

***Camponotus fallax* (Nylander, 1856), an expected species finally discovered in Belgium (Hymenoptera: Formicidae)**

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Abstract

In this paper we announce the first observation of the ant *Camponotus fallax* (Nylander, 1856) in Belgium and add it to the Belgian checklist. Specimens were collected in Sint-Martens-Voeren with an eclector trap mounted on a dead fruit tree.

Keywords: *Camponotus*, new species for Belgium, Formicidae, eclector trap

Samenvatting

In dit artikel vermelden we de eerste waarneming van de mier *Camponotus fallax* (Nylander, 1856) in België en we nemen ze op in de Belgische soortenlijst. Meerdere exemplaren werden gevangen in Sint-Martens-Voeren met een eklektor die rond de stam van een dode fruitboom was aangebracht.

Résumé

Dans cet article nous annonçons la première observation de la fourmi *Camponotus fallax* (Nylander, 1856) en Belgique et l'ajoutons à la liste des fourmis de Belgique. Les spécimens ont été récoltés à Sint-Martens-Voeren à l'aide d'un piège "eclecteur" monté autour d'un arbre fruitier mort.

Introduction

Observing and collecting ants is a discipline with attention not only for the local myrmecofauna but also for the ant communities of the surrounding countries. With this in mind we give special attention to ant species not yet mentioned in Belgium but collected in neighbouring countries in habitats comparable to habitats in our country. One of those species *Camponotus fallax* was mentioned in 2012 as a potential species for our Belgian myrmecofauna (DEKONINCK *et al.*, 2012).

In a large-scale project in 2017, we sampled dendrobiontic invertebrates with eclector traps in dead and decaying trees mainly high-stem fruit trees in orchards. With the attendance of low-stem orchards in the last decades, high-stem orchards lost their economic value. Due to this evolution many high-stem orchards are becoming old resulting in a high amount of dead wood. Dead wood, and especially thick, upright and sun exposed dead wood is rarely present in our landscape as it is mostly removed for security reasons (along fences, walking trails and roads) or firewood as dead wood is rarely seen as a valuable biotope. As a result old high-stem orchards are disappearing rapidly mainly in favour of agricultural land, low-stem orchards or in the best case newly planted high-stem orchards. For this reason we believe action is needed to make policy makers, conservationists, fruit growers aware of the importance in protecting this valuable biotope.

Between May and the end of November 2017 the second author captured three specimens of *C. fallax* in a not productive high-stem fruit tree in Voeren, a new species for the Belgian checklist.

Material and methods

A large-scale sampling project was set up in old, high-stem orchards in the region Haspengouw in the province of Limburg. In 18 orchards tree eclector traps were mounted on dead or partly dead tree trunks to collect invertebrates. The aim of the project is to prove the importance of dead, sun exposed wood for wild bees and (saproxylic) beetles. In the margin of it also wasps (cuckoo-wasps, crabronid wasps, spider hunting wasps, vespid wasps), ants, spiders and flies (hoverflies, soldier flies, robber flies, long-legged flies, picture-winged flies and horseflies) were investigated.

In one eclector trap that was mounted around a tree trunk of a dead apple tree in an old orchard (Fig. 1) in Altenbroek / Sint-Martens-Voeren on a SW oriented slope, *Camponotus fallax* was found. The high-stem fruit trees of this orchard are no longer productive and they all are characterised by a far-reaching form of decay.

One specimen is deposited in the private collection of the first author and two specimens are deposited in the entomology collection of the Royal Belgian Institute of Natural Sciences (I.G.: 33.699).



Fig. 1. New type tree-eclector at Altenbroek used for the first time in Belgium in 2016 (Photograph: Maarten Jacobs).

Results

The samples with the new discovered ant species belong to a series of trappings within a period of seven months. The three workers were collected on three different dates: 12.V.2017, 21.VIII.2017 and 30.VIII.2017.

Besides the three specimens of *C. fallax* the samples also contained four workers of *Temnothorax affinis* Mayr, 1855, five workers of *Temnothorax nylander* (Förster, 1850), eleven males and one worker of *Myrmica rubra* (Linnaeus, 1758), one alate gyne of *Myrmica scabrinodis* Nylander, 1846, six workers of *Lasius platythorax* Seifert, 1991 and one male, one alate gyne and three workers of *Lasius brunneus* (Latreille, 1798). *Temnothorax affinis* and *L. brunneus* can be expected in the same environment as *C. fallax* typically also nesting in deciduous trees and all three species are designated as true canopy dwelling ants species (SEIFERT, 2008). The presence of *C. fallax* on (and in) this dead tree can be related to the numerous boreholes in the trunk. However, during our inspection of the tree and the surrounding area on a sunny day in October 2017, we haven't found another specimen. The distance with other trees in the area is at least 50 m.

Characteristics of Camponotus fallax

The worker of *Camponotus fallax* (Fig. 2) has a total length between 5,5 and 8,3 mm about the same size as *Camponotus piceus* (Leach, 1825) (3,4 – 7,0 mm) and is much smaller than the workers of *Camponotus ligniperda* (Latreille, 1802) (6,0 – 14,5 mm), *Camponotus herculeanus* (Linnaeus, 1758) (6,0 – 14,0 mm) and *Camponotus vagus* (Scopoli, 1763) (6,2 – 12,6 mm) (BOER, 2015). *Camponotus piceus* is completely black and the propodeum meets declivity at an acute angel. *Camponotus fallax* on the contrary has a mostly black, quite convex mesonotum and black gaster but the antennae and legs are obvious paler. The clypeus is notched in the middle of the anterior border.



Fig. 2. A frontal and lateral view of one of the workers of *Camponotus fallax* collected at Sint-Martens-Voeren (Photograph: Maarten Jacobs).

Discussion

Camponotus fallax has a wide distribution range in the Palaearctic region where it is native from Sweden in the northwest to Siberia in the northeast and from Spain in the southwest to Turkey in the southeast, while it is also noticed in northwest Africa. Capturing the ant *C. fallax* in Belgium was expected (DEKONINCK *et al.*, 2012). Nevertheless it still is rather a surprise as this species is often overlooked due to its hidden life-style. The distance to Germany, where it is noticed as a rare species in deciduous forests, can likely be bridged under the right conditions. The species is known to occur in the adjacent North Rhine-Westphalia but was missing in this state till 2007 (SEIFERT, 2007). Moreover, it is quite noticeable that we had to wait until 2017 for the first observation in Belgium as quite a lot of invertebrate research is being done in this border area between Belgium, the Netherlands and Germany (DEKONINCK & GROOTAERT, 2005; DEKONINCK *et al.*, 2008; PLESSERS *et al.*, 2005a; 2005b; 2008a; 2008b; 2008c; THOMAES *et al.*, 2015). We therefore here suggest that this species might only recently have colonised Belgium.

Camponotus fallax is the fifth species in Belgium of the genus *Camponotus* Mayr, 1861 but all *Camponotus* species are rarely observed in the North of the country and to a lesser account also rare in the southern part. The presence of three *Camponotus* species is apparently just a rare event. We noticed *C. vagus* in Tildonk in 1999 and its presence was linked to a wood transport in the adjacent area (DEKONINCK & PAULY, 2002). Later the species was recorded a second time nearby in Balen. *Camponotus piceus* has been found in 2011 on two locations in the valley of the Viroin in the south of Belgium nearby the border with France (BAUGNÉE, 2004). It is likely that this species has settled down but it will still be a rare appearance on calcareous grasslands in that region. In 1918 Jean Bondroit noticed *C. herculeanus* in the Hautes Fagnes (BONDROIT, 1918), but it is almost certain that the species is extinct in Belgium. The fourth species, *C. ligniperda* is our most common species of this genus and can be found in the valleys of southeast Belgium (DEKONINCK *et al.*, 2012). Will *C. fallax* be a one-time observation or has this ant already colonised other locations?

Camponotus fallax is a dendrobiont which means that their nests are hidden in dead trees. Besides, the colonies are rather small, the workers are foraging individually, mainly in the evening and the first part of the night and hide if disturbed. So, it is an ant that will not be noticed so quickly. Consequently eclector traps, mounted on the right tree can be very useful!

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