



## On the presence of *Aglais cashmirensis* Kollar (Nymphalidae) and *Heliophorus sena* Kollar (Lycaenidae) in Rupa, Arunachal Pradesh, India

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The butterflies of Arunachal Pradesh are not well known. Among the earliest lists of the area is that by Betts (1950) who reported the Papilionidae, Pieridae, Nymphalidae and Riodinidae. Subsequently Arora & Mondal (1981) reported the Papilionidae. There does not seem to be any list of the Lycaenidae and Hesperidae of the area.

**Materials and Methods:** Butterflies in and around Rupa (27°11'60"N & 92°24'E, 1800m), Arunachal Pradesh, India, were photographed between May 2008 and November 2009. These were sent to Peter Smetacek, Bhimtal, India for identification. Among the species recorded, there were two that deserved special notice, the Indian Tortoiseshell *Aglais cashmirensis* Kollar (Image 1) and the Sorrel Sapphire *Heliophorus sena* Kollar (Image 2).

**Discussion:** *Aglais cashmirensis* and *Heliophorus sena* are residents of Rupa and the larval host plants of both, i.e. *Urtica* L. (Urticaceae) and *Rumex hastatus* D. Don (Polygonaceae) respectively, are well established throughout the area.

*Aglais cashmirensis aesis* Fruhstorfer was noted by Betts (1950) from "Meadows, 5000 to 8000 ft in temperate

Momba country only", Momba referring to the human inhabitants of a part of what was then the Balipara Frontier Tract. However, subsequent authors such as Haribal (1992) and Kehimkar (2008) apparently overlooked this report and gave a distribution as far west as Sikkim (Haribal 1992) and Bhutan (Kehimkar 2008) for the species when it is, in fact, well established in western Arunachal Pradesh.

It is on the wing from February to December but absent in the months of June, July and August, which is the wet season in this area. It has been noted mainly at widely cultivated exotic garden flowers such as *Gaillardia pulchella*, *Chrysanthemum indica*, *C. frutescens*, *Tagetes minuta* and *Tagetes patula*.

It is a common insect near habitation and wasteland where its larval food plant, *Urtica* sp., grows plentifully.

*Heliophorus sena* has so far not been reported from Arunachal Pradesh. Haribal (1992) does not mention the species while Kehimkar (2008) states that it is found from Afghanistan to Nepal. The present record extends the distribution of this species to western Arunachal Pradesh. While this species was previously considered a west Himalayan endemic, it is now clear that it has a pan-Himalayan distribution and may well be found even further east, since the range of the larval host plant, *Rumex hastatus*, extends from Afghanistan to southwestern China (Polunin & Stainton 1984).

The distribution of *H. sena* is of interest. Earlier authors such as Evans (1932) and Wynter-Blyth (1957) reported it from Chitral to Kumaon. Thus it appeared to be a west Himalayan endemic, although the distribution of its larval hostplant, *R. hastatus*, was known to extend to southwestern China. Since there are other members of the genus with a very restricted distribution, such as *Heliophorus oda* Hewitson (Himachal Pradesh to Uttarakhand in India (Evans 1932)) and *Heliophorus bakeri* Evans (Chitral to Himachal Pradesh in India (Evans 1932)), it appeared that climatic factors were restricting *H. sena* from extending its distribution to the extent of its larval host plant. It is now evident that the butterfly extends over most of the range of *R. hastatus*. Robinson et al. (2001) report *H. sena* as having also been bred on *Abutilon* (Malvaceae) on the basis of a card index in the Natural History Museum, London, but this does not appear to be its food plant of choice, since *Abutilon* is also found at low elevation on the Gangetic plain where the butterfly does not venture.

*H. sena* is quite local and will rarely be found more than a few hundred meters from the nearest patch of *R. hastatus*. Where there is an undisturbed patch of the plant, the butterfly can be very common for most of the year.

It is a common butterfly in Rupa, especially in the vicinity of its larval host plant. Since *R. hastatus* grows

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Image 1. Indian Tortoiseshell *Aglais cashmirensis*



Image 2. Sorrel Sapphire *Heliophorus sena*

abundantly near river banks and waterbodies, the butterfly is commonest in such places. It is on the wing from February to November. It is very fond of *Hydrangea* blossoms and is also attracted to *Calendula officinalis*.

**Conclusion:** The range of two Himalayan butterfly species is extended eastwards to Rupa in western Arunachal Pradesh. Although *A. cashmirensis* was reported from the area earlier (Betts 1950), the report was evidently overlooked and so it has become necessary to re-report it.

Both *A. cashmirensis* and *H. sena* are common and well established in Rupa and their presence earlier was reported but overlooked in the case of the former and simply not reported in the case of *H. sena*, since the Lycaenidae of Arunachal Pradesh do not appear to have been reported in the literature so far.

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