

Four new species of the tribe Cnodalonini (Coleoptera: Tenebrionidae) from Taiwan

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Taxonomy, new species, Tenebrionidae, Cnodalonini, *Derosphaerus*, *Gnesis*, *Menephilus*, *Tetragonomenes*, Oriental Region, Taiwan

Abstract. Four new Cnodalonini (Coleoptera, Tenebrionidae) species from Taiwan are described: *Derosphaerus wangi* sp. nov., *Gnesis hehuanshanus* sp. nov., *Menephilus ongi* sp. nov. and *Tetragonomenes naritai* sp. nov.

INTRODUCTION

We have been undertaking a series of field surveys on the tenebrionid beetles in Taiwan for long years, and have collected many material specimens. Meanwhile, old friends in entomology kindly offer us precious specimens for our study.

After the catalogue of Ando et al. (2016), we published 12 papers concerning the tenebrionid fauna of Taiwan, and also described new species in several reports concerning SE Asian Tenebrionid beetles. Particularly, the alleculine fauna of Taiwan has become very clear with the support of V. Novak. Furthermore, nearly ten synonymized species in the catalogue have been resurrected by detailed re-consideration.

Recently, we have an opportunity of examining new materials and found four species unknown to science. Thus, we are going to describe them as new species in this paper.

MATERIAL AND METHODS

The specimen materials used for this study are mainly based on our own collections in the National Museum for Nature and Science (NSMT), Tsukuba, Japan, and the Taiwan Agriculture Research Institute (TARI), Wufeng, Taichung, Taiwan, and the National Museum of Nature and Science, Taichung, Taiwan (NMNST).

External morphology and male genitalia were examined using an Olympus SZ60 and a Leica MS5 stereoscopic microscope. Photographs 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. A slash is used to separate lines of the data on the label, and a double slash separates the labels.

Holotypes designated in this study will be deposited in the NSMT in Tsukuba, Ibaraki, Japan, or the TARI in Wufeng, Taichung, Taiwan. Some paratypes will be deposited in the NMNST in Taichung, Taiwan. Other paratypes will be temporarily deposited in the NSMT, but will be shared with museums and institutes abroad in future.

Abbreviations used herein are as follows: BL = Body length (labrum to apices of elytra along median line in dorsal view); BW = Body width (at widest part of body, mostly in elytra); LAI-XI =

Length of antennomere I to XI; WE/ED = Width between eyes / Eye transverse diameter; PW = Pronotal width (at widest part); PL = Pronotal length (along the midline); EL = Elytral length (along the elytral suture); EW = Elytral width (at widest part); LTB-A = Lengths of pro-, meso- and metatarsi from baso- to tarsomeres; AL = Aedeagus length (apicale apex to basale base). AW = Aedeagus width (at widest point in dorsal view); AbL = Basale of aedeagus length; AaL = Apicale of aedeagus length; Co. = county.

TAXONOMY

Subfamily Stenochiinae Kirby, 1837

Tribe Cnodalonini Oken, 1843

Derosphaerus wangi sp. nov.

(Figs. 1-6)

Type locality. Wutai Hsiang, Pingtung Co., Taiwan.

Type material. Holotype (♂): "TAIWAN / Pingtung Co. Wutai /, Hsiang, / 10. V. 2024, Kimio Masumoto leg." (NSMT). Paratype: (1 ♀): same data as for the holotype (NSMT).

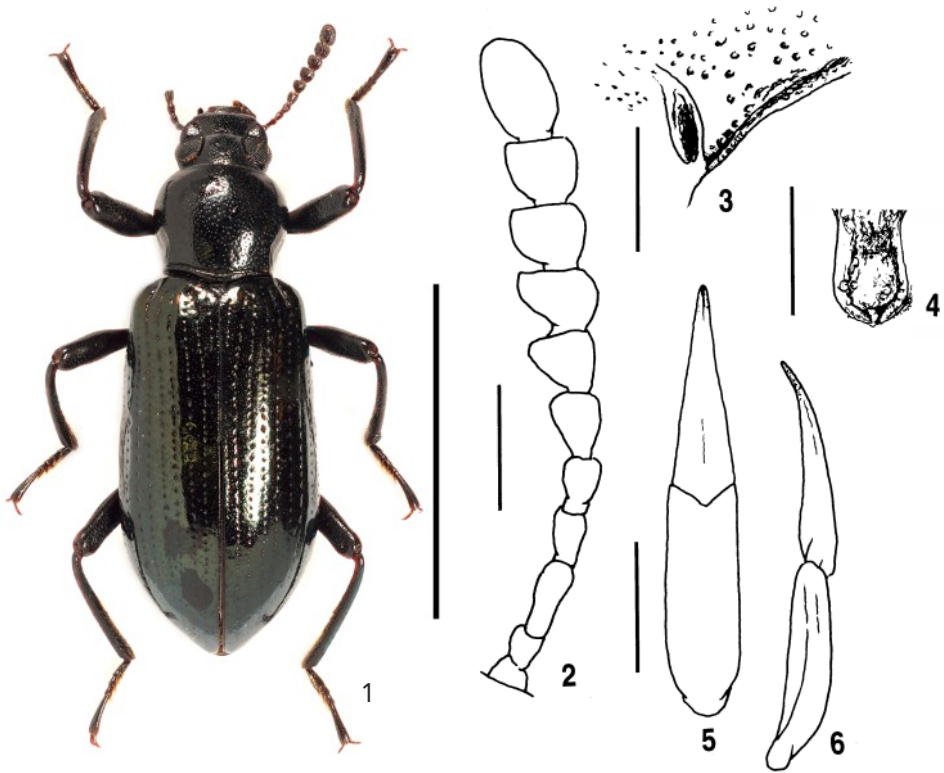
Description of the holotype. Body elongated subelliptical, fairly strongly narrowed in posterior portion of pronotum; BL 9.58 mm, BW 3.59 mm (widest area across elytra), BL/BW 2.7; head, six apical antennomeres, pronotum, scutellum, legs and anterior and medial portions of ventral side black partly with very feeble brownish tinge, five basal antennomeres and abdomen brownish black, hairs on antennae, tibiae and tarsi dark reddish brown; major dorsal surface fairly strongly shining, five basal antennomeres gently shining, six apical antennomeres matt, ventral surface moderately, partly sericeously shining; body almost glabrous, apico-ventral parts of tibiae densely haired, ventral sides of tarsi densely, spinulously haired, six apical antennomeres densely, finely haired.

Head subhexagonal, though the basal portion is concealed under the pronotum, gently raised medio-posteriad, weakly microsculptured, fairly closely, minutely punctate; clypeus fairly wide, depressed from frons, weakly convex medially, apical margin truncate, with lateral parts curved obliquely posteriad and continuing margins of genae; fronto-clypeal suture not clear but straightly bordered from frons; gena-clypeal suture not clear but obliquely grooved; genae rather small, obliquely dilated laterad, depressed in interior parts, with exterior margins gently rounded; frons closely punctate, the punctures larger and a little sparser than those on clypeus; vertex gently convex, irregularly scattered with punctures; areas around eyes deeply grooved. Eyes gently roundly convex laterad, slightly obliquely, roundly inlaid into head, WE/ED 1.3. Antennae elongated subclavate, tip of antennomere XI reaching half of pronotum. LAI-XI (in mm): 0.18, 0.15, 0.31, 0.21, 0.21, 0.25, 0.25, 0.25, 0.25, 0.25, 0.30.

Maxillar with terminal palpomere rather strongly dilated, with exterior side gently rounded and almost of same length of straight apical side, and twice the length of substraight interior side. Mentum inverted subtrapezoidal, microsculptured and punctate, with inverted triangular projection in antero-medial part, both sides of the projection obliquely depressed and micro-granulate. Gula fairly strongly, parabolically bordered from underside of head, weakly convex, finely microsculptured, transversely, minutely wrinkled, with a pair of roundly curved impressions near apex.

Pronotum transversely short-elliptical with constricted basal portions, PL 2.05 mm, PW 2.40 mm, PW/PL 0.8, widest at anterior 2/5; apex nearly straight in medial parts, weakly rounded in lateral parts, not bordered; base weakly produced and slightly sinuous in lateral parts, fairly boldly grooved, the groove with fine impression and scattered with minute punctures,

exterior margins weakly reflexed; front angles not clear but rounded in dorsal view; hind angles acute, slightly produced laterad; sides gently inclined, without lateral border, enveloping ventral portion; disc gently convex, very weakly microsculptured, fairly closely, irregularly punctate, the punctures almost of the same size on frons but a little sparsely set; postero-lateral portions suppressed from ventro-lateral sides, obviously with curved indentations (Fig. 3). Scutellum round-side triangular, depressed in anterior part, weakly microsculptured and scattered with minute punctures.



Figs. 1-6. *Derosphaerus wangi* sp. nov., holotype, ♂: 1- habitus; 2- antenna; 3- postero-lateral portion of pronotum; 4- prosternal process; 5- aedeagus (dorsal view); 6- ditto (lateral view). Scales: 5.0 mm for Fig. 1; 0.5 mm for Figs. 2-6.

Elytra elongated subovate, though the base is truncated, EL 6.35 mm, EW 3.59 mm, EL/EW 1.8, EL/PL 3.1, EW/PW 1.5, widest at apical 4/9; dorsum fairly strongly convex longitudinally, highest at basal 1/3; disc with rows of small punctures, the punctures somewhat subovate, those in interior portions smaller and closely set, those in lateral portions becoming larger and sparsely set; intervals nearly flat in interior portions, gently becoming convex laterad, weakly microsculptured, scattered with minute punctures; humeri moderately convex; apices slightly roundly produced.

Prosternum short and narrow, microsculptured; apex weakly, roundly emarginate; anterior part sparsely scattered with punctate; medial part steeply raised, minutely punctate; posterior part (area between procoxae) becoming narrower and raised, with two pairs of tubercles longitudinally in rows, areas between rows and exterior sides of them grooved; prosternal process semicircular, strongly depressed and obtusely projected, minutely granulo-punctate.

Mesoventrite rather short, major anterior part depressed and concealed under prosternum, coarsely ruguloso-punctate; medial part depressed in middle; posterior part raised, weakly microsculptured, antero-anterior margins of mesocoxae ridged. Metaventrite medium-sized, gently convex longitudinally, weakly depressed in medial portion, divided by longitudinal impression in basal 3/4 on median line; surface microsculptured, fairly closely punctate, the punctures rather transversely ovate.

Abdomen medium-sized, weakly microsculptured; ventrite I to III closely, minutely punctate; ventrite IV punctate, the punctures larger than those on I to III; borders of III and IV membranous; ventrite IV and V fairly closely, finely punctate: ventrite V with exterior margins not bordered, and apex nearly rounded.

Legs rather slender, weakly microsculptured, closely punctate. Femora moderately clavate. Protibiae very slightly curved intero-ventrad, feebly becoming bolder apicad, densely haired in apical half on interior face, the hairs becoming short, denser and subspinulose apicad; mesotibiae weakly curved intero-ventrad, feebly becoming bolder apicad, haired in apical 2/5 on apico-interior faces, the hairs in apical parts short and subspinulose; metatibiae gently curved interiad and feebly becoming bolder apicad, clothed with fine hairs in apical 4/7 on intero-apical faces, the hairs in apical part short, dense and subspinulose. Tarsi fairly long, clothed with spinulose hairs on ventral sides in four basal tarsomeres in pro- and mesotarsi, and in basal three tarsomeres in metatarsi, rather sparsely so in each apicomere. LTB-A (in mm): 0.16, 0.12, 0.11, 0.12, 1.01; 0.24, 0.16, 0.14, 0.15, 0.72; 0.25, 0.16, 0.13, 0.68.

Aedeagus subfusiform, gently convex longitudinally, weakly, rather widely longitudinally depressed along median line, weakly curved in lateral view, AL 1.67 mm, AW 0.24 mm (widest point at slightly before middle); basale elongated elliptical, though the apical part is truncate, AbL 0.84 mm, weakly curved in lateral view; apicale elongated nib-shaped, AaL 0.83 mm, with acute apex; AaL/AL 0.5.

Female (n=1). Compared with male, the body slightly bolder, the antennae shorter, the interocular space narrower, WE/ED 1.6, the legs slightly bolder; BL 9.75 mm, BW(=EW) 3.69 mm, BL/BW 2.6, PW/PL 1.3, EL/PL 2.7, EW/PW 1.5.

Diagnostic notes. This new species somewhat resembles *Derosphaerus binhanus* (Pic, 1922)*. The former can be distinguished from the latter as follows: the body a little bolder, with legs and antennae slenderer, the pronotum smoother, with indentations in hind corners clearer, the elytra not punctate-striate but with rows of punctures.

Etymology. The specific name is in honor of Tai-Chuan Wang, who is a good friend in entomology for long time, and permitted the first author to join many field surveys in Taiwan, and to use collected materials for the present study.

Distribution. Southern Taiwan.

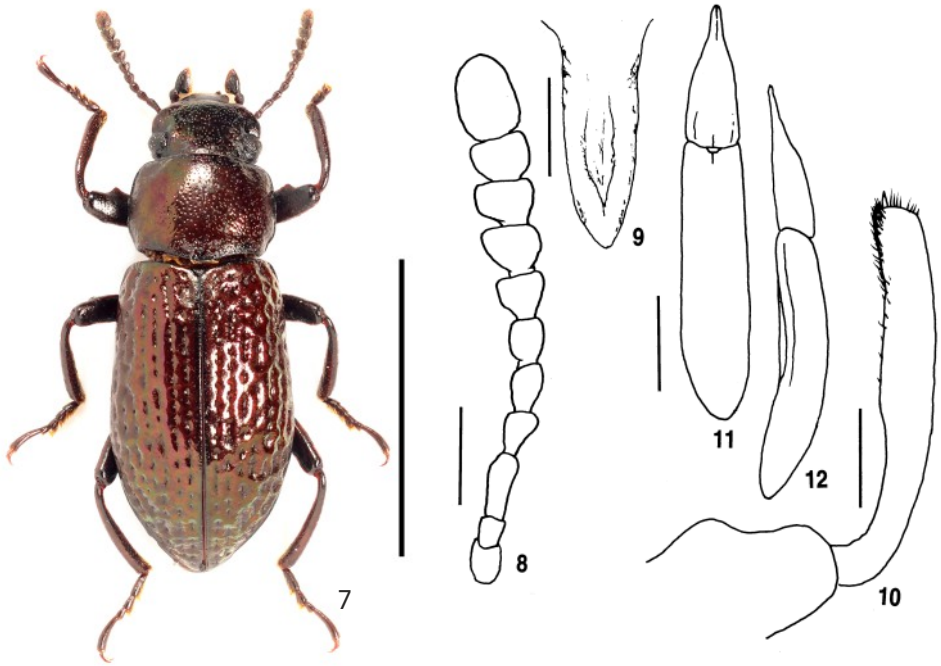
*Purchart (2025, p. 128) combined *Derosphaerus binhanus* (Pic, 1922) with the genus *Hexarhopalus* (*Leprocaulus*), but we disagree his treatment. Judging from the structure of the body shape, e. g. the femora not strongly clavate, the dorsal surface smooth, the present species also belongs to *Derosphaerus* rather than *Hexarhopalus*.

Gnesis hehuanshanus sp. nov.

(Figs. 7-12)

Type locality. Hehuanshan, Taichung City, Taiwan.

Type series. Holotype (♂): "Taiwan, Taichung, Hehuanshan, / 22-24. X. 2016 / K. Takahashi leg." (NSMT). Paratypes: (2♂♂, 3♀♀): same data as for the holotype. 1♂, 1♀, NMNST; 1♂, 1♀, TARI; 1♀, NSMT.



Figs. 7-12. *Gnesis hehuanshanus* sp. nov., holotype, ♂: 7- habitus; 8- antenna; 9- prosternal process; 10- protibia; 11- aedeagus (dorsal view); 12- ditto (lateral view). Scales: 5.0 mm for Fig. 7; 0.5 mm for Figs. 8-12.

Description of the holotype. Body elongated subelliptical, gently constricted at the border of pronotum and elytra; BL 9.24 mm, BW 3.52 mm (widest area across elytra), BL/BW 2.7; almost wholly dark brown, head, marginal portions of pronotum darker in color, five basal antennomeres and legs nearly black; head, pronotum and scutellum weakly shining, elytra, five basal antennomeres and legs gently shining, six apical antennomeres matt; dorsal and ventral sides of body as well as legs mostly glabrous, six apical antennomeres densely clothed with minute hairs, apico-internal parts of tibiae and ventral sides of tarsi densely clothed with spinulose hairs.

Head transversely suboctagonal, though the basal portion is usually concealed under the pronotum, nearly flat and feebly raised posteriad; clypeus widely subquadrate, slightly raised medially, truncate at apex, feebly microsculptured, scattered with minute punctures; fronto-clypeal suture finely, straightly grooved; gena-clypeal suture finely, somewhat obliquely grooved; genae fairly wide, nearly flat in major part, rather steeply declined to anterior parts of eyes, microsculptured and scattered with minute punctures, with exterior margins rounded; frons transverse, rather short, and nearly flat, microsculptured, scattered with minute punctures; vertex weakly raised, microsculptured, scattered with minute punctures. Eyes gently roundly convex laterad, nearly triangularly, obliquely inlaid into head, WE/ED 4.0. Antennae subclavate, tip of antennomere XI reaching basal 1/4 of pronotum. LAI-XI (in mm): 0.21, 0.15, 0.33, 0.23, 0.25, 0.23, 0.23, 0.25, 0.24, 0.23, 0.41.

Maxillar with terminal palpomere fairly large and strongly dilated, with exterior side gently curved and about twice the length of interior side, apical side obliquely truncate and slightly shorter than exterior one. Mentum subquadrate, strongly impressed on both sides, raised

in T-shape medially, and acutely projecting at apex and base, the apex projection larger than basal one. Gula finely, parabolically bordered from underside of head, finely wrinkled, with a pair of short impressions near apex.

Pronotum subquadrate, PL 2.53 mm, PW 2.86 mm, PW/PL 1.1, widest at middle; apex slightly produced, not bordered; base weakly produced in medial 3/5, very weakly sinuous and bordered in lateral portions; front angles subrectangular; hind angles obtusely angulate; lateral margins gently, roundly produced, bordered by groove, rather noticeably sinuous in basal 1/4; disc gently convex, weakly so in medial portion, microsculptured, fairly closely, irregularly punctate. Scutellum wide-based triangular, microsculptured, minutely punctate.

Elytra slightly elongated subelliptical, though the base is truncate, EL 6.13 mm, EW 3.52 mm, EL/EW 1.7, EL/PL 2.4, EW/PW 1.2, widest at middle; dorsum strongly convex, highest at basal 1/3; disc with rows of foveolate irregular-sized punctures, which are often connected with each other; intervals weakly convex, often curved by punctures in rows, weakly microsculptured, scattered with minute punctures, finely transversely wrinkled; humeri fairly reduced with exterior margins roundly angulate; apices slightly roundly produced.

Prosternum rather short, weakly microsculptured; apex weakly, widely emarginate, finely bordered; anterior part weakly depressed and coarsely punctate; medial part gently raised, weakly, obliquely ruguloso-punctate; posterior part (=area between procoxae) becoming narrower, longitudinally ridged and concave along median line, the ridges continuing prosternal process; prosternal process sharply projected, with surface scattered with minute punctures. Mesoventrite short, major anterior part depressed and concealed under prosternum, posterior part strongly raised in V-shape, with two anterior apices of the V prominent. Metaventrite fairly short, longitudinally convex, weakly microsculptured, scattered with minute punctures, finely transversely wrinkled; anterior part with transversely elliptical impression at middle; medial and posterior parts finely, longitudinally impressed on median line, with longitudinal elliptical depression at middle.

Abdomen medium-sized, weakly microsculptured; ventrite I to IV coarsely rugoso-punctate; ventrite V closely, minutely punctate, with exterior margins not bordered, and apex nearly rounded.

Legs medium-sized, microsculptured, scattered with minute punctures. Femora subclavate; profemora triangularly produced at apical 2/5 along anterior margin. Protibiae slightly curved inward, weakly gouged in basal 2/5 in interior margin, haired in apical 2/5 on interior face; mesotibiae nearly straight, gently becoming bolder apicad, densely with fine longer spinulous hairs in apico-interior parts, also with shorter and bolder spinulous hairs in apical part; metatibiae also nearly straight, gently becoming bolder apicad, with spinulous hairs in inter-apical parts, and with shorter and bolder spinulous hairs at apices. Tarsi rather long, clothed with short spinulous hairs on ventral sides in basal four tarsomeres in pro- and mesotarsi, and in basal three tarsomeres in metatarsi, rather sparsely so in each apical tarsomere. LTb-A (in mm): 0.32, 0.19, 0.19, 0.11, 0.55; 0.35, 0.27, 0.21, 0.15, 0.79; 0.53, 0.26, 0.21, 0.81.

Aedeagus subfusiform, gently convex longitudinally, AL 2.19 mm, AW 0.32 mm (widest point at slightly before middle); basale elongated elliptical, though the apical part is truncate, AbL 1.46 mm, weakly curved in lateral view; apicale nib-shaped, AaL 0.73 mm, with weakly elongated apical part, AaL/AL 0.3.

Variation of males (n=3). BL 9.24-9.58 mm, BW 3.52-3.58 mm; WE/ED 3.5-4.0; BL/BW 2.6-2.7, PW/PL 1.1-1.3, EL/EW 1.7, EL/PL 2.4-3.0, EW/PW 1.2-1.3.

Females (n=3). Compared with males, the antennae shorter, WE/ED 5.5, the maxillar with terminal palpomere less strongly dilated, the legs less noticeably modified; BL 8.48-9.21 mm, BW 3.28-3.37 mm, BL/BW 2.6-2.7, PW/PL 1.3, EL/EW 1.7-1.9, EL/PL 2.6-3.1, EW/PW 1.2.

Diagnostic notes. This new species somewhat resembles *Gnesis meilingae* Masumoto, Akita & Lee, 2014, distributed in the high land of Hualian Co., Taiwan. The former can be easily distinguished from the latter by the body slenderer, less strongly constricted at the border between the pronotum and the elytra, the elytra less densely punctate, the elytral foveae coarser, protibiae weakly gouged in basal 2/5 in interior margin (not clearly gouged in the latter), and the apicale shorter (AaL/AL 0.4 in the latter).

Etymology. The specific name, *hehuanshanus*, is after the place where the type series was collected.

Distribution. Eastern Taiwan.

List of Species of the genus *Gnesis* from Taiwan

Genus *Gnesis* Pascoe, 1866

Pascoe, 1866: 477. Type species. *Gnesis helopoides* Pascoe, 1866*.

Tromosternus Harold, 1876[1878]: 130. Type species: *T. haagi* Harold, 1876. Type locality: Hiogo.

Gnesis dulanensis Masumoto, Akita & Lee, 2014

Masumoto, Akita & Lee, 2014: 76. Type locality: Dulan, Taitung Hsien.

Gnesis formosanus (M. T. Chûjô, 1973)

Chûjô M. T., 1973: 20, *Phaedis* (*Phaedis*). Type locality: Chungshan, Chiayi Hsien.

Gnesis guoi Masumoto, Akita & Lee, 2019

Masumoto, Akita & Lee, 2019: 123. Type locality: Meiling, Tainan Hsien.

Gnesis hehuanshanensis sp. nov.

Type locality: Hehuanshan, Taichung City, Taiwan.

Gnesis kentingensis Masumoto, 1981

Masumoto, 1981b (as a subsp. of *G. helopoides*): 87. Type locality: Kenting Park, Pingtung Hsien.

Gnesis lini Masumoto, Akita & Lee, 2014

Masumoto, Akita & Lee, 2014: 79. Type locality: Yingtzuling, Taipei Hsien.

Gnesis liukueiensis Masumoto, 1981

Masumoto, 1981a (as a subsp. of *G. helopoides*): 45. Type locality: Bisyô (Weichuang). Liukuei, Kaohsiung Hsien.

Gnesis meilingae Masumoto, Akita & Lee, 2014

Masumoto, Akita & Lee, 2014: 74. Type locality: Bilu Divine Tree, Hualian Hsien.

*According to their "Catalogue of Formosan Tenebrionidae (Insecta: Coleoptera)", Ando et al. (2016) mentioned *Gnesis helophorids helioporids* Pascoe, 1866 is distributed in Taiwan, Japan and China (Mantchuria). This species was originally described from "Mantchuria", Northeast of China. Actually, it is distributed neither in Japan nor in Taiwan.

Menephilus ongi sp. nov.
(Figs. 13-19)

Type locality. Fushan Botanical Garden, Wulai, Xinbei City, Taiwan.

Type material. Holotype (♂): "TAIWAN Xinbei, Wulai / Fushan Botanical Garden / 2008. VII-2 / U. Ong // NMMS ENT / 8837-365" (NMNST).

Description of the holotype. Body elongated subelliptical, BL 11.63 mm, BW 4.03 mm (widest area across elytra), BL/BW 2.9; almost wholly black, six basal antennomeres, mouth parts, and tarsi slightly brownish; head, six basal antennomeres, pronotum and ventral surface gently shining, scutellum, elytra, and legs rather strongly shining, five apical antennomeres matt; dorsal and ventral sides of body as well as legs mostly glabrous, five apical antennomeres densely clothed with minute hairs, tibiae with antero-internal parts finely haired, and also with apico-interior parts densely clothed with rather short subspinulosus hairs; ventral sides of tarsi clothed with short spinulous hairs.

Head subhexagonal, rather flattened and weakly raised posteriad; clypeus somewhat transversely hexagonal, though the posterior half shortened, feebly convex medially, weakly microsculptured, fairly closely, minutely punctate, apex gently truncate with rounded lateral parts; fronto-clypeal suture finely impressed, continuing clypeo-genal sutures, which extend obliquely to exterior margins; genae weakly, obliquely dilated and raised, declined to eyes, weakly microsculptured, fairly closely, minutely punctate, the punctures becoming smaller exteriorly, with exterior margin obliquely straight in anterior 2/3, and weakly rounded in posterior 1/3; frons nearly flat in anterior part, very weakly raised in posterior part, surrounded parentheses-like impressions on both sides, weakly microsculptured and irregularly scattered with small punctures; vertex only slightly convex, weakly punctate and granulate; borders around posterior parts of eyes deeply grooved. Eyes roundly convex laterad, nearly triangularly inlaid into head, WE/ED 1.8. Antennae subclavate, tip of antennomere XI barely reaching half of pronotum. LAI-XI (in mm): 0.34, 0.13, 0.28, 0.25, 0.24, 0.17, 0.20, 0.23, 0.21, 0.20, 0.32.

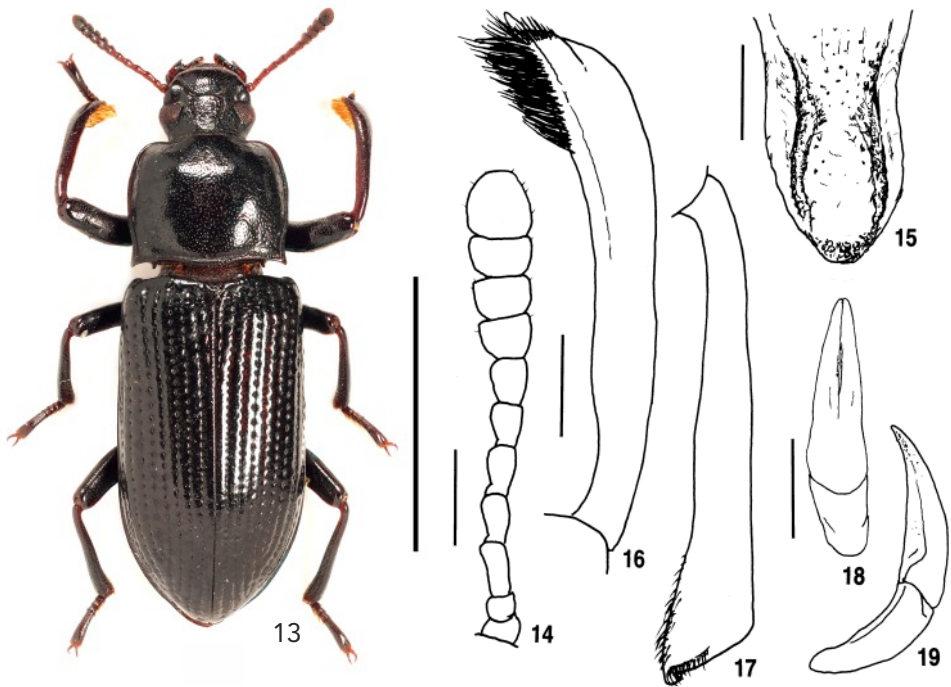
Maxillar with terminal palpomere weakly dilated, with both sides weakly rounded, exterior side about 1.3 times the length of interior side, apical side somewhat triangular, nearly same width of interior side. Mentum subquadrate at bottom, with longitudinal elongated subelliptical bulge on surface, whose interior part is weakly concave. Gula parabolically bordered from underside of head, with surface weakly microsculptured and slightly rugulose.

Pronotum subquadrate, PL 2.80 mm, PW 3.47 mm, PW/PL 1.2, widest at middle and base; apex feebly produced in medial part, sinuous on both sides, bordered and feebly reflexed in lateral parts; base very weakly produced in medial 3/5, weakly sinuous in lateral parts, strongly bordered by punctato-groove; front angles rounded; hind angles acutely projecting postero-laterad; lateral margins gently, roundly inclined, gently roundly produced, sinuous before hind angles, clearly bordered by groove and fine ridge; disc gently, broadly convex, weakly microsculptured, fairly closely punctate, the punctures smaller and more regularly set than those on frons. Scutellum semicircular, weakly raised posteriad, closely, minutely punctate.

Elytra elongated elliptical, though the base is truncate, EL 7.37 mm, EW 4.03 mm, EL/EW 1.83, EL/PL 2.6, EW/PW 1.2, widest at middle, slightly sinuous at basal 1/4; dorsum moderately convex longitudinally, gently flattened broadly in intero-medial portion, highest at basal 1/5, with area around 1st striae slightly concave; disc fairly strongly punctato-striate, the punctures in striae small and closely set in interior portion, becoming larger and separately set laterad; intervals rather narrow and convex, with margins shaped somewhat in circular-saw by punctures in striae, weakly microsculptured; humeri gently convex; apices rounded.

Prosternum medium in size, weakly microsculptured; apex roundly emarginate, ridged along margin, transversely depressed after the ridge; anterior and medial parts gently convex

longitudinally, closely punctulate and rugulose, with transverse convexity and weak depression after the convexity in medial part; posterior part (area between procoxae) becoming narrow and fairly strongly raised, continuing with prosternal process; postrenal process large and nearly horizontal, subelliptical, though the basal part is truncated, surrounded by ridges, with longitudinal convexity along median line, which is fairly smooth and sparsely scattered with minute punctures, both sides of the convexity longitudinally grooved, the grooves microsculptured and scattered with minute punctures. Mesoventrite very short, depressed in anterior and medial parts, steeply raised and with irregular folds in posterior part around border area of metaventrite. Metaventrite medium in size, gently, longitudinally convex, coarsely rugoso-punctate in anterior 1/4 (=area between posterior parts of metacoxae), weakly microsculptured and scattered with minute punctures, with longitudinal impression in posterior half on median line.



Figs. 13-19. *Menepphilus ongi* sp. nov., holotype, ♂: 13- habitus; 14- antenna; 15- prosternal process; 16- protibia; 17- metatibia; 18- aedeagus (dorsal view); 19- ditto (lateral view). Scales: 5.0 mm for Fig. 13; 0.5 mm for Figs. 14-19.

Legs rather stout, closely, minutely punctate. Femora subclavate. Protibiae gently curved intero-ventrad, gradually becoming bolder anteriad, flattened and feebly explanate exteriad in apical 1/3 on exterior face, with densely haired modification in apical 2/5 on interior face. Mesotibiae weakly curved intero-ventrad, gently becoming bolder apicad, clothed with subspinulous hairs in apico-interior parts. Metatibiae slightly curved intero-ventrad, gently becoming bolder apicad, clothed with spinulous hairs in intero-apical parts. Tarsi rather bold, densely clothed with short spinulous hairs on ventral sides. LTB-A (in mm): 0.16, 0.08, 0.08, 0.09, 0.72; 0.15, 0.09, 0.09, 0.10, 0.71; 0.23, 0.14, 0.13, 0.75.

Aedeagus subfusiform, convex longitudinally, AL 1.30 mm, AW 0.30 mm (widest point near basal part of apicale), fairly strongly curved in lateral view; AbL 0.70 mm, gradually becoming

bolder arteriad; apicale gently tapering arteriad in basal half, then a little abruptly narrowed apicad, AaL 0.95 mm, AaL/AL 0.73, flattened in apical part, impressed along median line in apical 1/4, with obtusely projecting apices.

Diagnostic notes. This new species resembles *Menephilus formosanus* Masumoto, 1981. The former can be easily distinguished from the latter by the body stouter, the pronotum smoother on the surface with the front angles rounded, the elytra strongly and clearly punctato-striate, the protibiae in apico-interior parts differently, complicatedly haired.

Etymology. The specific name is in honor of U. Ong, who collected the holotype.

Distribution. Northern Taiwan.

***Tetragonomenes naritai* sp. nov.**

(Figs. 20-24)

Type locality. Lili, Chunri Hsiang, Pingtung Co., Taiwan.

Type series. Holotype (♂): "TAIWAN: Pingtung-hsien, Chunri-hsiang, Lili / 22°4152N, 120°7260E (alt. 1000 m) / 28 IV 2024. Keisuke NARITA leg." (NSMT). Paratypes: (1 ♀): same data as for the holotype (K. Narita private collection); (1 ♀): Taiwan, Pingtung, Mt. Dahan, 2016. XI. 21., 1300m. Y.-T, Chung. CCCC. / NMNS EMT, 8538-615 (NMNST).

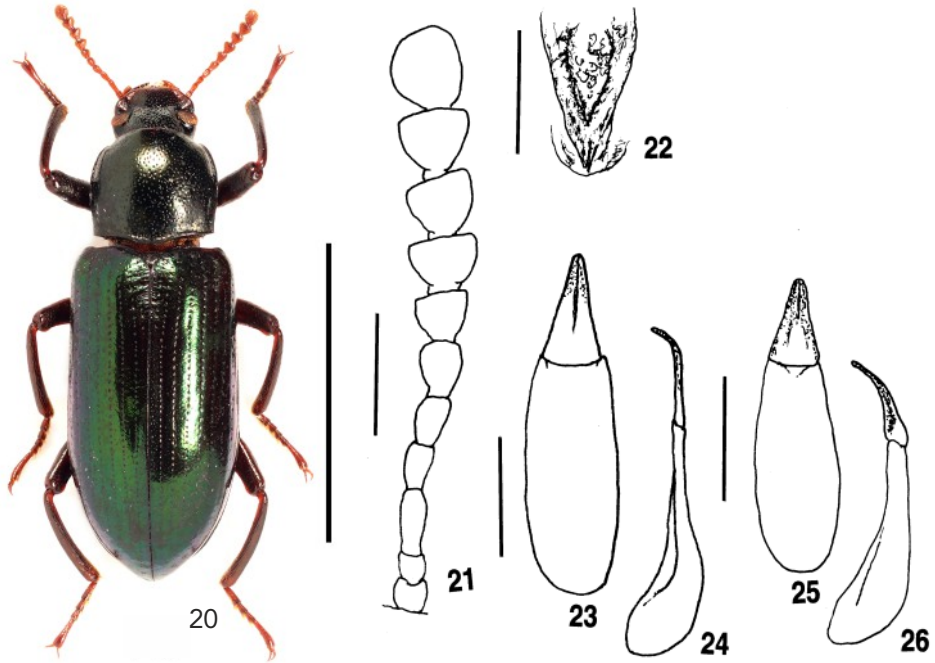
Description of the holotype. Body elongated subelliptical, gently constricted at the border of head and pronotum, and also pronotum and elytra; BL 8.98 mm, BW 3.25 mm (widest area across elytra), BL/BW 2.8; head, pronotum, scutellum, legs and major portion of ventral side black with very feeble brownish tinge, elytra dark greenish luster, antennae and tarsi dark reddish brown, hairs on apical parts of tibiae and ventral sides of tarsi brownish yellow; head weakly, sericeously shining, pronotum and elytra moderately, slightly sericeously shining, legs moderately shining, antennae weakly shining, ventral side rather strongly shining; body almost glabrous, apico-ventral parts of tibiae densely haired, ventral sides of tarsi densely, spinulously haired, antennae with six apicomeres densely, finely haired.

Head transversely subhexagonal, though the basal portion is concealed under the pronotum, nearly flat in anterior portion, strongly raised in posterior portion; clypeus nearly flat, dilated apicad, scattered with punctures, apical margin reflexed and loosely truncate, with lateral parts rounded; fronto-clypeal suture not clear; gena-clypeal sutures not clear but irregularly grooved; genae antero-obliquely dilated, nearly flat in major anterior parts, steeply declined to eyes in posterior parts, microsculptured and scattered with minute punctures, with exterior margins rounded; frons abruptly raised posteriad, microsculptured, rather closely punctate; vertex gently convex, longitudinally rugoso-punctate; areas between frons to occiput and eyes deeply grooved. Eyes subovate in dorsal view, gently roundly convex laterad, slightly obliquely, roundly inlaid into head, WE/ED 2.6. Antennae rather club-like, tip of antennomere XI reaching basal 1/3 of pronotum. LAI-XI (in mm): 0.28, 0.12, 0.24, 0.21, 0.22, 0.17, 0.16, 0.22, 0.21, 0.23, 0.25.

Maxillar with terminal palpomere moderately dilated, with exterior side gently rounded and twice the length of obliquely truncate apical side, and also twice the length of rounded interior side. Mentum subquadrate, microsculptured and irregularly rugulose, longitudinally strongly raised antero-medially, steeply inclined on both sides. Gula finely, parabolically bordered from underside of head, finely microsculptured and minutely wrinkled, with a pair of short impressions near apex.

Pronotum subquadrate, PL 2.32 mm, PW 2.12 mm, PW/PL 1.1, widest slightly before middle; apex weakly, roundly produced, not bordered; base weakly produced in widely V-shaped, slightly sinuous in lateral parts, bordered by punctate-groove, which is fairly wide in

medial part, and becomes narrower laterad, with posterior margin weakly reflexed; front angles subrectangular; hind angles obtusely angulate and slightly produced laterad; lateral margins gently rounded, weakly sinuous near base, bordered by groove, and finely reflexed; disc gently convex, microsculptured, fairly closely, irregularly punctate. Scutellum wide-based triangular, weakly microsculptured.



Figs. 20-26. *Tetragnomenes* spp., holotype, ♂: 20-24- *T. naritai* sp. nov.; 25 & 26- *T. hirasawai* Masumoto, 1984; 20- habitus; 21- antenna; 22- prosternal process; 23 & 25- aedeagus (dorsal view); 24 & 26- ditto (lateral view). Scales: 5.0 mm for Fig. 20; 0.5 mm for Figs. 21-26.

Elytra elongated subelliptical, though the base is truncated, EL 6.43 mm, EW 3.25 mm, EL/EW 2.0, EL/PL 2.8, EW/PW 1.5, widest at middle; dorsum strongly convex longitudinally, highest at basal 2/10; disc finely punctato-striate, the punctures in striae fine and fairly closely set in interior parts, becoming larger and sparser laterad; intervals nearly flat in interior portion, gently becoming convex laterad, weakly microsculptured, scattered with minute punctures; humeri moderately convex; apices slightly roundly produced.

Prosternum medium in size, microsculptured; apex weakly, roundly emarginate; anterior part minutely punctate; medial part gently raised, hardly punctate, ruguloso-punctulate posteriorly; posterior part (=area between procoxae) becoming narrower and raised, minutely ruguloso-punctate; prosternal process depressed and triangularly projected, minutely ruguloso-punctate, inclined on both sides. Mesoventrite with major anterior part strongly depressed and concealed under prosternum, coarsely punctate; posterior part abruptly raised in V-shape, whose surface ridged. Metaventrite medium-sized; anterior part raised and ruguloso-punctulate; medial and posterior parts gently convex longitudinally, scattered with minute punctures, divided by longitudinal impression in basal 2/3 on medial line.

Abdomen medium-sized, weakly microsculptured: ventrite I to III closely punctate; ventrite IV closely, fairly minutely punctate; ventrite V much more minutely punctate than ventrite IV, with exterior margins not bordered, and apex nearly rounded.

Legs medium-sized, weakly microsculptured, scattered with minute punctures. Femora somewhat club-like. Protibiae slightly curved intero-ventrad, feebly becoming bolder apicad, sparsely haired in apical 1/3 on interior face, densely clothed with subspinulose hairs in apical 1/6 on apico-ventral faces; mesotibiae weakly curved intero-ventrad, feebly becoming bolder apicad, clothed with fine hairs in apical 1/3 on apico-interior faces; metatibiae not so long, gently curved interiad, with clothed with fine hairs in apical 1/3 on intero-apical faces. Tarsi rather long, clothed with spinulose hairs on ventral sides in four basal tarsomeres in pro- and mesotarsi, and in basal three tarsomeres in metatarsi, rather sparsely so in each apical tarsomere. LTB-A (in mm): 0.20, 0.11, 0.10, 0.13, 0.61; 0.32, 0.22, 0.18, 0.17, 0.62; 0.44, 0.21, 0.15, 0.64.

Aedeagus subovate, gently convex posteriorly, AL 1.37 mm, AW 0.37 mm (widest point at slightly before middle); basale elongated ovate, though the apical part is truncate, AbL 0.92 mm in length, weakly curved in lateral view; apicale nib-shaped, AaL 0.45 mm, AaL/AL 0.32, with apical part curved ventrad.

Females (n=2). Compared with males, the antennae shorter, the inter-ocular space narrower, the legs less noticeably modified, BL 8.33-9.83 mm, WE/ED 2.8, PL 2.12 mm, PW 2.33 mm, PW/PL 1.1, EL 5.76-6.06 mm, EW 3.03 mm, EL/EW 1.9-2.0, EL/PL 2.7-2.9, EW/PW 1.3.

Diagnostic notes. This new species somewhat resembles *Tetragonomenes hirasawai* Masumoto, 1984, originally described from Kantaoshan, Nantou Hsien. The former can be distinguished from the latter as follows: the body larger (about 8 mm in the latter), interocular space wider (WE/ED 1.8 in the latter), pronotum subquadrate and a little narrower (roundly narrower anteriorly and PW/PL 1.2 in the latter), the elytra a little slenderer, EL/PL larger (EL/EW 1.8, and EL/PL 2.4 in the latter).

Aedeagus larger and slenderer, widest point at slightly before middle (AL 1.03 mm, AW 0.35 mm, widest point at basal 1/3 in the latter), apicale more strongly curved ventrad; apicale with sides of basal parts smooth (rough in the latter) (Figs. 25 & 26).

The latter species has been found from various places in Taiwan. Instead, up until now, the present new species can be found only southern part of Taiwan.

Etymology. The specific name is in honor of Keisuke Narita, Ôita City, Japan, who collected the type series.

Distribution. Southern Taiwan.

Menephilus medius Marseul, 1876

Menephilus medius Marseul, 1876: 120. Type locality: Japon, Partout.

Menephilus striatifrons: Schawaller et al., 2024 (nec Fairmaire, 1896: 101: *Nyctobates*).

Specimens examined: [All from Taiwan] 1 ♂, Pingtung, Jiupeng, 8. IV. 2012, K. Masumoto leg.; 1 ♂, Taichung City, Takeng, 28. III. 2012, T.-C. Wang leg.; 1 ♂, 1 ♀, Pingtung Co., Jiupeng, 7. VII. 2012, T.-C. Wang leg.; 2 ♀♀, Pingtung Co., Chiupeng, 8. VI. 2013, K. Takahashi leg.; 1 ♂, Taipei City, Danshui, 21.V.2009, Y.-T. Wang leg.

Distribution. Taiwan, Japan (Kyushu: Nagasaki & Shimabara; Honshu: Osaka), China, Vietnam, Laos, West Malaysia.

Notes. According to Schawaller et al. (2024), this species is widely distributed in SE China (Fujian; Jiangxi [type locality of *M. striatifrons*]; Guangxi; Zhejiang), Taiwan, Japan, Vietnam, Laos, West Malaysia.

Menophilus medius was originally described from Japan. According to the Marseul's description, it occurs in "Japon, Partout". Actually, the species inhabits only surrounding of Nagasaki City, Kyushu, which was opened as the port to foreign trade in 1571. Recently, the species is recorded from Osaka City, Honshu. Akita et Kôkata (2022) mentioned that this species might be an imported species. Even in Taiwan, this species has not been found among old specimens, therefore, it could be also "an imported species" there.

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