

Chestnut and Brown Phases of the Tawny Frogmouth on the North Coast of New South Wales

D. R. MILLEDGE and G. P. CLANCY

Attention is drawn to two colour phases of the Tawny Frogmouth *Podargus strigoides* from forests on the New South Wales north coast. The possibility of these phases being confused in the field with the marbled (Plumed) Frogmouth *P. ocellatus plumiferus* is discussed.

Specimens and Observations

On 23 March 1980, an injured frogmouth was captured by H. Nicholson in Terania Creek Basin, 25 km north-east of Lismore, in open country adjacent to subtropical rainforest. Because of its overall rich brown colouration, white blotches on the wing coverts and light orange eyes, it was tentatively identified (by D.R.M.) as a Marbled (Plumed) Frogmouth *Podargus ocellatus plumiferus*. However after consultation with local ornithologists (including G.P.C. and G. Holmes) and a thorough examination of relevant literature, this bird was determined to be a Tawny Frogmouth *P. strigoides*. It later died but the specimen was lost because of the failure of a freezer. Plumage details, soft parts colours, wing measurement and weight taken from the live bird are given in Table 1.

On 23 June 1980, a road-killed frogmouth was recovered (by G.P.C.) from the Pacific Highway at Halfway Creek, 30 km south of Grafton. This specimen was also tentatively identified as a Marbled Frogmouth (by G.P.C.) because of its unusual dark chestnut colouration, a prominent white eyebrow, triangular white blotches on the wing coverts and its small size. However some plumage characters did not agree with those of the Marbled Frogmouth and the head and wing of the specimen were submitted to The Australian Museum for determination. Subsequently W. E. Boles and N. W. Longmore identified the bird as a rufous phase Tawny Frogmouth (pers. comm. to G.P.C.). As full a description as could be obtained from the remains is presented in Table 1.

Forest in the Halfway Creek area is principally dry sclerophyll with some swamp sclero-

phyll associations in low lying areas and wet gully formations resembling gallery rainforest along major creeks.

Another chestnut coloured Tawny Frogmouth was found ill in Grafton (and reported to G.P.C.) on 16 July 1980. This bird was lighter in overall colouration than the bird found near Halfway Creek in June. Details of its plumage and wing measurement are given in Table 1. Yet another chestnut coloured Tawny Frogmouth was recovered from Halfway Creek (by G.P.C.) on 10 September 1980, again road-killed. This bird was similar in plumage to the first specimen from this locality and details are given in Table 1.

On 19 April 1981, a small, brown coloured Frogmouth was observed (by D.R.M.) roosting 5 m above the ground on a stump in Brush Box *Tristania conferta* forest on the upper slopes of Mount Nardi, 10 km north-east of Nimbin. This forest has a well-developed Coachwood *Ceratopetalum apetalum* understorey and is surrounded by extensive tracts of subtropical rainforest. The bird had a white eyebrow, white blotches on the wing coverts and light orange eyes, but other plumage characters enabled it to be identified as a Tawny Frogmouth. Details are given in Table 1.

Discussion

It is apparent that chestnut and brown phase Tawny Frogmouths occur frequently on the north coast of New South Wales and are associated with moist forests. Chestnut phase birds may favour swamp and creekside forest in drier forest types. Because of their relatively small size (wing measurements, see Table 1), it is

TABLE 1

Details of plumage, soft parts, wing measurements and weights of Tawny Frogmouths from the N.S.W. north coast.

Locality and date	Overall colouration	Eye colour	Markings on wing coverts	Eyebrow	Throat and upper breast markings	Tail	Wing length (mm)	Weight (gm)
Terania Creek 23.3.80	Rich brown	Light orange	Diamond-shaped white blotches	Indistinct, off-white	White, densely peppered with brown and finely streaked black	Short, ungraduated	275	415
Halfway Creek 23.6.80	Dark chestnut		Triangular white blotches	Prominent, white but narrow	Off-white with brown peppering, prominently streaked black		258	
Grafton 16.7.80	Light chestnut		Diamond-shaped white blotches	White, as above	White with brown peppering, streaked black		271	
Halfway Creek 10.9.80	Dark chestnut		Small triangular white blotches	White, as above	As above		281	
Mount Nardi 19.4.81	Brown	Light orange	Small rectangular white blotches	Prominent, pale fawn but narrow	White with brown peppering, finely streaked dark brown	Short, ungraduated		

also possible that the chestnut birds described above are females and their darker colouration may be a local variation of the rufous or red plumage frequently exhibited by females (Schodde and Mason 1981).

The common grey phase of the Tawny Frogmouth also occurs in the same habitats as both chestnut and brown phase birds on the New South Wales north coast (G.P.C., D.R.M. pers. obs.) and because of the marked differences between these phases, chestnut and brown birds may be mis-identified in the field as Marbled Frogmouths. Confusion is also likely because the Marbled Frogmouth is poorly known in New South Wales and field characters given as diagnostic in a number of publications are unreliable.

From the data in Table 1, it is clear that overall brown or chestnut colouration, orange-yellow or light orange eyes, whitish eyebrow, white blotches on the wing coverts and relatively small size are unacceptable diagnostic field characters of the Marbled Frogmouth (see Pizzey 1980; Roberts and Ingram 1978 and Slater 1970) because these may all be exhibited by the Tawny

Frogmouth. Habitat is also unreliable in separating the two species because the Tawny Frogmouth is common in rainforests on the north coast of New South Wales (D.R.M., G.P.C. pers. obs.). Holmes (1981) and Roberts and Ingram (1978) have drawn attention to the distinctive call notes of the Marbled Frogmouth and while these are diagnostic, they may not always be heard. We consider the relatively long, graduated tail (Holmes 1981), beautifully patterned, somewhat moth-like plumage (McGill 1978), absence of streaks (dark centre shafts of feathers) on the throat and upper breast and buff and black banded tufts of plumes over the bill (see Pizzey 1980, although plumes are black and buff banded, not black and white banded) are the most reliable field characters of the Marbled Frogmouth (from experience with the bird in Terania Creek Basin, D.R.M. in prep.). In comparison the Tawny Frogmouth has a relatively short, ungraduated tail, well streaked plumage including the throat and breast and the dark plumes over the bill unbanded although tipped paler.

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D. R. Milledge,
C/- P.O. Rosebank via Lismore, N.S.W., 2480.

G. P. Clancy,
79 Breimba Street. Grafton. N.S.W., 2461.

Successful Rearing of Young of the Spotted Harrier in an Artificial Nest

JAROSLAV KLAPSTE and PETER KLAPSTE

There are nine or ten species of harrier *Circus* in the world, depending on the taxonomic opinion. Except for the Spotted Harrier *C. assimilis* of Australia, Sulawesi and the Lesser Sunda Islands, all are ground-nesting hawks. The Spotted Harrier is the only one to nest regularly in a tree. This note describes how the nest of a Spotted Harrier was destroyed accidentally by man and how the two young birds were reared successfully by their parents in an artificial nest.

Near Underbool (35°10'S., 141°50'E.) in north-western Victoria, a nest of the Spotted Harrier was under observation between June and August 1979. The nesting tree was in a row of trees, between a farm road and a field of crops. The nest was on a sloping branch of a Slender Cypress-Pine *Callitris preissii*, 5.5 metres above the ground and 2.5 metres below the top of the tree. It was a rather flat platform built of sticks and twigs, enclosing only a shallow depression lined with small, narrow green leaves.

The dimensions of the nest in centimetres were: diameter 56, inside diameter 22, outside depth 18, inside depth 6. During the breeding season we visited the nest seven times to gather information for the RAOU Nest Record Scheme (Table 1). On our fifth visit the branch, which was rotten inside, broke and fell to the ground, together with the observer and the nest.

The nest contained three young and an infertile egg. P.K. took some photographs a few