

SYMPATRY OF *B. LUDLOWI* AND *B. LIDDERDALII* AND RANGE EXTENSION OF *BHUTANITIS LUDLOWI* IN BHUTAN

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Reviewer:

Abstract

Sympatry of *B. ludlowi* and *B. lidderdalii* in Bhutan and an additional locality for *Bhutanitis ludlowi* in Tashigang District, Eastern Bhutan is reported.

Keywords: *Bhutanitis ludlowi*, *Bhutanitis lidderdalii*, sympatry, Trashigang

Introduction

Bhutanitis ludlowi is a rare butterfly species confined to a few small pockets in Bhutan and India. Recent sightings in Bhutan were at an elevation of 2200 - 3300 m with maximum observations between 2600 - 2700 m. After its original collection in 1933-1934, *B. ludlowi* was rediscovered in 2009 from Bumdeling Wildlife Sanctuary, Trashiyantse, Eastern Bhutan. Over the years, further sightings were reported from different parts of the district leading to the belief that it could probably be found in other parts of Bhutan.

Earlier records of *B. ludlowi* were all from protected areas but the following observation are from outside the protected area system of Bhutan and extend the known range of *B. ludlowi* in the country. Owing to possible threats by unscrupulous collectors in the future, the details of the locations like GPS coordinates and specific area names have not been mentioned in this report.

From 20.viii.2021 in Trashiyangtse, the species was observed at two different locations other than the known locality, Tarpel in Bumdeling Wildlife Sanctuary. On 21.viii.2021, five individuals were observed at the first location at an altitude of 2762 m feeding on *Buddleja* sp. (figures 1 & 2). On the same day, at the base camp at another location

(2600 m), a dead specimen was observed near a government school kitchen.

On 27.viii.2021, one single worn individual was observed flying at Khaling, Tashigang at an elevation of 2700 m at noon (figures 3 & 4). In the next few days, two worn specimens were observed. Photographs were sent and the identity of the species confirmed by Mr. Motoki Saito.

Interestingly, a few fresh specimens of *B. lidderdalii* were also observed and photographed flying in the same place. Several further field visits by both authors were made but there was no evidence of *B. ludlowi* in the area during the month of September. This is the first time in Bhutan where two species of *Bhutanitis* were found to be sympatric. However, the time of activity of the two species has only an overlap of a few days, during the end of the brood for *B. ludlowi* and the beginning of the brood for *B. lidderdalii*. *B. lidderdalii* has been observed to be flying in larger numbers the from latter part of the second week of September, with many individuals observed in flight and some road kills. While the observation of *B. ludlowi* was restricted to one location, *B. lidderdalii* was observed almost throughout the stretch of 30 km of the study area.

The current findings prove that the *B. ludlowi* is found in other areas of Bhutan and that there may be need to conduct more research to ascertain the occurrence in other parts of Bhutan. *B. lidderdalii* has been observed over most of Bhutan above a certain elevation (South, Central, Eastern and Western) and further field surveys may also lead to observing *B. ludlowi* in the same locations as *B. lidderdalii*.

While they do face threats from habitat destruction such as road construction, hydropower development, etc., general observations on negative impacts by human development activities have not been assessed for this species. Development aspirations cannot be ignored but conscious effort for protection of such important habitats is important and Government of Bhutan has ensured protection of such habitats from severe destruction. It is therefore safe to

mention that these species may not face severe threats as they might have in other parts of the world.

It is suggested that Government of Bhutan might encourage plantation of *Aristolochia griffithi* in school yards in the area as well as other areas under private and government supervision, where stable populations of *B. ludlowi*, the national butterfly, could be maintained over the years as an educational and conservation tool.

Reference

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Fig.1: *B. ludlowi*, Phrumsengla National Park (PNP), Ura, Bumthang



Fig.2: *B. ludlowi*, Phrumsengla National Park (PNP), Ura, Bumthang



Fig.3: *B. lidderdalii*, Khaling Gewog



Fig.4: *B. lidderdalii*, Khaling Gewog