



Review of the cave cricket genus *Tamdaotettix* Gorochov with a new species and some new descriptions (Orthoptera: Rhaphidophoridae, Aemodogryllinae)

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Abstract

A review of the raphidophorid genus *Tamdaotettix* Gorochov, 1998 is presented. One new species, one newly-recorded species from China and one species from Vietnam are identified and described. These are namely *Tamdaotettix* (*Tamdaotettix*) *tridenticulatus* **sp. nov.**, *Tamdaotettix* (*Laotettix*) *curvatus* Gorochov, 2015 and *Tamdaotettix* (*Tamdaotettix*) *semipullus* Gorochov, 1998. At the same time, *Megadiestramima extensa* Gorochov, 1998 is redescribed. A key to the species of *Tamdaotettix* is provided.

Key words: Orthoptera, Rhaphidophoridae, Aemodogryllinae, *Tamdaotettix*

Introduction

Gorochov (1998) proposed the genus *Tamdaotettix* with the type species *T. dilutus* Gorochov, 1998. In that paper, he transferred *Atachycines vinhphuensis* Gorochov, 1992 to *Tamdaotettix* and described two species: *T. pullus* Gorochov, 1998 and *T. semipullus* Gorochov, 1998 from Vietnam. Gorochov & Storozhenko (2015) reviewed *Tamdaotettix*, described the subgenus *Tamdaotettix* (*Laotettix*) and described nine species which included four species from Vietnam and five species from Laos. They also listed the key to the species of the genus *Tamdaotettix*.

So far, *Tamdaotettix* comprises two subgenera and thirteen species for the world, eight species from Vietnam, and five from Laos. In this work, one new species, one newly-recorded species from China and one species from Vietnam of *Tamdaotettix* are identified and described, namely *Tamdaotettix* (*Tamdaotettix*) *tridenticulatus* **sp. nov.**, *Tamdaotettix* (*Laotettix*) *curvatus* Gorochov, 2015 and *Tamdaotettix* (*Tamdaotettix*) *semipullus* Gorochov, 1998. *Megadiestramima extensa* Gorochov, 1998 is also redescribed. All specimens recorded here are deposited in the Shanghai Entomological Museum, Chinese Academy of Sciences.

Tamdaotettix Gorochov, 1998

Tamdaotettix Gorochov, 1998. *Entomologicheskoe Obozrenie*, 77(1): 81–84; Storozhenko & Dawwrueng, 2014. *Zootaxa*, 3765(3): 289; Gorochov *et al.*, 2015. *Zoosystematica Rossica*, 24(1): 52–62.

Type species. *Tamdaotettix dilutus* Gorochov, 1998.

Generic diagnosis. Body not large for Diestramimini. Pronotum with an arcuate convex dorsal edge. Process of 7th abdominal tergite rather short and process of 6th abdominal tergite bearing a small spine or angular projection in the subgenus *Tamdaotettix* (*Tamdaotettix*). Male genitalia membranous, with six simple lobes.

Key to the species of the genus of *Tamdaotettix*

- 1 6th abdominal tergite with spine or small angular projection; genitalia with a pair of long dorso-lateral lobes. Female: subgenital plate slightly transverse and without truncated apex. Subgenus *Tamdaotettix*...2
- 6th abdominal tergite without spine or angular projection; genitalia with a pair of short dorso-lateral lobes. Female: subgenital plate strongly transverse and with truncated apex. Subgenus *Laotettix*...8
- 2 6th abdominal tergite with straight or slightly sinuate spine or small angular projection; basal portion of process of 7th abdominal tergite distinctly wider than apex 3
- 6th abdominal tergite with strongly curved spine or small angular projection; basal part of process of 7th abdominal tergite slightly narrower than apex or they almost equal in width 7
- 3 Process of paraproct almost equal to process of 6th abdominal tergite. 4
- Process of paraproct distinctly longer than process of 6th abdominal tergite. 5
- 4 Process of 6th abdominal tergite not surpassing apex of process of 7th abdominal tergite *T. (T.) dilutus* Gorochov, 1998
- Process of 6th abdominal tergite distinctly surpassing apex of process of 7th abdominal tergite *T. (T.) pullus* Gorochov, 1998
- 5 Process of 7th abdominal tergite with three denticles, middle denticle distinctly longer than lateral denticles *T. (T.) tridenticulatus* sp. nov.
- Process of 7th abdominal tergite without denticles. 6
- 6 Process of paraproct distinctly longer than remainder of paraproct and with small angular projection at apex *T. (T.) semipullus* Gorochov, 1998
- Process of paraproct almost equal to the remainder of paraproct and with small spine at apex. *T. (T.) aculeatus* Gorochov, 1998
- 7 6th abdominal tergite with larger spine directed upwards; process of 7th abdominal tergite with rather smooth lateral margins and its apex quite narrow and high *T. (T.) flexus* Gorochov, 2015
- 6th abdominal tergite with smaller angular spine; process of 7th abdominal tergite with denticulate lateral margins and its apex quite wide and low. *T. (T.) laocai* Gorochov, 2015
- 8 Paraproct with a rather long process. 9
- Paraproct without distinct process. 11
- 9 Process of 7th abdominal tergite with round apex; process of paraproct rather straight, directed posteriorly *T. (L.) inflatus* Gorochov, 2015
- Process of 7th abdominal tergite with slightly concave or transverse apex; process of paraproct curved upwards 10
- 10 Process of paraproct distinctly shorter than process of 7th abdominal tergite; paraproct with round apex, slightly thickened *T. (L.) curvatus* Gorochov, 2015
- Process of paraproct almost equal to process of 7th abdominal tergite; paraproct with finger-like apex *T. (L.) minutus* Gorochov, 2015
- 11 Process of 7th abdominal tergite with rather narrow and transverse apex *T. (L.) tarasovi* Gorochov, 2015
- Process of 7th abdominal tergite with rather wide and round apex *T. (L.) sympatricus* Gorochov, 2015

1. *Tamdaotettix (Tamdaotettix) semipullus* (Gorochov, 1998)

(Figs. 1–2)

Tamdaotettix (Tamdaotettix) semipullus Gorochov, 1998. *Entomologicheskoe Obozrenie*, 77(1): 84, figs. 75–84.

Description. Male. Body large (see below), shining. Head with fastigium of vertex divided into two conical tubercles, completely fused. Legs long and slender; fore femora about 1.5 times as long as the pronotum, beneath unarmed, external genicular lobe with a long movable spur; fore tibiae beneath with 2 external and 2 internal spurs, between the paired apical spurs with a short spur. Mid femora with a long movable spur on the external and internal genicular lobe; mid tibiae beneath with 2 external and 1 internal spur(s), between the paired apical spurs with a short spur. Hind femora beneath with 6 inter spines and without outer spines; hind tibiae above with 33–45 outer spines and 28–39 inter spines, inner subapical spur of hind tibiae slightly shorter than hind metatarsus. Hind metatarsus with 3 dorsal spines. Process of 6th abdominal tergite with a small angular projection (Fig. 1). Basal part of 7th abdominal tergite distinctly wider than apex (Fig. 1). Paraproct long and apex with a small angular projection (Fig. 2).

Female. Unknown.

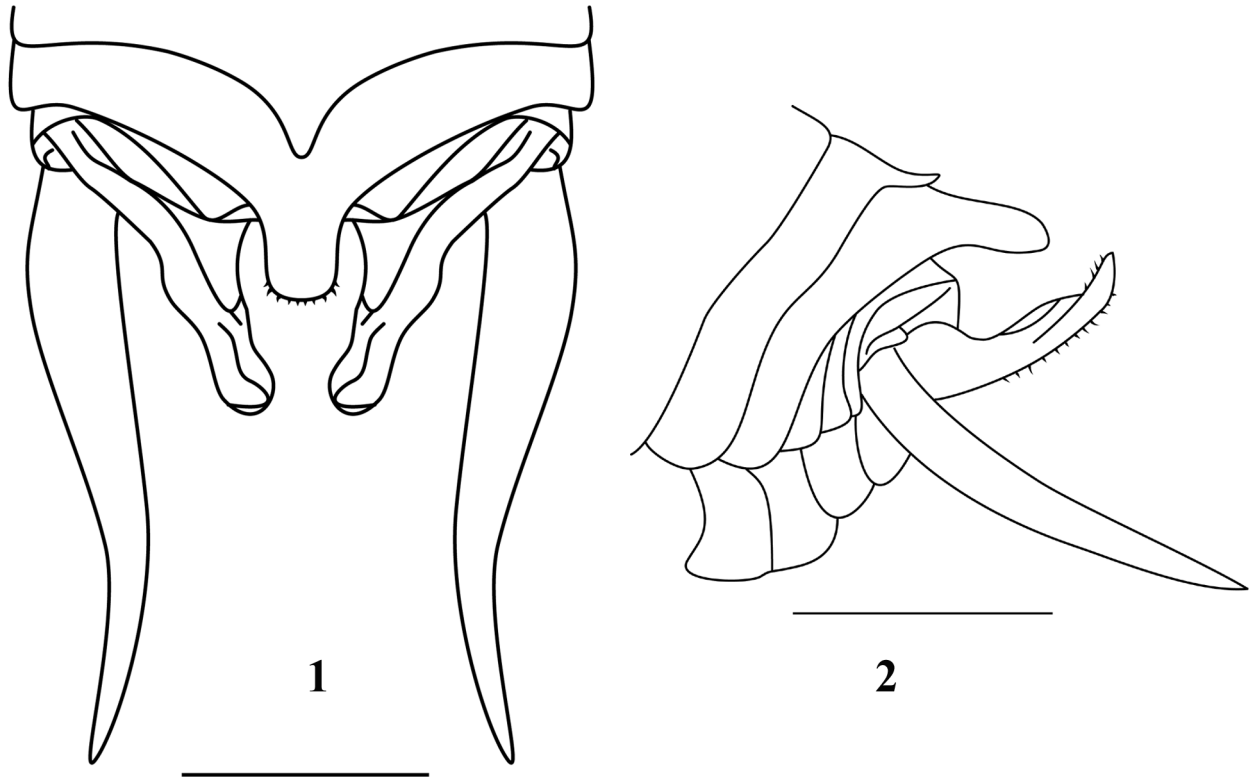
Coloration. Body dark brown. Four anterior tergites shining. Legs light brown, hind femora yellowish brown.

Measurements. (length in mm) Body ♂14.0; pronotum ♂6.5; fore femora ♂10.0; hind femora ♂20.5; hind tibiae ♂22.0.

Material examined. 1♂, Mt. Bavi, Tonkin, Vietnam, 1941.VII, alt. 800–1000m, collected by A. De. Cooman.

Distribution. Vietnam (Tonkin, Vinh Phu).

Discussion. This species is very similar to *Tamdaotettix* (*Tamdaotettix*) *aculeatus* Gorochov, 2015, but differs from the latter in: process of male paraproct distinctly longer than the rest part of paraproct and with a small angular projection at apex.



FIGURES 1–2. *Tamdaotettix* (*Tamdaotettix*) *semipullus* Gorovhov, 1998. 1. Abdominal apex, dorsal view; 2. Abdominal apex, lateral view; scale bars=2mm.

2. *Tamdaotettix* (*Laotettix*) *curvatus* (Gorochov, 2015)

(Figs. 3–4)

Tamdaotettix (*Laotettix*) *curvatus* Gorochov, 2015. *Zoosystematica Rossica*, 24(1): 54, figs. 18–24.

Description. Male. Body small sized, shining. Head with fastigium of vertex divided into two conical tubercles, completely fused. Legs long and slender; fore femora about 1.2 times as long as the pronotum, beneath unarmed, external genicular lobe with a long movable spur; fore tibiae beneath with 2 external and 2 internal spurs, between the paired apical spurs with a short spur. Mid femora with a long movable spur on the external and internal genicular lobe; mid tibiae beneath with 2 external and 1 internal spur(s), between the paired apical spurs with a short spur. Hind femora beneath with 6 internal spines and without outer spines; hind tibiae above with 59–62 outer spines and 57–58 inter spines, inner subapical spur of hind tibiae longer than hind metatarsus. Hind metatarsus with 5 dorsal spines. Process of 7th abdominal tergite with concave dorsal edge (Fig. 3). Process of 6th abdominal tergite without projection (Fig. 3). Paraproct with a globularly rounded apex (Fig. 4).

Female. Unkonwn.

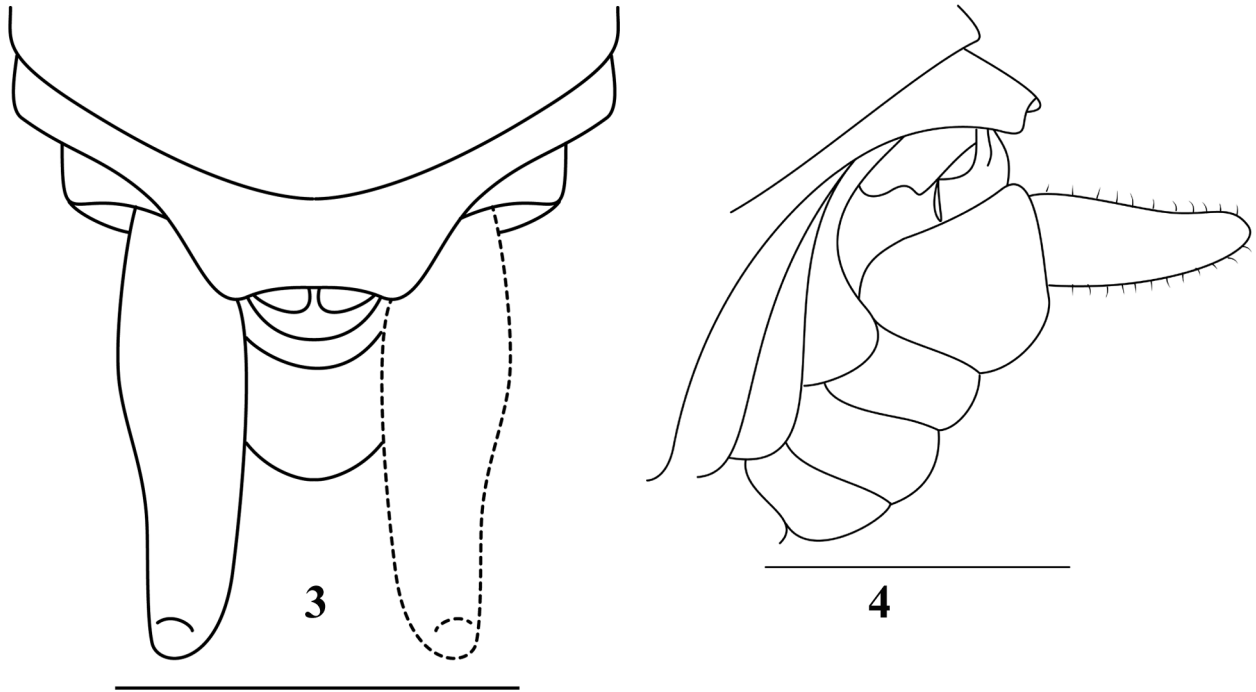
Coloration. Body light brown. Pronotum with a light median band. Hind legs yellowish brown and femora with brown stripes.

Measurements. (length in mm) Body ♂11.5; pronotum ♂6.5; fore femora ♂8.0; hind femora ♂18.0; hind tibiae ♂19.0.

Material examined. 1♂, Mengla, Yunnan, China, 1995.VII.23–27, collected by Liu Xian-Wei *et al.*

Distribution. China (Yunnan); Laos (Xieng Khouang).

Discussion. This species is very similar to *Tamdaotettix (Laotettix) minutus* Gorochov, 2015, but differs from the latter in: process of paraproct with a globularly round apex, process of 7th abdominal tergite with concave dorsal edge.



FIGURES 3–4. *Tamdaotettix (Laotettix) curvatus* Gorochov, 2015. 3. Abdominal apex, dorsal view; 4. Abdominal apex, lateral view; scale bars=2mm.

***Tamdaotettix (Tamdaotettix) tridenticulatus* sp. nov.**

(Figs. 5–7)

Description. Male. Body intermediate sized, shining. Head with fastigium of vertex divided into two conical tubercles, completely fused. Legs long and slender; fore femora about 1.4 times as long as the pronotum, beneath unarmed, external genicular lobe with a long movable spur; fore tibiae beneath with 1–2 external and 2 internal spur(s), between the paired apical spurs with a short spur. Mid femora with a long movable spur on the external and internal genicular lobe; mid tibiae beneath with 2 external and 1 internal spur(s), between the paired apical spurs with a short spur. Hind femora beneath with 6 inter spines and without outer spines; hind tibiae above with 40–43 outer spines and 40–41 inter spines, arrange in clusters, inner subapical spur of hind tibiae slightly longer than hind metatarsus. Hind metatarsus with 3–6 dorsal spines. Process of 7th abdominal tergite with 3 denticles, middle denticle distinctly longer than lateral denticles. Process of 6th abdominal tergite with a spine-like projection (Fig. 5). Paraproct rather short and compressed in profile (Fig. 6).

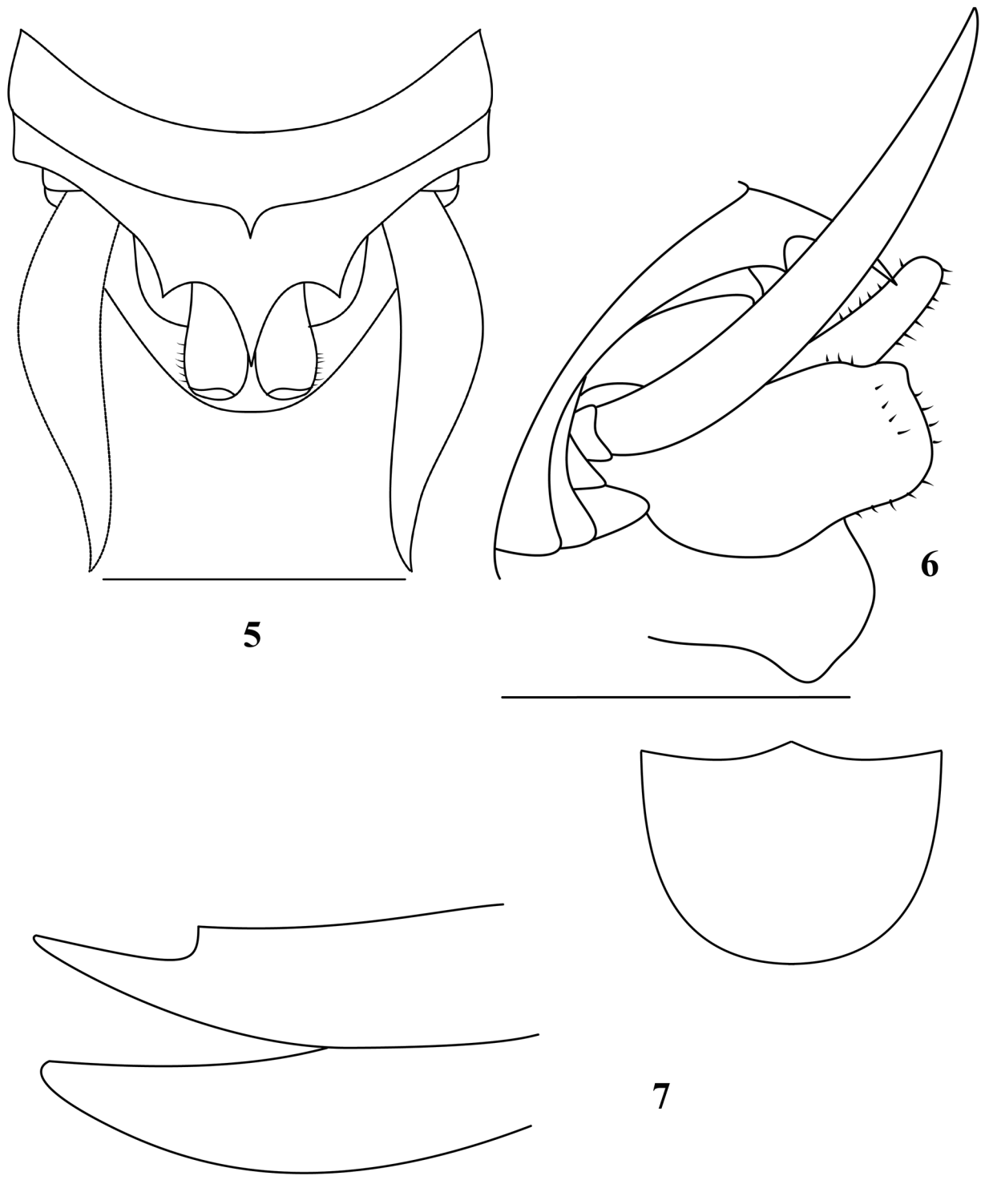
Female. Subgenital plate nearly semicircular and apex blunt (Fig. 7). Ovipositor shorter than the half of hind femora.

Coloration. Body dark black. Some individuals with a greyish white band on the tergite. Fore and mid leg darkish. Hind leg yellowish brown and hind femora with dark stripes.

Measurements. (length in mm) Body ♂11.0–12.0, ♀10.0–12.0; pronotum ♂5.5–6.0, ♀5.0–6.0; fore femora ♂8.0, ♀7.0–9.5; hind femora ♂17.0–17.5, ♀16.5–19.5; hind tibiae ♂17.5–19.0, ♀16.0–20.5; ovipositor 6.0–6.5.

Material examined. Holotype, 1♂, Jiuwan Mountain, Guangxi, alt. 1200m, 2015.VII.19, collected by Liu Xian-Wei *et al.*; paratype, 2♀♀, same data as holotype; 1♂1♀, Daming Mountain, Guangxi, China, alt. 1250m, 2013.VII.19–25, collected by Liu Xian-Wei *et al.*; 1♀, Leigong Mountain, Guizhou, China, alt. 690–800m, 2015.VIII.1–2, collected by Sun Mei-Ling; 1♂, Leigong Mountain, Guizhou, China, alt. 1530–2160m, 2015.VII.28–30, collected by Qin Yan-Yan.

Distribution. China (Guangxi, Guizhou).



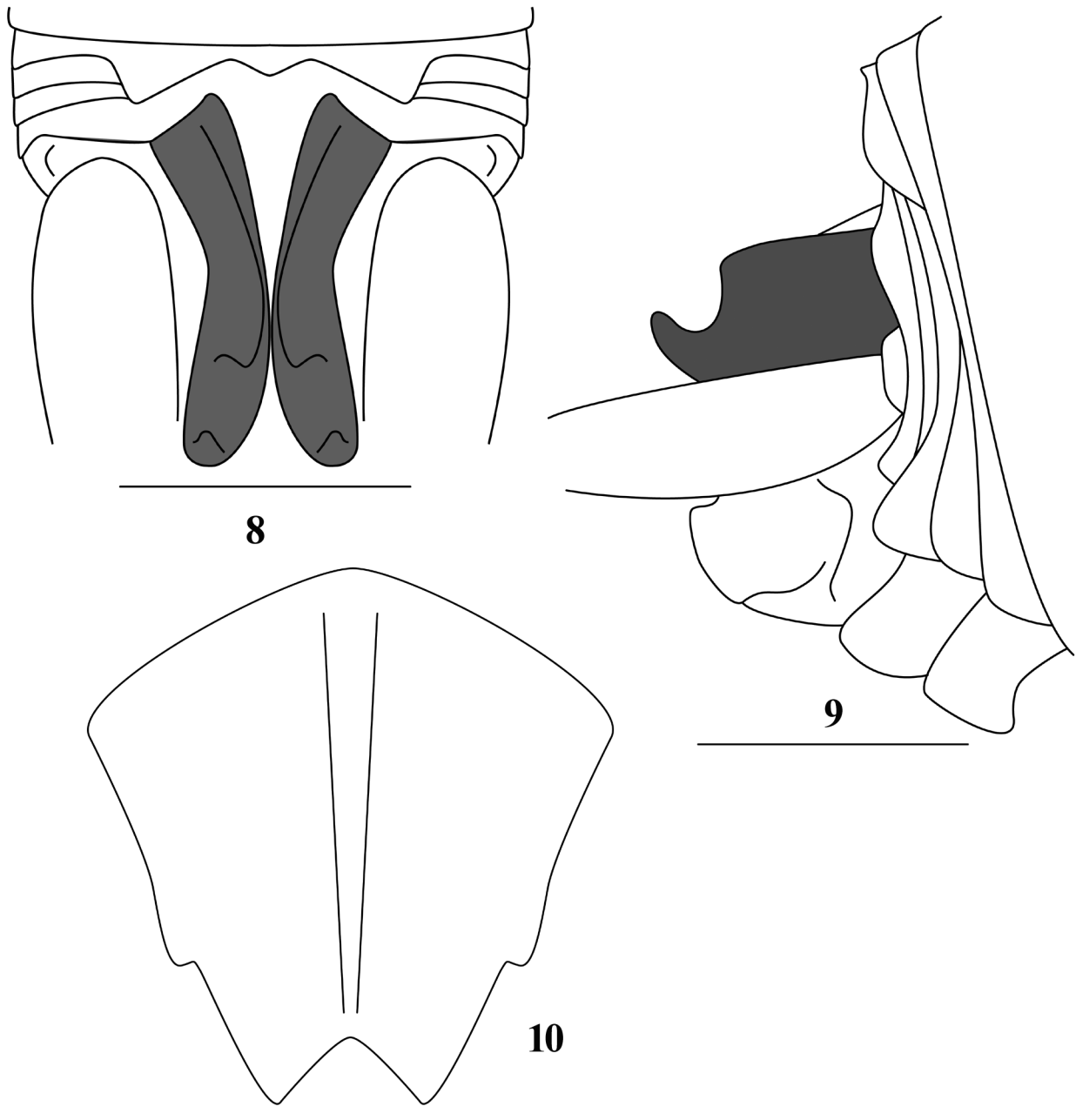
FIGURES 5–7. *Tamdaotettix (Tamdaotettix) tridenticulatus* sp. nov. 5. Abdominal apex of male, dorsal view; 6. Abdominal apex of male, lateral view; 7. Female subgenital plate and apex of ovipositor; scale bars=2mm.

Discussion. This species is very similar to *Tamdaotettix (Tamdaotettix) aculeatus* Gorochov, 2015, but differs from the latter in: process of 7th abdominal tergite with 3 denticles, middle denticle distinctly longer than lateral denticles and process of paraproct compressed in profile.

***Megadiestramima extensa* Gorochov, 1998**

(Figs. 8–10)

Megadiestramima extensa Gorochov, 1998. *Entomologicheskoe Obozrenie*, 77(1): 91–93, figs. 135–137.



FIGURES 8–10. *Megadiestramima extensa* Gorochov, 1998. 8. Abdominal apex of male, dorsal view; 9. Abdominal apex of male, lateral view; 10. Subgenital plate of female; scale bars=2mm.

Description. Male. Body intermediate sized. Head with fastigium of vertex divided into two conical tubercles, slightly separated. Legs long and slender, fore femora about 2.3 times as long as the pronotum, beneath unarmed, external genicular lobe with a long movable spur; fore tibiae beneath with 2 external and 2 internal spurs, between the paired apical spurs with a short spur. Mid femora with a long movable spur on the external and internal genicular lobe; mid tibiae beneath with 2 external and 2 internal spurs, between the paired apical spurs with a short spur. Hind femora with 7 inter spines and without outer spines on ventral margin; hind tibiae with 31 outer spines and 30 inter spines on dorsal margin, arranged sparsely, inner superapical spur of hind tibia almost equal in length to hind metatarsus. Hind metatarsus with 2 dorsal spines. Apex of process of 7th abdominal tergite almost saw-toothed (Fig. 8). Apex of paraproct hooked (Fig. 9).

Female. Subgenital plate narrowing from base to apex and apex with a deep median incision (Fig. 10). Ovipositor greater than half the length of hind femora.

Coloration. Body yellowish brown. Genicular lobes of leg dark and with darkish stripes. Dorsal side of hind femora dark.

Measurements. (length in mm) Body ♂14.0, ♀17.5; pronotum ♂6.0, ♀6.0–8.0; fore femora ♂14.0, ♀13.0–16.0; hind femora ♂27.5, ♀24.5–30.0; hind tibiae ♂30.0, ♀32.0; ovipositor 17.0.

Material examined. 1♂, Mt. Bavi, Tonkin, Vietnam, 1941.VII, alt. 800–1000m, collected by P. A. De. Cooman; 2♀♀, Mt. Bavi, Tonkin, Vietnam, 1940.VIII, alt. 900–1000m, collected by P. A. De. Cooman.

Distribution. Vietnam (Province Hasonbinh, Tonkin)

Discussion. This species is very similar to *Megadiestramima darevskyi* Gorochov, 1998, but differs from the latter in: apex of male paraproct hooked not strongly.

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