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NOTA / NOTE

New data on the biology and chorology of the tribe Gonocerini (Hemiptera: Heteroptera: Coreidae) in the Canary Islands.

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Abstract: New chorological data for the species belonging to the tribe Gonocerini (Hemiptera: Heteroptera: Coreidae) in the Canary Islands are given. *Plinachtus imitator* (Reuter, 1891) is reported for the first time for the islands of Tenerife and Gran Canaria, thus expanding its known distribution. Interaction with plant species where specimens have been collected is discussed.
Key words: Hemiptera, Coreidae, Gonocerini, *Plinachtus*, *Gonocerus*, host plant, distribution, new records, Canary Islands, Macaronesia.

Resumen: Nuevos datos sobre la biología y corología de la tribu Gonocerini (Hemiptera: Heteroptera: Coreidae) en las Islas Canarias. Se aportan nuevos datos corológicos de las especies de la tribu Gonocerini (Hemiptera: Heteroptera: Coreidae) en las Islas Canarias. Se cita por primera vez a *Plinachtus imitator* (Reuter, 1891) en las islas de Tenerife y Gran Canaria, ampliando así su distribución conocida. Se discute la interacción con las especies de plantas sobre las cuales se han colectado los especímenes.
Palabras clave: Hemiptera, Coreidae, Gonocerini, *Plinachtus*, *Gonocerus*, plantas huésped, distribución, nuevas citas, Islas Canarias, Macaronesia.

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Introducción

The family Coreidae Leach, 1815 is so far represented in the Canary Islands by 17 species, three of them belonging to the tribe Gonocerini: *Gonocerus insidiator* (Fabricius, 1787), *Gonocerus juniperi* Herrich-Schäffer, 1839 and *Plinachtus imitator* (Reuter, 1891) (Arechavaleta *et al.*, 2010; Aukema *et al.*, 2013). The diagnostic character to distinguish *P. imitator* from the two *Gonocerus* species is the presence of two black longitudinal bands along the external dorsal margins of the head (Carapezza & Mifsud, 2015).

These species are considered to be specialized phytophagous: while *G. insidiator* lives mainly on *Pistacia lentiscus* and *Arbutus unedo* (Vázquez & Monserrat, 1978), *G. juniperi* feeds on species of the family Cupressaceae, being found on *Juniperus cedrus* (Heiss & Woudstra, 1993) and occasionally on *Cupressus sempervirens* in the Canary Islands (Aukema *et al.*, 2013). In addition, *P. imitator* has been considered a monophagous species, feeding exclusively on *P. lentiscus* (Kment & Jindra, 2005). However, it has also been found in the Iberian Peninsula on *Rhamnus alaternus*, *Arbutus unedo* and other shrubs of the mediterranean scrubland (Authors' personal field observations).

In this article, the known distribution of two of those three species is expanded, reporting *P. imitator* for the first time for Tenerife and Gran Canaria (Table 1).

Material and methods

Specimens were examined under a Leica MZ160A (10–115X) and Leica MZ 125 binocular stereoscopes. Juveniles where raised under laboratory conditions providing their nutritious plants. Adults were glued individually on 10x21 mm cardboard mounting cards or pinned. Pictures of the habitus were made using a Canon IXUS 160 camera.

Material estudiado:

***Gonocerus juniperi* Herrich-Schäffer, 1839**

LA PALMA:

- Roque de los Muchachos (Garafía), 29/VII/2014, 1♂ and 1♀, on *Juniperus cedrus*, M. Roca-Cusachs *leg., det. et coll.*
- Cementerio de Tijarafe (Tijarafe), 2♂♂ and 1♀, 26/IV/2014; 2♂♂ and 4♀♀, 21/V/2014; 1♂ and 1♀, 25/III/2017, on *J. cedrus* and *Juniperus turbinata* ssp. *canariensis*. All M. Roca-Cusachs *leg., det. et coll.*

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

LA PALMA:

- Cementerio de Tijarafe (Tijarafe), 1♂ and 1♀, 26/IV/2014, M. Roca-Cusachs *leg., det. et coll.*, on *Juniperus cedrus*.

TENERIFE:

- Carretera de La Esperanza (San Cristóbal de La Laguna), 1♂, 17/IX/2017, D. Suárez *leg., det. et coll.*, on *Pistacia atlantica*.
- Gracia (San Cristóbal de La Laguna), 1♂, 26/III/2017, D. Suárez *leg.*, M. Roca-Cusachs *det. et coll.*, on *Schinus molle* (Fig. 1a).
- Jardín de la Brigada Forestal (San Cristóbal de La Laguna), 2♂♂ and 2♀♀, 24/VI/2002; 2♀♀ and 1 nymph, 20/V/2002. All A. Aguiar *leg. et coll.*, D. Suárez *det.*, on *Maytenus canariensis*.
- Guayonje (Tacoronte), 1♀, 24/IV/2017, I. Santos *leg. et coll.*, D. Suárez *det.*

GRAN CANARIA:

- El Brezal (Santa María de Guía), 4♀♀, 31/VII/2017, D. Suárez *leg. et coll.*, M. Roca-Cusachs *det.*, on *Maytenus canariensis*, collected as nymphs and matured in captivity (Fig. 1b,c).
- San Juan (Santa María de Guía), 3♂♂ and 3♀♀, 30/IV/2002, A. Machado *leg.*, A. Aguiar *coll.*, D. Suárez *det.*, on *Maytenus canariensis*.

Results and discussion

G. juniperi has been found on *J. cedrus* several times, thus confirming it as the main host plant in the Canary Islands. The presence on *J. turbinata* ssp. *canariensis* may be explained for being planted close to *J. cedrus*. However, considering it as a host plant needs to be confirmed by sampling on *J. turbinata* ssp. *canariensis* on its natural habitat. Native populations of both *Juniperus* species had

experienced a great regression in their original distribution due to human impacts in the past, being now really scarce (Montesinos *et al.*, 2009). In contrast, planted Cupressaceae are rather common near anthropic areas and road edges, especially for ornamental purposes. These formations are supporting *G. juniperi* populations, which would have their distribution area reduced if only natural resources were available.

Regarding *P. imitator*, the presence of nymphs and eggs on several individuals of *M. canariensis* is an argument for considering this Canarian endemic a host plant of *P. imitator*. This shrub is distributed between 200 and 1,500 m above sea level, and is rather common in thermo-sclerophyllous woodlands associated with *P. lentiscus* and *P. atlantica* (Bramwell & Bramwell, 2001). In addition, *P. atlantica* should be considered too as a host plant due to the presence of nymphs on this plant. The presence of adults on *Sch. molle* and *J. cedrus* should remain as casual reports until eggs or nymphs are found on these plant species.

In previous articles from the Canary Islands (Vázquez, 1986; Aukema *et al.*, 2013), authors did not specify any information about the plant species where *P. imitator* was collected. Thus, new interactions with other plant species seem to be probable, especially in the islands of La Palma and El Hierro, where the species is reported despite the absence of *P. lentiscus*. In those islands, *M. canariensis* is present and may be acting as host plant. A similar situation happens in the archipelago of Madeira, where *P. imitator* is reported but *P. lentiscus* is absent (Borges *et al.*, 2008). In the island of Madeira, a male of *P. imitator* was collected in Faja de Ovelha on *Maytenus umbellata* (A. Aguiar, comm. pers.), so this plant species is presumably the host plant in the Madeiran archipelago. The rest of the countries and islands where *P. imitator* is present are in the geographic area of the distribution of *Pistacia lentiscus* (Rhodes & Maxted, 2016).

In conclusion, distribution and feeding ecology of the Gonocerini species in the Canary Islands needs to be studied for a better understanding of the ecological phenomena that take place in oceanic islands.

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Table 1.- Distribution of the three species of the tribe Gonocerini in the Canary Islands. Previously known distributions are marked with "X", while new records are indicated with "•". (H: El Hierro; P: La Palma; G: La Gomera; T: Tenerife; C: Gran Canaria; F: Fuerteventura; L: Lanzarote).

SPECIES	H	P	G	T	C	F	L
Gonocerus insidiator (Fabricius, 1787)		X		X			
Gonocerus juniperi Herrich-Schäffer, 1839		X	X	X			
Plinachtus imitator (Reuter, 1891)	X	X		•	•		

Fig. 1.-. *Plinachtus imitator* (Reuter, 1891). **a.-**Adult on leaves of *Schinus molle*. **b.-** Late instar nymph on leaves of *Maytenus canariensis*. **c.-** Early instar nymph on fruits of *Maytenus canariensis*.