

NOTA / NOTE

The brown marmorated stink bug *Halyomorpha halys* (Stål, 1855) (Heteroptera: Pentatomidae) in Chile.

Eduardo I. Faúndez^{1,2} & David A. Rider¹

¹ Entomology Department, School of Natural Resource Sciences, North Dakota State University, Fargo, ND, USA.
e-mail: ed.faundez@gmail.com

² Departamento de Zoología Médica, Centro de Estudios en Biodiversidad (CEBCh), Magallanes, 1979, Osorno, CHILE.

Abstract: The brown marmorated stink bug, *Halyomorpha halys* (Stål, 1855) (Heteroptera: Pentatomidae), is recorded for the first time as established species in Chile, outside of interception facilities in the entrance gates of the country. The new records are based on adult specimens collected in homes in three different places in the city of Santiago, Metropolitan Region. Comments on how separate this species from other similar species in Chile are provided.

Key words: Heteroptera, Pentatomidae, *Halyomorpha halys*, invasive species, pest, new record, South America, Chile.

Resumen: La chinche parda marmolada *Halyomorpha halys* (Stål, 1855) (Heteroptera: Pentatomidae) en Chile. Se registra por primera vez la chinche parda marmolada *Halyomorpha halys* (Stål, 1855) (Heteroptera: Pentatomidae) como especie establecida en Chile, fuera de puntos de intercepción en puertas de entrada al país. Los nuevos registros están basados en ejemplares adultos colectados en hogares de tres puntos distintos de la ciudad de Santiago, Región Metropolitana. Se incluyen comentarios sobre cómo diferenciarla de otras especies similares en Chile.

Palabras clave: Heteroptera, Pentatomidae, *Halyomorpha halys*, especie invasora, plaga, nuevo registro, Sudamérica, Chile.

Recibido: 21 de marzo de 2017

Aceptado: 4 de abril de 2017

Publicado on-line: 20 de abril de 2017

The brown marmorated stink bug *Halyomorpha halys* (Stål, 1855) (Figs. 1, 2) is an invasive species of Pentatomidae (Heteroptera) native to Eastern Asia. In recent years, it was unintentionally introduced into the United States and Europe, and has caused economic damage to several crops; it is also a nuisance as it aggregates to overwinter in homes (Hamilton, 2009; Leskey *et al.*, 2012; Zhu *et al.*, 2012; Wallner *et al.*, 2014; Gapon, 2016). This phytophagous species is a generalist and has been recorded feeding on nearly 50 families of plants (Rider, 2017); however it seems to show a preference for plants in the families Fabaceae and Rosaceae (Nielsen & Hamilton, 2009).

Although this species has not been formally recorded from South America, in 2011 the Chilean governmental agricultural Agency (Servicio Agrícola y Ganadero SAG) raised a national alert for *H. halys* because a few specimens were intercepted at an entry point in the far northern part of Chile (Iquique city) in goods coming from the United States. These interceptions were dealt with in a timely manner and the species did not become established in Chile. Since then, only a few isolated interceptions have been occurred/observed, without any specimens being found outside of quarantine facilities or entry points. Zhu *et al.* (2012), however, presented a model of geographical areas which would be suitable for the establishment of *H. halys*, and central Chile is included as a region with a very high potential for invasion. We provide the first records of *H. halys* specimens in central Chile which were collected in a city outside of quarantine/interception facilities.

Material examined: CHILE, Metropolitan Region: Santiago Centro, 2-III-2017, 1♂, M. Grollmus Soto leg. (E. Faúndez coll.); Santiago, Estación Central, 5-III-2017, 1♂, 2♀♀, J. Soto leg. (J. Soto coll.); Santiago, Quinta Normal, 7-III-2017, 1♀, P. Santander leg. (together with 3 other adults observed) (E. Faúndez coll.).

The specimens were all collected/observed in homes in the downtown area of the city. At this time of the year, in the southern hemisphere, specimens of *H. halys* would be searching places to overwinter. Therefore, it is no surprise that these specimens were found entering or inside people's homes. At this time, we have no direct reports of specimens damaging crops, however, given its history in other regions (e.g., Europe, United States), it is highly probable that specimens of this species will eventually be found on various crops in the region. Thus, additional surveying is desirable to understand the actual status of this species in Chile. This record is also the first one from any South American country; therefore other neighbouring South American countries should perhaps take the necessary steps towards preventing the entrance of *H. halys* into their countries.

In Chile, the only other pentatomid species that can be easily confused with *H. halys* is *Pellaea stictica* Dallas, 1851 (Fig. 3). This species has been recently recorded in Chile, and it is so far only known from the very northern part of the country (Faúndez & Rider, 2014). *H. halys* can be differentiated from *P. stictica* by having a more elongated head (longer than wider; whereas the length and width are subequal in *P. stictica*) (Figs. 2, 3), and by the lack of a basal abdominal tubercle in *H. halys* (present in *P. stictica*).

It is interesting to note that another invasive pentatomid recently arrived in Chile, the painted bug *Bagrada hilaris* (Burmeister, 1835) (Faúndez *et al.*, 2016). In only a few months after its arrival, its distributional range has expanded noticeably, and it is causing economic problems (Faúndez *et al.*, in prep.). This situation should serve as a warning to quickly study the status of *H. halys* before its population increases and its distributional range expands substantially.

Acknowledgements

We thank Marianne Grollmus Soto for collecting the first specimen and for the photo in Fig 1. We also thank José Soto and Pedro Santander for providing their records and observations.

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Figs. 1-2.- *Halyomorpha halys* (Stål, 1855). 1.- Living specimen in a home in Santiago, Chile. 2.- Habitus. **Fig. 3.-** *Pellaea stictica* Dallas, 1851, habitus (modified from Faúndez & Rider, 2014).