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A new record of *Chersonesia intermedia* (Martin, 1895) for Bangladesh

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Abstract

The new butterfly *Chersonesia intermedia* (Martin, 1895) was recorded for the first time from the Moulvibazar district of Bangladesh; Adampur Beet (24 ° 16'46.2"N and 91 ° 54'41.5"E) of the Rajkandi Reserve Forest. During the survey of seasonal changes of butterflies, an individual of *Chersonesia intermedia* was recorded in this reserve forest. The fieldwork was operated from November 2021 to September 2022. This species has been provided with morphological, habitual, and geographical range data.

Keywords: Butterfly, new record, *Chersonesia intermedia*, distribution, Bangladesh

1. Introduction

The exact numbers of butterflies are not known yet ^[1], has documented 19,238 butterfly species throughout the world. The butterfly abundances and the species are more diverse in the tropical areas to a great extent in the tropical rainforests. Bangladesh is commonly known to be rich in butterfly fauna for its humid tropical climate and unique geographic location ^[2, 3].

A very few Studies on Butterflies are well documented in Bangladesh. it is important to know the exact number of butterfly species that currently exist due to its pollination activities and food source for others organisms like insects, spiders, amphibians, reptiles, birds and mammals ^[4]. In 2004 IUCN took an attempt to create a complete checklist about butterfly species of Bangladesh and recorded 236 species ^[2], later in 2015 a total 305 species of Butterflies belonging to 10 family were recorded ^[5] in Bangladesh furthermore, regionally some work done on butterfly checklist.

A total of 195 butterfly species of 6 families were recorded in the Sathchari National Park ^[6]; The 167 species of butterflies were recorded in the Shylet and Chittagong ^[7]; 158 species; 49 species, and 37 species from Savar, Tangail, and Sundarbans ^[8, 9, 10].

In Bangladesh region there is no specific updated record of total number of butterfly species in any scientific published research articles or any other publications. The aim of this study is to contribute to the butterfly checklist of Bangladesh. On that account, this paper represents the new record of *Chersonesia intermedia* (Martin, 1895) from the Adampur beat of Rajkandi reserve forest (24°16'46.2"N and 91°54'41.5"E) Moulvibazar District of Bangladesh.

2. Materials and Methods

2.1 Study area

North-East is one of the richest regions of Biodiversity. There are good opportunities for studies on biodiversity, population and community ecology by the butterflies. Many species prefer only a selected set of habitats. There are basically mixed-evergreen and mixed-tropical habitats that can be seen in Study areas. The North-East region of Bangladesh prefers diversified faunal diversity by considering floral diversity and habitat variations. Most of the forests of this region can be seen as mixed tropical evergreen forests. Butterflies are most sensitive when it comes to environmental changes and variations. In studies, it has been found that the relation between butterfly diversity and plant diversity, tropical or topological changes, and landscapes, habitat patterns, topological and moisture gradients can be related closely) Butterflies are an important group of bio indicators for ecological study.

The forest comprises 120 ha. Of natural forest, and rest of short rotation plantations of *Eucalyptus* sp. and *Acacia* sp. Soil characteristic is acidic then adjoining the ecological zone. The areas sees a moist tropical climate with a period of high precipitation from May to October and six months between November and April are relatively dry.

3. Methods

The study was carried out from November 2021 to September 2022. Based on the activeness of butterflies and topographical

changes 1 transect line was maintained, and observations was taken in the morning between 10.00 am to 5.00 pm. Butterflies was principally identified by direct observation and taking photo evidence using Canon 9000d camera. It were required to catch some specimens for identification and then releasing them after photographing. Species identification done by the identification key provided by Isaac Kehimkar and field guides^[11, 12]. Identification Climatic conditions such as temperature, humidity was measured by a thermo Hygrometer.

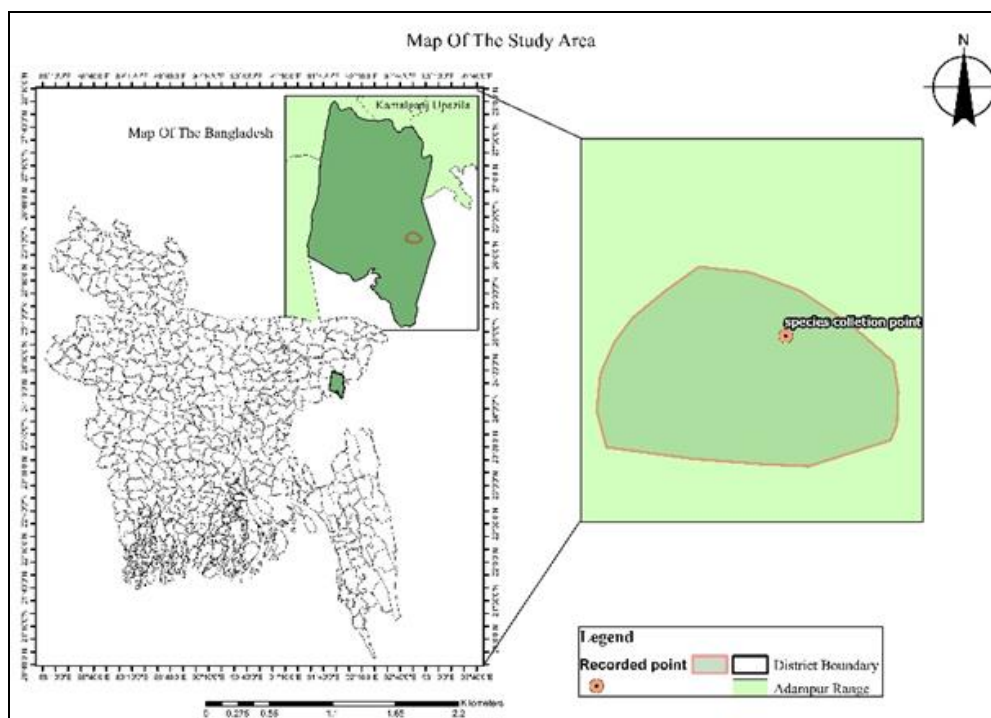


Fig 1: Location of the place of first recorded *Chersonesia intermedia* (Martin, 1895)

4. Result and Discussion

Member of genus *Chersonesia* family of Nymphalidae are very rare in Bangladesh region. Its only species *Chersonesia risa risa* (Westwood, 1848) probable Occurrence in Bangladesh was mention by Larsen(2), and recorded later on 2014. There was no mention of *Chersonesia intermedia* (Martin, 1895) in any published literature or collected preserved specimen in Bangladesh region, can be globally found in India, Myanmar, Vietnam, Thailand, Malaysia, Indonesia^[13]. Indian Distribution Assam, Arunachal Pradesh, Mizoram^[13]. A single individual of *C. intermedia* (Martin, 1895) was first recorded on 27th September 2022, 11.29 am +06 GMT in the Adampur (24°16'46.2"N and 91°54'41.5"E). The nearest Distribution area from first record sighted in Bangladesh is Karimganj district of Assam. During Observation period it were found obtain their sustenance from mineralized moisture on the ground.

4.1 Morphology

Very closely resembles the *C. risa*. Differs as follows: the discal single line crossing the wings very much broader; forming a diffuse fascia sometimes not black but of a darker ochraceous than the ground-color; the inner of the pair of postdiseal lines always bisinuate on the fore wing ; on the hind wing this pair sometimes form a loop near the tornal angle, the intermediate black fascia or line between this postdiscal pair of lines in many specimens not continuous on the hind wing, but broken into short streaks or lines between

the veins^[14]. UP golden tawny with nine dark parallel lines across both wings. On UPF, sixth line from base is wavy; fifth line from the base is orange-brownish color rather than black color^[12].

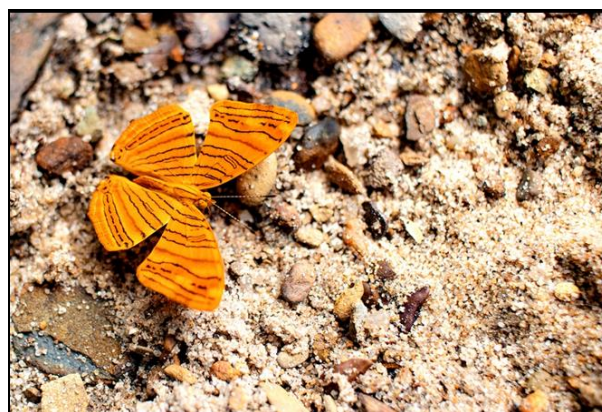


Fig 2: *C. intermedia* (Martin, 1895) obtain sustenance from mineralized moisture on the ground

5. Conclusion

Addition of new species of butterfly in our butterfly checklist is a significantly contribution for butterfly fauna of Bangladesh. This kind of finding is significantly important in updating the status and distribution of butterfly fauna of Bangladesh.

6. Acknowledgements

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