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NOTE

A teratological male of *Europiella miyamotoi* with a pair of left parameres (Hemiptera: Heteroptera: Miridae: Phylinae)

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Abstract

An aberrant male specimen of *Europiella miyamotoi* (Kerzhner, 1988) is reported. The unique transformation («right to left» paramere) is shown with scanning electron micrographs and discussed.

Key words: Miridae, Phylinae, *Europiella miyamotoi*, teratology, scanning electron micrographs.

Resumen

***Un macho teratológico de* Europiella miyamotoi *con un par de parámeros izquierdos* (*Hemiptera: Heteroptera: Miridae: Phylinae*)**

Se da a conocer el caso de un macho aberrante de *Europiella miyamotoi* (Kerzhner, 1988). Su única transformación (parámero «derecho a izquierdo») es mostrada y discutida con el apoyo de micrografías de barrido electrónico.

Palabras clave: Miridae, Phylinae, *Europiella miyamotoi*, teratología, micrografías de barrido electrónico.

Laburpena

Europiella miyamotoi*ren ar teratologiko bat, ezkerreko paramero pare batekin* (*Hemiptera: Heteroptera: Miridae: Phylinae*)

Ezagutzera ematen da *Europiella miyamotoi*ren (Kerzhner, 1988) ar aberrante baten kasua. Bere aldaketa bakarra (paramero «eskuinetik ezkerrera») erakutsi eta eztabaidatzen da ekorketa elektronikoen mikrografiak direla eta.

Gako-hitzak: Miridae, Phylinae, *Europiella miyamotoi*, teratologia, ekorketa elektronikoen mikrografiak.

Introduction

An aberrant specimen with the male parameres modified (each forming a «right» paramere) of *Lygocoris spinolae* (Meyer-Dür, 1841) [= now *Apolygus spinolae*] (Mirinae: Mirini) was documented by Yasunaga (1996). However, no other previous report mentioned such teratological morphology in the male genitalia of the Miridae. During recent examination of more than a few specimens of a phyline, *Europiella miyamotoi* (Kerzhner, 1988) (Phylinae: Phylini: Oncotylina), from Hokkaido, Japan, I found a male specimen that uniquely possesses a pair of «left» parameres. The present observation intriguingly represents a reverse of the pattern reported for the mirine (*A. spinolae*).

FIGURE 1. *Europiella miyamotoi*: Female on a bud of aster.

Result and discussion

Material examined: 5 ♂♂ 2 ♀♀ (incl. an aberrant ♂): JAPAN: Hokkaido, Kamikawa, Asahikawa City, Etanbetsu Town, Kyowa–Nakazono, 43.865, 142.240, on *Aster glehnii* F. Schmidt, 25 Jul 1998, T. Yasunaga (TYCN, author's collection).

Europiella miyamotoi (Kerzhner, 1988) is a common herb-inhabiting plant bug in northern Japan and associated with Asteraceae hosts (Kerzhner, 1988; Yasunaga *et al.*, 2001; Schuh, 2002-2013; Aukema, 2018). This species, known currently from Hokkaido including Etorofu Island and Honshu, Japan, and Sakhalin, Russia, is easily recognized by the moderate size, pale yellowish green general coloration, both silvery reclining setae and dark simple setae on dorsum, and minutely spotted apical part of metafemur (Fig. 1; more habitus images also available on https://www.discoverlife.org/20/q?search=Europiella+miyamotoi).

As in the majority of congeners of *Europiella* Reuter, 1909 (cf. Schuh, 2004), *E. miyamotoi* has the left paramere curved and compact, whereas the right paramere is straight, broadened and elongate (Figs. 2a, 3a-b). Nonetheless, the present (teratological) male specimen has the right paramere completely transformed into «left» paramere (appearing to have a pair of left parameres as in Figs. 2c, 3d-e).

Although antennal oligomery was occasionally recognized in some species of the Miridae (cf. Wheeler, 2001; Henry, 2015; Yasunaga, 2018; Yasunaga *et al.*, 2019), teratological form of the parameres was reported only on *Apolygus spinolae*. In the case of the aberrant *A. spinolae*, the typical sclerites and secondary gonopore on the vesica (endosoma) were remarkably reduced or modified, which presumably prevented the mirine from mating (Yasunaga, 1996). On the other hand, the individual of *E. miyamotoi* has a perfectly sclerotized vesica that is strongly coiled (Figs. 2d, 3f), differing from the standard shape (Figs. 2b, 3c). It is less certain whether the phyline male with «a pair of left parameres» could retain the normal reproductive function.

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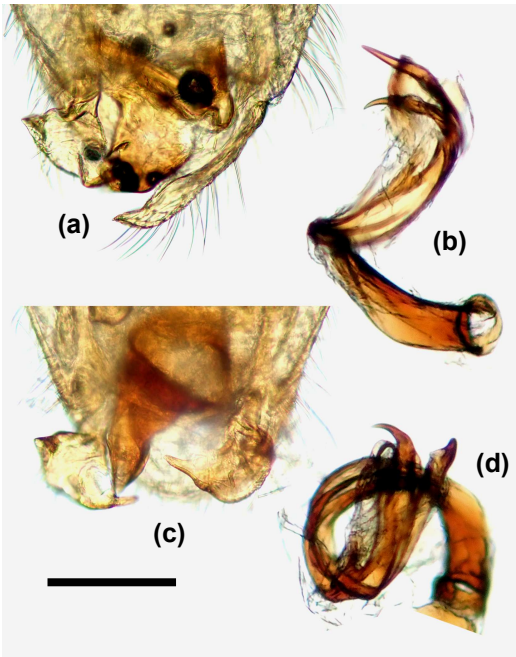

FIGURE 2. Male genital segment (a, c) and vesica (endosoma) (b, d) of *Europiella miyamotoi*: (a)-(b) Normal form; (c)-(d) Teratological form (Scale bar = 0.2 mm).

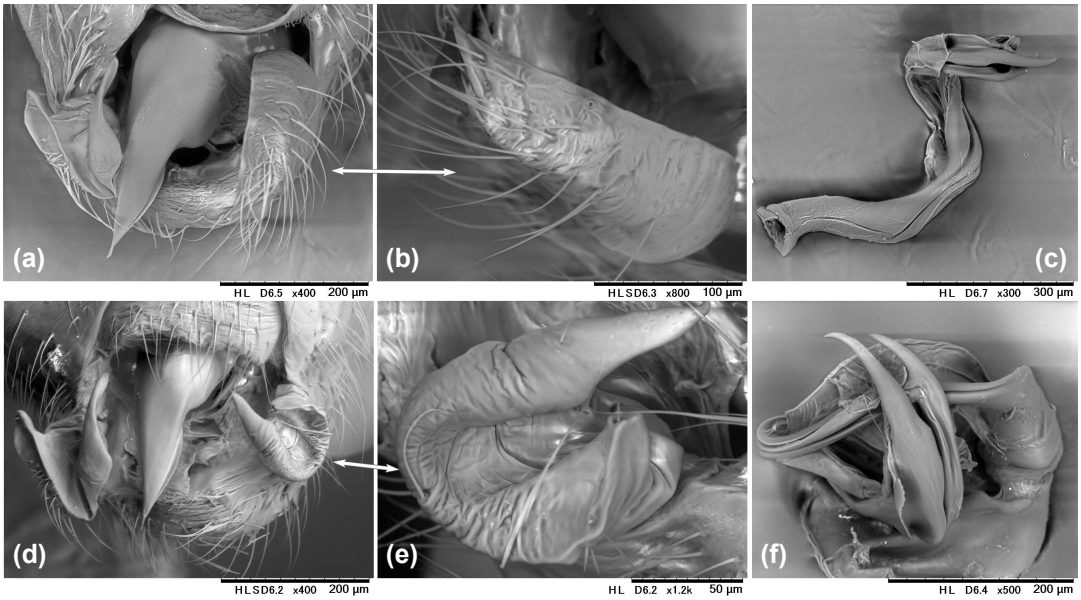

Figure 3. Scanning electron micrographs for *Europiella miyamotoi*: (a)-(c) Normal form; (d)-(f) Teratological form / (a), (d) Pygophore; (b), (e) Right paramere; (c), (f) Vesica (endosoma).

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