The invasive brown marmorated stink bug *Halyomorpha halys* (Stål, 1855) (*Heteroptera: Pentatomidae*) already in Bulgaria

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In course of studying the invasive alien true bugs in the city area of Sofia, the brown marmorated stink bug *Halyomorpha halys* (Stål, 1855) was found.

The native range of brown marmorated stink bug includes territories of China, Japan, Korean Peninsula and Taiwan. In the last decade of 20th and in the beginning of 21st century the species rapidly spread to the territory of USA, Canada, New Zealand, and Europe (Haye et al. 2015; Mityushev 2016).

*Figure 1.* Nymph of *Halyomorpha halys* on *Hibiscus syriacus* from Sofia City, Bulgaria.
The species was first recorded in Europe in 2007 in Zürich, Switzerland (Wermelinger et al. 2008). Within just a decade, the species spread to a large part of Europe, including Italy, Switzerland, Hungary, Greece, Germany, Russia, France, Lichtenstein, Austria, Romania and Serbia (Rabitsch 2010; Wyniger & Kment 2010; Heckmann 2012; Callot & Brua 2013; Vétek et al. 2014; Rabitsch & Friebe, 2015; Macavei et al. 2015; Šeat 2015; Mityushev 2016). In Great Britain no stable population is known so far. Only single adults were intercepted on two occasions associated with passenger luggage and consignment of stones (Malumphy 2014).

Because of the good flight ability (Wiman et al. 2015) and very rapid spreading of the species, and also presence of favorable habitats and climatic conditions (Haye et al. 2015) it was expected to reach the territory of Bulgaria. On 16 September 2016 Halyomorpha halys was found in Bulgaria for the first time.

Two different localities and presence of nymphs and adults, searching for hibernating places could be an evidence for an already established and stable population in Sofia. The interesting fact is the coexistence of four true bug species feeding and developing on the same Hibiscus plants, some of them in huge aggregations: O. lavaterae, P. apterus and N. viridula (Fig. 2). Brown marmorated stink bug is a polyphagous species and in the invaded range in the USA a strong economic impact of the species is
observed (Haye et al. 2015). Although no economic impact is known so far in Europe, future stable establishment and mass development of *Halyomorpha halys* in Bulgaria most probably will be a problem in agriculture jointly accumulated with recently observed damages caused by *N. viridula* in some Bulgarian regions (Simov et al. 2012).

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