

SOME NEW DISTRIBUTION RECORDS OF LYCAENID BUTTERFLIES IN NEPAL

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Introduction

Butterflies frequently travel from one place to another. This leads to their appearance in new places every now and then. Their colonization of that area mainly depends upon habitat structure and availability of their food plants (Abideen *et al.*, 2015). Moreover, they can be taken as vital ecological indicators and their distribution can be related to factors like habitat loss, fragmentation, land use and most of all, climate change (Thomas *et al.*, 1998).

Nepal is home to 660 species of butterflies (Smith, 2011a). Colin Smith has classified the distribution of butterflies of Nepal into 4 categories. The West (W), area encompassing Karnali watershed, The Center (C) encompassing Gandaki watershed, The East, encompassing Koshi and Mechi watersheds and Kathmandu (K) encompassing Bagmati watershed (Smith 2011b). However, it is inevitable that these distribution records, most of which were taken decades ago, have changed over time, and the species in the east (E) and the west (W) have frequently been seen in Kathmandu (K) and other central Nepal regions (C) as well.

The present note supplements a previous paper on Hesperiid (K.C., 2020), highlighting findings during the past 2 years (2019-2020) in which anomalous records of Lycaenidae butterflies with reference to Colin Smith's distribution records (1994; 2011a; 2011b; 2016) have been presented. Most findings are based on photographic records. ID keys from Evans (1927; 1932) have been followed.

Observations

Lycaenidae

1. *Taraka hamada mendesia* Fruhstorfer, 1918
- Forest Pierrot

Only recorded from the east earlier, this species is very common in the central hills. Several individuals were seen in Lamjung, Bhorletar (28°09'57" N; 84°13'02" E) and Kaski, Lakeside (28°26'29" N 83°96'85" E) in central Nepal from March-October.

2. *Sinthusa nasaka pallidior* Fruhstorfer, [1912] - Narrow Spark

This was only recorded from west and Kathmandu earlier; however, several individuals were seen in central Nepal, Bandipur, Tanahun, (27°56'27"N; 84°24'59"E) flying around bushes of *Rubus paniculata* SM. along with *Sinthusa chandrana* (Moore, 1882) in March, 2020, at 800 masl.

3. *Catochrysops panormus exiguus* (Distant, 1886) - Silver Forget-Me-Not

Recorded only from Kathmandu in the past, a mating pair was seen in Bhorletar, Lamjung (28°09'57" N; 84°13'02" E) in March, 2020 at around 460 masl. The costal spot on the underside forewing is closer to postdiscal band while it is midway between discal and postdiscal band in *C. strabo strabo* (Fabricius, 1793).

4. *Tarucus waterstradii dharta* Bethune-Baker, [1918] - Assam Pierrot

Three individuals were seen in Bhorletar, Lamjung (28°09'57" N; 84°13'02" E). They were only recorded from Sankhuwasabha, east

and as near as Parsa before (Smith, 1994). The discal spots on sp. 5 on UnFW and UnHW were not coalesced to postdiscal band (Evans, 1932) unlike in *Tarucus ananda* (de Nicéville, [1884]) and the UnHW discal spots 3,4 and 5 are fused together forming a forming a straight bar parallel to and well separated from postdiscal line (Basu *et al.*, 2019). Our records were from April, May and June 2020, at around 460 masl.

5. *Everes argiades diporides* Chapman, 1908 - Chapman's Cupid

An individual was recorded at Bandipur, Tanahun (27°56'13"N; 84°24'04"E), central Nepal, in March at 1121 masl. It was earlier recorded only from west and Kathmandu.

6. *Neopithecops zalmora* (Butler, [1870]) - Common Quaker

Although recorded only from the east before *vide* Smith (2011), they were quite common in Neulapur, Bardiya (28°27'43"N; 81°15'10"E), west in late February, 2020, at 170 masl.

7. *Heliophorus brahma* (Moore, [1858]) - Golden Sapphire

This butterfly was only documented from the east and Kathmandu valley earlier. One individual was observed at Kaadey, Kaski (28°17'29"N; 83°49'23"E), central Nepal at 1750 masl in October, 2020.

8. *Tarucus* Moore, 1881 sp.

A peculiar *Tarucus* sp. was encountered at AFU, in Rampur, Chitwan (27°39'10"N; 84°21'12"E), central Nepal at 160 masl, on 14.iii.2020. The other related *Tarucus* from Nepal, *Tarucus callinara* Butler, 1886, has spotted and broken post discal spots and unH discal spots 5, 6 and 7 are equidistant and in line (Evans, 1932). The sighted individual has UnhW discal spot 6 much closer to 7 and far away from 5. The postdiscal line is somewhat regular but not as in *T. nara* (Kollar, 1848) in which it is much like a stripe. The individual could very well have been *T. venosus* Moore, 1882 which is not recorded from Nepal. Other possibilities are *T. balkanica* (Freyer, 1844) and *T. indica* Evans, 1932 none of which are

recorded from Nepal. The species cannot be confirmed without upperwing, male genitalia and androconia, but is mentioned to alert future workers to examine specimens of the genus in the area.

Discussion

The record of these butterflies in new regions of Nepal proves the flow of species from one part to another, and in most cases, extension of species from the west and the east to central areas. It could also be that these species were always there but never before seen due to scanty exploration. In most cases, the anomalous species were seen in March-May and not in other months. These months are also the best months to observe butterflies in Nepal, including September-November. Further studies could reveal more hidden secrets regarding the distribution of butterflies in Nepal.

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References

- Abideen, A.A., O.G. James & M. Samuel. 2015. Butterfly Species Diversity and Abundance in University of Ibadan Botanical Garden, Nigeria. *Journal of Ecology* 5:352-360.
- Basu D.N., P. Churi, A. Soman, A. Sengupta, M. Bhakare, S. Lokhande, S. Bhoite, B. Huertas & K. Kunte. 2019. The genus *Tarucus* Moore, [1881] (Lepidoptera: Lycaenidae) in the Indian Subcontinent. *Trop. Lepid. Res.* 29(2): 87-110.
- Evans, W. H. 1927. *The Identification of Indian Butterflies*. 1st ed. Bombay Natural History Society, Bombay. The Diocesan Press, Madras, 302 pp. + 32 pls.
- Evans, W. H. 1932. *The Identification of Indian Butterflies*. 2nd ed. Bombay Natural History Society, Bombay. The Diocesan Press, Madras, x + 454 pp. + 32 pls.

Forster, W. 1941. Neue Lycaeniden-Formen aus China II. *Mitteilungen der Munchner Entomologischen Gesellschaft (e.V.)*. 11: 593-627.

K.C. S. 2020. Some new distribution records of Hesperiid butterflies in Nepal. *Bionotes* 22 (3): 190-194.

Smith, C. 1994. *Butterflies of Nepal*. Tecpress Services L.P., Bangkok, Thailand. 368 pp.

Smith, C. 2011a. *Butterflies of Nepal in Natural Environment*. Himalayan Map House (P.) Ltd. Basantapur, Kathmandu, Nepal. 144 pp.

Smith, C. 2011b. *Illustrated Checklist of Nepal's Butterflies*. Rati Majupuria, Balkhu, Kumari Club, Kathmandu, Nepal. 129 pp.

Smith, C., L. Sherpa & N. Shristi. 2016. *Butterflies of Begnas and Rupa Watershed Area*. Pokhara, Nepal: LI-BIRD. 174 pp.

Thomas, J.A, D. J. Simcox, J. C. Wardlaw, W. G. Elms, M. E. Hochberg & R. T. Clark. 1998. Effects of latitude, altitude and climate on the habitat and conservation of the endangered butterfly *Maculinea arion* and its *Myrmica* ant host. *Journal of Insect Conservation* 2: 39-46.



Fig.1: Assam Pierrot, underside



Fig.2: Assam Pierrot, upperside



Fig.3: Chapman's Cupid



Fig.4: Common Quaker



Fig.5: Golden Sapphire



Fig.6: Narrow Spark



Fig.7: Silver Forget-me-not Blue



Fig.8: Forest Pierrot



Fig.9: *Tarucus* sp.