Mitt. internat. entomol. Ver.	Frankfurt a.M.	ISSN 1019-2808
Band 32 · Heft 3/4	Seiten 169 - 174	22. November 2007

Closterotomus tunetanus (Wagner, 1942), new record for continental Europe

(Hemiptera: Heteroptera: Miridae)

H. GÜNTHER, S. PAGOLA-CARTE & J. RIBES

Abstract: The Maghrebin Mirinae *Closterotomus tunetanus* (Wagner, 1942) is recorded as new for Spain (province of Almería, in Andalusia), being also the first record from continental Europe. Some features are discussed concerning both the external morphology and the male genitalia.

Zusammenfassung: *Closterotomus tunetanus* (Wagner, 1942), ein Neunachweis für den europäischen Kontinent (Hemiptera: Heteroptera: Miridae).
Die nordafrikanische Mirinae *Closterotomus tunetanus* (Wagner, 1942) wurde erstmals in Südspanien (Provinz Almería, Andalusien) nachgewiesen. Sie ist neu für Europa. Ihre charakteristischen Merkmale, wie die äußere Morphologie und die männlichen Genitalstrukturen werden dargestellt und diskutiert.

Resumen: *Closterotomus tunetanus* (Wagner, 1942), nuevo registro para Europa continental (Hemiptera: Heteroptera: Miridae).
Se aporta el primer registro para España (provincia de Almería, en Andalucía), del Mirinae *Closterotomus tunetanus* (Wagner, 1942), que constituye asimismo la primera citación para Europa continental. Se discuten algunos caracteres, tanto relativos a la morfología externa como a la genitalia masculina.

Key words: Heteroptera, Miridae, *Closterotomus tunetanus* (Wagner, 1942), Spain, new record

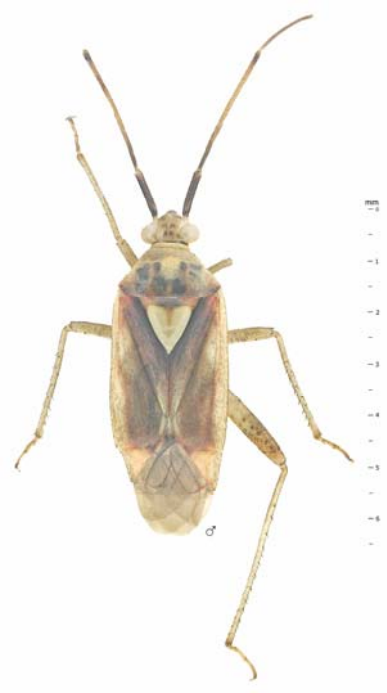

Fig. 1. Habitus of *Closterotomus tunetanus* from Sierra de Bédar (Almería, Spain).

Introduction

The Mirinae genus *Closterotomus* Fieber, 1858 was revised by ROSENZWEIG (1997) as part of a review of the *Calocoris* complex, previous to his comprehensive study of the whole Palaearctic Mirina (ROSENZWEIG, 2001). *Closterotomus* is a Palaearctic genus containing 33 species, most of which are concentrated in the Eastern Mediterranean and adjacent regions. Of them, 28 species were dealt with by ROSENZWEIG (1997), who distributed them into ten groups according to the high diversity of the male genitalia and united those groups into three supergroups based on the female genitalia. Posteriorly, five additional species (CARAPEZZA 1997, 2002; J. RIBES & E. RIBES 2003; YASUNAGA 2003; MATOCQ & PLUOT-SIGWALT 2006) and one subspecies (RIEGER & GRIMM 1999; subsequent synonymy by RIEGER 2006) have been described as new in the genus.

Despite the objections recently made by MATOCQ & PLUOT-SIGWALT (2006) to those three supergroups, the species groups seem to be quite useful. Concerning the *norwegicus*-group, its diagnostic features were well defined by ROSENZWEIG (1997) and CARAPEZZA (2002), a key was provided by J. RIBES & E. RIBES (2003), and interesting morphological considerations and discussion can be found in the most recent descriptions (J. RIBES & E. RIBES 2003; MATOCQ & PLUOT-SIGWALT 2006).

The present paper deals with the recording of a single specimen (male) of *Closterotomus tunetanus* (Wagner, 1942) from southern Spain

(Fig. 1). Its faunistic relevance and some interesting notes on morphology lead us to prepare this contribution.

Material studied

Recording dates: 1 male, surrounding of Bédar, Sierra de Bédar, province of Almería, april, 27th 2001, 200 m a.s.l., H. GÜNTHER leg.

Description of finding site

(Fig. 2)

Fig. 2. View over the Sierra de Bédar from the top to the sea.

The Sierra de Bédar lies northerly of the highway Murcia – Almería, at the exit of Los Gallardos. It rises up to 500 meters a.s.l.. It belongs to the desertlike region round Tabernas with about 200 mm rainfall per year as a medium of many years.

The northern part of the Sierra declines continuously to the sea around the city of Mojacar, the southern part is isolated from the sea by the Sierra Cabrera. Between the two mountain chains a plane exceeds over three – six miles. It is covered with watered plantations and dry

areas. Through this plane the river Aguas flows, which holds water until the midth of summer.

The southern slopes are partially cultivated with sparsely farm-buildings, the main place, Bédar, lies at 250 a.s.l. There are cultures of vegetables, wine and olive- and almond-trees. Between them, at steep slopes are waste places with crops, shrubs and trees, for example broom-species, *Genista*, *Retama*, *Ephedra*, *Nicotiana* and occasionally pines. The terrains of both sides of the road which lead to the top of the Sierra are steep, only few places allow to stripe insects with the net.

The specimen of *Closterotomus tunetanus* was collected at the lower part of the Sierra, at 150 to 200 m height, on *Ephedra fragilis* at the border of the road. Together with *C. tunetanus* some other interesting species were caught, *Nasocoris platycranoides*, *Hyoidea stehliki* and a not yet identified *Phytocoris*.

Discussion

The specimen clearly belongs to the *norwegicus*-group of *Closterotomus*, due to the following combination of characters: 2nd metatarsal segment lengthened, rostrum relatively short, somewhat enlarged eyes, left lobe of vesica with double comb formed by two close together rows of denticles, and forked spiculum massive with obvious blunt process (ROSENZWEIG 1997; CARAPEZZA 2002).

According to the species key and the discussion provided by J. RIBES & E. RIBES (2003) and MATOCQ & PLUOT-SIGWALT (2006), it can be placed in *C. tunetanus* (Wagner, 1942) and separated from the remaining species of the group, including the closest one, *C. valcarceli* J. Ribes & E. Ribes 2003, by the following characters: (1) shape of parameres, which are also rather similar to those of *C. longitarsis* (Reuter, 1896) (but the vesica and external morphology (WAGNER, 1974) of the latter species are quite different); (2) presence of a semisclerotized spiculum in the vesica, which is virguliform and not bent near its apex; (3) absence of lateral or sublateral black stripes in the scutellum, as in *C. longitarsis*, *C. norwegicus* (Gmelin, 1790) and *C. tunetanus*; (4) vertex not so strongly marginated as in *C. valcarceli*.

The male genital structures of the Spanish specimen (Fig. 3) have been studied and compared with the illustrations of CARAPEZZA (1997)

and J. RIBES & E. RIBES (2003), as well as with the material of the genus in J. RIBES collection. In addition, several features of external morphology have been adequately examined only by comparison of material. The general coloration of pronotum and hemielytra is like in *C. tunetanus*. Concerning the head, its coloration and pattern of spots and stripes seem to be rather similar between *C. tunetanus* and *C. valcarceli*, and differences are probably depending on the melanization degree of each individual rather than on real differences between both species.

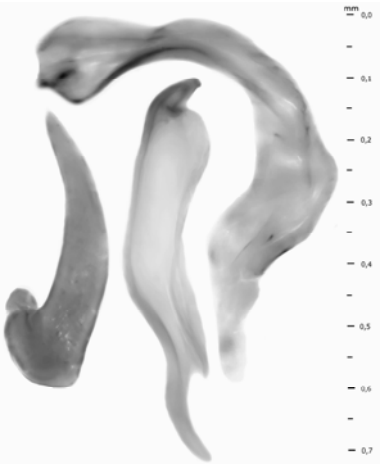

Fig. 3. Male genitalia of the specimen studied of *Closterotomus tunetanus*. From left to right: forked spiculum of the vesica, right paramere and left paramere.

Finally, a comment on the ocular index is needed. In the description of *C. valcarceli*, J. RIBES & E. RIBES (2003) provided an ocular index of 1.27–1.33 for males, separating the new species from *C. tunetanus* (1.4–1.5). Although we have now detected the same qualitative difference between both species, i.e. less globose eyes than in *C. valcarceli*, quantitatively this fact is not so markedly reflected in the ocular index. Actually, it is 1.36 in the Spanish specimen, exactly the same as in one of the north African specimens from J. RIBES collection.

C. tunetanus is considered a Maghrebin species, distributed in Algeria, Libya, Morocco and Tunisia, but also recorded in the island of Lampedusa (KERZHNER & JOSIFOV 1999). This Italian record, omitted in the work of CARAPEZZA (1995) on the Heteroptera of that island, was later included in his work of Tunisia (CARAPEZZA 1997). The specimen collected in Almería, southern Spain, constitutes the first record for the Iberian Peninsula and for continental Europe.

Acknowledgements

We express our thank to Gerhard STRAUß, Biberach, for the picture of *Closterotomus tunetanus*.

References

CARAPEZZA, A. (1995): Heteroptera. – In: Arthropoda di Lampedusa, Linosa e Pantelleria (Canale di Sicilia, Mar Mediterraneo). Naturalista sicil. (4)**19** (Suppl.):199–278.

CARAPEZZA, A. (1997): Heteroptera of Tunisia. – Naturalista sicil. (4)**21**(Suppl. A):1–312.

CARAPEZZA, A. (2002): Heteroptera of Jordan: new taxa and new records (Hemiptera, Heteroptera). – Naturalista sicil. (4) **26**(1–2):35–76.

KERZHNER, I. M. & JOSIFOV, M. (1999): Miridae Hahn, 1833. — In: AUKEMA, B. & RIEGER, C. (eds.). Catalogue of the Heteroptera of the Palaearctic Region. Cimicomorpha II. Netherl. Ent. Soc. **3**:1–576.

MATOCQ, A. & PLUOT-SIGWALT, D. (2006): A new species of the genus *Closterotomus* Fieber from Crete (Hemiptera: Heteroptera: Miridae: Mirinae). – Russian Entomol. J. **15**(2):171–174.

RIBES, J. & RIBES, E. (2003): Sobre algunos Mirinae de Argelia (Hemiptera, Heteroptera, Miridae). – Bull. Soc. ent. Fr. **108**(4):361–370.

RIEGER, C. (2006): Zur Synonymie westpaläarktischer Miriden (Heteroptera). – Denisia **19** [zugleich Kataloge der OÖ. Landesmuseen Neue Serie **50**:611–616].

RIEGER, C. & GRIMM, D. (1999): Ein neuer *Closterotomus* aus Griechenland (Hemiptera: Heteroptera: Miridae). – Reichenbachia **33**(29):227–230.

ROSENZWEIG, V. Y. (1997): Revised classification of the *Calocoris* complex and related genera (Heteroptera: Miridae). – Zoosyst. Rossica **6**(1/2):139–169.

ROSENZWEIG, V. Y. (2001): Synopsis of the Palaearctic genera of Mirina (Heteroptera: Miridae). – Zoosyst. Rossica **9**(2):367–383.

WAGNER, E. (1974): Die Miridae Hahn, 1831, des Mittelmeerraumes und der Makaronesischen Inseln (Hemiptera, Heteroptera). Teil 1. – Ent. Abh. Mus. Tierk. **37**(Suppl.)[1970–1971]:1–484.

YASUNAGA, T. (2003): A new species of the Mirine plant bug genus *Closterotomus* Fieber (Heteroptera, Miridae) from Japan. – Biogeography **5**:39–43.

Hannes GÜNTHER, Eisenacher Straße 25; D-55218 Ingelheim, Germany.
E-Mail: chguenther@bytestream.de

S. PAGOLA-CARTE, Azpeitia 3, 7. D; E-20010 Donostia (Gipuzkoa), Spain.
E-Mail: pagolaxpc@telefonica.net

J. RIBES, València 123–125, ent., 3a; E-08011 Barcelona, Catalonia; Spain.
E-Mail: 4354jrr@comb.es