A taxonomic study of tenebrionid beetles (Coleoptera: Tenebrionidae) from Thailand and Laos

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Abstract. Six new tenebrionid beetles, together with a new genus, from Thailand and Laos are described: *Chaetopsia thailandicus* sp. nov., *C. chiangmaiensis* sp. nov., *Falsonannocerus laosensis* sp. nov., *Maostrongylium* gen. nov., *Maostrongylium phousamsounum* sp. nov., *Steneucyrtus huaphanensis* sp. nov., and *Spinogauromaia maerimensis* sp. nov. Seven known species are proposed to be new combinations and a new distribution record is reported.

INTRODUCTION

We have been studying the tenebrionid fauna of southeastern Asia, particularly from Thailand and Laos for the last several decades. Among the Masumoto Collections (Tenebrionidae) in the National Museum of Nature and Science, Tsukuba, Ibaraki Pref., Japan and the Akita Private Collection in Tsu, Mie Pref., Japan, we found some unknown tenebrionid species from these areas. We have been examining them and recognized that six species are new to science. Of those, one unique species belongs to a new genus. So we will describe herein six new species and a new genus in this paper. In addition, we propose seven known species to be new combinations.

MATERIAL AND METHODS

The specimen materials used for this study, as mentioned above, were used from the Masumoto Collection (Tenebrionidae) preserved in the National Museum of Nature and Science (NSMT), Tsukuba, Ibaraki Pref., Japan, and the Akita Private Collection, Tsu City, Mie Pref., Japan.

External morphology and male genitalia were examined using an Olympus SZ60 and a Leica MS5 stereoscopic microscope. Pictures were taken using an Olympus PEN E-P3 digital camera equipped with an extension tube and a ZUIKO AUTO-MACRO 50mm f3.5 lens or a 80mm f4 lens, and stacked using the free software Combine ZM from Alan Hadley.

The label data of the analysed specimens are verbatim cited between quotation marks, and a slash is used to separate lines of the data on the label, and a double slash separates the labels. Holotypes are deposited in the collection of the National Museum, Nature and Science (NSMT), and paratypes are preserved in the same collection for the moment, but will be shared among major museums and institutes overseas and also shared in the Mie Prefectural Museum, Mie Pref., Japan.

Abbreviations used herein are as follows: BL = Body length; BW = Body width; LAI-XI = Length of antennomere I to XI in mm; WE/ED = Width between eyes / Eye transverse diameter; PW = Pronotal width; PL = Pronotal length; EL = Elytral length; EW = Elytral width; LTB-A = Length of pro-, meso- and metatarsi from baso- to apicomeres in mm; AL = Aedeagus length. AW = Aedeagus width; AbL = Basale of aedeagus length; AaL = Apicale of aedeagus length.

TAXONOMY

Genus *Chaetopsia* Gebien, 1925

Type species: *Chaetopsia angusticollis* Gebien, 1925: 568.

Chaetopsia thailandicus sp. nov.

(Fig. 1)

Type locality. Thailand, Chiang Rai, Wiang Pa Pao.

Type material. Holotype (♀): "Thailand, Chiang Rai, / Wiang Pa Pao, / 20-29. V. 2017, / K. Takahashi leg. // Coll. Masumoto /2017", (NSMT).

Description of holotype. BL 5.68 mm, BW 2.23 mm, BL/BW 2.5, elongated subelliptical, though the anterior body is narrower than the posterior body, rather strongly convex longitudinally. Except for elytral tubercles, body is black with feeble brownish tinge, the tubercles are black, and hairs are mostly brownish yellow, and partly dark brown; except for tubercles, the dorsal surface strongly shining (often matt due to dusty secretion), the tubercles also strongly shining, the ventral surface with anterior portion weakly shining, and posterior portion (=abdomen) weakly shining; body surface rather sparsely clothed with short hairs, antennae and legs fairly closely clothed with fine hairs.

Head transversely subelliptical, strongly raised posteriad; clypeus semicircular, weakly depressed in basal part, rather strongly raised in anterior part, truncate and reflexed at apex, surface micosculptured in medial part, finely punctate in lateral parts; fronto-clypeal border roundly curved, weakly deepened in lateral parts; genae weakly raised antero-laterad, weakly microsculptured, sparsely micro-granulate; frons rather wide, weakly microsculptured, closely granulo-punctate, each puncture with a minute rod-like hair; ocular sulcus deepened in postero-interior areas. Eyes weakly convex laterad, short subelliptically inlaid into head, with minute suberect rod-like hairs; WE/ED 2.7. Antennae subclavate, tip of antennomere XI reaching to a little before the middle of pronotum; LAI-XI: 0.13, 0.05, 0.08, 0.05, 0.04, 0.07, 0.08, 0.09, 0.10, 0.12, 0.16.

Pronotum inverted subtrapezoidal, PL 1.26 mm, PW1.33 mm, PW/PL 1.1, widest at apical 2/5; apex rather strongly produced dorso-anteriad; base weakly produced posteriad, weakly bordered in medial part, slightly sinuous in lateral parts; front angles rounded; hind angles obtuse; disc strongly convex, coarsely punctate, each puncture with a microsculptured bottom and a rod-like hair at each center; spaces among punctures coarsely granulate; sides rather steeply declined to lateral margins, which are slightly expanded, serrated with saw-shaped granules, each crenulate space with a minute rod-like hair. Scutellum linguiform, slightly convex, minutely granulate and closely punctulate.

Elytra elongated subelliptical, EL 4.15 mm, EW 2.15 mm, EL/EW 1.9, EL/PL 3.3, EW/PW 1.6; dorsum fairly strongly convex longitudinally, highest at a little before the middle; disc rather finely grooved with rows of small punctures; intervals with rows of shiny tubercles, those on even intervals mostly small and round, and those on odd ones large or elongated, those on interval III most noticeable; surface irregularly minutely granulate; sides rather steeply inclined, and slightly enveloping hind body, with lateral margins each bordered by punctate-groove, coarsely ridged, and hardly visible from above; humeri gently swollen; apices obtusely rounded.

Maxilla with terminal palpomere gently dilated, with the apex oblique. Mentum small and

subquadrate, sparsely punctate and minutely, setaceously haired. Gula gently convex, semicircularly bordered by finely groove from head, very weakly microsculptured.

Prosternum weakly depressed in major anterior part, strongly raised in posterior part (intercoxal space), weakly microsculptured, closely, minutely punctate, each puncture with a minute, short, rather bold hair; apex gently emarginate, finely ridged; prosternal process small, microsculptured, micro-granulate, roundly produced ventrad. Mesoventrite rather short, rather strongly depressed, closely punctate in anterior part, strongly raised, microsculptured and micro-granulate in posterior part. Metaventrite gently convex, weakly depressed and micro-granulate in anterior part (posterior part of inter-mesocoxal space), longitudinally impressed on median line, weakly microscuptured, weakly micro-granulate, minutely punctate, each puncture with a minute, short, rather bold hair, the hairs becoming more distinct in lateral parts.

Fig. 1. *Chaetopsia thailandicus* sp. nov., holotype, ♀, habitus. Scale: 5.0 mm.

Abdomen gently, longitudinally convex, weakly microsculptured, closely punctate, each puncture with a minute hair; ventrite V with rounded apex.

Legs a little slender among the members. Femora elongated subclavate, minutely tuberclate, closely punctate, each puncture with a minute subdecumbent hair. Tibiae slightly becoming bolder apicad, weakly bent ventrad before each apex, minutely tuberclate, closely punctate, each puncture with a short, minute, subdecumbent hair; intero-ventral surfaces clothed with fairly long, fine hair. Tarsi normal in length, LTB-A: 0.15, 0.12, 0.11, 0.10, 0.37; 0.16, 0.09, 0.11,

0.11, 0.39; 0.20, 0.14, 0.10, 0.40.

Ovipositor chitinous, 1.12 mm in length, 0.09 mm in width, with apical part rather waxing-moon-shaped, with sensorial bristles near apex.

Male. Unknown.

Diagnostic notes. This new species resembles *Chaetopsia minuta* Masumoto, 1986, described from Central Luzon, the Philippines. As comparing with each species in female specimen, the former can be distinguished from the latter by the body a little bolder, the head more coarsely granulate, the pronotum more coarsely granulate, with apical margin more strongly produced anteriad, and sinuous in lateral parts, lateral margins expanded and more strongly widened in anterior parts, the elytra with tubercles obviously larger, the legs slenderer, and the body coloration darker.

It is worthy to note that this new species is the first one collected from Thailand in the Asian Continent.

Etymology. The specific name, *thailandicus*, is given after the place where the holotype was collected.

Distribution. Northern Thailand.

Chaetopsia chiangmaiensis sp. nov.

(Figs. 2-4)

Type locality. Thailand, Chiang Mai, Mae Rim District.

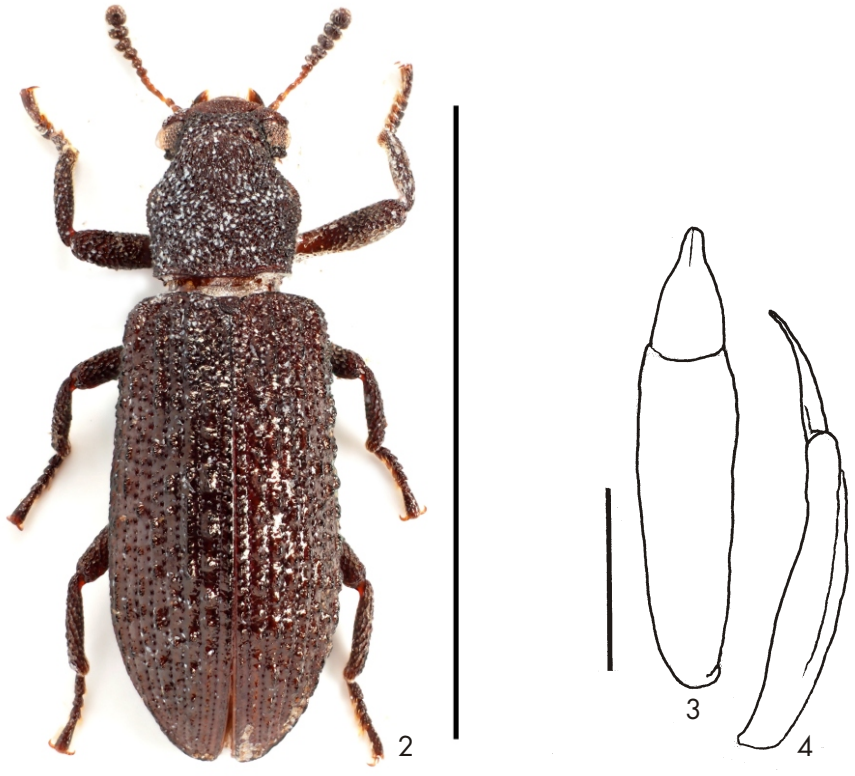
Type material. Holotype (♂): "Thailand, Chiang / Mai, Mae Rim Distr./ 22-23. V. 2017, / K. Masumoto leg. // Coll. Masumoto / 2017", (NSMT).

Description of holotype. BL 5.23 mm, BW 1.82 mm, BL/BW 2.9, elongated subelliptical, though the anterior body is narrower than the posterior body, strongly convex longitudinally; almost wholly black with feeble brownish tinge; except for tubercles on elytra, the elytra and abdomen are lighter in color; head, pronotum, scutellum, legs nearly matt, tubercles on elytra, abdomen weakly shining; body surface hardly haired, six apical antennomeres and tibiae and tarsi partly clothed with fine hairs.

Head transversely subelliptical, rather strongly raised posteriad; clypeus transversely semicircular, rather steeply inclined in apical part, feebly convex medially; surface weakly coarsely, minutely punctate and granulate; fronto-clypeal border clearly roundly grooved; genae narrow in interior part and strongly dilated in exterior part, weakly raised antero-laterad, minutely punctate and granulate, partly covered with white secretion; frons rather wide, closely punctate, granulate, and rugulose, the punctures partly covered with white secretion, and also partly clothed with minute decumbent rod-like hairs; ocular sulcus clear, becoming deeper posteriad. Eyes gently convex laterad, slightly obliquely, roundly inlaid into head; WE/ED 2.6. Antennae subclavate, tip of antennomere XI reaching to apical 1/4 pronotum; LAI-XI: 0.19, 0.08, 0.14, 0.07, 0.05, 0.07, 0.07, 0.08, 0.08, 0.08, 0.16.

Pronotum somewhat inverted subtrapezoidal, PL 1.13 mm, PW 1.22 mm, PW/PL 1.1, widest at apical 2/5; apex strongly produced dorso-anteriad, granulate along margin; base weakly produced, with finely granulate margin; front angles rounded; hind angles obtuse; disc strongly

convex, coarsely punctate, the punctures often connected with one another, mostly covered with white secretion, granulate, the granules connected with one another and forming rugulosities; sides steeply inclined in anterior portions, and rather gently so in posterior portions, lateral margins minutely saw-shaped with granules. Scutellum short-linguiform, loosely, minutely punctate and granulate.



Figs. 2-4. *Chetopsia chiangmaiensis* sp. nov., holotype, ♂: 2- habitus; 3- aedeagus (dorsal view); 4- ditto (lateral view). Scales: 5.0 mm for Fig. 2; 0.5 mm for Figs. 3-4.

Elytra elongated subelliptical, though the basal portion truncate, EL 3.50 mm, EW 1.82 mm, EL/EW 1.9, EL/PL 3.1, EW/PW 1.5; dorsum strongly convex longitudinally, highest at basal 1/3; disc punctate-grooved, the punctures in grooves small but rather deep, fairly closely set with each other; intervals with shiny tubercles, some small and round, others connected each other and forming in ridges or large elongate protuberances; basal portion fairly closely punctate, granulate and partly covered with white secretion; humeri gently swollen, densely granulate; apices rounded, with each apex very slightly emarginate.

Maxilla with terminal palpomere subsecuriform, with the apex oblique. Mentum rather inverted subtrapezoidal, closely punctate in apical part, hardly punctate and transversely minutely wrinkled in major posterior part. Gula weakly convex, semicircularly bordered by finely groove from head, briefly impressed near apical parts on both sides, transversely or a little obliquely micro-wrinkled.

Prosternum weakly depressed in major anterior part, strongly raised in posterior part (=intercoxal space), microsculptured, rather strongly, closely punctate, the punctures mostly transversely subelliptical; apex slightly emarginate, not ridged; prosternal process sublinguiform, rather strongly depressed, weakly convex in medial part, microsculptured, micro-granulate, with lateral parts gently inclined. Mesoventrite rather short, depressed, closely punctate and granulate in anterior part, fairly strongly raised and forming narrower, microsculptured and scattered with minute punctures in posterior part. Metaventrite rather short, gently longitudinally convex, vaguely impressed in posterior 2/5 along median line, microsculptured, coarsely punctate, partly granulate, and wholly rugulose.

Abdomen gently, longitudinally convex, weakly microsculptured, ventrite I to basal part of III covered with rather closely, slightly elongated punctures and longitudinally wrinkled, ventrite IV micosculptured and irregularly scattered with punctures in medial part, rather closely punctate in major lateral parts, the punctures often fused with one another, and forming rugulosities, V closely punctate, the punctures becoming smaller apicad, with rounded apex.

Legs slightly bolder among the members. Femora rather short-subclavate, coarsely punctate and tuberculate. Tibiae slightly becoming bolder apicad, weakly bent intero-ventrad before each apex, minutely granulate, closely punctate, each puncture with a short, minute, subdecumbent hair; protibiae with fairly noticeably, setaceous hairs on antero-interior faces. Tarsi normal in length, with tufts of short hairs on each ventral face, LTB-A: 0.12, 0.07, 0.08, 0.07, 0.28; 0.15, 0.08, 0.09, 0.09, 0.30; 0.12, 0.07, 0.07, 0.21.

Aedeagus short-subfusiform, gently curved in lateral view; AL 1.24 mm, AW 0.19 mm (in basale); basale convex medially, AbL 0.80 mm, gently border anteriad, and weakly narrowed before the border; apicale elongated triangular, rather flat, AaL 0.32 mm, AaL/AL 0.26, with basal half gently narrowed, and rather steeply so in the remaining part to apices; apices blunt.

Female. Unknown.

Diagnostic notes. This new species resembles the previous new species, *Chaetopsia thailandicus* sp. nov. But, this species has no hairs on eyes. Although it is one of very important characteristics for this members, other characters of this new one are well-fit with those of the genus *Chaetopsia*. Therefore, we decided this new species exceptionally belongs to *Chaetopsia*.

Etymology. The specific name, *chiangmaiensis*, is given after the place where the holotype is collected.

Distribution. North Thailand.

Genus *Falsonannocerus* Pic, 1947

Type species: *Falsonannocerus dentaticeps* Pic, 1947: 150.

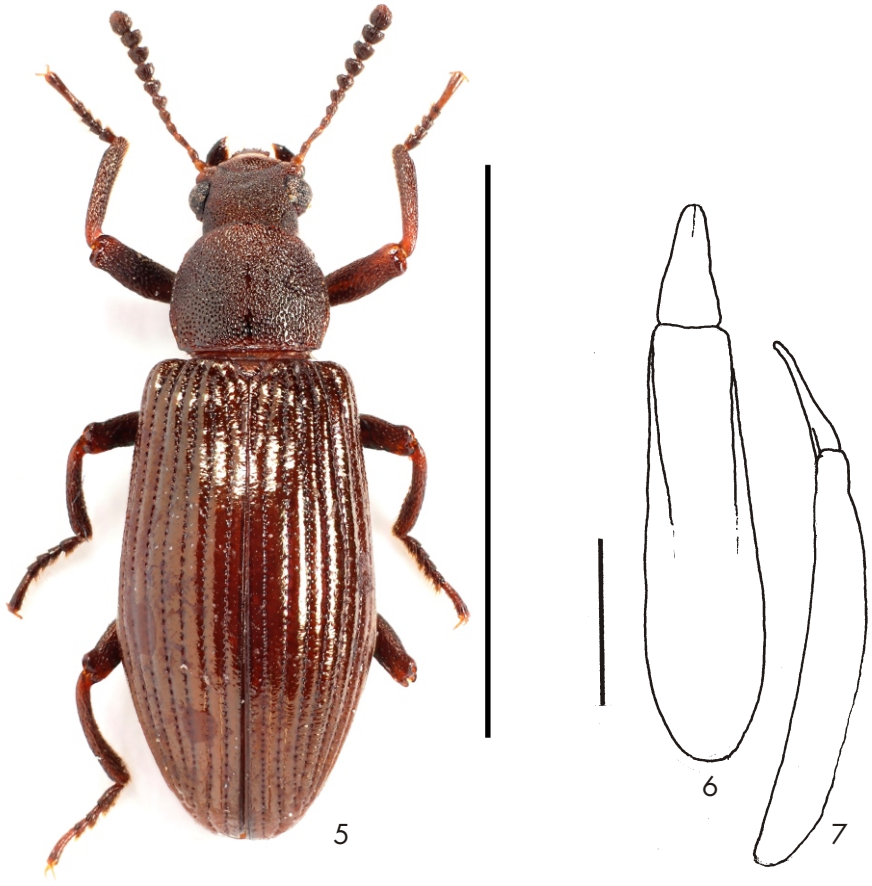
Falsonannocerus laosensis sp. nov.

(Figs. 5-7)

Type locality. Northeastern Laos, Hua Phan Prov., Mt. Phu Pan, 1200-1600 m, 20°12′ N 103°59′ E.

Type material. Holotype (♂): "NE LAOS, Hua Phan Prov., / MT. PHU PAN / 1200-1600 m / 20°12′ N 103°59′ E / 10-22 V 2011 / St. Jakl and Lao / Collectors lgt. // Coll. Masumoto / 2013" (NSMT). Paratypes: (1 ♂): same data as for the

holotype; (1 ♂): "LAOS, HUA PHANE, Mt. Phu Pan, Ban Saluel v. env. Alt. 1200-1900 m, 20°12′ N, 103°59′ E, 26. IV-10. V. 2013, St. Jakl and Lao Collectors lgt."; (3 ♀♀): "LAOS, NE Laos, Hua Phan Prov., MT. PHU PAN, 1200-1900 m, 18. V-2. VI. 2012, 20°12′ N 103°59′ E, St. Jakl and Lao Collectors lgt.".



Figs. 5-7. *Falsonannocerus laosensis* sp. nov., holotype, ♂: 5- habitus; 6- aedeagus (dorsal view); 7- ditto (lateral view). Scales: 5.0 mm for Fig. 5; 0.5 mm for Figs. 6-7.

Description of holotype. BL 5.80 mm, BW 2.27 mm, BL/BW 2.6, elongated subelliptical, rather strongly convex longitudinally; body almost wholly brownish black, but elytra and prosternum lighter in color, hairs on surfaces mostly pale yellow but partly slightly brownish yellow; head, pronotum, scutellum and legs, weakly shining, elytra rather strongly shining, six apical antennomeres rather matt; head, pronotum, scutellum, elytra and major portions of ventral surface hardly haired, legs with intero-ventral faces with hairs.

Head transversely subelliptical, gently raised posteriad; clypeus noticeably roundly produced anteriad, apical part somewhat membranous, inclined apicad, transverse-elliptically convex and clothed with suberect hairs, medial part also somewhat membranous, transversely concave, hardly haired, basal part chitinous, closely, minutely punctate, each puncture with a minute, short hair; fronto-clypeal border roundly grooved; genae rather small, strongly dilated, weakly raised

antero-laterad, minutely punctate, each puncture with a minute, short hair; frons wide, rather flat, weakly depressed medially, closely, finely punctate, rugulose, micro-granulate, each puncture with a short, minute hair; ocular sulcus clear and deepen posteriad. Eyes roundly convex laterad, slightly obliquely inlaid into head; WE/ED 3.0. Antennae subclubate, tip of antennomere XI reaching to basal 1/4 of pronotum; LAI-XI: 0.18, 0.11, 0.19, 0.13, 0.11, 0.10, 0.10, 0.11, 0.11, 0.11, 0.24.

Pronotum subtrapezoidal, though the lateral margins are rounded, PL1.39 mm, PW 1.32 mm, PW/PL 1.1, widest at slightly before basal 1/4; apex gently produced, not margined; base very weakly produced posteriad, slightly emarginate in medial 1/3; front angles nearly rectangle with rounded corners; hind angles obtuse; disc strongly convex, weakly, triangularly depressed in medio-basal part, weakly, closely punctate and rugulose, the punctures often fused with one another, each puncture with a minute hair; sides gradually declined to lateral margins, which are bordered by grooves, slightly explanate, micro-crenulate in anterior parts, and wholly visible from above. Scutellum triangular, slightly convex, with minute granules.

Elytra elongated subelliptical, though the basal portion is truncated, EL4.23 mm, EW 2.27 mm, EL/EW 1.9, EL/PL 3.0, EW/PW 1.7; dorsum fairly strongly convex, highest at basal 3/8, weakly depressed in antero-medial portion (basal 1/8); disc punctate-striate, the punctures rather closely set, small, round to a little ovate; intervals well convex, scattered with minute punctures; sides rather steeply inclined, and slightly enveloping hind body, with lateral margins bordered by punctate grooves, feebly expanded latero-ventrad, but hardly visible from above; humeri swollen, scattered with microscopic punctures; apical parts rounded, with apices very slightly emarginate.

Maxilla with terminal palpomere dilated and subsecuriform. Mentum small and subquadrate, rather strongly convex, sparsely, minutely punctate. Gula gently convex, clearly bordered by grooves from head, microscopically, transversely wrinkled.

Prosternum weakly depressed in major anterior part, strongly raised in posterior part (=inter-procoxal space), transversely wrinkled and minutely granulate; apex nearly straight, finely ridged; prosternal process semicircular, strongly depressed, micro-granulate. Mesoventrite short; strongly depressed, hidden under prosternum in repose, coarsely punctate in major anterior part, strongly raised, becoming narrower, and forming triangular in inter-mesocoxal space, minutely punctate in posterior part. Metaventrite gently convex, longitudinally impressed on median line, weakly microsculptured, fairly closely punctate, each puncture with a fine hair.

Abdomen gently, longitudinally convex, rather closely punctate, each puncture with a minute, short hair, ventrite I to basal part of III longitudinally wrinkled, ventrite IV weakly wrinkled in medio-basal part, ventrite V with mildly truncate apex.

Legs a little slender among the members. Femora elongated subclavate, closely, coarsely punctate, each puncture with a short, minute subdecumbent hair. Tibiae slightly becoming bolder apicad, closely, minutely punctate; protibiae weakly curved intero-ventrad, densely clothed with hairs in anterior part on ventral face; meso- and metatibiae rather noticeably curved intero-ventrad, rather densely clothed with hairs in posterior parts on interior faces. Tarsi rather slender among the members; LTB-A: 0.15, 0.10, 0.11, 0.13, 0.29; 0.24, 0.11, 0.10, 0.09, 0.40; 0.31, 0.14, 0.11, 0.38.

Aedeagus rather strongly curved in lateral view; AL1.39 mm, AW 0.32 mm (in basale); AbL1.13 mm, widest at basal 1/4, tapering apicad, rounded basad, longitudinally convex; AaL 0.34 mm, AaL/AL 0.24, subtriangular, with apices spatulate.

Variability (n=3). BL 5.80-6.34 mm; BW 2.27-2.52 mm; WE/WD 3.0-3.3; PW/PL 1.0-1.1; EL/EW 1.8-1.9; EL/PL 3.0-3.2.

Females (n= 3). Body stouter; antennae shorter; head a little convex in posterior portion; elytra more noticeably punctate striate, intervals weakly microsculptured; legs shorter; ovipositor chitinous, thinly subcresent-shaped. BL 6.28-7.14 mm; BW 2.30-2.62 mm; WE/WD 3.3-3.6; PW/PL 1.0-1.1; EL/EW 1.8-1.9; EL/PL 3.0-3.5.

Diagnostic notes. This new species closely resembles *Falsonannocerus tsuyukii* Masumoto, 1986, from Northwestern Thailand. The former can be distinguished from the latter by the body larger (5.0-5.5 mm in the latter), the head less strongly convex, more minutely punctate, the pronotum more minutely punctate, with lateral margins slightly explanate, the elytra smoother, with dorsum weakly depressed in antero-medial portion; the legs with meso- and metatibiae obviously curved (nearly straight in the latter), and aedeagus a little slenderer.

Etymology. The specific name is given where the type series were collected.

Distribution. Laos.

Maostrongylium gen. nov.

Type species: *Maostrongylium phousamsounum* sp. nov.

Description. Body rather small in the members of the tribe Stenochiini, strongly constricted at the border of fore and hind bodies, strongly convex dorsad, surface dark colored, rather matt and mostly hardly haired. Head noticeably narrowed in area before eyes, with frons rather strongly raised and with a remarkable modification. Eyes fairly large. Antennae subfiliform. Pronotum subtrapezoidal, strongly convex, with a modification in the middle. Scutellum lacking. Elytra subelliptical, punctate-grooved, and intervals ridged, the ridges rather transversely or obliquely connected with one another. Apterous. Legs slender.

This new genus is a very isolated one, but if we dare to compare with some genus from Southeastern Asia, it could be the genus *Saitostrongylium*, 1996, erected for *S. acco* Masumoto, 1996, from North Vietnam, based on a female. The former can be discriminated from the latter by the head with the area before the eyes obviously narrower than the area behind them (similar width in the latter), and with the noticeable protuberance on the frons (simply raised posteriad in the latter), the antennae subfiliform (subclavate in the latter), the pronotum strongly convex with a large protuberance (moderately convex with four tubercles which are armed with peculiar processes in the latter), the elytra with rows of punctures, the intervals narrow and odd ones ridged (strongly punctate, the odd intervals often with ridges or gibbosities in the latter), and legs obviously slenderer.

No additional specimen of each genus has hitherto been collected since the types were collected.

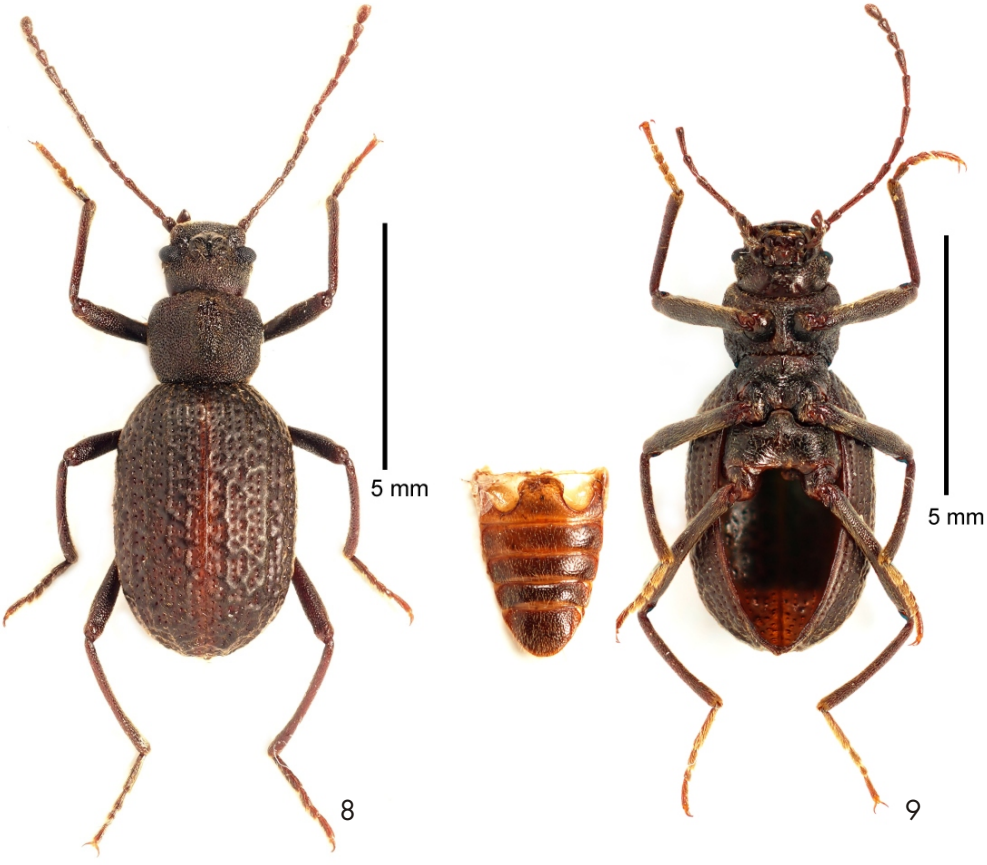
Etymology. The generic name is given in honor of Mao Kobayashi (Tokyo) who has been a good friend in entomology. Gender: neuter.

Maostrongylium phousamsounum sp. nov.

(Figs. 8-9)

Type locality. Laos, Xieng Khouang, Phou Samsoun, 2100 m.

Type material. Holotype (♀): "LAOS: Xiengkhouang, / Phou Samsoun, 2100m, / 13-16. III. 2021. // K. AKITA / Collection / KAC289839", (NSMT). Paratypes: (2 ♀♀): same data as for the holotype.



Figs. 8-9. *Maostrongylium phousamsounum* gen. et sp. nov., holotype, ♀, habitus: 8- dorsal view; 9- ventral view. Scale: 5.0 mm.

Description of holotype. BL 7.28 mm, BW 3.58 mm, BL/BW 2.0, oblong ovate, strong constricted at the border of fore and hind bodies, convex dorsad. Except for elytra, almost wholly black with feeble brownish tinge, elytra dark brownish black, hairs mostly brownish yellow, but partly becoming darker; head, pronotum, and legs weakly shining, elytra matt, ventral parts rather matt in anterior portion, abdomen weakly shining; body surface almost glabrous, antennae, legs and minor parts of body haired.

Head subparabolical, rather strongly convex; clypeus quadrate, rather strongly depressed, flattened in basal part, inclined apicad, subparallel-sided, truncate at apex, with surface closely punctate and rugulose, densely clothed with subdecumbent hairs; fronto-clypeal border bulgily curved and strongly impressed; genae rather strongly raised antero-laterad, exterior margins roundly produced, closely irregularly punctate and rugulose; frons with large, bold horseshoe-shaped protuberance, whose surface are weakly microsculptured, irregularly punctured and haired; vertex and posterior portion of head closely punctate, rugulose and clothed with subdecumbent microscopic hairs. Eyes obliquely semicircular and gently convex laterad, nearly transversely inlaid into head; WE/ED 2.4. Antennae subfiliform, tip of antennomere XI reaching

to midst of elytra; LAI-XI: 0.40, 0.31, 0.85, 0.49, 0.58, 0.62, 0.60, 0.51, 0.34, 0.30, 0.39.

Pronotum inverted subtrapezoidal, PL 1.80 mm, PW 2.29 mm, PW/PL1.3, widest at basal 1/4; apex nearly straight, very slightly produced in medial part, not margined; base very slightly produced, not margined; front angles subrectangular with the corners rounded; hind angles obtuse; disc strongly convex, closely, coarsely punctate, the punctures not round but mostly ovate, with a large longitudinally oblong protuberance at the middle, whose summit nearly flat; lateral parts of protuberance steeply inclined, enveloping frontal body and extending to prosternum without clear border. Scutellum lacking.

Elytra subelliptical, EL 5.31 mm, EW 3.55 mm, EL/EW 1.5, EL/PL 3.0, EW/PW 1.2, gently widened posteriad in basal 1/3, nearly subparallel-sided in medial 1/3, and roundly narrowed apicad in posterior 1/3; dorsum fairly strongly convex; disc microsculptured, sparsely clothed with minute, suberect hairs, and with rows of punctures (small at the bottom and rather large at the surface); intervals narrow, odd ones weakly ridged, the ridges transversely or obliquely connected with one another ridges of odd intervals; sides rather steeply inclined, enveloping hind body, with lateral margins finely bordered and ridged; epipleura tapering anteriad and posteriad, with exterior margin finely ridged; humeri reduced and round in dorsal view; apical portions weakly protruded and apices slightly dehiscent. Apterous.

Maxilla with terminal palpomere gently dilated, with apex a little oblique. Mentum subquadrate, raised longitudinally. Gula semicircularly bordered by finely groove from head, impressed on both sides on the border, very weakly microsculptured.

Prosternum depressed, weakly microsculptured, closely, minutely punctate and partly rugulose; apex gently emarginate, finely ridged and minute granulate; inter-procoxal space not raised; prosternal process small and slightly, roundly produced. Mesoventrite rather short, depressed, closely, fairly coarsely punctate in anterior part, rather strongly raised and coarsely rugulose in posterior part (antero-interior parts of mesocoxae), though the median part is grooved. Metaventrite rather short, gently convex in anterior part, rather strongly inclined in postero-medial part, wholly weakly microsculptured, scattered with minute punctures with decumbent hairs, finely impressed on median line, obliquely wrinkled on both sides.

Abdomen gently, longitudinally convex, weakly microsculptured, scattered with haired punctures, finely rugulose; ventrite I to III microsculputured more noticeably, meanwhile, ventrites IV and V more noticeably punctate; ventrite V with round, hair-fringed apex.

Legs rather slender. Femora elongated subclavate, closely punctate. Tibiae slightly becoming bolder apicad, closely punctate and finely haired; protibiae nearly straight, very weakly curved ventrad in apical parts, with fine setaceous hairs in apical 3/5 on ventral face, which become longer and denser apicad; meso- and metatibiae very weakly curved intero-ventrad, with fine noticeable hairs on apico-ventral faces. Tarsi rather long, LTB-A: 0.34, 0.29, 0.24, 0.18, 0.51; 0.41, 0.30, 0.28, 0.17, 0.53; 0.84, 0.34, 0.18, 0.52.

Variability (n=3). BL 7.28-8.90 mm, BW 3.58-3.61 mm, BL/BW 2.0-2.4, WE/ED 2.4, PW/PL 1.2-1.3, EL/EW 1.5-1.7, EL/PL 2.9-3.0, EW/PW 1.2-1.4.

Male. Unknown.

Etymology. The specific name is given after the mountain name where the type series were collected.

Distribution. Laos.

Genus *Steneucyrtus* Fairmaire, 1896

Type species: *Steneucyrtus pexicollis* Fairemaire, 1896: 31.

Steneucyrtus huaphanensis sp. nov.
(Figs. 10-13)

Type locality. Laos, Hua Phan province, Mt. Phu Pane, 1200-1600 m.

Type material. Holotype (♂): "LAOS, Hua Phan prov. / MT. PHU PANE, 1200-1600 / m, 10-22. V. 2011. / 20°12′ N/ 103°59′ E, St. Jakl and Lao / collectors lgt. // Coll. Masumoto / 2021", (NSMT).

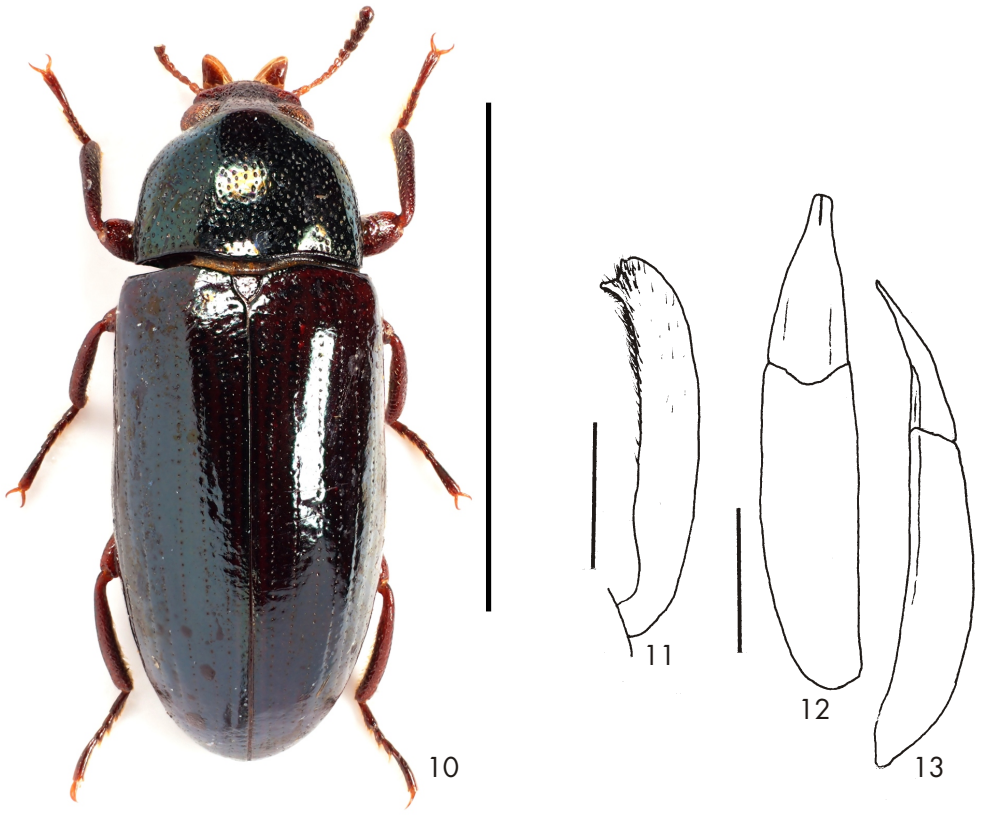
Description of holotype. BL 6.52 mm, BW 2.66 mm, BL/BW 2.5, longitudinally elongated elliptical, strongly, rather longitudinally convex dorsad; head, elytra, and legs dark brown, pronotum and ventral surface black slightly with brownish tinge, antennae with seven basal antennomeres brownish yellow, five apical ones brownish black; head weakly sericeously shining, pronotum and scutellum gently shining, elytra fairly strongly shining, six apical antennomeres rather matt, five basal antennomeres and legs mostly moderately shining, ventral surface gently shining; dorsal surface almost glabrous, antennae haired, legs partly haired, ventral surface not densely with minute, fine hairs.

Head transversely subelliptical, raised posteriad; clypeus subtrapezoidal with gently rounded apex, depressed, weakly convex widely in medial part, rather closely minutely punctate and clothed with subdecumbent fine hairs; fronto-clypeal border nearly straight, not sulcate; genae dilated and slightly raised antero-laterad, minutely punctate, with exterior margins weakly roundly produced; frons noticeably elevate, finely punctate, each puncture with a subdecumbent fine hair. Eyes large, strongly convex laterad, slightly obliquely inlaid into head; WE/ED 1.5. Antennae subclavate, tip of antennomere XI barely reaching to the midst of pronotum; LAI-XI: 0.16, 0.07, 0.17, 0.10, 0.10, 0.08, 0.07, 0.12, 0.11, 0.10, 0.17.

Pronotum subtrapezoidal, PL 1.67 mm, PW 2.27 mm, PW/PL 1.4, widest at basal 3/8; apex noticeably produced anteriad, steeply inclined in medial part, hardly margined; base very slightly produced, weakly bisinuous, finely ridged, the ridge roughly microsculptured; front angles obtuse with the corners rounded; hind angles obtusely angulate; disc strongly convex, though the surface is widely, weakly convex in antero-medial portion and weakly inclined in postero-lateral portions, fairly closely, irregularly punctate, the punctures not round but ovate; sides steeply declined to lateral margins, which are bordered by punctulate-grooves and finely ridged. Scutellum subcordate, almost flattened, weakly microsculptured, scattered with minute punctures.

Elytra subelliptical, EL 3.33 mm, EW 2.64 mm, EL/EW 1.3, EL/PL 2.0, EW/PW 1.2, widest at basal 4/9, slightly narrowed and gradually so from the widest point, very slightly sinuous at basal 2/7; dorsum strongly convex longitudinally, highest at basal 2/7; disc very weakly microsculptured, with rows of small punctures, which are set in 2-3 times the length of own diameter; intervals wide, weakly convex, sparsely scattered with minute punctures, often transversely micro-aciculate; sides steeply declined to lateral margins, which are bordered by fine grooves, and finely ridged, the ridges partly invisible from above due to convexities; humeri gently swollen, scattered with microscopic punctures; apical portions rounded.

Maxilla with terminal palpomere strongly dilated, obtusely triangular. Mentum subpentagonal, convex, scattered minute punctures. Gula semicircularly bordered by grooves from head, impressed on both sides on the border, very weakly microsculptured.



Figs. 10-13. *Steneucyrtus huaphanensis* sp. nov., holotype, ♂: 10- habitus; 11- protibia; 12- aedeagus (dorsal view); 13, ditto (lateral view). Scales: 5.0 mm for Fig. 10; 0.5 mm for Figs. 11-13.

Prosternum short; apex roundly emarginate, rather boldly ridged, the ridge sparsely, minutely punctate; anterior part depressed, rugulose; medial part strongly raised, very weakly microsculptured, inter-procoxal space widest and highest; posterior part gently inclined, scattered with minute punctures; prosternal process sublinguiform, scattered with minute punctures, with apex not acute but rounded. Mesoventrite short; anterior part strongly depressed, hidden under prothorax; posterior part strongly raised in V-shape, apices of V granulate. Metaventrite rather short, gently convex, wholly weakly microsculptured, finely rugulose, scattered with minute punctures, each with a subdecumbent hair, rather noticeably ruguloso-punctate in inter-mesocoxal area.

Abdomen gently, longitudinally convex, weakly microsculptured, scattered with minute punctures, each with a fine hair, partly weakly, transversely wrinkled; ventrite V with punctures becoming closer and smaller apicad; apex simply rounded.

Legs rather stout. Femora bold, closely ruguloso-punctate, the punctures each with a minute fine hair. Tibiae slightly becoming bolder apicad, mostly weakly curved intero-ventrad, closely punctate, each puncture with a minute short hair; intero-ventral faces flattened and clothed with fine hairs, which become longer apicad; protibiae with apico-interior part triangularly produced.

Tarsi normal in size, LTB-A: 0.16, 0.09, 0.08, 0.09, 0.47; 0.20, 0.12, 0.11, 0.12, 0.46; 0.27, 0.11, 0.18, 0.49.

Aedeagus subfusiform, gently curved in lateral view, AL 1.75 mm, AW 0.30 mm (in basale); basale gently convex longitudinally, AbL 1.19 mm, slightly widened in middle; apicale elongated triangular, rather flat, AaL 0.56 mm, AaL/AL 0.32, gently narrowed in basal 2/5, and rather steeply so apicad; apices truncate.

Female. Unknown.

Diagnostic notes. The new species resembles *Steneucyrtus jakli* (Masumoto & Akita, 2020) which was collected on the same mountain, Mt. Phu Pane, that the present one was collected. The former can be distinguished from the latter by the body larger and slenderer (BL 5.3 mm, BL/BW 2.4 in the latter), the elytra without strong metallic luster, the protibia with a projection at the apico-ventral part simply triangular (hock-shaped in the latter), the aedeagus larger (AL 1.41mmin the latter), and the apicale slenderer (AaL/AL 0.29 in the latter).

Etymology. The specific name is given after the place, Hua Phan, where the holotype was collected.

Distribution. Laos.

Genus *Spinogauromaia* Pic, 1922

Type species: *Spinogauromaia rufescens* Pic, 1922: 23.

Spinogauromaia maerimensis sp. nov.

(Figs. 14-21)

Type locality. Thailand, Chiang Mai, Mae Rim.

Type material. Holotype (♂): "Thailand, Chiang Mai, / Mae Rim / 24-26. V. 2014 / K. Takahashi leg. // Coll. Masumoto / 2014", (NSMT).

Description of holotype. BL 6.63 mm, BW 2.78 mm, BL/BW 2.4, elongated subovate, gently convex; body almost wholly brownish black, seven basal antennomeres, apical parts of protibial spine, tarsi and ventral side lighter in color, hairs mostly pale yellow; head and pronotum very weakly, sericeously shining, elytra gently, sericeously shining, legs and ventral surface gently shining, five apical antennomeres rather matt, six basal ones gently shining; body surface almost hardly haired (though partly clothed with minute hairs), antennae and legs with hairs.

Head transversely subelliptical, though the posterior portion is concealed under the pronotum, gently raised posteriad; clypeus rather noticeably dilated, weakly convex widely in medial part, microsculptured, rather closely punctate, the punctures small and each with a minute hair, with apex truncate; fronto-clypeal border nearly straight but not sulcate in medial 1/3, oblique, slightly curved and sulcate in lateral 1/3, both ends reaching to exterior margins; genae weakly dilated, depressed around eyes, microsculptured, punctate, the punctures a little larger than those on clypeus, exterior margins weakly rounded; frons wide, weakly depressed antero-medially, microsculptured, irregularly punctate, the punctures often connected with each other. Eyes roundly convex laterad, slightly obliquely inlaid into head; WE/ED 3.4. Antennae subclavate, tip

of antennomere XI reaching to the midst of pronotum; LAI-XI: 0.17, 0.08, 0.20, 0.16, 0.13, 0.11, 0.11, 0.13, 0.12, 0.12, 0.19.

Pronotum subquadrate, PL 2.09 mm, PW 1.46 mm, PW/PL 1.4, widest at apical 1/3; apex gently produced, margined in lateral parts; base slightly produced and weakly, widely bisinuous, weakly bordered in medial 3/5; front angles obtuse-angular; hind angles subrectangular; disc gently convex, very weakly, obliquely impressed at basal 1/5 on both sides, microsculptured, irregularly punctate, the punctures almost of the same size as that of frontal punctures; sides gradually declined to lateral margins, which are bordered and ridged, the ridges wholly visible from above. Scutellum triangular, slightly depressed, microsculptured, scattered with minute punctures in antero-lateral parts, with a longitudinal ridge on median line in posterior half.

Elytra slightly elongated subelliptical, EL 4.60 mm, EW 2.78 mm, EL/EW 1.7, EL/PL 2.2, EW/PW 1.9; dorsum fairly strongly convex, highest at basal 3/7, weakly depressed in area between 5th and 6th striae close to base; disc punctate-striate, the punctures subovate, small and rather closely set in dorsal portion, becoming larger, remote and often isolate with each other in lateral portions; intervals gently convex, microsculptured, scattered with minute punctures; sides rather steeply inclined, and slightly enveloping hind body, with lateral margins bordered by punctate-grooves, and finely ridged, the ridges hardly visible from above; humeri swollen, sparsely scattered with minute punctures; apical parts feebly roundly produced.

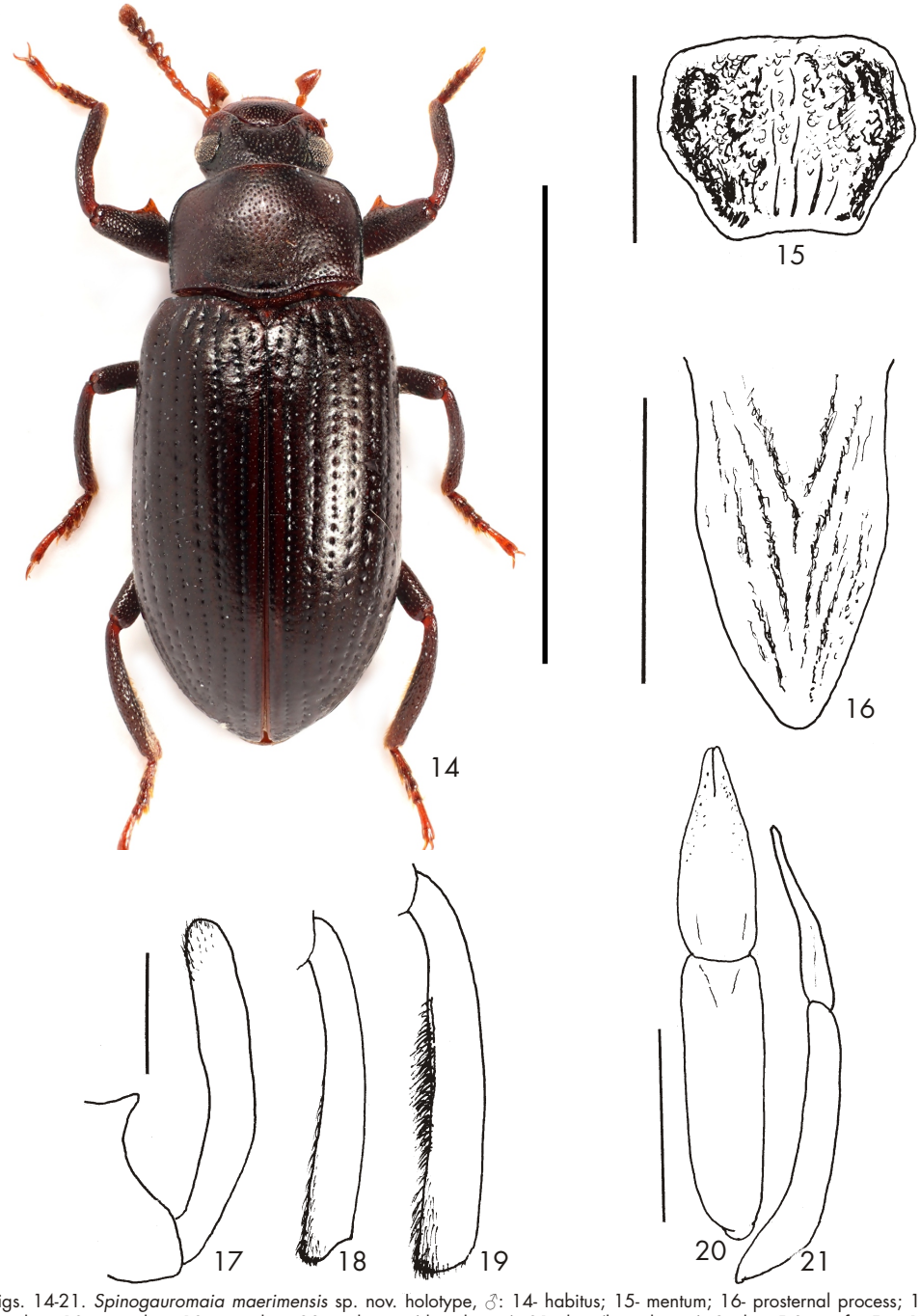
Maxilla with terminal palpomere gently dilated and subrectangular. Mentum subpentagonal, mircrosculptured and closely punctate, anterior and lateral margins finely ridged. Gula bordered by fine grooves from head, gently convex, sericeous in major basal part, transversely wrinkled in anterior part, with a pair of impressions near apex.

Prosternum rather short; apex widely emarginate, finely ridged; anterior part weakly depressed and microsculptured on both sides; medial part gradually raised posteriad, weakly convex, scattered with minute punctures and longitudinally, weakly ridged; posterior part continuing prosternal process elongately triangular with lateral margins ridged; prosternal process acutely triangular with depressed side-lobes. Mesoventrite rather short; major anterior part strongly depressed, microsculptured and weakly, minutely punctate; posterior part strongly raised in Y-shape, almost smooth, with granules at the apices of the Y-shaped ridge. Metaventrite gently longitudinally convex, longitudinally impressed in posterior 2/3 on median line, weakly microsculptured, scattered with minute punctures, each puncture with a fine subdecumbent hair.

Abdomen gently, longitudinally convex, microsculptured, rather closely punctate, each puncture with a minute, short hair, ventrites I and II and basal and lateral part of III with longitudinal wrinkles, to basal part of III longitudinally wrinkled, ventrite V with apical part closely minutely punctate and the apex rounded.

Femora subclavate, closely, rather coarsely punctate, each puncture with a minute decumbent hair; profemora each with an acute tooth at apical 3/7 on front margin. Tibiae slightly becoming bolder apicad, closely, minutely punctate; protibiae gently bent intero-ventrad in middle, with ventral face slightly gouged in basal half; meso- and metatibiae gently curved intero-ventrad, metatibiae weakly, subelliptically gougued from basal 1/3 to apical 1/4 on intero-ventral face and noticeably densely haired. Tarsi with each tarsomere slightly dilated, densely clothed with short hairs on ventral face; LTB-A: 0.13, 0.10, 0.11, 0.09, 0.27; 0.17, 0.09, 0.12, 0.07, 0.42; 0.26, 0.13, 0.16, 0.47.

Aedeagus weakly curved in lateral view, AL 1.22 mm, AW 0.19 mm (in apicale); basale very slightly widened anteriad, gently longitudinally convex, AbL 0.74 mm; apicale gently narrowed in basal 2/3, then rather steeply narrow apicad, with apices blunt, AaL 0.48 mm, AaL/AL 0.39.



Figs. 14-21. *Spinogauromaia maerimensis* sp. nov. holotype, ♂: 14- habitus; 15- mentum; 16- prosternal process; 17- protibia; 18- mesotibia; 19- metatibia; 20- aedeagus (dorsal view); 21- ditto (lateral view). Scales: 5.0 mm for Fig. 14; 0.2 mm for Fig. 15; 0.5 mm for Figs. 16-21.

Diagnostic notes. This new species closely resembles *Phaedis soppongensis* Ando, 2021 (Northweatern Thailand, Soppong). The former can be discriminated from the latter by smaller body (7.5-7.7 mm in the latter), the mentum widest at the middle (basal 1/3 in the latter), and without hairs in anterior and lateral margins (with two pairs of long hairs in anterior margin and a pair of long hairs in lateral margin in the latter), the prosternal process not narrowed in basal parts, the aedeagus bolder and the apicale not elongated in apical parts.
Incidentally, Ando (2021b) described *Phaedis soppongensis*. We consider that this species does not belongs to *Phaedius* but to *Spinogauromaia*, judging from many *Spinogauromaira* characteristics such as the clypeo-genal sutures deeply grooved.

Female. Unknown.

Etymology. The specific name is given after the place, Mae Rim, where the holotype was collected.

Distribution. Northern Thailand.

New Combinations

Accepting the Ando's treatment (2020), we transfer the following species from the genus *Tetragonomenes* Chevrolat, 1878 to the genus *Steneucyrtus* Fairmaire, 1896.

***Steneucyrtus balkei* (Masumoto & Akita, 2020) comb. nov.**
Tetragonomenes balkei Masumoto & Akita, 2020: 39.

Distribution. South Vietnam.

***Steneucyrtus chiangmaiensis* (Masumoto & Akita, 2020) comb. nov.**
Tetragonomenes chiangmaiensis Masumoto & Akita, 2020: 34.

Distribution. North Thailand.

***Steneucyrtus jakli* (Masumoto & Akita, 2020) comb. nov.**
Tetragonomenes jakli Masumoto & Akita, 2020: 37.

Distribution. Northeastern Laos; North Thailand (new record: 1 ♂, "Thailand, Chiang Mai, Mae Rim District, 22-23. V. 2017, K. Masumoto leg. // Coll. Masumoto, 2017" (NSMT)).

***Steneucyrtus phupanensis* (Masumoto & Akita, 2020) comb. nov.**
Tetragonomenes phupanensis Masumoto & Akita, 2020: 36.

Distribution. Northeastern Laos.

***Steneucyrtus reoi* (Akita & Masumoto, 2019) comb. nov.**
Tetragonomenes reoi Akita & Masumoto, 2019: 93.

Distribution. Daitô Isls., Minamidaitô-jima Is. (South Japan).

***Steneucyrtus sekongensis* (Masumoto & Akita, 2020) comb. nov.**
Tetragonomenes sekongensis Masumoto & Akita, 2020: 42.

Distribution. South Laos.

In addition, as mentioned above, we are going to transfer the genus of the Ando's species, *Phaedis soppongensis* to the genus *Spinogauromaia*.

***Spinogauromaia soppongensis* (Ando, 2021) comb. nov.**
Phaedis soppongensis Ando, 2021: 68.

Distribution. North Thailand.

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