

Short communication

FIRST RECORDS OF *PLINACHTUS IMITATOR* (REUTER, 1891)
(HETEROPTERA: COREIDAE: COREINAE) IN CROATIA,
BOSNIA & HERZEGOVINA AND MONTENEGRO,
WITH NOTES ON NEW HOST-PLANT RECORDS

MATEA MARTINOVIĆ^{1*}, SEBASTIAN ČATO², DUBRAVKO DENDER³, ANTON GJELDUM⁴, TINO MILAT⁵
and DUBRAVKA TULLIO¹

1 Dubrovnik Natural History Museum, Androvićevo 1, HR-20000 Dubrovnik, Croatia

2 Srednja strukovna škola Šibenik, Ante Šupuka 31, HR-22000 Šibenik, Croatia

3 Association Biom, Čazmanska ul. 2, HR-10000 Zagreb, Croatia

4 City of Split, Obala kneza Branimira 17, HR-21000 Split, Croatia

5 Natural History Museum Split, Kolombatovićevo šetalište 2, HR-21000 Split, Croatia

*E-mail: matea.martinovic@pmd.hr (corresponding author)

Plinachtus imitator (Reuter, 1891) is a Holomediterranean coreid bug species and the only member of the genus *Plinachtus* present in the European fauna (de Jong *et al.*, 2014). It can be distinguished from the other related species of the Gonocerini tribe, *Gonocerus acuteangulatus* (Goeze, 1778), *G. insidiator* (Fabricius, 1787) and *G. juniperi* Herrich-Schäffer, 1839, by the presence of two lateral black bands, extending from the antennae to the posterior edge of the head. Another difference is the shape of the humeral angles of the pronotum (Moulet, 1995).

For a long time, *P. imitator* was considered monophagous on *Pistacia lentiscus* L. (Moulet, 1995), but later research revealed additional host-plant species. On the Canary Islands, *P. lentiscus* is not present, however, *P. imitator* eggs and nymphs were recorded on endemic *Maytenus canariensis* (Loes.) G. Kunkel & Sunding. Nymphs were also found on *P. atlantica* Desf. (Suárez *et al.*, 2017). In Northern Italy, one adult specimen was found in a private garden on *Schinus molle* L., an introduced plant species of South American origin. Although no early developmental stages were found, the possibility of a new host plant is assumed, as it belongs to the same plant family as the *Pistacia* species (Dioli *et al.*, 2021). The general distribution of the species was summarized by van der Heyden (2017).

The aim of this study was to present the first records of *P. imitator* in Croatia, Bosnia & Herzegovina and Montenegro, with notes on new host-plant species recorded in Croatia. The nomenclature of the bug species follows the Fauna Europaea database (de Yong *et al.*, 2014), while the nomenclature of the plant species follows Euro+Med PlantBase (2006+). The collected specimens are stored in the Heteroptera collection of the Dubrovnik Natural History Museum.

New records

***Plinachtus imitator* (Reuter, 1891)**

Croatia: Šibenik-Knin County – Vodice, 43.771329 15.785173, 1 adult, 12.06.2021, obs. S. Čato; Split-Dalmatia County – Kučine, 43.521681 16.524904, 1 adult, 06.12.2021, obs. A. Gjeldum & T. Milat; Kamen, 43.523605 16.510508, 1 adult, 28.09.2022, obs. A. Gjeldum & T. Milat; Split, Firule, 43.502378 16.464799, 1 adult, 25.01.2023, obs. A. Gjeldum; Dubrovnik-Neretva County – Dubrovnik, Splendid 42.653832 18.066142, nymphs and adults on *Pistacia lentiscus* L., 03.09.2019, obs. M. Martinović; Orašac, 42.693799 18.021744, 2 ex nymphs on *P. lentiscus*, 04.11.2019, leg. M. Martinović; Dubrovnik, Nuncijata, 42.665199 18.084967, 1 ex nymph on *P. lentiscus*, 19.11.2019, leg. M. Martinović, nymphs and adults on *P. lentiscus*, 24.10.2020, obs. D. Dender; Dubrovnik, Hladnica 42.648513 18.079249, 1 ♀ on *P. lentiscus*, 04.12.2019, leg. M. Martinović; Trsteno, 42.710876 17.975946, eggs, nymphs and adults on *Pistacia terebinthus* L., 20.08.2020, leg. M. Martinović; 12.09.2020, obs. M. Martinović; Dubrovnik, Solitudo, 42.663863 18.072787, eggs, nymphs and adults on *P. lentiscus*, 03.10.2020, obs. M. Martinović; Dubrovnik, west of Orsula Park, 42.633681 18.132899, eggs, nymphs and adults on *P. lentiscus*, 04.10.2020, leg. M. Martinović; Slano, 42.788492 17.888281, eggs, nymphs and adults on *P. lentiscus*, 05.10.2020, leg. M. Martinović; Dubrovnik, Nuncijata, 42.662399 18.091391, nymphs and adults on *P. lentiscus*, 24.10.2020, obs. D. Dender; Dubrovnik, President, 42.663 18.059813, nymphs and adults on *P. lentiscus*, 04.11.2020, obs. M. Martinović; Orašac, 42.70536645 17.99137951, 1 adult on *P. lentiscus*, 18.11.2020, obs. M. Martinović; Lopud Island, west of Sutvrač fortress, 42.689908 17.94647, on *P. lentiscus*, 25.11.2020, obs. D. Dender; Lopud Island, 42.684534 17.956679, 25.11.2020, on *P. lentiscus*, obs. D. Dender; Dubrovnik, east of Orsula Park, 42.632598 18.139225, eggs, nymphs and adults on *P. lentiscus*, 27.11.2020, obs. D. Dender; Dubrovnik, Ploče, 42.643425 18.115289, 13.12.2020, 1 adult, obs. D. Tullio, 1 ♀ on *Citrus japonica* Thunb., 29.01.2021, leg. D. Tullio; Dubrovnik, Solitudo, 42.660946 18.078391, 1 ♂, 30.01.2021, leg. M. Martinović.

The first record of *Plinachtus imitator* (Reuter, 1891) in Croatia is from early September 2019. The species was recorded close to the Splendid beach on *Pistacia lentiscus* L. on the Lapad peninsula in Dubrovnik, southern Croatia. In the following years, *P. lentiscus* was studied throughout Dubrovnik-Neretva County and the species was recorded at numerous localities on the mainland part of the County, and two localities on Lopud Island. Apart from the expected findings on *P. lentiscus*, a previously known host plant, the finding of *P. imitator* in Trsteno was particularly interesting. All developmental stages – eggs, nymphs and adults, were for the first time discovered on *Pistacia terebinthus* L. in August 2020 (Fig. 1). This finding expands current knowledge about the biology of the species and adds another member of the Anacardiaceae family, *P. terebinthus*, to the list of host plants. In 2021, a single adult specimen of *P. imitator* was photographed in Vodice in Šibenik-Knin County, while in Split-Dalmatia County it was recorded at three localities from 2021 to 2023. Both plant species, *P. lentiscus* and *P. terebinthus*, are widespread along the entire Adriatic Coast of Croatia (Nikolić, 2015-); accordingly, it is to be expected that *P. imitator* has a similar distribution.

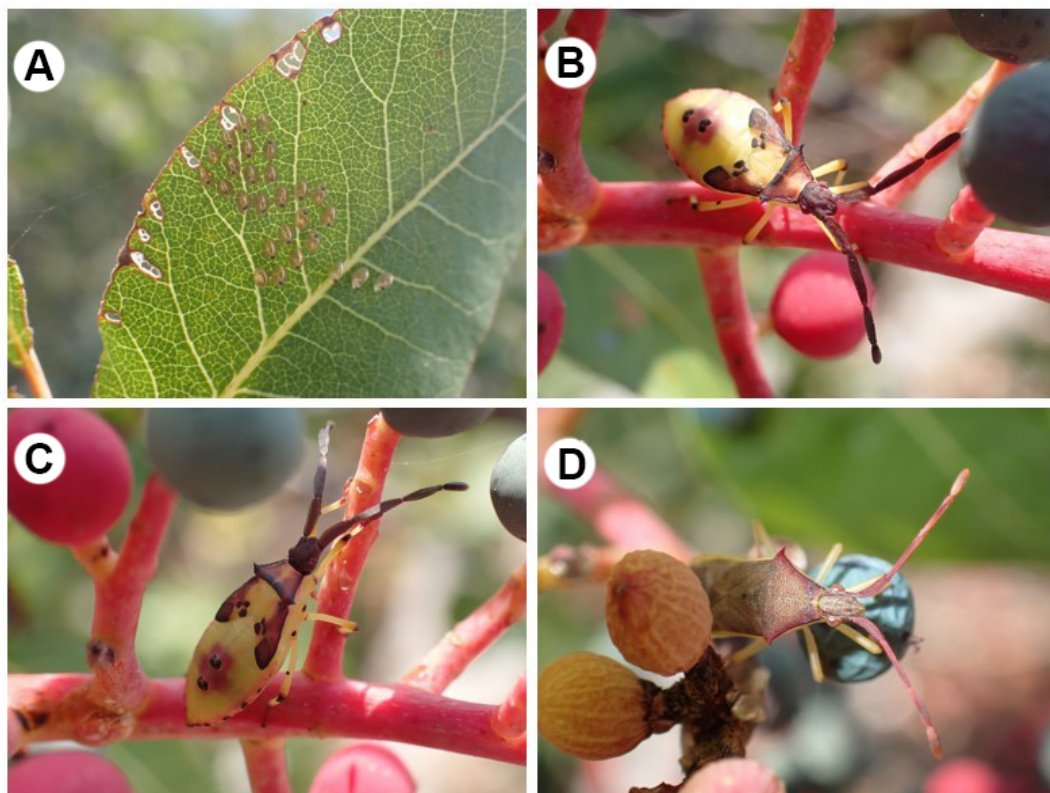


Figure 1. *Plinactus imitator* (Reuter, 1891) on *Pistacia terebinthus* L. in Trsteno, Croatia: A – eggs; B, C – nymphs, D – adult. (photo by: M. Martinović).

Bosnia & Herzegovina: Neum, 42.927699 17.610089, nymphs and adults on *P. lentiscus*, 05.10.2020, leg. M. Martinović.

In Bosnia & Herzegovina, *P. lentiscus* was examined in and around Neum, the only Bosnian town on the Adriatic coastline. Numerous nymphs and several adults were recorded on a small roadside verge in Neum in October 2020, and 2 female specimens were collected (Fig. 2).



Figure 2. *Plinactus imitator* (Reuter, 1891) from Neum, Bosnia & Herzegovina.

Montenegro: Njivice, 42.429034 18.520342, 1 nymph on *P. lentiscus*, 08.10.2020, leg. M. Martinović; Njivice, 42.443486 18.506342, 1 ♀, collected from *Hyparrhenia hirta* (L.) Stapf, 03.01.2023, leg. M. Martinović.

On a first visit to Montenegro in October 2020, a single nymph was collected on *P. lentiscus* in Njivice, close to the border with Croatia. Although it was a nymph, the black stripes on the head were clearly visible, so identifying the species was possible (Fig. 3B). A second visit to Njivice in January 2023 resulted in the accidental catch of one female *P. imitator* specimen, taken from the grass species, *H. hirta* (Fig. 3A).

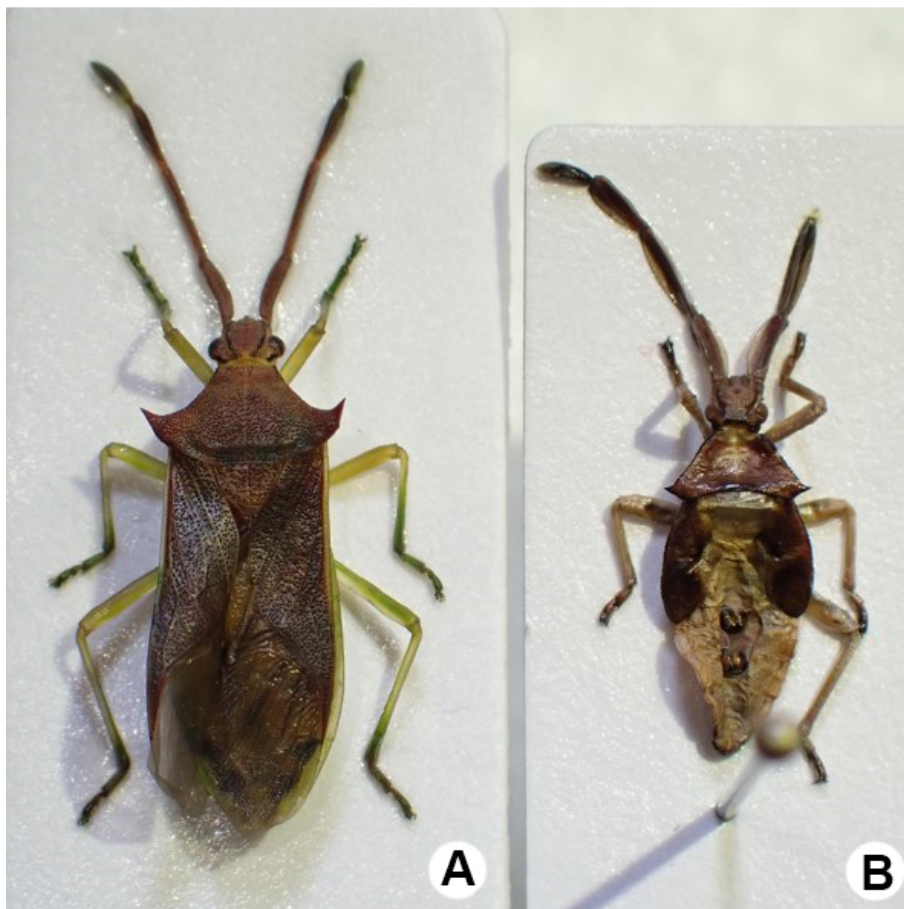


Figure 3. *Plinactus imitator* (Reuter, 1891) from Njivice, Montenegro: A – female, B – nymph.

These first records of *Plinactus imitator* in Croatia, Bosnia & Herzegovina and Montenegro fill the gap in the species' distribution in the Mediterranean parts of Europe.

References

- de Jong, Y., Verbeek, M., Michelsen, V., Bjørn, P., Los, W., Steeman, F., Bailly, N., Basire, C., Chylarecki, P., Stloukal, E., Hagedorn, G., Wetzel, F., Glöckler, F., Kroupa, A., Korb, G., Hoffmann, A., Häuser, C., Kohlbecker, A., Müller, A., Güntsch, A., Stoev, P., & Penev, L. (2014). Fauna Europaea – all European animal species on the web. *Biodiversity Data Journal*, 2: e4034.
- Dioli, P., Brizio, S., & Salvetti, M. (2021). New host plant for *Plinactus imitator* (Reuter, 1891) found for the first time in Northern Italy. *Annali del Museo Civico di Storia Naturale 'Giacomo Doria'*, 9(412), 1-6.
- Euro+Med. (2006). [continuously updated] Euro+Med PlantBase - the information resource for Euro-Mediterranean plant diversity. Retrieved from: <http://www.europlusmed.org> [Accessed on: 01.02.2023].

- Moulet, P. (1995). *Hémiptères Coreoidea (Coreidae, Rhopalidae, Alydidae), Pyrrhocoridae, Stenocephalidae Euro-Méditerranéens*. Faune de France, Fédération Française des Sociétés des Sciences Naturelles, Montpellier, 336 pp.
- Nikolić T. (2015). Rasprostranjenost *Pistacia lentiscus* L. i *Pistacia terebinthus* L. u Hrvatskoj, Flora Croatica baza podataka. Prirodoslovno-matematički fakultet, Sveučilište u Zagrebu. Retrieved from: <http://hirc.botanic.hr/fcd>. [Accessed on: 01.02.2023].
- Suárez, D., Santos, I., & Roca-Cusachs M. (2017). New data on the biology and chorology of the tribe Gonocerini (Hemiptera: Heteroptera: Coreidae) in the Canary Islands. *Archivos Entomológicos*, 18: 169-172.
- van der Heyden, T. (2017). Notes on *Plinachtus imitator* (Reuter, 1891), including the first records for Albania (Hemiptera: Heteroptera: Coreinae: Gonocerini). *BV news Publicaciones Científicas*, 6(77): 68-73.

ПРВИ НАЛАЗ *PLINACHTUS IMITATOR* (REUTER, 1891)
(HETEROPTERA: COREIDAE: COREINAE) У ХРВАТСКОЈ,
БОСНИ И ХЕРЦЕГОВИНИ И ЦРНОЈ ГОРИ
И НОВИ ПОДАЦИ О БИЉКАМА ДОМАЋИНИМА

МАТЕА МАРТИНОВИЋ, СЕБАСТИАН ЋАТО, ДУБРАВКО ДЕНДЕР, АНТОН ЂЕЛДУМ,
ТИНО МИЛАТ и ДУБРАВКА ТУЛИО

Извод

У раду су наведени први налази стенице *Plinachtus imitator* (Reuter, 1891) у Хрватској, Босни и Херцеговини и Црној Гори. Сви налази су забележени на локалитетима уз јадранску обалу, најчешће на *Pistacia lentiscus*, биљка која је већ позната одраније као домаћин. *Plinachtus imitator* по први пут је забележена на новој биљци домаћину – *Pistacia terebinthus* у месту Трстено у Хрватској.

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