## The Brown Bush-Warbler *Locustella luteoventris* in Govind Pashu Vihar Wildlife Sanctuary, Uttarakhand: An addition to the avifauna of the Western Himalayas

The Brown Bush-Warbler *Locustella luteoventris* is considered a resident in the Eastern Himalayas and the north-eastern hills, from Darjeeling, north-western Bengal, to Arunachal Pradesh, and in the southern Assam hills, occurring in grassy or scrubby hillsides at various elevations (Rasmussen & Anderton 2012; Grimmett et al. 2011). Kennerly & Pearson (2010) described it as a skulking bird that breeds in tall grass from the Eastern Himalayas, the north-eastern Indian hills to Eastern China.

In general, bush-warblers in the genera *Locustella* and *Bradypterus* are known to be cryptically coloured, and challenging to identify; except by song. Little is known, therefore, about their migration patterns between wintering and breeding ranges (Kennerley & Pearson 2010). Here we provide the first record of this species for the Western Himalayas.

In the first week of June 2010, while on a birding trail in the Tons River Valley in the Govind Pashu Vihar Wildlife Sanctuary (Uttarakhand; henceforth, GPVWL), YH had a brief sighting of a skulking bird with an insect-like call. YH was quite certain that the bird in question was not a West Himalayan Bush-Warbler L. kasmirensis and surmised that it was either a Long-billed Bush-Warbler L. major or a Brown Bush-Warbler. The bird was, however, not definitively identified, and no photographs were taken at the time. With this observation in mind, when AM and SK visited GPVWL on 16 June 2018, they heard a distinctive insect-like reeling 'tik-tik-tik...' song, emanating from grassy slopes of the same valley (of YH's bird) at c.2,900 m asl; 31.12°N, 78.36°E). They identified it as that of the Brown Bush-Warbler. Altogether five birds were heard in an area that they covered on a, roughly, one-and-a-half kilometer trail. Three of these birds were observed through binoculars, and their songs and pictures recorded. Two birds were heard calling 20 m apart from one another, in cultivated wheat grass [19b]. A third bird was heard calling from some distance up the slope. Finally, another pair was observed in a patch of wild shrubbery, roughly one kilometer from where the first two birds were seen [19a]. Although there was no conclusive evidence of the birds breeding at that location, the fact that they were in pairs suggests that they might use these grassy slopes for the purpose.



**19** (a) The Brown Bush-Warbler in wild shrubbery. (b) A different individual which sang from inside a cultivated wheat grass patch.

The field characteristics of the three birds that were observed were very similar, all in adult-like plumage: uniformly brown upperparts, paler rusty-brown flanks, unbarred undertail coverts, whitish unmarked throat and belly, pale whitish eye-ring, faint rusty-brown breast patch, pink-orange legs, and a pale yellowish lower mandible. The songs of all these birds were identical. A representative spectrogram of the recording made using an Olympus LS-12 recorder is shown in Fig. 1. The time interval between two 'tiks' was 0.10 sec (Bioacoustics Research Program 2014). In the literature, recordings of the reeling 'tik-tik-tik...' song of the Brown Bush-Warbler are only available from Arunachal Pradesh (West Kameng), Nagaland, Myanmar, and China, from April to June (Alström 1990; Athanas 2006; Campbell 2016; Cox 2018; Cox 2019; Irving 2013; Kennerly 2019; Kirwan 2016; Kirwan 2017; Lambert 2012; Lambert 2013; Lambert 2014; Lambert 2016; Liao 2018; Munshi 2018; Nelson 2015; Robson undated; Singal 2016; eBird 2019; Xeno-Canto 2019). The altitude of these recordings ranges from 950 m to 3,000 m asl. As per our analysis, the time interval between two 'tiks' in these songs (recordings) was in the range 0.09-0.14 sec. No discernible correlation seems to be present between this time interval and the geographical location, altitude, or season of these recordings. The frequency range of the song is 2-8 kHz in most of the recordings. The maximum frequency of these 'tiks' rises to 14 kHz in some recordings.

From the Eastern Himalayas, westernmost records of this bird are from Sikkim and the adjoining hills of West Bengal (SACON 2004; Birdwatchers' Society of Bengal 1994; Dutta 2016; eBird 2019; Lachungpa 2014; Tempo 2014; Warren 1990). There have been no earlier reliable records of this bird from west of these hills. One record by Inskipp & Inskipp (1985), from Sukla Phanta in the western-most part of Nepal, is found in extant literature. This record was however treated unacceptable later (Inskipp & Inskipp 1991), and the Brown Bush-Warbler is, consequently, not included in the checklists of Nepal (Grimmett et. al. 2016; Department of National Parks and Wildlife Conservation and Bird Conservation Nepal., Kathmandu, Nepal. 2018). Even west of Nepal, the checklist of birds of the state of Uttarakhand lists this bird as a doubtful record (Mohan & Sondhi 2015; Sondhi, S. pers. comm. 2019). The Director: Zoological Survey of India (2010) (henceforth, ZSI) cited Osmaston (1921), and Myers & Singh (2006) when referring to the distribution of this bird. Osmaston (1921), however, did not include any mention of the Brown Bush-Warbler, and Myers & Singh (2006), referred to a doubtful 1990 record by S. Sondhi (Sondhi, S., pers. comm. 2019).



Fig. 1. A representative spectrogram of the song of one of the observed individuals.

This, our first record of the Brown Bush-Warbler from Uttarakhand is a very important one considering its geographical location in the Great Himalayan range. This location, which is more than 1,000 km westards of regions from where there have been confirmed records of this bird, is well outside its traditionally known distribution range. The large geographical separation, and the absence of noticeable differences in plumage and vocal characteristics between the individuals, reported here, and those that have been reported in the literature from Eastern Himalayas, north-eastern India and East Asia can mean two things. One, that our observations point at an extension of the previously known distribution range of the same species in the east and that this species has been previously overlooked in the Western Himalayas, or that we possibly have a case of cryptic speciation where the observed specimens are genetically separable from the eastern specimens. DNA studies will therefore be necessary to confirm the taxanomic status of the specimens observed in the Western Himalayas. Our record also motivates further field work that can shed more light on the seasonal movements of this species, its breeding range, and to ascertain whether these birds breed in the surveyed location.

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