



## First record of *Halyomorpha halys* (Heteroptera: Pentatomidae) from Uzbekistan

## Первая находка *Halyomorpha halys* (Heteroptera: Pentatomidae) в Узбекистане

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**Abstract.** The invasive stink bug species *Halyomorpha halys* (Stål, 1855) (Heteroptera: Pentatomidae), a dangerous pest of many agricultural plants, is recorded from Uzbekistan for the first time. Several imagines and larvae were found in the Khorezm and Ferghana provinces in 2020 and 2022.

**Резюме.** Инвазионный вид клопов-щитников *Halyomorpha halys* (Stål, 1855) (Heteroptera: Pentatomidae), являющийся опасным вредителем сельскохозяйственных культур, впервые обнаружен в Узбекистане. Несколько имаго и личинок были найдены в Хорезмской и Ферганской областях в 2020 и 2022 годах.

**Key words:** brown marmorated stink bug, Khorezm, Fergana, Heteroptera, Pentatomidae, *Halyomorpha halys*, invasive species, first record

**Ключевые слова:** восточноазиатский мраморный клоп, Хорезм, Фергана, Heteroptera, Pentatomidae, *Halyomorpha halys*, инвазивный вид, первое указание

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The brown marmorated stink bug *Halyomorpha halys* (Stål, 1855) (Heteroptera: Pentatomidae), native to East Asia (China, Korea, Japan and Taiwan) (Esaki, 1926; Rider, 2006), was introduced in the mid-1990s to the United States (Hoebeke & Carter, 2003) and in the early 2000s to Europe. In 2016, this species was registered in the European

part of Russia (Adler and Sochi), Abkhazia, Georgia (Gapon, 2016), Ukraine (Odesa) (Uzhevskaya, 2017), and in the Almaty Province of Kazakhstan (Esenbekova, 2017). In 2017, it was recorded from Krasnodar, the Severskiy and Dinsk districts of the Krasnodar Territory (Neymorovets, 2018), in 2019 from the Rostov Province (Gapon, 2019),



**Fig. 1.** Male (A) and female (B) of *Halyomorpha halys* collected in Fergana and map of findings of this species in Uzbekistan (C).

and in 2021 it was found in Armenia (Kalashian et al., 2022). Currently, its secondary range in the western Palearctic extends west to east from Great Britain to Kazakhstan and north to south from Germany to Morocco, Algeria and Turkey (EPPO, 2022; Powell et al., 2021).

*Halyomorpha halys* is characterised by wide polyphagy and is able to feed on cultivated plants of about 300 species out of 49 families, giving pref-

erence to the family Rosaceae (Duthie, 2012). It can damage various vegetables, fruit trees, soybean, berries, grain, and leguminous plants, ornamental woody plants, and forest trees, particularly maple and ash, and also can be a carrier of phytopathogenic microorganisms (Gapon, 2016; Musolin et al., 2018).

Until now, *H. halys* has not been found in Uzbekistan. This article presents the first record of the

species for the southwestern and northeastern parts of Uzbekistan (Khorezm and Ferghana provinces).

One male of *Halyomorpha halys* was found in the summer of 2020 in Urgench on an apple tree. On 25 August 2022, two males, one female, and seven larvae of the II and III instars were collected in the same city on various fruit trees (mainly apple trees), and on 2 September 2022, one male, one female, and one larva of the II instar were found in Ferghana on apricot trees. The collected larvae clearly belong to the second or subsequent generations which developed for a year, and this indicates to the existence of stable self-reproducing populations in the places of collection and, probably, also in other regions of Uzbekistan.

The appearance of *H. halys* in Uzbekistan from neighbouring countries affected by the invasion was expected, and this article puts another point on the map of its rapid spread and adds one more record to the list of the countries whose agriculture is threatened by this dangerous pest.

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