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Colour variations in Broad-tailed Grassbird *Schoenicola platyurus*

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The Broad-tailed Grassbird *Schoenicola platyurus* is endemic to the Western Ghats of India and is categorised as Vulnerable under the IUCN Red List of Threatened Species (BirdLife International 2018). Although some details about its plumage are available (Ali & Ripley 1997; Rasmussen & Anderton 2012), a fuller description of the plumage of the female is missing. Some works (Ali & Ripley 1997) even consider the species to be sexually monomorphic. Here, we give a detailed description of the plumage of the sexes, establishing their sexual dimorphism, and also present some aspects of the fledgling's plumage, including references to past literature wherever relevant.

From 2016 till date, we have been observing the breeding activity of Broad-tailed Grassbirds around Belgaum, Karnataka (Sant *et al.* 2018). During these three years we have photographed 64 adult males, 31 adult females, and 11 juveniles. All our observations were made during the breeding season, from June

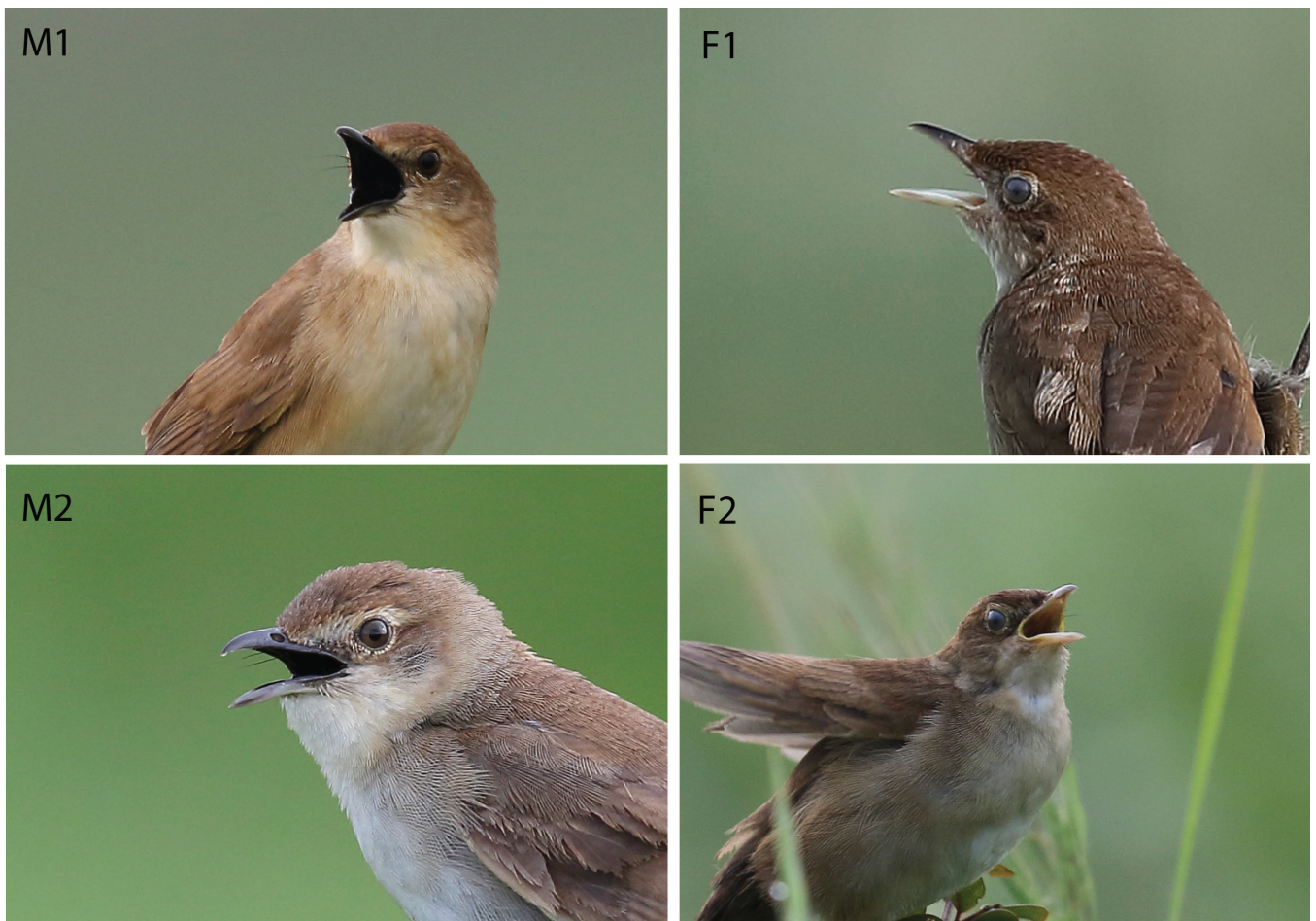
till December. Sites with Broad-tailed Grassbirds were visited, at least, on five days in a week, in an attempt to document the unfolding events through images. The field visits were mostly between 0600hrs to 0930hrs, and a few times from 1600hrs to 1900hrs. We tried to photograph all the displaying males, nesting pairs, and wherever possible fledglings. No nests were disturbed during this study. While processing the raw images, we did not alter any setting, retaining the colour balance as shot, to prevent any colour shift from the original image. Only the cropping tool was used to crop images.

Plumage differences between sexes

Collage [209] demonstrates the difference in the plumage tones between male and female Broad-tailed Grassbirds, during their breeding season. Six different males (=M1–M6), and six different



209. Females are consistently darker than males in plumage with a rufous wash on their flanks.



210. Insides of the mouths are black in males and reddish-yellow in females.

females (=F1–F6) are shown in this collage. As evident, females were consistently darker in their upper parts, than the males. Females had a rufous wash on their flanks, which was missing in the males. This difference is consistent in all our photographs, and is a characteristic that had not been documented earlier.

Colours of the soft parts

It is well documented that breeding males of the Broad-tailed

Grassbird have black bills, while those of the females are pale in colour (Rasmussen & Anderton 2012). This is consistent in all our photos [211]. Additionally, M1 and M2 show that their mouths are black inside, while females have reddish-yellow mouths [210]. During September, in closely monitored nests, we observed that the colour of the bills, and that inside the mouths of some males had begun to fade [XX5], indicating that they might have all dark bills only while they are breeding.

M1



F1



M2



F2



M3



F3





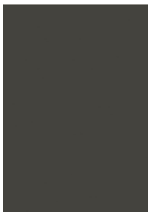
All: Miranjan Sant

212. Males have red tarsi; females, flesh-coloured.

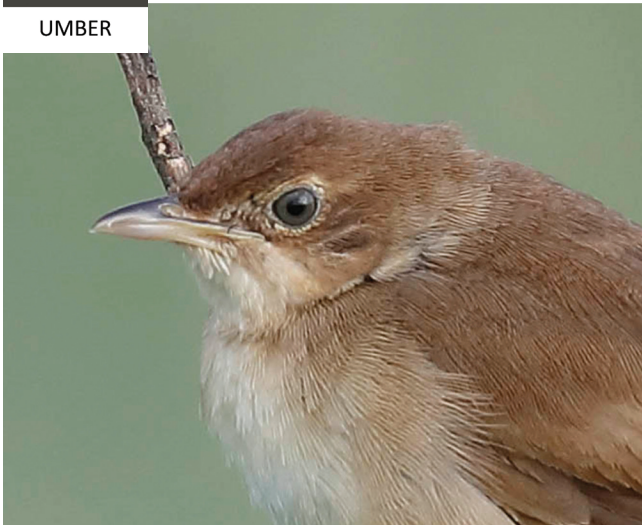


213. Bill colour and insides of the mouth of males fade in September (R), compared to May (L).

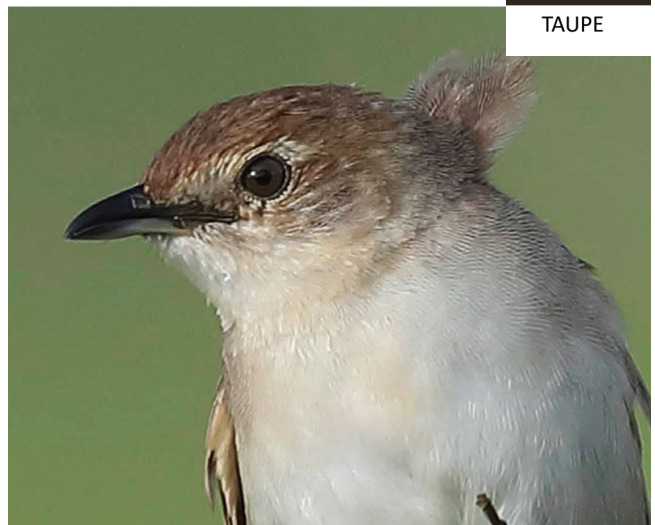
Shades of brown									
Amber	Auburn	Beaver	Beige	Bistre	Bole	Bronze	Brown	Buff	Burgundy
Burnt sienna	Burnt umber	Camel	Chamoisee	Chestnut	Chocolate	Citrine	Coffee	Copper	Cordovan
Coyote	Desert sand	Earth yellow	Ecru	Fallow	Fawn	Field drab	Fulvous	Isabelline	Khaki
Lion	Liver	Mahogany	Maroon	Ochre	Raw umber	Redwood	Rufous	Russet	Rust
Sand	Sandy brown	Seal brown	Sepia	Sienna	Sinopia	Tan	Taupe	Tawny	Umber
Wenge	Wheat						✓		✓



UMBER



TAUPE



Photo

214. Iris colour is taupe in males (R) and umber in females (L). Illustrated with a colour shadecard prepared using Adobe Photoshop.

215. Colour of eyes of fledgling Grassbirds



Photo 216. Tail moulting from one side

Table 1. Differences between the sexes of Broad-tailed Grassbird

Characteristic	Male	Female	References
Bill	Black	Pale	Rasmussen & Anderton (2012)
Mouth	Black	Reddish yellow	
Feet	Red	Flesh	Oates (1889)
Upper body	Dull brown	Darker brown	
Under parts	Whitish	Rufous washed white	
Iris	Taupe	Umber	

[212] illustrates the differences in the colour of the tarsi: red in males, and flesh-coloured in females. [213] demonstrates the differences in colour of the iris: Taupe in males, and umber in females (214 illustrates these shades of brown).

We also observed similar colour differences in the eyes of fledglings [215], where some fledglings showed taupe eyes, and others umber. It is not possible to confirm the sex without actually watching a marked fledgling grow into adulthood, and into the next breeding period.

Moult of tails

We observed a few male grassbirds [216] that were moulting tails during September. During the moult, the birds always dropped all the tail feathers, either on the left, or right side of the central tail feather. In two closely observed males, they took seven days and eight days to lose the central tail feather. It took approximately three weeks for the new tail feathers to grow to full length. Even during the tail-less phase, males were seen calling, and indulging in aerial displays.

Discussion

Table 1 lists all the differences of plumage and soft parts, between male and female birds that we noted, with additional references mentioned in earlier works, which seem to have recorded colours

of only the bill and legs. It is possible that most of the museum specimens are of breeding males, which are easily seen. Though Capt. Butler mentioned that he shot a female bird near the nest, he did not describe it (Butler 1899). We noted that female grassbirds are elusive, even during breeding; hence the paucity of their plumage description in literature. Ramesh *et al.* (2011), have also reported similar plumage differences between male and female birds. Even today, a description of the female's non-breeding plumage is lacking, and it would be interesting to study that too.

Rasmussen & Anderton (2012) allude to the possibility that the northern population of the Broad-tailed Grassbird is paler than its southern counterparts; they recommend further research. Such research, we feel, would benefit from the male-female plumage variations that we've described above.

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In Memoriam

Bishwarup Brahmabrata Raha

(19 August 1956 – 03 December 2018)