

New Evidence of Himalayan Small-banded Flat *Celaenorrhinus nigricans nigricans* (de Nicéville, 1885) from Nepal

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Abstract

Two specimens of *Celaenorrhinus nigricans nigricans* (de Nicéville, 1885) were recorded from Nepal in July 2019 in the mid-hill regions of Syangja and Kaski district. One specimen was recorded from a hilltop in Syangja district along a rural trail while the other specimen was recorded along a forest trail in Sarangkot, Pokhara. The addition of this new record sums up the total number of butterfly species in Nepal to 661 and the total number of species in the genus *Celaenorrhinus* to 9.

Keywords: butterflies, skippers, Nepal, new distribution record

Introduction

Celaenorrhinus (Hübner, 1819) ^[11] is a genus of butterflies belonging to the family HesperIIDae. Generally, they are referred as flats or sprites. *Celaenorrhinus* is one of the largest genera of skippers with approximately 90 species known worldwide (Bascombe *et al.*, 1999) ^[6] almost half of which occur in Oriental Region (de Jong & Treadaway, 2007) ^[14]. They can normally be found during day inside forest resting under leaves in shade but can also be found in sunny patches of the forest in early morning or late afternoon. *Celaenorrhinus nigricans* (de Nicéville, 1885) ^[8] is distributed in Sikkim and Assam to Burma and West Thailand; Borneo; Philippines (de Jong & Treadaway, 1993) ^[13]. *Celaenorrhinus nigricans* has four subspecies viz. *C. n. balukinus* (Elwes & Edwards, 1897) ^[2], *C. n. orbiferus* (Elwes & Edwards, 1897) ^[2] which are undoubtedly synonymous as they are both from Kinabalu, Sabah, Malaysia, *C. n. mindanus* de Jong, 1981 ^[12] from Philippines and *C. n. nigricans* (de Nicéville, 1885) ^[8] is found in Indo-China region (de Jong & Treadaway, 1993) ^[13].

General Thomson Hardwick is known to be the first butterfly collector in Nepal who started studying them in Nepal since 1826. Maj. W.G.H. Gough (1935) ^[10] made the first attempt to compile a list of butterfly species in Nepal. He recorded 150 species. Later on, Maj. Gen. Ramsey indexed 44 species during 1852-67 (Khanal and Smith, 1997) ^[15]. Then after, Lt. Col. F.M. Bailey (1951) ^[5] published a list of 365 species. A Japanese expedition to Kathmandu and East Nepal in 1970 produced a list of 285 species of which 8 or 10 species or subspecies were new to science (Smith 1994) ^[19]. Later V.K. Thapa (1998) ^[21] published 656 species of butterflies in Nepal. Similarly, Colin Smith (1978) ^[18] initially indexed 567 species in Nepal. In his book 'Butterflies of Nepal (Central Himalaya)' (1994) ^[19], he indexed 643 species of butterflies in Nepal. Likewise, in his book 'Butterflies of Nepal in Natural Environment (2011) ^[20]' he mentioned that 660 species are found in Nepal, and 690 if we count 30 subspecies. In the genus *Celaenorrhinus* (Hübner, 1819) ^[11], 8 species

were recorded from Nepal in the past. Those species are *Celaenorrhinus ratna tyleri* Evans, 1926 ^[9], *Celaenorrhinus pero lucifera* Leech, 1894 ^[16], *Celaenorrhinus patula* de Nicéville, 1889 ^[4], *Celaenorrhinus leucocera* (Kollar, 1844) ^[17], *Celaenorrhinus putra putra* (Moore, 1866) ^[7], *Celaenorrhinus munda* Moore, 1884 ^[3], *Celaenorrhinus maculicornis* Elwes & Edwards, 1897 ^[2] and *Celaenorrhinus dhanada dhanada* Moore, 1865 ^[1]. Colin Smith had included *Celaenorrhinus nigricans* (de Nicéville, 1885) ^[8] in his 1978 Checklist based on a vague data by an unknown author, so he later pulled it out of the list because of the lack of confirmation. Later he himself spotted this species 3 times in Kaski. Once in Rakhi Village (25th June, 2006) and twice in Tiger Mountain, Pokhara, on 8th March, 2009 and 5th July, 2010 respectively. However, these data were grey literature only and were not globally published. This paper is written to bring out a new evidence of *Celaenorrhinus nigricans nigricans* (de Nicéville, 1885) ^[8] in Nepal. This brings the total number of butterfly species in Nepal to 661 and the total number of species in the genus *Celaenorrhinus* to 9.

Methodology

The species was encountered during a random photography trip in the forest trails of Sarangkot, Pokhara of Kaski district and a rural trail of Magyam, Chisapani of Syangja district, mid hills of Nepal. The major floral components in both locations were bamboos, *Castanopsis indica*, *Schima wallichii* and mostly *Rubus paniculata*, while pine trees and *Shorea robusta* were also prevalent in a nearby hills in Syangja location. The sightings were recorded capturing photos in Sony Cyber-Shot DSC-HX90V 18.2MP camera. The Global Positioning System (GPS) details of location and date were recorded on the photos itself. Identification was based on the ID keys prepared by Colin Smith. Unfortunately, the flash feature couldn't be used while photographing the specimen in Syangja, so a photograph from Pokhara is included both with and without flash to compare and confirm that both species are indeed same.

The following ID keys given by Colin Smith himself were adopted for identification;

1. No orange spots on the Hind-Wing
2. Discal band on Fore-wing White (not yellow)
3. Discal band extends to Costa
4. Spot in cell 3 joined into band (not separate), but also

5. Only one small spot below vein 2 against outer edge of band (not two)
6. Hind-wing cilia mostly brown (nor prominently chequered)

Result and Observation

Images of all sightings:



Fig 1: Sighting in Pokhara

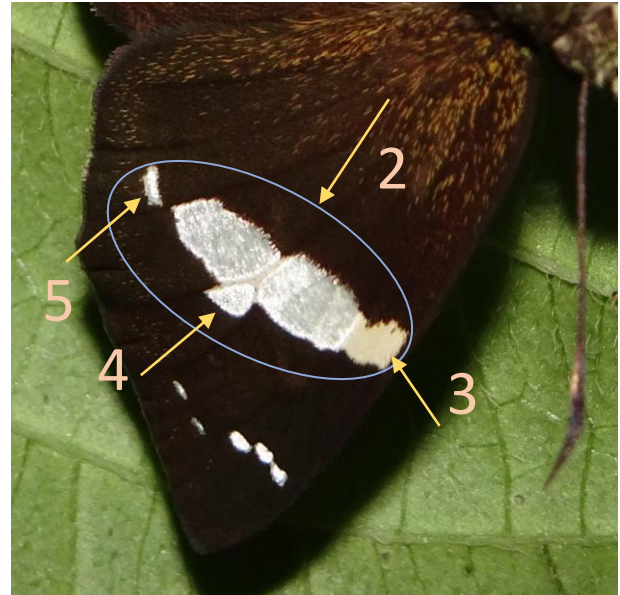


Fig 4: ID Keys on forewing



Fig 2: Sighting in Pokhara (Without Flash)

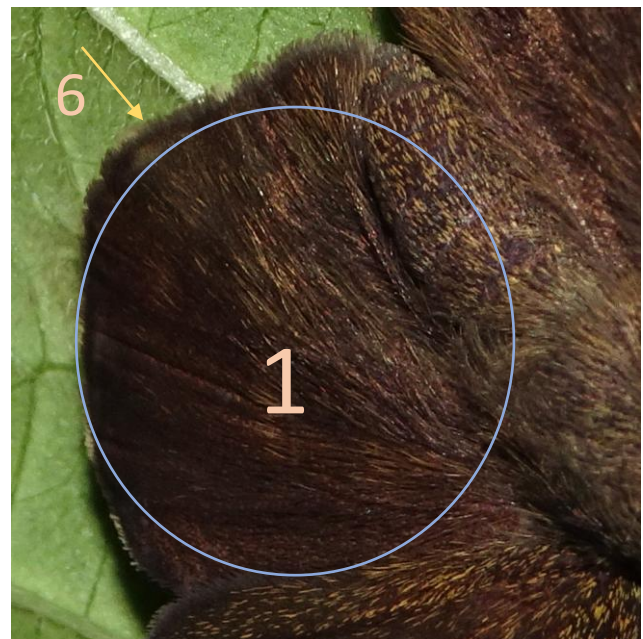


Fig 5: ID Keys on hindwing



Fig 3: Sighting in Chisapani

Table 1: Details of Sightings

Location	District	GPS	Altitude	Environment	Time of Day	Date	Number of specimens recorded
Sarangkot, Pokhara (Fig 1, 2)	Kaski	28°13'01.9"N 83°57'47.3"E	868 masl	Forest Trail	4:56 PM	14.vii.2019	1
Magyam, Chisapani (Fig 3)	Syangja	28°01'04.6"N 84°00'05.9"E	963 masl	Rural Trail on a Cloudy Day	12:23 PM	09.vii.2019	1

Discussions

Celaenorrhinus nigricans nigricans (de Nicéville, 1885) [8] had been recorded in the past from as close as Assam and Sikkim. However, the record of this species from Nepal has not been included in any books or papers on butterflies of Nepal yet. This new record signifies that there could indeed be many other species new to Nepal and the checklist of butterflies of Nepal is not complete yet. Thus, further researches need to be conducted in various nooks and crannies of the country to get a more thorough list of the butterflies of Nepal.

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