



# *Vagrans egista sinha* (Kollar, 1844) (Lepidoptera: Papilionoidea: Nymphalidae): range extension and an addition to the butterfly fauna of Himachal Pradesh, India

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**Abstract:** This paper reports the first record of *Vagrans egista sinha* (Kollar, 1844) (Lepidoptera: Papilionoidea: Nymphalidae) from Himachal Pradesh, India, extending its known distribution (Dehradun to Sikkim, Bengal, Orissa, Assam and Burma) by 250 km westward, beyond the Sutlej defile.

**Key words:** Northwest Himalaya; Oriental region; Australian region

*Vagrans* Hemming, 1934 is a monotypic butterfly genus with the species *Vagrans egista* (Cramer, 1780) distributed throughout the Oriental and Australian regions (D'Abrera 1940). Some authors (Vane-Wright and de Jong 2003; Larsen 2004) recognise two allopatric species, *V. egista* and *V. sinha* (Kollar, 1844), but D'Abrera (1940) considered *V. sinha* to be a subspecies of *V. egista*, and this is followed here. *Vagrans egista sinha* (Kollar, 1844) is distributed in India from western to northeastern Himalaya (Dehradun to Sikkim), Bengal, Orissa, and Assam (Bingham 1905; Evans 1932; Wynter-Blyth 1957). This subspecies also occurs in Bhutan (Singh 2012), southern Burma and Thailand, southern China and Hainan (D'Abrera 1940). It is not included in the Wildlife (Protection) Act, 1972 (Anonymous 2006) and its status is not assessed by the International Union for Conservation of Nature (IUCN 2015).

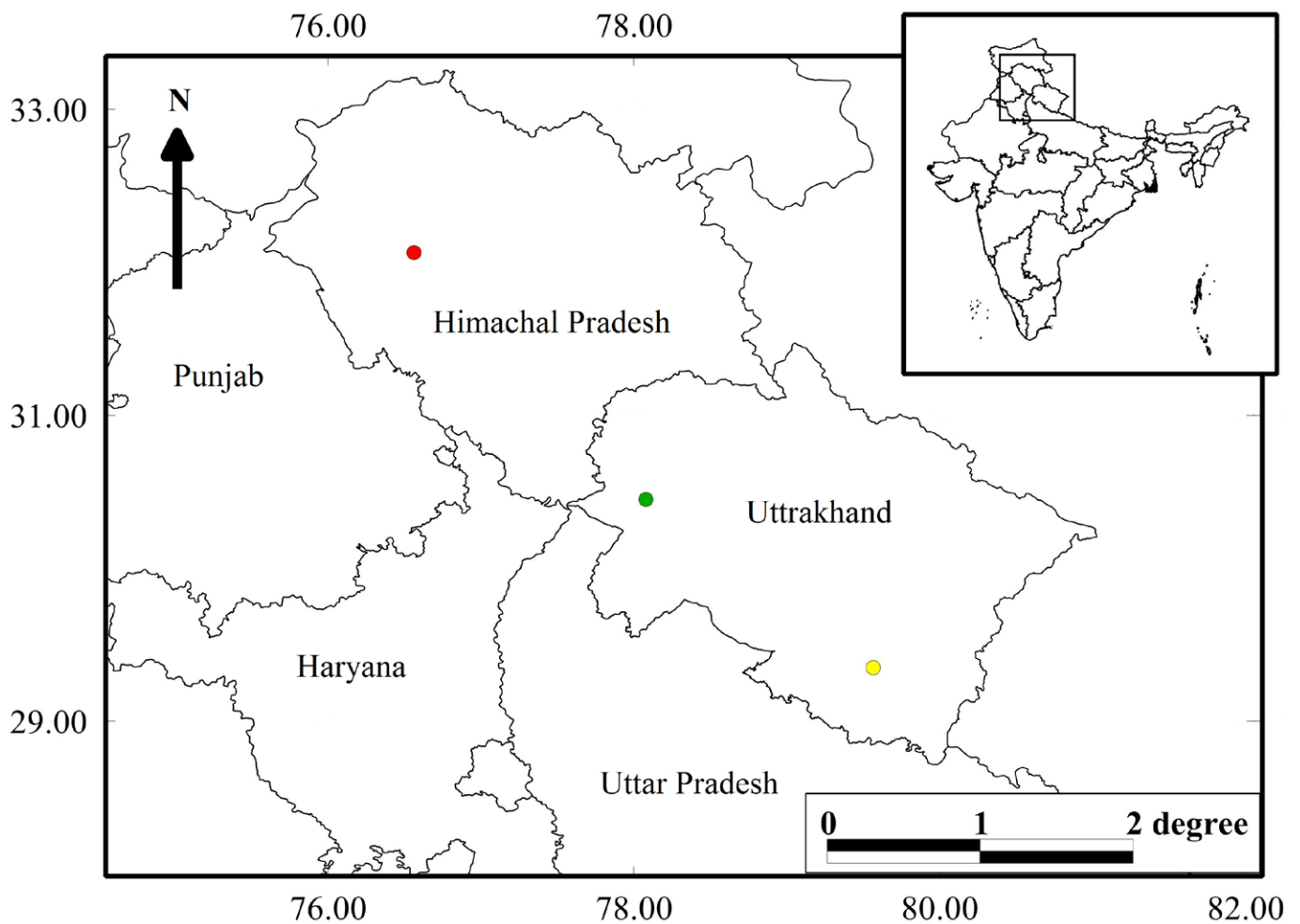
In the western Himalaya *V. egista sinha* occupies mainly tropical deciduous forests between 400 to 1,400 m, Sal (*Shorea robusta* C.F. Gaertn.) forests below 1,000 m, and scrublands (Smetacek 2012; Singh and Sondhi 2016). Its larvae are known to feed on Salicaceae (Malpighiales) (*Homalium circumpinnatum* F.M. Bailey and *Xylosma ovatum* Benth.) and Dilleniaceae (Vane-Wright and de Jong 2003; Smetacek 2012). Although

rare in the Himalaya according to the Singh (2012) and Smetacek (2012), *V. egista sinha* was recently reported to be locally common in Dehradun valley (Singh and Sondhi 2016).

While conducting an intensive butterfly faunal expedition from 25–29 September 2015 to Andretta village (32.0639° N, 076.563° E; 990 m above mean sea level), Kangra district, Himachal Pradesh, India, one specimen was found along the edge of mixed vegetation on a roadside. The specimen was collected using a sweeping net and was sacrificed using ethyl acetate vapours. It was then preserved dried after stretching. This specimen is vouchered and deposited at the entomological collection of Zoological Survey of India, HARC, Solan station (Voucher no. I-2142/Entomology/ZSI/Solan collections). Another personal record by the corresponding author is from Bhimtal (29.35° N, 079.5667° E; 1,495 m above mean sea level), Nanital, Uttarakhand on 23 September 2014 (Figure 1).

Identification of *V. egista sinha* (Figure 2) was based on Evans (1932), D'Abrera (1940), and Wynter-Blyth (1957). Diagnostic characters include forewing triangular with subacute apex, hindwing prominently toothed at M<sub>3</sub>, and antennal club gradual, spatulate and concave on the underside.

Mani (1974) placed the boundary between Northwest Himalaya and Western Himalaya provinces at the defile of the Sutlej River and stated that only a few eastern elements occur west of this boundary. The new record extends the distribution range of *V. egista sinha* to the Northwestern Himalayan province by 250 km from the record of Singh and Sondhi (2016) (Figure 2). Furthermore, this is the first record of *V. egista sinha* with a trans-Sutlej distribution (species that occur west of the Sutlej defile; Mani 1986) and the first record from the Indian state of Himachal Pradesh.



**Figure 1.** Study site showing the sampling area (red balloon) of *Vagrans egista sinha* (Kollar, 1844) in Andretta, Kangra, Himachal Pradesh, India. The previous westernmost distribution record (green balloon) is from Mussoorie, Dehradun, Uttarakhand, India, and the author's earlier record (yellow balloon) is from Bhimtal, Uttarakhand, India.



**Figure 2.** Male of *Vagrans egista sinha* (Kollar, 1844). **A:** Dorsal. **B:** Ventral.

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