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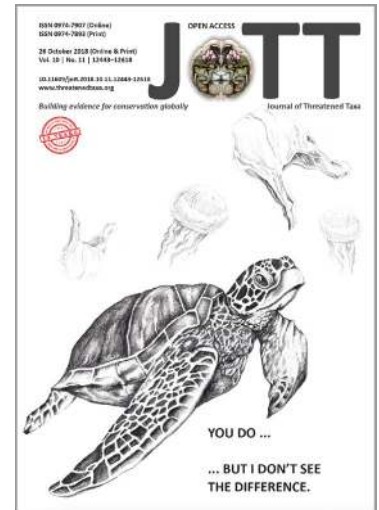
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NOTE

NEW NYMPHALID BUTTERFLY RECORDS FROM JAMMU & KASHMIR, INDIA

Shakha Sharma & Neeraj Sharma

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India is home to 461 species of butterflies belonging to the largest family Nymphalidae (Varshney & Smetacek 2015; Kehimkar 2016). A number of reports on the range extension of butterfly species are consistently pouring in from the states of Uttarakhand, Himachal Pradesh, and Punjab of the northwestern Himalaya, but the

information on the distribution and range extension of butterflies in the northern Himalayan state of Jammu & Kashmir is scanty and equivocal. The Jammu region of Jammu & Kashmir offers a wide range of habitats from the alluvial plains of the Ravi and Chenab in the south to the moderately elevated Shiwaliks, Pir-Panjal, and Great Himalaya northwards, bordering Kashmir in the north and Ladakh in the northeast. While a good account of butterfly fauna is available for Kashmir (Home 1938; Mani & Singh 1962; Das et al. 1964; Das & Verma 1965; Qureshi et al. 2014) and Ladakh (Meinertzhagan 1927; Tshikolovets 2005; Sidhu et al. 2012; Sondhi et al. 2017), only a few records are available from the Jammu region (Sharma & Sharma 2017a,b, 2018). During the surveys conducted in the Jammu Shiwaliks, Sharma & Sharma (2017a) reported three new nymphalid butterfly species for the state and these included *Polyura agraria*, *Athyma perius* and *Lethe europa*.

Targeting a wide area, the butterfly surveys were conducted in different landscapes across sub-tropical and temperate climatic regimes, viz., Kalidhar and Dalhori forests, Rajouri District (west), Mansar-Surinsar-

NEW NYMPHALID BUTTERFLY RECORDS FROM JAMMU & KASHMIR, INDIA

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Manwal Range, Jammu, Samba, and Udhampur districts (south), Billawar-Basoholi-Bani, Kathua District (east), Batote-Baderwah, Ramban and Doda districts (north), and Paddar in Kishtwar District (far northeast) in an elevation range of 320–3,200 m (Fig. 1) from June 2016 to June 2018. During the explorations, we sighted five nymphalid butterfly species previously not reported from the state of Jammu & Kashmir. The species were photographed in the field and the geo-coordinates were recorded. The species were identified 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; Smetacek 2016; Sondhi & Kunte 2018), annotated checklist (van Gasse 2017), and online resources (Anonymous 2018a,b; Choker et al. 2018; Karmakar & Sarkar 2018; Kunte et al. 2018).

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

Heliconiinae

Vagrans egista Kollar (Vagrant)

Current known distribution until this study: India (Punjab, Himachal Pradesh, Uttarakhand to Arunachal Pradesh, West Bengal, and Odisha), Nepal, Bhutan, and Myanmar (van Gasse 2017; Kehimkar 2014, 2016; Varshney & Smetacek 2015; Anonymous 2018a).

Remarks: Three individuals were spotted nectaring on the water pepper plant *Polygonum hydropiper* L. along the banks of lake Mansar (32.693°N & 75.149°E, c. 665m), Samba District, on 22 October 2017. Five individuals were noted mud-puddling on the moist sandy bed of a seasonal stream near Manwal (32.801°E & 75.140°E, c. 575m) in Udhampur District on 28 October 2017 (Image 1). Three individuals were again sighted on the same day in an adjacent stream. The species, though widely distributed across the Himalaya with its known western distribution up to Himachal Pradesh (Kirti et al. 2016; Anonymous 2018a), was recorded for the first time from the state of Jammu & Kashmir.

Acraea issoria issoria Hubner (Himalayan Yellow Coster)

Current known distribution until this study: India (Himachal Pradesh to Arunachal Pradesh), Nepal, Bhutan, and Myanmar (van Gasse 2017; Kehimkar 2014, 2016; Varshney & Smetacek 2015; Sondhi & Kunte 2018; Kunte et al. 2018).

Remarks: On the sunny evening of 04 June 2018, an individual of Himalayan Yellow Coster was spotted



Image 1 Vagrant *Vagrans egista*

basking over a leaf of *Debregeasia hypoleuca* Gaudich (Image 2a) along a perennial stream near Batote (33.110°N & 75.340°E, c. 1,390m) on the Jammu-Kishtwar State Highway. On scanning the area further up along the stream, we noticed sluggish swarms of Himalayan Yellow Coster butterflies hovering and intermittently sitting over *Debregeasia hypoleuca* Gaudich and *Girardinia palmata* Blume shrubs. Two days later, on 06 June 2018, a few pairs were observed mating (Image 2b) while a few others were spotted laying eggs. On 19 June 2018, we visited the spot again and observed the ventral surface of *D. hypoleuca* Gaudich leaves loaded with eggs along with a few freshly emerged caterpillars (Image

2c). The species has its established distribution across the Himalayas from Arunachal Pradesh in the east up to Solan District of Himachal Pradesh in the far west (Kunte et al. 2018) until this reporting, thus confirming it as an addition to the butterfly fauna of Jammu & Kashmir.

Limenitinae

Auzakia danava Moore (Indian Commodore)

Current known distribution until this study: India (Himachal Pradesh, Uttarakhand to Arunachal Pradesh, northern hills of West Bengal), Nepal, Bhutan, and Myanmar (van Gasse 2017; Kehimkar 2014, 2016; Varshney & Smetacek 2015; Anonymous 2018b; Sondhi & Kunte 2018).

Remarks: On the bright sunny afternoon of 23 October 2017, a female individual (Image 3a) was seen hovering over a gregarious *Mentha longifolia* L. growth near marshy slopes of Pranoo (32.113°N & 75.575°E, c. 1,020m), Bhaderwah. A male individual was spotted perched on a rocky boulder near Nalthi (32.937°N & 75.712°E, c. 2025m), Bhaderwah, on 18 May 2018 (Image 3b). The species has a widespread distribution across the Himalayas, with its western extent reported up to Bandli Wildlife Sanctuary, Mandi District, Himachal Pradesh (Anonymous 2018b). This is the first sighting of the species from this part of the northwestern Himalayas and thus is a new record for the state of Jammu & Kashmir.

Cyrestinae

Pseudergolis wedah Kollar (Himalayan Tabby)

Current known distribution until this study: India (Himachal Pradesh to Uttarakhand, Sikkim, Arunachal Pradesh), Nepal, Bhutan, Bangladesh, and Myanmar (van Gasse 2017; Kehimkar 2014, 2016; Varshney & Smetacek 2015; Karmakar & Sarkar 2018; Sondhi & Kunte 2018).

Remarks: An individual was seen basking over a sandstone along a small rivulet near Dalhori (32.299°N & 74.453°E, c. 1125m), Rajouri, on 21 July 2017. A group of five individuals was again sighted in a dumpy vegetated location near Kalidhar (33.050°N & 74.646°E, c. 810m), Jammu District, on 20 October 2017 (Image 4). On the same day two individuals were again spotted basking over the leaves of *Ficus auriculata* Lour, two others sitting on dung, and one observed in continuous low flight. Taslima Sheikh also recorded the species from Chenani (33.041°N & 75.279°E, c. 1,185m), Udhampur District, on 14 August 2017. Karmakar & Sarkar (2018) have reported the westernmost extent of the species up to Mcleodganj in Kangra District, Himachal Pradesh, and this could be a possible missed record or a range



Image 2 a. Himalayan Yellow Coster *Acraea issoria issoria* (male)



Image 2b. Himalayan Yellow Coster *Acraea issoria issoria* (mating pair)



Image 2c. Himalayan Yellow Coster *Acraea issoria issoria* (eggs and caterpillars)



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a



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b

Image 3 a,b. Indian Commodore *Auzakia danava* (female and male)



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Image 4. Himalayan Tabby *Pseudergolis wedah*



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a



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b

Images 5a,b. Common Jester *Symbrenthia lilaea* (wings closed and open)

extension of the species and thus is a new addition to the butterfly fauna of Jammu & Kashmir State.

Nymphalinae

Symbrenthia lilaea Hewitson (Common Jester)

Current known distribution until this study: India (Himachal Pradesh to Arunachal Pradesh, West Bengal, and Odisha), Nepal, Bhutan, and Myanmar (van Gasse 2017; Kehimkar 2014, 2016; Varshney & Smetacek 2015; Choker et al. 2018; Sondhi & Kunte, 2018).

Remarks: An individual was first spotted basking over the leaves of *Ficus auriculata* Lour along the Jammu-Poonch National Highway near Kalidhar (33.052°N & 74.633°E, c. 720m) on 18 October 2017. Two individuals were sighted on the sandy bed of a seasonal stream close to Kalidhar Temple on 20 October 2017 (Images 5 a,b). Another individual was recorded among a group of Vagrant *Vagrans egista*, Common Leopard *Phalanta phalantha*, Lemon Emigrant *Catopsilia pomona*, Danaid Eggfly *Hypolimnas misippus*, Common Punch *Dodona durga*, and Common Beak *Libythea lepita* along a seasonal stream near Manwal (32.801°E, 75.140°E, c. 575m), Udhampur District, on 28 October 2017. Taslima

Sheikh first recorded the species on 22 January 2016 (Choker et al., 2018) from Environmental Park, Jammu (32.729°N, 75.904°E, c. 475m). The species has so far been reported up to Daryar in Solan District of Himachal Pradesh (Choker et al. 2018) and thus is an addition to the butterfly fauna of Jammu & Kashmir State.

References

- Anonymous (2018a).** *Vagrans egista* Cramer, 1780 – Vagrant. In: Kunte, K., S. Sondhi & P. Roy (eds.). *Butterflies of India*, v. 2.31. Indian Foundation for Butterflies. <http://www.ifoundbutterflies.org/sp/908/Vagrans-egista>. Accessed on 05 September 2018.
- Anonymous (2018b).** *Auzakia danava* Moore, 1857 – Commodore. In: Kunte, K., S. Sondhi & P. Roy (eds.). *Butterflies of India*, v. 2.31. Indian Foundation for Butterflies. <http://www.ifoundbutterflies.org/sp/497/Auzakia-danava>. Accessed on 05 September 2018
- Choker, L., P. Gokhale, T. Karmakar & S. Baidya (2018).** *Symbrenthia lilaea* Hewitson, 1864 – Northern Common Jester. In: Kunte, K., S. Sondhi & P. Roy (eds.). *Butterflies of India*, v. 2.31. Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/sp/835/Symbrenthia-lilaea>. Accessed on 05 September 2018
- Das, S.M. & K.D. Verma (1965).** The insects of Kashmir (a special entomo-fauna). *Kashmir Science* 2(1–2): 142–146.
- Das, S.M., Y.R. Malhotra & P.L. Duda (1964).** The Palaearctic elements in the fauna of Kashmir Region. *Kashmir Science* 1(1–2): 100–111.
- Evans, B.W.H. (1927).** *The Identification of Indian Butterflies, Part I*. Bombay Natural History Society, Bombay, The Diocesan Press, Madras, 302pp+32pl.
- Evans, B.W.H. (1932).** *The Identification of Indian Butterflies, Part II*. Bombay Natural History Society, Bombay, The Diocesan Press, Madras, x+454pp+32pl.
- Home, W.M.L. (1938).** Some notes on butterflies and big game in Kashmir. *Journal of the Bombay Natural History Society* 40(1): 49–55.
- Karmakar, T. & V. Sarkar (2018).** *Pseudergolis wedah* Kollar, 1844 – Tabby. In: Kunte, K., S. Sondhi & P. Roy (eds.). *Butterflies of India*, v. 2.31. Indian Foundation for Butterflies. <https://www.ifoundbutterflies.org/sp/741/Pseudergolis-wedah>. Accessed on 05 September 2018.
- Kehimkar, I. (2014).** *The Book of Indian Butterflies*. Bombay Natural History Society, Oxford University Press, Mumbai, 497pp.
- Kehimkar, I. (2016).** *BNHS Field Guides, Butterflies of India*. Bombay Natural history Society, Oxford University Press, Mumbai, 506pp.
- Kirti, J.S., D. Mehra & A.K. Sidhu (2016).** *Vagrans egista sinha* (Kollar, 1844) (Lepidoptera: Papilionoidea: Nymphalidae): range extension and an addition to the butterfly fauna of Himachal Pradesh, India. *Check List* 12(4): 1923; <https://doi.org/10.15560/12.4.1923>
- Kunte, K. (2006).** *India - A Lifescape, Butterflies of Peninsular India*. Universities Press (India) Private Ltd., Hyderabad, India, 254pp.
- Kunte, K., S. Joshi & N. Sharma (2018).** *Acraea issoria* Hübner, 1818 – Yellow Coster. In: Kunte, K., S. Sondhi & P. Roy (eds.). *Butterflies of India*, v. 2.53. Indian Foundation for Butterflies; <https://www.ifoundbutterflies.org/sp/647/Acraea-issoria>. Accessed on 05 September 2018
- Mani, M.S. & S. Singh (1962).** Entomological survey of the Himalaya, part XXVI. A contribution to our knowledge of the geography of high altitude insects of the nival zones from the north-west Himalaya, part 3. *Journal of the Bombay Natural History Society* 59(1): 77–99.
- Meinertzhagen, R. (1927).** Ladakh with special history to its natural history. *The Geographical Journal* 70(2): 129–156; <https://www.jstor.org/stable/1782178>
- Pajni, H.R., H.S. Rose & V.K. Walia (2006).** *Butterflies of North-West India—Part 1*. Atma Ram & Sons, Chandigarh, India, 115pp.
- Qureshi, A.A., R.C. Bhagat & D.M. Bhat (2014).** Diversity of butterflies (Lepidoptera: Papilionoidea and Hesperoidea) of Dachigam National Park, Jammu & Kashmir, India. *Journal of Threatened Taxa* 6(1): 5389–5392; <https://doi.org/10.11609/JoTT.o2886.5389-92>
- Sharma, S. & N. Sharma (2017 a).** New butterfly records from the Jammu Shiwaliks, Jammu & Kashmir, India. *Journal of Threatened Taxa* 9(10): 10856–10859; <https://doi.org/10.11609/jott.3180.9.10.10856-10859>
- Sharma, S. & N. Sharma (2017 b).** Two new species of butterflies from Jammu and neighbourhood, Jammu and Kashmir, India. *Journal of Wildlife Resaerch* 5(1) : 10-13
- Sharma, S. & N. Sharma (2018).** New Lycaenid butterfly records from Jammu & Kashmir, India. *Journal of Threatened Taxa* 10(7): 11984–11987; <https://doi.org/10.11609/jott.4046.10.7.11984-11987>
- Sidhu, A.K., K. Chandra & J. Palot (2012).** Observations on the status and diversity of butterflies in the fragile ecosystem of Ladakh (J & K). *Records of the Zoological Survey of India* 112(3): 101–112.
- Singh, A.P. (2010).** *Butterflies of India*. Om Books International, India, 184pp.
- Smetacek, P. (2016).** *A Naturalist's Guide to the Butterflies of India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka*. John Beaufoy Publishing Ltd., United Kingdom, 176pp.
- Sondhi, S. & K. Kunte (2018).** *Butterflies of Uttarakhand - A Field Guide*. Bishen Singh Mahendra Pal Singh (Dehradun), Titli Trust (Dehradun), National Centre for Biological Sciences (Bengaluru) & Indian Foundation of Butterflies (Bengaluru), x+310pp.
- Sondhi, S., B. Valappil, Y. Sondhi & A. Sondhi (2017).** A report on some butterflies (Lepidoptera) from Ladakh in Jammu & Kashmir and Lahaul in Himachal Pradesh, India. *Journal of Threatened Taxa* 9(3): 9971–9987; <https://doi.org/10.11609/jott.3024.9.3.9971-9987>
- Tshikolovets, V.V. (2005).** *The Butterflies of Ladak (N. W. India)*. Vadim V. Tshikolovets, Pardubice, Czech Republic, 176pp+30pl.
- van Gasse, P. (2017).** Annotated checklist of the butterflies of the Indo-Burmese region. <http://www.ifoundbutterflies.org/Checklists>; Accessed on 26 October 2017.
- Varshney, R.K. & P. Smetacek (2015).** *A Synoptic Catalogue of the Butterflies of India*. Butterfly Research Centre, Bhimtal. Indinov Publishing, New Delhi, ii+261pp+8pl.
- Varshney, R.K. (1983).** Index *Rhopalocera indica*, part II. Common names of butterflies from India and neighbouring countries. *Records of the Zoological Survey of India*. Occasional Paper no. 47: 1–49.
- Varshney, R.K. (1993).** Index *Rhopalocera indica*, part III. Genera of butterflies from India and neighbouring countries [Lepidoptera: (A) Papilionidae, Pieridae and Danaidae]. *Oriental Insects* 27(1): 347–372.





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