



SWEDISH TAXONOMY INITIATIVE RESEARCH REPORT

Project period: 2006, 2008, 2010

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INSECTS:

Taxonomy and faunistics of the Anthomyiidae (Diptera) of Sweden and neighbouring countries, part III

Anthomyiidae is a medium large family of two-winged insects occurring primarily in the northern or elevated parts of the Northern Hemisphere.

Anthomyiid flies tend to be strongly anthophilous and play a significant role as pollinators, especially under subarctic to arctic conditions.

The larvae are highly varied in their feeding strategies, including scavengers as well as herbivores and fungivores. Several anthomyiid species are larval pests in agriculture and forestry and thus of major economic importance.

In spite of the highly diverse and often interesting life history strategies found among Anthomyiidae, the group has always been considered notoriously difficult due to the high number of species in combination with a rather uniform and dull external appearance.

The family is notably diverse in Scandinavia with altogether 342 species currently known from Sweden (including 5 undescribed species), the highest number from any European country. In terms of species richness this makes anthomyiids among the most important in the Swedish fauna of Diptera.

The primary objectives for part III of the project "Taxonomy and faunistics of the Anthomyiidae (Diptera) of Sweden and neighbouring countries. III" were as follows:

- (1) Preparation of "An identification guide to the Anthomyiidae (Diptera) of NW Europe", and
- (2) Preparation of "A catalogue of the provincial distribution of Anthomyiidae in the Nordic countries".

A major step has been taken in respect to the first objective, as only two out of 32 genera are still without identification keys. However, it is two of the larger genera (*Botanophila*, *Pegomya*) that are still unfinished, but I continue my taxonomic work in order to finish the text (keys and brief diagnoses for all the genera and species) supplemented with photographic images when required for safe identification.

Several of my keys to the more difficult genera, notably *Delia* and *Phorbia*, have been tested and were very well received by the only other taxonomic specialist on European anthomyiid flies, Dr D.M. Ackland, Oxford.

Thanks to published taxonomic papers stemming from parts I and II of the present project there are now very few anthomyiid species found in our area that still need to be formally named and described (10 out of a total of 382 species).

The second objective is finished and continuously kept updated in respect to taxonomic changes and new faunistic data.

I am also maintaining the data on Anthomyiidae for Fauna Europaea (<http://www.fauna-eu.org/>).

PUBLICATIONS

- Michelsen, V. 2012. Revision of the European *Delia pruinosa* species group (Diptera: Anthomyiidae) feeding as larvae in seed capsules of *Silene* L. (Caryophyllaceae). *Zootaxa* 3434: 31–48.
- Michelsen, V. 2014. Taxonomic assessment of *Chirosiomima* Hennig (Diptera: Anthomyiidae), with proposal of a new genus for *Hylemyia curtigena* Ringdahl. *Zootaxa* 3790: 86–102. <http://dx.doi.org/10.11646/zootaxa.3790.1.4>
- Michelsen, V. 2014. Checklist of the family Anthomyiidae (Diptera) of Finland. *ZooKeys* 441: 369–382. doi: 10.3897/zookeys.441.7527
- Michelsen, V. 2015. Taxonomic review of the major larval pests of bolete fungi (Boletaceae) in Europe: the *Pegomya fulgens*, *furva* and *tabida* species groups (Diptera: Anthomyiidae). *Zootaxa* 4020: 51–80. <http://dx.doi.org/10.11646/zootaxa.4020.1.2>.

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