

## SCIENTIFIC NOTE

**First record of the Palearctic seed bug *Metopoplax fuscinervis* Stål (Hemiptera: Oxycarenidae) in North America****C.G. RATZLAFF<sup>1</sup> AND G.G.E. SCUDDER<sup>2</sup>**

*Metopoplax* Fieber, a small genus of seed bugs in the family Oxycarenidae (Hemiptera), is naturally found throughout Europe, the northern coast of Africa, and Central Asia. All three species of *Metopoplax* use plants of the Asteraceae family as their host, from egg to adult (Péricart 1999). In Péricart (1999), *Metopoplax ditomoides* (Costa) was recorded throughout the western Mediterranean region, extending north to England and east to Bulgaria. *Metopoplax fuscinervis* Stål was recorded throughout the entire Mediterranean region, extending as far north as central France and as far east as Iran. *Metopoplax origani* (Kolenati) was recorded throughout the eastern Mediterranean region and eastern Europe, extending eastwards into Central Asia as far as Kyrgyzstan. Recently, *M. ditomoides* was introduced to western North America, being found first in Oregon in 1998 (Lattin and Wetherill 2002). Specimens were subsequently found in California, Washington, and, in 2010, in British Columbia (Wheeler and Hoebeke 2012). Expansion of the known range of *M. fuscinervis* has also occurred; it has recently been recorded from Belgium (Baugnee *et al.* 2000), the Netherlands (Aukema *et al.* 2005), and England (Harvey 2008).

On a warm, sunny day in August 2018, one male *M. fuscinervis* (Fig. 1) was collected by the first author (C.G.R.) in Memorial South Park in Vancouver, British Columbia, Canada. This specimen represents the first record of this species in North America. It is deposited at the Spencer Entomological Collection in the Beaty Biodiversity Museum at the University of British Columbia, Vancouver, British Columbia, Canada.

**Speciman data.** ♂, CAN, BC, Vancouver, Memorial South Pk., 49.23117 °N, 123.08721 °W, 14.viii.2018 (C.G. Ratzlaff)

*Metopoplax fuscinervis* is easily separated from the two other species of *Metopoplax*, in that the posterior half of its pronotum is lighter in colour (Fig. 1). In addition, it can be distinguished from the other introduced species, *M. ditomoides* (Fig. 2), by its clypeus, which is smaller and rounded or truncate instead of larger and spatulate. Péricart's (1999) key to the species of *Metopoplax* includes the variety *M. origani* var. *cingulata* and pairs it with *M. fuscinervis* in the final couplet; however, the variety has since been synonymized with *M. fuscinervis* (Dellapé and Henry 2020).

*Metopoplax fuscinervis* can be distinguished from other superficially similar species present in the region using the key to Lygaeoidea in Henry (1997) and the key to genera of Oxycarenidae in Henry *et al.* (2015). In the latter, *M. fuscinervis* keys to couplet 8 but does not agree with the characteristics for either *Metopoplax*, based on *M. ditomoides* and differentiated previously, or *Microplax*, which is also based on a single species. The only species of the genus *Microplax* recorded from North America is *Microplax albofasciata* (Costa) (Hemiptera: Oxycarenidae), from California. Unlike *M. fuscinervis*, it has a completely black pronotum (Henry *et al.* 2015).

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**Figure 1.** Male *Metopoplax fuscinervis*, a) dorsal view and b) lateral view, from Memorial South Park, in Vancouver, British Columbia.

The specimen of *M. fuscinervis* was collected in a park in the middle of the city, in a section of field only sparsely vegetated by short grass. This park is not close to any obvious ports of entry, so how this specimen might have arrived at this location is unknown. Little research has been done into the biology or dispersal of this species. The recent recorded spread northwards in Europe suggests that *M. fuscinervis* is capable of crossing larger distances, whether naturally or with human assistance. The closely related *M. ditomoides* is thought to have been transported to new regions on plant material (Deckert 2004). The same may be true for *M. fuscinervis*.

Vancouver is an apparent hotspot for introduced insects, with non-native species consistently found there, many being new to British Columbia, Canada, or North America. Hemiptera are no exception, with the aforementioned *M. ditomoides*, *Monosteira unicastata* (Mulsant & Rey) (Hemiptera: Tingidae) (Scudder 2012), *Halyomorpha halys* (Stål) (Hemiptera: Pentatomidae) (Abram *et al.* 2017), *Cyphostethus*

*tristriatus* (Fabricius) (Hemiptera: Acanthosomatidae) (Ratzlaff and Scudder 2018), and *Aradus depressus* (Fabricius) (Hemiptera: Aradidae) (Heiss and Scudder 2019) all being reported in the city in the past eight years. In fact, several of the city's most commonly found insects, of any order, are introduced; these include *Polistes dominula* (Christ) (Hymenoptera: Vespidae), *Amphimallon majale* (Razoumowsky) (Coleoptera: Scarabaeidae), and the widespread *Harmonia axyridis* (Pallas) (Coleoptera: Coccinellidae).



**Figure 2.** Female *Metopoplax ditomoides*, dorsal view, from Richmond, British Columbia.

Early detection and sampling are key to determining the extent of a species' introduction and to estimating the introduction's possible effects (Lodge *et al.* 2006). Unfortunately, these new populations may already be well established and widespread before they are detected, because collecting efforts in public spaces, such as city parks, are usually minimal. In addition, many factors are taken into account in invasive species management, and, for many reasons, land managers tend to view less noticeable species that have few or no economic impacts as less of a management priority than invasive species that have noticeable, economic impacts (Hanley and Roberts 2019). More extensive sampling is needed to determine if *M. fuscineris* has become established and, if so, at what stage of introduction it is.

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