

# On the Tettigometridae (Hemiptera, Auchenorrhyncha, Fulgoroidea) of the Canary Islands, with the Description of a New Subspecies from La Gomera

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**Abstract**—*Tettigometra virescens bola* **subsp. n.** is described from La Gomera Island of the Canary Archipelago. This is the second species of the family Tettigometridae recorded so far from the Canaries. Photographs of a *Tettigometra beckeri* Horváth, 1909 syntype are given for the first time.

**Keywords:** *Tettigometra*, new record, new subspecies, Western Palearctic

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Tettigometridae are usually rare in the sweep netted collections. Since the publications by G. Horváth (1909) and H. Lindberg (1954) on Auchenorrhyncha of the Canary Islands, only one species of this family was known from the archipelago, *Tettigometra beckeri* Horváth, 1909 (Fig. 1), described from Gran Canaria based on two males collected by Th. Becker in May 1901 (Horváth, 1909) and recorded later also from Tenerife based on two females collected in April 1950 (Lindberg, 1954). During my field trip to La Gomera, two females of *Tettigometra virescens* (Panzer, 1799) (Figs. 2, 3) were swept in Juego de Bolas at 717 m a.s.l. in a biotope with *Erica*, *Euphorbia*, *Hypericum*, Fabaceae, Poaceae, etc. These specimens differ from “typical” Western Palearctic *T. virescens* (see the photos in Kunz et al., 2011; Mozaffarian et al., 2018; Mühlethaler et al., 2019) in a darker general coloration formed by dense red dots, with two narrow fuzzy dark bands across the forewings behind the apex of the mesonotum. A new subspecies, *Tettigometra virescens bola* subsp. n., is described herein based on these specimens to stress the specific features of this isolated insular form. This is the second tettigometrid record from the Canaries and the first record of the family from La Gomera Island.

## MATERIALS AND METHODS

Photographs of the new subspecies were taken using a Canon EOS 5D Mark IV camera with the lens Canon MP-E 65mm f/2.8 1-5x Macro and a flash Canon Macro Twin Lite MT-26EX-RT. The images were produced using Helicon Focus v. 7.6.4 and Adobe Photoshop CC 2019 software.

The type specimens of the new subspecies are in the collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, Russia.

Family **TETTIGOMETRIDAE** Germar

Subfamily **TETTIGOMETRINAE** Germar

Tribe **TETTIGOMETRINI** Germar

*Tettigometra (Tettigometra) beckeri* Horváth, 1909  
(Fig. 1)

**Notes.** According to the original Horváth’s (1909, p. 299) text, the species was described from a male. However, curator of Hemiptera collection in the Hungarian Natural History Museum (Budapest, Hungary), Ms. Anna Somogyi, confirmed the presence of two specimens from Gran Canaria collected by Th. Becker and both with a “Typus” label in the collection. Thus appar-



Fig. 1. *Tettigometra beckeri* Horváth, 1909, syntype: (1) dorsal view, (2) lateral view, (3) front view, (4) labels. Not to scale.

ently G. Horváth described *T. beckeri* based on at least two specimens (males), and a lectotype designation is needed. Photographs of one of the syntypes were examined in the current study.

The species is widely distributed in the Mediterranean Region including Crimea in Russia and is also recorded from Southeastern Kazakhstan (Mitjaev, 1971, 2002; Nast, 1972).

***Tettigometra (Tettigometra) virescens virescens***  
(Panzer, 1799)

*Fulgora virescens* Panzer, 1799 : 12.

**Notes.** The species was described from Europe (Panzer, 1799) where it is widely distributed, including the Mediterranean Region, with many variations described in the last 200 years (Metcalf, 1932; Nast, 1972); it is also recorded from Iran (Mozaffarian et al., 2018).

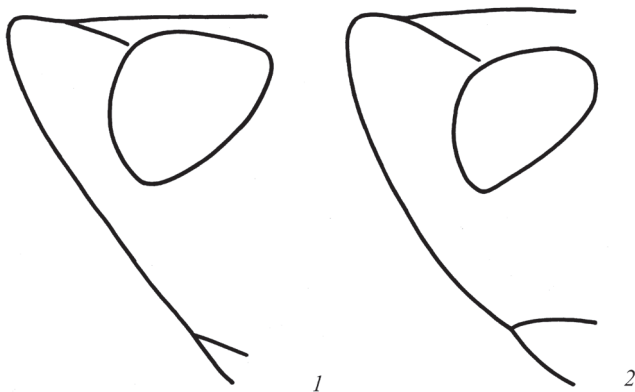
***Tettigometra (Tettigometra) virescens bola*** Gnezdilov,  
subsp. n.  
(Fig. 2, Fig. 3)

**Material.** Holotype, ♀: **Canary Islands**, La Gomera, Juego de Bolas, 717 m, 28°10.725'N, 17°12.797'W, 2.IV.2022 (V.M. Gnezdilov). Paratype: ♀, as holotype.

**Description.** *Structure.* Metope wide, 1.5 times as wide as long along midline, slightly convex (in lateral view) (Fig. 2, Fig. 3). Coryphe wide, nearly twice as wide between the eyes as long along midline, slightly concave medially, with anterior margin obtusely angulate (Fig. 2, 1). Rostrum protruding beyond middle coxae, but not reaching hind ones; 2nd and 3rd segments equal in length. Metope, coryphe, pro- and mesonotum without carinae. Pronotum almost as long as coryphe at midline, with strongly concave posterior margin. Mesonotum twice as long as pronotum medially. Tegulae



**Fig. 2.** *Tettigometra virescens bola* subsp. n., holotype: (1) dorsal view, (2) front view. Scale bar – 1 mm.



**Fig. 3.** *Tettigometra virescens bola* subsp. n., lateral head contour: (1) holotype, (2) paratype. Not to scale.

large. Forewings elongate, more than four times as long as wide basally, with long clavus ( $2/3$  of wing length). Apices of forewings acutely angulate. Basal cell narrow. *R* and *M* forking after wing middle. *CuA* simple. Crossveins between *R*, *M*, and *CuA* in apical third of wing. Hind wings reaching abdominal apex. Hind tibia without lateral spines and with 7–9 apical spines. First metatar-

somere slightly longer than second one, with 7 or 8 apical spines. Second metatarsomere with only two latero-apical spines. Ventral surface of both metatarsomeres with dense long setae.

**Coloration.** General coloration light greenish yellow to light brown, with dense red dots. Metope with light yellow band above clypeus. Lorae reddish brown. Postclypeus black (Fig. 2, 2). Anteclypeus light yellow. Rostrum brown to dark brown, with black apex. Forewings with two fuzzy narrow dark brown bands between apex of mesonotum and apex of clavus and with small elongate dark brown spot on each corium after claval apex (Fig. 2, 1). Legs brown to dark brown or black, except for light greenish yellow, with reddish dots tarsi. Apices of leg spines black. Claws dark brown, with black apices. Abdominal sternites and genital block light yellowish brown.

**Total length.** 4.5 mm.

**Comparative diagnosis.** *Tettigometra virescens bola* subsp. n. clearly differs from *T. virescens virescens* sensu Logvinenko (1975), Biedermann and Niedringhaus (2009), Kunz et al., 2011, etc. by a darker general coloration with two fuzzy bands on the forewings and by a slightly longer coryphe with a more convex anterior margin (Fig. 2, 1); however, a convex outline of the metope (Fig. 3) still nests this subspecies within *T. virescens*. In a generally dark coloration formed by dense red dots *T. virescens bola* subsp. n. is similar to *T. impressopunctata* (Dufour, 1846) (photo in Mühlethaler et al., 2019), while in the shape of coryphe it is close to *T. varia* Fieber, 1865 (Mozaffarian et al., 2018, fig. 21); however, the two last species are characterized by a straight or concave outline of metope.

**Etymology.** The name of the new subspecies is a feminine noun in apposition derived from the type locality name “Juego de Bolas” meaning “ball game”—the traditional Canarian game “bola canaria” similar to the French pétanque.

## DISCUSSION

The new subspecies described above demonstrates representation of *Tettigometra virescens* by an endemic form on La Gomera which requires confirmation by additional material, particularly that of males, for a comprehensive comparison with the continental populations.



Further collecting is needed to find out which species (if any) are present on other islands of the Canary Archipelago.

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#### COMPLIANCE WITH ETHICAL STANDARDS

*Statement on the welfare of animals.* All the applicable international, national, and institutional guidelines for the care and use of animals were followed. All the procedures performed in studies involving animals were in accordance with the ethical standards of the institution or practice at which the studies were conducted.

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