroves fringing Pumicestone Passage, situated 11 km east of Beerburrum. Pumicestone Passage is the waterway between Bribie Island and the adjacent mainland of south-eastern Queensland. During the summer of 1975-76 six Leaden Flycatchers in female plumage were netted in this area of mangroves. All six birds had a distinctive leaden-white margin on the external edge of the outer tail feather and the adjacent feathers were narrowly tipped white (Fig. 1). Other tail feathers may have a suggestion of a pale tip. Details of these six birds, together with another female netted in the same area in May 1976, are given in Table 2. Measurements and/or mass were taken for five of the six birds, and all were smaller than a pair netted



● Figure 1. Tail of female plumaged Leaden Flycatcher, Beerburrum, Queensland 28 November 1975.

in the adjacent area of open coastal forest on 7 September 1975; this male and female both had wing chords of 79 mm and mass of 14 and 13.5 g respectively.

On 10 January 1976, three female plumaged Leaden Flycatchers were obviously agitated whenever anyone passed along one patch of the

TABLE 2
Details of female plumaged Leaden Flycatchers netted at Beerburrum.

Measurements are in millimetres and mass in grams.

Date netted	Wing	Length	Exposed culmen	Width of bill at base	Mass	White in tail	Active moult of primaries
15.11.75	—	—	—	—	—	Yes	No
28.11.75	73	159	12.2	7.0	12.5	Yes	No
13.12.75	69	156	12.2	7.1	12	Yes	Yes
24. 1.76	74	163	12.3	—	—	Yes	Yes
7. 2.76	75	161	10.3	6.8	12	Yes	No
21. 3.76	75	159	11.4	7.3	—	Yes	Yes
15. 5.76	73	171	10.6	8.7	13	No	No

mangrove bank, and nesting was suspected. No male was seen, and indeed male plumaged Leaden Flycatchers were not seen in the mangrove area during the summer of 1975-76, although two or three female plumaged birds were seen during most visits, in addition to the birds netted.

A combination of four factors (white in the tail; smaller size compared with the pair netted in September; absence of male plumaged birds; and occurrence in mangroves) caused me to query the identity of the birds and to check the possibility that they might be Broad-billed Flycatchers markedly out of the recognised range; at the time I was unaware of Mathews' descriptions of the female Leaden Flycatchers.

The wing chords of nine Queensland Museum specimens of female plumaged Leaden Flycatchers, including two immature males, ranged between 71 mm and 79 mm. Measurements of the exposed culmen and width of the bill at the base were similar for the museum and Beerburum birds. However, none of the museum birds showed the distinct white external edging and/or tips to the tail feathers; but several specimens had the outermost tail feather paler than the rest of the tail, and the external edge tended to be paler than the remainder of the feather.

Leaden Flycatchers were not observed during visits to Beerburum on 18 April and 3 May 1976, but a bird in female plumage was netted on 15 May 1976. This bird did not have the white edging and/or tips to the tail feathers, but agreed generally with several of the museum skins in having rather paler outermost feathers. It has been assumed, perhaps erroneously, that the summer population of Leaden Flycatchers had migrated out of the area in early April, and that the bird netted in May was a passage migrant.

Some Leaden Flycatchers in female plumage thus have comparatively plain brown tails, while others have well marked white edges and tips. The former type seems to be most common; it is almost universally described in textbooks and is represented by all nine specimens in the Queensland Museum collection and by the bird netted at Beerburum in May 1976. The plumage with white edges and tips on the tail is described by Mathews (1921) for a bird from Derby, W.A. and also applies to six birds netted in the

mangroves near Beerburum during the summer of 1975-76. The significance of this plumage variation is unknown.

Discussion

The Broad-billed Flycatcher is a poorly known species in Australia and is not well represented in collections. Several references in the literature are open to speculation as to whether or not some recorded sightings of the Broad-billed Flycatcher should not more properly refer to female plumaged Leaden Flycatchers. At present there does not seem to be any agreed characteristics by which these species can be distinguished in the field. There is also poor agreement among various authors to the southern limits of the range of the Broad-billed Flycatcher on the east coast of Queensland. Slater (1974) and Officer (1969) both limit its range to Cape York. Macdonald (1973) extends its range to Cooktown. The most definitive range is given by Storr (1973):

... east coast of Cape York Peninsula south to Cape Grenville and Haggerstone Island; ...

Curiously Storr (1953) in a previous publication has recorded it much further to the south:

'Seen only in *Melaleuca* thickets around swamps near Cooktown and Fairview'.

Examples of more southerly records referred to the Broad-billed Flycatcher include Cooktown and Pebble Beach, south of Port Douglas (Wheeler 1967), Dunk Island (Tarr 1948), and Sabina Point, Shoalwater Bay (Nix 1972). Until such time as the Broad-billed Flycatcher is proved to occur south of Cape Grenville, it seems prudent to regard all such sight records somewhat sceptically.

The small series of Satin Flycatchers in the Queensland Museum was examined for comparative purposes. Wing chords of the four specimens were 88 mm for a male, and 83 mm, 84 mm and 86 mm respectively for three female plumaged birds. In the hand the Satin Flycatcher is a relatively massive bird compared with the Leaden Flycatcher, and the relative sizes of birds from the Queensland Museum collection is well illustrated in Figure 2. This difference in size was quite unexpected from measurements given for the two species in various texts dealing with Australian birds. The lengths of the Leaden and Satin Flycatchers are each given as 6 inches by



● Figure 2. *Skins of Leaden and Satin Flycatchers from the Queensland Museum collection. From left to right:—*

Female Satin Flycatcher, location and collection date unknown.

Female plumaged Leaden Flycatcher, Cape York, Qld 14 July 1948.

Male Satin Flycatcher, Victoria, collection date unknown.

Male Leaden Flycatcher, near Chinchilla, Qld 9 Oct. 1954.

Photo Queensland Museum.

Hindwood and McGill (1958) and as 6½ inches by Leach (1950) and Sharland (1958). North (1901-2) and Officer (1969) both give the length of the Satin Flycatcher as 6½ inches, and give the length of the Leaden Flycatcher as 6 and 6½ inches respectively. Slater (1974) shows the Leaden Flycatcher as longer than the Satin Flycatcher, giving lengths of 16 and 15 cm respectively.

It is assumed that the flycatchers in the Queensland Museum collection are reasonably representative of the two species generally, and Figure 2 is obviously at variance with the comparative lengths given for the two species by the various authors.

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