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Scientific note

The unstoppable march of *Halyomorpha halys*: new first country records

(Hemiptera, Pentatomidae)

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Halyomorpha halys (Stål, 1855) is a stink bug native to East Asia, which has been introduced into several European countries, North America, Chile, and intercepted also in Oceania (see Cianferoni et al. 2018 and Claerebout et al. 2018 for further details). Concerning Europe, in several northern countries it is considered only intercepted (Claerebout et al. 2018); in particular in Great Britain this insect was intercepted twice, one in 2010 in London, in association with passenger luggage flown in from the USA, and the other in 2013 in North Yorkshire, associated with a consignment of stone imported from China (Malumphy 2014, Cianferoni et al. 2018). Eastwards this insect reached European Turkey and Caucasus, but to date no records existed for the Asian part of Turkey.

New first occurrence records updating the distribution of this invasive and pest species (Bergmann et al. 2016) are given.

The examined material, from the platform "iNaturalist" (www.inaturalist.org), was revised by the authors and it is listed below. Geographical coordinates are in decimal degrees (datum WGS84). The uncertainty (in metres) of data was indicated according to the pointradius method (Wieczorek et al. 2004).

- Greece. Lesbos Island. Pyrgi Thermis, 39.173592°N 26.503971°E (uncertainty = 335 m), 23.IV.2019, 1 adult (Fig. 1), photo by Savvas Zafeiriou.
- **Great Britain**. England. Farnham, Zoo Birdworld, 51.181439°N 0.841524°E (uncertainty = 4 m), 27.IV.2019, 1 adult, photo by Jaime Rockhill.
- Turkey. Istanbul, Kadıköy, 40.98098°N 29.02079°E (uncertainty = 3 m), 23.IX.2018, 1 adult, photo by Ahmet Kutsi Nircan; Istanbul, Üsküdar, 41.0187°N 29.008997°E (uncertainty = 5 m), 27.X.2018, 1 adult, photo by "c_nurdan_ozturk".
- USA, Louisiana. New Orleans, 29.95057° N 90.04649° W (uncertainty = 2 km), 30.IV.2018, 1 adult, photo by Thomas Werts. Oklahoma. Tulsa, Broken Arrow, 36.007804° N 95.817144° W (uncertainty = 5 m), 2.XII.2018, 1 adult, photo by "autumn4444".

In the USA *H. halys* is now recorded for all the states (Cianferoni et al. 2018), completing its unstoppable invasion of the country.

Concerning Europe, a further recent record for England, where the species was known only through multiple introductions (but only intercepted), is given. Now, it will be important to continue monitoring in order to ascertain if the species has established or not in the country. The Turkish records are the first east of the Bosporus and, although they are near to the previous published record from Istanbul (Çerçi & Koçak 2017), these are actually the first ones for the Asiatic Turkey. The record from Lesbos Island (Greece), very near to Anatolia, is the easternmost for this country (Cianferoni et al. 2018, Claerebout et al. 2018). It is very likely that Anatolia will be invaded soon, since *H. halys* has



Fig. 1. Adult of *Halyomorpha halys* from Lesbos Island (photo by Savvas Zafeiriou).

now crossed the Bosporus and landed on the Asian side and is also very close to Asian Turkey in Georgia in the east (see Claerebout et al. 2018).

These data unfortunately confirm again the very quick spreading of this allochthonous true bug in the Western Palaearctic, threatening several new countries northwards (i.e. Great Britain) and from Eastern Europe towards Near East (Cianferoni et al. 2018).

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