

**TAXONOMY OF THE KATYDIDS (ORTHOPTERA: TETTIGONIIDAE)
FROM EAST ASIA AND ADJACENT ISLANDS. COMMUNICATION 18:
GENERA *DECMA* AND *ALLOTERATURA***

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Summary. New material on the genera *Decma* Gorochov, 1993 and *Alloteratura* Hebard, 1922 (Meconematinae: Meconematini) is reviewed. The compositions of these genera are briefly discussed. For subgenera of *Decma*, a new synonymy is proposed: *Neodecma* Gorochov, 2004 = *Paradecma* Liu et Zhu, 2007, **syn. n.** Three new species from Laos, Indonesia and the Philippines are described: *Decma* (*Neodecma*) *laosi* **sp. n.**, *D.* (*Decma*) *curupi* **sp. n.**, and *Alloteratura* (*Alloteratura*) *dahilayan* **sp. n.** Also *Decma* (*Neodecma*) *orientale* Gorochov, 2012, **stat. n.** is considered as a separate species but not a subspecies of *D.* (*N.*) *elefani* Gorochov, 2004.

Key words: Meconematinae, Meconematini, Meconematina, *Decma*, *Alloteratura*, new taxa, new synonymy, South-East Asia.

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Резюме. Изучен новый материал по родам *Decma* Gorochov, 1993 и *Alloteratura* Hebard, 1922 (Meconematinae: Meconematini). Кратко обсуждается состав этих родов. Для подродов *Decma* предложена новая синонимия: *Neodecma* Gorochov, 2004 = *Paradecma* Liu et Zhu, 2007, **syn. n.** Описаны три новых вида из Лаоса, Индонезии и Филиппин: *Decma* (*Neodecma*) *laosi* **sp. n.**, *D.* (*Decma*) *curupi* **sp. n.** и *Alloteratura* (*Alloteratura*) *dahilayan* **sp. n.** Кроме того, *Decma* (*Neodecma*) *orientale* Gorochov, 2012, **stat. n.** рассматривается как самостоятельный вид, но не как подвид *D.* (*N.*) *elefani* Gorochov, 2004.

INTRODUCTION

This paper is the eighteenth communication in the series of papers by Gorochov on Indo-Malayan and Papuan Tettigoniidae. It includes some new data on taxonomy and distribution of the Indo-Malayan genera *Decma* Gorochov, 1993 and *Alloteratura* Hebard, 1922 from the tribe Meconematini (Meconematinae); thus, this communication is a continuation of the fourth and tenth communications from this series (Gorochov, 2012, 2016) and also of the separate paper on Meconematinae of this region (Gorochov, 2024).

The material studied (including the types of new taxa) is deposited at the Zoological Institute of the Russian Academy of Sciences, Saint Petersburg (ZIN). This material is dry and pinned; it was collected in different countries of South-East Asia and nearest islands. The internet catalogue Orthoptera Species File is here cited as OSF (Cigliano *et al.*, 2025).

TAXONOMY

Subfamily Meconematinae

Tribe Meconematini

Subtribe Meconematina

Genus *Decma* Gorochov, 1993

NOTES. According to OSF, now this genus consists of four subgenera with 20 species from Vietnam, China, Thailand, Cambodia, Burma, Indonesia and Malaysia: *Decma* s. str. with 14 species; *Idiodesma* Gorochov, 1993 with three species; *Neodesma* Gorochov, 2004 with one species and two subspecies; *Paradesma* Liu et Zhu, 2007 with one species. Besides, this genus also includes one species with unknown male and unclear subgeneric position.

However, this list of taxa of *Decma* s. l. is in need of some correction. Firstly, *D. (Idiodesma) nigrovertex* Liu, 2004 (Liu & Jin, 2004) most probably belongs to the subgenus *Eoxizicus* Gorochov, 1993 of the genus *Xizicus* Gorochov, 1993 but not to *Idiodesma* or *Decma* s. l. Secondly, *Xiphidiopsis sjostedti* Karny, 1927 is correctly placed in *Decma* s. l. but should probably be transferred from the subgenus *Decma* s. str. (Jin *et al.*, 2020) to the subgenus *Neodesma*. Finally, *D. (N.) elefani orientale* Gorochov, 2012 is a separate species but not a subspecies of *D. (N.) elefani* Gorochov, 2004 (judging by the characteristic shape of its female genital plate; compare Figs 27 and 28), and two new species of *Decma* s. l. must be also described.

Subgenus *Neodesma* Gorochov, 2004

NOTES. The subgenus *Paradesma* is almost certainly a synonym of *Neodesma*, and its single species should be named *D. (Neodesma) bispinosum* Liu et Zhou, 2007. Therefore new synonymy is proposed here: *Neodesma* Gorochov, 2004 = *Paradesma* Liu et Zhu, 2007, **syn. n.**

This subgenus consists of five species: *Decma (N.) elefani* Gorochov, 2004 from Cambodia (type species of *Neodesma*), *D. (N.) orientale* Gorochov, 2012, **stat. n.** from Vietnam, *D. (N.) bispinosum* Liu et Zhou, 2007 from China and peninsular Malaysia, *D. (N.) sjostedti* (Karny, 1927) from Indonesia, and a new species from Laos described below.

Decma (Neodesma) laosi Gorochov, sp. n.

<https://zoobank.org/NomenclaturalActs/F8375CAF-80B7-43A1-9E2D-C75E6F524119>

Figs 1–7

MATERIAL. Holotype – ♂, **Laos**: Vientiane Prov., ~70 km NNW of Vientiane City, Nam Lik Eco Village on Nam Lik River, 18.61469° N, 102.40847° E, h~200 m, primary/secondary forest, at light, 10–30.VI 2017, A. Gorochov, M. Omelko (ZIN). Paratypes: 1♂, 1♀, same data as for holotype (ZIN).

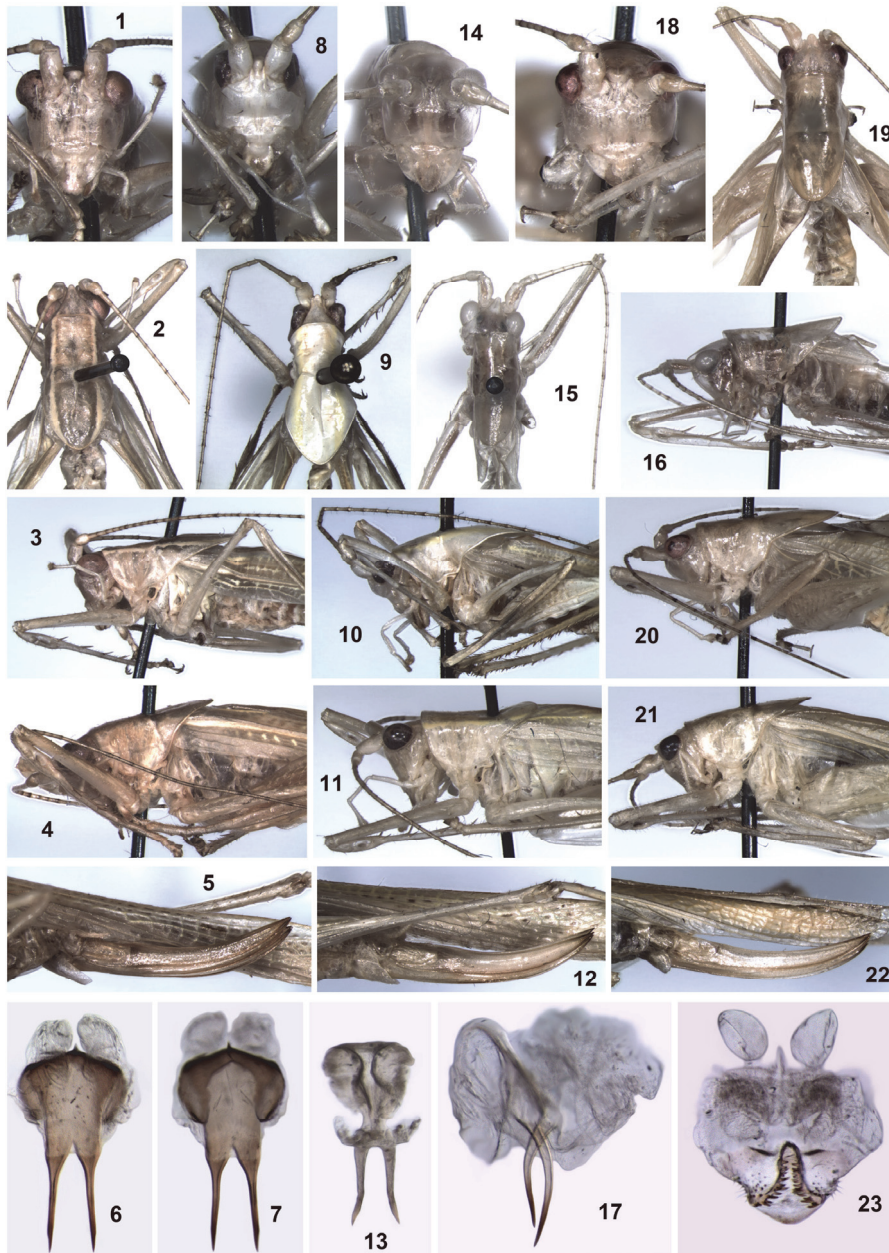
DESCRIPTION. *Male* (holotype). General appearance typical of this genus: body coloration yellowish (light greenish in living condition) with pale eyes, light brown numerous and very short rings on antennal flagellum (in its distal part, these rings distinctly longer and slightly lighter), a pair of almost whitish stripes running from medial parts of eyes to posterior part of hind pronotal lobe (these stripes running along lateral edges of pronotal disc; Figs 1–3), light greyish brown marks on some membranes in lateral tegminal fields, transparent membranes of tegminal stridulatory apparatus and of hind wings, light brown posterior edge of last tergite and distal part of subapical cercal lobule, and brown areas on lateral lobes of third tarsal segments; head with scape almost twice as wide as distance between antennal cavities, with upper rostral tubercle rather small and almost conical (but having slightly flattened dorsal surface), without distinct lower rostral tubercle, and with barely longitudinal eyes as well as rather long apical segments of maxillary palpi (these segments apically somewhat inflated and almost as long as each of two subapical segments of these palpi; Figs 1–3); pronotum with more or less flattened disc having posterior half barely inflated and with narrowly rounded posterior apex (Fig. 2), but lateral pronotal lobes with posterior half distinctly lower than anterior one (Fig. 3); tegmina long and very narrow, with normally developed both stridulatory apparatus (completely covered by hind pronotal lobe) and base of RS, with 3–4 distinct RS branches, and with narrowly rounded apices; hind wings distinctly protruding beyond tegminal apices; legs rather long and thin, with a pair of open longitudinal tympana on fore tibia, barely widened (in proximal part) middle tibia, and distinctly thickened proximal part of hind tibia; abdomen without specialization, except for its distal part which similar to that of *Neodecma* type species but with slightly less sinuate posterior edge of last tergite, with more fusiform cerci having distinctly shorter and subacute subapical lobules (these lobules directed dorsomedially and almost as long as directed backwards apical lobules), and with slightly wider and less notched apex of genital plate (Figs 30–32). Genitalia with sclerotized part having a pair of moderately long but very thin and straight apical spines (Fig. 6, 7).

Variation. Second male with marks on majority of membranes in lateral tegminal fields, with more rounded apices of subapical (dorsomedial) cercal lobules (Fig. 29), and with almost straight posterior edge of genital plate.

Female. Coloration and structure of body as in males, but pronotum with somewhat shorter hind lobe (Fig. 4), tegmina without stridulatory apparatus, subapical and apical tergites simple (subapical tergite without distinct posterolateral projections, and last tergite with only slightly convex posterior edge), cerci much smaller and without additional lobules; genital plate long and rather narrow, with slightly narrowed apical part having distinct rounded posteromedian notch between subacute posterolateral projections (Fig. 33); ovipositor as in Fig. 5.

Length (in mm). Body: male 8–8.5, female 9; body with wings: male 17–17.5, female 21; pronotum: male 3.7–3.9, female 3.4; tegmina: male 13–13.3, female 16; hind femora: male 8.7–9, female 11.3; ovipositor 5.8.

COMPARISON. The new species differs from *D. (N.) elefani* from Cambodia in the subapical (dorsomedial) lobules of the male cerci almost as long as their apical lobules (vs these lobules are almost twice as long as the latter lobules; compare Figs 24–26 and 30–32), in the female genital plate having different apical shape (for comparison see Figs 27 and 33), and in the male genital sclerite having shorter and more straight apical spines. From *D. (N.) orientale* from Vietnam, the new species is distinguished by the female genital plate with a distinctly less deep and not angular posteromedian notch (see Figs 28 and 33), and possibly by the same male characters as from *D. (N.) elefani*; however, I cannot exclude that the male from Vietnam, attributed to “*D. (N.) elefani orientale*” by Gorochoy (2012), may really belong



Figs 1–23. Genera *Decma* and *Alloteratura*: 1–7 – *D. (Neodecma) laosi* sp. n. (1–3, 6, 7, holotype); 8–13 – *D. (N.) sjostedti*; 14–17 – *D. (Decma) curupi* sp. n.; 18–23 – *A. (Alloteratura) dahilayan* sp. n. Male head in front (1, 8, 14, 18); head with pronotum and tegminal bases of male (2, 3, 9, 10, 15, 16, 19, 20) and of female (4, 11, 21) from above (2, 9, 15, 19) and from side (3, 4, 10, 11, 16, 20, 21); ovipositor from side (5, 12, 22); more or less sclerotized median part of male genitalia from above (6, 13, 17, 23) and from below (7).

to *D. (N.) elefani* but not to *D. (N.) orientale*. From *D. (N.) bispinosa* and *D. (N.) sjostedti*, the new species clearly differs in the presence of well developed subapical and apical lobules in the male cerci (see the description of a male of *D. sjostedti* below).

ETYMOLOGY. The new species is named after Laos, the country where this species was collected.

***Decma (Neodecma) sjostedti* (Karny, 1927)**

Figs 8–13, 34–37

MATERIAL. **Indonesia:** Sumatra I., Sumatera Utara Prov., ~80 km W of Medan City, environs of Bukit Lawang Vill. on Bohorok River near Gunung Leuser National Park, 3°32–33' N, 98°6–7' E, h=200–300 m, primary/secondary forest, at light, 6–14.IV 2018, 1♂, 1♀, A. Gorochov, M. Berezin, I. Kamskov, E. Tkatsheva (ZIN); Aceh Prov. near border with Sumatera Utara Prov., environs of Ketambe Vill. on Alas River near Gunung Leuser National Park, 3°41–42' N, 97°38–39' E, h=300–500 m, primary forest, at light, 29.I–8.II 2023, 5♀, A. Gorochov, M. Omelko, A. Fomichev (ZIN).

NOTE. These specimens are very similar to photographs of the female holotype of this species from Sumatera Utara Province. However, the genital plate of this female is poorly visible in these photographs, and in this connection, the determination of the above-listed specimens of the both sexes is somewhat problematic. Nevertheless, the male from this material must be described, because it may be a first known male of this species.

DESCRIPTION. *Male* (previously unknown). General appearance similar to that of *D. (N.) laosi* **sp. n.** but with following differences (Figs 8–10): body coloration whitish with greenish tinge, greyish eyes, numerous small light greyish marks on antennal flagellum, yellowish apices of maxillary palpi and a pair of longitudinal stripes from medial parts of eyes to posterior part of hind pronotal lobe (these stripes located identically to almost whitish stripes of *D. laosi* **sp. n.**), light brown stripe along each anal edge of tegminal lateral fields, a few barely darkened dots on distal halves of these fields, and without darkened marks on abdomen (except for more or less darkish genital plate); abdominal apex with less projected posterolateral corners of subapical tergite as well as with slightly medially curved and barely laterally flattened cerci (in *D. laosi* **sp. n.**, they almost not curved and not flattened) having apical parts practically undivided into lobules but more or less obliquely truncated (Figs 34–36). Genitalia with sclerotized part also similar to that of this species but having less strongly curved proximal portion and slightly curved apical spines (distal parts of these spines directed backwards and slightly laterally; Fig. 13).

Female. Coloration and structure of body as in male, but yellowish stripes on pronotum sometimes clearly wider, darkish marks on lateral tegminal fields often larger and distinctly more numerous, pronotum with hind lobe shorter (approximately as in *D. laosi* **sp. n.**; Fig. 11), and structure of tegmina and of abdominal tergites also as in female of this species; genital plate somewhat wider than in this species as well as with narrower and almost truncated apex (Fig. 37); ovipositor as in Fig. 12.

Length (in mm). Body: male 7.5, female 8.5–10; body with wings: male 16.8, female 20–20.7; pronotum: male 3.8, female 3.1–3.3; tegmina: male 12.9, female 15–15.6; hind femora: male 9.5, female 10.8–11.2; ovipositor 5.4–5.7.

COMPARISON. This species is most similar to *D. (N.) bispinosum* from China in the shape of the male cerci, but its male genitalia probably have a narrower sclerotized part with more straight apical spines (possibly, this species was recorded from Malay Peninsula as *D. bispinosum*; Tan & Kamaruddin, 2016). From all other species of *Neodecma*, it differs in the male cerci practically undivided into distinct lobules.

Subgenus *Decma* s. str.

***Decma (Decma) curupi* Gorochoy, sp. n.**

<https://zoobank.org/NomenclaturalActs/4F3C21F6-F754-444B-B8C9-F58F3B90DBCF>

Figs 14–17, 38–40

MATERIAL. Holotype – ♂, **Indonesia:** Sumatra I., Bengkulu Prov., environs of Curup Town not far from Bengkulu City, 3°28–29' S, 102°31–38' E, h=1000–1500 m, primary/secondary forest, on leaf of bush at night, 24.IV–2.V 2009, A. Gorochoy, N. Berezin, E. Tkatsheva (ZIN).

DESCRIPTION. *Male* (holotype). General appearance more or less similar to that of both previous species (*D. laosi* sp. n. and *D. sjostedti*), but: coloration uniformly whitish with greenish tinge as well as light brown spines of hind tibiae and marks on denticulated parts of cerci; pronotum shorter than in males of these species and almost without humeral notches (Figs 14–16); tegmina strongly shortened (reaching apex of third abdominal tergite) and with stridulatory apparatus distinctly longer than more distal tegminal parts (these parts with only 3 longitudinal veins and narrowly rounded apices) but not completely covered by pronotal hind lobe (Figs 15, 16); hind wings invisible (absent ?); subapical tergite without posterolateral projections; last tergite with almost widely rounded posterior edge; cerci long, clearly arcuate, moderately thin, with laterally flattened but not widened distal parts, with thin and straight medial spine on each cercal base (this spine finely denticulated) which not pressed to main cercal body, and with ventromedial angular projection at middle of this cercal body (this projection horizontally lamellar, posteromedially denticulated and connected with low, long and denticulated ventromedial keel along more distal part of this cercal body; Figs 38–40); genital plate wide but with strongly narrowed distal part having thin styles and distinct angularly rounded notch between them (Fig. 39, 40). Genitalia with sclerotized part long, narrow and mostly semimembranous but having a pair of thin and rather long spines slightly arcuate in proximal parts (Fig. 17).

Female unknown.

Length (in mm). Body 7.8; pronotum 3.2; visible parts of tegmina 1.8; hind femora 8.4.

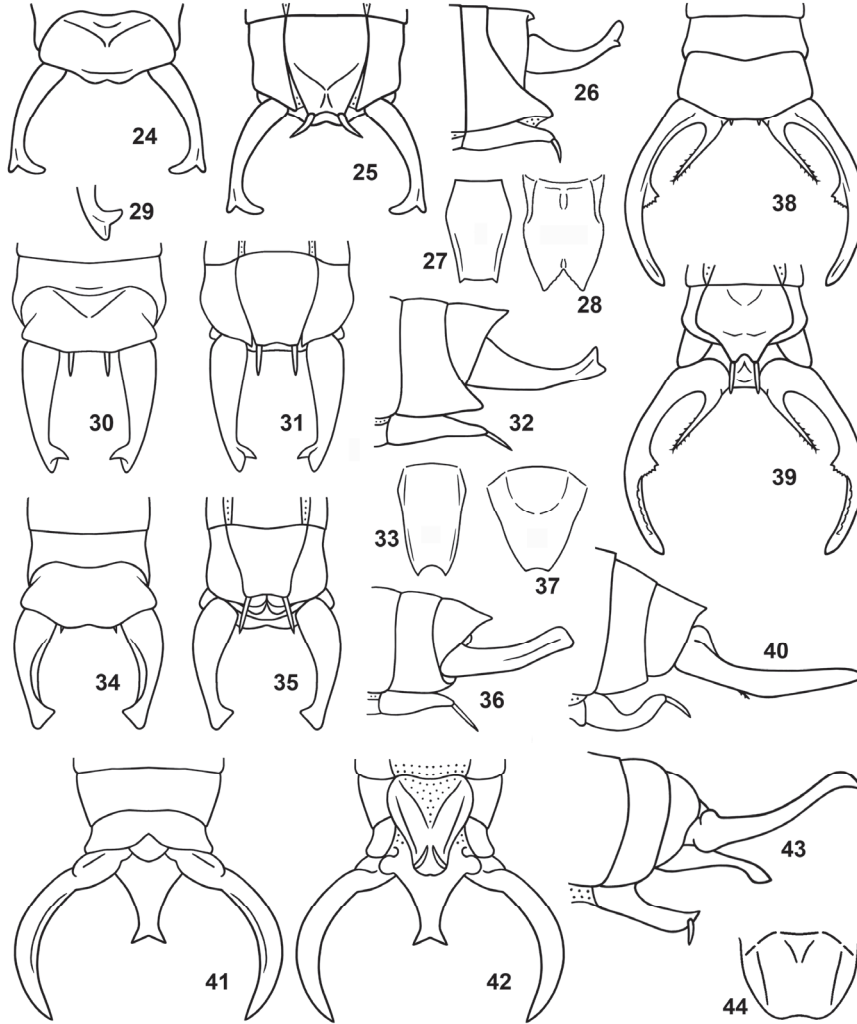
COMPARISON. The new species is somewhat similar to *D. (D.) brachyptera* Chang, Du et Shi, 2013 from Taiwan and to *D. abruptum* Gorochoy, 2012 from Sulawesi in strongly shortened wings. However: it differs from *D. (D.) brachyptera* in narrower distal parts of the male cerci, the presence of a lamellar ventromedial projection at the middle of each male cercus, and a less arcuate proximodistal spine of this cercus; from *D. abruptum*, lacking known male, the new species is distinguished by the absence of distinct yellowish stripes along the lateral edges of the pronotal disc and slightly less low pronotal lateral lobes. And from all other congeners, it differs in strongly shortened wings and some features of body coloration and of abdominal structure (including shape of spines in the male genitalia).

ETYMOLOGY. The new species is named after Curup Town, situated near its type locality.

Genus *Alloteratura* Hebard, 1922

NOTE. This genus includes numerous Indo-Malayan species with extremely short apical segments of the maxillary palpi (Hebard, 1922) and is divided into 4 subgenera (Gorochoy, 2016, 2024): *Alloteratura* s. str. with about 30 species (but many of them are in need of restudy for detalization of their subgeneric position); *Meconemopsis* Karny, 1922 with 17–18

species; *Deinoratura* Gorochoy, 2024 with four species; *Protoratura* Gorochoy, 2024 with two species, but *A. (Meconemopsis) dawwruengi* Tan et Artchawakom, 2017 (Thailand) with undescribed male genitalia (Tan & Artchawakom, 2017) looks more or less intermediate between *Protoratura* and *Meconemopsis* and may be a third species of *Protoratura*.



Figs 24–44. Genera *Decma* and *Alloteratura*: 24–27 – *D. (Neodecma) elefani* (24–26, holotype); 28 – *D. (N.) orientale* stat. n. (holotype); 29–33 – *D. (N.) laosi* sp. n. (30–32, holotype); 34–37 – *D. (N.) sjostedti*; 38–40 – *D. (Decma) curupi* sp. n.; 41–44 – *A. (Alloteratura) dahilayan* sp. n. Male abdominal apex from above (24, 30, 34, 38, 41), from below (25, 31, 35, 39, 42) and from side (26, 32, 36, 40, 43); distal part of left male cercus from above and slightly laterally (29); female genital plate from below (27, 28, 33, 37, 44). [24–27, after Gorochoy (2004), modified; 28, after Gorochoy (2012).]

Subgenus *Alloteratura* s. str.

***Alloteratura (Alloteratura) dahilayan* Gorochoy, sp. n.**

<https://zoobank.org/NomenclaturalActs/A54BE491-D100-49A5-8EDB-87356E832A53>

Figs 18–23, 41–44

MATERIAL. Holotype – ♂, **Philippines:** Mindanao I., ~150 km NNW of Dabaw City, environs of Dahilayan Adventure Park, 8°11'38" N, 124°51'39" E, h=1000–1500 m, primary/secondary forest, on leaf of bush at night, 2–9.II.2024, A. Gorochoy, M. Omelko, I. Naumenko (ZIN). Paratypes: 2 ♀, same data as for holotype (ZIN).

DESCRIPTION. *Male* (holotype). Body coloration yellowish with following marks: eyes brown; antennal flagellum with moderately numerous and small as well as light brown to brown spots; tegmina with transparent membranes in tegminal stridulatory apparatus, light brown area on distal half of this apparatus in left (upper) tegmen, very light brown stripe along anal edge of each tegmen behind above-mentioned apparatus; hind wings with all membranes transparent; legs also with very light brown both tympanic membranes, but hind tibia with light brown to brown spines, and each tarsus with third segment having somewhat darkened marks on lateral lobes (Figs 18–20). Head and pronotum typical of this subgenus: upper rostral tubercle slightly projected before marginal keels of antennal cavities but rounded at apex, flattened dorsally and with distinct thin median (longitudinal) groove on dorsum (this tubercle slightly widening to basal part, but distance between antennal cavities almost as wide as in *D. (N.) laosi* sp. n.); lower rostral tubercle undeveloped; eyes slightly longitudinal (Figs 18–20); pronotum as in Figs 19 and 20 (its posterior part not completely covering stridulatory apparatus of tegmina). Wings slightly shortened (somewhat shorter than in *D. laosi* sp. n. and *D. sjostedti*); apices of hind wings reaching tegminal apices; tegminal stridulatory apparatus as in Fig. 19; tegminal apices narrowly rounded; tegminal RS with normal base and 2–3 branches in distal part; legs long and thin, but hind femur with distinctly thickened proximal half and without acute apical spinules. Abdomen with all tergites unspecialized, but last one with wide but moderately deep and approximately obtuse-angled posteromedian notch; cerci almost sickle-shaped, dorsoventrally compressed and with acute apices; epiproct and paraprocts lobule-like, small and very small, respectively; subanal plate rather large, almost triangular, with strongly concave lateral sides, with rather narrow and apically slightly widened median lobe having apical part barely bifurcated, and with lateral parts articulated with last tergite posteroventral parts; genital plate with distal part narrowing to rounded but hardly bilobed apical portion, and with a pair of thin and moderately short styles on ventral surface of this portion (Figs 41–43); genitalia with almost V-shaped but reversed semimembranous plate having posterior parts curved aside (dorsally, this plate almost completely covered by rather numerous but moderately small spinules) (Fig. 23).

Female. General appearance as in male, but eyes often dark brown, tympanic membranes sometimes brown, tegmina without darkened marks or with only very light brown stripe along each anal edge, tegminal stridulatory apparatus undeveloped, last tergite somewhat smaller and almost truncated apically, cerci smaller and almost cylindrical but clearly curved upwards; genital plate and ovipositor as in Figs 22, 44.

Length (in mm). Body: male 8, female 8.2–8.5; body with wings: male 13.5, female 14.5–14.7; pronotum: male 3.8, female 3.5–3.6; tegmina: male 10.4, female 11.5–11.8; hind femora: male 8, female 8.5–8.7; ovipositor 5.6–5.7.

COMPARISON. The new species is more or less similar to *A. (A.) triloba* (Karny, 1920) from Malay Peninsula in the shape of the male subanal plate, but this plate in the new species

is distinctly narrower in its posteromedian part. From other philippinean species, the new one is distinguished by the following characters: from *A. (A.) bakeri* Hebard, 1922 (Mindanao I.), *A. (A.) xiphidiopsis* (Karny, 1920) (Luzon I.) and *A. (A.) plauta* Jin, 1995 (Negros I.), by the male cerci much thinner; from *A. (A.) simplex* (Karny, 1920) (Luzon I.), by the male subanal plate longer and clearly narrower in its posteromedian part; from *A. (A.) longicauda* (Karny, 1924) (Mindanao I.), by shorter wings and ovipositor. And from all other congeners belonging to this subgenus or having unclear subgeneric position, the new species differs in the same characters and/or in the male subanal plate apically slightly bifurcated (not spine-like).

ETYMOLOGY. The new species is named after Dahilayan Adventure Park placed very near its type locality.

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