

New and little-known taxa of the tribe Diestramimini (Orthoptera: Rhabdophoridae: Aemodogryllinae) from Southeast Asia. Part 1

Новые и малоизвестные таксоны трибы Diestramimini (Orthoptera: Rhabdophoridae: Aemodogryllinae) из Юго-Восточной Азии.

Часть 1

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A new subgenus, 19 new species and two new subspecies are described from Vietnam, Laos and China: *Tamdaotettix* (*Tamdaotettix*) *aculeatus* sp. nov., *T. (T.) flexus* sp. nov., *T. (T.) laocai* sp. nov., *T. (Laotettix* subgen. nov.) *tarasovi* sp. nov., *T. (L.) curvatus* sp. nov., *T. (L.) minutus* sp. nov., *T. (L.) inflatus* sp. nov., *T. (L.) sympatricus* sp. nov., *T. (?) robustus* sp. nov., *Gigantettix laosensis* sp. nov., *G. maximus auster* subsp. nov., *Diestramima hainanensis* sp. nov., *D. bispinosa* sp. nov., *D. hamata* sp. nov., *D. propria* sp. nov., *D. yunnanensis* sp. nov., *D. champasak* sp. nov., *Adiestramima adunca* sp. nov., *A. bella* sp. nov., *A. elongata* sp. nov., *A. perfecta* hue subsp. nov. Previously unknown male of *G. maximus maximus* Gorochov, 1998 and imago of *D. palpata* (Rehn, 1906) are described on the base of a new material. New distributional data for some species are given.

Из Вьетнама, Лаоса и Китая описаны новый подрод, 19 новых видов и два новых подвида: *Tamdaotettix* (*Tamdaotettix*) *aculeatus* sp. nov., *T. (T.) flexus* sp. nov., *T. (T.) laocai* sp. nov., *T. (Laotettix* subgen. nov.) *tarasovi* sp. nov., *T. (L.) curvatus* sp. nov., *T. (L.) minutus* sp. nov., *T. (L.) inflatus* sp. nov., *T. (L.) sympatricus* sp. nov., *T. (?) robustus* sp. nov., *Gigantettix laosensis* sp. nov., *G. maximus auster* subsp. nov., *Diestramima hainanensis* sp. nov., *D. bispinosa* sp. nov., *D. hamata* sp. nov., *D. propria* sp. nov., *D. yunnanensis* sp. nov., *D. champasak* sp. nov., *Adiestramima adunca* sp. nov., *A. bella* sp. nov., *A. elongata* sp. nov., *A. perfecta* hue subsp. nov. На основании нового материала описаны ранее неизвестные самец *G. maximus maximus* Gorochov, 1998 и имаго *D. palpata* (Rehn, 1906). Приведены новые данные по распространению некоторых видов.

Key words: rhabdophorids, taxonomy, Indochina, China, Orthoptera, Rhabdophoridae, Aemodogryllinae, Diestramimini, new taxa

Ключевые слова: пещерники, таксономия, Индокитай, Китай, Orthoptera, Rhabdophoridae, Aemodogryllinae, Diestramimini, новые таксоны

INTRODUCTION

The subfamily Aemodogryllinae is one of two subfamilies of the family Rhabdophoridae (Orthoptera: Stenopelmatoidea) distributed in tropical regions of South-

east Asia. This subfamily is distributed also in the eastern part of Palaearctic (northwards to Kunashir Island and Amur River in Russia); the related subfamily Rhabdophorinae is more tropical and distributed from Ryukyu Islands and Central China to

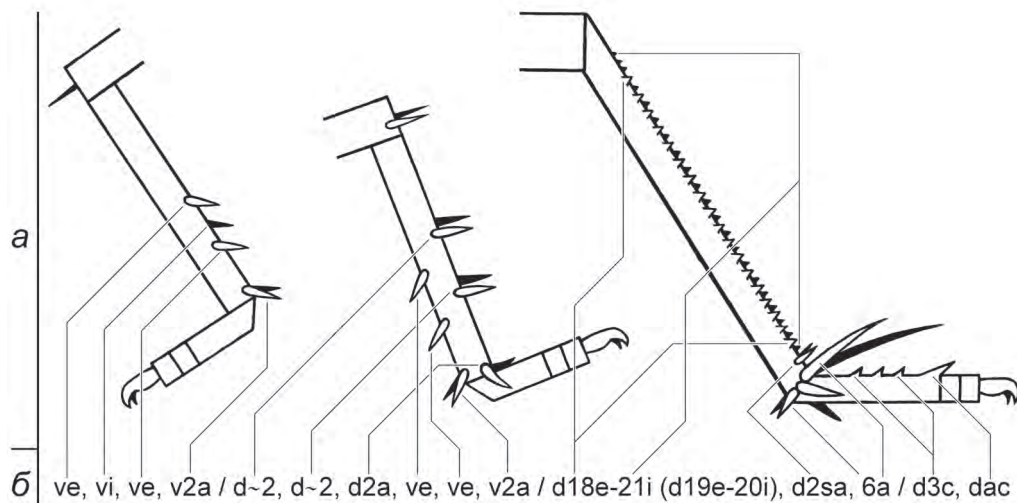


Fig. 1. Schema of location of spines and spurs on tibiae and tarsi of *Eurhaphidophora bona* Gor. (a), and its reflection in "armament formula" (b) [after Gorochov (2012)].

Northern Australia and Samoan Archipelago. Aemodogryllinae consists of two tribes: Aemodogryllini Jacobson, 1902 and Diestramimini Gorochov, 1998.

The tribe Diestramimini differs from Aemodogryllini in specialized abdominal tergites and paraprocts of male: seventh abdominal tergite always and sixth one sometimes have a characteristic posteromedian process; each paraproct is usually with a finger-like, spine-like or hook-like process (epiproct sometimes also somewhat specialized). Male genitalia in Diestramimini are usually membranous, but in two genera, they are with very small sclerotized and hook-like denticles (*Gigantettix* Gorochov, 1998) or with a V-shaped sclerite (*Megadiestramima* Storozhenko et Gorochov, 1992) very different from the analogous structure of Aemodogryllini (male genitalia in Aemodogryllini have a median semisclerotized plate usually provided with numerous small denticles). The latter tribe is also distinguished from Diestramimini by unspecialized tergites, paraprocts and epiproct in male. It seems to us that, in accordance to the above-mentioned characters, Diestramimini is a more primitive tribe, because similar abdominal processes are developed

in some genera of Rhaphidophorinae, and completely membranous male genitalia are characteristic of most genera of the latter subfamily.

Still now 33 species and subspecies belonging to at least six genera of Diestramimini are known from India, Bhutan, China, Myanmar, Thailand and Vietnam (Rehn, 1906; Griffini, 1914; Chopard, 1918; Würmli, 1973; Storozhenko, 1990, 2009; Gorochov & Storozhenko, 1992; Gorochov, 1994, 1998, 2002, 2010a; Liu & Zhang, 2001; Storozhenko & Dawwrueng, 2014). One new subgenus as well as 19 new species and two new subspecies of this tribe from Vietnam, Laos and China are described in the present paper. Two genera (*Megadiestramima* and *Mimadiestra* Storozhenko et Dawwrueng, 2014) will be considered in the second part of this paper.

To describe the location of spines and spurs on the tibiae and tarsi, a special "armament formula" is used here. This formula is originally elaborated for representatives of the subfamily Rhaphidophorinae (Gorochov, 2010b, 2012), but it is suitable for Aemodogryllinae also. The scheme of this armament and its reflection in the "armament formula" are shown in Fig. 1. In this formula,

the following abbreviations are used: de, di, d2, d-2 – dorsal spines of fore and middle tibiae (external spine, internal one, a pair of spines consisting of external and internal ones which are situated very near each other, a pair of these spines situated almost near each other); ve, vi, v2, v-2 – ventral spines of same tibiae; d2a, v2a, v3a – apical spines (= spurs) of same tibiae (a pair of dorsal spurs, a pair of ventral ones, three ventral spurs); d18e–21i – dorsal spines of hind tibia (18 external and 21 internal spines); d2sa, 6a – a pair of dorsal subapical spines and three pairs of spurs on same tibia; d3c, dac – three dorsal central (= median) spines and one dorsal central spur on hind basitarsus. If any spine (spur) is developed in one leg only, or if the number of spines (spurs) is different in the left and right legs, this spine (spur) or spines (spurs) are given in parentheses: ve, (vi), ve; d18e–21i (d19e–20i); d3c (d5c).

The material studied (including holotypes and paratypes of new species and subspecies) is deposited at the following institutions: Zoological Institute of the Russian Academy of Sciences, St Petersburg (ZIN); Academy of Natural Sciences of Philadelphia, Pennsylvania (ANSP).

SYSTEMATICS

Tribe **DIESTRAMIMINI** Gorochov, 1998

Note. All the genera of Diestramimini are listed below, in a new generic key based on the key published recently (Storozhenko & Dawwrueng, 2014). This new key is necessary in connection with some changes in the generic diagnosis of *Tamdaotettix* Gorochov, 1998 and problematic position of *Leodies-tramima* Storozhenko, 2009 which considered here as a subgenus of *Megadiestramima* but not as a separate genus (the latter rank was proposed for this taxon in the above-mentioned paper).

1. Body from medium-sized to small (length in mm: pronotum 3.5–7.5; hind femur 8.9–24); fore femora without spines or denticles on

ventral keels. Male: abdomen with rather short posteromedian process of seventh abdominal tergite and often with angular or spine-like posteromedian process on sixth abdominal tergite (Figs II: 2, 5, 7, 9, 11, 15, 19, 23, 27, 30, 34), or abdomen with posteromedian process of seventh abdominal tergite deeply divided into a pair of rather long spines and without any process on sixth abdominal tergite; paraproct without large dorsal lobe in proximal half and often with finger-like posterior process having rounded, angular, narrowed or spine-like apex (Figs II: 1, 4, 6, 8, 10, 14, 18, 22, 26), but sometimes paraproct simple, roundly triangular in profile (Figs II: 29, 33); genitalia completely membranous, with six lobes (three dorsal and three ventral lobes, and ventrolateral lobes not very long and undivided; Figs III: 1–15). Female: posterodorsal part of seventh abdominal tergite with one median convexity or small angular projection, and paraproct simple in shape (almost roundly triangular); or posterodorsal edge of seventh abdominal tergite with a pair of tubercles, and paraproct with short conical distal process; upper valve of ovipositor sometimes with distinct dorsal notch near apex (Fig. IV: 5) 2

- Body from large to medium-sized (length in mm: pronotum 4.4–11; hind femur 19.5–48); fore femora with ventral spines or denticles, or without them. Male: abdomen with diverse posteromedian process of seventh abdominal tergite (but this process undivided into a pair of rather long spines) and always without distinct posteromedian projection on sixth abdominal tergite (sometimes latter tergite with short and widely rounded median convexity on posterior edge only); paraproct diverse in shape and with diverse process or processes (but not simple in shape, i. e. not roundly triangular in profile); genitalia with almost globular inflation on dorsal surface having numerous hook-like denticles (Figs VI: 1–5), or with very long ventrolateral lobes (much longer than all other lobes; Figs XI: 1–6), or with eight lobes (each ventrolateral lobe divided into two additional lobes; Figs VIII: 1–9), or with distinct V-shaped sclerite, or as in antithesis (but in latter case, paraproct with more or less high dorsal lobe in proximal half). Female: posterodorsal part of seventh abdominal tergite with median convexity or small angular pro-

- jection, or with almost spine-like tubercle; paraproct rather simple in shape but with angular or square apical lobule, or with conical or spine-like distal process; upper valve of ovipositor without distinct dorsal notch near apex (Figs IV: 10, 11; IX: 1–8) 3
2. Thoracic tergites shining (except one species possibly not belonging to *Tamdaotettix*; see notes on this genus below). Male: abdomen with rather short posteromedian process of seventh abdominal tergite and often with angular or spine-like posteromedian process on sixth abdominal tergite (Figs II: 2, 5, 7, 9, 11, 15, 19, 23, 27, 30, 34); paraproct often with finger-like process having rounded, angular, narrowed or spine-like apex (Figs II: 1, 4, 6, 8, 10, 14, 18, 22, 26), but sometimes paraproct without any process, roundly triangular in profile (Figs II: 29, 33). Female: posterodorsal part of seventh abdominal tergite with median convexity or small angular projection; paraproct simple in shape (almost roundly triangular); upper valve of ovipositor sometimes with distinct dorsal notch near apex (Fig. IV: 5) *Tamdaotettix* Gorochov, 1998
- Thoracic tergites mat. Male: abdomen with posteromedian process of seventh abdominal tergite deeply divided into a pair of rather long spines and without any process on sixth abdominal tergite; paraproct with finger-like process having rounded apex. Female: posterodorsal part of seventh abdominal tergite with a pair of tubercles; paraproct with short conical distal process; upper valve of ovipositor without distinct dorsal notch near apex *Mimadiestra* Storozhenko et Dawwrueng, 2014
3. Fore femora with ventral spines or denticles. Male: posteromedian process of seventh abdominal tergite medium-sized but completely or almost completely covering paraprocts (Figs V: 1, 5, 7, 11; X: 2, 9, 13, 17, 24, 29, 41), or this process long (in latter case, each lower part of ninth abdominal tergite with strong hook; Figs X: 34, 35); genitalia with six lobes; dorsal surface of genitalia with almost globular inflation having numerous hook-like denticles (Figs VI: 1–5), or ventrolateral lobes of genitalia very long (much longer than all other lobes; Figs XI: 1–6). Female: hind femur 2–3.3 times as long as ovipositor; genital plate with short angular apical projection or with apical part not acutely angular (Figs V: 6, 9, 10, 13; X: 5, 6, 11, 15, 19, 22, 27, 32, 38, 44) 4
- Fore femora without ventral spines or denticles. Male: posteromedian process of seventh abdominal tergite long (Figs VII: 1, 6, 9, 17, 19, 23, 27, 31, 34, 36, 39, 41, 43), or this process short and covering only proximal part of paraprocts; lower parts of ninth abdominal tergite always without hooks; genitalia with eight lobes (each ventrolateral lobe divided into two additional lobes; Figs VIII: 1–9), or with six more or less short lobes and without numerous hook-like denticles on dorsal surface. Female: hind femur 1.3–1.8 or (in one species) 2–2.2 times as long as ovipositor (in latter case, genital plate with rather long and narrow angular apical projection) 5
4. Ventral edge of pronotal lateral lobes with weakly concave posterior part. Male: paraproct with apical lobule or small angular projection of apical part directed downwards or downwards /backwards (Figs V: 1, 3, 7, 11); genitalia with ventrolateral lobes approximately equal to dorsal lobes in length and with large globular inflation on dorsal surface having numerous hook-like denticles (Figs VI: 1–5). Female: paraproct with very small apical lobule (angular or more or less square) at apex *Gigantettix* Gorochov, 1998
- Ventral edge of pronotal lateral lobes without concavity in posterior part (i. e. almost completely convex). Male: paraproct with apical projection or process directed upwards, upwards / backwards or backwards (Figs X: 2, 9, 13, 17, 24, 29, 35, 41); genitalia with ventrolateral lobes much longer than all other lobes but without large globular inflation and hook-like denticles on dorsal surface (Figs XI: 1–6). Female: paraproctal process from long to short (but not very small; Figs X: 10, 14, 18, 21, 33, 39, 43) *Adiestramima* Gorochov, 1998
5. Male: posteromedian process of seventh abdominal tergite long, completely covering paraprocts from above (Figs VII: 1, 6, 9, 17, 19, 23, 27, 31, 34, 36, 39, 41, 43); genitalia completely membranous, with eight lobes (each ventrolateral lobe divided into two large lobes; Figs VIII: 1–9). Female: seventh abdominal tergite with angular and more or less narrow posteromedian projection (Figs VII: 4, 13–15) *Diestramima* Storozhenko, 1990

- Male: posteromedian process of seventh abdominal tergite short (almost truncate or spine-like), covering only proximal part of paraprocts from above; genitalia completely membranous or having V-shaped median sclerite, with six lobes. Female: seventh abdominal tergite with rounded and distinctly wider posteromedian lobe (this lobe often with very small apical notch) or with short and rather wide median convexity on posterior edge, but sometimes this tergite with angular and rather narrow posteromedian projection (in latter case, female practically indistinguishable from that of *Diestramima*)
..... **Megadiestramima**
Storozhenko et Gorochov, 1992

Genus ***Tamdaotettix*** Gorochov, 1998

Type species: *Tamdaotettix dilutus* Gorochov, 1998, by original designation.

Note. This genus is here divided into two subgenera. Its original description is based on one of these subgenera only (Gorochov, 1998) and contradicts to some new data. It is a reason that the genus *Tamdaotettix* is provided with the following new diagnosis (see also the generic key above): body is smaller than in majority of the other genera of Diestramimini; pronotum has an arcuate convex dorsal edge; male abdomen is with a distinct but not very long posteromedian process on the seventh tergite and sometimes with an additional posteromedian spine on the sixth tergite; male paraproct is simple or with process (Figs II: 1, 2, 4–11, 14, 15, 18–20, 22–24, 26–31, 33–35); male genitalia consists of six rather simple and completely membranous lobes (Figs III: 1–15). The latter type of male genitalia is probably most primitive among Diestramimini. *Tamdaotettix* contains 11 species listed in a key below, but *T. vinphuensis* (Gorochov, 1992) and *T. robustus* **sp. nov.**, known only from females collected in Northern Vietnam, is not included in this key (belonging of *T. vinphuensis* to this genus and this tribe is questionable); subgenera of *Tamdaotettix* are described in this key also.

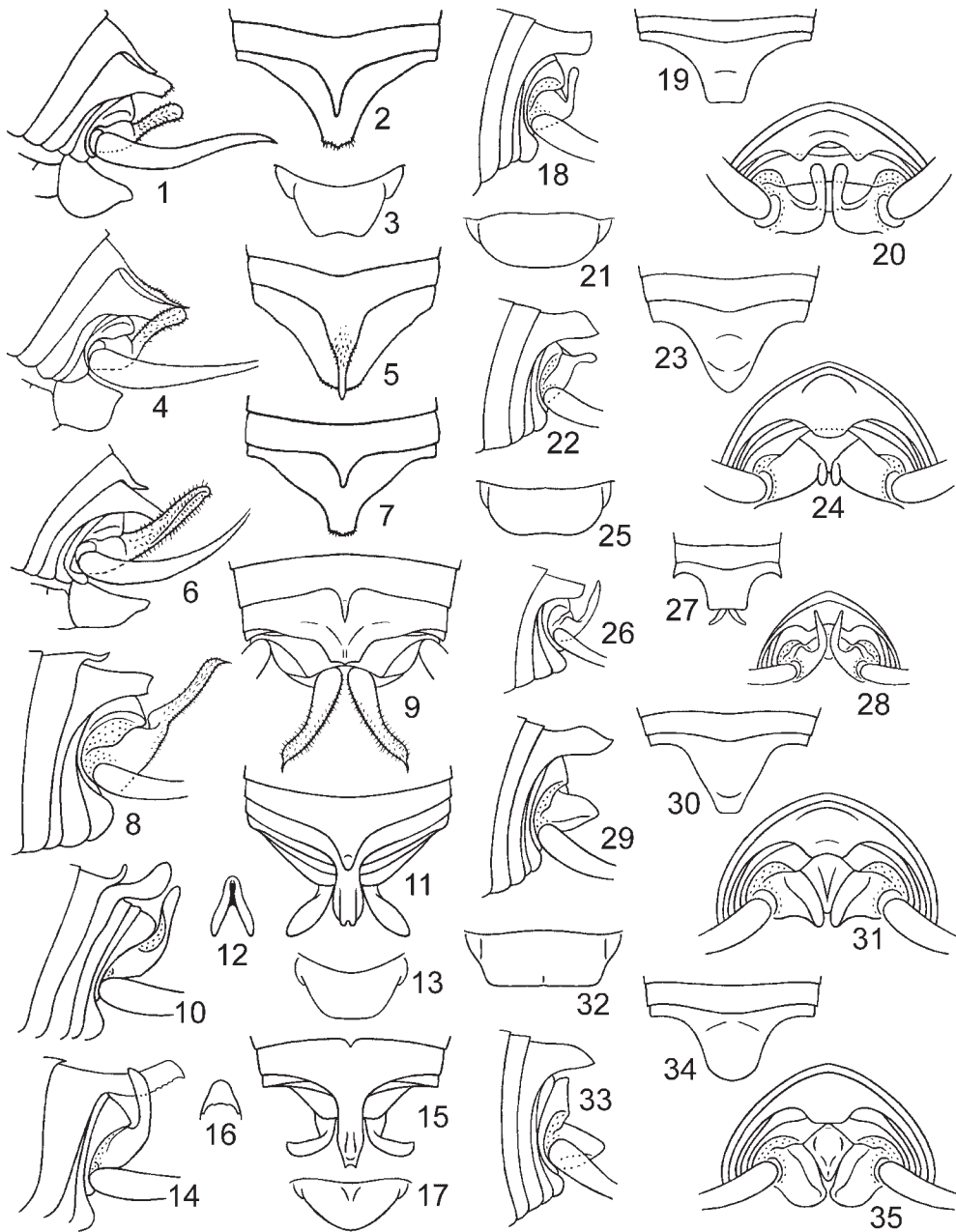
1. Male: sixth abdominal tergite with spine or small angular projection in posteromedian part (Figs II: 1, 2, 4–11, 14, 15); genitalia with a pair of distinctly elongate dorsolateral lobes situated near dorsomedian lobe, (Figs III: 1–5). Female: genital plate moderately transverse and / or not truncated apically (Fig. II: 3, 13, 17). Subgenus ***Tamdaotettix*** s. str. 2
 - Male: sixth abdominal tergite without spine or angular projection in posteromedian part (Figs II: 18–20, 22–24, 26–28, 29–31, 33–35); genitalia with a pair of short dorsolateral lobes situated near dorsomedian lobe (Figs III: 6–15). Female: genital plate strongly transverse and with truncate or almost truncate apical part (Figs II: 21, 25, 32). Subgenus ***Laotettix*** **subgen. nov.** [Type species: *T. tarasovi* **sp. nov.** Etymology: from Laos and *Tamdaotettix*.] 7
2. Male: sixth abdominal tergite with straight or slightly sinuate posteromedian spine (Figs II: 1, 2, 4–9); posteromedian process of seventh abdominal tergite not compressed laterally (its proximal part clearly wider than its distal half; Figs II: 2, 5, 7, 9) 3
 - Male: sixth abdominal tergite with strongly curved spine (directed upwards) or with small angular projection in posteromedian part (Figs II: 10, 11, 14, 15); posteromedian process of seventh abdominal tergite compressed laterally (its proximal part somewhat narrower than its distal half, or they almost equal in width; Figs II: 11, 15) 6
3. Male: paraproct with finger-like and moderately long process (this process almost equal to posteromedian spine of sixth abdominal tergite in length; Figs II: 1, 4) 4
 - Male: paraproct with very long process (this process 2–3 times as long as posteromedian spine of sixth abdominal tergite; Figs II: 6, 8) 5
4. Male: posteromedian spine of sixth abdominal tergite distinctly not reaching apex of posteromedian process of seventh abdominal tergite (this spine not longer than this process; Figs II: 1, 2). Northern Vietnam.
..... ***T. (T.) dilutus*** Gorochov, 1998
 - Male: posteromedian spine of sixth abdominal tergite reaching apex of posteromedian process of seventh abdominal tergite (this spine clearly longer than this process; Figs II: 4, 5). Northern Vietnam
..... ***T. (T.) pullus*** Gorochov, 1998

5. Male: process of paraproct distinctly longer than rest part of paraproct and with very small angular projection at apex (Fig. II: 6). Northern Vietnam ***T. (T.) semipullus*** Gorochov, 1998
- Male: process of paraproct almost equal to rest part of paraproct in length and with rather long spinule at apex (Figs II: 8, 9). Northern Vietnam ***T. (T.) aculeatus*** sp. nov.
6. Male: sixth abdominal tergite with rather large posteromedian spine directed upwards (Fig. II: 10, 11); posteromedian process of seventh abdominal tergite with smooth ventral edges and narrow and high (in posteroventral view) apical part (Figs II: 10, 12). Northern Vietnam ... ***T. (T.) flexus*** sp. nov.
- Male: sixth abdominal tergite with small angular posteromedian projection (Fig. II: 14, 15); posteromedian process of seventh abdominal tergite with denticulate ventral edges and less narrow and not high (in posteroventral view) apical part (Figs II: 14, 16). Northern Vietnam ***T. (T.) laocai*** sp. nov.
7. Male: paraproct with elongate process (Figs II: 18, 20, 22, 24, 26, 28) 8
- Male: paraproct without distinct process (Figs II: 29, 31, 33, 35) 10
8. Male: posteromedian process of seventh abdominal tergite with rounded dorsal convexity (inflation) in distal half; process of paraproct almost straight, directed more or less backwards (Figs II: 22). Laos ***T. (L.) inflatus*** sp. nov.
- Male: posteromedian process of seventh abdominal tergite with slightly concave or straight dorsal edge in profile; process of paraproct strongly or moderately curved upwards (Figs II: 18, 26) 9
9. Male: process of paraproct distinctly shorter than posteromedian process of seventh abdominal tergite; apical part of paraproctal process globularly rounded and slightly thickened (Figs II: 18, 20). Laos ***T. (L.) curvatus*** sp. nov.
- Male: process of paraproct approximately equal to posteromedian process of seventh abdominal tergite in length; apical part of paraproctal process almost spine-like (Figs II: 26–28). Laos ***T. (L.) minutus*** sp. nov.
10. Male: posteromedian process of seventh abdominal tergite with rather narrow and almost truncate apex (Fig. II: 30). Laos. ***T. (L.) tarasovi*** sp. nov.
- Male: posteromedian process of seventh abdominal tergite with wide and clearly rounded apex (Fig. II: 34). Laos ***T. (L.) sympatricus*** sp. nov.

Tamdaotettix (Tamdaotettix) aculeatus
sp. nov.
(Figs II: 8, 9; III: 1)

Holotype. Male; Northern Vietnam, Phu Tho Prov., Thanh Son Distr., Xuan Son National Park, August 2011, N. Orlov (ZIN).

Description. Male. Body large for this genus, with four anterior tergites more or less shining. Colouration brown with following marks: lower half of head light brown with a pair of weakly distinguishable darkish vertical stripes under antennae, greyish brown vertical stripes under eyes, and more or less darkened lateral and ventral parts of clypeus; dorsum of head with dark brown spot behind each eye; antenna reddish brown with light brown most part of scape and rather numerous marks on middle part of flagellum; four anterior tergites with dark brown stripe along each posterior edge, with similar stripe along anterior edge of pronotum, and with a pair of longitudinal dark stripes on pronotal dorsum; femora with somewhat darkened apical part; fore and middle tibiae more or less spotted; hind tibia greyish brown but gradually turning into somewhat lighter distal part; coxae, tarsi and sternites with light brown areas; abdominal apex (excepting genital plate and sternites) almost completely dark brown. Head with rather thin, elongate and almost conical rostral tubercles which almost completely pressed to each other (approximately as in Fig. IV: 1); eye and scape almost equal in size; lateral ocelli rounded and occupying proximal third of lateral surface of rostral tubercle. Pronotum with completely convex ventral edges; lateral parts of metanotum and of first abdominal tergite mat; other abdominal tergites also mat. Spurs (= apical spines) of middle femur and outer spur of fore femur very long; inner spur of fore femur and spurs of hind femur practically undeveloped (only left hind femur with very small inner



Figs II (1–35). *Tamdaotettix* Gor.: 1, 2, *T. dilutus* Gor.; 3, *T. robustus* sp. nov.; 4, 5, *T. pullus* Gor.; 6, 7, *T. semipullus* Gor.; 8, 9, *T. aculeatus* sp. nov.; 10–13, *T. flexus* sp. nov.; 14–17, *T. laocai* sp. nov.; 18–21, *T. curvatus* sp. nov.; 22–25, *T. inflatus* sp. nov.; 26–28, *T. minutus* sp. nov.; 29–32, *T. tarasovi* sp. nov.; 33–35, *T. sympatricus* sp. nov. Male abdominal apex from side (1, 4, 6); same without lower part from side (8, 10, 14, 18, 22, 26, 29, 33), from above (9, 11, 15) and from behind (20, 24, 28, 31, 35); sixth and seventh abdominal tergites as well as paraproctal processes (if they visible) in male from above (2, 5, 7, 19, 23, 27, 30, 34); female genital plate from below (3, 13, 17, 21, 25, 32); apical part of posteromedian process of male seventh abdominal tergite from behind / below (12, 16). [1, 2, 4–7, after Gorochov (1998).]

apical spinule); hind femur also with five small spines on inner ventral keel (other non-apical femoral spines undeveloped); tibial armament – dea, v~2, v~2, v3a / d2a, ve, v~2, v3a / d55e–54i (d57e–55i), d2sa, 6a / d2c (d3c), dac; longest (inner dorsal) spur of hind tibiae slightly longer than hind basitarsus. Posteromedian spine of sixth abdominal tergite moderately long, somewhat sinuate in profile, clearly shorter than posteromedian process of seventh abdominal tergite (i. e. distinctly not reaching its apex); latter process moderately long and with apex as in Figs II: 8, 9; paraproct with long and rather thin process directed more or less backwards (this process approximately equal to rest part of paraproct in length); apex of paraproctal process with rather long apical spinule (Figs II: 8, 9); genitalia with long dorsomedian lobe gradually narrowing to acute apex (Fig. III: 1), i. e. they similar to those of *T. dilutus*, *T. pullus* and *T. semipullus*.

Female unknown.

Length in mm. Body 18; pronotum 7.5; fore femur 11; hind femur 24; hind tibia 25; hind basitarsus 5.4.

Comparison. The new species is most similar to *T. semipullus* in the male paraprocts but distinguished from it and from the other congeners by the characters given above, in the key to *Tamdaotettix* taxa.

Etymology. This species name is the Latin word “aculeatus” (prickly).

Tamdaotettix (Tamdaotettix) flexus
sp. nov.

(Figs II: 10–13; III: 2; IV: 1, 2)

Holotype. Male; **Northern Vietnam**, Lao Cai Prov., Hoang Lien National Park to West of Sa Pa Town, about 2000 m, “subtropical” [?] forest, 16–30 July 2007, S. Golovatch (ZIN).

Paratype. Female; same data as for holotype (ZIN).

Description. Male. Colouration and structure of body similar to those of *T. aculeatus* but with following differences: body distinctly smaller; colouration of upper half of body brown with almost dark brown dor-

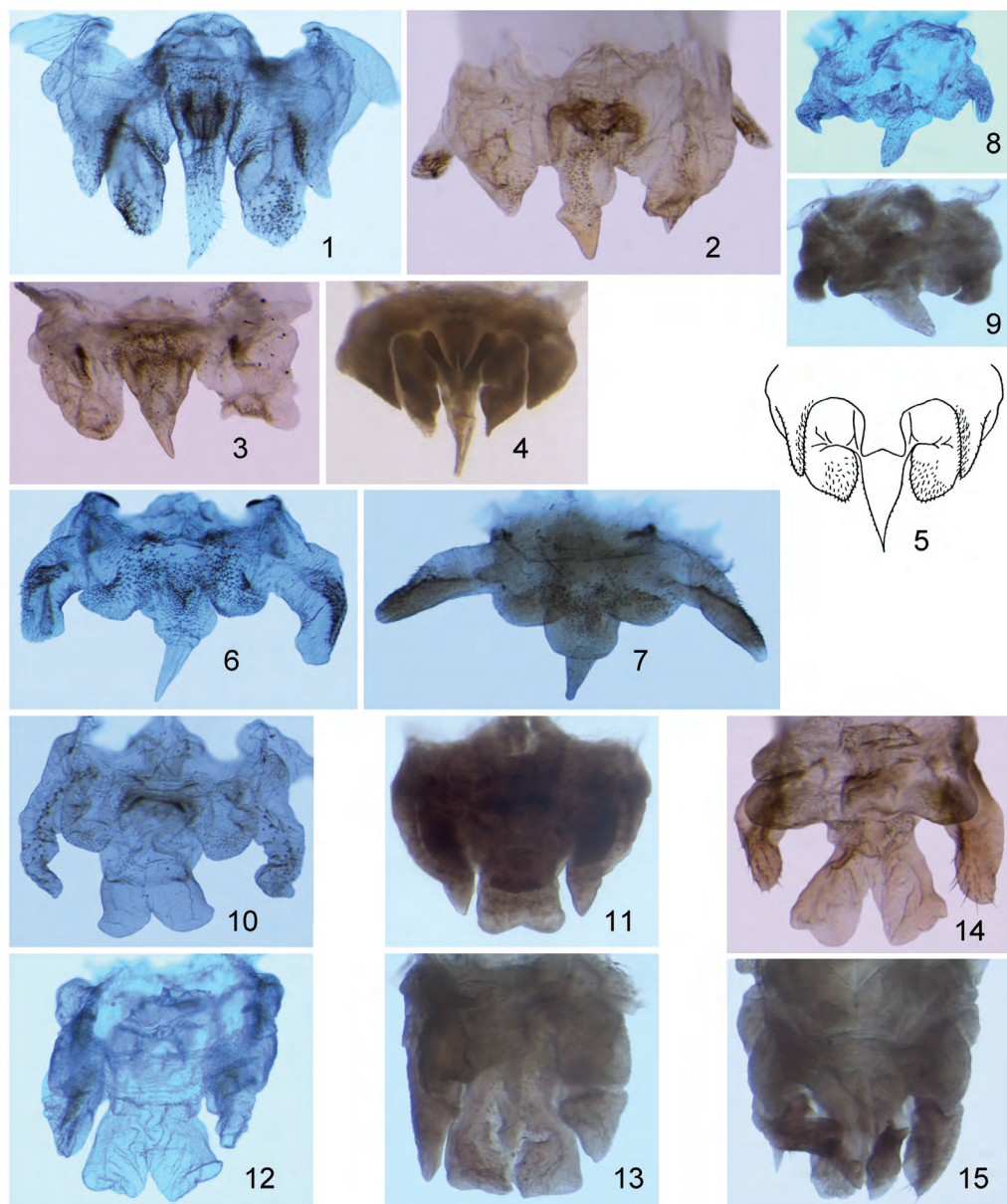
sal surface of head and of thoracic tergites as well as with small sparse lightish marks on these surfaces; lower half of body light greyish brown (including antennae and cerci) but with weakly spotted fore and middle legs as well as greyish brown distal two thirds of hind femur and proximal part of hind tibia; armament of tibiae and hind basitarsus – d2a, v2, v~2, v3a / d2a, ve, v~2, v2a (v3a) / d60e–61i, d2sa, 6a / d2c, dac; sixth abdominal tergite with moderately long and narrowly triangular (spine-like) posteromedian process which strongly curved upwards (Figs II: 10, 11); seventh abdominal tergite with much longer and laterally compressed posteromedian process which arcuate curved upwards and widened in profile (Figs II: 10, 11); latter process with deep median concavity on ventral surface and narrow and high apical part (in posteroventral view; Fig. II: 12); paraproct with rather long finger-like process directed upwards (Figs II: 10, 11); genitalia distinguished from those of *T. aculeatus* by somewhat shorter dorsolateral lobes (Fig. III: 2).

Female. General appearance as in male, but lightish marks on dorsal surface of head and thoracic tergites more numerous, hind femur with slightly lighter distal two thirds, sixth abdominal tergite without posteromedian process or convexity, seventh one with small rounded posteromedian convexity, paraproct simple (roundly triangular). Genital plate moderately transverse and with truncate apex (Fig. II: 13); ovipositor with distal part gradually narrowing to narrow and acute apex, without small denticles on ventral edge (Fig. IV: 2).

Length in mm. Body: male 13.5, female 12.5; pronotum: male 4.9, female 5; fore femur: male 7.2, female 6.8; hind femur: male 17, female 16.5; hind tibia: male 17.2, female 17; hind basitarsus: male 3, female 3; ovipositor 7.5.

Comparison. The new species is clearly distinguished from the other congeners by the characters listed in the key for this genus.

Etymology. This species name is the Latin word “flexus” (turned).



Figs III (1–15). *Tamdaotettix* Gor., male: 1, *T. aculeatus* sp. nov.; 2, *T. flexus* sp. nov.; 3, 4, *T. laocai* sp. nov.; 5, *T. dilutus* Gor.; 6, 7, *T. curvatus* sp. nov.; 8, 9, *T. minutus* sp. nov.; 10, 11, *T. inflatus* sp. nov.; 12–13, *T. tarasovi* sp. nov.; 14, 15, *T. sympatricus* sp. nov. Genitalia from above (1–3, 6–15) and from below (4, 5): preparation after (1–3, 5, 6, 8, 10, 12, 14) and before (4, 7, 9, 11, 13, 15) cleaning by KOH solution. [5, after Gorochov (1998).]

Tamdaotettix (Tamdaotettix) laocai
sp. nov.

(Figs II: 14–17; III: 3, 4; IV: 9)

Holotype. Male; **Northern Vietnam**, Lao Cai Prov., Hoang Lien National Park to West of Sa Pa Town, about 2000 m, “subtropical” [?] forest, 16–30 July 2007, S. Golovatch (ZIN).

Paratypes. Four males and 6 females; same data as for holotype (ZIN).

Description. Male (holotype). Colouration and structure of body similar to those of *T. flexus* but distinguished from them by following characters: body somewhat smaller; head and abdominal tergites almost completely light brown (excepting barely spotted middle part of antennae); thoracic tergites brown with light brown wide median band on dorsal surface and lower parts of these tergites; femora and tibiae of fore and middle legs weakly spotted; hind legs slightly lighter than in holotype of *T. flexus* but with weakly darkened basitarsus; rest of body more or less yellowish; armament of tibiae and hind basitarsus – dea, v2, v~2, v2a (v3a) / dia, ve, v2, v3a / d48e–47i (d49e–47i), d2sa, 6a / d3c, dac; sixth abdominal tergite with small angular posteromedian projection (Fig. II: 14, 15); seventh abdominal tergite with posteromedian process similar to that of *T. flexus* but somewhat longer, less high and weakly curved upwards (Figs 14, 15); this process with very small denticles on ventrolateral edges (Fig. II: 14) and with apical part not very narrow and not high (in posteroventral view; Fig. II: 16); genitalia as in Fig. III: 3.

Variations. Paratypes (Fig. III: 4) with colouration from barely darker to slightly lighter (in latter case, brown areas on tergites almost indistinct) and with paraprocts sometimes slightly darkened; armament of tibiae and tarsi insignificantly varied.

Female. General appearance as in males, but width of light median band on thoracic dorsum varied, sixth abdominal tergite without posteromedian projection or convexity, seventh one with short angular posteromedian projection reaching hind edge of eighth abdominal tergite only; paraproct

simple, almost as in female of *T. flexus*; genital plate with distinctly arcuate posterior edge (Fig. II: 17); ovipositor similar to that of *T. flexus* but with somewhat higher (wider in profile) distal part of lower valve (for comparison see Figs IV: 2 and 9).

Length in mm. Body: male 10.5–13, female 10–12; pronotum: male 4–4.4, female 4.4–4.7; fore femur: male 5.5–6, female 5.8–6.2; hind femur: male 13–14, female 13.5–14.5; hind tibia: male 13.3–14.2, female 13.8–14.6; hind basitarsus: male 2.4–2.6, female 2.7–3; ovipositor 5.7–6.2.

Comparison. Differences of the new species from the other congeners are given in the key to *Tamdaotettix* taxa.

Etymology. This species is named after the Lao Cai Province.

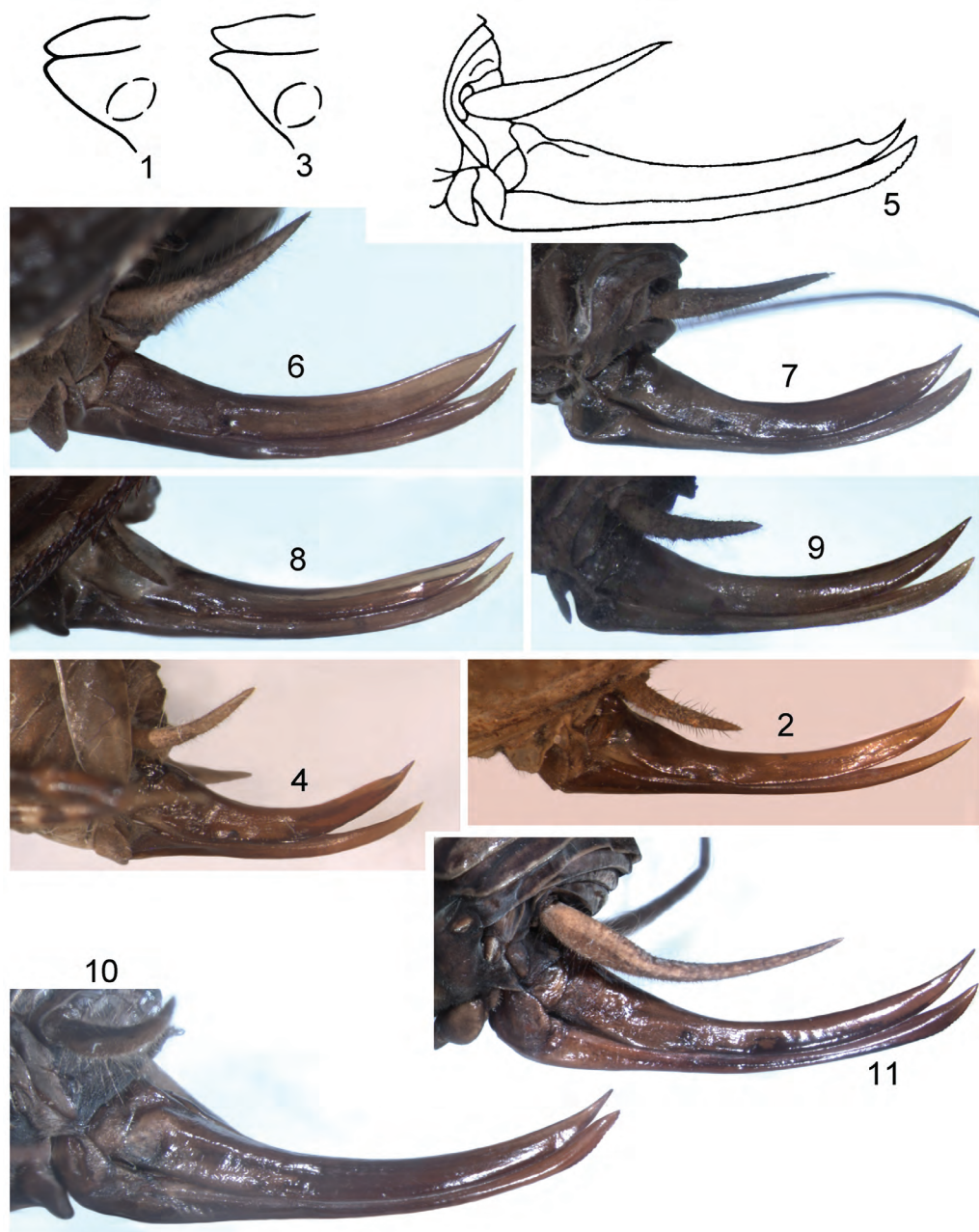
Tamdaotettix (Laotettix) curvatus
sp. nov.

(Figs II: 18–21; III: 6, 7; IV: 6)

Holotype. Male; **Laos**, Xieng Khouang Prov., 22 km NE of Phonsavan Nong Pet, 19°34.657'N, 103°23.313'E, 1300 m, secondary mountain forest, carrion trap, 3–16 August 2008, S. Tarasov (ZIN).

Paratypes. Male and 2 females; same data as for holotype (ZIN).

Description. Male (holotype). Colouration and structure of body similar to those of *T. aculeatus* but with following differences: body somewhat smaller; colouration light brown with weakly distinct lighter spots on lower half of head (including almost yellowish palpi and labrum), yellowish rostral tubercles and a pair of longitudinal stripes above antennal cavities, brown median band on pronotum, a pair of yellowish stripes along lateral edges of this band, brown longitudinal spots along lateral edges of previous stripes, several yellowish and brown spots on other tergites, and barely spotted femora and tibiae of fore and middle legs; hind leg with 60–64 dorsal spines (excepting a pair of subapical spines) on tibia and with six dorsal spines on basitarsus; abdomen with posteromedian process on seventh tergite only; this process moderately long and wide, with



Figs IV (1–11). *Tamdaotettix* Gor. and *Gigantettix* Gor., female: 1, 2, *T. flexus* sp. nov.; 3, 4, *T. robustus* sp. nov.; 5, *T. dilutus* Gor.; 6, *T. curvatus* sp. nov.; 7, *T. inflatus* sp. nov.; 8, *T. tarasovi* sp. nov.; 9, *T. laocai* sp. nov.; 10, *G. maximus maximus* Gor.; 11, *G. laosensis* sp. nov. Tubercles of head rostrum from side / above (1, 3); ovipositor from side (2, 4–11). [5, after Gorochov (1998).]

slightly concave dorsal edge in profile, with truncate apex having lateral parts distinctly curved downwards (Figs II: 18–20); paraproctal process moderately long and thin, strongly curved upwards, and having slightly widened and widely rounded apical part (Figs II: 18, 20); genitalia with dorsomedian lobe inflate in proximal part and narrowly conical in distal part (Fig. III: 6).

Variations. Second male (Fig. III: 7) darker: head with brown areas behind eyes; pronotum with brown longitudinal spots larger, occupying upper half of lateral lobes (these spots almost dark brown); other tergites also with dark spots larger and more distinct; fore and middle legs distinctly spotted; femur and tibia of hind leg greyish brown (rather dark) with rather numerous light spots and dots.

Female. General appearance as in males, but posteromedian process of seventh abdominal tergite distinctly shorter and narrower, and paraproct simple (roundly triangular). Genital plate distinctly transverse, roundly truncate at apex (Fig. II: 21); ovipositor with upper valves slightly higher in distal half than in *T. flexus* and *T. laocai*, with distal part of these valves having very low (barely distinct) dorsal notch in profile, and with distal part of lower valves lacking distinct denticles on ventral edge (Fig. IV: 6).

Length in mm. Body: male 11.5–14, female 13.5–14.5; pronotum: male 5.3–5.6, female 5.6–5.8; fore femur: male 6.5–7.5, female 7–7.5; hind femur: male 15–17.5, female 16–17; hind tibia: male 17.5, female 16–17; hind basitarsus: male 3.5, female 3.2–3.4; ovipositor 6.5–7.

Comparison. The new species clearly differs from the other congeners in the characters listed above, in the key to species of this genus.

Etymology. This species name is the Latin word “curvatus” (curved).

***Tamdaotettix (Laotettix) minutus* sp. nov.** (Figs II: 26–28; III: 8, 9)

Holotype. Male; Laos, northeastern part of country, Phu Loie National Park, Phu Loie (Phu

Soy) Mt, 20°15.267'N, 103°11.560'E, 2099 m, primary rain forest, pitfall traps, 9–13 August 2008, S. Tarasov (ZIN).

Paratype. Two males; same data as for holotype (ZIN).

Description. Male (holotype). Colouration and structure of body very similar to those of *T. curvatus* but with following differences: body clearly smaller; colouration greyish brown (rather dark) with light brown spots on head dorsum and median band on thoracic tergites (this band strongly narrowed in anterior half of pronotum), light greyish brown scape and palpi, spotted antennal flagellum and most part of legs (but hind femur brown with lighter proximal part and yellowish dots in distal part, and hind tarsus almost completely yellowish), and lightish areas on lateral parts of tergites as well as on thoracic sternites and genital plate; hind tibia with insignificantly less numerous dorsal spines; hind basitarsus without dorsal spines (but with small spur); posteromedian process of seventh abdominal tergite somewhat shorter and wider, and with straight dorsal edge in profile (Figs II: 26–28); paraproctal process longer, less strongly curved upwards and with almost spine-like apical part (Figs II: 26–28); proximal half of paraproct with additional tubercle directed upwards (Figs II: 26, 28); genitalia similar to those of *T. curvatus* but with dorsomedial lobe having wider (thicker) distal part and shorter proximal inflation, as well as with shorter ventrolateral lobes visible as lateral ones in Fig. III: 8.

Variations. Paratypes (Fig. III: 9) with light greyish brown large area on labrum and sometimes with darkish small marks on inner surface of maxillary palpi.

Female unknown.

Length in mm. Body 7–8.5; pronotum 3.5–3.9; fore femur 4.4–4.9; hind femur 9–9.5; hind tibia 8.9–9.5; hind basitarsus 1.8–2.

Comparison. The new species is most similar to *T. curvatus* but distinguished from it by the characters listed above, in the description of *T. minutus*. Differences from

the other congeners are given in the key to species.

Etymology. This species name is the Latin word “*minutus*” (small).

***Tamdaotettix (Laotettix) inflatus* sp. nov.**
(Figs II: 22–25; III: 10, 11; IV: 7)

Holotype. Male; Laos, northeastern part of country, Phu Loei National Park, Phu Loei (Phu Soy) Mt, 20°15.267'N, 103°11.560'E, 2099 m, primary rain forest, pitfall traps, 9–13 August 2008, S. Tarasov (ZIN).

Paratypes. Four males and 8 females; same data as for holotype (ZIN).

Description. Male (holotype). Colouration and structure of body similar to those of *T. curvatus* and *T. minutus* but distinguished by following characters: body intermediate in size; colouration brown with light brown lower half of head, dorsum of epicranium (including rostral tubercles) and most part of legs (fore and middle tibiae with yellowish spots, hind femur with almost brown distal half having numerous yellowish dots), with yellowish palpi and proximal part of antenna (rest of antenna light brown) as well as a few small spots on pronotal disc, and with light greyish brown thoracic sternites and cerci; armament of legs similar to that of *T. minutus*; posteromedian process of seventh abdominal tergite narrowly rounded at apex, with distinct inflation-like dorsal convexity in distal half and with deeply concave ventral surface (Figs II: 22–24); paraproct rather simple in shape but with rather short finger-like process directed more or less backwards and having laterally compressed distal part (Figs II: 22, 24); genitalia distinguished from those of all previously described species (having known male) by dorsal median lobe distinctly bifurcate (Fig. III: 10).

Variations. Some males (Fig. III: 11) slightly darker and / or with distinct yellowish marks on pterothoracic tergites and on first abdominal tergite; fore and middle femora sometimes more or less spotted.

Female. General appearance as in males, but seventh abdominal tergite with short

and narrowly rounded posteromedian process, and paraproct simple (roundly triangular and without process). Genital plate distinguished from that of *T. curvatus* by barely concave posterior edge only (Fig. II: 25); ovipositor almost indistinguishable from that of latter species (Fig. IV: 7).

Length in mm. Body: male 11–13, female 12–14; pronotum: male 4.7–4.9, female 5.1–5.4; fore femur: male 6.2–6.7, female 6.8–7.3; hind femur: male 14–15, female 14.5–15.7; hind tibia: male 14–15, female 14.7–16; hind basitarsus: male 2.8–3, female 2.9–3.2; ovipositor 6.9–7.3.

Comparison. Differences of the new species from the other congeners are given in the key for *Tamdaotettix* representatives.

Etymology. This species name is the Latin word “*inflatus*” (inflated).

***Tamdaotettix (Laotettix) tarasovi* sp. nov.**
(Figs II: 29–32; III: 12, 13; IV: 8)

Holotype. Male; Laos, Champasak Prov., Bolaven Plateau, 14 km SE of Muang Paxong, Ban Thongvay, 15°14.741'N, 106°31.916'E, 1030 m, 7–16 June 2008, S. Tarasov (ZIN).

Paratypes. Three males and female; same data as for holotype (ZIN).

Description. Male (holotype). Colouration and structure of body similar to those of previously described representatives of *Laotettix* but distinguished by following characters: body rather large for this subgenus; head light brown with reddish brown dorsum, brown vertical stripe under each eye and on each lateral parts of clypeus, dark brown marks near rostral tubercles and on medial part of each antennal cavity area, almost dark brown area behind each eye, and very weakly spotted most part of antennal flagellum; tergites brown with light brown median line and spots on lateral parts of pronotum; fore and middle tibiae, proximal part of hind tibia and distal part of all femora weakly spotted; rest of legs and thoracic sternites light brown but with reddish brown most part of hind femur; abdominal sternites and structures of abdominal apex brown with blackish apical part of each

paraproct; seventh abdominal tergite with posteromedian process similar to that of *T. inflatus* but having narrowly truncate apex (Figs II: 29–31); paraproct simple, roundly triangular but with somewhat angularly projected posterior part (Figs II: 29, 31); genitalia similar to those of *T. inflatus* but with wider dorsal median lobe (Fig. III: 12).

Variations. Some paratypes (Fig. III: 13) without light median line on tergites and with meso- and metanotum having distinct light brown spots.

Female. General appearance as in males lacking light median line on thoracic dorsum, but seventh abdominal tergite with short roundly angular posteromedian projection, and paraproct shorter and with lighter and less projected posterior part. Genital plate strongly transverse, posteriorly truncate and with almost angular posterolateral parts (Fig. II: 32); ovipositor approximately as in other representatives of *Laotettix* but barely lower in distal half (Fig. IV: 8).

Length in mm. Body: male 11–13, female 12; pronotum: male 5.4–5.7, female 5.5; fore femur: male 7.5–8, female 7.3; hind femur: male 16.5–17, female 16.6; hind tibia: male 16.5–17, female 16.4; hind basitarsus: male 3–3.2, female 3.1; ovipositor 6.8.

Comparison. The new species differs from the other known congeners in the male paraproct lacking any distinct process (see also the key to *Tamdaotettix* species).

Etymology. This species is named after its collector.

***Tamdaotettix (Laotettix) sympatricus*
sp. nov.**

(Figs II: 33–35; III: 14, 15)

Holotype. Male; Laos, Champasak Prov., Bolaven Plateau, 14 km SE of Muang Paxong, Ban Thongvay, 15°14.741'N, 106°31.916'E, 1030 m, 7–16 June 2008, S. Tarasov (ZIN).

Description. Male. Colouration and structure of body very similar to those of *T. tarasovi* but with following differences: colouration similar to holotype of latter species but lower half of head with only a

few brown marks near rostral tubercles and on medial and upper parts of each antennal cavity area, pronotum without light median line in anterior half, other tergites light brown with darkish marks mainly on lateral parts of meso- and metanotum, legs slightly less spotted and with somewhat lighter most part of hind femur, and structures of abdominal apex light brown with barely darker distal half of cerci and yellowish its proximal half; hind basitarsus with one dorsal spinule additional to apical one; seventh abdominal tergite with shorter and less dorsally inflated posteromedian process (Fig. II: 33–35); distal third of this process clearly wider, widely rounded and with lateral parts almost not curved downwards (in *T. tarasovi*, these parts distinctly curved downwards; for comparison see Figs II: 30 and 34); paraproct distinguished from that of *T. tarasovi* by almost only light posterior part; genitalia with dorsomedian lobe more deeply bifurcate than in *T. inflatus* and *T. tarasovi* (Figs III: 14, 15).

Female unknown.

Length in mm. Body 12.5; pronotum 5.7; fore femur 7.5; hind femur 17.5; hind tibia 17; hind basitarsus 3.3.

Comparison. The new species is most similar to sympatric *T. tarasovi* but distinguished by the posteromedian process of seventh abdominal tergite of male somewhat different in the shape as well as by the posterior part of male paraproct undarkened. Differences of the new species from the other congeners are given in the key above.

Etymology. This species name is the Latin word “sympatricus” (sympatric).

***Tamdaotettix (?) robustus* sp. nov.**
(Figs II: 3; IV: 3, 4)

Holotype. Female; Northern Vietnam, Lao Cai Prov., 6 km W of Sa Pa Town, northern slope of Phan Si Pan Mt, environs of Tram Ton Vill. in Hoang Lien National Park, 1930–2000 m, May 2010, A. Abramov (ZIN).

Description. Female. General appearance similar to that of female of *T. laocai* but with following differences: head brown

with wide light brown median band from labrum to hind part of vertex, yellowish rostral tubercles and scapes, light brown rest of antennae having weakly spotted middle part of flagellum (its distal part missing), and almost yellowish palpi having brownish longitudinal stripes on outer surfaces; thoracic tergites dark brown with wide light brown median band; other tergites and areas on pleurites brown; fore and middle legs spotted; hind femur brown with light brown proximal part; hind tibia brown with a few lightish spots; rest of body light greyish brown; rostral tubercles elongate, conical, with thin and almost acute apical parts (Fig. IV: 3); genital plate moderately transverse and with weakly concave posterior edge (Fig. II: 3); ovipositor rather short and with apical part similar to that of *T. curvatus* and *T. inflatus* (Fig. IV: 4).

Male unknown.

Length in mm. Body 12; pronotum 4.6; fore femur 7; hind femur 15.6; hind tibia 16.5; hind basitarsus 3.2; ovipositor 5.6.

Comparison. Subgeneric position of the new species is unclear, as its male is unknown; but *T. robustus* may belong to the nominotypical subgenus, because female genital plate of this species is not strongly transverse (however, this character seems not very dependable for such determination). From all the other congeners with known females, *T. robustus* is distinguished by the shape of rostral tubercles (in these congeners, rostral tubercles are slightly shorter and with clearly rounded and less thin apical parts; for comparison see Figs IV: 1 and 3); from *T. flexus* and *T. laocai*, the new species differs also in a slightly concave posterior edge of the female genital plate and in a shorter ovipositor, and from representatives of the subgenus *Laotettix*, in a less transverse shape of this plate and in the same ovipositor feature.

Genus *Gigantettix* Gorochov, 1998

Type species: *Diestramima gigantea* Gorochov, 1992, by original designation.

Note. This genus is characterized by the following features: body is very large, colouration is distinctly spotted, pronotum has a more or less straight or slightly sinuate (but not distinctly arcuate) dorsal edge in the profile, and abdominal apex is as in the generic key given above. Also, it is necessary to note that male genitalia in this genus consist of six membranous lobes as in *Tamdaotettix*, but dorsal genital surface at the base of these lobes is with a large and more or less globular inflation having numerous sclerotized denticles (such denticles may be also developed near this inflation; Figs VI: 1–5). *Gigantettix* includes seven species and subspecies partly listed below, in a key for these taxa; *G. longipes* (Rehn, 1906) and *G. sapaensis* Gorochov, 2002, known only from nymphs collected in the most northern provinces of Vietnam (Lang Son and Lao Cai, respectively), are not included in this key.

1. Male: posteromedian process of seventh abdominal tergite almost straight in profile (Fig. V: 1); genitalia without sclerotized plates (Fig. VI: 1). Female: genital plate with distinct posteromedian notch (Fig. V: 6). Central Laos ***G. laosensis* sp. nov.**
- Male: posteromedian process of seventh abdominal tergite with distal part strongly curved downwards (Figs V: 7, 11); genitalia diverse. Female: genital plate with posteromedian projection having angular, almost rounded or barely bilobate apex (Figs V: 9, 10, 13) 2
2. Male: posteromedian process of seventh abdominal tergite with distal part (directed downwards) clearly or barely narrowed at base (Figs V: 8, 12); genitalia with distinct sclerotized plates (Fig. VI: 3, 4). Female: genital plate with roundly angular or barely bilobate posteromedian projection (Figs V: 9, 10), or female unknown 3
- Male: posteromedian process of seventh abdominal tergite with distal part (directed downwards) gradually narrowing to apex (Figs V: 14, 15); genitalia diverse. Female: genital plate with distinctly angular posteromedian projection (Fig. V: 13) 4
3. Male: posteromedian process of seventh abdominal tergite with distal part clearly narrowed at base (Fig. V: 8); paraprocts more or less angularly hooked (Fig. V: 7). Northern

Vietnam *G. maximus maximus* Gorochov, 1998, *stat. nov.*

- Male: posteromedian process of seventh abdominal tergite with distal part barely narrowed at base (Fig. V: 12); paraprocts almost arcuately hooked (Fig. V: 11). Central Vietnam *G. maximus auster* subsp. *nov.*
- 4. Body larger (length in both sexes: pronotum 8–10 mm, fore femur 22–26 mm). Male: posteromedian process of seventh abdominal tergite with narrowly rounded apex (Fig. V: 14); genitalia with distinct sclerotized plates (Fig. VI: 5). Northern Vietnam *G. giganteus* (Gorochov, 1992)
- Body smaller (length in both sexes: pronotum 7.2–7.3 mm, fore femur 19 mm). Male: posteromedian process of seventh abdominal tergite with widely truncate apex (Fig. V: 15); genitalia without sclerotized plates (Fig. VI: 2). Northern Vietnam *G. minusculus* Gorochov, 1998

***Gigantettix laosensis* sp. nov.**

(Figs IV: 11; V: 1–6; VI: 1)

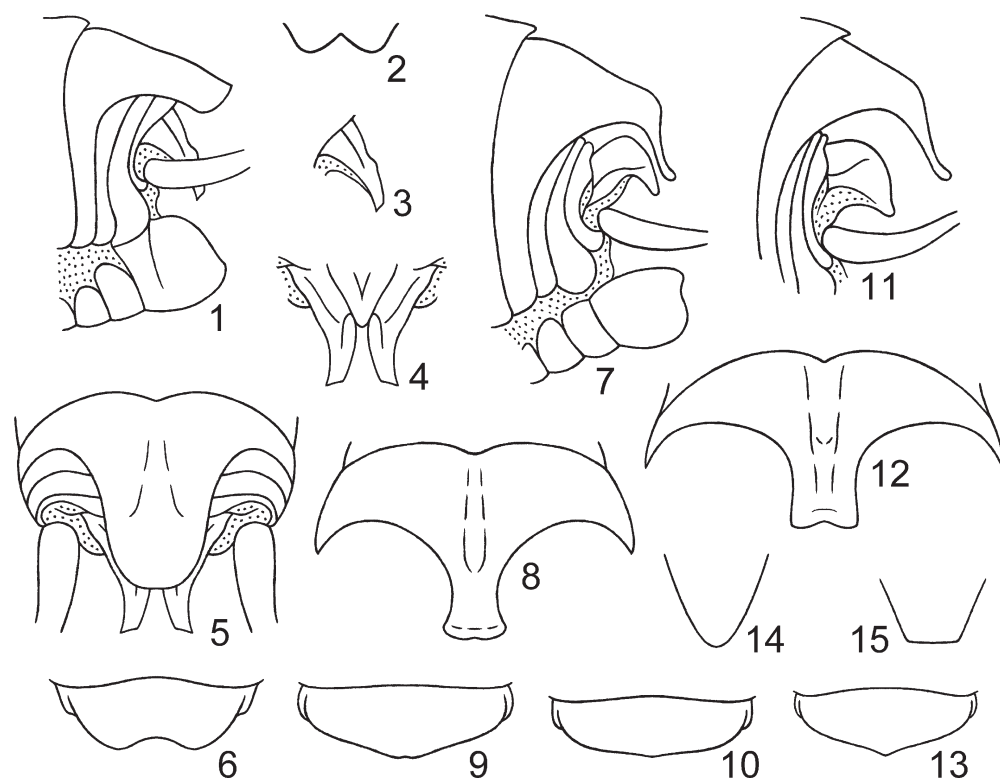
Holotype. Male; **Central Laos**, Vientiane Prov., Phu Khao Khouay National Park, Ban Vangheua, 18°21.097'N, 102°48.897'E, about 800 m, disturbed tropical forest, on stones, 1–2 October 2008, S. Tarasov (ZIN).

Paratypes. Two males and 7 females; same data as for holotype (ZIN).

Description. Male (holotype). Body large for this genus. Colouration light brown with following marks: epicranium with two pairs of dark brown vertical (but slightly oblique) stripes under antennae and eyes, with brown eyes, and with a pair of narrow oblique darkish lines on rostral base between hind parts of eyes; membrane of antennal cavity with brown upper area; antenna with large spot on ventromedial surface of scape as well as with reddish brown flagellum; clypeus with a pair of brown lateral spots; six anterior tergites (including pronotum) with reddish tinge, blackish posterior transverse band on each tergite, dark brown central spot on each lateral lobes of pronotum and median spot on pronotal disc near its anterior edge; legs with almost indistinct darkish spots on fore femur and fore tibia, with somewhat more distinct and rather

numerous darkened spots on middle femur and middle tibia, with numerous distinct brown spots on hind femur, and with almost uniformly reddish brown hind tibia; rest of body more or less uniformly light brown with greyish tinge and also with greyish brown cerci and paraprocts. Head typical of this genus in structure: eye and scape almost equal in size; rostral tubercles short, angular, and with long and very narrow slit between them; lateral ocellus rounded and occupying almost half of lateral surface of rostral tubercle. Pronotum also typical of *Gigantettix*: ventral edge of lateral lobes arcuately convex but with small concavity in posterior part. Legs long and rather thin; outer spur of fore femur and both spurs of middle femur very long; these femora also with short spur and 6–7 short ventral spines on inner surface of fore femur and with four ventral spines on outer surface of middle femur; hind femur with a pair of short spurs, 17–18 short spines on inner ventral keel and 6–7 short spines on distal part of outer ventral keel; tibial armament – d2a, v~2, v~2, v3a / d2a, v~2, v~2, v3a / d41e–38i (d39e–38i), d2sa, 6a / d2c, dac; longest (inner dorsal) spur of hind tibia somewhat not reaching base of dac. Seventh abdominal tergite with large, elongate and almost straight (in profile) lamellar posteromedian process (Figs V: 1, 5); distal part of this process roundly truncate and with lateral halves slightly bent downwards along median line (apex of this process looking angularly notched from behind; Fig. V: 2); paraproct elongate, gradually narrowing to apex (but with small dorsal convexity in middle part), slightly curved downwards and laterally, and with rather narrow and obliquely truncate apex (lateral and medial corners of this apex acute and obtuse, respectively; Figs V: 3, 4); genitalia with rather numerous and very small hook-like denticles only (large sclerotized plates absent; Fig. VI: 1).

Variations. Pronotal disc sometimes with blackish median stripe running from anterior spot to posterior band. Spines of legs insignificantly varied in number.



Figs V (1–15). *Gigantettix* Gor.: 1–6, *G. laosensis* sp. nov.; 7–10, *G. maximus maximus* Gor. (9, holotype); 11, 12, *G. maximus auster* subsp. nov.; 13, 14, *G. giganteus* (Gor.); 15, *G. minusculus* Gor. Male abdominal apex from side (1, 7) and from above and slightly behind (5); same without lower part from side (11); apical part of posteromedian process of male seventh abdominal tergite from behind (2); male paraproct from side (3); epiproct and paraprocts of male from above and slightly behind (4); female genital plate from below (6, 9, 10, 13); seventh abdominal tergite and posterior part of sixth one in male from behind and slightly above (8, 12); distal part of posteromedian process of male seventh abdominal tergite from behind (14, 15). [9, 13–15, after Gorochov (1998).]

Female. General appearance similar to that of males but with following differences: seventh abdominal tergite with short rounded posteromedian lobe; paraproct distinctly shorter than in male, more or less triangular, and with very small and almost square apical lobule slightly curved dorsolaterally. Genital plate transverse and with rather wide (but not deep) posteromedian notch (Fig. V: 6); ovipositor rather short, with very small teeth on ventral edge of distal part of lower valves (Fig. IV: 11).

Length in mm. Body: male 23–26, female 25–29; pronotum: male 7.5–7.8, fe-

male 8–9; fore femur: male 20–23, female 22–25; hind femur: male 40–43, female 42–45; hind tibia: male 46–50, female 48–52; hind basitarsus: male 8.3–8.7, female 9–9.5; ovipositor 12.5–14.

Comparison. The new species is most similar to *G. sapaensis* in the shape of male paraprocts, but it probably differs from the latter species as well as from *G. longipes* in a distinctly wider posteromedian process of the seventh abdominal tergite in male. The differences of *G. laosensis* from the other congeners are given in the key.

Etymology. The species is named after the Laos Country.

Gigantettix maximus maximus

Gorochov, 1998

(Figs IV: 10; V: 7–10; VI: 3)

Material examined. **Northern Vietnam:** female (holotype), Hoa Binh Prov. [?], Cuc Phuong National Park, 15 October 1994, I. Darevsky (ZIN); 5 males, 7 females, Phu Tho Prov., Thanh Son Distr., Xuan Son National Park, August 2011, N. Orlov (ZIN).

Redescription. Male (nov.). General appearance similar to that of *G. laosensis*, but with following differences in colouration: dark vertical stripes under antennae fused with each other not far from median ocellus; genae behind eyes with large brown or dark brown areas partly or almost completely fused with dark vertical stripes under eyes; rostrum and dorsum of head brown with dark brown marks (but lateral ocelli light); membrane of antennal cavity with blackish lower area and brown or dark brown upper spot; scape with dark brown ventral spot but sometimes with additional brown dorsal spot also; antennal flagellum brown with numerous small light brown spots in proximal half; thoracic tergites blackish with brown and light brown lateral areas and with several marks on dorsal surface, but sometimes dark parts of these tergites divided into a few dark spots having numerous light brown dots; other tergites light greyish brown with sparse or rather numerous small darker marks; legs with distinctly spotted coxae, femora, tibiae and distal half of tarsi; abdominal sternites with brown or dark brown median spots; cerci sometimes more or less light brown. Structure of body parts also similar to that of this species, but lateral ocellus sometimes occupying more than half of lateral surface of rostral tubercle, outer ventral spines of middle femora usually less numerous (1–4), inner dorsal spur of hind tibia almost reaching apex of dac, hind basitarsus with only short apical spur or sometimes with one dorsal spinule additionally, posteromedian process of seventh abdominal tergite with rather narrow and elongate distal part strongly curved downwards and with apical part clearly widened and almost

truncate (Figs V: 7, 8), paraproct short and angularly hooked (Fig. V: 7), and genitalia with sclerotized plates almost indistinguishable from those of *G. giganteus* as well as with wider median band formed by small hook-like denticles (Fig. VI: 3).

Female. Body very similar to that of males, but seventh abdominal tergite with short angular posteromedian projection, and paraproct distinguished from that of female of *G. laosensis* mainly by angular shape of its small apical lobule. Genital plate strongly transverse, with short posteromedian projection having angularly rounded or barely bilobate apex (Figs V: 9, 10); ovipositor almost indistinguishable from that of *G. laosensis* (Fig. IV: 10).

Length in mm. Body: male 27–32, female 26–35; pronotum: male 8–9, female 7.5–11; fore femur: male 22–24, female 20–27; hind femur: male 37–45, female 36–48; hind tibia: male 45–51, female 44–56; hind basitarsus: male 7–8, female 7–8.5; ovipositor 14–18.

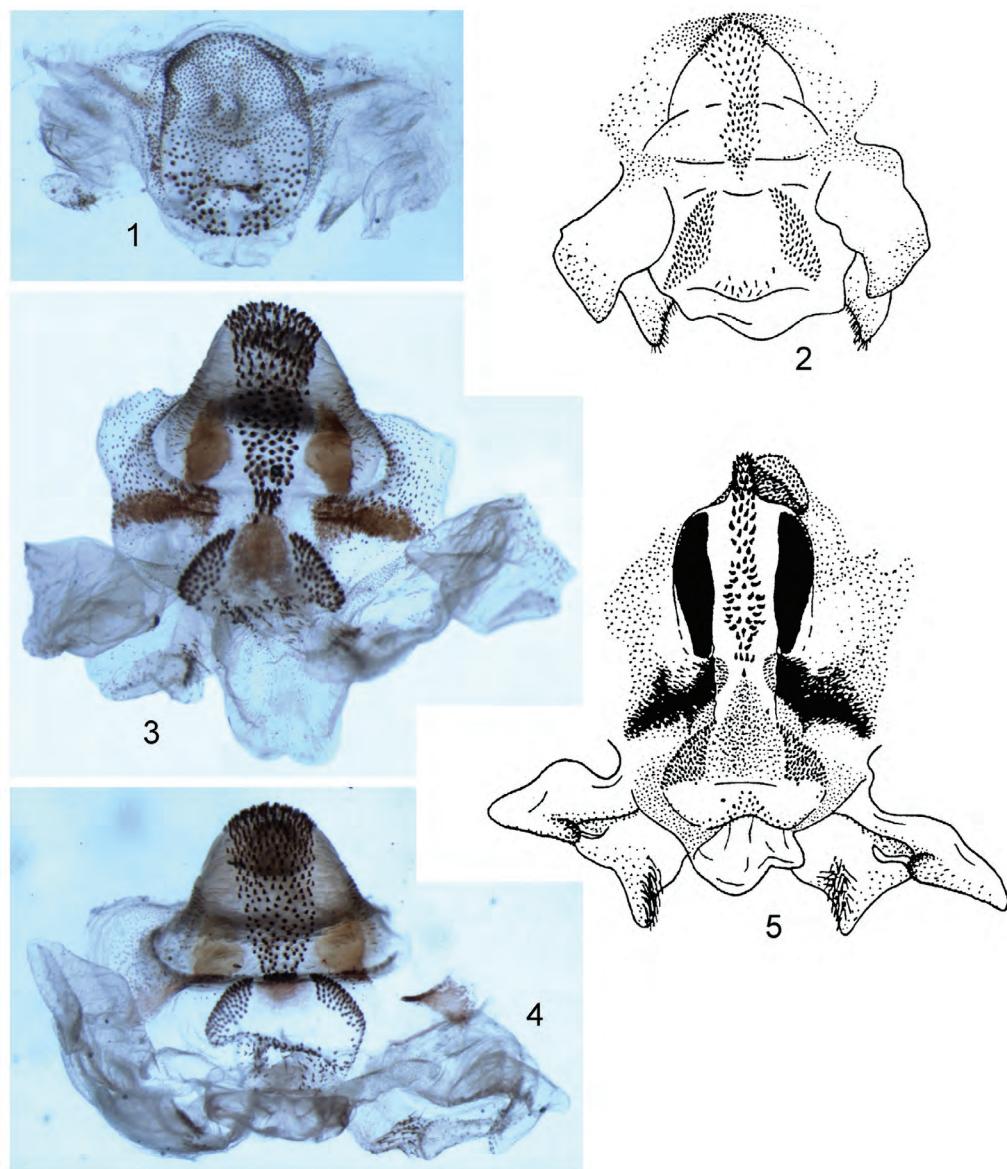
Comparison. This subspecies was originally described as a species (Gorochov, 1998). It is very similar to *G. giganteus* but clearly distinguished from it by some characters of the male abdominal apex mentioned in the key; possibly, these related species are more or less mountain and separated from each other by the Red River Valley (*G. giganteus* is probably the more northern species, and *G. maximus*, more southern one).

***Gigantettix maximus auster* subsp. nov.**

(Figs V: 11, 12; VI: 4)

Holotype. Male; **Central Vietnam**, Thua Thien Hue Prov., 40 km SE of Hue Town, Bach Ma National Park, 1300 m, October 2003, N. Orlov (ZIN).

Description. Male. General appearance and genitalia very similar to those of *G. m. maximus*, but colouration lighter (dark stripes under eyes brown and not fused with each other; dark stripes under eyes almost indistinct; genae behind eyes



Figs VI (1–5). *Gigantettix* Gor., male genitalia from above: 1, *G. laosensis* sp. nov.; 2, *G. minusculus* Gor.; 3, *G. maximus maximus* Gor.; 4, *G. maximus auster* subsp. nov.; 5, *G. giganteus* (Gor.). [2, 5, after Gorochov (1998)].

with darkish spots only; most part of rostrum and dorsum of head light brown; dorsal surface of scape more or less light brown; tergites light brown with rather small and not numerous dark brown areas and dots as well as with numerous small brown marks on lateral parts of abdominal tergites; cer-

ci light brown), posteromedian process of seventh abdominal tergite with distal part (curved downwards) wider and having less concave lateral edges (Fig. V: 12), and paraproct somewhat wider in profile and almost arcuately hooked (Fig. V: 11).

Female unknown.

Length in mm (fore legs absent). Body 33; pronotum 9.7; hind femur 47; hind tibia 56; hind basitarsus 8.

Comparison. The new subspecies is collected rather far from the type locality of *G. m. maximus*, and it may be a much more southern subspecies or a separate species distinguished from the other congeners by the characters given in the key.

Etymology. This species name is the Latin word "auster" (south wind).

Genus *Diestramima* Storozhenko, 1990

Type species: *Diestrammena palpata* Rehn, 1906, by original designation.

Note. This genus is distinguished from the both previous genera (*Tamdaotettix* and *Gigantettix*) by a more or less intermediate body size and by some characters of the abdominal apex listed in the generic key (especially by characteristic male genitalia having a pair of additional lateral membranous lobes and lacking any sclerotized structures; Figs VIII: 1–9). *Diestramima* includes 10 previously described species and subspecies, as well as 4 new species described below; this genus was divided into two groups of species by Gorochov (1998), but here these groups are not considered because some new species show intermediate condition of the characters used in the latter paper for such division.

Male of *Diestrammena longipes* var. *himalayana* Griffini, 1914 described from India ("Kurseong") is unknown; this taxon was included in *Diestramima* (as a separate species), because its female has a small posteromedian projection on the seventh abdominal tergite (Storozhenko, 1990); but after description of a few genera with such projection, its generic position seems more problematic, and this taxon is not included in the key to *Diestramima* taxa given below. Two new species (*D. yunnanensis* sp. nov. and *D. champasak* sp. nov.), described here from females only, are also not included in this key.

1. Male: paraproct short (Figs VII: 1, 3); if it moderately elongate, then without spine-like projections in distal half or angular projection in middle part (Figs VII: 6, 9)..... 2
 - Male: paraproct long (Figs VII: 31, 34, 36, 39, 44); if it variously elongate, then with angular projection in middle part or spine-like projection (projections) in distal half (Figs VII: 17, 19, 23, 27, 41)..... 5
2. Male: posteromedian process of seventh abdominal tergite with large (wide and long) distal widening distinctly separated from narrower part of this process (Fig. VII: 2); paraproct short, and its distal part with angular projection directed upwards (Figs VII: 1, 3)..... 3
 - Male: posteromedian process of seventh abdominal tergite with narrower distal widening gradually narrowing to base of this process (Figs VII: 7, 10); paraproct moderately elongate, and its distal part wide and consisting of two (upper and lower) very short rounded lobes (Figs VII: 6, 9)..... 4
3. Femora and tibiae distinctly spotted. Male: paraproct with slightly concave dorsal edge in profile (Fig. VII: 1). Northern Vietnam (Hoa Binh Prov. and its environs)..... ***D. vietnamensis vietnamensis*** Gorochov, 1998
 - Femora with uniformly reddish brown proximal and dark brown distal halves; tibiae uniformly brown or dark brown. Male: paraproct with distinctly concave dorsal edge in profile (Fig. VII: 3). Northern Vietnam (Habac and Lang Son Provinces)..... ***D. vietnamensis saturata*** Gorochov, 2002
4. Male: posteromedian process of seventh abdominal tergite with a pair of large ventral tubercles distinctly visible from above / behind (Fig. VII: 6, 7); paraproct somewhat narrowing to apex (Fig. VII: 6). South China (Guangdong Prov.)..... ***D. austrosinensis*** Gorochov, 1998
 - Male: posteromedian process of seventh abdominal tergite with a pair of small ventral tubercles invisible from above / behind (Figs VII: 9–11); paraproct somewhat widening to apex (Fig. VII: 9). Northern Vietnam..... ***D. palpata*** (Rehn, 1906)
5. Male: paraproct moderately elongate, with angular projection in middle part or 1–2 spine-like projections in distal half (apical spine sometimes rather long and hooked) (Figs VII: 17, 19, 23, 27, 41)..... 6
 - Male: paraproct long, without angular projection in middle part and any spine-like pro-

- jections but with distal half clearly narrower (in profile) than proximal half (Figs VII: 31, 34, 36, 39, 44) 10
6. Male: paraproct with dorsal angular projection in middle part (Fig. VII: 17) or with one distal spine-like projection directed clearly backwards (Fig. VII: 41) 7
- Male: paraproct without angular projection in middle part but with 1–2 more distal spine-like projections directed distinctly upwards (Figs VII: 19, 23, 27) 8
7. Male: paraproct with dorsal angular projection in middle part and without distinct spine-like projections in distal half (Fig. VII: 17). Southwest China (Tibet)
..... ***D. distincta*** Gorochov, 2010
- Male: paraproct without angular projection in middle part and with one distal spine-like projection (Fig. VII: 41). East China (Zhejiang Prov.)
..... ***D. intermedia*** Liu et Zhang, 2001
8. Male: paraproct with one spine-like projection in distal half (Fig. VII: 19). South China (Hainan I.) ***D. hainanensis*** sp. nov.
- Male: paraproct with two spine-like projections in distal half (Figs VII: 23, 27) 9
9. Male: paraproct with two small spines (Fig. VII: 23). Northern Vietnam (Phu Tho Province) ***D. bispinosa*** sp. nov.
- Male: paraproct with one small spine and one large spine (latter spine much longer than smaller one and clearly hooked; Fig. VII: 27). Northern Vietnam (Cao Bang Province) ...
..... ***D. hamata*** sp. nov.
10. Male: posteromedian process of seventh abdominal tergite straight or almost straight in profile and low in proximal half (Figs VII: 34, 36); paraproct with distal half straight or barely curved in profile and with proximal half not high (weakly widened in profile; Figs VII: 34, 36) 11
- Male: posteromedian process of seventh abdominal tergite slightly or distinctly arcuate in profile (Figs VII: 31, 39) or rather high (widened in profile) in proximal half (Fig. VII: 43); paraproct with distinctly curved apical part (Fig. VII: 31) or with high (strongly widened in profile) proximal half (Figs VII: 39, 44) 12
11. Male: distal part of posteromedian process of seventh abdominal tergite widened, clearly wider than middle part of this process (Fig. VII: 35). Northern Vietnam (Vinh Phuc Province) ***D. major*** Gorochov, 1998
- Male: distal part of posteromedian process of seventh abdominal tergite narrowed, distinctly narrower than middle part of this process (Fig. VII: 37). Myanmar
..... ***D. minor*** Gorochov, 1998
12. Male: paraproct with proximal half not high (weakly widened in profile) and with apical part distinctly curved downwards; Figs VII: 31) ***D. propria*** sp. nov.
- Male: paraproct with high (strongly widened in profile) proximal half and with apical part not curved or almost not curved in profile (Figs VII: 39, 44) 13
13. Male: posteromedian process of seventh abdominal tergite low in proximal half (Fig. VII: 39) and with barely notched apex (Fig. VII: 40). India (“Assam”)
..... ***D. cryptopygia*** (Chopard, 1918)
- Male: posteromedian process of seventh abdominal tergite rather high (widened in profile) in proximal half (Fig. VII: 43) and with distinctly notched apex. Bhutan
..... ***D. tsongkhapa*** (Würmli, 1973)

Diestramima vietnamensis saturata

Gorochov, 2002

(Figs VII: 3–5)

Material examined. **Northern Vietnam:** 3 males (holotype and paratypes) and 9 females (paratypes), Habac Prov., Chi Linh Vill., primary forest, at night, October 1997, N. Orlov (ZIN); male and female, Lang Son Prov., Huu Lien Reserve, 200 m, primary forest, 23–30 July 2003, N. Orlov (ZIN).

Note. This subspecies was originally described from Habac Province. It is here recorded from Lang Son Province. The both provinces are situated northward of Red River Valley, but the nominotypical subspecies is distributed southward of this valley (Hoa Binh Prov. or its environs).

Diestramima palpata (Rehn, 1906)

(Figs VII: 9–16; VIII: 5; IX: 3)

Material examined. **Northern Vietnam,** Lang Son Prov.: nymph of male (holotype), “Than-Moi” (ANSP); male and 3 females, Huu Lien Reserve, 200 m, primary forest, 23–30 July 2003, N. Orlov (ZIN).

Redescription. Male (nov.). Body medium-sized for this genus. Colouration more

or less uniformly brown but with very light brown lower half of head (having four dark brown vertical stripes on epicranium under antennae and eyes as well as yellowish most part of labrum and a pair of short lines along clypeal suture), almost yellowish coxae and lower part of both thorax and abdomen (including cerci), more or less dark brown distal part of femora (but their spurs light brown) and base of fore and middle tibiae, and light brown proximal half of hind femur having numerous darkish transverse and oblique lines. Rostral tubercles of head moderately short, with narrowly rounded apices, and with distal parts not contacting with each other; eye slightly smaller than scape; lateral ocellus rounded, and its diameter barely smaller than distance between this ocellus and apex of rostral tubercle. Pronotum with dorsal edge barely convex in profile; ventral edge of each pronotal lateral lobe with straight (almost concave) anterior and posterior parts. Hind femur with 15 spines on ventral inner keel; armament of tibiae and hind basitarsus – d2a, v~2, v~2, v3a / d2a, v~2, v2, v3a / d33e–32i, d2sa, 6a / d1c, dac; longest (inner dorsal) spur of hind tibia almost reaching apex of hind basitarsus. Sixth abdominal tergite without posteromedian process or projection; seventh abdominal tergite with long posteromedian process which narrow near base, slightly widened to apex, moderately and almost angularly curved downwards (directed downwards / backwards), and with slightly bifurcate apex (this apex also with a pair of small medial tubercles on ventral surface; Figs VII: 9–11); paraproct in shape of somewhat elongate plate with slightly widened distal part having two short unequal lobes (Fig. VII: 9); male genitalia with barely notched dorsomedian lobe (Fig. VIII: 5).

Female (nov.). General appearance as in male, but armament of legs insignificantly varied, seventh abdominal tergite with small and angular postromedian projection somewhat varied in shape (Figs VII: 13–15), paraproct short and almost triangular

but with narrowly angular apical part (Fig. VII: 16). Genital plate with largest (median) lobe similar to that of *D. vietnamensis* (Fig. VII: 5) or barely narrower and with clearly angular apex (Fig. VII: 12); ovipositor long and thin, with gradually narrowing and acute at apex distal part as well as with very small (hardly noticeable) denticles on ventral valves (Fig. IX: 3).

Length in mm. Body: male 30, female 23–27; pronotum: male 8.3, female 8–8.4; fore femur: male 20.5, female 20–25; hind femur: male 39, female 39–42; hind tibia: male 46, female 43–49; hind basitarsus: male 7, female 7.3–7.8; ovipositor 26–29.

Comparison. Differences of *D. palpata* from the other congeners are indicated above, in the key to *Diestramima* taxa. This species was originally described in the genus *Diestrammena* Brunner-Wattenwyl, 1888 from a single nymph (male) collected in the Lang Son province of Vietnam (Rehn, 1906). In this connection, determination of the above-mentioned adult specimens from the same province as *D. palpata* is somewhat questionable because nymphs from Huu Lien Reserve are unknown.

Diestramima hainanensis sp. nov.

(Figs VII: 19–22; VIII: 6)

Holotype. Male; **South China**, Hainan I., Diao Lao Shan Mt, Diao Lao Shan Reserve, 900 m, 26–29 July 2000, N. Orlov (ZIN).

Paratypes. Male and female; same data as for holotype (ZIN).

Description. Male (holotype). Body size approximately as in *D. palpata*. Colouration also similar to that species, but dorsal surface with distinct yellowish median stripe running from rostral tubercles to apex of posteromedian process of seventh abdominal tergite, lower half of head as well as sternites and coxae yellowish but with four brown vertical stripes on epicranium under antennae and eyes (clypeus with a pair of additional darkish dots), hind tibia weakly spotted, hind tarsus more or less brown, and cerci and genital plate light greyish brown. Structure of body distinguished from that



of *D. palpata* by following characters only: dorsal edge of pronotum straight in profile; fore femur without inner dorsal spur; hind legs with insignificantly different number of ventral inner spines on femur and dorsal spines on tibia; posteromedian process of seventh abdominal tergite arcuately curved in profile, with almost immovable distal half having parallel lateral edges and short and wide apical notch (apex of this process without medial tubercles; Figs VII: 19–21); paraproct in shape of elongate plate having distal part somewhat narrowed, arcuately curved upwards and provided with dorsoapical spine directed upwards (Fig. VII: 19); genitalia distinguished from those of *D. palpata* by three dorsal lobes almost equal to ventrolateral lobes in length (in latter species, all dorsal lobes clearly shorter than ventrolateral lobes; for comparison see Figs VIII: 5 and 6).

Variations. Second male with very narrow lightish line running from rostral tubercles to posterior edge of metanotum (instead longer and more distinct light median stripe on dorsal surface of holotype body), with slightly spotted lateral parts of tergites, with barely spotted fore and middle femora, and with darker (almost greyish brown) hind tibia and hind tarsus.

Female. General appearance as in holotype, but body slightly darker and with barely spotted fore and middle tibiae as well as with spotted hind tibia, seventh abdominal tergite similar to that of one female of

D. palpata (Fig. VII: 13), and paraproct distinguished from that of *D. palpata* by slightly shorter and narrowly rounded apical part. Genital plate with largest (median) lobe somewhat wider than in *D. vietnamensis* and *D. palpata* and with clearly angular apex (Fig. VII: 22); ovipositor very similar to that of latter species.

Length in mm. Body: male 25–29, female 26; pronotum: male 6.8–7.4, female 7.7; fore femur: male 16.5–17.5, female 16.8; hind femur: male 33–35, female 34; hind tibia: male 36–38, female 37; hind basitarsus: male 6.4–6.8, female 7; ovipositor 22.

Comparison. Differences of the new species from the other congeners are given above, in the key to *Diestramima* taxa.

Etymology. The new species is named after the Hainan Island.

Diestramima bispinosa sp. nov.

(Figs VII: 23–26; VIII: 7)

Holotype. Male; **Northern Vietnam**, Phu Tho Prov., Thanh Son Distr., Xuan Son National Park, August 2011, N. Orlov (ZIN).

Paratypes. Two female deutonymphs; same data as for holotype (ZIN).

Description. Male. Body medium-sized for this genus. Colouration brown with following marks: dorsum of head with four dark brown longitudinal bands and a pair of rather dark lateral areas (situated behind posterodorsal parts of eyes); rest of head light brown with four brown vertical stripes

Figs VII (1–47). *Diestramima* Stor.: 1, 2, *D. vietnamensis vietnamensis* Gor.; 3–5, *D. v. saturata* Gor.; 6–8, *D. austrosinensis* Gor.; 9–16, *D. palpata* (Rehn); 17, 18, *D. distincta* Gor.; 19–22, *D. hainanensis* sp. nov.; 23–26, *D. bispinosa* sp. nov.; 27–30, *D. hamata* sp. nov.; 31–33, *D. propria* sp. nov.; 34, 35, *D. major* Gor.; 36–38, *D. minor* Gor.; 39, 40, *D. cryptopygia* (Chop.); 41, 42, *D. intermedia* Liu et Zhang; 43–45, *D. tsongkhapa* (Würmli); 46, *D. yunnanensis* sp. nov.; 47, *D. champasak* sp. nov. Male abdominal apex from side (1, 6, 17, 34, 36, 39) and from above (18, 32, 35, 37, 40); same without lower part from above / behind (2, 7) and from side (9, 19, 23, 27, 31); female abdominal apex from above (4); female genital plate from below (5, 8, 12, 22, 26, 30, 38, 42, 45–47); seventh abdominal tergite and hind part of sixth one in male from above (10, 20, 24, 28); apical part of posteromedian process of male seventh abdominal tergite from behind and slightly below (11, 21, 25, 29, 33); hind part of female seventh abdominal tergite (13) and its posteromedian part (14, 15) from above; female paraproct from side (16); posteromedian process of seventh abdominal tergite (43) and paraproct (44) in male from side. [1–8, 17, 18, 34–45, after Chopard (1921), Gorochov (1998, 2002, 2010a), Würmli (1973) and Liu & Zhang (2001), modified.]

on epicranium under eyes and antennae as well as a pair of dark spots at dorsolateral corners of clypeus and weakly spotted antennae; pronotum with light brown lateral lobes having a few brown spots as well as numerous small and not very distinct darkish marks; other tergites with light brown lateral parts of abdominal tergites and lateral spots on meso- and metanotum as well as with dark brown tenth abdominal tergite and median part of seventh abdominal tergite; legs distinctly spotted; sternites and pleurites light brown but with brown marks on pleurites; cerci and genital plate more or less greyish brown. Structure of body similar to that of *D. hainanensis*, but posteromedian process of seventh abdominal tergite slightly shorter and wider, its apical part with more projected ventrolateral corners, paraproct with two apical spines directed upwards and upwards / backwards (Figs VII: 23–25), and genitalia distinguished from those of *D. hainanensis* by distinctly notched apex of dorsomedian lobe (Fig. VIII: 7).

Deutonymph of female. General appearance as in male, but body slightly smaller and more spotted (dorsal surface of ten anterior tergites with diverse light brown marks), cerci and genital plate light brown, paraproct similar to that of female of *D. palpata* but with distinctly shorter and less acute posterior projection, seventh abdominal tergite with short angular posteromedian projection similar to that pictured in Fig. VII: 14. Genital plate slightly shorter than in all females previously described here and with small notch at apex (Fig. VII: 26); ovipositor without denticles (nymphal character), more or less similar to that of *D. hainanensis* and *D. palpata* in general shape.

Length in mm. Body: male 21, deutonymph of female 18–20; pronotum: male 6.7, deutonymph of female 6.4–6.6; fore femur: male 18.5, deutonymph of female 15.5–16; hind femur: male 34, deutonymph of female 30–31; hind tibia: male 37, deutonymph of female 33–34; hind basitarsus: male 7, deutonymph of female 6.3–6.5; ovipositor, deutonymph 18.5–19.

Comparison. Differences of the new species from the other congeners are given in the key to *Diestramima* taxa.

Etymology. This species name is the Latin word “bispinosa” (bispinose).

***Diestramima hamata* sp. nov.**

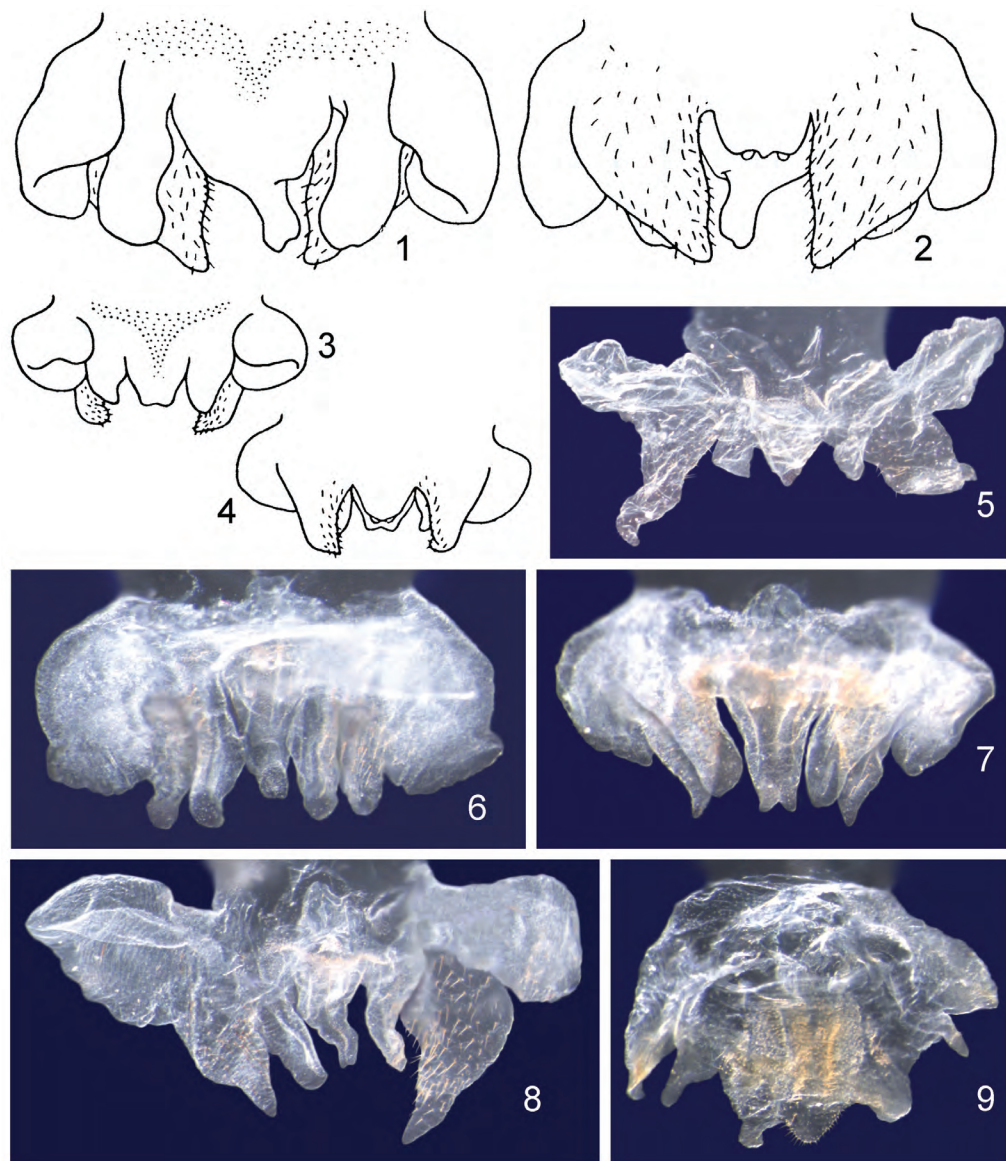
(Figs VII: 27–30; VIII: 8)

Holotype. Male; **Northern Vietnam**, Cao Bang Prov., Trung Khanh Distr., Trung Khanh Natural Reserve, September 2008, S. Ryabov, N. Orlov (ZIN).

Paratype. Female; same data as for holotype (ZIN).

Description. Male. Colouration and structure of body similar to those of *D. bispinosa* but with following differences: dorsum of head almost uniformly brown; antenna with light brown scape having brown distal part, brown pedicel having light base, and reddish brown flagellum having sparse small and weak lightish spots on middle part (distal part of flagellum missing); tergites with uniformly brown upper half and light brown lower parts, but lower parts of pronotum brown with weakly distinct lightish marks; fore and middle legs with weakly spotted femur and with almost uniformly brown tibia and tarsus (hind leg missing); pleurites, coxae, sternites and genital plate almost yellowish (cerci missing); seventh abdominal tergite with posteromedian process similar to that of *D. hainanensis* but more narrowed in proximal part and having more acute ventrolateral corners at apex (Figs VII: 27–29); paraproct widened (high) in proximal half, narrowing in distal half, and having one small spine (directed upwards) near middle of paraproct and one large apical spine arcuately curved upwards (Fig. VII: 27); genitalia almost intermediate between those of *D. palpata* and *D. hainanensis* but with slightly narrower (thinner) distal part of dorsomedian lobe (Fig. VIII: 8).

Female. General appearance as in male, but visible part of tenth abdominal tergite and of epiproct dark brown, middle part of flagellum almost uniformly reddish brown, seventh abdominal tergite with almost



Figs VIII (1–9). *Diestramima* Stor., male: 1, 2, *D. major* Gor.; 3, 4, *D. minor* Gor.; 5, *D. palpata* (Rehn); 6, *D. hainanensis* sp. nov.; 7, *D. bispinosa* sp. nov.; 8, *D. hamata* sp. nov.; 9, *D. propria* sp. nov. Genitalia from above (1, 3, 5–9) and from below (2, 4). [1–4, after Gorochov (1998).]

spine-like posteromedian projection (it similar to that in Fig. VII: 15), and paraproct approximately as in Fig. VII: 16 (but with slightly shorter apical part). Hind leg greyish brown with weak and oblique light brown stripes on proximal part of femur as well as with weak lightish spots on distal

part of femur and on proximal part of tibia; spines of this leg insignificantly less numerous than in *D. bispinosa*; ovipositor similar to that of all females previously described here; genital plate as in Fig. VII: 30.

Length in mm. Body: male 23, female 21; pronotum: male 6.9, female 6.7; fore femur:

male 17, female 15.5; hind femur, female 33; hind tibia, female 37; hind basitarsus, female 6.5; ovipositor 23.

Comparison. The new species is distinguished from the other congeners by the characters listed above, in the key to *Diestramima* taxa.

Etymology. The species name is the Latin word "hamata" (barbed).

***Diestramima propria* sp. nov.**

(Figs VII: 31–33; VIII: 9)

Holotype. Male; Laos, Xieng Khouang Prov., 22 km NE of Phonsavan Nong Pet, 19°34.657'N, 103°23.313'E, 1300 m, secondary mountain forest, 3–16 August 2008, S. Tarasov (ZIN).

Description. Male. Body medium-sized. Colouration light brown with following pattern: head with greyish brown most part of dorsum, brown ventromedial area on scape, reddish brown rest of antenna, and yellowish other parts of head having four brownish vertical stripes on epicranium under eyes and antennae as well as a pair of lateral marks on clypeus; thoracic tergites marble with darker (more or less brown) upper half and lighter (more or less light brown) lower half; abdominal tergites with a few small brown spots along posterior edge; legs with spotted distal part of femur and proximal part of tibia, with rather large greyish brown area on dorsal surface of hind femur near its middle, with numerous darkish spots on dorsal part of hind tibia, and with weakly darkened spot in distal part of all tibiae; a few posterior tergites and paraprocts with more or less large brown areas. Structure of body similar to that of all males previously described here (hind femur with 11 or 14 inner ventral spines, hind tibia with 30–32 dorsal spines in each row, and hind basitarsus with one dorsal spine), but fore tibia with a pair of dorsal spurs, posteromedian process of seventh abdominal tergite similar to that of *D. hainanensis* but barely wider as well as with parallel lateral edges and almost truncate apex, this apex with semimembranous median part and short

angular lateral parts (Figs VII: 31–33), paraproct with long and rather thin distal process slightly arcuate from above and having somewhat curved (downwards) and not acute apical part (Figs VII: 31, 32), and genitalia with somewhat less short common part of three dorsal lobes (in comparison to all species previously described here) and with almost roundly angular dorsomedian lobe (Fig. VIII: 9).

Female unknown.

Length in mm. Body 27; pronotum 8.3; fore femur 18; hind femur 33; hind tibia 35; hind basitarsus 6.6.

Comparison. See the key to *Diestramima* taxa above.

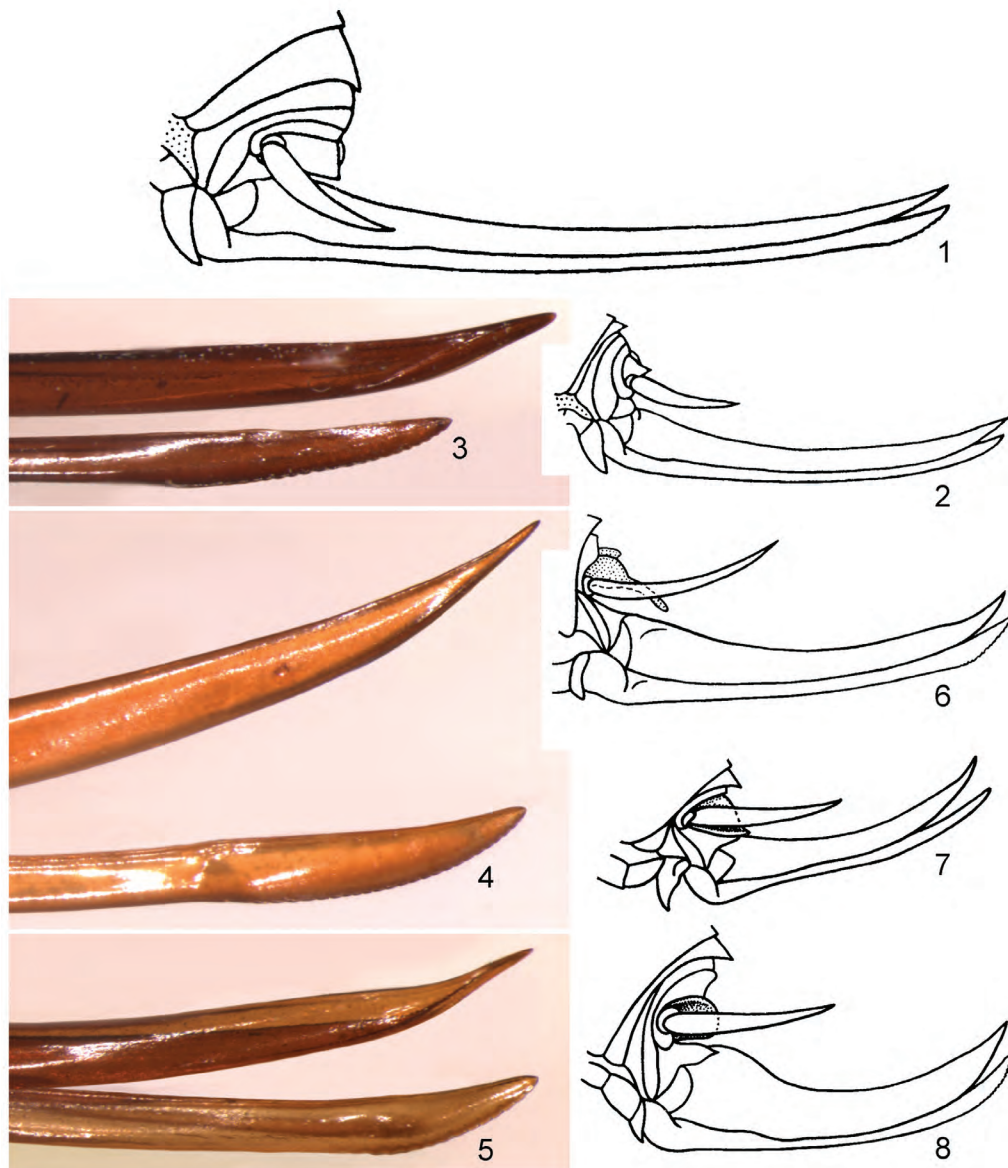
Etymology. This species name is the Latin word "propria" (separated).

***Diestramima yunnanensis* sp. nov.**

(Figs VII: 46; IX: 4)

Holotype. Female; Southwest China, Yunnan Prov., Jing Dong, Xishuan Banna National Park, 900 m, October 2009, collector unknown (ZIN).

Description. Female. Body rather large for this genus. Colouration light brown, however dorsum of head and dorsal area on hind femora near their middle brown (but rostral tubercles light), proximal part of antennal flagellum as well as dorsum of tergites intermediate between brown and light brown (but dorsal part of two posterior tergites somewhat darker), rest of head and coxae as well as sternites and genital plate yellowish with greyish eyes and darkened distal part of mandibles, legs with darkened distal area on all femora and darkish apical part of all tibiae. Structure of body typical of *Diestramima* but with following characteristic features: lateral ocellus obliquely elongate and rather small (distance between apex of rostral tubercle and lateral ocellus approximately 1.5 times as great as length of this ocellus and almost twice as great as height of this ocellus); hind femur with 15–16 inner ventral spines; armament of tibiae and hind basitarsus – d2a, v~2, v~2,



Figs IX (1–8). *Diestramima* Stor. and *Adiestramima* Gor.: 1, *D. austrosinensis* Gor.; 2, *D. minor* Gor.; 3, *D. palpata* (Rehn); 4, *D. yunnanensis* sp. nov.; 5, *D. champasak* sp. nov.; 6, *A. multa* (Gor.); 7, *A. modesta* (Gor.); 8, *A. citrea* (Gor.). Ovipositor (1, 2, 6–8) and its distal part (3, 4, 5) from side. [1, 2, 6–8, after Gorochov (1992, 1994, 1998).]

v3a / d2a, v~2, v~2, v3a / d30e–31i (d31e–30i), d2sa, 6a, d6c (d7c), dac (inner dorsal spur of hind tibia longest and reaching base of dac); seventh abdominal tergite with small and roundly angular (but distinct) posteromedian projection (approximately

as in Fig. VII: 13); paraproct with weakly arcuate (not sinuate) ventral edge in profile and with short angular posterior projection (this projection almost as in Fig. VII: 16); genital plate with very large and elongate median lobe having small but distinct

notch at apex (Fig. VII: 46); ovipositor very similar to that of previously described congeners but with slightly narrower apex of upper valves (Fig. IX: 4).

Male unknown.

Length in mm. Body 30; pronotum 9.1; fore femur 19; hind femur 36; hind tibia 40; hind basitarsus 7.5; ovipositor 25.

Comparison. The new species is distinguished from all the previously described congeners with known females by a very large and elongate median lobe of the female genital plate having a narrow but distinct notch at the apex (for comparison see Figs VII: 5, 8, 12, 22, 26, 30, 38, 42, 45 and 46), and additionally from *D. austrosinensis*, by a clearly narrower distal part of this lobe. From the other congeners, the new species differs in the body larger, colouration less spotted (without or almost without darkened vertical stripes on lower part of epicranium), and / or number of dorsal spines on the hind basitarsus more numerous.

***Diestramima champasak* sp. nov.**
(Figs VII: 47; IX: 5)

Holotype. Female; Laos, Champasak Prov., Bolaven Plateau, 14 km SE of Muang Paxong, Ban Thongvay, 15°14.741'N, 106°31.916'E, 1030 m, 7–16 June 2008, S. Tarasov (ZIN).

Description. Female. Body rather small for this genus. Colouration brown with following pattern: epicranium light brown with reddish brown dorsum, dark brown lower parts of rostral tubercles (but other parts of these tubercles rather light) and two pairs of vertical stripes (a pair under antennae narrow, and a pair under eyes widened in upper half); mouthparts light brown with almost completely brown clypeus, yellowish palpi and greyish brown upper half of labrum; antenna with light brown scape having darkened medial part, and with reddish brown rest parts; tergites with weakly distinct marble light brown areas on ventrolateral parts and with almost dark brown dorsal part of six posterior tergites; pleurites, legs and sternites light brown with small darkish marks on pleurites, with

weakly distinct brown spots on distal half of hind femur and on lower part of proximal half of this femur as well as on proximal half of all tibiae, and with dark brown distal area on all femora; epiproct, paraprocts and cerci greyish brown with light brown basal part of cerci; genital plate also greyish brown, but slightly lighter than latter structures. Other characters more or less similar to those of *D. yunnanensis*, but lateral ocellus almost round (distance between apex of rostral tubercle and lateral ocellus almost 1.5 times as great as diameter of this ocellus), hind femur with 10–11 inner ventral spines, hind tibia with 26–29 dorsal spines in each row (excepting a pair of subapical spines and three pairs of spurs), hind basitarsus without dorsal spines (but dorsal spur more or less developed), seventh abdominal tergite with small and almost spine-like posteromedian projection (approximately as in Fig. VII: 15), paraproct similar to that of female of *D. palpata* (Fig. VII: 16) but with somewhat rounded apex, genital plate with almost roundly truncate apex (Fig. VII: 47), and ovipositor with lower valves having shorter distal (weakly denticulate) part (Fig. IX: 5).

Male unknown.

Length in mm. Body 18; pronotum 6.6; fore femur 13.5; hind femur 26; hind tibia 28; hind basitarsus 5; ovipositor 17.

Comparison. The new species is similar to *D. austrosinensis* in the shape of female genital plate, but it differs from the latter species in a longer and narrower posteromedian projection of the seventh abdominal tergite in female (in *D. austrosinensis*, this projection is almost as in Fig. VII: 13) as well as the hind basitarsus lacking dorsal spines (only one spur on this basitarsus is developed), and from all the other previously described congeners with known females, in an almost truncate apex of the female genital plate (see Figs VII: 5, 12, 22, 26, 30, 38, 42, 45, 46 and 47). From the congeners known only from males, *D. champasak* is distinguished by the body smaller and / or by the hind basitarsus lacking dorsal spines,

and additionally from *D. propria* distributed also in Laos, by a light proximal half of the hind femur (this half is without any distinct darkened area in its dorsal part).

Genus *Adiestramima* Gorochov, 1998

Type species: *Diestramima multa* Gorochov, 1994, by original designation.

Note. This genus is similar to *Diestramima* in the general appearance and structure of abdominal apex but distinguished from the latter genus by a usually darker colouration of the thoracic tergites, more spotted or bicolour (with dark upper and light lower parts) proximal half of the hind femora, a roundly convex ventral edge of the pronotal lateral lobes, usually wider and shorter posteromedian process of seventh abdominal tergite in male (this process is often with the apical part curved more or less downwards), diverse and rather short male paraprocts (Figs X: 1–4, 7–9, 12, 13, 16, 17, 20, 23–26, 28–31, 34–37, 40–42), and characteristic male genitalia having six lobes only but with the ventrolateral lobes very long (much longer than all the other lobes), corrugated and compacted in the rest position, and undivided into additional lobes (Figs XI: 1–6). The latter genital characters are most important for separation of this genus from the other genera of Diestramimini. *Adiestramima* includes nine species and subspecies listed below, in a key for this genus.

1. Body small (pronotum 4.4–4.6 mm and hind femur 19.5–20.5 mm in length). Ovipositor rather high (wide in profile) (Fig. IX: 8). Northern Vietnam *A. citrea* (Gorochov, 1992)
- Body larger (pronotum 5.3–9.5 mm and hind femur 26–40 mm in length). Ovipositor relatively less high (narrower in profile) (Figs IX: 6, 7) 2
2. Male: paraproct with high and more or less rounded (in profile) dorsal lobe, and with rather thin hook-like or finger-like distal process (Figs X: 9, 13, 17, 41). Female: hind femur approximately 2–2.3 times as long as ovipositor 3
 - Male: paraproct different, almost quadrangular in profile (Fig. X: 2) or curved upwards (Figs X: 24, 29, 35). Female: hind femur approximately 2.7–3.2 times as long as ovipositor 6
3. Male: posteromedian process of seventh abdominal tergite with apical part not curved downwards and distinctly bifurcate at apex (Figs X: 7–9, 12, 13); paraproct with hook-like distal process (Figs X: 9, 13). Female: paraproct with very long distal process (Figs X: 10, 14); genital plate with rather short median lobe having convex lateral edges (Figs X: 11, 15) 4
 - Male: posteromedian process of seventh abdominal tergite with apical part strongly curved downwards and not bifurcate at apex (Figs X: 16, 17, 20, 40–42); paraproct with finger-like distal process (Figs X: 17, 41). Female: paraproct with short distal process (Figs X: 18, 43); genital plate with median lobe having barely concave lateral edges (Figs X: 19, 44) 5
4. Male: paraproct with rather long and weakly hooked distal process (Fig. X: 9). Female: paraproct with not very narrow distal part of distal process (Fig. X: 10); genital plate with posteromedian projection small and almost angular in shape (Fig. X: 11). Central Vietnam *A. multa* (Gorochov, 1994)
 - Male: paraproct with short and strongly hooked distal process (Fig. X: 13). Female: paraproct with very narrow distal part of distal process (Fig. X: 14); genital plate with posteromedian projection divided into a pair of very small and more or less rounded tubercles by barely visible notch (Fig. X: 15). Central Vietnam *A. proxima* (Gorochov, 1994)
5. Male: posteromedian process of seventh abdominal tergite gradually narrowing to narrowly rounded apical part which curved downwards and rather long (high); distal finger-like process of paraproct moderately long (Figs X: 16, 17, 20). Female: paraproctal process with thin distal part (Fig. X: 18); genital plate with narrowly truncate apex (Fig. X: 19). Central Vietnam (Gia Lai Prov.) *A. perfecta perfecta* Gorochov, 2002
 - Male: posteromedian process of seventh abdominal tergite almost not narrowing to widely rounded apical part which curved downwards / forwards and rather short

- (low); distal finger-like process of paraproct short (Figs X: 40–42). Female: paraproctal process with clearly thicker distal part (Fig. X: 43); genital plate with wider and slightly sinuate apex (Fig. X: 44). Central Vietnam (Thua Thien Hue Prov.)
- ***A. perfecta hue* subsp. nov.**
6. Male: posteromedian process of seventh abdominal tergite narrow at apex, rather short, and with very small apical part directed downwards; lower parts of ninth abdominal tergite fused with rest of this tergite and lacking posterior hook; paraproct almost quadrangular in profile (Figs X: 1–4). Female: median lobe of genital plate with weakly elongate posteromedian projection having small apical notch and concave lateral edges (Fig. X: 5). Northern Vietnam
- ***A. modesta* (Gorochov, 1992)**
- Male: posteromedian process of seventh abdominal tergite wide or moderately wide at apex, rather short (and with apical part curved downwards; Figs X: 23–25, 28–30) or long (and with apical part practically not curved downwards; Figs X: 34–36); lower parts of ninth abdominal tergite articulate with rest of this tergite and having posterior hook; paraproct distinctly curved upwards (Figs X: 24, 29, 35). Female: median lobe of genital plate more or less gradually narrowing to apex (without distinct posteromedian projection) and with convex or almost straight lateral edges (Fig. X: 22, 27, 32, 38). 7
7. Male: posteromedian process of seventh abdominal tergite rather short and with moderately short vertical apical part roundly angular at apex (Figs X: 23–25), or this process long and with sinuate apical part practically not curved downwards (Figs X: 34–36). Female: genital plate with angular apex (Figs X: 27, 38) 8
- Male: posteromedian process of seventh abdominal tergite rather short and with very short vertical apical part slightly bilobate at apex (Figs X: 28–30). Female: genital plate with small notch at apex (Figs X: 22, 32) . . . 9
8. Male: posteromedian process of seventh abdominal tergite rather short and with moderately short vertical apical part roundly angular at apex (Figs X: 23–25). Female: genital plate with narrow lateral lobules and clearly convex lateral edges of distal half of median lobe (Fig. X: 27). Northern Vietnam
- ***A. adunca* sp. nov.**
- Male: posteromedian process of seventh abdominal tergite long and with sinuate apical part practically not curved downwards (Figs X: 34–36). Female: genital plate with wide lateral lobules and almost straight lateral edges of distal half of median lobe (Fig. X: 38). Central Vietnam . . . ***A. elongata* sp. nov.**
9. Male: posteromedian process of seventh abdominal tergite rather short and with very short vertical apical part slightly bilobate at apex (Figs X: 28–30). Female: paraproctal process long, almost as rest part of paraproct in length (Fig. X: 33). Central Vietnam
- ***A. bella* sp. nov.**
- Male unknown. Female: paraproctal process distinctly less long, clearly shorter than rest part of paraproct (Fig. X: 21). Northern Vietnam ***A. bicolor* Gorochov, 2002**
- Adiestramima adunca* sp. nov.**
(Figs X: 23–27; XI: 3)
- Holotype.* Male; **Northern Vietnam**, Hai Phong Prov., Cat Ba I. in Tonkin Bay, Cat Ba National Park, September 2008, S. Ryabov, N. Orlov (ZIN).
- Paratypes.* Four males and 3 females; same data as for holotype (ZIN).
- Description.* Male (holotype). Body medium-sized for this genus. Colouration greyish brown with following marks: head yellowish with light brown dorsomedian area, brown areas above eyes, dark brown upper half of membrane of each antennal cavity and four vertical stripes on epicranium under eyes and under antennae, reddish brown dorsal and medial parts of scape as well as pedicel and proximal part of flagellum, and more or less darkened (greyish brown) lower and lateral parts of clypeus as well as distal part of mandibles and rest of antennal flagellum; thoracic tergites with a pair of interrupted light lines situated along lateral edges of median part, with weakly distinct (marble) light brown areas on lateral parts of these tergites, and with almost dark brown areas along anterior and posterior edges of pronotum as well as along posterior edge of meso- and metanotum; fore and middle femora light brown with reddish brown dorsal part, two darkish lines along

ventral keels, and almost dark brown apical part; hind femur with greyish brown distal half having darker apical part and weakly distinguishable lightish spots, with proximal half divided into dark brown upper area (having reddish brown proximal part) and light brown lower area (having more or less noticeable darkish longitudinal stripe in ventral part); tibiae light brown with somewhat darkened basal and apical areas as well as with brown to brownish spines and spurs; tarsi also light brown with sparse darkish spots; coxae, pleurites, sternites and genital plate light brown with a few darkish marks on coxae and pleurites; posteromedian process of seventh abdominal tergite and lower parts of ninth abdominal tergite reddish brown; cerci with light greyish brown proximal part. Lateral ocellus small and almost round (distance between apex of rostral tubercle and lateral ocellus approximately 2.5 times as great as diameter of this ocellus); femora with 6–8 small ventral spines in fore leg, and with 4 outer and 16–17 inner short ventral spines in hind leg; armament of tibiae and hind basitarsus – d2a, v~2, v~2, v3a / d2a, v~2, v~2, v3a / d34e–34i (d38e–34i), d1c, dac (inner dorsal spur of hind tibia longest and reaching apex of dac); posteromedian process of seventh abdominal tergite large (wide and moderately long) and with short and roundly angular apical part strongly curved downwards (Figs X: 23–25); lower parts of ninth abdominal tergite separated from its other parts, movable (almost articulated), and with short posterior hook directed upwards / downwards in profile (Figs X: 23, 24); paraproct characteristically curved upwards, with almost angular apex and subapical rounded lobe directed laterally and widest near paraproctal apex (Figs X: 24, 26); genitalia with dorsomedian lobe having a pair of distinct lobules at apex (Fig. XI: 3).

Variations. Some males with almost uniformly light clypeus or with dark brown distal part of antennal flagellum; armament of legs slightly varied (hind basitarsus often with spur only); apical part of posterome-

dian process of seventh abdominal tergite sometimes less strongly curved than in holotype or, alternatively, directed almost downwards / forwards.

Female. General appearance as in males, but seventh abdominal tergite with short median convexity on posterior edge (this convexity more or less as in Fig. X: 33), paraprocts with posterior process narrow and moderately long (approximately as in Fig. X: 21); genital plate not strongly transverse and with angular apex (Fig. X: 27); ovipositor similar to that of *Diestramima* but slightly higher (wider in profile), approximately as in *A. multa* (Fig. IX: 6).

Length in mm. Body: male 21–25, female 18–22; pronotum: male 6.5–7, female 6.8–7.2; fore femur: male 20–23, female 20–22; hind femur: male 30–33, female 31–33; hind tibia: male 38–41, female 40–43; hind basitarsus: male 6–6.4, female 6.2–6.5; ovipositor 11–12.

Comparison. See the key to *Adiastramima* congeners.

Etymology. This species name is the Latin word “adunca” (hooked).

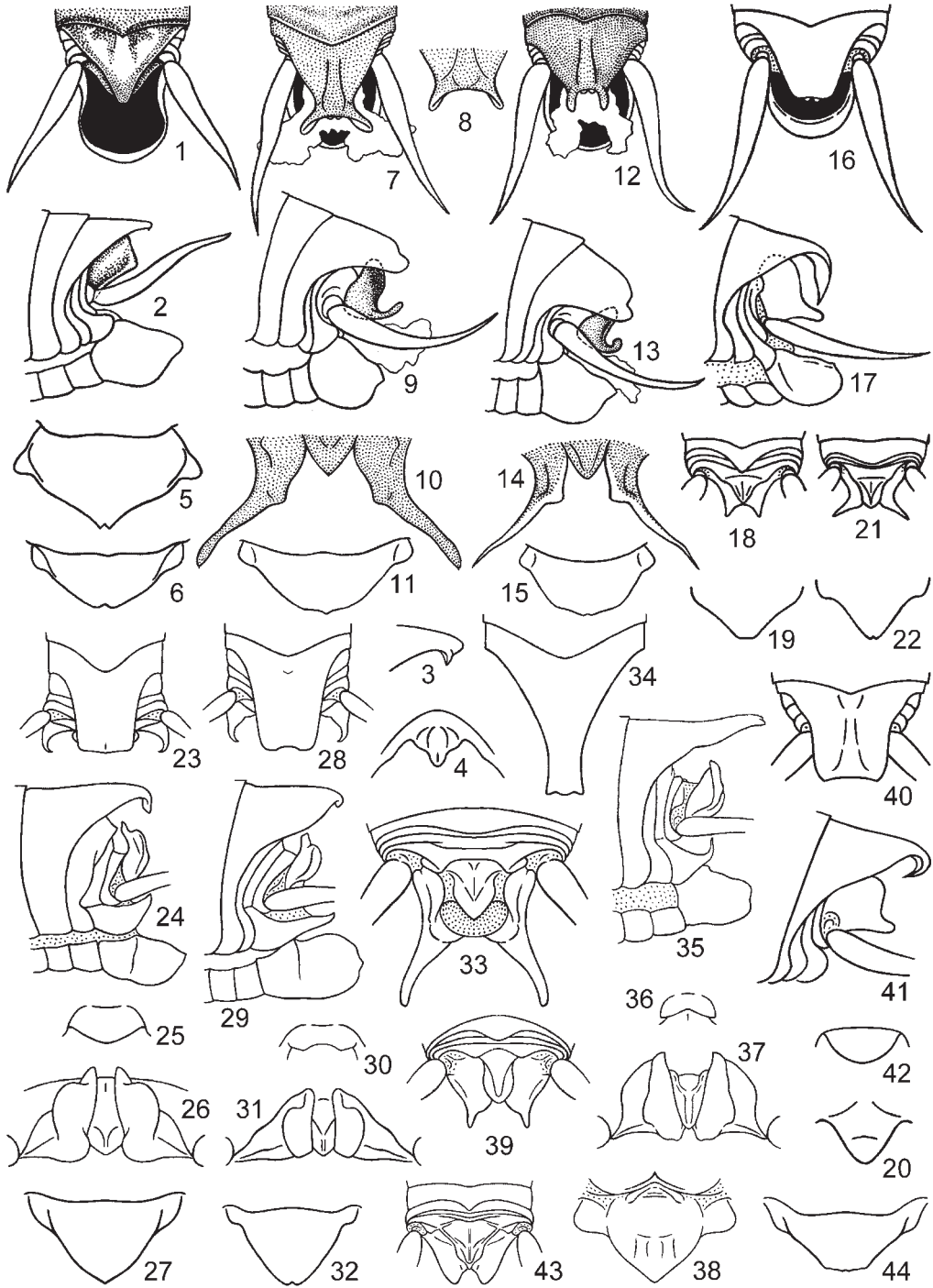
Adiastramima bella sp. nov.

(Figs X: 28–33; XI: 4)

Holotype. Male; **Central Vietnam**, Quang Binh Prov., 35 km NW of Dong Hoi, Phong Nha – Ke Bang National Park, 600 m, September–October 2003, N. Orlov (ZIN).

Paratypes. Two females; same data as for holotype (ZIN).

Description. Male. Body size and colouration similar to those of *A. adunca* but with following differences: head dorsum (including rostral tubercles and areas above eyes) greyish brown with three lightish longitudinal stripes; dark area on membrane of antennal cavity somewhat lighter and smaller; clypeus with a pair of lateral darkened spots only; distal half of hind femur completely dark brown; hind basitarsus with three dorsal spines (except spur); posteromedian process of seventh abdominal tergite slightly longer and with smaller and barely bilobate apical part curved downwards (Figs X:



28–30); lower parts of ninth abdominal tergite with distinctly longer posterior hook directed mainly backwards (Figs X: 28, 29); paraproct with roundly truncate apex and less widened subapical lobe (Figs X: 29, 31); genitalia without a pair of distinct lobules at apex of dorsomedian lobe (Fig. XI: 4).

Female. General appearance similar to that of male, however head dorsum light brown with darkened dorsal area on rostral tubercles, hind basitarsus with 0–2 dorsal spines, and structure of abdominal apex as in females of *A. adunca* but with distinctly longer paraproctal processes (Fig. X: 33) and with slightly notched apex of genital plate (Fig. X: 32).

Length in mm. Body: male 24, female 19–21; pronotum: male 6.8, female 6.4–6.6; fore femur: male 19, female 18–20; hind femur: male 31, female 30–32; hind tibia: male 37, female 36–38; hind basitarsus: male 6.2, female 6–6.5; ovipositor 11–11.5.

Comparison. See the key to *Adiestramima* taxa above.

Etymology. This species name is the Latin word “bella” (beautiful).

Adiestramima elongata sp. nov.

(Figs X: 34–39; XI: 5)

Holotype. Male; **Central Vietnam**, Thua Thien Hue Prov., 40 km SE of Hue Town, Bach Ma National Park, 1300 m, October 2003, N. Orlov (ZIN).

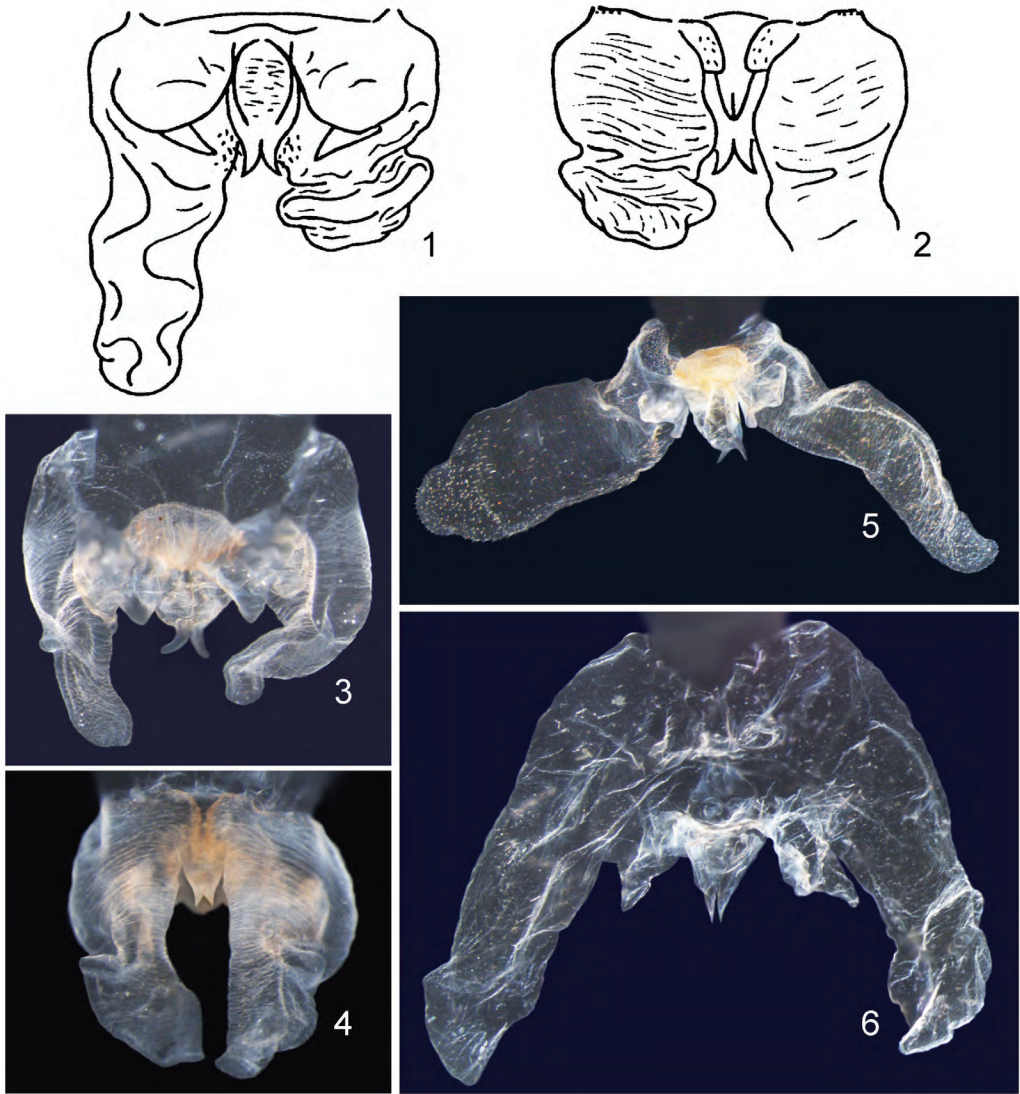
Paratype. Female; same data as for holotype (ZIN).

Description. Male. Body size and colouration very similar to those of *A. bella*

but with following characteristic features: colouration of head dorsum almost as in females of latter species; membrane of antennal cavity light; cerci light brown with darkened distal part; lateral ocellus larger (distance between apex of rostral tubercle and lateral ocellus approximately 1.5 times as great as diameter of this ocellus); hind basitarsus with very small spur only; posteromedian process of seventh abdominal tergite much longer and distinctly narrower, with sinuate (almost truncate) apical part practically not curved downwards (Figs X: 34–36); lower parts of ninth abdominal tergite with posterior hook thinner and strongly curved upwards (Fig. X: 35); paraproct with apex approximately as in *A. adunca* and with rounded lobe reaching this apex and widened in proximal half (Figs X: 35, 37); genitalia with dorsomedian lobe similar to that of *A. adunca* but with somewhat larger ventrolateral lobes (Fig. XI: 5).

Female. General appearance as in male, but rostral tubercles with light dorsal surface, darkened marks under antennae (on epicranium) and on clypeus almost undeveloped, lateral parts of thoracic tergites almost completely light brown, middle tibia with slightly darker distal part (fore tibiae and hind legs missing), and structure of abdominal apex similar to that of *A. adunca* and *A. bella* but with somewhat larger posteromedian convexity of seventh abdominal tergite (looking as rounded projection; Fig. X: 39), with shorter (not distinct) paraproctal processes (Fig. X: 39), and with acutely angular apex of genital plate (this plate also

Figs X (1–44). *Adiestramima* Gor.: 1–5, *A. modesta* (Gor.); 6, *A. citrea* (Gor.); 7–11, *A. multa* (Gor.); 12–15, *A. proxima* (Gor.); 16–20, *A. perfecta perfecta* Gor.; 21, 22, *A. bicolor* Gor.; 23–27, *A. adunca* sp. nov.; 28–33, *A. bella* sp. nov.; 34–39, *A. elongata* sp. nov.; 40–44, *A. perfecta hue* subsp. nov. Male abdominal apex from above (1, 7, 12, 16) and from side (2, 9, 13, 17, 24, 29, 35); same but without lower part from above (23, 28, 40) and from side (41); female genital plate from below (5, 6, 11, 15, 19, 22, 27, 32, 38, 44); apical part of posteromedian process of seventh abdominal tergite in male from side (3), from behind (4, 20, 25, 30, 36), and from behind / below (42); distal half of paraprocts and of epiproct in female from above (10, 14); female abdominal apex without lower part from above (18, 21, 33, 39, 43); paraprocts and epiproct of male from behind (26, 31, 37); seventh abdominal tergite and posterior part of sixth one in male from above (34). [1, 2, 5–22, after Gorochov (1992, 1994, 2002).]



Figs XI (1–6). *Adiestramima* Gor., male: 1, 2, *A. perfecta perfecta* Gor.; 3, *A. adunca* sp. nov.; 4, *A. bella* sp. nov.; 5, *A. elongata* sp. nov.; 6, *A. perfecta hue* subsp. nov. Genitalia from above (1, 3, 5, 6) and from below (2, 4): in first male (1, 2), right ventrolateral lobe in rest position (corrugated and compacted) but left one straightened; in other males (3–6), both ventrolateral lobes more or less straightened. [1, 2, after Gorochov (2002).]

with wider lateral lobules; Fig. X: 38).

Length in mm. Body: male 26, female 20; pronotum: male 6.4, female 7.1; fore femur: male 21, female 20; hind femur, male 33; hind tibia, male 40; hind basitarsus, male 6.3; ovipositor 11.8.

Comparison. See the key for *Adiestramima*.

Etymology. This species name is the Latin word “*elongata*” (elongate).

***Adiestramima perfecta hue* subsp. nov.**
(Figs X: 40–44; XI: 6)

Holotype. Male; **Central Vietnam**, Thua Thien Hue Prov., 40 km SE of Hue Town, Bach

Ma National Park, 1300 m, October 2003, N. Orlov (ZIN).

Paratypes. Male and female; same data as for holotype (ZIN).

Description. Male (holotype). Body rather large for this genus. Colouration similar to that of all previous species described here but with following pattern: colouration of head most similar to that of holotype of *A. bella*, but scape with reddish brown area having light (almost yellowish) spot on distomedial part; thoracic tergites with light brown lateral parts almost as in paratype of *A. elongata*; fore and middle femora almost completely reddish brown but with slightly darkened distal part; hind femur with proximal third light brown and having large oblique dark brown stripe in upper half, with distal two thirds brown and having dark brown spots near middle of femur and a few lightish spots in more distal parts; tibiae and tarsi also almost reddish brown and with a few lightish spots on tibiae; coxae, pleurites, sternites and genital plate light greyish brown; abdominal tergites brown with slightly lighter ventrolateral areas; paraprocts brown; cerci light brown with darkish distal half. Lateral ocellus approximately as in *A. adunca* and *A. bella*; fore femora with 5 small inner ventral spines; hind femora with 5–6 outer and 13–14 inner short ventral spines; armament of tibiae and hind basitarsus – d2a (dea), v2, v2, v3a / d2a, v2, v2, v3a / d29e–27i (d31e–27i), d2sa, 6a / (d1c), dac (inner dorsal spur longest and reaching base of dac); postero-medial process of seventh abdominal tergite moderately short and wide (wider than in *A. p. perfecta*), with short rounded apical part strongly curved downwards / forwards (in *A. p. perfecta*, this part longer and narrowly rounded at apex; for comparison see Figs X: 16, 17, 20 and 40–42); ninth abdominal tergite simple (its lower parts not separated from upper parts and without posterior hook; Fig. X: 41); paraproct with rounded dorsal lobe and finger-like posteroventral process (this process distinctly shorter than in *A. p. perfecta*; see Figs X: 17

and 41); genitalia approximately as in nominotypical subspecies (Figs XI: 1, 2 and 6), i. e. with dorsomedian lobe similar to that of *A. adunca* and *A. elongata* but with ventrolateral lobes intermediate between these species in size.

Variations. Tergites in paratype somewhat darker, with darkened parts almost dark brown.

Female. General appearance similar to that of males, but body larger, its colouration almost as in male paratype, and abdominal apex very similar to that of female of *A. p. perfecta* but with posteromedian projection of seventh abdominal tergite somewhat shorter, with paraproctal processes slightly wider (Figs X: 18 and 43), and with genital plate having wider and barely sinuate (not clearly truncate) apex (Figs X: 19 and 44).

Length in mm. Body: male 25–26, female 32; pronotum: male 7.3–7.5, female 9.5; fore femur: male 18–19, female 23; hind femur: male 32, female 40; hind tibia: male 37, female 47; hind basitarsus: male 6, female 7.2; ovipositor 18.5.

Comparison. See the key for *Adiastromima* above.

Etymology. The new subspecies is named after the Hue Town.

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