Another signal of climate change? First records of the Mediterranean *Graptopeltus validus* (Horváth, 1875) (Hemiptera: Heteroptera: Lygaeidae s.l.) in Austria. Ein weiteres Signal des Klimawandels? Erste Nachweise des mediterranen *Graptopeltus validus* (Horváth, 1875) (Hemiptera: Heteroptera: Lygaeidae s.l.) in Österreich.

According to Péricart (1999) the distribution range of the lygaeid seed-bug *Graptopeltus validus* (Horváth, 1875) extends from Turkmenistan through Asia Minor and Greece as far west as Tuscany in Italy. In Central Europe the species is known from southern and central Hungary (Budapest, Horváth 1897; Simontornya, Kondorosy 2014; Bugac, Bakonyi & Vásárhelyi 1987; Zamárdi, Kondorosy 2001; Litér, Harmat 2001; Naszály, Rédei 2010), southern Slovakia (Štúrovo, Roubal 1961; no recent findings, P. Kment in litt.) and southern Slovenia (Novo mesto, Gogala & Gogala 1989, Gogala 1991; Rakitovec (Istria), A. Gogala in litt.; see also Gogala 2014).

In May 2015 two females of this species were collected in Austria (Lower Austria, Mödling, Eichkogel, Eichkogelweg, N 48°03'47.1" E 16°18'20.8", 28.V.2015, leg. F. Schmolke & T. Schulz-Mirbach, coll. F. Schmolke and ZSM). A second inspection close to this location in August 2015 revealed two males (Eichkogel, N 48°03'30.8" E 16°18'9.3", 1.VIII.2015, leg. et in coll. W. Rabitsch). These specimens represent the first record of *G. validus* for Austria.

All specimens were found under *Anchusa officinalis* (Boraginaceae) along the waysides of a narrow road, which is only used by winegrowers, bicyclists, and walkers (Fig. 1). However, the roadsides are intensively managed and mowed and vegetation is usually suppressed mechanically and presumably chemically as well. No specimens were found beneath *Echium vulgare* plants. While searching for the species on 1st August, the following additional Heteroptera species were collected as by-catch under *Anchusa officinalis* and *Echium vulgare*: **Psacasta exanthematica* (Scopoli, 1763); **Sehirus morio* (Linnaeus, 1761); **Aellopus atratus* (Goeze, 1778), *Beosus maritimus* (Scopoli, 1763), *Emblethis verbasci* (Fabricius, 1803), **Geocoris ater* (Fabricius, 1787), **Megalonotus praetextatus* (Herrich-Schäffer, 1835), **Megalonotus sabulicola* (Thomson, 1870), *Metopoplax origani* (Kolenati, 1845), *Peritrechus gracilicornis* Puton, 1877, *Pterotmetus staphyliniformis* (Schilling, 1829), *Raglius alboacuminatus* (Goeze, 1778), *Sphragisticus nebulosus* (Fallén, 1807). On 28th May: **Sehirus morio* (Linnaeus, 1761) and **Prostemma guttula* (Fabricius, 1787). The asterisks indicate species that were not mentioned for the Eichkogel by Rabitsch et al. (1998), who recorded 171 species, but did not aim for a complete inventory of the area. No doubt several more species can be found at this well-known biodiversity hotspot for many different taxonomic groups (e.g. Bieringer & Berg 2001, Mazzucco & Ortel 2001, Wiesbauer 2008).

The separation from *Graptopeltus lynceus* (Fabricius, 1775) is straightforward (Figs. 2–3) as follows:

6.7–8.0 mm. A triangular white patch posterior to the large quadrangular black spot at the anal area of the fore wings; membrane light grey with whitish spots. .....*G. lynceus*

8.0–10.0 mm. The white patch posterior to the large quadrangular black spot diffuse or absent; membrane brown with a whitish tip. ..... *G. validus*

Fig. 1: Sampling location of *Graptopeltus validus* at the Eichkogel, Mödling, Lower Austria (1st August 2015). / *Sammelplatz von Graptopeltus validus am Eichkogel*, *Mödling*, *Niederösterreich (1. August 2015).* © W. Rabitsch.

It is still to be clarified whether *G. validus* has recently arrived to Austria or has been overlooked in the past. Examination of material collected by the first author at the Eichkogel between 1994 and 1997 and the Heteroptera collection at the Natural History Museum Vienna revealed no specimens from Austria. The increasing influx of Mediterranean Heteroptera species in Austria has been observed before (Rabitsch 2008) and a "mediterranization" of the fauna in Central Europe was suggested, which is most likely due to climate change. Because *G. validus* has a clear xero-thermophilic preference (Péricart 1999), and also due to a higher number of records from Hungary, we consider it more likely that the species has arrived from the east (Hungary) than from the south (Slovenia). There is no evidence of unintentional translocation as stowaway with goods along transportation routes, but it remains to be investigated if the species is present in-between the currently known records, particularly within the Pannonian Basin. As *G. validus* is a rather large and easily identified species, it seems unlikely that it has been overlooked in the past. We rather suggest that our records represent (another) new arrival of a thermophilic (ponto)mediterranean faunal element in Austria.

Acknowledgements

We thank Elöd Kondorosy (University of Veszprém), Petr Kment (National Museum, Prague), and Andrej Gogala (Slovenian Museum of Natural History) for providing information on the occurrence of the specimens in Hungary, Slovakia, and Slovenia.

Figs. 2–3: (2) *Graptopeltus validus*; (3) *Graptopeltus lynceus*. © W. Rabitsch.

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