

Three willow catkin flies *Egle* Robineau-Desvoidy, 1830 new for Belgium (Diptera : Anthomyiidae)

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Abstract

This paper describes the first records of the Anthomyiidae *Egle parvaeformis* Schnabl in Schnabl & Dziedzicki, 1911, *Egle rhinotmeta* (Pandellé, 1900) and *Egle minuta* (Meigen, 1826) for Belgium.

Keywords : Diptera, Anthomyiidae, *Egle*, species new for Belgium

Samenvatting

De eerste Belgische records van de Anthomyiidae *Egle parvaeformis* Schnabl in Schnabl & Dziedzicki, 1911, *Egle rhinotmeta* (Pandellé, 1900) and *Egle minuta* (Meigen, 1826) worden beschreven.

Résumé

Trois espèces d'Anthomyiidae sont mentionnées pour la première fois de Belgique : *Egle parvaeformis* Schnabl in Schnabl & Dziedzicki, 1911, *Egle rhinotmeta* (Pandellé, 1900) et *Egle minuta* (Meigen, 1826).

Introduction

Egle Robineau-Desvoidy is a genus of small blackish Anthomyiidae. All species have seed-feeding larvae. Their larval host-plants are mainly species of willow *Salix* L., but also poplar *Populus* L. and false tamarisk *Myricaria* Desv. (MICHELSEN, 2009). All species are univoltine and have a flight period that is closely synchronized with the period of flowering and seed development of their hosts. At the same time the adult flies, feeding on pollen and nectar, serving as specialized pollinators of their larval hosts. Accordingly, most species of *Egle* are active from the very beginning of the season, i.e. from the end of February. At that time they can be observed and collected on and around shrubs of flowering willow (MICHELSEN, 2009).

Important diagnostic characters for adult *Egle* are a very short antennal postpedicel, an antennal arista with a very short pubescence and a hind tibia without an apical posteroventral seta (MICHELSEN, 2009 ; VAN ERKELENS, 2011). With the exception of *Egle concomitans* (Pandellé, 1900), adult *Egle* are also characterised by a conspicuously protruding mouthedge and long and slender proboscis and palpaes (MICHELSEN, 2009 ; VAN ERKELENS, 2011). Due to the typical head, the early flight period and the typical habitat, most species are easy assigned to the genus *Egle*. Nevertheless, identification to species level is often impossible without dissection of the terminalia (ACKLAND, 1997 ; MICHELSEN, 2009).

In 1991 a checklist of the Belgian Anthomyiidae was published (GOSSERIES & ACKLAND, 1991), which listed three species of *Egle*: *Egle brevicornis* (Zetterstedt, 1838), *Egle ciliata* (Walker, 1849) and *Egle parva* Robineau-Desvoidy, 1830. In spring 2012 both authors started sampling adult *Egle* and we could add three new species to the Belgian checklist. In this paper we describe their first records. Identification of the species is based on ACKLAND (1997) and MICHELSEN (2009).

Detailed description of the observations

Egle parvaeformis Schnabl in Schnabl & Dzierzicki, 1911

MATERIAL EXAMINED : Maldegem, Maldegemveld Zuid, Langedreef, 02.IV.2012, 1♂, leg., coll. & det. C. Martens.

One male *Egle parvaeformis* was collected early April at a flowering willow along the country road 'Langedreef' in the nature reserve 'Maldegemveld Zuid' in Maldegem. The reserve mainly consists of heathland and some pine plantations. The vicinity of the reserve is characterized by a variety of habitats such as coniferous forest, deciduous forest and agricultural areas.

Egle rhinotmeta (Pandellé, 1900)

MATERIAL EXAMINED : Ostend, de Zwaanhoek, 26.III.2012, 2♂, leg., coll. & det. J. Mortelmans ; Maldegem, Maldegemveld Zuid, Langedreef, 02.IV.2012, 1♂, leg., coll. & det. C. Martens ; Maldegem, Maldegemveld Zuid, Langedreef, 04.IV.2012, 9♂, leg., coll. & det. C. Martens.

Ten males *Egle rhinotmeta* were collected early April at the willows along the same country road as the above species and two males were collected in the polders of Ostend at the end of March. The latter location is part of the nature reserve 'de Zwaanhoek', an important march area with saline influences.

Egle minuta (Meigen, 1826)

MATERIAL EXAMINED : Knesselare, Drongengoed, Bommelaere-Pilkem, roadside verges of the 'Drongengoedweg', 12.III.2012, 1♂, leg., coll. & det. J. Mortelmans ; Oudenaarde, Enamebos, 17.III.2012, 2♂, leg., coll. & det. J. Mortelmans.

A first male specimen of *E. minuta* was caught in the 'Drongengoed forest' in Knesselare. This forest connects to the above mentioned nature reserve 'Maldegemveld Zuid'. The forest area consists of deciduous wood, coniferous wood and some small heathland relicts. The roadside verges contain arid grasslands, lush vegetations and bushes. In the vicinity there are pastures and agricultural areas. A second male was caught in the forest reserve 'Enamebos' in East-Flanders, while putting up there a Malaisetrapp. *Salix* bushes were checked for *Egle* at a locality where potatoes *Solanum tuberosum* L. were farmed until 2002 and that is extensively grazed by cattle since 2004.

Discussion

All new species, *E. parvaeformis*, *E. rhinotmeta* and *E. minuta*, were collected at flowering willows in the nature reserve 'Maldegemveld Zuid' or the neighboring 'Drongengoed forest'. Two species, *E. minuta* and *E. rhinotmeta* were also caught at completely different locations. In all locations the new species were accompanied by *E. ciliata* (Walker, 1849) and *E. parva* Robineau-Desvoidy, 1830. In fact the trapping localities are simply the locations where the authors were looking for the genus. *Egle* is probably one of the most overlooked genera of flies in Belgium and undoubtedly several species of *Egle* can be found at many locations with flowering willows and several other new species of *Egle* can be added to the Belgian checklist. Also in the Netherlands recent interest in this genus has been raised and eight new species were found (VAN ERKELENS, pers. comm.).

Apart from trapping with a sweeping net, *Egle* can also be collected with air-exhausters or simply by hanging white clothes in the willows which attract adult flies. Given their small size this may be a more efficient way of trapping. During spring 2013, an extensive sampling campaign with small catching devices in willows will be conducted by the second author (MORTELMANS, in prep.).

References

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