

***Phaonia trimaculata* (Bouché, 1834), *Helina latitarsis* Ringdahl, 1924,  
*Helina maculipennis* (Zetterstedt, 1845) and  
*Coenosia antennata* (Zetterstedt, 1849) (Diptera: Muscidae)  
new for Belgium**

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**Abstract**

This paper describes the first records of the Muscidae *Phaonia trimaculata* (Bouché, 1834), *Helina latitarsis* Ringdahl, 1924, *Helina maculipennis* (Zetterstedt, 1845) and *Coenosia antennata* (Zetterstedt, 1849) in Belgium.

**Keywords:** Muscidae, *Phaonia*, *Helina*, *Coenosia*, species new for Belgium

**Samenvatting**

De eerste Belgische records van de Muscidae *Phaonia trimaculata* (Bouché, 1834), *Helina latitarsis* Ringdahl, 1924, *Helina maculipennis* (Zetterstedt, 1845) and *Coenosia antennata* (Zetterstedt, 1849) worden beschreven.

**Introduction**

Muscidae are small to middle sized flies, belonging to the Calyptrata family group. They are predominantly dark, sometimes with an inconspicuous pattern on thorax or abdomen. Some species are partly yellow and members of some genera resemble Calliphoridae with their metallic sheen. The configuration of setae on the head, thorax, abdomen and legs is important for the identification of genera and species. Most larvae are at least partly predaceous. A few species are exclusively saprophagous or coprophagous. In Europe there is only one obligate phytophagous species (GREGOR *et al.*, 2002).

In 1991 a checklist of the Belgian Muscidae was published, which listed 200 species (HOFMANS, 1991). Since that paper the Muscidae have hardly received any attention in Belgium. This means that there is still a lot to be discovered about the Belgian Muscidae. Recently MARTENS *et al.* (2011) added *Hydrotaea aenescens* (Wiedemann, 1830) to the checklist. In this paper the first Belgian records of one *Phaonia*-species, two *Helina*-species and one *Coenosia*-species are described.

**Detailed account of the observations**

***Phaonia trimaculata* (Bouché, 1834)**

Material: Sint-Laureins, Noorddijk, 14.X.2011, 1 female, leg., coll. & det. C. Martens.

*Phaonia trimaculata* is a *Phaonia* characterized by among other things infuscated cross-veins, a scutellum with 1 or 3 dark basal spots and often a reddish tip, two pairs of strong presutural acrostichals and legs that are black with the exception of the mid and hind tibia which are often brownish to yellow (GREGOR *et al.*, 2002).

*Phaonia trimaculata* is a West Palaearctic species that occurs from North Africa to Fennoscandia and eastwards to Israel (GREGOR *et al.*, 2002) and the former Central Asian Soviet Republics (Adrian Pont, pers. comm.). The larvae are rather specialized. They are associated with herbaceous plants, especially Brassicaceae, where they prey upon the larvae of various Anthomyiidae and Coleoptera. They are also found on for example Apiaceae (*Heracleum* L.), Poaceae (*Saccharum* L.) and Asteraceae (thistles). The adults occur especially in the vicinity of Brassicaceae crops, but are found also in uncultivated areas (D'ASSIS-FONSECA, 1968;

SKIDMORE, 1985; GREGOR *et al.*, 2002).

I found one female *Phaonia trimaculata* that was sun basking on a leaf of *Rubus* sp. L. on a dike in the reclaimed land of Sint-Laureins. The dike is characterized by a species-rich vegetation with *Carex flacca* Schreb., *Origanum vulgare* L., *Clinopodium vulgare* L., *Arenaria serpyllifolia* L., *Hieracium pilosella* L. and *Geranium columbinum* L., alternating with shrubs or individuals of *Ulmus minor* Mill., *Prunus spinosa* L., *Crataegus monogyna* Jacq. and *Rosa* sp. L.. This species-rich vegetation developed as the understory of a poplar (*Populus x canadensis* Moench) plantation, grown on the dike. The neighbourhood consists mainly of agricultural land. In spring there were no Brassicaceae crops near the dike (data Marsh Harrier project INBO), but in autumn/winter there was a crop with *Sinapis alba* L. at about 500m from the site (Pieter Dhaluin, pers. comm.).

#### ***Helina latitarsis* Ringdahl, 1924**

Material: Berlare, Overmeire, 25.VI.1944, 1 male, leg. J. Verbeke, coll. C. Verbeke, det. C. Verbeke and C. Martens; Knesselare, Burkel-Zuid, 28.VIII.2011, 1 male, leg., coll. & det. C. Martens.

*Helina latitarsis* is a black species (including blackish infuscated wings in male and black legs in both sexes) with contrasting pale yellow calypters. It has a prealar seta that is about as long as the posterior notopleural. The male hind tibia has several rows of long hair-like posteroventrals in the middle third or slightly more and the male abdomen is grey dusted with paired brown spots and a large mid spot at base. The females have fore tarsomeres that are distinctly dilated and an abdomen with shifting markings (GREGOR *et al.*, 2002).

*Helina latitarsis* is a Palaearctic species. It occurs from Spain and Bulgaria to Fennoscandia and eastwards to China and Western Siberia (GREGOR *et al.*, 2002; SOROKINA & PONT, 2010). Very little is published about the habitat preferences. RINGDAHL (1924) found the species in Sweden both at the coast and inland. He found that it occurs mostly amongst vegetation in moist areas.

I collected one male on the border of a recent forest plantation and a poplar plantation with a marshy zone. In the vicinity there are also an ash-elm wood, a willow thicket, a pine plantation, pastures and agricultural areas.

In addition, one male was discovered in the

collection of Charel Verbeke, dating from 1944. The label mentions "Overmeire" and the date, without any further details.

In the Belgian checklist (HOFMANS, 1991) *Helina latitarsis* is not included. However, the list mentions "*Phaonia latitarsis* Rhingdahl, 1924", which is a name that we could not trace in any literature. This is certainly an error. Probably *Helina latitarsis* is meant, but this could not be checked as the source of the name in the checklist could not be found and there are no corresponding specimens in the RBINS collection.

#### ***Helina maculipennis* (Zetterstedt, 1845)**

Material: Sint-Laureins, Jeronimuspolder, 01.VIII.2011, 1 female, leg. C. Martens, B. Vandevoorde and J. Mortelmans, coll. & det. C. Martens; Knesselare, Drongengoedweg, 27.VIII.2011, 1 male, leg., coll. & det. C. Martens; Sint-Laureins, Jeronimuspolder, 28.IX.2011, 1 female, leg. C. Martens, B. Vandevoorde and J. Mortelmans, coll. & det. C. Martens.

*Helina maculipennis* is a species with black legs, a short prealar seta and wings that have greyish brown infuscated crossveins. The hind tibia of the males is characterized by long hair-like posteroventrals in the basal half (GREGOR *et al.*, 2002).

*Helina maculipennis* is a Holarctic species. In Europe it occurs from Spain and former Yugoslavia to Fennoscandia (GREGOR *et al.*, 2002). We could not find detailed information about the ecological requirements of this species.

I collected one male by sweeping a net through the vegetation of a roadside verge of the 'Drongengoedweg' in the Drongengoed forest (Knesselare). At that site the road crosses a birch-oak wood. The roadside verges have a vegetation with species such as *Molinia caerulea* (L.) Moench, *Centaurea jacea* L., *Potentilla erecta* (L.) Rauschel, *Hieracium umbellatum* L. and *Solidago virgaurea* L. (Fig. 1). The vicinity is characterized by a variety of habitats such as deciduous forest, coniferous forest, heathland relics, arid grassland, pastures and agricultural areas.

In addition two females were collected by a Malaise trap in the reclaimed land of Sint-Laureins. The trap was located on the bank of a wide, brackish ditch (Fig. 2). The vegetation of the bank is dominated by *Scirpus maritimus* L. and *Phragmites australis* (Cav.) Steud. The



Fig. 1: Roadside verge in the Drongengoed forest, where the male *Helina maculipennis* was found.



Fig. 2: Malaise trap on the bank of a brackish ditch in the reclaimed land of Sint-Laureins. Two females *Helina maculipennis* and one female *Coenosia antennata* were collected here.

surrounding area consists mainly of pastures and agricultural land. Adjacent to the sampled bank there is a salt meadow with species such as *Puccinellia maritima* (Huds.) Parl., *Juncus gerardii* Loisel., *Suaeda maritima* (L.) Dum., *Spergularia marina* (L.) Besser, *Spergularia media* (L.) C. Presl *subsp. angustata* (Clavaud) P. Kerguélen et Lambinon, *Parapholis strigosa* (Dum.) C.E. Hubbard, *Aster tripolium* L., *Glaux maritima* L. and *Salicornia europaea* L. On the dike nearby there are poplars *Populus sp.* L..

#### ***Coenosia antennata* (Zetterstedt, 1849)**

Material: Sint-Laureins, Jeronimuspolder, 01.VIII.2011, 1 female, leg. C. Martens, B. Vandevoorde and J. Mortelmans, coll. & det. C. Martens.

*Coenosia antennata* is a *Coenosia* with an unusually long postpedicel, that has a tip which is sharply angular. The lower calypter is conspicuously longer than the upper one and the proepisternum bears two setae. The male is also characterised by the absence of setae in the middle part of the tibiae and an arista that is barely longer than the postpedicel (D'ASSIS-FONSECA, 1968; GREGOR *et al.*, 2002).

*Coenosia antennata* has a wide distribution in Europe (GREGOR *et al.*, 2002). We could not find detailed information about the ecological requirements of this species.

One female *Coenosia antennata* was collected by the same Malaise trap as above.

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