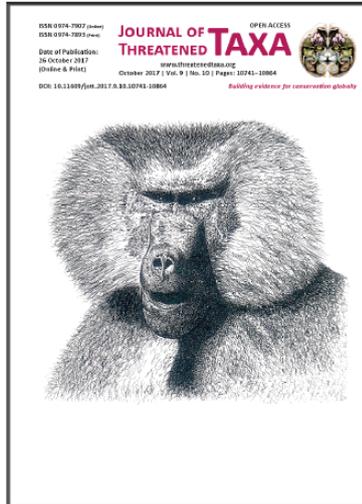


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### NOTE

### NEW BUTTERFLY RECORDS FROM THE JAMMU SHIWALIKS, JAMMU & KASHMIR, INDIA

Shakha Sharma & Neeraj Sharma

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The Himalayan state of Jammu & Kashmir, owing to a variety of habitats, different climatic regimes and a wide range of altitudes, offers conducive habitats to butterflies ranging from the low level hills of the Shiwaliks through Pir-Panjal and the valley of Kashmir to the Trans-Himalayan landscapes of Ladakh. It is noteworthy that these mountainous landscapes though rich in insect diversity are the least known for butterfly fauna. The earlier records of butterfly checklists date back to the pre-independence era and the mid 20<sup>th</sup> century (Moore 1865, 1874; Lang 1868; Bingham 1905, 1907; Meinertzhagen 1927; Evans 1932; Talbot 1939, 1947; Wynter-Blyth 1957). While Kashmir has been a major attraction for different entomologists and naturalists (Home 1938; Mani & Singh 1962; Das et al. 1964; Das & Verma 1965; Qureshi 2014) followed by Ladakh (Meinertzhagen 1927; Tshikolovets 2005; Sidhu et al. 2012; Sondhi et al. 2017), only a few efforts have been made to inventorize the butterflies with a few scattered studies in the Jammu Shiwaliks (Sharma & Sharma 2017).

The present communication is based on the opportunistic surveys of butterflies (on the sidelines of avian surveys) conducted in the Jammu Shiwaliks during 2015 and 2016. A number of butterfly species have been observed and photographed. The species identification was done by consulting the available literature viz., keys (Evans 1927, 1932), catalogue (Varshney & Smetacek 2015), field guides and books (Varshney 1983, 1993; Kunte 2006; Pajni et al. 2006; Singh 2010; Kehimkar 2014, 2016), annotated checklist (van Gasse 2013), besides the online resources (Saji et al. 2017; Saji &

## NEW BUTTERFLY RECORDS FROM THE JAMMU SHIWALIKS, JAMMU & KASHMIR, INDIA

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Haneesh 2017; Lovalekar et al. 2017; Ogale 2017)

With an approximate geographical coverage of 2,400km<sup>2</sup>, the study area is located in low-level hill country outside the Pir-Panjal and between Jhelum and Ravi rivers constituting the Jammu Hills (Fig. 1) in Jammu & Kashmir State. Mostly covering the twin districts of Jammu and Samba, the area is interspersed with typical sub-tropical vegetation with altitudes ranging from 318–655 m. During the opportunistic surveys, five species were recorded that are additions to the butterfly checklist of Jammu & Kashmir, of which there are no published records. Approximately, 80 species of butterflies were recorded (unpublished).

### Papilionidae (Papilioninae)

#### *Papilio clytia* Linnaeus (Common Mime)

Current known distribution: India (Himachal Pradesh to the north east, Arunachal Pradesh, southern, central and eastern India), Pakistan, Nepal, Bhutan, Bangladesh, Myanmar and Sri Lanka (van Gasse 2013; Kehimkar 2014, 2016; Varshney & Smetacek 2015; Saji et al. 2017).

Remarks: An adult was observed (Image 1a,b) hovering over *Lantana camara* scrub around a

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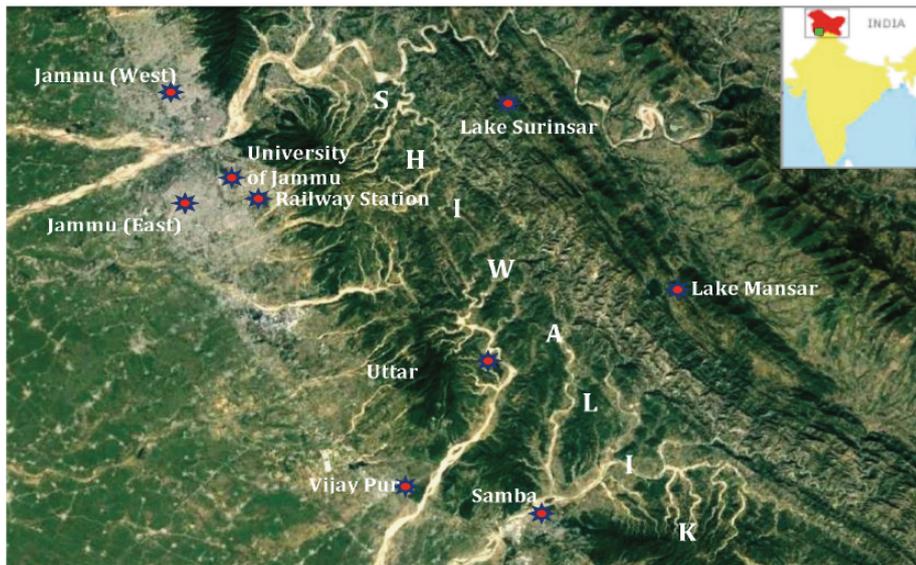


Figure 1. Map of the study area showing locations of butterfly record



Image 1 a&b. Common Mime *Papilio clytia* (wings closed and open)

community pond near the University of Jammu, Jammu at an elevation of 327m on 22 June 2015. The species has not been recorded since then in the vicinity and whole of the study area despite our intensive efforts suggesting it is rare and has a restricted distribution in the region.

The species so far has been reported from the nearby state Himachal Pradesh (Kehimkar 2016), and is thus a possible range extension further north and a new record for the state of Jammu & Kashmir.

#### Lycaenidae (Polyommatae)

##### *Talicauda nyseus* Guérin-Ménéville (Red Pierrot)

Current known distribution: India (Peninsular India, Maharashtra to Kerala, Andhra Pradesh, Madhya Pradesh, Odisha, Himachal Pradesh, Uttarakhand, Uttar Pradesh to northeastern India), Sri Lanka and Myanmar

(van Gasse 2013; Kehimkar 2014, 2016 Varshney & Smetacek 2015; Saji et al. 2017).

Remarks: An individual was observed hovering over a *Lantana* bush near the University of Jammu at an elevation of 321m on 13 July 2015 (Image 2). Another pair was observed mating in the lawns of a private property near the railway station, Jammu (338m) on 21 July 2015. The species, though common in the rest of India, has not been recorded so frequently in this part of northwestern Himalayas except for an individual (unpublished) record from Srinagar (J & K) by Parveen Purohit (Saji et al. 2017). The current sightings thus confirm an eventual range extension of the species, which seems to have successfully colonized the urban landscapes of the Jammu Shivaliks and acclimatized well further north towards the valley of Kashmir.

Image 2. Red Pierrot *Talicada nyseus*Image 3. Anomalous Nawab *Polyura agraria*Image 4. Common Sergeant *Athyma perius*Image 5. Bamboo Treebrown *Lethe europa*

### Nymphalidae (Charaxinae)

#### *Polyura agraria* Swinhoe (Anomalous Nawab)

Current known distribution: India (southern India up to Gujarat, Punjab, Haryana, Himachal Pradesh, Uttarakhand, Madhya Pradesh, Chhattisgarh, Odisha, northeastern India), Nepal, Sri Lanka and Myanmar (van Gasse 2013; Kehimkar 2014, 2016; Varshney & Smetacek 2015; Lovalekar et al. 2017; Mehra et al. 2017).

Remarks: Two individuals were noted swiftly flying over the mixed stand of thorny *Acacia modesta*, *Acacia catechu*, *Flacourtia indica* and *Lantana camara* at Uttarbehni (395m) on 27 October 2016 until one suddenly descended from the trees and landed on the unpaved road, presumably for salt intake (Image 3). Another individual was seen basking on the leaves of a *Jacaranda mimosifolia* tree in the University of Jammu at 325m on 28 November 2016.

The species, though not rare in peninsular India, is also recorded from the north (Punjab, Haryana, Himachal

Pradesh and Uttarakhand); however this sighting is the first ever record from the state of Jammu & Kashmir.

### Nymphalidae (Limenitidinae)

#### *Athyma perius* Moore (Common Sergeant)

Current known distribution: India (Himachal Pradesh to Arunachal Pradesh, northeastern India, peninsular India up to Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal), Myanmar (van Gasse 2013; Kehimkar 2014, 2016 Varshney & Smetacek 2015; Ogale 2017).

Remarks: An individual was recorded flying and mud puddling around *Lantana camara - Ipomea carnea* bushes along the banks of Lake Surinsar, Jammu at an elevation of 607m on 12 November 2016 (Image 4).

The species has already established its presence up to the adjoining state of Himachal Pradesh and thus is a range extension further north and a new record for Jammu & Kashmir.

**Nymphalidae (Satyrinae)*****Lethe europa* Fabricius (Bamboo Treebrown)**

Current known distribution: India (southern India, Madhya Pradesh, Jharkhand, Odisha, West Bengal, Punjab, Himachal Pradesh, Uttarakhand to Arunachal Pradesh, northeastern India), Nepal, Bhutan and Myanmar (van Gasse 2013; Kehimkar 2014, 2016; Varshney & Smetacek 2015; Saji & Haneesh 2017)

Remarks: The species has been observed in a variety of habitats in the urban-suburban landscapes, parks and gardens and avenue plantations and forest interiors. Solitary individuals (Image 5) have been recorded seven times in different habitats at an elevation range of 332m (near Jammu City) to 655m (Mansar Lake) and Surinsar Lake (607m) from August to late October in 2015 and 2016, respectively. The species has earlier not been reported from the state and thus is a new addition to the butterfly fauna of the state.

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