
A NOTE ON THE RECONFIRMATION OF TAWNY MIMIC, *PAPILIO AGESTOR* GRAY, 1831 (LEPIDOPTERA: PAPILIONIDAE) FROM UNION TERRITORY OF JAMMU AND KASHMIR, INDIA AFTER 115 YEARS

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ABSTRACT: *Papilio agestor* (Gray, 1831) ssp. *govindra* (Moore, 1864) known as Tawny Mime, is rediscovered from Bani area of Jammu and Kashmir, India after 115 years. The last record of the species were seen in Kashmir by Bingham in 1907.

KEY WORDS: Checklist, *Melia azedarach*, Papilionidae, *Papilio*

The history of the study of Butterflies fauna of J&K dates back to the middle of the 19th century when an Australian entomologist Vincenz Kollar explored it and described many new taxa from the region (Kollar, 1844, 1848). During the British rule on the Indian subcontinent (1857-1947), Holland (1896) and Tytler (1926) deserve special mention in this regard. After Independence not much work was done on butterflies of Jammu and Kashmir. Over the last decade, some local researcher and photographers have explored some parts of the Union territory extensively and not only added to the known distribution of the butterflies (Qureshi et al., 2013-A, 2013-B, 2014; Sharma & Sharma, 2017A, 2017B, 2018A, 2018B, 2020) but also published so many new records for the Union Territory, e.g. Sharma & Sharma (2017A, 2017B, 2018), Sheikh (2018), Sheikh & Parey (2019A, 2019B), Sharma & Sharma (2020), Gupta & Sheikh (2021), Sheikh (2021), Singh & Sheikh (2021), Parey & Sheikh (2021), Dar et al. (2021), Sheikh & Mishra (2022). Tawny mime is a tropical papilionid butterfly with a wide distribution from Pakistan across northern, India, Nepal and Bhutan and down through Myanmar into south-east Asia as far as peninsular Malaysia. It is usually found in hilly areas between 1200 to 2500 m, such as the foothills of Himalayas. The tawny mime is a notable mimic of the Himalayan Chestnut Tiger (*Parantica sita sita*) which of course it closely resembles. Despite the similarity however, these two species are in completely different families. *Papilio agestor* is a papilionid butterfly whereas, *Parantica sita* is a nymphalid butterfly. Recently Popinjay butterfly was rediscovered by Singh & Sheikh (2021), and white bordered copper butterfly was rediscovered by Sheikh & Gupta (2022).

There are two subspecies of *Papilio agestor* (Gray, 1831) – Tawny Mime in India, one is *Papilio agestor* ssp. *agestor* (Gray 1831) – Nepalese Tawny Mime and another is *Papilio agestor* ssp. *govindra* (Moore, 1864) - West Himalayan Tawny Mime.

The nominate ssp. *P. a. agestor* (Gray, 1831) (= *creconius*, *senchalus*), is fairly common in Himalayas from 600 to 2700 m a.s.l, ranging from Central Nepal east through Sikkim, Northern part of West Bengal and Bhutan to Arunachal Pradesh and hills of North East India South of Brahmaputra (Assam in Barail Range, Meghalaya, Nagaland, and Manipur) (Van Gasse, 2018). As per Evans, 1932 this subspecies has the range extension from Sikkim- Dawnas. According to ifoundbutterflies (ifb), this is found in Sikkim, Nagaland and Arunachal Pradesh (Anonymous, 2022).

P. a. govindra (Moore, 1864) (= *chiraghshahi*) is uncommon in Himalayas and is seen from 350m to 2700m, from the north-east of North-West Frontier Province (Hazara) in Pakistan east through Kashmir, Himachal Pradesh, North Haryana (Kalesar WS) and Uttarakhand to West Nepal (Van Gasse, 2018). As per Evans, 1932 this subspecies has the range extension from Kashmir- Kumaon.

As per Varshney and Smetacek, 2015; *P. a. agestor* Gray, 1831 have range extension from Sikkim to North East India and *P.a. govindra* Moore, 1864 have range extension from Jammu and Kashmir to Uttarakhand.

In Jammu and Kashmir, its distribution was mentioned as Kashmir by Bingham (1907); later this was cited by many authors in their books and publications like in Evans (1932), Talbot (1939), Varshney & Smetacek (2015), Kehimkar (2016), Smetacek (2018) and Gasse (2018).

MATERIALS AND METHODS

On 14.iv.2022, first author has done survey on the butterflies of Bani area of Kathua district of Jammu and Kashmir Union Territory where she found *Papilio agestor* Gray, 1831 (FigS. 1a,b) nectaring on *Melia azedarach* L. Later on the first author again found the same species in various parts of Bani tehsil of district Kathua and Bhaderwah tehsil of district Doda. First author photographed this butterfly with the help of Canon Eos 1300 D, and noted down the coordinates of the area (32°42'42.8" N, 74°48'58.0" E) at an altitude of around 1500 m a.s.l. The study was carried out in Kathua district of Jammu and Kashmir. It is located between 75.5173° E longitude and 32.3865° N latitude. The average annual rainfall is 1360 mm. The study area experiences a sub-tropical climate. The Kathua district has its border with Pakistan, Punjab and Himachal Pradesh. The vegetation around the sighting was; *Melia azedarach* L., *Alnus nitida* Spach, *Rubus niveus* Thunb, *Berberis lycium* Royle, *Rubus ellipticus* Sm., *Prinsepia utilis* Royle etc.

The identity was confirmed with Evans (1932), Wynter-Blyth (1957), Kehimkar (2016) and Smetacek (2018).

RESULTS

Papilio agestor Gray, 1831

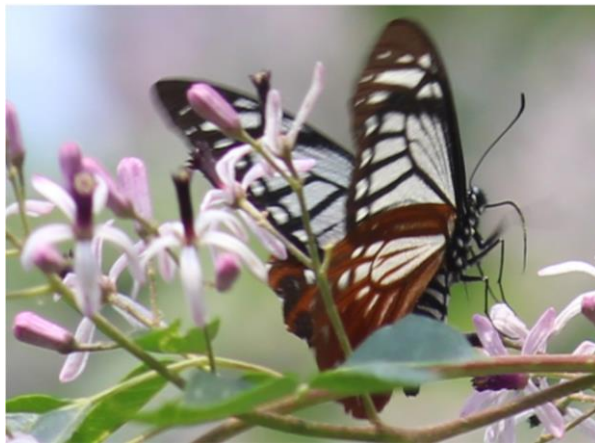
Description: (Adult) (Figs. 1a-b)

Upperside forewing grey, veins and outer edge black. Black bar at upperside forewing cell apex. Upper hindwing chestnut brown, whitish grey markings, crescents near margin (Fig. 1a). Underside hindwing central area dark chestnut; spots and small crescents near margin (Fig. 1b). Mimics Chestnut tiger and Circe.

In *Papilio agestor govindra* Moore upper hindwing margin bright chestnut, post discal spots incomplete. Paler and bluer above. These features resembles with the specimen pictures given on this article and this *Papilio agestor govindra* Moore can be easily differentiated from *Papilio agestor agestor* Gray which have upper forewing no black bar across cell. Upper hindwing prominent yellow tornal spot. First author found *Papilio agestor* Gray, 1831 (Figs. 1a,b) nectaring on *Melia azedarach* L. there were two individuals nectaring on the same tree, many other species like *Byasa polyeuctes* Doubleday, *Byasa dasarada* Moore, *Papilio protenor* Cramer, *Vanessa cardui* Linnaeus, *Vanessa indica* Herbst, *Danaus genutia* Cramer etc were nectaring. Author observed this species nectaring on the same tree for around half an hour.



A



B

Figure 1. *Papilio agestor* Gray, 1831, A. Upperwing, B. Underwing.

DISCUSSION

Previous work done on butterfly diversity of J&K Himalaya is in the form of various publications (Sheikh & Parey, 2019a,b; Sharma & Sharma, 2020; Gupta & Sheikh, 2021; Sheikh, 2021; Singh & Sheikh, 2021; Parey & Sheikh, 2021; Dar et al., 2021 and Sheikh & Gupta, 2022) has added many butterflies as well as rediscoveries like Popinjay and white bordered copper butterfly to the butterfly fauna of J&K. Similar work is done in other states like Uttar Pradesh, a redspot (*Zesius chrysomallus* Hubner) butterfly is rediscovered after 108 years by Kumari & Sheikh (2021). Today's results of this finding coincides with the previous work done in Jammu and Kashmir and Uttar Pradesh by various authors and current study in this article is also adding a rediscovery of *Papilio agestor* Gray after 115 years in Jammu and Kashmir UT.

CONCLUSIONS

The distribution of this butterfly is found in Kashmir by Bingham, 1907; later on cited by many authors in their books and other publications (Evans, 1932; Talbot, 1939; Varshney & Smetacek, 2015; Kehimkar, 2016; Smetacek, 2018; Gasse, 2018; Sheikh et al., 2021). After 1907, this species is recorded after 115 years from Jammu & Kashmir, India. There making this species very rare. Yet more investigation and detailed long term survey is needed to yield significant result of faunal diversity of butterflies. Sincere efforts towards faunistic survey for butterfly diversity will enrich the butterfly fauna of the Jammu & Kashmir.

Much of the area is unexplored in the UT of J&K, continuous survey in future can give many new records as well as rediscoveries.

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