



## The *Pegomya maculata* species group (Diptera Anthomyiidae) in Europe, with description of a new species

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### Abstract

The number of species in the *Pegomya maculata* species group is raised from three to four with the description of a new, Holarctic species, *P. grahami* sp. nov. The other species, *P. maculata* Stein, *P. atricauda* Ringdahl and *P. macrophthalma* Griffiths, are redescribed. The number of species in Europe is raised from two to four. Two species, *P. grahami* (previously recorded as *P. maculata*) and *P. macrophthalma*, are also Nearctic. *Pegomya maculata* is the only species known from the female, but descriptions are given of 2–3 unidentified female morphospecies matching the species group. A lectotype is designated for *Pegomya maculata* Stein, 1906.

**Key words:** Diptera, Anthomyiidae, *Pegomya*, new species, Europe

### Introduction

*Pegomya* Robineau-Desvoidy is a large anthomyiid genus with 77 species thus far recorded from Europe (Michelsen 2004, 2006a, 2006b, 2008). Many species feed as larvae on fresh tissues of various mushrooms. Two species within this mushroom-feeding section, viz. *P. maculata* Stein, 1906 and *P. atricauda* Ringdahl, 1944, were considered as closely related and with possibly vicariant distributions in central and northern Europe by Hennig (1973a, b). Griffiths (1984) formally proposed a ‘*Pegomya maculata* superspecies’ including the Holarctic *Pegomya maculata*, the European *P. atricauda*, and a new species, *P. macrophthalma* Griffiths, 1984, endemic to North America.

The present paper presents the results of an examination of mostly European material (males and females) of the *Pegomya maculata* species group. It includes specimens from Spain, Andorra, Italy, Austria, Slovakia, Great Britain (England, Scotland), Denmark, Norway, Sweden, Finland, Russia (Karelia) and Canada (Alberta). Our study shows that the taxonomy of the *P. maculata* species group is more complex than previously assumed as: (1) It consists of four rather than three species, of which all occur in Europe, one in Japan, and two in North America; (2) it includes a new Holarctic species that was first recorded from USA (Pennsylvania) as ‘*P. maculata* Stein’ but is described below as *P. grahami* sp. nov. from central and northern Europe and from Canada (Alberta); (3) the European distribution of *P. maculata* Stein is not restricted to the central and western parts as previously assumed, but even includes Fennoscandia; and (4) *P. macrophthalma* Griffiths, described from USA (North Carolina), is newly recorded from several places in C and NW Europe. The species of the *Pegomya maculata* species group are taxonomically revised in the male sex with illustrated descriptions, new specimen data and distribution records, and an identification key. The only species recognized in the female sex is *P. maculata*, but two or three female morphospecies not combined with males are described and tentatively referred to the *Pegomya maculata* species group.