

First record of *Celaenorrhinus ratna daphne* Evans, 1949 from Himachal Pradesh and its first photographic record from the Western Himalayas (Lepidoptera: Hesperiiidae, Pyrginae)

Lovish Garlani

Abstract

The *daphne* subspecies of *Celaenorrhinus ratna* Fruhstorfer, [1908] reported first by Evans (1949) from Uttarakhand and has not been reported in the past from the neighbor state Himachal Pradesh. In July 2017, Author recorded and photographed about eight specimens of *Celaenorrhinus ratna daphne* Evans, 1949 for the first time near McLeodganj town of Himachal Pradesh.

Keywords: Lepidoptera, Hesperiiidae, Pyrginae, Western Himalayas, Himachal Pradesh, India.

Primer registro de *Celaenorrhinus ratna daphne* Evans, 1949 del Himachal Pradesh y su primer registro fotográfico del Himalaya occidental (Lepidoptera: Hesperiiidae, Pyrginae)

Resumen

La subespecie *daphne* de *Celaenorrhinus ratna* Fruhstorfer, [1908] citada por primera vez por Evans (1949) de Uttarakhand y no ha sido citada en el pasado del estado vecino Himachal Pradesh. En julio de 2017, el autor registró y fotografió unos ocho ejemplares de *Celaenorrhinus ratna daphne* Evans, 1949 por primera vez cerca de la ciudad de McLeodganj de Himachal Pradesh.

Palabras clave: Lepidoptera, Hesperiiidae, Pyrginae, Himalaya occidental, Himachal Pradesh, India.

Introduction

Himachal Pradesh is a northern Indian state and extends from the latitudes 30° 22' 40"N to 33° 12' 40" N and longitude 75° 45' 55" E to 79° 04' 20" E in the western Himalayan Mountain range. The elevation of this hill state extends from 350 meters in the southern lowlands and reaches up to 7000 meters in the high Himalayan ranges. Such a great variation in elevation supports vast species of Rhopalocera. The Rhopalocera of Himachal are well studied in the past. Shimla was the summer capital of India during British times and hence it attracted many research workers to study the Rhopalocera of Himachal Pradesh. All the scientific work done on Rhopalocera of Himachal from mid to late 19th century was included in publications by Evans (1932) and Tablot (1939, 1947). Mani (1986) reported 377 species of Rhopalocera from Himalayas, but he did not include Hesperiiidae family.

Tyler's Multi-spotted Flat *Celaenorrhinus ratna tyleri* Evans, 1926 is uncommon in Himalayas and its range is from Central and Eastern Himalaya to NE India and Nepal, Bhutan, Myanmar (Varshney & Smetacek 2015; Kehimkar, 2016; Sondhi & Kunte, 2018). The West Himalayan Ratna

Flat *Celaenorrhinus ratna daphne* Evans, 1949 is very rare in Western Himalayas and has been recorded in Northwest Frontier Province NWFP (Kaghan Valley, Mansehra) in Pakistan and in Uttarakhand (Kumaon) between the ranges of 2300-3300 m (Gasse, 2018).

Materials and Methods

On 12-VII-2017, during a visit to McLeodganj, Kangra district in Himachal Pradesh, I recorded the West Himalayan Ratna Flat *Celaenorrhinus ratna daphne* Evans, [1949] around 13:15h (Figure 1). It was observed for the first time near St. John Church, on the way to McLeodganj, at ForsythGunj (32.2427949 N, 76.3182040 E) at an altitude of 1775 m. There were about 8 specimens of *Celaenorrhinus ratna daphne* Evans, 1949 resting under the leaves of *Colocasia sp.* plants. Some of the specimens were fresh while few had damaged wings. After planning several visits to the same locations in subsequent years, no other specimen was recorded.

Results and Discussion

Description (Adult) (Figure 1): *Celaenorrhinus ratna* Fruhstorfer, 1908 is a 4-5 mm sized flat of Hesperiiidae family which can be seen in the hill forests between June and September. Two subspecies of *Celaenorrhinus ratna* Fruhstorfer, 1908 which are known to occur in India were reported by Evans (1926, 1949) as *Celaenorrhinus ratna tyleri* Evans, 1926 and *Celaenorrhinus ratna daphne* Evans, 1949.



Figure 1. Upper side of *Celaenorrhinus ratna daphne* Evans, 1949 ForsythGunj, Himachal Pradesh, India.

Celaenorrhinus ratna Fruhstorfer, 1908 is very similar to *Celaenorrhinus pulomaya* (Moore, [1866]) but yellow spots on Upper Hindwings are smaller in the Western Himalayan subspecies. The

abdomen is prominently yellow-striped, Hindwing cilia are checkered, and basal half of the antenna is white *Celaenorrhinus ratna daphne* Evans, 1949 (Sondhi & Kunte, 2018).

A detailed study of old literature on Indian Rhopalocera reveals that Evans (1949) was the first to report *daphne* subspecies of *Celaenorrhinus ratna* Fruhstorfer, 1908 from Kumaon, Uttarakhand and there is no any recent published or photographic record from the state of Uttarakhand (Sondhi & Kunte, 2018). Other publications specifically focused on Himachal Pradesh (Moore 1882; de Rhe-Philippe 1931; Talbot 1939, 1947; Wynter-Blyth 1940-1946) do not list this species from the state. Considering the recent publications (Mehta et al. 2002; Thakur et al. 2002; Singh, 2008; Arora et al. 2009; Saini et al. 2009; Singh & Banyal, 2013; Chandel et al. 2014; Sharma et al. 2015) reveals no records of this species from Himachal Pradesh. It is worth to mention that there is no photographic record of *Celaenorrhinus ratna daphne* Evans, 1949 is given on the Rhopalocera of India website (Kunte et al. 2020).

Hence the record of *Celaenorrhinus ratna daphne* Evans, 1949 is the first record from Himachal Pradesh and also the first photographic record from the Western Himalayas.

Acknowledgements

This record is part of a long-term survey and study in McLeod Ganj town of Himachal Pradesh. The author acknowledges cooperation from the local people. The present study is self-funded by the author.

References

- Arora, G. S., Mehta, H. S., & Walia, V. K. (2009). *Handbook on Butterflies*. Zoological Survey of India.
- Chandel, S., Kumar, V., Sharma, B. P., & Patiyal, R. (2014). Butterfly fauna of Shivalik hills areas of Kangra and Hamirpur districts of Himachal Pradesh in India. *Life Sciences Leaflets*, 55, 25-38.
- De Rhe-Philippe, G. W. V. (1931). *The butterflies of the Simla Hills*. *Journal of the Bombay Natural History Society*, 35(2), 172-184, 415-429, 620-634.
- Evans, W. H. (1926). The Identification of Indian butterflies. Part. IX. *Journal of the Bombay Natural History Society*, 31(1), 49-83, pl. 30.
- Evans, W. H. (1932). *The Identification of Indian Butterflies*. The Bombay Natural History Society.
- Evans, W. H. (1949). *A Catalogue of the Hesperidae from Europa, Asia, and Australia in the British Museum (Natural History)*. Trustees of the British Museum.
- Kehimkar, I. (2016). *Butterflies of India*. Bombay Natural History Society.
- Kumar, A., & Juneja, D. P. (1977). Some distributional records of butterflies (Lepidoptera: Rhopalocera) from Himachal Pradesh (Western Himalayas). *Newsletter Zoological Survey of India*, 3(6), 410-415.
- Kunte, K., Sondhi, S., & Roy, P. (2020). *Butterflies of India*, v. 2.88. Indian Foundation for Butterflies.
- Mehta, H. S., Thakur, M. S., Sharma, R. M., & Mattu, V. K. (2002). Butterflies of Pong Dam wetland, Himachal Pradesh. *India Binotes*, 4(2), 37-38.
- Moore, F. (1882). List of the Lepidoptera collected by the Rev. J. H. Hocking in the Kangra District, N. W. Himalaya; with descriptions of new genera and species. *Proceedings of the Zoological Society of London*, 1882, 234-263.
- Saini, K., Sidhu, A. K., & Mehta, H. S. (2009). Insecta: Lepidoptera: Rhopalocera. In *Faunal Diversity of Pong Dam and its Catchment Area (District Kangra, Himalaya Pradesh)* (pp. 21-41). Zoological Survey of India.
- Singh, A. P. (2008). Butterflies of Renuka Wildlife Sanctuary, Sirmaur District, Himachal Pradesh, India. *The Indian Forester*, 134(10), 1326-1338.
- Singh, V., & Banyal, H. S. (2013). Insect Fauna of Khajjiar Lake of Chamba District, Himachal Pradesh, India. *Pakistan Journal of Zoology*, 45, 1053-1061.
- Sondhi, S., & Kunte, K. (2018). *Butterflies of Uttarakhand: A Field Guide*. National Centre for Biological Sciences and Indian Foundation for Butterflies.
- Thakur, M. S., Mehta, H. S., & V. K. Mattu, V. K. (2002). Butterflies of Kalatop-Khajjiar Wildlife Sanctuary, Himachal Pradesh. *Zoos Print Journal*, 17(10), 909-910. <https://doi.org/10.11609/JoTT.ZPJ.17.10.909-10>

- Uniyal, V. P. (2007). Butterflies in the Great Himalayas Conservation Landscape in Himachal Pradesh, Western Himalayas. *Entomon*, 32(2), 119-127.
- Varshney, R. K., & Smetacek, P. (2015). *A Synoptic Catalogue of the Butterflies of India*. Bhimtal and Indinov Publishing.
- Wynter-Blyth, M. A. (1940-1947). A list of butterflies of the Shimla hills. *The Journal of the Bombay Natural History Society*, 41, 719-741, 42, 448; 43, 672-673; 45, 256-257; 46, 735-736.
- Wynter-Blyth, M. A. (1957). *Butterflies of the Indian Region*. Bombay Natural History Society.

Lovish Garlani
Village & P. O: Garli, Tehsil
Rakkar, District Kangra
Himachal Pradesh 177108
INDIA / INDIA
E-mail: lovishgarlani.natgeo123@gmail.com
<https://orcid.org/0000-0002-0663-9775>

y / and

Himachal Pradesh University
Summerhill, Shimla
Himachal Pradesh 171005
INDIA / INDIA

(Recibido para publicación / Received for publication 7-VIII-2022)

(Revisado y aceptado / Revised and accepted 9-VIII-2022)

(Publicado / Published 30-XII-2022)

Derechos de autor: El autor(es). Este es un artículo de acceso abierto distribuido bajo los términos de la Licencia de Reconocimiento 4.0 Internacional de Creative Commons (CC BY 4.0), que permite el uso, distribución y reproducción sin restricciones en cualquier medio, siempre que se cite al autor original y la fuente. / **Copyright:** The author(s). This is an open access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.