

Molecular taxonomy of two sympatric sibling species of the pollen-beetle genus *Meligethes* (Coleoptera: Nitidulidae)

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Abstract

A molecular analysis was performed, combined with field data on insect/host-plant associations, in order to clarify taxonomic relationships within the W-Palaeartic *Meligethes aeneus* complex (Coleoptera, Nitidulidae, Meligethinae). The analysis was focused on the specific distinction of *M. aeneus* (Fabricius, 1775), and *M. gracilis* C.Brisout de Barneville, 1863, with special regard to populations occurring in sympatry. The genetic divergence between the two examined taxa, based on comparison between mtDNA sequence data, was congruent with distance values usually scored between related, but evidently separated, insect species. Genetic data and ecological evidence clearly show that *Meligethes aeneus* and *M. gracilis*, erroneously synonymized in a recent paper by a Russian author, are distinct biological species that frequently occur in syntopy in Western Europe.

Key words: Coleoptera, Nitidulidae, Meligethinae, *Meligethes*, molecular taxonomy, resurrected species

Introduction

The large and strictly monophyletic (Kirejtshuk, 1979; Audisio, 1993) *Meligethes aeneus* group (Coleoptera, Nitidulidae, Meligethinae) contains some species complexes which are difficult to classify. All species included are associated with flowers of Brassicaceae for their larval development (Audisio, 1993; Audisio & De Biase, 1999; Audisio *et al.*, 1999a, 1999b, 2000, 2001a, 2001b, in press), the single exception being *M. cleominis* Easton, 1959, from western North America (Easton, 1959), associated with Capparaceae (family