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Alliopsis billbergi (Zetterstedt, 1838) new for Belgium (Diptera: Anthomyiidae)

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Abstract

In this paper the Anthomyiidae species *Alliopsis billbergi* (Zetterstedt, 1838) is added to the Belgian checklist.

Keywords: Anthomyiidae, *Alliopsis*, species new for Belgium

Samenvatting

In dit manuscript wordt de Anthomyiidae soort *Alliopsis billbergi* (Zetterstedt, 1838) toegevoegd aan de Belgische checklist.

Résumé

Dans cet article, l'espèce *Alliopsis billbergi* (Zetterstedt, 1838) est ajoutée à la liste des Anthomyiidae de Belgique.

Introduction

Anthomyiidae receive little attention in Belgium. It is a difficult group of small calyptrate flies and only a few species can be identified in the field. Identification of the genera and species is mainly based on the chaetotaxy and the configuration of the genitalia.

For some years the first author (CM) studied the Anthomyiidae genus *Egle* Robineau-Desvoidy (MARTENS & MORTELMANS, 2013; MARTENS *et al.*, 2015). This genus contains small blackish Anthomyiidae that have seed-feeding larvae with mostly willow *Salix* as host-plant. The species have a flight period which is synchronized with the period of flowering and seed development of their hosts and at that time they can be observed and collected on and around shrubs of flowering willow. Thanks to the typical head with a conspicuously protruding mouthedge and long and slender proboscis and palpae (except in *Egle concomitans* (Pandellé, 1900) which has *Populus* as host plant), the lack of an anteroventral seta on the mid tibia, the early flight period and the typical habitat, it is mostly possible to assign specimens to the genus *Egle* in the field. For identification to species level dissection of the terminalia is needed in most cases (MICHELSEN, 2009; VAN ERKELENS, 2011; VAN ERKELENS, 2013). The genus is recently reviewed by MICHELSEN (2009) for Europe and it's neighbouring areas.

As most species of *Egle* are numerous only during a very short period it is not possible to get a good idea of the distribution within the country as an individual collector. Therefore, in 2016 CM launched a call to look for and collect *Egle* specimens in Belgium. Though only few samples were obtained and these samples contained often more other flies then *Egle*, some of the samples contained interesting species. In this way also *Alliopsis billbergi* (Zetterstedt, 1838) was collected for the first time in Belgium by the second author (FVDM).

Material and methods

During a field collection trip in the eastern part of Belgium, FVDM arrived in late afternoon at the valley of the Jansbach river (Rocherath). High numbers of dipterans were present on a row of flowering willows near the small stream. Amongst a good number of interesting Syrphidae (e.g. *Brachyopa dorsata* Zetterstedt, 1837, *Cheilosia frontalis* Loew, 1857, *Cheilosia uviformis* (Becker, 1894)) some Anthomyiidae were collected with the aim to look for interesting *Egle* spp. They were collected by net and preserved in 90% alcohol for later identification by CM.

Subsequently the Anthomyiidae specimens were set dry by CM. The abdomens of the males were removed and soaked and the terminalia were dissected, applying a method that doesn't use aggressive chemicals as explained in MARTENS *et al.* (2015). The abdomens and the terminalia are kept in microvials attached to the corresponding needles with the specimens. Identification is based on the unpublished genera and species keys of ACKLAND in combination with his drawings of the terminalia. The material is kept in the personal collection of CM.

Results and discussion

Alliopsis billbergi (Zetterstedt, 1838)

MATERIAL. Rocherath (Büllingen), valley of the Jansbach river, 8.V.2016, 1♂, leg. FVDM, det. & coll. CM.

One of the male Anthomyiidae specimens found on flowering willow in the valley of the Jansbach in Rocherath turned out to be *Alliopsis billbergi*, a species new for Belgium.
Species of the genus *Alliopsis* generally have a rather long and slender black shining prementum, cruciate interfrontal setulae, a rather long prealar (from slightly shorter than posterior notopleural seta to considerably longer) and in the male sternite V has characteristic raised inner margins and is shining black at least on the lower inner margin in most species.
Alliopsis billbergi has a long and strong posteroventral seta above the middle on the hind tibia, a bare prosternum, wing bases which are not or only weakly yellowish and whitish calypters. In the male, the processes of sternite V have a distinct incision on the ventral margin before the apex.

The presence of *Alliopsis billbergi* in Belgium is not a surprise, as the species occurs in most Western and Central European countries including all our neighbouring countries except for Luxembourg (MICHELSEN, 2017).
It is not the first time that *Alliopsis billbergi* has been found on willow. STEIN (1916) caught it in large numbers on willow blossoms in Germany. According to HENNIG (1966-1976) the imagines seem predatory. HENNIG (1966-1976) reported a female that was found with a Chironomidae as a prey. It is not clear whether specimens found on willow were foraging on the willow flowers or were just using the willow as a hunting area. LUNDBLAD (1933) found the larvae of *Alliopsis billbergi* in rotting cabbages.
SÉGUY (1923) mentions as flight period April-June.

The specimen of Rocherath was accompanied not only by interesting Syrphidae, but also by some other Anthomyiidae species: *Pegomya rubivora* (Coquillett in Slingerland, 1897), *Pegoplata aestiva* (Meigen, 1826) and *Delia platura Conf.* (Meigen, 1826). Peculiarly, no *Egle* spp. were collected at the site.

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