

The psyllid *Agonoscena succincta* new to the Netherlands (Hemiptera, Aphalaridae)

C.F.M. (Kees) den Bieman
Paul H. Hoekstra

KEY WORDS

Area expansion, distribution, exotic species, Psylloidea

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In 2019 the tiny psyllid *Agonoscena succincta* was collected in a yellow pan trap. A species not occurring in neighbouring countries and new for the Netherlands. Fieldwork in 2020 in herb gardens showed that this species could be easily found on its hostplant *Ruta graveolens*. The biology of *A. succincta* is discussed.

Introduction

Recently an overview was given on the Dutch psyllid fauna (Den Bieman *et al.* 2019) including a list of species to be expected in the near future. It is ironical that the first psyllid reported new for the Netherlands was not included in this list. Because, as a great surprise, in 2019 one specimen of the tiny *Agonoscena succincta* (Heeger, 1856) (figure 1) was collected in a yellow pan trap. This inspired to check rue *Ruta graveolens*, the known host-plant of this species, at several locations in the Netherlands.

The genus *Agonoscena* comprises fifteen species (Ouvrard 2020) of which four occur in Europe. Older distribution data are unreliable due to taxonomic confusion (Hodkinson & Hollis 1981).

The Dutch geographical coordinates (Amersfoortcoördinaten = AC) are given for each collection site. The material was collected by the authors and preserved in the collection of the first author. Identification is possible with Burckhardt & Lauterer 1989 or Hodkinson & Hollis 1981.

Material

Flevoland: Almere-Verzetswijk (AC 144.9-488.1), yellow pan trap on the roof of a shed, 16-29.viii.2019, 1 ♀, leg. P.H. Hoekstra, coll. C.F.M. den Bieman. **Noord-Brabant:** Ulvenhout, herb garden De Pekhoeve (AC 114.0-395.6) on *Ruta graveolens*, 3.viii.2020, 2 ♂ 2 ♀; Breda, herb garden Begijnhof (AC 112.8-120.2), 4.viii.2020, 11 ♂, 11 ♀, nymphs on *R. graveolens*; same location, 23.ix.2020, 10 ♂ 9 ♀, nymphs on *R. graveolens*, leg. & coll. C.F.M. den Bieman.

Distribution

The discovery of *A. succincta* in the Netherlands is surprising because the nearest known populations are from Austria. Reliable records of *A. succincta* are only available from Austria (type locality), Israel, Italy, Slovenia and Spain (Burckhardt & Lauterer 1989, Ouvrard 2020, Seljak 2020, Spodek *et al.* 2017). Recently *A. succincta* was also collected in Tunisia (Ben Halima



1. *Agonoscena succincta* on *Ruta graveolens*. Grgar (Slovenia), 27.v.2012. Photo: Gabrijel Seljak

1. *Agonoscena succincta* op wijnruit *Ruta graveolens*. Grgar (Slovenië), 27.v.2012.



2. Nymphs of *Agonoscena succincta* on *Ruta graveolens*. Grgar (Slovenia), 27.v.2012. Photo: Gabrijel Seljak
2. Nimfen van *Agonoscena succincta* op wijnruit *Ruta graveolens*. Grgar (Slovenië), 27.v.2012.

Kamel et al. 2019). Reports from Germany (Aulman 1913, Ouvrard 2020, Wagner & Franz 1961) were not correct (Burckhardt & Lauterer 2003). Also, from France no reliable data are available. The record from Iraq (Ouvrard 2020) needs confirmation. *Agonoscena succincta* is also introduced in Brazil (Burckhardt & Lauterer 1989).

Agonoscena succincta is one of the smaller European psyllids: males 1.3 mm (range 1.2-1.5 mm) and females 1.5 mm (range 1.4-1.6 mm). Its small size may have contributed to this species being easily overlooked.

Biology

Agonoscena succincta is a multivoltine species (2-3 generations) and overwinters as second or third instar on its hostplant (Hodkinson 2009, Seljak 2020). It has been reported from *Ruta graveolens* (= *R. divaricata*) (Sapindales, Rutaceae) and also from *R. chalepensis* (Burckhardt & Lauterer 1989, Conci et al. 1992, Spodek et al. 2017). On cultivated *Ruta* plants *A. succincta* can be noxious: yellowing, purpling and curling of leaves (Ben Halima Kamel et al. 2019, Conci et al. 1993). *Ruta graveolens* originates from the Mediterranean and south eastern Europe. This species is naturalized in a number of places in Europe, America and North Africa. In the Netherlands it is growing in herb and old gardens, at old walls and other stony localities. It is rarely naturalized in urban areas, but increasingly so in the last few years (Duistermaat 2020, www.verspreidingsatlas.nl).

Records of *A. succincta* on other plants in particular on *Pistacia terebinthus* or *P. vera* concern other *Agonoscena* species like *A. targionii* (Lichtenstein, 1882) or *A. pistacae* Burckhardt & Lauterer, 1989 (Burckhardt & Lauterer 1989, Drohojowska & Burckhardt 2014, Hodkinson & Hollis 1981). For monophagous and oligophagous species the hostplant is a good indicator for the identity of the psyllid species.

Discussion

Most intriguing is how this tiny psyllid reached the Netherlands. The first finding of *A. succincta* in a yellow pan trap on the top of a roof suggests that this species is capable of migration. Also, *Ruta graveolens* was not growing in the surrounding gardens. The nearest populations (Austria) are far away, and migration seems improbable. Introduction together with its hostplant seems the most obvious introduction pathway and the species must be considered exotic. Observations in several Dutch garden centers on *Ruta graveolens* were not successful. Probably because the *Ruta* plants were grown from seed.

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Samenvatting

De bladvlo *Agonoscena succincta* nieuw voor Nederland (Hemiptera, Aphalaridae)

In 2019 werd de kleine bladvlo *Agonoscena succincta* verzameld met behulp van een *yellow pan trap* op een dak in Almere. Deze soort is nieuw voor Nederland en niet bekend uit onze buurlanden. Een inventarisatie in 2020 in kruidentuinen in Breda en Ulvenhout toonde aan dat de soort gemakkelijk gevonden kan worden op de belangrijkste voedselplant wijnruit *Ruta graveolens*. Aangezien de dichtstbijzijnde vindplaats van de bladvlo in Oostenrijk ligt, is *A. succincta* in Nederland waarschijnlijk een exoot die met de voedselplant is geïmporteerd.



C.F.M. (Kees) den Bieman
Ulvenhout, the Netherlands
cdbieman@planet.nl

Paul H. Hoekstra
Almere, the Netherlands