

Eupeodes goeldlini (Diptera: Syrphidae) new to the Belgian fauna

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Abstract. Following a recent revision of *Eupeodes* and *E. bucculatus* (Rondani, 1857) in particular, this species has been recognized as a species complex consisting of at least three species. One of them, *E. goeldlini* Mazánek, Láska & Bicik, 1999, appears to be widespread in Europe, and it has been found recently in all our neighbouring countries, but not in Belgium so far. Given the presence in our neighbouring countries, it came as no surprise when we finally found a female *E. goeldlini* in Belgian collection material. *E. goeldlini* can now also be added to the Belgian fauna list.

Samenvatting. *Eupeodes goeldlini* (Diptera: Syrphidae) nieuw voor de Belgische fauna. Bij een recente revisie van het genus *Eupeodes* en van *E. bucculatus* (Rondani, 1857) in het bijzonder is gebleken dat een aantal tot dan onopgemerkte soorten schuilgingen onder deze soortnaam. Eén van deze soorten, *Eupeodes goeldlini* Mazánek, Láska & Bicik, 1999, heeft een wijde Europese verspreiding en werd reeds in al onze buurlanden vastgesteld. Het was dan ook geen verrassing dat bij de controle van Belgisch collectiemateriaal ook een vrouwtje *Eupeodes goeldlini* gevonden werd. Deze soort kan nu toegevoegd worden aan de Belgische faunalijst.

Résumé. *Eupeodes goeldlini* (Diptera: Syrphidae) espèce nouvelle pour la faune belge. Lors d'une révision récente du genre *Eupeodes*, et de *E. bucculatus* (Rondani, 1857) en particulier, il apparaît qu'il s'agit d'un groupe d'au moins trois espèces. Une d'entre elles, *E. goeldlini* Mazánek, Láska & Bicik, 1999, est distribuée en Europe, et elle a été mentionnée de tous nos pays avoisinants. Il n'est donc pas surprenant que cette espèce a été trouvée aussi lors d'une inspection des collections contenant des exemplaires belges. *E. goeldlini* peut être ajouté à la liste faunistique de Belgique.

Key words: *Eupeodes goeldlini* – Belgium – First record – faunistics.

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Introduction

Eupeodes hoverflies are archetypical Syrphidae with yellowish transverse banding or interrupted banding on the abdomen, which gives them a wasp-like appearance. Due to a number of migrants and generalist species within this genus, *Eupeodes* are a common member of Syrphidae assemblages throughout Europe in all kinds of habitats. For Belgium, seven *Eupeodes* species have been recorded so far. One of the species, *E. bucculatus* (Rondani, 1857) has a tumultuous taxonomic history. This species was formerly known as *E. latilunulatus* (Collin, 1931) or even before as *Metasyrphus latilunulatus*, and keys out as such in Verlinden (1991). A recent revision by Mazánek *et al.* (1998) revealed that a senior synonym existed and the official species name was changed to *E. bucculatus* (Rondani, 1857). Soon after this, it appeared that European *E. bucculatus* consisted of at least three different species: *E. bucculatus* (Rondani, 1857), *E. duseki* Mazánek, Láska & Bicik, 1999, and *E. goeldlini* Mazánek, Láska & Bicik, 1999. *E. duseki* so far is only known from northern Scandinavia (Sweden, Norway; Speight 2007). The other two species, however, are widely distributed over Europe, and have their range extending as far as East-Russia and China. *Eupeodes goeldlini* appears to be not particularly

rare, and it has recently been reported from Britain, Czech Republic, Germany, Finland, France, Ireland, the Netherlands, Poland, and Switzerland (Speight 2003, 2006). In the Netherlands, nearly half of the specimens of *E. bucculatus* s.l. that have been checked turned out to be *E. goeldlini* (Reemer & van Steenis 2006). As a consequence, this species was expected to be present in Belgium as well.

Material and methods

While checking my personal Syrphidae collection I discovered a female labelled as *E. bucculatus* that keyed out as *E. goeldlini*. This individual was trapped on 28.V.1998 at Dorstveld, Bonheiden, Prov. Antwerp, leg. & coll. Van de Meutter Frank. This place is a 0.25 ha oldfield open area within deciduous forest. Within 300 m range from this locale are extensive wet and dry meadows, old parkland and *Pinus* coniferous stands. This high variety of habitats is due to its location at the northern flank of the Dyle valley which exhibits a moisture gradient from open water and marshland to forested dry sand dunes (former heathlands) within a few hundred meters. This makes it difficult to derive any habitat characteristics of *E. goeldlini* from this record. Interestingly, a female *E. bucculatus* trapped on 09.VI.1999 at exactly the same place is present in my collection, indicating both species may co-occur.

The identification of *Eupeodes* can be troublesome. *Eupeodes* in general and *E. bucculatus* in particular exhibit a high morphological variation (which has given rise to its Dutch name "variabele kommazwever"), especially in the extent and intensity of the banding patterns on the abdomen. I used the key in Speight (2007) to re-identify all *Eupeodes* present in my collection. *E. goeldlini* keyed out perfectly by having the lateral margin of tergite 5 entirely yellow (Fig. 1), large dust spots on the frons (Fig. 2), the alula completely covered by microtrichia (Fig. 2), sternite 4 with a rounded black mark and sternite 5 entirely pale (Fig. 1), hind femora entirely yellow (Fig. 1), the posterolateral hair fringe on the front femur was yellowish pale and the second basal cell of the wing had less than 50% of its surface bare of microtrichia. All identification features could be checked against female *E. bucculatus*, *E. nitens* and *E. nielsenii* individuals in my collection (all from Flanders) of which the identity could be confirmed with the key of Speight (2007).



Fig. 1: Dorsal (left) and ventral (right) view on female *Eupeodes goeldlini* from Bonheiden 28.V.1998.

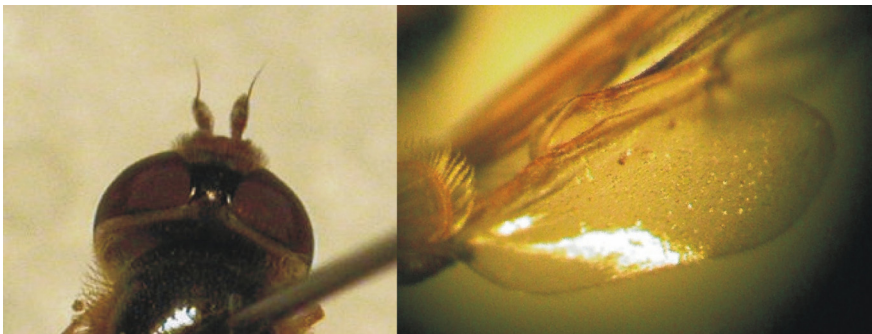


Fig. 2: Detail of the frons with dust markings (left) and alula with microtrichia (right) of the female *Eupeodes goeldlini* from Bonheiden 28.V.1998.

Conclusion

This is the first report of the presence of *E. goeldlini* in Belgium, and this species can be added to the Belgian fauna list. It is expected that *E. goeldlini* occurs more widely throughout Belgium, as is the case in the Netherlands. So far, there is no clear definition neither of the habitat preferences of *E. goeldlini*, nor whether these may differ from those of *E. bucculatus*. The findings of Speight (2007) and Reemer & van Steenis (2006) contradict on whether one of the species prefers more or less moist conditions. Our observations indicate that both species may co-occur, and it is possible that habitat differences, if any, are very subtle. At present, it appears that *E. goeldlini* may be expected in any of the habitats where *E. bucculatus* s.l. has been found before.

E. bucculatus s.l. has a wide but scattered distribution throughout Belgium. A relatively large number of observations were done since 1980 (64, Belgian database). They appear to occur typically at low densities, for example, only three records in the database had more than two individuals. Finding *E.*

bucculatus and allies requires searching for *Eupeodes* with slender abdominal banding, although they may have separated spots as well. It is expected that more *E. goeldlini* will turn up the next few years in Belgium, if they are better looked for.

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