

Revision of the Belgian Camillidae, a neglected family (Diptera: Camillidae)

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Abstract

A revision of the Belgian Camillidae from the Royal Belgian Institute of Natural Sciences collection revealed that not *Camilla glabra* Fallen, 1823 but *Camilla flavicauda* Duda, 1922 and *Camilla atrimana* Strobl, 1910 should be mentioned on the Belgian checklist. Other *Camilla* species could be found in the future.

Keywords: Camillidae, Belgium, *Camilla flavicauda*, *Camilla atrimana*

Samenvatting

De Camillidae aanwezig in de collecties van het Koninklijk Belgisch Instituut voor Natuurwetenschappen werden opnieuw gedetermineerd. Dit leidde tot de vaststelling dat de Belgische soortenlijst moet aangepast worden. Niet *Camilla glabra* Fallen, 1823 maar *Camilla flavicauda* Duda, 1922 en *Camilla atrimana* Strobl, 1910 zijn aanwezig in België. Andere *Camilla* soorten zijn eveneens te verwachten.

Introduction

Although many Dipteran families are present in Belgium, only few of them are well studied like the hoverflies (Syrphidae), long-legged flies (Dolichopodidae) and danceflies (Empididae). Most other families are neglected by the lack of complete identification keys or their small body size. Camillidae is one of the latter families with a length of approximately 2 mm and a black body. However, identification keys were recently published by BEUK & DE JONG (1994) and MERZ (2008).

In Europe this family is represented by the genus *Camilla*. Other genera are endemic to Africa. There has been confusion concerning multiple taxa, which were solved by PAPP (1985). A revision of the Dutch material by BEUK and DE JONG (1994) revealed that *Camilla flavicauda* Duda, 1922 is a very common species. The others, *Camilla atrimana* Strobl, 1910, *Camilla fuscipes* Collin, 1933 and *Camilla glabra* Fallen, 1823 are much rarer. Nevertheless, the situation in Switzerland is different as *C. glabra* was abundantly found at several localities and *C. flavicauda* was only recently reported from single specimen (MERZ, 1998; 2008).

Until now, only *C. glabra* was recorded from Belgium (GOSSERIES, 1991). Nevertheless, all Camillidae present in the Royal Belgian Institute of Natural Sciences collection (RBINS) were collected in the past century (1908-1981). Reports of *C. glabra* before 1985 are doubtful as they mostly concern *C. flavicauda*. Therefore we decided to revise the Camillidae in RBINS entomological collection.



Fig. 1. *Camilla flavicauda* (left). This specimen was photographed in lateral and frontal view.
 Fig. 2. *Camilla atrimana* (above and right). This specimen was photographed in lateral, frontal and ventral view.

Material and methods

This family was absent in the Gembloux Agricultural University Conservatory (Jeannine Bortels pers. comm.). In the Belgian collection of RBINS only 24 specimens of the genus *Camilla* were present. They were all identified as *C. glabra* by Gerhard Bächli in 1993. We revised all these specimens using the key of BEUK & DE JONG (1994).

From each species one specimen was photographed using a Canon 600D with a MP-E 65 mm 3x Super Macro, Cognisys StackShot and two Yongnuo Speedlight YN560-II flashes. Focus stacking of 43 photos with a step size of 75 µm was performed to create the macro photos.

Results

Camilla flavicauda Duda, 1922

MATERIAL EXAMINED. 06.VIII.1924, Modave, 1 ex. col. RBINS; 12.IX.1931, De Panne, 1 ex. leg. Goetghebuer, col. RBINS; 15.V.1943, Brussel, 1 ex. Leg. R. Tollet col. RBINS; 17.V.1948, De Panne, dunes, 2 ex. leg. M. Bequaert col. RBINS; 16.VI.1948, Knokke, dunes, 1 ex. leg. M. Bequaert col. RBINS; 1-06.V.1949, Falaën, 2 ex. leg. M. Bequaert col. RBINS; 12.VI.1949 Knokke, 8 ex. leg. L. Verbeke, col. RBINS; 27.V.1951, Knokke, dunes, 1 ex. leg. M. Bequaert col. RBINS; 04.IX.1957, Blankenberge, 2 ex. leg. M. Bequaert col. RBINS; 20.V.1981, De Haan, dune, 1 ex. leg. L. Verbeke, col. RBINS; 3.VI.1981, Zeebrugge, Fonteintjes, 3 ex. leg. L. Verbeke, col. RBINS.

Camilla atrimana Strobl, 1910

MATERIAL EXAMINED. 10.IX.1938, Zeebrugge, 1 ex. leg. M. Bequaert col. RBINS.

Discussion

Almost all investigated Camillidae were collected near the Belgium coast. However, they can be found at other sites as well, mainly near excrements and burrows of small mammals like rabbits (Paul BEUK

pers. comm.). Our study revealed that all but one specimen in RBINS were in fact *C. flavicauda* as expected. However, we found one specimen of *C. atrimana*. This specimen was collected in 1938, but it is not well preserved since the wings are damaged.

The common *C. flavicauda* can be recognized by the entirely yellow legs and the two pairs of vibrissae (Fig. 1). Other species like *C. atrimana* (Fig. 2) have black legs and two pairs of vibrissae. However also other characteristics need to be checked with the key from BEUK & DE JONG (1994).

We conclude that *C. glabra* must be deleted from the Belgium checklist. Instead *C. flavicauda* and *C. atrimana* are added. Other European species such as *C. glabra* and *C. fuscipes* can be expected when conducting further studies into this neglected Dipteran family.

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