

**THE FIRST RECORD OF THE WHARF BORER  
*Nacerdes melanura* (Linnaeus, 1758) (COLEOPTERA: OEDEMERIDAE)  
IN SERBIA**

**Sanja Banjanac\*, Mihailo Vujić**

*Association for Sustainable Development and Habitat Protection in Serbia "HabiProt"*  
*Cankareva 9/13, 21000 Novi Sad, Serbia*

\*Corresponding author; E-mail: sanjabanjanac3@gmail.com

*(Received January 14, 2024; Accepted February 28, 2024)*

**ABSTRACT.** The finding of the wharf borer, *Nacerdes melanura*, is the first record of this species from Serbia, as well as from the continental part of the Balkans. The species was recorded in Mirijevo, Belgrade, on June 16th, 2021, during the night.

**Keywords:** allochthonous species, Belgrade, Balkans, Oedemeridae, *Nacerdes*

The genus *Nacerdes* Dejean 1834 counts about 90 species distributed worldwide, while 55 of them can be found in the Palearctic. This genus includes three subgenera, *Nacerdes* Dejean 1834, *Allagatha* Semenov & Ter-Minasjan, 1937 and *Xanthochroa* W.L.E. Schmidt, 1844 (EGOROV and RUSHER, 2021). It is known so far that only *Nacerdes* (*Xanthochroa*) *carniolica* (Gistel, 1834) occurs in Serbia (BANJANAC, 2014-2024). In this article, we present the first record of another congeneric species, *Nacerdes* (*Nacerdes*) *melanura* (LINNAEUS, 1758).

*Nacerdes melanura* is a cosmopolitan species, widely distributed in the Palearctic, Afrotropical, Australian, Nearctic, and Neotropical realms (KUBISZ and IWAN, 2020). In a vast majority of European countries, this species was mainly recorded near the seashore (<https://www.inaturalist.org/taxa/225433-Nacerdes-melanura>, <https://www.gbif.org/species/1045471>, <https://observation.org/species/23483/>). Records in continental parts of Europe are relatively scarce. ZÚBER (2019) presented new records from Czechia after 70 years. Unpublished data from online databases, e.g. iNaturalist (<https://www.inaturalist.org/taxa/225433-Nacerdes-melanura>), indicates that species also occurs in continental parts of Germany and France. In the Balkans, the species was mainly restricted to areas near the seashores (OGNYAN, 2012; <https://www.inaturalist.org/taxa/225433-Nacerdes-melanura>), and there is no reliable data from the continental part.

The larvae of *N. melanura* are associated with wet wood and can potentially be a threat to human settlements, docks, and shipyards. Adults can be seen near the larval habitats but also can be attracted to artificial lights (PITMAN *et al*, 2003; RITTNER and NIR, 2014). Although practically associated with places near the sea, this species clearly shows the tendency to occupy areas further into the continent (RITTNER and NIR, 2014; ZÚBER, 2019).

The specimen found in Serbia was recorded during the warm summer night of June 16<sup>th</sup>, 2021, on the garden wall next to the source of a cold LED light bulb. The locality where the specimen was found is a private yard in the urban part of Belgrade (Fig. 1B-C). *Nacerdes*

*melanura* (Fig. 1A); 1 specimen photographed; Serbia, Belgrade, Mirijevo, (44.794533; 20.524783); June 16<sup>th</sup>, 2021; leg. MV, det. SB.

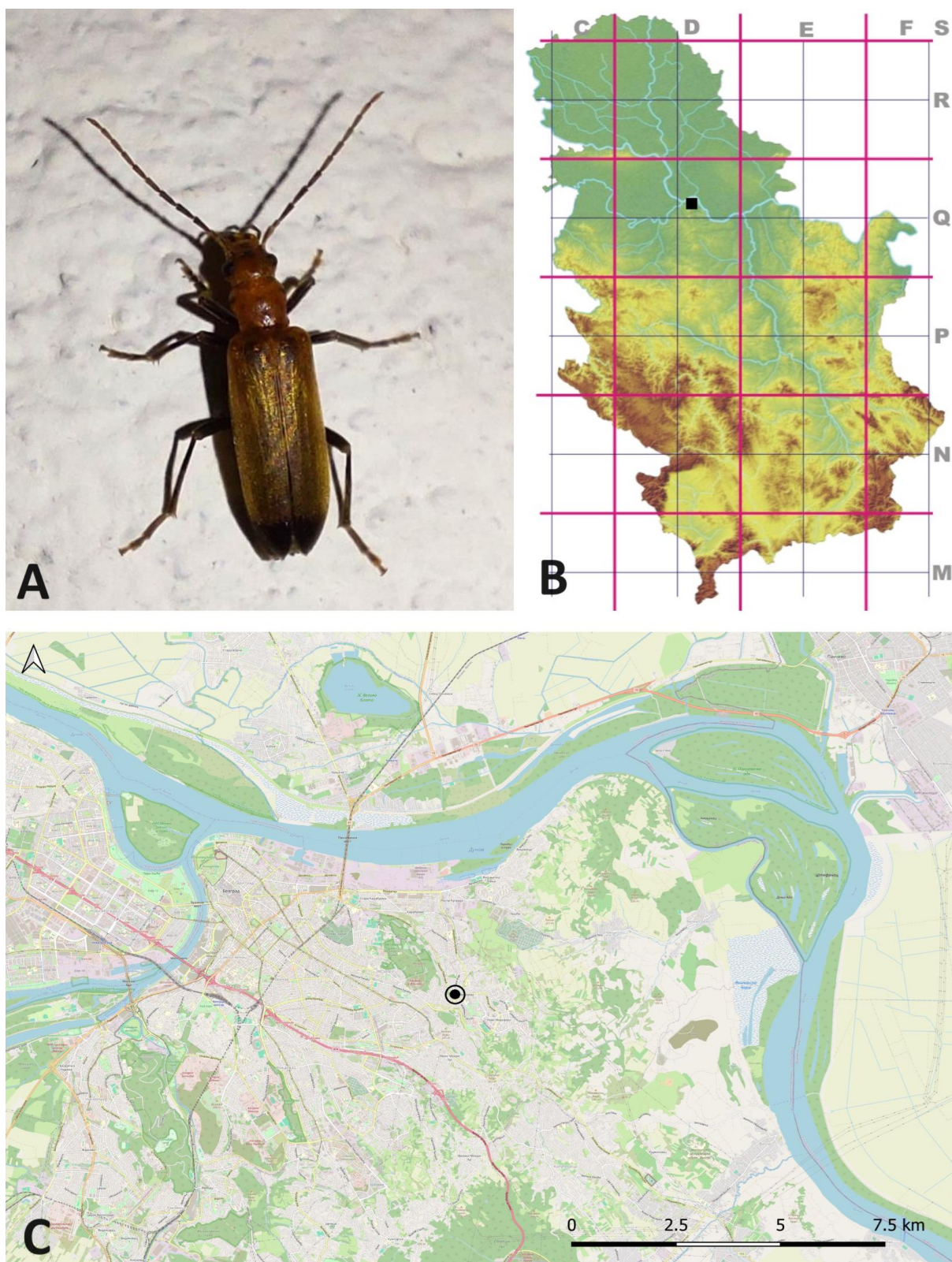


Figure 1. A) *Nacerdes melanura* specimen from Belgrade, Serbia; B) the map of Serbia with marked locality where the specimen was found (black square); C) the map of Belgrade with marked locality where the specimen was found (black target).

This specimen was recorded relatively close to the Danube River (approximately 3 km), and Port Belgrade on the Danube River (approximately 5 km) (Fig. 1B). Although recorded relatively recently, in 2021, the species was not recorded later during the following years, neither at the same nor in other localities within Belgrade and/or Serbia. The absence of repeated records raises the question of the presence of an established population in Belgrade, which cannot be confirmed for now. As *N. melanura* is considered generalist in view of a selection of wood type for larval development, as well as its tendency to occupy continental areas (RITTNER and NIR, 2014, ZÚBER, 2019), it is not unexpected that an established population exists. The discovery of *N. melanura* is another obvious evidence of insects' fast-paced expansion outside of their native habitats. Recently, insect expansions attracted increased entomological interest in Serbia, which was lacking in previous years. In the gathering of these data significant interest is ascribed to citizen science, which is well-proved and documented in recent years in Serbia (KEREŠI *et al.*, 2012; ŠEAT, 2015; PROTIĆ and ŠEAT, 2016; MILOJKOVIĆ *et al.*, 2021; VUJIĆ *et al.*, 2021). Climate changes, the heat island effect in and around Belgrade, and intensive trade are already considered factors that contribute to the establishment of populations of various non-native species (XU *et al.*, 2018; VUJIĆ *et al.*, 2021; GOJŠINA *et al.*, 2022; MILOVANOVIĆ *et al.*, 2022;).

### Acknowledgments

The authors are thankful to Luka Zlatić for his help and for providing access to the private yard where the *Nacerdes melanura* specimen was found.

### References:

- [1] BANJANAC, S. [Ed.] (2014-2024): Alciphron – baza podataka o insektima Srbije (Coleoptera: Oedemeridae). HabiProt [in Serbian] <https://alciphron.habiprot.org.rs> Accessed 10/01/2024]
- [2] EGOROV, L.V., RUCHIN, A.B. (2021): New records of *Nacerdes carniolica* (Gistel, 1834) (Coleoptera: Oedemeridae) from European part of Russia. *Евразийский энтомолог. журнал*, **20** (3): 170–174. doi: 10.15298/euroasentj.20.3.09
- [3] GOJŠINA, V., PÁLL-GERGELY, B., VUJIĆ, M., DEDOV, I. (2022): First record of the genus *Xeropicta* Monterosato, 1892 (Gastropoda: Eupulmonata: Geomitridae) in Serbia. *Folia Malacologica*, **30** (1): 47–53. doi: 10.12657/fofmal.030.008
- [4] KEREŠI, T., SEKULIĆ, R., PROTIĆ, LJ., MILOVAC, Ž. (2012): Occurrence of *Nezara viridula* L. (Heteroptera: Pentatomidae) in Serbia. *Plant Doctor*, **40** (4): 296–304.
- [5] KUBISZ, D., IWAN, D. (2020): Oedemeridae. In: Iwan D., Löbl I. (eds), *Catalogue of Palaearctic Coleoptera*. Vol. 5. Tenebrionoidea, revised and updated second edition. Apollo Books, Stenstrup, Denmark. 476–499
- [6] MILOJKOVIĆ, S., VUJIĆ, M., ĐURIĆ, M., TOT, I. (2021): Geranium bronze, *Cacyreus marshalli* Butler, 1897 – New butterfly species for fauna of Serbia (Papilionidea: Lycaenidae). *Acta Entomologica Slovenica*, **29** (1): 121–124.
- [7] MILOVANOVIĆ, B., RADOVANOVIĆ, M., SCHNEIDER, C. (2022): Seasonal distribution of urban heat island intensity in Belgrade (Serbia). *Journal of Geographical Institute "Jovan Cvijić" SASA* **70** (2): 163–170. doi: 10.2298/IJGI2002163M
- [8] OGNJAN, S. (2012): Records of Oedemeridae (Insecta: Coleoptera) species from Strandzha Mountain (Bulgaria and Turkey). *ZooNotes* **32**: 1–5.
- [9] PITMAN, A.J., JONES, E.B., JONES, M.A., OEVERING, P. (2003): An overview of the biology of the wharf borer beetle (*Nacerdes melanura* L., Oedemeridae) a pest of wood in marine structures. *Biofouling* **19**(1): 239–248, doi: 10.1080/0892701021000049584
- [10] PROTIĆ, LJ., ŠEAT, J. (2016): First records of the alien sycamore seed bug *Belonochilus numenius* in Serbia (Heteroptera: Lygaeidae). *Acta Entomologica Serbica*, **21**: 13–19. doi: 10.5281/zenodo.198

- [11] RITTNER, O., NIR, A. (2014): First records of *Nacerdes melanura* (Linnaeus 1758) and *Xanthochroina auberti* (Abeille de Perrin 1876) (Coleoptera: Oedemeridae) from Israel. *Zootaxa*, **3838** (3): 397–400. doi: 10.11646/zootaxa.3838.3.10
- [12] ŠEAT, J. (2015): *Halyomorpha halys* (Stål, 1855) (Heteroptera: Pentatomidae) a new invasive species in Serbia. *Acta Entomologica Serbica*, **20**: 167–171. doi: 10.5281/zenodo.45391
- [13] VUJIĆ, M., IVKOVIĆ, S., REKECKI, T., KRSTIĆ, D., STANKOVIĆ, V., ĐURIĆ, M., TOT, I. (2021): A first record of the alien mantis species *Hierodula tenuidentata* (Mantodea: Mantidae) in Serbia. *Acta Entomologica Serbica*, **26** (1): 1–7. doi: 10.5281/zenodo.4621135
- [14] XU, Y., RAMANATHAN, V., VICTOR, D. G. (2018): Global warming will happen faster than we think. *Nature*, **564**, 30–32. doi: 10.1038/d41586-018-07586-5
- [15] ZÚBER, M. (2019): Faunistic records from the Czech Republic – 472. *Klapalekiana*, **55**: 147.
- [16] <https://www.gbif.org/species/1045471> Accessed 29 Dec. 2023.
- [17] <https://www.inaturalist.org/taxa/225433-Nacerdes-melanura> Accessed 29 Dec. 2023
- [18] <https://observation.org/species/23483/> Accessed 29 Dec. 2023.