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Revision of the *Hylaea fasciaria* (Linnaeus, 1758) species group in the western Palaearctic (Lepidoptera: Geometridae, Ennominae)

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Abstract

The Palaearctic *Hylaea fasciaria* (Linnaeus, 1758) species group is revised (Lepidoptera: Geometridae, Ennominae). Four taxa are considered valid at species level: *H. fasciaria* (Linnaeus, 1758), *H. pinicolaria* (Bellier, 1861), *H. compararia* (Staudinger, 1894) and one new species, *H. mediterranea*, from Italy: Sicily, Calabria and Molise. The following taxonomic changes are proposed: *Ellopiia cedricola* Wehrli, 1919, from Turkey is downgraded to subspecies of *Hylaea fasciaria* (Linnaeus, 1758) (revised status), *Hylaea fasciaria cleui* Leraut, 1993, from France is downgraded from subspecies to synonymy with *H. fasciaria fasciaria* (Linnaeus, 1758) (new synonymy) and *Ellopiia compararia* Staudinger, 1894, from Algeria is raised from subspecies of *Hylaea fasciaria* (Linnaeus, 1758) to species status (revised status). *Hemithea squalidaria* O. G. Costa, 1848 from southern Italy was placed in the genus *Hylaea*, but it is reverted to its original combination as its taxonomic status is uncertain. Adults, male and female genitalia and distribution maps are illustrated for all species. DNA barcodes are presented for most taxa studied.

Key words: new species, new status, new synonymy, revised status, DNA barcode

Introduction

The geometrid genus *Hylaea* Hübner, 1822 has been considered to contain 13 putative species in the Palaearctic, the Nearctic and in the Neotropical regions (Scoble 1999). This view was questioned by Pitkin (2002), who noted that all Neotropical species placed in *Hylaea* appear not to belong to the genus, and true members of the genus are restricted to the Palaearctic region. This view was not adopted by Scoble and Hausmann (2007), who listed 12 putative species; virtually the same as Scoble (1999), except removing the Mexican *H. myandaria* (Walker, 1860) from the list. When Leraut (2009) proposed *Pungeleria poeymirai* (Oberthür, 1922), described from Morocco, to be transferred to *Hylaea*, and *H. compararia* to be downgraded to a subspecies of *H. fasciaria* (Linnaeus, 1758), the number of putative *Hylaea* species is four, with few taxa whose taxonomic status is uncertain.

The species of the Palaearctic *Hylaea fasciaria* (Linnaeus, 1758) species group (Geometridae: Ennominae) are diagnosable by external characters. The species are medium-sized, wingspan being about 30–40 mm. Wings are various shades of green, red-brown to greyish, forewings have rather straight, whitish medial and postmedial lines and hindwings have whitish postmedial line. The caterpillars are needle-mimics (illustrated for instance in Ebert 2003; Porter 2010; Lepiforum 2013), and those have been recorded to feed on conifer trees, *H. fasciaria* mostly on *Pinus sylvestris*, *Picea abies*, *Abies alba* and on *Larix* (Mikkola *et al.* 1989, Ebert 2003) and *H. pinicolaria* on *Pinus laricio* (Bellier 1861; Robineau 2007). Adults are nocturnal.

Three holistic views on the Palaearctic *Hylaea fasciaria* species group exist. Prout (1912–1916) considered

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