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Recently, Singh (2016) published a Short Communication in the *Journal of Threatened Taxa* dealing with 65 species of butterflies from western Bhutan along with their photographs. The checklist is the outcome of random surveys carried out by the author in "the moist temperate forests" at elevations ranging 1,860–3,116

m in the western part of Bhutan around Dochula Pass (Site I, 3116m) on the way to Punakha from Thimphu and also around Chukha-Bunakha Village (Site II) along Wang Chu river catchment which lie en route from Thimphu to Phuentsholing; during 2009 and 2012 in different seasons (pre-monsoon; monsoon; late spring and post monsoon season). The article is important because western Bhutan is not well studied as that of eastern, central and southern Bhutan, from where a comprehensive list is already published (Wangdi et al. 2012; Singh 2012; Singh & Chib 2014; Singh 2014; Nidup 2015).

The result portion consists of notes on some important butterflies, a checklist and photographs of important species. It contains, brief description of the locality where species were sighted, their geographical distribution and their status with citations. This is an excellent effort of the author to bring out a checklist on butterflies of western Bhutan, which remain poorly studied for decades. There are, however, a few mistakes in species status in the presence or absence in Bhutan. For example:

Tawny Mime Chilasa agestor agestor (Gray): Yazaki & Kanmuri (1985) have the species recorded from Chasilakha, Thinleygang, Mendegang of Punaka district in western Bhutan. Also Harada (1987) recorded the species from Damzhi (1 male) and Mo-chu (1 male) of Gasa district. Recently the species has been recorded from the area of the Bumdeling Wildlife Sanctuary and other palace of Bhutan (Wangdi & Sherab 2012a; BWS 2013; Uemura 2016). The species is also reflected in the publications of Singh & Chib (2015) as reported from Bhutan.

Straightwing Blue Orthomiella pontis pontis Elwes: Yazaki & Kanmuri (1985) reported the species from Mendegang (Punakha District) and is also recorded from the warm broadleaf forest of the Dzamling Norzoed Community forest (DNCF) in Tsirang District (Singh 2014) and happens to be very rare. The species is distributed

Some comments on the 'Moist temperate forest butterflies of western Bhutan'

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in Chukha, Punakha and Zhemgang districts of Bhutan (Sbordoni et al. 2015) and is included in the checklist of Bhutan published by Singh & Chib (2015).

Dull Green Hairstreak *Esakiozephyrus icana* **Moore:** Yazaki & Kanmuri (1985) reported the species from Jelila, in the Haa District of western Bhutan; between 1500–3000 m (Sbordoni et al. 2015) and included in the checklist of Bhutan published by Singh & Chib (2015).

Small Silverfork Zoophoessa jalaurida elwesi Moore: Yazaki & Kanmuri (1985) reported the species from Jelila (Haa District) and vander Poel & Wangchuk (2007) from the altitudes between 2300–3500 m where the vegetation is dominated by bamboo. The species is also recorded by Sbordoni et al. (2015) from Haa, Thimphu and Trongsa districts between 3000–4300 m. It is reflected in the publications of Wangdi & Sherab (2012b) and Singh & Chib (2015) as reported from Bhutan.

Scarch Labyrinth *Neope pulahina* (Evans): Harada (1987) recorded the species from Paro (1 male) and Chiley-la (1 male) from western Bhutan. Later the species was recorded from Bumdeling, eastern Bhutan (BWS, 2013) and Luentse at 1500–3000 m (Sbordoni et al. 2015). It is included in the publications by Wangdi & Sherub (2012b) and Singh & Chib (2015) as reported from Bhutan.

Chumbi Wall Chonala masoni Elwes: Yazaki & Kanmuri (1985) reported the species from Trasiyangtshe, Thimphu, Paro, Jelila (Haa) and Punakha, and three

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males were reported from Thimphu during August by Harada (1987). The species is recorded from the Phobjikha valley (Wangduephodrang) during August and September basking in the sun (Dorji 2014). Sbordoni et al. (2015) recorded the species from Haa, Paro, Punakha, Thimphu and Trashiyangtse districts between 1500-3000m. Wangdi & Sherub (2012b) and Singh & Chib (2015) reported the species from Bhutan.

Himalayan Spotted Flat *Celaenorrhinus munda* Moore: Yazaki & Kanmuri (1985) reported the species from Mendegang (Punakha), and one female was reported from Mo-chu (Punakha) during May by Harada (1987); observed between 1500–3000 m at Punakha (Sbordoni et al. 2015). Wangdi & Sherub (2014), and Singh & Chib (2015) reported the species from Bhutan.

Overall, the article is important to add to the knowledge of butterflies present in the western Bhutan but the missing literature by the author gives some misleading information to the readers. In fact, this is the first ever article published on the butterfly fauna of Chukha and Thimphu districts in the recent decades and forms a very important resource to be counted for years to come.

References

Bumdeling Wildlife Sanctuary (2013). Conservation Management Plan 2013 to 2018. Bumdeling Wildlife Sanctuary, 98–101pp.

Dorji, S. (2014). Butterflies in and around Phobjikha Valley. Royal Society for Protection of Nature (RSPN). Thimphu, Bhutan, 1–163pp.
Harada, M. (1987). Butterflies of Bhutan (I). The Lepidopterological Society of Japan 4–14.

Nidup, T. (2015). An Annotated checklist of Butterflies from Royal Manas National Park, Gelephu, Bhutan. *Spring* 5: 1–9.

Sbordoni, V., G.C. Bozano, K. Wangdi, S. Sherub, S. Marta, S. De Felici & D. Cesaroni (2015). Towards a georeferenced checklist of the butterflies of Bhutan: a preliminary account (Insecta: Lepidoptera), pp. 523–546, pl. I-VI. In: Hartmann, M. & J. Weipert: Biodiversity and natural heritage of the Himalaya V, Verein der Freunde und Foerder des Naturkundemuseums Erfurt e.V. Erfurt, Germany.

Singh, A.P. (2012). Lowland forest butterflies of the Sankosh River catchment, Bhutan. *Journal of Threatened Taxa* 4(12): 3085–3102; http://dx.doi.org/10.11609/JoTT.o2625.3085-102

Singh, I.J. (2014). Butterfly diversity of Dzamling Norzoed Community Forest, Tsirang, Bhutan. A Preliminary study. SAARC Forestry, Vol. III, 38–46.

Singh, A.P. (2016). Moist temperate forest butterflies of western Bhutan. Journal of Threatened Taxa 8(3): 8596–8601; http://dx.doi.org/10.11609/jott.2297.8.3.8596-8601

Singh, I.J. & M.S. Chib (2014). A preliminary checklist of butterflies (Lepidoptera: Rhophalocera) of Mendrelgang, Tsirang District, Bhutan. *Journal of Threatened Taxa* 6(5): 5755-5768; http://dx.doi.org/10.11609/JoTT.o3675.5755-68

Singh, I.J. & M.S. Chib (2015). Checklist of Butterflies of Bhutan. *Journal of the Bhutan Ecological Society* 1(2): 22–58.

Uemura, Y. (2016). A synonymic List of Butterflies of Bhutan. Part I. Papilionidae. *Bulletin of the Toyosato Museum of Entomology* 25: 1–10.

vander Poel, P. & T. Wangchuk (2007). Butterflies of Bhutan. Mountains, Hills and Valleys between 800 and 3000m. Royal Society for Protection of Nature (RSPN). Thimphu, Bhutan, 2-71pp.

Wangdi, K. & Sherub (2012a). Field Guide for Swallowtails of Bhutan. UWICE Nature Guide Series. Ugyen Wangchuk Institute of Conservation and Environment, Bumthang, Bhutan, 77pp.

Wangdi, K. & Sherub (2012b). Field Guide to Nymphalids (Brushfooted) of Bhutan. UWICE Nature Guide Series. Ugyen Wangchuk Institute of Conservation and Environment, Bumthang, Bhutan, 166pp.

Wangdi, K. & Sherub (2014). Field Guide to Hesperiidae (Skippers) of Bhutan. UWICE Nature Guide Series. Ugyen Wangchuk Institute of Conservation and Environment, Bumthang, Bhutan, 91pp.

Yazaki, Y. & S. Kanmuri (1985). Butterflies of Western Bhutan (218 species). The Rhopalocerists' Magazine, Japan 8(7): 260–267.



Reply to Comments

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I wish to thank Mr. Jatishwor Singh Irungbam for pointing out corrections in Singh (2016) published in the Journal of Threatened Taxa indicating there are a few mistakes on the status of species in Bhutan which has occurred due to less review of literature, which thus gives a misleading information to the readers. I would like to clarify that while writing the article I had searched all peer reviewed journals on the web. However, some references as listed by Irungbam (2016), were missed, the reason for which is explained herewith. One important recent source of literature on Bhutan by Sbordoni et al. (2015), a chapter in a book containing a check list of 533 species of butterflies recorded from Bhutan along with geo-referencing of sampling locations, was missed as it was published after my paper had already been submitted, and was not available on the web until recently. Likewise, the reference of Uemura (2016) is only very recent to be guoted. Some of the other sources of literature pertaining to records from Bhutan as mentioned by Irungbam (2016) pertain

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to grey literature. They are either reports (BWS 2013; Singh 2014) or local publications (Wangdi & Sherub 2012a&b, 2014; Dorji 2014; Singh & Chib 2015) from Bhutan that are very difficult to access for readers from outside Bhutan. Only recently they are being made available on websites. A few other references that have been cited are in Japanese language or magazine articles that are also not available on the web (Yazaki & Kanuri 1985; Harada 1987). One reference, Singh & Chib (2015) which is a recent compilation of annotated checklist of butterflies of Bhutan listing 670 species is based on published records from mainly other sources of literature, both peer reviewed and grey literature, but this article does not give any new first hand information on butterflies by the authors themselves.

References

Dorji, S. (2014). Butterflies in and around Phobjikha Valley. Royal Society for Protection of Nature (RSPN). Thimphu, Bhutan, 1–163pp.
Harada, M. (1987). Butterflies of Bhutan (I). The Lepidopterological Society of Japan 4–14.

- Sbordoni, V., G.C. Bozano, K. Wangdi, S. Sherub, S. Marta, S. De Felici & D. Cesaroni (2015). Towards a georeferenced checklist of the butterflies of Bhutan: a preliminary account (Insecta: Lepidoptera), pp. 523–546, pl. I-VI. In: Hartmann, M. & J. Weipert: Biodiversity and natural heritage of the Himalaya V, Verein der Freunde und Foerder des Naturkundemuseums Erfurt e.V. Erfurt, Germany.
- Singh, A.P. (2016). Moist temperate forest butterflies of western Bhutan. Journal of Threatened Taxa 8(3): 8596–8601; http://dx.doi.org/10.11609/jott.2297.8.3.8596-8601
- Singh, I.J. & M.S. Chib (2014). A preliminary checklist of butterflies (Lepidoptera: Rhophalocera) of Mendrelgang, Tsirang District, Bhutan. *Journal of Threatened Taxa* 6(5): 5755-5768; http://dx.doi. org/10.11609/JoTT.o3675.5755-68
- Singh, I.J. & M.S. Chib (2015). Checklist of Butterflies of Bhutan. *Journal of the Bhutan Ecological Society* 1(2): 22–58.
- **Uemura, Y. (2016).** A synonymic List of Butterflies of Bhutan. Part I. Papilionidae. *Bulletin of the Toyosato Museum of Entomology* 25: 1–10.
- Wangdi, K. & Sherub (2012a). Field Guide for Swallowtails of Bhutan. UWICE Nature Guide Series. Ugyen Wangchuk Institute of Conservation and Environment, Bumthang, Bhutan, 77pp.
- Wangdi, K. & Sherub (2012b). Field Guide to Nymphalids (Brushfooted) of Bhutan. UWICE Nature Guide Series. Ugyen Wangchuk Institute of Conservation and Environment, Bumthang, Bhutan, 166pp.
- Wangdi, K. & Sherub (2014). Field Guide to Hesperiidae (Skippers) of Bhutan. UWICE Nature Guide Series. Ugyen Wangchuk Institute of Conservation and Environment, Bumthang, Bhutan, 91pp.
- Yazaki, Y. & S. Kanmuri (1985). Butterflies of Western Bhutan (218 species). The Rhopalocerists' Magazine, Japan 8(7): 260–267

