

Telling apart *Euchloe (Elphinstonia) charlonia* from *Euchloe (Elphinstonia) penia* by wing characters and probable records of the former from Asiatic Turkey (Lepidoptera: Papilionoidea, Pieridae)

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Abstract. A wing character is given for differentiating *Euchloe (Elphinstonia) charlonia* from *Euchloe (Elphinstonia) penia*, and the possibility that the former may eventually prove to be a member of the Turkish butterfly fauna is discussed.

Samenvatting. Verschillen in vleugelkenmerken tussen *Euchloe (Elphinstonia) charlonia* en *Euchloe (Elphinstonia) penia* en mogelijk voorkomen van de eerstgenoemde soort uit Aziatisch Turkije (Lepidoptera: Papilionoidea, Pieridae)

Een vleugelkenmerk waarmee *Euchloe (Elphinstonia) charlonia* en *Euchloe (Elphinstonia) penia* kunnen onderscheiden worden, wordt besproken en afgebeeld. Het mogelijk voorkomen van eerstgenoemde soort in Aziatisch Turkije wordt aangehaald.

Résumé. La différenciation d'*Euchloe (Elphinstonia) charlonia* et *Euchloe (Elphinstonia) penia* avec un caractère sur les ailes et observations probables de la première espèce en Turquie asiatique (Lepidoptera: Papilionoidea, Pieridae)

Un caractère sur les ailes d'*Euchloe (Elphinstonia) charlonia* en *Euchloe (Elphinstonia) penia* avec lequel il est possible de différencier les deux espèces est discuté et figuré. La possibilité que la première espèce soit trouvée en Turquie asiatique est discutée.

Key words: Pieridae – *Euchloe (Elphinstonia) charlonia* – *Euchloe (Elphinstonia) penia* – Species differentiation by wing character – Turkey.

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Introduction

According to Higgins & Riley (1980: 31) *Euchloe (Elphinstonia) charlonia* (Donzel, 1842) may be told apart from the otherwise quite similar *Euchloe (Elphinstonia) penia* (Freyer, [1851]) by its more pointed FW, its red marginal line along the costa and outer margin of FW underside (according to the authors absent in the latter) and its more conspicuous pale markings in the dark apex on FW upper side. Nothing is being said about the presence in *E. (E.) charlonia* and absence in *E. (E.) penia* of a solid black discoidal marking on FW underside, probably because the significance of this character was not understood at the time the book was published. Tolman (1997: 46, 47) states that in *E. (E.) charlonia* the FW underside has a solid black discoidal spot (light grey and shadowy in *E. (E.) penia*, resulting from the upper side black discoidal spot showing through), that the hair between the head and the thorax is rose-pink in the former, pale yellow, sometimes with interspersed rose-pink dorsal hair in the latter, and that in *E. (E.) penia* the FW underside costa and outer margin are sometimes lined rose-red much as are in *E. (E.) charlonia*, thus disagreeing in this last respect with Higgins & Riley. In Lafranchis (2004: 82 (figures), 83 (text)) the FW underside discoidal spot is pointed out in the figures, and it is stated in the text that in *E. (E.) charlonia* "Discoidal spot deep black on fore-wing underside" and that in *E. (E.) penia* "Discoidal spot pale grey on fore-wing underside", this being the only difference between the two taxa given by the author. Figures in Manley & Allcard (1970: pl. 38, fig. 17), Larsen (1980: 26; 1984: pl. 3, fig. 41; 1990: pl. 5, fig. 6), Tennent (1996: pl. 4, figs. 44, 45, 48), Tarrier & Delacre (2008: 131), Tshikolovets (2011: 112) confirm the existence of the FW underside solid black discoidal spot in *E. (E.) charlonia*, while figures in Abadjiev (1993: vol. 2, pl. XIII, fig. 5), Nazari (2003: pl. 13,

figs. 2, 7), Baytaş (2007: 37, figs. 5, 6), Pamperis (2009: 101), Tshikolovets (2011: 113), confirm the existence of a light grey one in *E. (E.) penia*.



Figs. 1, 2. Underside of male *Euchoe (Elphinstonia)* species. Scale bar = 1 cm. 1. *Euchoe (Elphinstonia) penia*, Greece, Makedhonia, Kozáni prefecture, foothills N of Siátista, 850–1050 m, 25.v.2008. 2. *Euchoe (Elphinstonia) charlonia*, Israel, Maale Efraim, 200 m, 2.iii.1979.

The FW underside discoidal spot as recorded from material available to the author

In the more than 100 specimens of *E. (E.) penia* from Greece that were studied by the author not one was found to possess a solid black discoidal spot on FW underside, clearly suggesting that this is the rule for this species (Fig. 1). In fact the light grey discoidal marking found in place of the solid black one is indeed no other than the upper side black discoidal spot showing through the mildly translucent forewing, as stated by Tolman (1977), but it is also due to the presence of sparse black scaling, most obvious microscopically. On the other hand, a small sample of four *E. (E.) charlonia* in the author's possession, two from Israel, one from Algeria and one from Morocco, clearly possess the solid black marking, further supporting that this is always to be met with in this species (Fig. 2).

Mixed Turkish material

In Hesselbarth *et al.* (1995: vol. 3, pl. 26 (undersides)) three specimens (figs. 40–42) have a well defined FW underside solid black discoidal spot, suggesting that they are *E. (E.) charlonia* and not, as erroneously stated by the authors, *E. (E.) penia*. These appear on the same plate together with five other specimens (figs. 37–39, 43, 44) whose FW underside discoidal spot is light grey instead of solid black, suggesting that indeed they are *E. (E.) penia*.

The geographic provenance of two of these *E. (E.) charlonia* is Ankara province (leg. Noack, 1934, Staatliches Museum für Naturkunde Karlsruhe, SMNK), which seems quite improbable because of the locality's distance from the boundaries of the known geographic

range of this species. The third specimen is from Antalya province (leg. Koçak, 1976, SMNK), and its geographic provenance appears more convincing, as this area is in fairly close proximity to the Near East, where the butterfly is known to have been recorded from.

Conclusion

Despite of what has been presented right above it still seems necessary that a confirmation is needed about the existence in Turkey of *E. (E.) charlonia*, before outright accepting it as a member of the country's butterfly fauna.

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