

Notes on the natural history of the Chestnut-capped Babbler *Timalia pileata* in southern West Bengal

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Introduction

The Chestnut-capped Babbler *Timalia pileata* is a skulking small babbler that inhabits tall grass, reed-beds, and scrub in low-lying wet areas of the Terai region in northern India, foothills of north-eastern India, and with residual populations in similar habitats in southern West Bengal and Bhitarkanika mangroves of north-eastern Odisha (Ali & Ripley 2001: 187; Rasmussen & Anderton 2012: 441; Praveen 2025: 291). It stays in small groups of six to eight individuals, remaining well hidden among the grass stems, feeding on insects off the leaves and twigs and clambering up and threading its way through the tangles of grass, seldom exposing itself (Ali & Ripley 2001: 188; Collar & Robson 2020). Sexes are similar (Ali & Ripley 2001; Collar & Robson 2020), but the male is much larger than the female (Rasmussen & Anderton 2012: 441). During the breeding season they form pairs, when males

emerge briefly out of the grass stems, while singing (Grewal et al. 2016: 491). Though historically known from southern West Bengal (Hume 1889: 91; Ali & Ripley 2001: 188), recent records from this part of the country have been mostly from two regions; the Sundarbans and the region around Kalbansh village beside the Damodar River (eBird 2025). Their nests are described as an oval or dome shaped ball, or sometimes a deep cup, with a large side entrance, made of dry coarse grass, straw, dry bamboo, or other leaves and rootlets, placed up to one meter above ground, low down in a bush or sapling. The nest is usually surrounded by long grass, is on spikes protruding from grass nodes, or on ground sheltered by bush or grass tussock (Collar & Robson 2020). However, not much has been written about the bird's nesting habits since the colonial era (Hume 1889: 90; Stuart Baker 1932: 132) and hence, we provide our observation notes from our study.

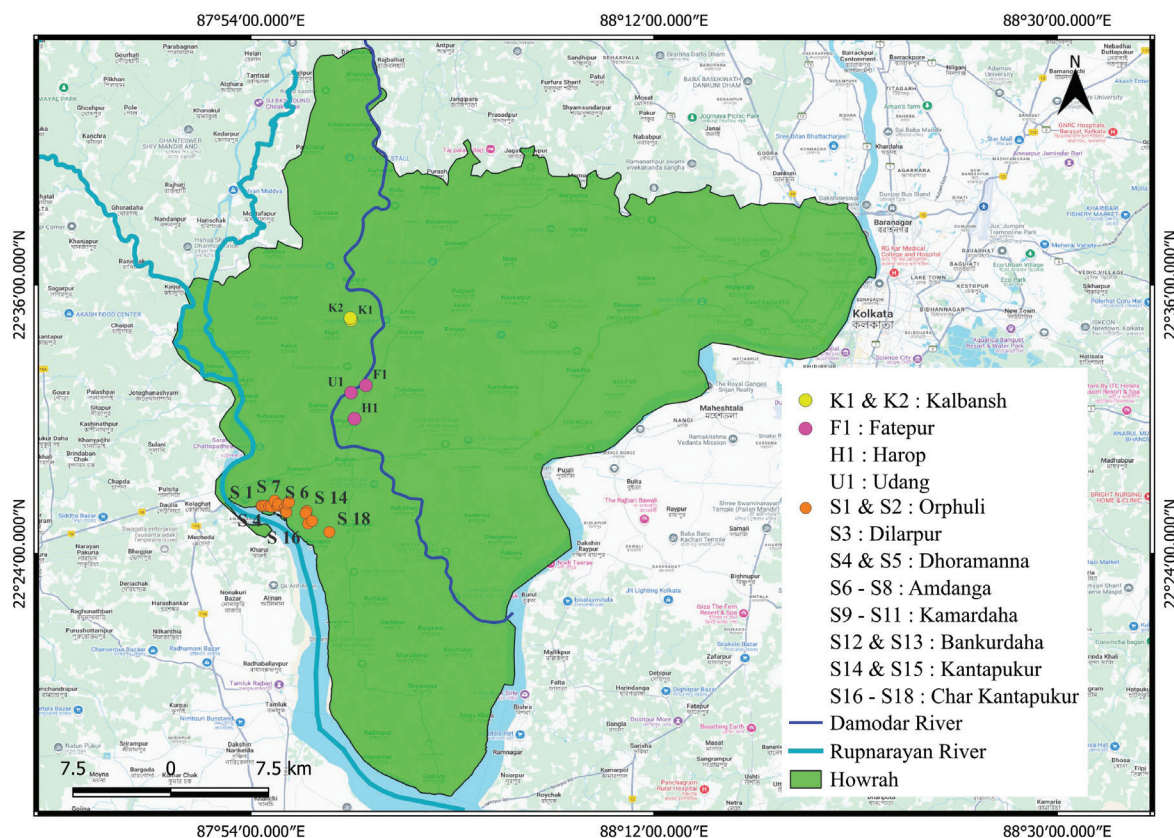


Fig. 1. Map of Howrah District showing our study area where Chestnut-capped Babblers occur.

Study area

From December 2022 to March 2025, we observed the Chestnut-capped Babbler *Timalia pileata* in the grasslands of two adjoining rivers, the Rupnarayan and the Damodar in Howrah District of southern West Bengal (22.570°–22.630°N, 88.210°–88.310°E). These sites consist of 18 riverine grassland patches of *Saccharum spontaneum* (locally called 'Kash') along the Rupnarayan, spread near seven villages, and five grassland patches of *S. fenestratum* (locally called 'Khorī') along the Damodar, spread near three villages (Fig. 1). None of these areas are formally protected. All these grassland patches are similarly thick or dense and extended for 100–700 m from the bank of either of these rivers. However, the *S. spontaneum* grassland patches were more extensive along the bank of the wider Rupnarayan (200–700 m) than the *S. fenestratum* grassland patches along the bank of the narrower Damodar (100–200 m). The height of both grass species increased from two meters to five meters after the monsoons, when they flowered, producing fluffy balls at the tip of the stems.

Methodology

Between December 2022 to March 2025, we visited these sites twice every week during the breeding season from February to May, once every month from June to September during the monsoons, and twice every month from October to January during the winter – amounting a total of 102 field visits. Apart from the two of us, we were sometimes accompanied by wildlife photographers and bird enthusiasts from Kolkata, who were keen

to see and photograph this species and thus helped us in photo documentation. We generally spent about four hours (0530–0930 h) in the morning and two hours (1630–1830 h) in the evening at these sites, during both breeding and non-breeding seasons. While observing the birds and recording their calls (with a Zoom H1 Essential digital sound recorder), we always remained at least 20m away from them so as not to disturb them and hamper our own observations (Barve et al. 2020).

Results

In all we found 23 sites in our study region where Chestnut-capped Babblers occur: 18 along the Rupnarayan River and five along the Damodar River (Fig. 1 & 2). At all the large grassland patches in these sites the species was present during the full duration of our study.

Sexual dimorphism

Although all field-guides mention that there is no sexual dimorphism, we noted a difference in the iris colour of birds. Based on their behaviour, we think that the birds with a red iris are the males [41, 42] while the birds with a black iris are the females [43]. Our preliminary conclusion results from our observations that only individuals with red iris vocalize and emerge more out of the grass clumps during the breeding season (February to May). This behaviour of red-iris birds was consistent and we observed it in over 70 occasions (~140 individuals) in our study area. Our observations and photographs taken by different bird

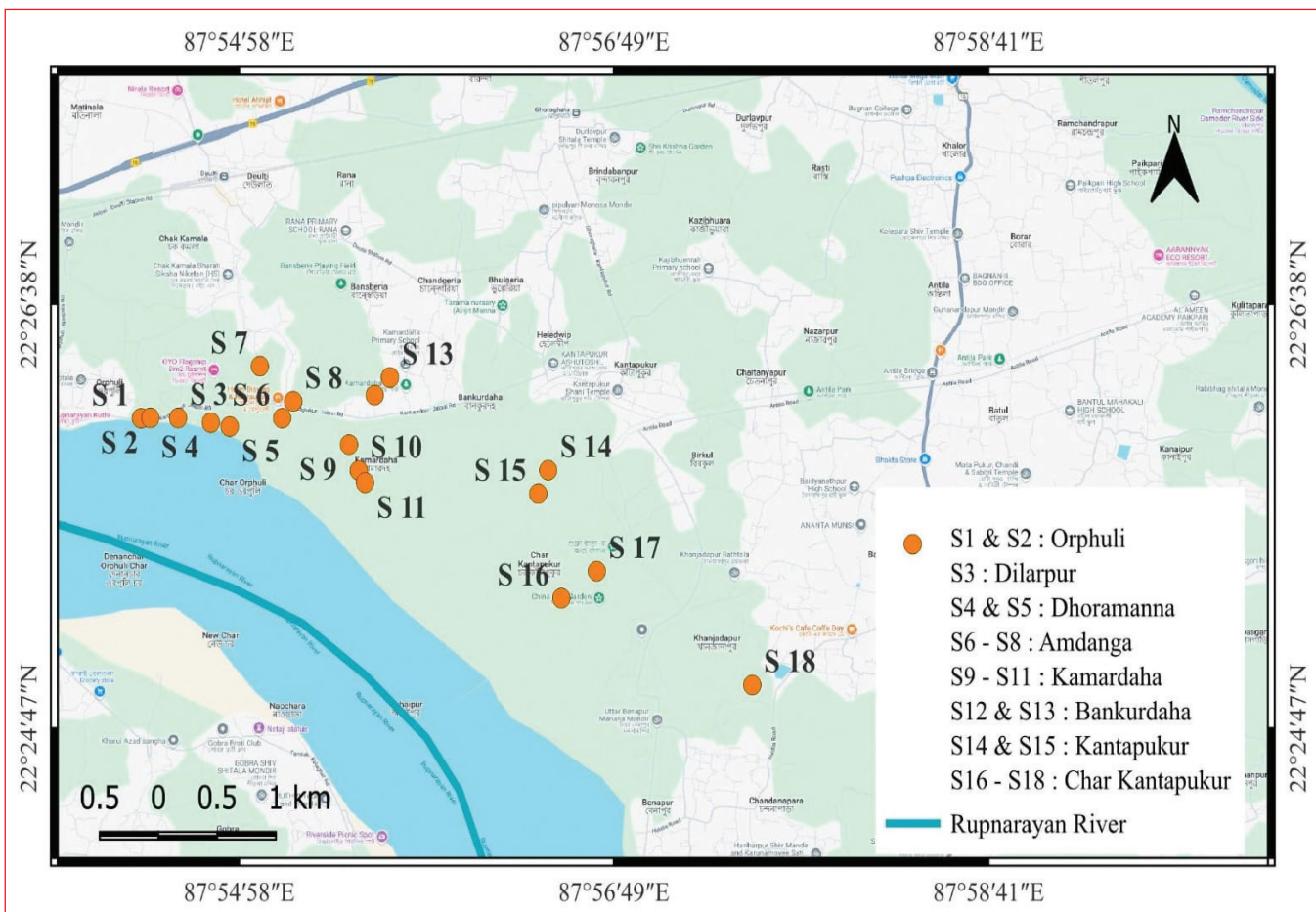


Fig. 2. Detailed map of occurrence sites of the Chestnut-capped Babbler along the Rupnarayan River

photographers, throughout the year [41, 42], suggest that the eye colour in this species is not a seasonal variation. The colour of the iris has been variously described as 'dark red' (Oates 1889: 132), 'deep bright red' (Stuart Baker 1922: 226), or 'reddish-brown' (Ali & Ripley 2001: 188). It would not be surprising that such an important morphological difference was missed by previous ornithologists; most studies on morphology happened in the museums where the eyes have not been preserved. Such differences in colour of iris have been missed previously as well (see Sant et al. 2019).



Bubay Dolui

41. Chestnut-capped Babbler, presumably the male, during its breeding season, with red iris on 02 February 2025 at Char Kantapukur Site of Rupnarayan River grasslands.



Samar Jana

42. Chestnut-capped Babbler, presumably the male, during its non-breeding season, with red iris, calling on 10 September 2024 at Dilarpur Site of Rupnarayan River grasslands.



Sumit Kayal

43. Chestnut-capped Babbler, presumably the female, with black iris on 06 April 2025 at Fatepur Site of Damodar River grasslands.

Activity Pattern

Chestnut-capped Babblers emerged out of the grass occasionally between 0600 and 0800 h in the morning and again briefly between 1700 and 1730 h during the winter season (October to January). During the breeding and monsoon season, this changes slightly to 0530–0730 h and again briefly at dusk 1630–1830 h. This is not surprising as some other grassland birds, that co-habit in the same grassland patches, like the Striated Babbler *Argya earlei*, Yellow-bellied Prinia *Prinia flaviventris*, Red Munia *Amandava amandava*, and Tricoloured Munia *Lonchura malacca*, also were noted to have a similar activity pattern.

Food

We observed Chestnut-capped Babblers feeding on Noctuid and other moths [44], grasshoppers, and leaf bugs which they found easily while clambering up and down the grass stems in their habitat; not much different from what has already been documented (Collar & Robson 2020).



Supriyo Samanta

44. Chestnut-capped Babbler feeding on a Noctuid moth on 12 March 2023 at Orphuli Site of Rupnarayan River grasslands.

Vocalizations

The species was observed to emit at least three types of calls: alarm call (Fig. 3), territorial call (Fig. 4), and breeding or courtship call (Fig. 5). We recorded all of these at the Fatepur Site and analyzed by ourselves at the laboratory. The breeding call was only heard from February to May, while alarm and territorial calls were heard throughout the year. We also reviewed the Cornell Lab's Macaulay Library (www.macaulaylibrary.org) and found that of its holdings of 216 recordings of this species, the recordists have specifically assigned 36 as calls, and 31 as songs. Of these, 78 recordings were from India (13 calls, 8 songs) and 24 from West Bengal. Similarly, in Xeno Canto (<https://xeno-canto.org/>), we found a total of 148 recordings (19 call and subsongs, 5 duets, 48 songs, and 4 alarm calls) of which 14 are from India and only one from West Bengal. Clearly, there are more variations in their vocalization than the three we recorded.

Breeding

Although all 23 sites are foraging grounds of this species, evidence for their breeding and nesting was observed only at Orphuli, Kamardaha, and Char Kantapukur sites on the north-eastern bank of the Rupnarayan River and Kalbansh site on the western bank of the Damodar River. From February to May, the

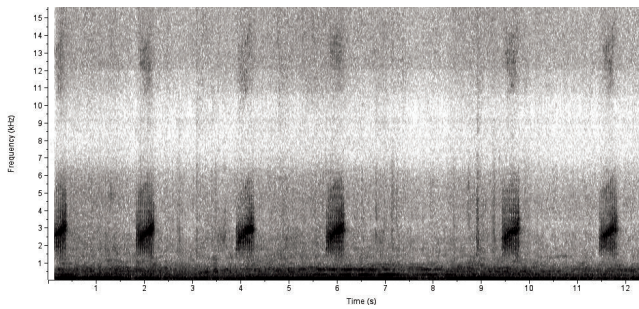


Fig. 3. Alarm call of the Chestnut-capped Babbler. Sonogram: Sekhar Pramanik

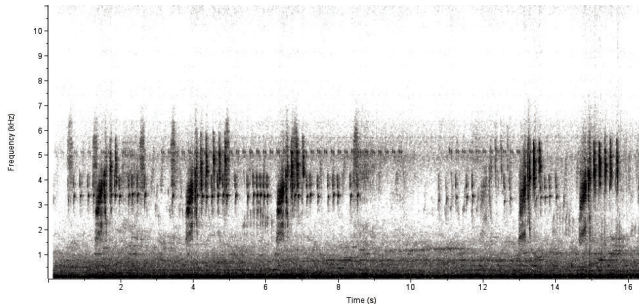


Fig. 4. Territorial call of the Chestnut-capped Babbler. Sonogram: Sekhar Pramanik.

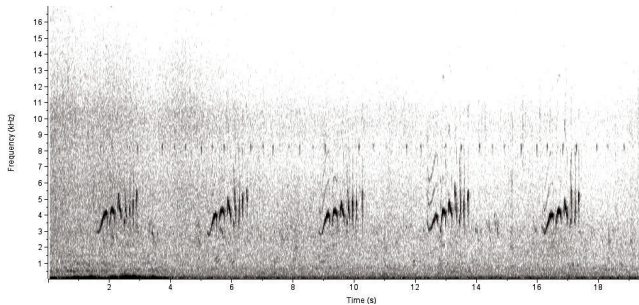


Fig 5: Breeding song of the Chestnut-capped Babbler. Sonogram: Sekhar Pramanik.

red-eyed individuals were found to emit breeding / courtship song and were seen occasionally displaying their full body while perching on the top of the grass stems for a few seconds. The pairs invariably comprised a red-eyed and a black-eyed bird, however no copulation could be observed.

During February and April 2024, we came across two nests that were being constructed at Orphuli and Kamardaha sites near the Rupnarayan River and in both cases, the nests were well-hidden among thick tall grass, which we did not wish to sift through to photograph as that would lead to disturbing the nesting birds and forcing them to abandoning their nests. J. R. Cripps mentioned that a nest found on 01 April 1878 in eastern Bengal (probably now in Bangladesh) was deserted by the pair after being disturbed (Hume 1889: 91–92). On four other occasions, nests were deserted after being disturbed (Hume 1889:92).

Both the nests were entirely made up of grass leaves intertwined with dry mud and clay. Although these low-lying grasslands get inundated, one of the nests at Kamardaha constructed in April 2024, was only 44 cm above the ground, and measured about 20 x 14 cm. At Orphuli, the first nest construction started during the first week of February 2024 and was completed within one month. This 18 x 10 cm nest was pear-shaped. It was attached to grass at 31 cm above the ground. Unfortunately, just after their completion, both

nests were burnt during grass burning by villagers [45]. All our measurements were taken after the nests got burnt and the birds have abandoned the nests.

Eugene Oates found two nests in Burma (=Myanmar) on 02 June and 04 July and concluded that the breeding season in Myanmar was June–July (Hume 1889: 90). However, after finding nests in April, he thought that this species is perhaps double-brooded and laid about three eggs in each clutch (*ibid.*). Hume also quoted J. C. Parker, who found a nest from Salt Lakes (Kolkata) on 14 August 1875, along with that of the Yellow-bellied Prinia (Hume 1889: 91). However, at our site, the breeding season seems to be much earlier than April. The nest that Oates found was made of bamboo leaves and lined sparingly with fine grass. It was oval, 18 x 10 cm (similar to ours), with a large entrance at the side, its lower edge being about the middle of the nest. The nest was placed on the fork of a thick thorny shrub, very near to the ground and surrounded on all sides by tall grass. The nest found by Parker was placed on spikes growing from the joints of a species of grass very thick and stiff which was 15 x 10 cm. The egg cavity was 5 cm and the entrance hole 3.5 cm. The nest was situated 90 cm above the ground (higher than ours) and was loosely put together with dead leaves of tiger-grass twisted round and round and lined with coarse grass.

Threats

Though riverine grasslands in India are facing several threats, the main local threat for this species was the cutting and burning of grass stems [46] for clearing land for hibiscus *Hibiscus rosasinensis* and marigold *Tagetes erecta* floriculture [47]. The Rupnarayan grasslands, in fact, are on a natural riverbed that was exposed when the river changed course; they still get submerged during high tides. Hence, long-term cultivation is not possible in these grasslands. The demand for fresh flowers in Kolkata—for worship in temples, puja pandals, and homes—is so high, that



45. Burnt nest of the Chestnut-capped Babbler at Orphuli.



46. Cutting and burning of grasses in Chestnut-capped Babbler habitat for flower cultivation.



47. Marigold flower cultivation after grass burning at the Rupnarayan grasslands.



48. Villagers making garlands with marigold flowers cultivated at the Rupnarayan grasslands.

ALL: Kaushik Deuti

villagers of these seven villages adjoining the Rupnarayan River have cleared riverine grasslands for the lucrative floriculture industry. This is turning out to be the primary means of livelihood for these villages [48]. The demand for flowers is such that villagers now even hire machinery (e. g., JCB) to clear grasslands instead of the traditional, slower physical scything. The development of transportation infrastructure, both road and rail, allows rapid movement of the crop to markets, and has added to the increase in the destruction of these grasslands. Hence, the plight of all grassland obligate species, like the Chestnut-capped Babbler, is imperiled and they may only survive in the protected area networks like the Sundarbans.

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