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NEW GRASSHOPPERS OF THE TRIBE GERENIINI (ORTHOPTERA: ACRIDIDAE, CATANTOPINAE) FROM THAILAND AND VIETNAM

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A monotypic genus *Anasedulia maejophræ* **gen. et sp. n.** and a new species *Striatosedulia cattiensis* **sp. n.** are described from Thailand and Vietnam respectively. A key to species of the genus *Striatosedulia* is also provided.

KEY WORDS: Orthoptera, Acrididae, Catantopinae, Gereniini, new taxa, South-East Asia.

Р. Даввруенг¹⁾, С. Ю. Стороженко²⁾, Л. Асанок^{3*)}. Новые саранчовые трибы Gereniini (Orthoptera: Acrididae, Catantopinae) из Таиланда и Вьетнама // Дальневосточный энтомолог. 2015. N 299. С. 1-10.

Из Таиланда и Вьетнама, соответственно, описаны монотипичный род *Anasedulia maejophræ* **gen. et sp. n.** и новый вид *Striatosedulia cattiensis* **sp. n.** Дана определительная таблица видов рода *Striatosedulia*.

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INTRODUCTION

Still now 15 species in seven genera of the tribe Gereniini (Acrididae: Catantopinae) are recorded from Myanmar, Thailand, Cambodia, Vietnam and continental part of Malaysia (Willemsse, 1956; Ingrisch, 1989; Storozhenko, 1992, 2002, 2005, 2009; Kim & Pham, 2014; Eades *et al.*, 2015). One new monotypic genus and one new species of the genus *Striatosedulia* are found in Thailand and Vietnam respectively and described in present paper. Holotypes and paratypes of the new species are deposited in the Thailand Natural History Museum (THNHM) and the Zoological Institute of the Russian Academy of Sciences, St. Petersburg (ZISP).

KEY WORDS: Orthoptera, Acrididae, Catantopinae, Gereniini, new taxa, South-East Asia.

DESCRIPTIONS OF NEW TAXA

Family Acrididae MacLeay, 1821

Subfamily Catantopinae Brunner von Wattenwyl, 1893

Tribe Gereniini Brunner von Wattenwyl, 1893

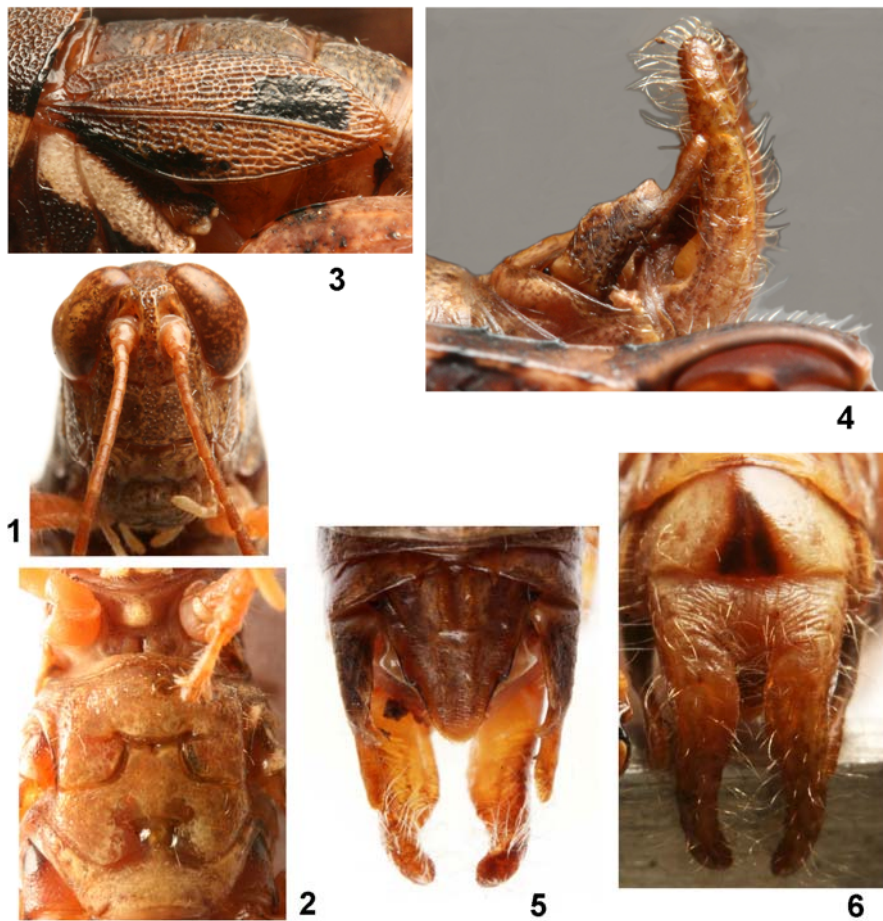
Genus *Anasedulia* Dawwrueng, Storozhenko et Asanok, gen. n.

Type species: *Anasedulia maejophræ* sp. n., here designated.

DIAGNOSIS. New genus belongs to the group of genera of Gereniini with scale-like tegmina, not touching each other in rest position. It differs from *Striatosedulia* Ingrisch, 1989 by present of the irregular vienlets in costal field of tegmen (in *Striatosedulia* costal field with parallel vienlets) and similar in this aspect to *Sedulia* Stål, 1878 and *Leosedulia* Storozhenko, 2009. From both genera it differs by the shape of male cerci (in *Sedulia* cerci terminating into two spines; in *Leosedulia* cerci with pointed apex). New genus is also easy recognizable by the unusually long lateral lophi of male subgenital plate (in *Sedulia* and *Leosedulia* subgenital plate conical without lateral lobes; in *Striatosedulia* plate with two short obtuse lateral lobes) and by narrow ectophallic sheath of penis (in *Leosedulia* and *Striatosedulia* sheath broadly triangular).

DESCRIPTION. Male medium-sized; female larger and more robust. Head considerably shorter than pronotum. Frontal ridge narrow, almost parallel-sided. Vertex between eyes 1.4-1.8 times as broad as frontal ridge between antennae. Eyes large; vertical diameter of eye 1.9-2.1 times in male and 1.5-1.6 times in female as long as subocular furrow. Antennae 20-21 segmented, reaching base of hind femora in male and posterior margin of pronotum in female; mid segments of antennae 2.2-2.8 times as long as wide. Pronotum long, crossed by three transverse furrows; prozona 1.4-1.5

times in male and 1.3-1.4 times in female as long as metazona; anterior margin of prozona obtuse rounded; posterior margin of metazona angularly rounded; lateral carinae absent; median carina distinct. Prosternal spine straight, conical, with obtuse apex. Mesosternal lophi broad, 1.3-1.5 times as wide as long; mesosternal interspace trapezoidal, 1.3-1.4 times in male and 1.4-1.7 times in female as wide as long. Tegmina scale-like and with narrowly rounded apex, not touching each other in rest position, 2.2-2.6 times in male and 1.8-2.0 times in female as long as wide, reaching hind margin of third tergite; costal field with irregular vienlets. Hind wings absent. Hind femora stout, 3.1-3.3 times in male and 3.4-3.6 times in female as long



Figs 1–6. *Anasedulia maejophræ* sp. n., male. 1 – head, frontal view; 2 – sternum, ventral view; 3 – tegmen, lateral view; 4 – apex of abdomen, lateral view; 5 – the same, dorsal view; 6 – the same, ventral view.



Figs 7–8. *Anasedulia maejophræ* sp. n., body, lateral view. 7 – male; 8 – female.

as maximal width of these femora; dorsal carina serrated. Hind tibiae with 7-8 outer dorsal spines and 8 inner dorsal spines; outer apical dorsal spine absent. Hind tarsi short, not longer than half of hind tibiae; third segment (without claws) 1.2-1.4 times shorter than two others together; arolium large, almost reaching apex of claws. Tympanum large, oval. Male tenth tergite with two short and distinctly separated furculae on posterior margin. Male supra-anal plate triangular, 1.2-1.3 times as long as its width near base, with rounded apex; median furrow interrupted, in basal part deep and bordered by distinct parallel carinae, in apical part shallow. Female supra-anal plate triangular, 1.3-1.4 times as long as its width near base, rounded apex; median furrow shallow; with transverse median furrow. Male cerci in dorsal view compressed and almost straight, in lateral view 3.1-3.2 times as long as their width near base, in apical third suddenly narrowed with rounded apex; dorsal side of cerci with triangle tooth situated before narrowing part. Female cerci conical, 1.7-1.8 times as long as their width near base, with attenuated apex. Male subgenital plate with unusually long lateral lophi covered by long hair-like setae. Female subgenital plate elongate, 1.6-1.8 times as long as wide; posterior margin with large median angular projection and without lateral excisions. Ovipositor short, hook-like; dorsal valves smooth; ventral valves with tooth near base. Male genitalia as in Figs. 9–12.

SPECIES INCLUDED. Type species only.

***Anasedulia maejophræ* Dawwrueng, Storozhenko et Asanok, sp. n.**

Figs 1–12

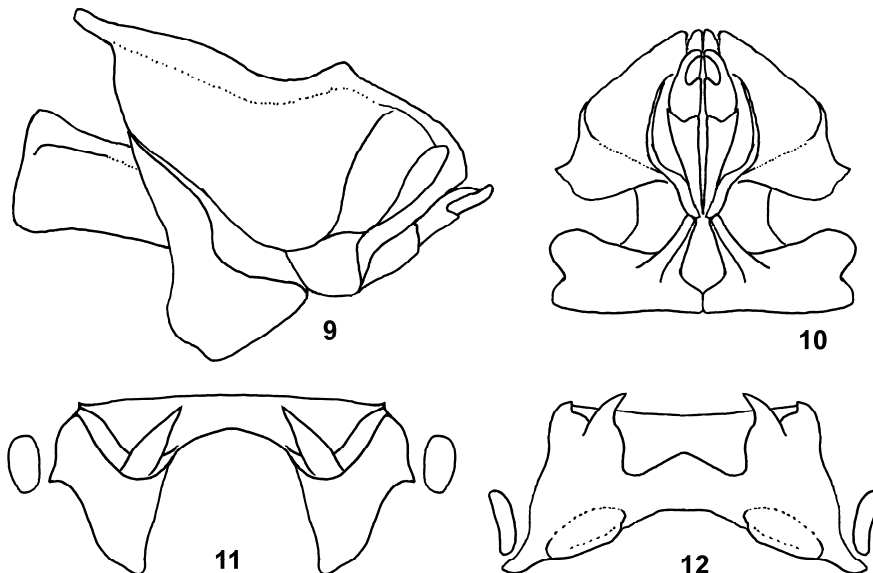
MATERIAL. Holotype – male, **Thailand**: Phrae Province, environs of Maejo University Phrae Campus, 1.VIII 2015, coll. P. Dawwrueng; deposited in THNHM. Paratypes – 3 male, 3 female, the same label as in holotype (THNHM).

DESCRIPTION. Male body brown with light brown and blackish pattern. Head light brown above; frons light brown with numerous small irregular blackish spots. Basal third of antennae blackish brown; rest of antennae black, but 17-18th and 21th segments yellow. Disc of pronotum brown; lateral lobes blackish with light brown stripe in upper part. Tegmina light brown with two large and shining black spot in the basal part of costal field and the ventral part near middle. Fore and mid legs light brown with blackish brown spots. Hind femur brown with three oblique black bands on external and dorso-external areas; internal area with two black bands; ventro-external area light brown; hind knees brown. Hind tibia yellowish brown; spines yellow with black apex. 1-4-th tergites blackish brown, 5-10th tergites light brown. Sternites and supra-anal plate brown; subgenital plate shining brown. Cerci brown with yellowish apex.

Female. Coloured as male, but frons almost without blackish spots; lateral lobes of pronotum brown with light brown stripe in upper part and mid femur brown with black spots in lower part. Three oblique blackish bands on the external and dorso-external areas of hind femur less distinct than in male; inner side of hind femur light brown with two black bands; ventro-external area light brown. All tergites brown without stripes along posterior margin; sternites, subgenital plate, cerci and supra-anal plate brown. Ovipositor light brown, with blackish apex.

MEASUREMENTS (in mm). Length of body male 20.3–22.7, female 28.6–31.2; pronotum male 5.3–5.5, female 7.6–8.5; tegmen male 5.8–6.0, female 7.2–7.6; hind femur male 11.4–11.8, female 15.5–16.4.

DISTRIBUTION. Thailand (endemic to Phrae Province)



Figs 9–12. *Anasedulia maejophræ* sp. n., male genitalia. 9 – phallic complex, lateral view; 10 – the same, posterior view; 11 – epiphallus, frontal view; 12 – the same, dorsal view.

Genus *Striatosedulia* Ingrisch, 1989

Type species: *Striatosedulia pluvisilvatica* Ingrisch, 1989, by original designation.

COMPOSITION. Up to now the genus consists of three species from Southeast Asia. One new species is found in South Vietnam. Differences of new species from congeners are given below in a key.

Key to species of *Striatosedulia*

- 1(4) Male supra-anal plate more or less triangular. Female tegmina with obtuse-angular apex.
- 2(3) Apical part of hind tibia red. Male tegmen 2.3-2.4 times as long as wide. Male cerci stout, 2.5 times as long as wide near the base. Thailand (endemic to Rayong Province: south of Kleang, Wan Keo) ***S. pluvisilvatica* Ingrisch, 1989**

- 3(2) Hind tibia completely light brown. Male tegmen 2.7-3.1 times as long as wide. Male cerci slender, 3.8-3.9 times as long as wide near the base. Thailand (endemic to Trat Province: Chang Island in Siam Bay) ... *S. beybienkoi* Storozhenko, 2005
- 4(1) Male supra-anal plate trapezoidal. Female tegmina with broadly rounded apex.
- 5(6) Prozona in male 1.9 times, in female 1.7 times longer than metazona. Male cerci slender, 2.9 times as long as wide near the base. Vietnam (endemic to Dong Nai Province: 55 km NW Ho Chi Minh City, Ma Da Forest)
 *S. ingrishi* Storozhenko, 1992
- 6(5) Prozona in male 1.3-1.5 times, in female 1.4 times as long as metazona. Male cerci stout, 2.6 times as long as wide near the base *S. cattiensis* sp. n.



Figs 13–16. *Striatosedulia cattiensis* sp. n., male. 13 – head, pronotum and base of abdomen, dorsal view; 14 – apex of abdomen, lateral view; 15 – the same, dorsal view; 16 – the same, ventral view.

***Striatosedulia cattiensis* Dawwrueng, Storozhenko et Asanok, sp. n.**

Figs 13–22

MATERIAL. Holotype – male, **Vietnam:** Dong Nai Province, Cat Tien National Park, 3-14.XII 2010, coll. L.N. Anisyutkin and A.E. Anichkin; deposited in ZISP. Paratypes – 1 male, 1 female, the same label as in holotype (ZISP).

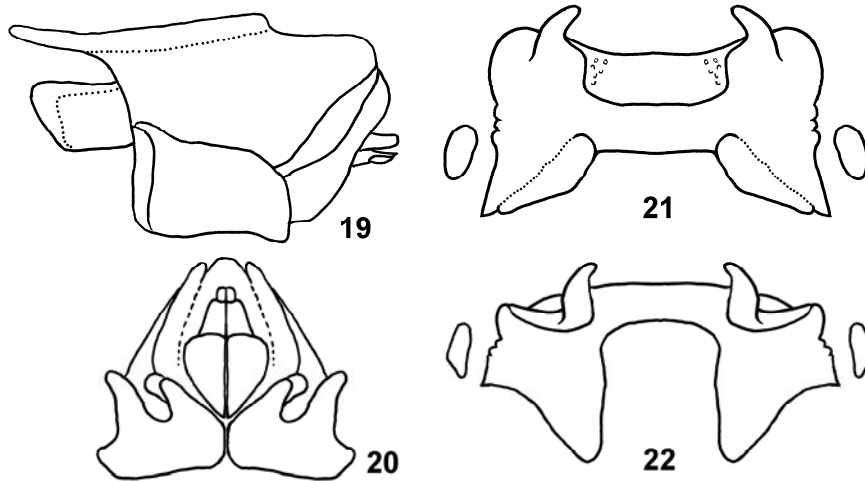
DESCRIPTION. Male. Body medium-sized for genus, rugose. Head considerably shorter than pronotum. Face in profile reclinate; frontal ridge projecting somewhat between antennae, reaching to clypeal margin, distinctly sulcate above and shallowly sulcate below median ocellus; carinae of frontal ridge almost parallel. Fastigium of

vertex with subacute apex; vertex between eyes as broad as frontal ridge between antennae. Antennae filiform, 24-segmented, reaching basal quarter of hind femora; mid segments 2.5-2.6 times as long as broad. Eyes large, oval; vertical diameter of eye 2.2-2.5 times as long as subocular furrow. Vertex and occiput rugose. Pronotum long, widened posteriorly, rugose, crossed by three transverse furrows; prozona 1.3-1.5 times as long as metazona; anterior margin of prozona obtuse rounded; posterior margin of metazona angularly rounded; lateral carinae absent; median carina distinct. Prosternal spine straight, conical, with obtuse apex. Mesosternal lophi broad, 1.2-1.3 times as wide as long; mesosternal interspace trapezoidal, 1.2 times as long as broad. Metasternal lobes separated. Tegmina scale-like and with rounded apex, not touching each other in rest position, 2.6-2.8 times as long as wide, reaching hind margin of 4-5th tergites; tegmina with parallel vienlets in costal field. Hind wings absent. Hind femora stout, 3.6-3.8 times as long as wide; dorsal carina serrate, terminating in a small tooth; ventral genicular lobes obtuse. Hind tibiae with 7-8 outer dorsal spines and 9 inner dorsal spines; outer apical dorsal spine absent. Hind tarsi short, not longer than half of hind tibiae; third segment (without claws) 1.4 times shorter than two others together; arolium large, almost reaching apex of claws. First abdominal tergite with large oval tympanum. Tenth tergite without furculae on posterior margin. Supra-anal plate trapezoidal, almost as long as wide near base, with triangle apex; median furrow narrow, bordered by distinct parallel carinae. Cerci in dorsal view compressed and gently incurved, in lateral view 2.6 times as long as their width near base, in apical third strongly narrowed, but with widened apex. Subgenital plate short, conical, terminating in two obtuse lateral lobes. Male genitalia as in Figs. 19-22.



Figs 17-18. *Striatosedulia cattiensis* sp. n., body, lateral view. 77 – male; 18 – female.

Body brown with light brown and blackish pattern. Head light brown above; frons light brown with numerous small irregular blackish spots. Basal third of antennae blackish brown; rest of antennae black, but 17-18th and 24th segments yellow. Disc of pronotum brown; lateral lobes blackish with light brown stripe in upper part. Tegmina light brown with large and shining black spot in the basal part of costal field. Fore and mid legs light brown. Hind femur brown with three oblique black bands on external and dorso-external areas; internal area with two black bands; ventro-external area light brown; hind knees brown. Hind tibia yellowish brown; spines yellow with black apex. 1-5-th tergites blackish brown, 6-10th tergites light brown. Sternites and supra-anal plate brown; subgenital plate shining brown. Cerci brown with yellowish apex.



Figs 19–22. *Striatosedulia cattiensis* sp. n., male genitalia. 19 – phallic complex, lateral view; 20 – the same, posterior view; 21 – epiphallus, dorsal view; 22 – the same, frontal view.

Female. Similar to male, but larger. Head as in male, but vertex between eyes 1.1 times as broad as frontal ridge between antennae. Antennae 24-segmented, reaching base of hind femora only; mid segments 2.7-2.8 times as long as broad. Vertical diameter of eye 1.8 times as long as subocular furrow. Pronotum as in male; prozona 1.4 times as long as metazona. Prosternal spine and mesosternal lophi as in male; mesosternal interspace 1.4 times as long as broad. Metasternal lobes widely separated. Tegmina with rounded apex, 2.0 times as long as wide, reaching middle of 3th tergite; in costal field tegmina with parallel venlets. Supra-anal plate triangular, 1.5 times as long as its width near base, with narrowly angular apex; median furrow shallow. Female cerci conical, 2.9 times as long as their width near base, with attenuated apex. Female subgenital plate elongate, 1.8 times as long as wide; posterior margin with long median projection and without lateral excisions. Ovipositor short, hook-like; dorsal valves smooth; ventral valves with distinct tooth near base.

Coloured as male, but frons almost without blackish spots; lateral lobes of pronotum black and mid femur brown with black spots. Three oblique blackish bands on the external and dorso-external areas of hind femur less distinct than in male; inner side of hind femur light brown with two black bands; ventro-external area light brown. All tergites blackish brown without stripes along posterior margin; sternites, subgenital plate, cerci and supra-anal plate brown. Ovipositor light brown, with blackish apex.

MEASUREMENTS (in mm). Length of body male 16.0–16.5, female 21.7; pronotum male 5.3–5.5, female 7.2; tegmen male 5.5–5.6, female 5.5; hind femur male 11.5–12.1, female 15.4.

DISTRIBUTION. Vietnam (endemic to Dong Nai Province).

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REFERENCES

- Eades, D.C., Otte, D., Cigliano, M.M. & Braun, H. 2015. *Orthoptera Species File Online. Version 5.0/5.0* Available from: <http://Orthoptera.SpeciesFile.org>. (Accessed 15 August 2015).
- Ingrisch, S. 1989. Records, descriptions, and revisionary studies of Acrididae from Thailand and adjacent regions (Orthoptera, Acridoidea). *Spixiana*, 11(3): 205–342.
- Kim, T.-W. & Pham, H. T. 2014. Checklist of Vietnamese Orthoptera (Saltatoria). *Zootaxa*, 3811(1): 53–82. DOI: 10.11646/zootaxa.3811.1.3
- Storozhenko, S. 1992. A new species of the genus *Striatosedulia* Ingrisch from Vietnam (Orthoptera, Acrididae). *Entomofauna*, 13(11): 205–212.
- Storozhenko, S.Yu. 2002. New acridids of the tribe Gereniini (Orthoptera, Acrididae) from Vietnam. *Entomologicheskoe Obozrenie*, 81(3): 600–604. [In Russian with English summary].
- Storozhenko, S.Yu. 2005. New grasshoppers of the subfamily Catantopinae (Orthoptera, Acrididae) from Thailand. *Proceedings of the Russian Entomological Society. St. Petersburg*, 76: 79–91. [In Russian with English summary].
- Storozhenko, S.Yu. 2009. New and little-known Orthoptera from South-East Asia. *Proceedings of the Russian Entomological Society. St. Petersburg*, 80(1): 11–20.
- Willemse, C. 1956. Synopsis of the Acridoidea of the Indo-Malayan and adjacent regions (Insecta, Orthoptera). Part II. Fam. Acrididae, subfam. Catantopinae, part I. *Publicaties van het Natuurhistorisch genootschap in Limburg*, 8[1955]: 1–225.