Journal of Biodiversity and Conservation 10(4): 1-7
2026

ISSN: 2457-0761 (online)
http://www.aprfjournal.in

Research Article

Marbled Map - *Cyrestis cocles* (Fabricius, 1787), Addition to the Butterfly Fauna of Chhattisgarh, India

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DOI: https://doi.org/10.5281/zenodo.23132530

Article Details: Received: 2026-08-22 | Accepted: 2026-09-17 | Available online: 2026-10-05

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Abstract: The Marbled Map, *Cyrestis cocles* (Fabricius, 1787), is a rarely sighted butterfly species in the family Nymphalidae and is legally protected under Schedule II of the Wildlife (Protection) Act, 1972, in India. After reviewing the Ph.D. thesis titled “A Study of Biodiversity of Butterfly in Bastar District, Chhattisgarh" by Dr. Sheela Dubey, authors found the species Marbled Map - *Cyrestis cocles* (Fabricius, 1787) has been reported in the thesis and had not been documented in Chhattisgarh state before this sighting. This is the first record of Marbled Map from Chhattisgarh and is a valuable addition to the documented butterfly diversity of the region.

Keywords: Biodiversity, Lepidoptera, New record, Nymphalidae, State fauna

Introduction

The Marbled map - *Cyrestis cocles* (Fabricius, 1787) is a butterfly species belonging to the family Nymphalidae in the order Lepidoptera of the phylum Arthropoda (Smetacek, 2025). This species was observed at the Tirathgarh Waterfall site and in the core area of Kanger Valley National Park, along a forest trail in a dense forest habitat dominated by *Shorea robusta* – C. F. Gaerten, as part of the Ph.D. work of Sheela Dubey in 2015. Butterflies are day-flying, colorful, and multi-voltine insects with a four-stage lifecycle: Egg, Larvae, Pupa, and Adult (Pohl et al., 2018), evolved alongside plants and spread globally due to geological events (Kawahara, 2023). The diversity of butterflies has been studied well, and the number of butterfly species worldwide has been estimated at roughly 19,238 (Heppner, 1998);

however, Copinbarger (2008) reported about 17,950 species in the early 20th century. Varshney (2006) reported 1641 species in India, which is about 9.50% of the worldwide record. In the state of Chhattisgarh, the butterflies have been documented well after the state separated from Madhya Pradesh in 2000, by multiple researchers, including Chandra (2006), Varshney (2006), Siddiqui and Singh (2004), and Singh and Chandra (2002). The first specific checklist was published by Chandra et al. (2007), starting with 113 species that are unique to the Chhattisgarh state, published with 174 species, a combined report of Madhya Pradesh and Chhattisgarh. Further reports have been published, and 203 species have been documented in Chhattisgarh state to date, with recent documentation by Nihalni et al. (2025) and Chand et al. (2025).

Material and Methods

Authors reviewed the Ph.D. thesis titled “A Study of Biodiversity of Butterfly in Bastar District, Chhattisgarh" by Dr. Sheela Dubey, and previous report on butterflies of Chhattisgarh. This observation was occurred and captured photos during the field survey at the forest trail of Kanger Valley National Park at Jagdalpur District of Chhattisgarh, India. The butterflies were identified by examining key traits, including color patterns and wing spots, in accordance with standard literature (Kehimkr, 2016).

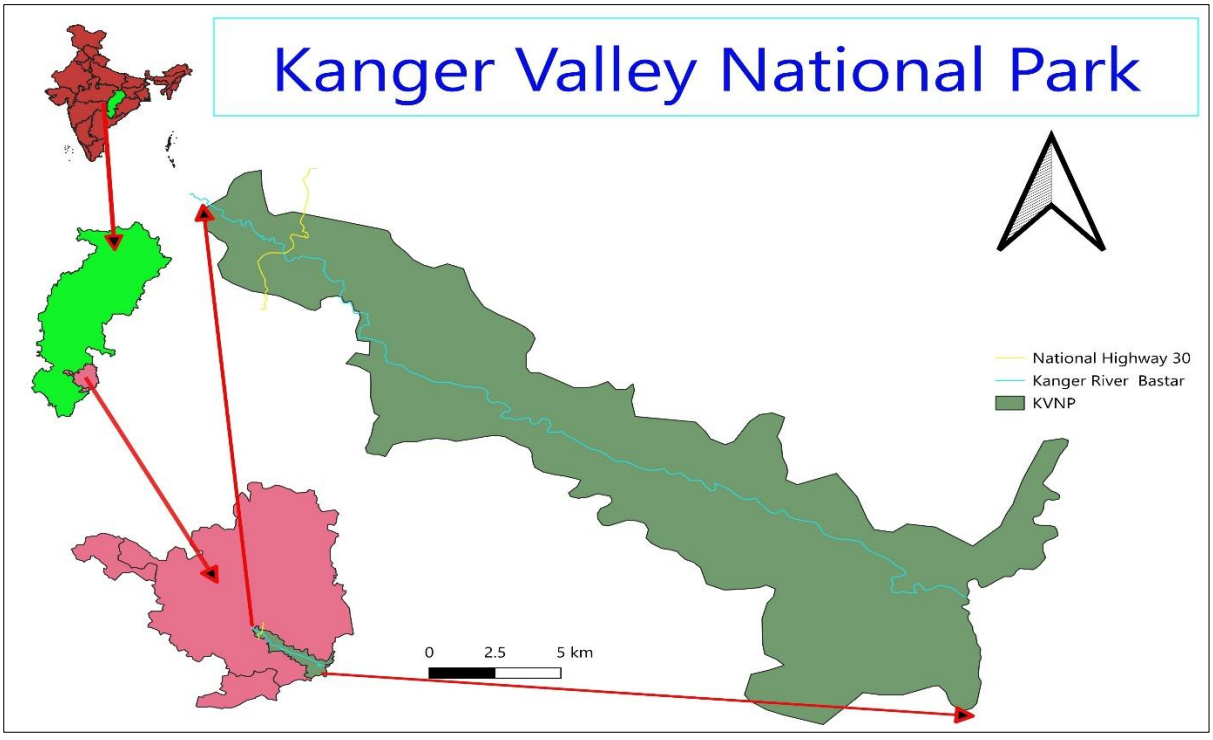

Figure 1: Map of study area - Kanger Valley National Park (KVNP)

Study area: Kanger Valley National Park (KVNP) is located in the south-eastern region of the state of Chhattisgarh, around 24 km South-East of Jagdalpur (Figure 1). The park, created on July 22, 1982, is located between 81°045' and 18°051'30” N and 81°051'30” and 82°010' E. It covers an area of 200 square kilometers in the Kotumsar and Koleng ranges (Rawat, 2008). The park is bounded between the beautiful Tirathgarh waterfall and the Kolab River. The park includes a range of landforms from low flat areas, mild slopes, steep slopes, plateaus, valleys and streams, giving it a hilly character. Famous

for many underground limestone caves include the Kutumsar, Kailash and Dandak caves. The park's elevations range from 338m to 781m above mean sea level (Rawat, 2008).

Result and discussion

After reviewing the Ph. D thesis titled "A Study of Biodiversity of Butterfly in Bastar District, Chhattisgarh" by Dr. Sheela Dubey, we found that in Pl. 5.12, Fig. 4 the species Marbled Map - *Cyrestis cocles* (Fabricius, 1787) has been recorded (Figure 2). This species has not previously been documented from Chhattisgarh prior to this observation. Authors reviewed the published articles on butterflies in Chhattisgarh from the first area specific checklist of the state by Chandra et al. (2007) began with a baseline of 174 species, focusing on Madhya Pradesh and Chhattisgarh, of which 113 are unique to the state of Chhattisgarh. Further reports have been published by Sharma & Chandra (2009); Chandra et al. (2014); Dubey et al. (2015); Sisodia (2019); Tandan et al. (2020, 2021a, 2021b); Nihlani et al. (2021); Chand et al. (2022); Jangde (2023); Singh et al. (2023); Tandan et al. (2024a, b, c); Tandan & Visvanathan (2024): Nihani et al. (2025): Chand et al. (2025) and Naidu et al. (2025) which have not included the Marbled map - *Cyrestis cocles* (Fabricius, 1787). This observation marks the first report of the Marbled Map from Chhattisgarh. It marks a significant addition to the region's documented butterfly diversity.

Figure 2: The Marbled Map, *Cyrestis cocles* (Fabricius, 1787) © Dr. Sheela Dubey

Family: Nymphalidae

Subfamily: Cyrestinae

The Marbled Map, *Cyrestis cocles* (Fabricius, 1787)

Known distribution in India: Odisha; Jharkhand; Sikkim to N.E. India; Andaman Is. (Smetacek, 2025).

Remark: Wing Spawn -50 to 60mm Pale green on upper wing, marked with thin vertical lines. Outline of wings more rounded. Forewing apex not truncates Occur in two forms – Early form and Natta form.

Conservation status: Legally protected under Schedule II of the Wildlife (Protection) Act, 1972.

Host Plant: The host plant was identified as *Streblus asper* (L.) Lour., belonging to the family Moraceae (mulberry family). Commonly known as the Sandpaper Tree, Siamese Rough Bush, and Toothbrush Tree, it is locally known by several names, including Daheya, Dahia, Karchanna, Rusa, Sahora, and Sihora. *Streblus asper* is a medium-sized, rigid, densely branched tree that typically grows to a height of 4–10 m. It is native to tropical Asia and is commonly found in dry habitats. Its leaves are characteristically rough and harsh to the touch, resembling sandpaper (Figure 3). The species was recorded at Nagarnar, Chhattisgarh, by Dr. Sarvesh Kaushik Patel and Dr. Gulab Chand.

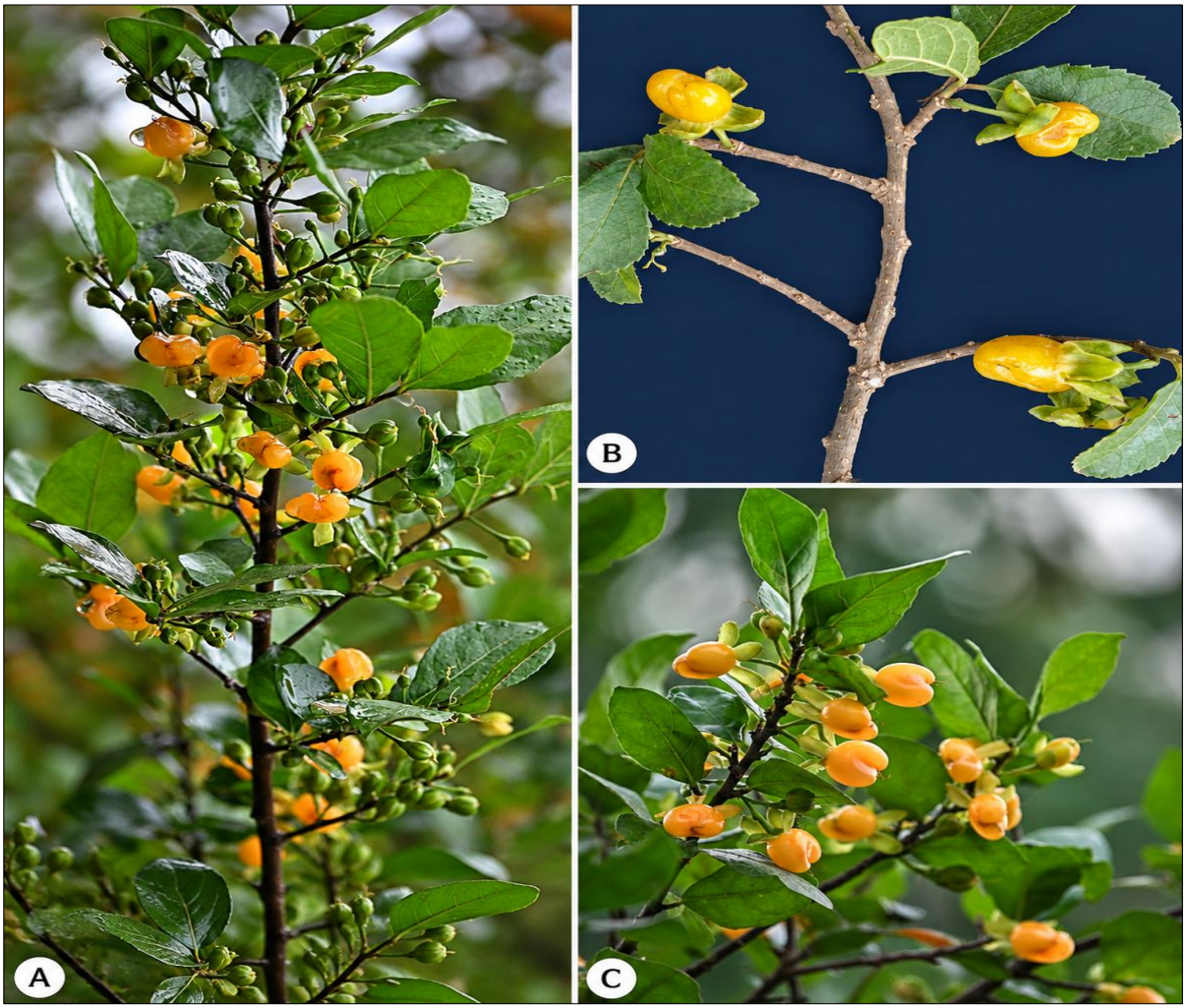

Figure 3: Host Plant (*Streblus asper*) whole tree © Dr. Sarvesh Kaushik Patel and fruits © Dr. Gulab Chand

Acknowledgements

The authors are greatly obliged to professor Dr. R. K. Agrawal, supervisor of the Ph. D. of Dr. Sheela Dubey. We are highly grateful to Dr. S. K. Dutta, Head of the department Zoology, Govt. Kaktey P. G. College Jagadalpur and other forest department field personnel and staff for their cooperation and assistance and facilities provided for the survey.

Author contribution statement

HNT prepared the manuscript, SD leads the survey and photographed the species The Marbled Map, SKP and GC photographed the host plant *Streblus asper* of Marbled Map butterfly

Financial support: The authors received no financial support for this research.

Conflict of interest: The authors declare no conflict of interest.

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