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Taxonomy of *Dolerus subfasciatus* auct. and *D. subfasciatus* F. Smith with notes on the sawfly subgenus *Equidolerus* (Hymenoptera, Tenthredinidae)

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Abstract

Dolerus (*Equidolerus*) *subfasciatus* F. Smith 1874 is a valid species. *Dolerus subfasciatus* auct. is shown to include three distinct species: the Nearctic *D. (Equidolerus.) neoaprilis* MacGillivray, 1908, **spec. rev.** and two Palearctic species, *D. (E.) pseudoanticus* Malaise, 1931, **spec. rev.** and *D. (E.) rhodogaster* Zhelochovtsev, 1935, **stat. nov.** Distribution records and imaginal diagnostic characters of the species are provided, and the male of *D. (E.) subfasciatus* is described. Lectotypes are designated for *Dolerus picinus* Marlatt, 1898, *D. picinus rhodogaster* Zhelochovtsev, 1935, *D. pseudoanticus* Malaise, 1931, and *D. yokohamensis* Rohwer, 1925. *Dolerus lucidus* Freymuth, 1870 and *D. purus* Jakowlew, 1891 are associated with the subgenus *Equidolerus* and *D. glabratus* Wei, 2002 is transferred from *Equidolerus* to *Dolerus* s. str.

Kew words: Sawflies, lectotype, nomenclature

Introduction

Comparative phylogeographic studies of the insect taxa which currently occur in widely separated territories, such as western North America and eastern Eurasia, but likely had ancestors with continuous distribution ranges, can help to shed light on biogeographical patterns and evolutionary processes, especially if complemented by DNA sequence analyses. However, such studies can be impeded by numerous taxonomic and nomenclatorial problems on the species level, particularly in diverse but taxonomically insufficiently studied groups like Tenthredinidae.

One taxonomic problem concerns a heterogeneous species assemblage commonly referred to as *Dolerus subfasciatus* F. Smith, 1874, which has been treated mostly as one Holarctic species, but includes at least four distinct species according to our study. *Dolerus (E.) subfasciatus* F. Smith, 1874 is a valid eastern Palearctic species. *Dolerus neoaprilis* MacGillivray, 1908 (= *D. subfasciatus* auct. non F. Smith), *D. pseudoanticus* Malaise, 1931, and *D. rhodogaster* Zhelochovtsev, 1935, which had been considered either as subspecies or colour forms of *D. subfasciatus*, are all treated here as valid species belonging to the subgenus *Equidolerus* Taeger & Blank, 1996. We present adult diagnostic characters of each, give their distributions, and designate lectotypes where necessary.

Materials and methods

Figure 1 was taken with a Zeiss Axioskop and a Canon EOS450D camera using the image stacking software Helicon Focus v. 5.2. Figures 2 and 4A were acquired through an EntoVision micro-imaging system. This system included a Leica M16 or Leica DRMB compound microscope attached to a JVC KY-75U 3-CCD digital video camera or a GT-Vision Lw11057C digital camera. The program Cartograph 5.6.0 was used to merge image series