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# BIONOTES

A Quarterly Newsletter for Research Notes and News  
On Any Aspect Related with Life Forms

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Cover Photo of founder of BIONOTES *Late* Dr. R.K. Varshney

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## SOME IMPORTANT RECORDS OF BUTTERFLIES FROM DHANKUTA AND SUNSARI, NEPAL

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*Reviewer: P. van der Poel*

Nepal is home to 660 species of butterflies in 263 genera (Smith, 2010). Van der Poel (2020) reported this number to be 665, after the addition and deletion of several species. However, in the draft of an updated species list for Nepal (Van der Poel & Smetacek, *in prep.*), it is reported that the number of butterfly species is 674. This number is likely to go up as many species that have been recorded from Sikkim and/or Uttarakhand may also occur in Nepal.

Province Number 1 of Nepal has 14 districts, out of which Dhankuta is a mid-hill district while Sunsari is essentially a Terai district. Dhankuta stretches over an area of 891 km<sup>2</sup>. The altitude varies from around 300 m to 2500 m. The vegetation ranges from sub-tropical Sal forest along the Arun and Tamor rivers, to cooler temperate vegetation at the higher elevation. Bhedetar is a small hill station at the border of Dhankuta and Sunsari districts, 16 km from Dharan, Sunsari.

Sunsari district covers an area of 1,257 km<sup>2</sup>. Dharan is a sub-metropolitan city in Sunsari, situated at an elevation of 349 m in the foothills of the Mahabharat Range in the north. The southern part of Dharan borders the Terai region.

Some areas of Bhedetar, Dhankuta (26°52'30"N 87°19'55"E) and Dharan, Sunsari (26°50'10"N 87°18'09"E) were explored in March of 2021. Bhedetar of Dhankuta was visited on 8-10.iii.2021 while Dharan of Sunsari was visited on 11.iii.2021.

March is one of the best months to observe butterflies in Nepal in Terai and mid-hill

regions (Smith, 2011). During the survey, several common species were recorded which occur all across Nepal, while species which are typical to the east of Nepal were evident as well. Moreover, on 8-9.iii.2021, some extremely rare species appeared at one point.

This paper deals with some significant records, which are either new to Nepal or new to east Nepal or species with very few records or not recorded for a very long time. References for existing records have been taken from Van der Poel & Smetacek, (*in prep.*). Identification keys from Evans (1927; 1932; 1949) have been followed.

### **Family: HesperIIDae**

*Scobura isota* Swinhoe, 1893 – Swinhoe's Forest Bob

Several individuals were seen at Bhedetar, Dhankuta flying around a forest stream there at 630-650 masl. The recorded individuals were all DSF as the base color of UnHW was all yellow (Evans, 1949). *S. isota* differs from *S. cephalis* (Hewitson, 1876) in that it bears only 2 spots on UnHW (in spaces 2 and 4+5) while *S. cephalis* has an extra rectangular spot in space 1c. Sometimes though in *isota*, an insignificant spot (or sometimes even significant) could be present in space 1c and if so, a corresponding spot is "always" present in space 6 (connected to inner margin of spot 5). On UpFW, *S. cephalis* is always (possibly with some exceptions) known to bear a spot in sp. 4 apart from 2 and 3 while *S. isota* mostly lacks it (Evans, 1949). Swinhoe, 1893 describes *S. isota* as having only 2 FW subapical spots instead of three (also true for the present

individuals), but this character is clearly variable comparing with references from Yutaka Inayoshi (online resource).

Smith (2010; 2011) listed *Scobura cephal* (Hewitson, 1876) as the only species under *Scobura* Elwes & Edwards, 1897 found in Nepal and recorded it from central and eastern Nepal. Consequently, Van der Poel & Smetacek (*in prep.*) also list *Scobura cephal* (Hewitson, 1876) with a distribution in the East Terai (which includes part of Smith's (2011) central Terai) and East Nepal, reporting it as very seldom and local. Smith (2011) only shows an image of the upperside which, however contains a spot in FW space 4 as well. This feature is also sometimes shared by *S. isota*.

Although Fan *et al.* (2010) list a characteristic very similar to that specified by Evans (1949) to distinguish between *Scobura cephal* (conspicuous rectangular white spot in space 1c [=CuA2]), and *S. isota* (no such spot), they indicate that *S. isota* is very similar to *S. cephal* from Vietnam (although without the rectangular spot in 1c), requiring examination of the male genitalia to ensure conclusive identification. However, in the present case, more than 10 individuals were observed and not a single one had any character remotely resembling *S. cephal*.

Thus, it would be safe to say that the individuals were all *S. isota* and constitute the first record for Nepal. The identification was further confirmed by Dr T.L. Seow (Singapore, *pers. comm.*), and Mr. Monsoon Jyoti Gogoi (*pers. comm.*), both being certain that all the individuals photographed in the present study were typical *S. isota*. Monsoon Jyoti Gogoi (*pers. comm.*) also added that "*S. cephal* will never have small UnHW spots like the present individuals".

*Hasora anura anura* de Nicéville, 1889 – Himalayan Slate Awl

Reported only once from Pokhara, central Nepal, in 1970, this species was seen for the second time at Bhedetar, Dhankuta at dusk

(4:26 PM) around a forest stream on 9.iii.2021, at 630 masl.

*Halpe zema zema* (Hewitson, 1877) – Banded Ace

Prior to the present report, this species was recorded only from Illam. An individual was seen along a forest trail in the morning (9:22 AM) at Bhedetar, Dhankuta on 9.iii.2021, at 630 masl. This record represents a small westward extension to its known range by about 60 km.

*Matapa sasivarna* (Moore, [1866]) – Black-veined Redeye.

Recorded only from central Nepal before, at least 2 individuals were seen along a forest stream at Bhedetar, Dhankuta on 9.iii.2021 at 630-640 masl.

*Caltoris kumara moorei* (Evans, 1926) – Blank Swift

This species was spotted only in the western Terai and central Nepal before. An individual was seen along a forest stream at Bhedetar, Dhankuta perched on a rock, on 10.iii.2021, at 630 masl.

*Caltoris tulsii tulsii* (de Nicéville, [1884]) – Purple Swift

Before, this species was recorded only from Pokhara and Kathmandu valley, central Nepal. An individual was perched on a rock along a forest stream on 8.iii.2021, at 640 masl.

*Telicota ohara jix* Evans, 1949– Narrow-branded Palm Dart

Recorded only from central Nepal and east Terai, several individuals were seen at Bhedetar, Dhankuta along a forest stream for three days, at 630-650 masl.

The identification was confirmed by Dr T.L. Seow on the basis of the position of the male brand and the hindwing band.

**Family: Lycaenidae**

*Allotinus drumila drumila* (Moore, [1866]) – Great Darkie

This is the third record of this species in Nepal. It was recorded only twice earlier, both before 1988 and from Sankhuwasabha (north of Dhankuta). A female was flying around a

banana stump by the side of a river at Bhedetar, Dhankuta at 3:30 p.m. on 8.iii.2021, at 630 masl. The sun had set and the stump was full of aphids and ants.

**Family: Nymphalidae**

*Charaxes solon solon* (Fabricius, 1793) – Black Rajah

Fourth record for Nepal, an individual was seen circling around, near a river at Bhedetar, Dhankuta midday on 9.iii.2021, at 650 masl. Two individuals were recorded in east Nepal in 1979, and one in west Nepal in Kanchanpur in 2019.

*Pantoporia sandaka davidsoni* Eliot, 1969 – Extra Lascar

Reported only from central Nepal and eastern Terai (Chitwan) before, several individuals were found at Bhedetar, Dhankuta every day of the survey, at 630-650 masl.

**Family: Papilionidae**

*Graphium macareus indicus* (Rothschild, 1895) – Lesser Zebra

This butterfly is considered very rare and local in Nepal and was only recorded from Ilam earlier, in April and May. At least 2 individuals were recorded on 9.iii.2021, at 630-650 masl. One was perched on a leaf early in the morning and one was flying around a *Lantana* bush. Some others were noticed flying around on other days too, but they could easily have been *Papilio clytia clytia* Linnaeus, 1758, which was fairly common there.

*Papilio polymnestor polymnestor* Cramer, 1775 – Blue Mormon

Recorded only from Pokhara (central Nepal) and Ilam (east) before, an individual was seen for three days in a row flying and never settling near a river at Bhedetar, Dhankuta, at 630-650 masl.

*Papilio memnon agenor* Linnaeus, 1758 form *primigenius* – Great Mormon

This form of great Mormon is new to Nepal. It has weak blue patches on its hindwings and forewings. Two or three such individuals were seen in Dharan, Sunsari on 11.iii.2021.

*Papilio memnon agenor* Linnaeus, 1758 form *polymnestoroides* – Great Mormon

This form of Great Mormon is new to Nepal. It appears very much like *Papilio polymnestor* except for the lack of dense blue patches on the UnHW. Moreover, the blue is deeper blue unlike in *Papilio polymnestor polymnestor* which looks more greyish blue. It should be noted that these two forms of *Papilio memnon agenor* were very abundant, at least in Dharan (11.iii.2021) at 590-640 masl while there are no reports of them anywhere in central Nepal, although the species occurs there.

**Family Pieridae**

*Eurema andersonii jordani* Corbet & Pendlebury, 1932 – One-spot Grass Yellow

Reported only from central Nepal before (van der Poel, 2020), an individual was seen at Bhedetar, Dhankuta flying among the flowers of *Lantana camara* on 10.iii.2021, at 585 masl.

**Discussion**

These findings of rare species and new records signify the vast diversity of butterflies in unexplored parts of the country. The importance of thorough surveys in such areas is always a necessity to expand the existing documentation of butterfly fauna in Nepal.

**Acknowledgements**

I am grateful to Ms. Anisha Sapkota (AFU, Chitwan), Mr. Piet van der Poel (Netherlands) and Mr. Surendra Pariyar (ANHM, Pokhara) for helping me in my research. I also appreciate the staff of Annapurna Natural History Museum, Pokhara, who permitted me to work on and refer to material in the collection.

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Fig.1: *Scobura isota* Swinhoe, 1893 – Swinhoe's Forest Bob (No spot in FW sp. 4)



Fig.2: *Scobura isota* Swinhoe, 1893 – Swinhoe's Forest Bob (Typical DSF with small spots)



Fig.3: *Scobura isota* Swinhoe, 1893 – Swinhoe's Forest Bob (Individual with small spot in UnHW sp. 1c and corresponding small spot in sp. 6)

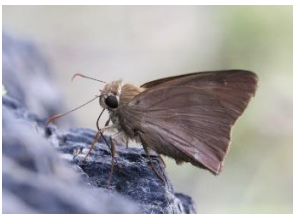


Fig.4: *Hasora anura anura* - de Nicéville, 1889 – Slate Awl



Fig.5: *Halpe zema zema* (Hewitson, 1877) – Banded Ace



Fig.6: *Matapa sasivarna* (Moore, [1866]) – Black-veined Redeye



Fig.7: *Caltoris kumara moorei* (Evans, 1926) – Blank Swift



Fig.8: *Caltoris kumara moorei* (Evans, 1926) – Blank Swift



Fig.9: *Caltoris tulsii tulsii* (de Nicéville, [1884]) – Purple Swift



Fig.10: *Telicota ohara jix* – Narrow-branded Palm Dart Swift



Fig.11: *Telicota ohara jix* – Narrow-branded Palm Dart Swift



Fig.12: *Allotinus drumila drumila* (Moore, [1866]) – Great Darkie



Fig.13: *Allotinus drumila drumila* (Moore, [1866]) – Great Darkie



Fig.14: *Charaxes solon solon* (Fabricius, 1793) – Black Rajah



Fig.15: *Pantoporia sandaka davidsoni* Eliot, 1969 – Extra



Fig.16: *Graphium macareus indicus* (Rothschild, 1895) – Lesser Zebra



Fig.17: *Papilio polymnestor polymnestor* Cramer, 1775 – Blue Mormon



Fig.18: *Papilio polymnestor polymnestor* Cramer, 1775 – Blue Mormon



Fig.19: *Papilio memnon*  
*agenor* form *primigenius*  
Linnaeus, 1758 – Great  
Mormon



Fig.20: *Papilio memnon*  
*agenor* form *polymnestoroides*  
Linnaeus, 1758 – Great  
Mormon



Fig.21: *Papilio memnon*  
*agenor* form *polymnestoroides*  
Linnaeus, 1758 – Great  
Mormon