

SYNONYMY OF *TELCHINIA ISSORIA ISSORIA* AND *TELCHINIA ISSORIA ANOMALA* (LEPIDOPTERA: NYMPHALIDAE: ACRAEINAE)

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ABSTRACT

We report an unusually large specimen of the Yellow Coster *Telchinia issoria* along with several other specimens from the Himalaya, and recognize the synonymy of *T. i. issoria* and *T. i. anomala*.

INTRODUCTION

In butterflies, wingspan is the only measurement used in morphological studies. In the past, the wingspan of butterflies has been measured in different ways. During the 18th and 19th centuries, it was normal to set butterflies with the forewing costae almost in a straight line. At that time, wingspan was measured as the direct distance between the forewing apices. However, this method of pinning obscured some features of the hindwing costae, which in some cases, might be diagnostic. During the latter half of the 19th century, it was fashionable to raise the forewings until the forewing termen, rather than the costae, were in a straight line. Since the forewing apices were much closer together using this method, the wing

span would be reduced if measured following the older method.

Marshall & de Niceville (1882) stated that, “the expanse (=wingspan) is usually taken as twice the length of the forewing plus the breadth of the body”. For *Telchinia issoria* Huebner, 1819, they gave a wingspan of 50.6 mm – 88.6 mm (2”-3.5”) for the species, ignoring the subspecies.

Evans (1932) measured all Indian butterflies known at the time and available to him. Since some of the specimens examined were pinned using the older method and some using the newer method, he used a measurement from the centre of the thorax to the tip of a forewing apex and doubled the result, assuming the butterfly to be bilaterally symmetrical. Evans (1932) and Talbot ([1949]) gave a measurement of 45-70 mm for the three subspecies of *T. issoria* examined by them, *i.e.* *T. i. anomala* Kollar, 1844 (45-65 mm); *T. i. issoria* (50-70 mm) and *T. i. sordice* (Fruhstorfer, 1914) (50-70 mm). It is entirely unclear why Evans (1932) did not take the larger measurement noted by

Marshall & de Niceville (1882) into consideration.

Nymphalidae

Acraeinae: Acraeini

Telchinia issoria issoria Hübner, 1819

Telchinia issoria Hübner, 1819: Verz. bek. Schmett. (2):27. TL. not stated.

Papilio vesta Fabricius, 1787: Mantissa Insectorum 2:14. TL. China. (homonym)

Acraea anomala Kollar, 1844: in Hugel, Kaschmir und das Reich der Siek 4:425-426, pl.3, figs.3,4. TL. Himal., Massuri.

Pareba vesta, Marshall & de Niceville, 1882: Butt. India. 1: 318 (syn. *Acraea anomala* Kollar)

Pareba vesta anomala, Fruhstorfer, 1914: Seitz. Gross-schmett. Erde 9: 741; Evans, 1932: Ident. Ind. Butt.: 192.

Acraea vesta anomala, Peile, 1937: Guide Coll. Ind. Butt.: 155, pl. 15, figure 124.

Acraea issoria anomala, Talbot, [1949]: Faun. Ind. 2: 465; Varshney & Smetacek, 2015: 222.

Material examined

1 female: 19.vi.2023 Butterfly Research Centre, Bhimtal, Uttarakhand, 1500 m. Forewing length 40 mm; wingspan 84 mm. (Figure 1).

20 exs.: 56-78 mm. Butterfly Research Centre, Bhimtal, Uttarakhand, 1500 m. Males: 23.v.1981; 5.vii.1991; 2.ix.2011;

7.ix.2016 x6; females: 7.ix.2016; 4.ix.2017; 31.iii.2016 x4.

Males: 4.vi.1998 Ramgarh, Uttarakhand 2200 m; Dibrugarh, Assam 108 m vii.2019; Females: 6.iv.1982 Nainital, Uttarakhand 2000 m; 18.vi.1990 Quiti, Pithoragarh, 1600 m; 28.iv.-15.v.2021 Roing, Arunachal Pradesh 390 m.

All specimens: *Leg. et Coll.* Peter Smetacek, Butterfly Research Centre, Bhimtal.

DISCUSSION

Taxonomic note

After the description of *Acraea anomala* by Kollar in 1844, it was treated as a synonym of *Acraea issoria* by Marshall & de Niceville (1882). Eltringham (1912) treated *T. anomala* as a synonym of *T. issoria* without offering any explanation, while recognizing *T. issoria* f. *vestalina* Fruhstorfer (1906) from S. Annam (“forewing dusky with spots whitish, hindwing with broad dark border”); *T. issoria vestita* de Niceville (1895) from N.E. Sumatra (“Small. Male with broad dusky border in both wings, nervules black. female forewing dusky with pale spots, hindwing with broad dusky marginal border”); *T. issoria vestita* f. *alticola* Fruhstorfer (1906) from W. Sumatra. (“Intermediate to *issoria vestita*.”); *T. issoria vestoides* Moore (1901) from W. Java (“Small. Male usually with dark spots in forewing cell and discal area. Hindwing with reddish submarginal band of underside showing through to upper surface. Marginal pale spots well marked in both wings. All

nervules black. Female forewing with dark colour predominating. Hindwing with nervules heavily marked, dark border broad, and usually with reddish ochreous internervular patches towards anal angle. Examples from E. Java are often without spots in forewing”).

According to Eltringham (1912), “Careful examination of long series might disclose the existence of other local races in addition to the Javan and Sumatran forms above described, though judging from the variability exhibited by some seventy-five examples now before me, instability of pattern would seem to be the most constant characteristic.”

The subspecies *T. i. sordice* (Fruhstorfer, 1914) was subsequently described from Myanmar, distinguished largely by its broader black border, the white areas absent on the underside and, in the female, a sub-marginal series of short red-brown arrows. In northern Myanmar, this butterfly is generally found around 1,800 m elevation based on personal observation.

Evans (1932) and Talbot ([1949]) recognized *T. i. anomala*, *T. i. issoria* and *T. i. sordice* as valid subspecies. This arrangement was followed by Varshney & Smetacek (2015). However, in the original description of *anomala*, Kollar (1848) did not distinguish it from *T. issoria*. Evans (1932) and Talbot ([1949]) distinguished *anomala* as being smaller than *issoria*, and restricted to the western Himalaya, from Kulu to Kumaon.

Van der Poel & Smetacek (2022) suggested that size might not prove a

reliable feature for distinguishing between the subspecies *issoria* and *anomala*.

The present specimen has a wingspan of 84 mm and a forewing length of 40 mm. this is considerably larger than anything measured by Evans (1932) or Talbot ([1949]), although smaller than some of the specimens measured by Marshall & de Niceville (1882).

From its location, the specimens examined in the present study clearly should be placed under *anomala*, but fail to justify the distinctive character of being smaller than *T. i. issoria*. Therefore, it is evident that the taxon *anomala* cannot be reliably distinguished from *issoria* and should therefore be treated as a synonym of *T. i. issoria*.

Altitudinal distribution

Wynter-Blyth (1957), Kehimkar (2016), Smetacek ([2016]) and Van der Poel & Smetacek (2022) give different figures for the elevation this hill species inhabits. While Wynter-Blyth (1957) recorded it from 600 – 2133 m, Smetacek ([2016]) reported it from 1200-2600 m; Kehimkar (2016) reported it from 600 – 2400 m and Van der Poel & Smetacek (2022) reported it from 120-2,470 m in Nepal. Marshall & de Niceville (1882) report it from Sibsagar (=Sivasagar) in Assam, which is at an elevation of 86 m. We have examined specimens of this species from Dibrugarh (108 m amsl) in July and Roing, Arunachal Pradesh (390 m amsl) in May.

Therefore, while it appears to be strictly a montane species in the western Himalaya and Myanmar, in Assam and Arunachal

Pradesh it descends to the plains, which are nearly at sea level.

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Figure: Yellow Coster 19.vi.2023
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