



Voice mimicry exhibited by Grey-sided Laughingthrush *Garrulax caerulatus* (Hodgson, 1836) in Phulchoki Mountain, an important bird area, central Nepal

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Introduction

There are 15 species of birds in Nepal known as laughingthrush (Grimmett *et al.*, 2016; BCN and DNPWC, 2018). Most laughingthrushes are concentrated in the midhills habitat, but few species such as Variegated Laughingthrush *Trochalopteron variegata* is known to reach high altitude and has been recorded upto 4600m (Inskipp *et al.*, 2016). Two species of necklaced laughingthrushes *Garrulax monileger* and *G. pectoralis* and Rufous-necked Laughingthrush *G. ruficollis* are the only laughingthrushes that are confined to the lower foothills (Grimmett *et al.*, 2016). In Nepal, therefore, midhills can be considered as the area with the highest diversity of laughingthrushes. As many as 12 species are found centred around the midhills with various level of abundance depending on east-west distribution limitations and altitude.

Ecology of many Himalayan birds is very little studied (Inskipp and Inskipp, 1991). In this regard, mid-hills dwelling Grey-sided Laughingthrush is not an exception. Since it was first described to science by Brian Hodgson (Hodgson, 1836) and its description on Fauna of British India (Baker, 1922), there are only a handful of papers published about its behavior and ecology. According to BirdLife International (2020), although the species' population is showing downtrend, the decline is not considered to keep this species under any threat category. Therefore, it is currently listed under Least

Concern category. Some observations of its behavior that are hitherto unknown to ecologists are noted in Phulchoki mountain, an important bird and biodiversity area (IBA) and are described in the following paragraphs.

Observation

During my regular birdwatching trips to Phulchoki, I observed Grey-sided Laughingthrush *Garrulax caerulatus* mimicking voices of Crested Serpent Eagle *Spilornis cheela*, Spotted Owlet *Athene brama* and Indian Cuckoo *Cuculus micropterus* on different occasions. I describe the voice mimicry behavior for three separate dates during my visit to Phulchoki.

On 21 October 2009, at the base of Phulchoki mountain, by the Godavari ravines, I located two Grey-sided Laughingthrushes at 1800m asl about 1500 hrs. I was mimicking Collared Owlet *Glaucidium brodei* call when I saw and heard a pair of Grey-sided Laughingthrush produce thrush (*Turdus* spp., *Monticola* spp.) like melodious voice. It continued to produce several other bird species sounds that would be normally found at this altitude, unfortunately during my excitement I did not take note of what all of them really represented. However, I noted that one of the voices produced was well known and distinct calls of Indian Cuckoo *Cuculus micropterus* ! 'One more bottle!!'

On another occasion 4 November 2009, I noted six Grey-sided Laughingthrushes in a flock. These were located in dense thickets above Godavari ravines approximately 1850m asl in the afternoon. Here too, I had been imitating Collared Owlet *Glaucidium radiatum* call trying to find new bird for the day in Phulchoki. Suddenly from dense thickets I heard a call that resembled Crested Serpent Eagle *Spilornis cheela*. On close inspection, to my amusement I found that the call was coming from one of the two Grey-sided Laughingthrushes perched on a horizontal branch.

On another occasion in Phulchoki in 2010, Spotted Owlet sound came from dense thickets but birds were not visible. I assumed that Grey-sided Laughingthrushes were making this sound considering the dense thickets more suitable habitat for Grey-sided Laughingthrush compared to the owlets. After having heard these unusual calls from Grey-sided Laughingthrush I later checked some documented knowledge about the species and its voice.

Discussion

Grey-sided Laughingthrush *Garrulax caerulatus* is a member of the family Leiotrichidae, and its world distribution is east from Taiwan, China, Myanmar, India, Bhutan and west to Nepal (del Hoyo *et al.*, 2007). Nepal marks the western limit for the species' distribution (Ali and Ripley, 1987) and Annapurna Conservation Area is the most westerly locality within Nepal (Inskipp *et al.*, 2016). In Nepal, the species is found in the midhills between 1370 to 2745 m (Grimmett *et al.*, 2016) and inhabits dense, humid, subtropical broadleaf forests (Inskipp *et al.* 2016, Grimmett *et al.*, 2016), particularly oak-rhododendron forests (Fleming *et al.*, 1984). It has been described as a locally distributed resident and breeding has been proved in two places within Kathmandu Valley, Shivapuri and Phulchoki (Baral and Parr 2004, Inskipp *et al.* 2016). In Kathmandu valley, the species is an uncommon resident (Mallalieu, 2008), and at national level it is considered threatened for Nepal (Category: Vulnerable) because of loss and degradation of dense humid forest and bamboo (Inskipp *et al.* 2016). Although the population is suspected to be in decline globally owing to ongoing habitat destruction and fragmentation, the decline is not yet considered enough to warrant the species a threatened category on a global scale (BirdLife International, 2020).

In Phulchoki (27°37'N/85°16'E) and Shivapuri (27°48'N/85°23'E) mountains this species is

known to associate with larger flocks of White-throated Laughingthrush *G. albugularis*, and occasionally with Chestnut-crowned Laughingthrush *G. erythrocephalus* and Rusty-cheeked Scimitar Babbler *Pomatorhinus erythrogeus* (Mallalieu, 2008). Compared to White-throated Laughingthrush, Grey-sided Laughingthrush is found in smaller flocks, normally upto six birds in a flock (Mallalieu, 2008). Both Phulchoki and Shivapuri form part of the network of 37 Important Bird and Biodiversity Areas (IBAs) spread throughout Nepal identified by BirdLife International (BCN and DNPWC in press). While Shivapuri mountain is part of the larger Shivapuri Nagarjun National Park and enjoys formal protection, Phulchoki lies outside the protected area network. The latter, however, is of exceptional value because of the conservation of top quality old growth forests. Phulchoki mountain is the number one midhill forest birding destination of the entire country.

The description of voice and calls by Baker (1922), Ali and Ripley (1987) already indicate possible mimicry by Grey-sided Laughingthrush. For two subspecies of the laughingthrush Baker (1922) states; 'said to have a very fine, almost human whistle which easily be imitated and by which it can be called up' (subspecies *kaurensis*) and 'Many of its notes are very full, soft and pleasant, but others are equally harsh and discordant (subspecies *subcaerulatus*)'. On both description, there is broadness in the characters leading to possible mimicry and less consistent voices. Please note Ali and Ripley (1987) state "Loud musical calls and liquid whistles, some of them rendered by Fleming as *ovik-chorr*, *brain fever* and *new jericho* (do si fa la)". The call 'brain fever' mentioned here is already an indication of voice mimicry of the Large Hawk Cuckoo *Hierococcyx sparveroides* or Common Hawk Cuckoo *H. cuculus*, species recorded in the same habitat/altitude as that of Grey-sided Laughingthrush. Furthermore, Ali and Ripley (1987) write "One of its call-notes is a loud *oh my dear*". This again could be an indication of instant mimicry/copy of some people talking nearby?!

Scott Connop made a collection of two audio cassettes with bird songs of the Himalayas including Nepal (Connop, 1994;1995). He taped recording of Grey-sided Laughingthrush voices. The call sounds like mixed calls and song of various birds including a short strophe of Asian Koel *Eudynamis scolopacea*, the latter half of the song reminds the main portion of Large Hawk Cuckoo *Hierococcyx sparveroides* call. Both the

species can be frequently heard in the Grey-sided Laughingthrush habitat. Further, the species has been noted to be very vocal producing variety of different sounds (Suchit Basnet *verbally* 2020).

As many as 24 songs/calls have been described in Xeno-Canto (2019, <https://www.xeno-canto.org/species/Garrulax-caerulatus>) contributed by various recorders. None of these calls and songs match exactly to one another as one would expect for a normal bird. Recording made by George Wagner in Yunnan, China (XC23930) the last part is reminiscent of a Hawk Cuckoo call (*Hierococcyx* spp).

Del Hoyo *et al.* (2007) have given a large space in their definitive handbook to describe its voice compared to many other laughingthrushes. Although a large variety of voice forms has been described, voice mimicry has not been mentioned even once. Similarly, its voice has been described to have various forms in southeast Asia (Robson, 2008). Some forms having airy and whistles as well as raptor like squealing and rasp, mewing, rising then falling nyaoowl etc. Further it is said to have harsh grating when agitated. Rasmussen and Anderton (2012) spend considerable time in describing the voice of this laughingthrush and voice description appears to be one of the longest for laughingthrush species in their book. They state, 'songs are musical, arresting and strident, usually disjointed, explosive, impatient or jeering, they are given in many often surprising forms'. The authors then continue to describe the various voice forms of this species and of particular interest are: 'a series of raptor-like squeals'; 'first note quickly slurred up and down, middle notes flat and low, last prolonged, strongly upslurred and with a bell-like ending'; 'recalling a call of Rufous-chinned Laughingthrush *Garrulax rufogularis*'; 'mewing'; 'hiccupping'; 'guttural'; 'crowing' and 'strange, thin prolonged squeaky-hinge notes'. There are too many forms described here and basically the summary is –it can be of any forms! Which then leads to possible voice mimicry.

Laughingthrushes are known to be quite vocal also having a wide vocabulary (Del Hoyo *et al.*, 2007). For example, Striated Laughingthrush *Garrulax striatus* and Chestnut-crowned Laughingthrush *G. erythrocephalus* each of them produce at least half a dozen different songs and calls. Most of these calls tend to be in a regular pattern consistent and predictable.

There are indications that other laughingthrushes may also exhibit voice mimicry. In another independent observation, it has been

found that Lesser Necklaced Laughingthrush *Garrulax monileger* once mimicking Red-wattled Lapwing *Vanellus indicus* in April 2000 at Chitwan National Park (Harka Man Gurung and Kapil Prasad Pokharel *verbally* 2013). Further information is lacking on this laughingthrush behavior particular to voice mimicry.

Prior to these observations, mimicry behaviour was not described for any species of laughingthrush. Indication of large variety of voice forms that is not regular, consistent is also an indication of voice mimicry. Based on above observations I conclude that the calls and songs described for far, in most cases, have included some form of voice mimicry of Grey-sided Laughingthrush. Further studies on the behavior and ecology of laughingthrushes including Grey-sided to clarify these facts and their usefulness would be a worthwhile project.

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