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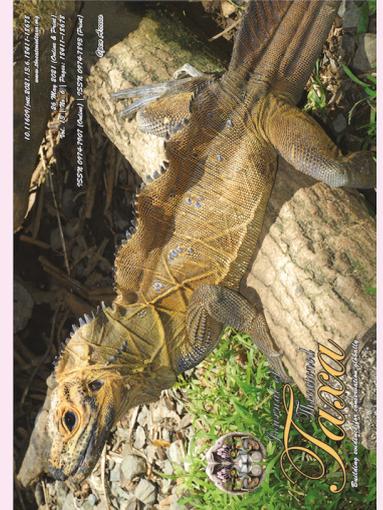
NOTE

NOTES ON NEW DISTRIBUTION RECORDS OF *EUASPA MOTOKII* KOIWAYA, 2002 (LEPIDOPTERA: LYCAENIDAE: THECLINAE) FROM BHUTAN

Jigme Wangchuk, Dhan Bahadur Subba & Karma Wangdi

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Notes on new distribution records of *Euaspa motokii* Koiwaya, 2002 (Lepidoptera: Lycaenidae: Theclinae) from Bhutan

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The genus *Euaspa* Moore (1884), commonly known as hairstreak butterflies, falls in the Lycaenidae family and is distributed across the Himalayan range to southeastern Asia. With the recent description of *Euaspa zhengi* Huang, 2016 from Motuo, southeastern Tibet (Huang 2016), there are 14 species in the *Euaspa* worldwide (Das et al. 2019). Currently, two *Euaspa* species—*E. pavo* (de Nicéville 1887) and *E. motokii* Koiwaya, 2002—have been recorded from Bhutan. *Euaspa motokii* was first described from Naungomon, Kachin state of Myanmar (Koiwaya 2002), and its distribution extends to Anini (Dihang-Dibang Biosphere Reserve) in Arunachal Pradesh State of India (Das et al. 2019). The IUCN status of this species is not assessed. The present record extends the distribution range of *E. motokii* from Kachin State of Myanmar and the Indian state of eastern Arunachal Pradesh to the foothills of the Himalaya in Bhutan.

Euaspa motokii Koiwaya, 2002 (Image 1a,b)

Diagnosis: *Euaspa motokii* Koiwaya, 2002 is

differentiated from all other congeners in having less prominent blackish marks in the subterminal area of the underside of the forewing. These marks are prominent in case of *E. forsteri* (Esaki & Shirôzu 1943). It also has two discal white zig-zag lines and two sub-basal white markings on the underside of the hindwings. An oval-shaped cell spot with semi-circular opening is a prominent feature of this species (Das et al. 2019) (Image 1a,b).

Current record: *Euaspa motokii* was first observed on 9 June 2017 at Dakpai (27.191°N & 90.734°E; 1,245m) and later on 1 June 2020 at Tali (27.166°N & 90.751°E; 1,769m), both in Zhemgang District (Figure 1). Dakpai and Tali are neighboring villages located within 3km of each other. A single individual was photographed at around 08.00h and 09.30h, respectively (Image 1a,b). The species was identified based on the description and photographs provided in Koiwaya (2002; 2007) and Das et al. (2019), and confirmation was provided by Motoki Saito. This species has remained unreported until now, even though it was first observed and archived in 2017

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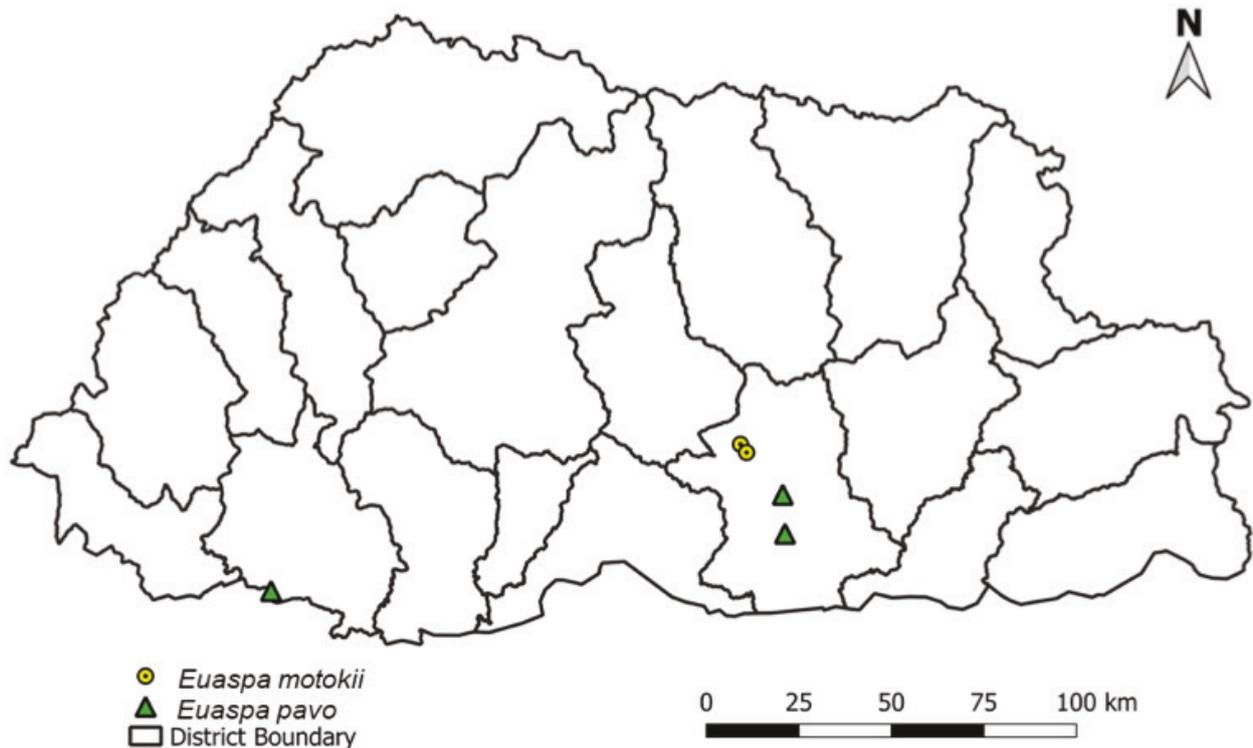


Figure 1. Current records of *Euaspa motokii* from Tali and Dakpai; and distribution records of *Euaspa pavo* from Pasakha, Chukha District, Khomshar and Pantang, in Zhemgang District, Bhutan.

in the photograph collection of the second author. With this new record, Bhutan now has 760 species of butterflies as per Wangchuk et al. (in press).

Remarks: The species was observed perching on the fallen branch of *Castanopsis* sp. and dry soil. The species has been reported only from these two localities despite concerted efforts, suggesting it is rare and may have a restricted distribution in Bhutan. Associated species observed in the same area include *Pedesta pandita*, *Libythea myrrha*, *Cyrestis thyodamas*, *Hebomoia glaucippe*, *Papilio helenus*, and *Papilio polyctor*. In Bhutan the presence of two species of *Euaspa* viz, *E. motokii* and *E. pavo* have been established.

The preferred habitat of this species is cool-broadleaved forest mainly composed of *Castanopsis tribuloides*, *C. hystris*, *Schima wallichii*, *Eurya* sp., *Hobina* sp., *Daphne sureil*, *Artemesia* sp., *Ageternia adonophora*, *Salligenella* sp., *Solanum* sp., *Osbeckia* sp., *Polygals arillara*, and *Leucus cilita*. Typically, this species prefers evergreen forest dominated by oak species. *Castanopsis* was reported to be the food plant of *E. motokii* larvae (Das et al. 2002; Koiwaya 2002) this is probably the case in Bhutan as it was sighted in oak forest. Previously, the local community used this area for shifting cultivation and the forest is typically young and appears to be a

favorable habitat for butterflies.

The sighting locality falls within the Nangkhor Local Forest Management Area. The area is primarily used by local people for the extraction of fuelwood and timber, and for cattle grazing. The Territorial Forest Division in Zhemgang under the Department of Forests and Park Services has been safeguarding and protecting wildlife and habitats. The increasing demand for timber and fuelwood has become a concern and increases the pressure on the habitat of *E. motokii* habitat. The practices of seldom shifting cultivation and extraction of non-wood forest products are additional threats which are exacerbated by easy access from motorable road. These factors may pose threats to the existence of this species in Bhutan. We suggest that further assessment to be carried out to ascertain specific threats to the species in Bhutan.

***Euaspa pavo* (de Nicéville 1887)**

Current record: In Bhutan *E. pavo* (de Nicéville 1887) has also been reported from Pantang (26.967°N & 90.855°E; 245m) and Khomshar (27.134°N & 90.948°E; 1,100m) villages in Zhemgang District on 24 September 2018 and 1 July 2019 respectively (Figure 1, Image 2 a,b). Since the first description by de Nicéville in 1887, *E. pavo*



Image 1. *Euaspa motokii* recorded from Zhemgang District, Bhutan: a—Dakphai in 2017 | b—Tali in 2020. © Dhan Bahadur Subba



Image 2. *Euaspa pavo* recorded from Zhemgang District, Bhutan: a—female | b—male, Khomshar Vilage. © Sherub Jamtsho

has been observed at two localities of warm broadleaved forest, extending its distribution from the south western to central foothills of Bhutan.

Remarks: The specimen of *E. pavo* deposited at Carnegie Museum of Natural History in the collection of Mr. Knyvetts was collected from Buxa (Ueda & Koiwaya 2003), currently Pasakha, Bhutan. The reported distribution elsewhere, where this species is known to occur are in northeastern India, Laos, and Myanmar (Gupta & Mondal 2005; Ueda & Koiwaya 2003). The species appears to have a restricted distribution, though concerted efforts are employed for a study. This species has high conservation significance due to its restricted distribution and is protected under the Indian Wildlife Protection Act, 1972, Schedule-I (Part V), primarily to reduce vulnerability against threats such as deforestation, logging, grazing, tourism, and infrastructure development (Gupta & Mondal 2005). A systematic empirical study is suggested as this species

require more information on habitat, ecology, life cycle, and distribution to establish the conservation measures and interventions in the localities.

Conclusion: The distribution of *Euaspa* species is confined to the Himalaya and Southeastern Asia. Data on the distribution and ecology of *Euaspa motokii* are in the early stages due to limited investigation and exploration (Saito 2017) and mainly consist of occasional sightings. The current record of *Euaspa motokii* from limited localities reveals the need for systematic sampling in similar subtropical broadleaved evergreen forest (Das et al. 2019), cool-broadleaved forest for former species, and warm broadleaved forest for latter species across Bhutan to establish the approximate distribution in the country. Knowledge of the current records of *Euaspa motokii* and *E. pavo* will not only serve as baseline data to instigate future organized sampling but will also in the long run help evaluate the health of the environment in response to the effects of climate change. Community

awareness to mainstream responsible conservation, and engagement of local residents in monitoring will also help uphold the habitats of butterflies in Bhutan.

References

- Das, G.N., S. Gayen, M. Saito & K. Chandra (2019).** Notes on the hairstreak butterflies *Euaspa* Moore, 1884 (Lepidoptera: Lycaenidae) with new distribution records to the Indian Eastern Himalaya. *Journal of Threatened Taxa* 11(9): 14238–14241. <https://doi.org/10.11609/jott.4873.11.914238-14241>
- Esaki, T & T. Shirôzu (1943).** New species and subspecies of the subfamily Theclinae from Formosa (Lycaenidae). *Zephyrus* 9(3): 151–156.
- Gupta, I. J & D.K. Mondal (2005).** *Euaspa pavo* (de Nicéville 1887) the peacock Hairstreak in Red data book (Part-2), Butterflies of India. Zoological Survey of India, Kolkata 420–422pp.
- Huang, H. (2016).** New or little-known butterflies from China - 2 (Lepidoptera: Pieridae, Nymphalidae, Lycaenidae et Hesperiiidae). *Atalanta* 47(1/2): 161–173.
- Moore, F. (1884).** Descriptions of some New Asiatic Lepidoptera; chiefly from specimens contained in the Indian Museum Calcutta. *Asiatic Society of Bengal* 53(1): 16–52.
- de Nicéville, L. (1887).** Description of some new or little-known butterflies from India, with some notes on the seasonal dimorphism obtaining in genus *Melanitis*, pp. 448–467. Proceeding of the scientific meeting in Zoological Society of London.
- Koiwaya, S. (2002).** Description of five new species and a new subspecies of Theclini (Lycaenidae) from China, Myanmar and India. *Gekkan-Mushi* 377: 2–8.
- Koiwaya, S. (2007).** *The Zephyrus Hairstreaks of the World*. Mushi-Sha, Tokyo, Japan, 300pp.
- Saito, M. (2017).** Notes on some Theclini (Lepidoptera: Lycaenidae) chiefly from the Himalayas (Part 1). *Butterflies* 76: 31–35.
- Ueda, K. & S. Koiwaya (2003).** Examination of the type specimens of *Zephyrus pavo* de Nicéville and *Zephyrus zoa* de Nicéville. *Bulletin of the Kitayushu Museum of Natural History and Human History, Series of a Natural History* 1: 13–22.
- Wangchuk, J., G.S. Bhandari, K. Wangdi & U. Tshering (in press).** Notes on the new records of Witch, *Araotes lapithis* Moore, 1857 (Lycaenidae: Araotes) from Bhutan. *Journal of Bombay Natural History Society*.





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