



New distribution records of some alien and invasive spiders (Araneae: Salticidae, Titanoecidae) and insects (Cicadomorpha: Acanaloniidae; Coleoptera: Cerambycidae, Dermestidae, Latridiidae) in Bulgaria

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INTRODUCTION & AIM

Human transportation and agriculture have facilitated both the intentional and accidental introduction of species of organisms outside of their natural realm. While a significant portion does not survive at their new destination, historically, a large number of species have successfully established populations way outside of their natural distribution, and this number continues to grow. Some of them have proven to be detrimental to local ecosystems (invasive species), others, especially phytophagous ones, to human agriculture. Other species have not shown such adverse effects to their new environment, but a portion of them may exhibit such traits in the future. These factors highlight the importance of monitoring of imports holds and the introduction of alien species, which is the aim of this study. We provide the first records of *Pandava laminata* (Thorell, 1878) (Araneae: Titanoecidae) from the Balkans, as well as the first records of *Hasarius adansoni* (Audouin, 1826) (Araneae: Salticidae) and *Neoclytus acuminatus* (Fabricius, 1775) (Coleoptera: Cerambycidae) from Bulgaria. In addition, new records of *Acanalonia conica* (Say, 1830) (Acanaloniidae) from the city of Sofia, of *Reesa vespulae* (Milliron, 1939) (Coleoptera: Dermestidae) from Sofia and Plovdiv, and of *Cartodere nodifer* (Westwood, 1839) (Coleoptera: Latridiidae) from Sofia are provided.

METHOD

The material was collected in different habitats, both urban and natural, by hand, with exhaustor or tweezers. The specimens were preserved in 70–80% ethanol and deposited in the collection of the Institute of Biodiversity and Ecosystem Research at the Bulgarian Academy of Sciences (IBER). Photo-identifiable records in social media (SM) posts are also included.

RESULTS & DISCUSSION

We provide new faunistic records of two spiders (Araneae: Salticidae, Titanoecidae), one planthopper (Cicadomorpha: Acanaloniidae) and three beetles (Coleoptera: Cerambycidae, Dermestidae, Latridiidae), as follows:

ARANEAE

Hasarius adansoni (Audouin, 1826)

Material: 1 ♂, Sofia, 02.10.2016, in potted orchid (*Phalaenopsis hybr.*) import from the Netherlands (SM) (Fig. 1); 1 juv., Sofia, 10.01.2024, in potted orchid (*Phalaenopsis hybr.*) (SM).

A species of African origin, distributed also in The Middle East and introduced to the Americas, Europe, India, Laos, Vietnam, China, Taiwan, Japan, Australia, Pacific Is.

First records from Bulgaria.

Pandava laminata (Thorell, 1878)

Material: 1 juv., Sofia, 20.03.2024, in potted orchid (*Phalaenopsis hybr.*) (SM); 1 ♀, Sofia, 15.09.2024, in potted orchid (*Phalaenopsis hybr.*) (SM) (Fig. 2).

A species of Asian origin, recently introduced into Europe. Its current distribution includes Tanzania, Kenya, Madagascar, India, Sri Lanka to China, Indonesia, Philippines, Micronesia, French Polynesia. Introduced to the United Kingdom, Netherlands, Germany, Poland and Hungary.

First records from The Balkans.

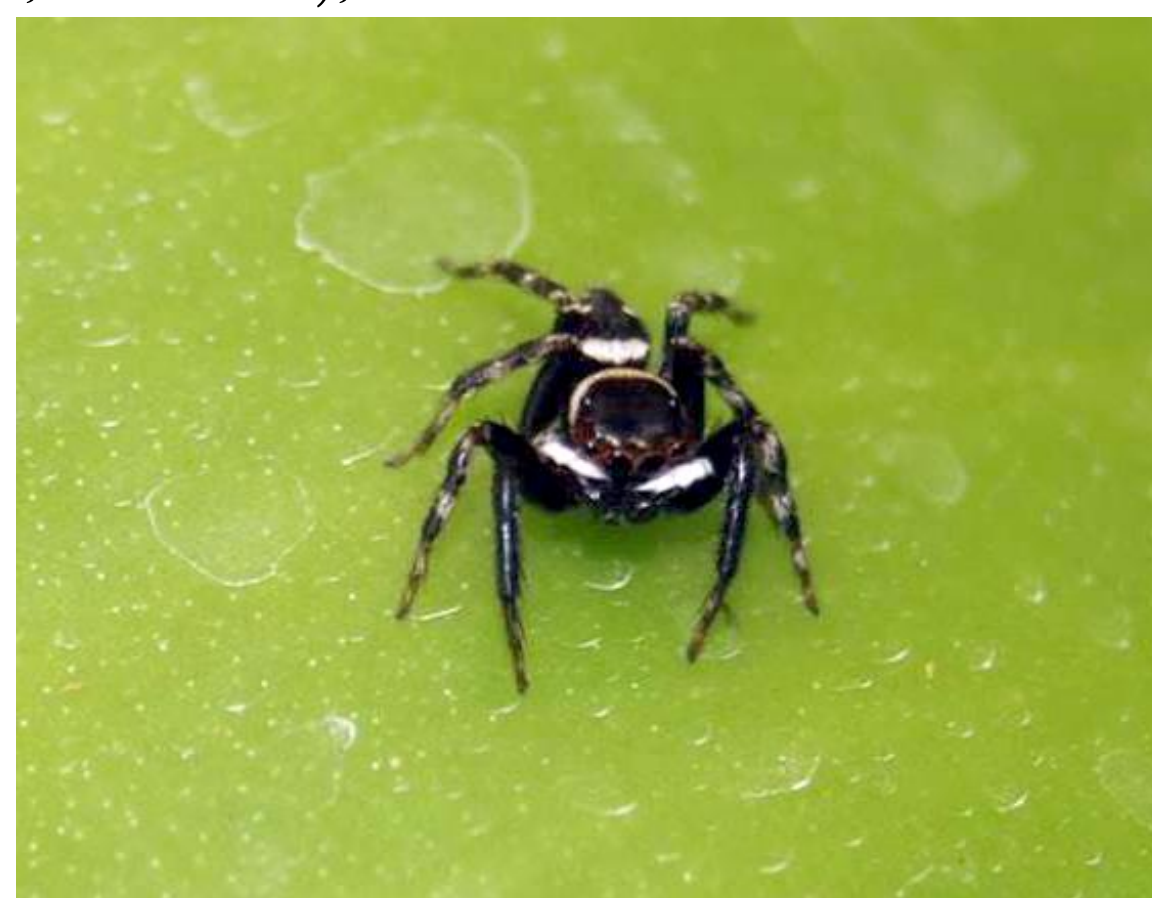


Fig. 1. ♂ *Hasarius adansoni* (Salticidae) from Sofia.



Fig. 2. ♀ *Pandava laminata* (Titanoecidae) from Sofia.

HEMIPTERA

Acanalonia conica (Say, 1830)

Material: 1 indiv., 28.07.2024, Sofia, N 42.6875, E 23.3614, city park on tree bark, V. Vassilev obs. & photo (Fig. 3).

The species is native to the Nearctic realm. It has been found in Europe (Italy) for the first time in 2003.

Second country record after Malko Tarnovo, Strandzha Mts (Gjonov et al. 2023).

COLEOPTERA

Neoclytus acuminatus (Fabricius, 1775)

Material: 1 ♂, Kozloduy, 01.05.2021, photo (SM) (Fig. 4); 1 ♀, Vidin, 22.06.2023, photo (SM); 1 ♂, Pleven distr., Obnova Village, 14.04.2025, photo (SM).

Invasive species from North America. The first European record dates back to 1851 in Rijeka, Croatia. After that, it has spread from Dalmatia and Istria to Montenegro, Serbia, and southeastern Hungary, forming stable populations along the way. Currently, it can also be found in many parts of Romania.

First records from Bulgaria.

Reesa vespulae (Milliron, 1939)

Material: 1 indiv., Plovdiv, 13.06.2023, in packaged bee pollen, R. Andreev obs. & photo; 1 indiv., Sofia, 21.06.2024, on a terrace, V. Vassilev obs. & photo (Fig. 5); 1 indiv., Sofia, in front of a building, 28.06.2024, V. Vassilev obs.

A species with North American origin, introduced in Europe in the mid-20th century (Nardi et al. 2021).

Second report from Bulgaria after Tsvetanov & Háva (2020).

Cartodere nodifer (Westwood, 1839)

Material: 1 ♂, 1 ♀, Sofia, 13.11.2024, V. Vassilev obs. & photo (Fig. 6).

A species with Australian - New Zealand origin, introduced in United Kingdom about 200 years ago and than dispersed in Europe. These beetles feed exclusively on mold that grows on a variety of dead plant matter (including household products).

First documented records from Bulgaria.



Fig. 3. *Acanalonia conica* (Acanaloniidae) from Sofia.



Fig. 4. *Neoclytus acuminatus* (Cerambycidae) from Kozloduy.



Fig. 5. *Reesa vespulae* (Dermestidae) from Sofia.



Fig. 6. *Cartodere nodifer* (Latridiidae) from Sofia.

CONCLUSION

Global climate change is leading to the expansion of both native and non-native (often accidentally introduced) species. The accidental import of many invertebrates with ornamental plants and various goods cannot be avoided. Historically, it has been actively carried out for millennia, but in recent decades it has gained enormous scale. Many accidentally introduced species have established stable populations in new territories. The effect on local fauna and flora is sometimes immediate and drastic, but in most cases, it is gradual and unpredictable. Continuous monitoring of the populations of alien and invasive species is necessary, which takes into account their natural expansion after introduction.

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