

A New Species of *Gibbomesosella* from Taiwan (Coleoptera, Cerambycidae, Lamiinae, Pteropliini)

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Abstract *Gibbomesosella taiwana* n. sp. is described from Taiwan, as the first representative of the genus in the region. The relationship of the new species with other congeners is briefly discussed, with habitus images of name-bearing type specimens for all known species of the genus. The definition of the genus is partly modified.

Introduction

Gibbomesosella, originally established as a subgenus of *Mesosella* BATES, 1884 by PIC (1932) and later upgraded by BREUNING (1961), is a small genus of the tribe Pteropliini THOMSON, 1860. It had been comprised only two species distributed in the Indochina region so far since BREUNING (1969): *G. nodulosa* (PIC, 1932) from Vietnam and *G. laosica* BREUNING, 1969 from Laos.

On the other hand, the presence of an undetermined pteropliine species had been known from Taiwan among several longicornists for a long time (YAMASAKO & CHOU, priv. comm.). In the course of our survey on the lamiine fauna of Taiwan, the species in question was concluded as a new species belonging to *Gibbomesosella*. Herein, we therefore describe it as the third member of the genus. In this opportunity, we provide the habitus images of all known members of the genus for comparison. This is the first record of the genus from Taiwan.

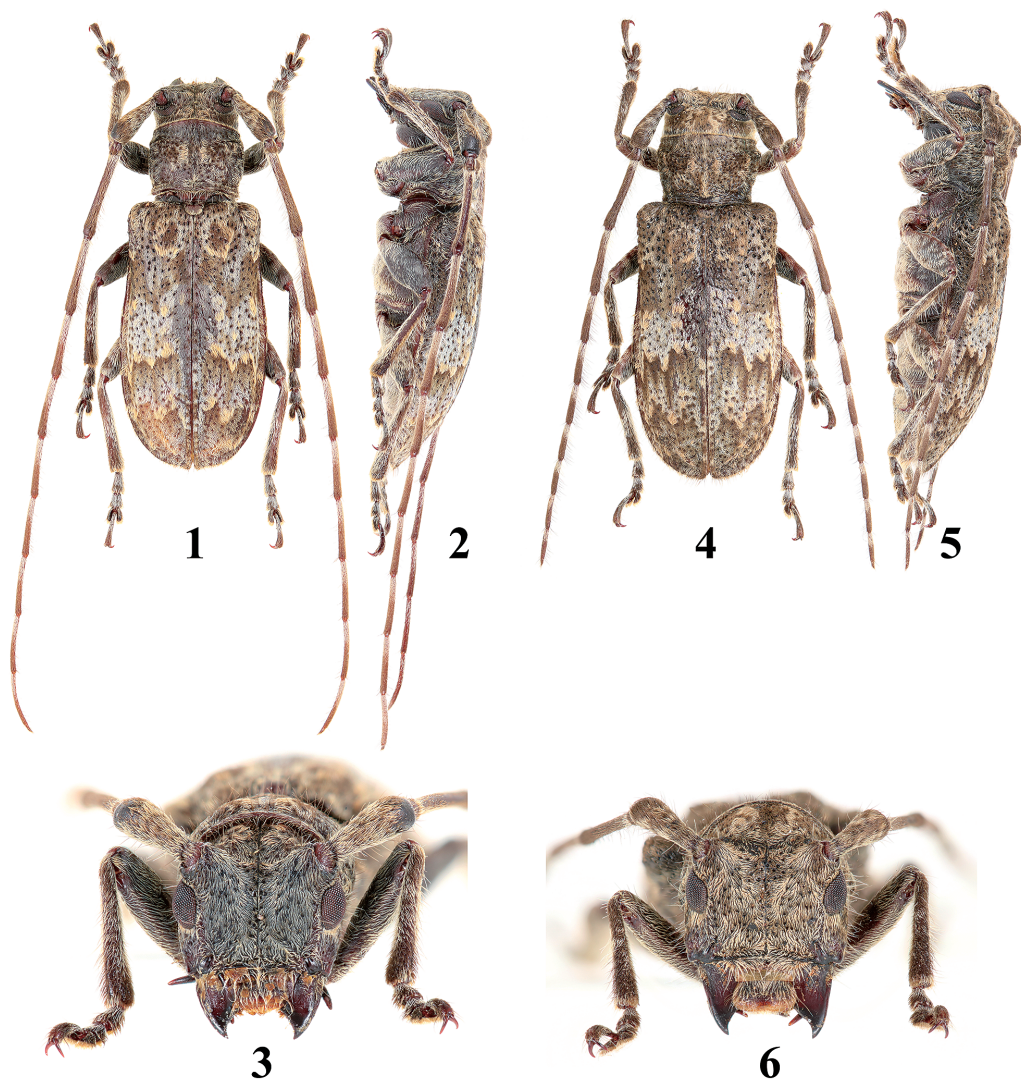
Material and Methods

This study was conducted based on the dried specimens deposited in our own collections, the private collections of our colleagues, and the collections of the following institutions: Musée cantonal de zoologie, Lausanne, Switzerland (MZL); Muséum National d'Histoire Naturelle, Paris, France (MNHN); National Museum of Natural Science, Taichung, Taiwan (NMNS); and private collections of C.-M. CHEN, Tainan, Taiwan (CCMC), J.-F. CHEN, Tainan, Taiwan (CJFC), W.-I CHOU, Taitung, Taiwan (CWIC), D. J. HEFFERN, Texas, USA (CDJH), Y.-L. LIN, Taipei, Taiwan (CYLL), and J. YAMASAKO, Tokyo, Japan (CJY).

Verbatim label data are provided for the holotype, of which each label data are cited in double quotation marks (“ ”) with a slash (/) indicating the line break.

The observational method, terminology, and abbreviations of the endophallus mainly followed YAMASAKO and OHBAYASHI (2011), but used petroleum jelly to inflate endophallus.

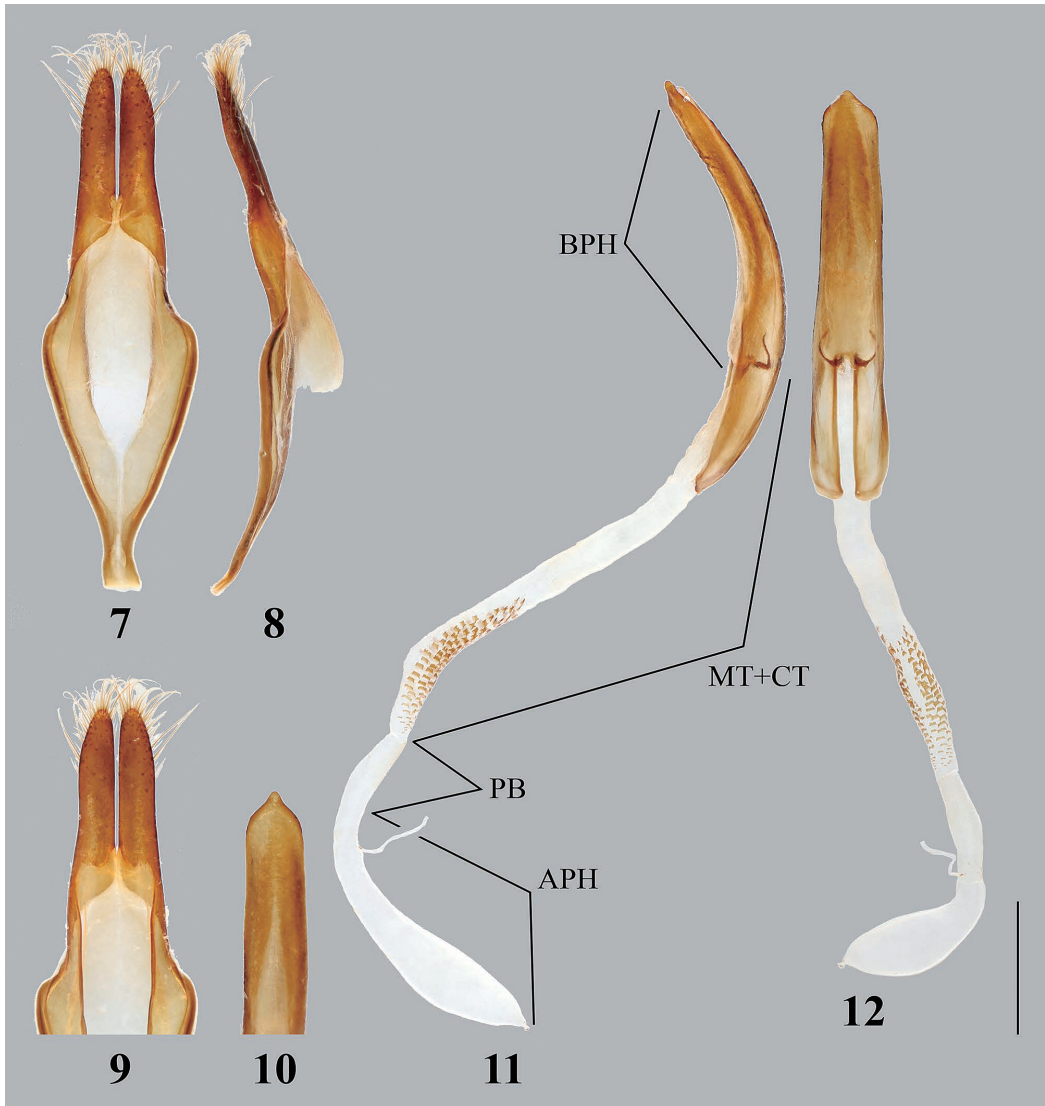
The abbreviations used in the present paper are as follows: APH: apical phallomer; BPH: basal phallomer; CS: crescent shaped sclerites; CT: central trunk; ED: ejaculatory duct; LSp: large spicules; MPH: median phallomer; MSp: micro spicules; MT: medial tube; PB: pre-apical bulb; and SSp: small



Figs. 1–6. Habitus of *Gibbomesosella taiwana* n. sp. — 1–3, Male (holotype); 4–6, female (paratype). — 1 & 4, Dorsal view; 2 & 5, lateral view; 3 & 6, frontal view.

spicules.

Measurements of various body parts are coded as follows: LB = length of body, from the tip of vertex to the apex of closed elytra; LE = length of elytra, from the basal to the apical margins along suture; LG = length of gena, from the upper to lower margins; LL = length of lower eye lobe, from the upper to lower margins; LP = length of pronotum, from the basal to apical margins along the mid-line; WB = maximum width across body; WEH = width across elytral humeri; WL = maximum width of lower eye lobe; WP = maximum width across pronotum.



Figs. 7–12. Male genitalia of *Gibbomesosella taiwana* n. sp. (holotype). — 7 & 8, Tegmen; 9, parameres; 10, apex of median lobe; 11 & 12, median lobe with endophallus. — 7 & 12, Dorsal view; 8 & 11, lateral view; 9 & 10, ventral view. Scale: 1.0 mm. See text for abbreviations.

Gibbomesosella taiwana YAMASAKO & CHOU, n. sp.

(Figs. 1–6 & 7–12)

Type locality. Taiwan, Pingtung County, Shihzih Township, Fonggang, Longfongshi located at the foot of Lilong-shan (Mt.), alt. ca. 200 m.

Type series. Holotype (NMNS, Figs. 1–3 & 7–12): ♂, “[TAIWAN] Longfongshi, / Fonggang, Shihzih Township, / Pingtung County / 屏東縣獅子鄉楓港紫竹林龍峰寺 / 9. V, 2012, W.-I CHOU leg.”. Paratypes (all from Taiwan): 1 ♀ (CJY), Wulai, New Taipei, 15.VII.1968, S. SUZUKI leg.; 1 ♂ (CDJH),

“Shanping”, Kaohsiung, 10.V.1988, R. Davidson coll.; 1 ♀ (CWIC), Lushan, Renai, Nantou, VI.1996, L.-H. CHANG leg.; 1 ♂ (CWIC), Lijia Forest-Road, alt. ca. 1,200 m, Beinan, Taitung, 19.VII.1996, W.-I CHOU leg.; 1 ♀ (CWIC), Guangxing, Xindian, New Taipei, 20.VI.1997, W.-I CHOU leg.; 1 ♂ (CWIC), Dulan, Donghe, Taitung, 23.V.2012, W.-I CHOU leg.; 2 ♂♂ (CDJH), “Shanping For. Rec. Area, UV”, Kaohsiung, 1.VI.1997, C. W. & B. O'BRIEN; 1 ♀ (CWIC), Shouka, Shihzhih, Pingtung, 9.X.1999, W.-I CHOU leg.; 1 ♂, 1 ♀ (CWIC), Shanping, Maolin, Kaohsiung, alt. ca. 700 m, 8.VI.2001, W.-I. CHOU leg.; 2 ♀♀ (CWIC), Erjitan, Taoyuan, Kaohsiung, VII.2001, W.-H. LIN leg.; 1 ♂ (CWIC), Wulai, New Taipei, 3.VI.2003, W.-I. CHOU leg.; 1 ♀ (CYLL) (Figs. 4–6), Baling, Fuxing, Taoyuan, 18.VII.2009, Y.-L. LIN leg.; 1 ♀ (CYLL), same data; 1 ♂ (CJFC), 1 ♀ (CJFC), Shouka, Shihzhih, Pingtung, 9.V.2012, J.-F. CHEN leg.; 1 ♀ (CJFC), same locality, 12.V.2012, J.-F. CHEN leg.; 1 ♂ (CCMC), same locality, 12.V.2012, C.-M. CHEN leg.; 1 ♂ (CCMC), Dahan-shan (Mt.), Chunri, Pingtung, 10.V.2013, C.-M. CHEN leg.; 1 ♂ (CJFC), same locality, 19.VI.2013, J.-F. CHEN leg.; 1 ♂ (CWIC), Shouka, Shihzhih, Pingtung, 2.V.2017, W.-I CHOU leg.; 1 ♀ (CWIC), Dulan-shan (Mt.), Donghe, Taitung, 19.IX.2017, W.-I CHOU leg.

Description. Male (n = 5, Figs. 1–3): LB = 15.6–18.7 mm, WB = 5.7–6.8 mm.

Body brown or dark brown, with sparse long suberect light brown setae on dorsal surface throughout and beneath antennomeres. Head, antennal scape, pronotum, elytra, ventral surface, and legs with brown, light brown, and partly white pubescence. Antennomeres II–XI with white pubescence on each basal part and the remainders with brown pubescence.

Elytra with vague transversal bands of white pubescence on base, near middle and apical 1/4, scattered with spots of light brown pubescence on base, before and behind the white bands. Legs with white pubescence on middle of each tibia, tarsomeres I–II, and basal part of craws on each leg.

Head with frons with sparse punctures. Eye deeply emarginate into upper and lower lobes which are connected posteriorly by 3–4 rows of ommatidia; lower lobe LL/WL = 1.3–1.4, LL/LG = 0.8–1.0. Antenna long, 1.6–1.8 times as long as LB; scape clavate, well thickened apically, without cicatrix; relative lengths of each segment from scape to antennomere XI as follows: 0.9–1.0 : 0.2 : 1.3 : 1.2 : 1.0 : 0.9 : 0.9 : 0.9 : 0.9 : 0.9 : 0.9. Pronotum LP/WP = 0.7, WP/WEH = 0.7, constricted and transversally depressed near base, transversally depressed near apical margin, with pair of obtuse swellings on middle of disk and small projection on each side near apical 1/4. Elytra LE/BL = 0.7, LE/WEH = 2.0–2.2, LE/LP = 3.7–4.1, slightly constricted behind humeri, dilated toward apical 1/3, and thence arcuately narrowed and rounded apically, each with subquadrate inner angle; disk with several tubercles behind each base, punctures distinct in basal half and somewhat reduced apically, slightly swollen above at each middle behind base. Pro- and mesosternal processes hardly ridged and projected, roundly sloped in lateral view. Legs with mesotibia simple, without distal notch.

Male genitalia as in Figs. 7–12. Tegmen in dorsal view widest near middle, slightly curved in lateral view; paramere in dorsal view slightly shorter than 1/3 length of tegmen, hardly narrowed in basal half, thence gently and arcuately narrowed from outer side toward roundly pointed apex, with setae arising from apical half on latero-dorsal side and concentrated apically; ringed part in dorsal view well expanded laterally near middle of tegmen, thence gently narrowed basally, constricted near base. Median lobe in dorsal view slender, gently curved in lateral view; ventral plate roundly pointed at apex; basal struts dehiscent from near middle of median lobe. Endophallus almost triple times as long

Figs. 13–22. Habitus of *Gibbomesosella* spp. — 13–15, 19 & 20, *G. nodulosa* (13–15, male; 19 & 20, the syntype of *Mesosella nodulosa* Pic, 1932, female and its labels); 16–18, 21 & 22, *G. laosica* (16–17, male; 21 & 22, the holotype, female and its labels). — 13, 16, 19 & 21, Dorsal view; 14 & 17, lateral view; 15 & 18, frontal view.



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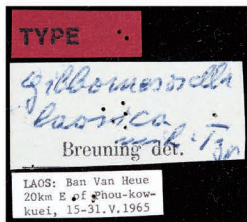
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as median lobe, subdivided into BPH, MPH (MT+CT & PB), and APH, but PB and APH almost fused each other. BPH slightly longer than half length of median lobe, with pair of CS; MPH with MT+CT ca. 1.5 times as long as median lobe, weakly curved and gently narrowed in distal area, with MSp and LSp; PB cylindrical, long, with SSp; APH long, subequal to half length of median lobe, swollen in fusiform, with single ED on dorsal side of proximal area. MSp minute, weakly colored, sparsely arranged in proximal 2/3 of MT+CT; LSp distributed on dorsal side of distal 1/3 of MT+CT, arranged into two irregular lines, unidentate in proximal area, multidentate distally, and thence reduced in distal area; SSp minute, weakly colored, densely on PB, but somewhat sparser in ventral side.

F e m a l e (n = 5, Figs. 4–6): LB = 16.2–22.0 mm, WB = 6.1–8.1 mm. Similar to male. Body relatively thick. Eye with lower lobe rather small, LL/WL = 1.1–1.2, LL/LG = 0.7. Antenna 1.3 times as long as LB; relative lengths of each segment from scape to antennomere XI as follow: 1.1 : 0.2–0.3 : 1.4–1.5 : 1.3–1.4 : 1.0–1.1 : 0.9 : 0.9 : 0.8 : 0.7–0.8 : 0.7 : 0.7.

Diagnosis. This new species is easily distinguishable from any other congeners by the following characteristics (see also Figs. 13–22 for comparison): elytra with small spots of yellowish brown pubescence, without distinct swelling on each base, dilated toward apically and widest at apical 1/3.

Etymology. The species name is derived from its distribution, endemic to Taiwan.

Remarks. This new species is more similar to *G. laosica* (Figs. 16–18, 21 & 22) than to *G. nodulosa* (Figs. 13–15, 19 & 20), the type species of the genus, mainly in the following characteristics: antenna in male slender and well long; elytra somewhat elongate, dilated apically (weekly in *G. laosica* and distinctly in *G. taiwana* n. sp.), with vague white bands. Whereas *G. nodulosa* possesses the following features: antenna in male relatively thick and short; elytra relatively short, hardly dilated apically, with distinct transversal wide white band on middle and in contrast the remainders clothed with brown or light brown pubescence. Those similarities may suggest that this new species is more closely related with *G. laosica* than with *G. nodulosa*.

The basal prominent ridges of elytra had been regarded as one of the defining features for *Gibbomesosella* (PIC, 1932; BREUNING, 1963), but it is variable among the members. The prominences are well developed to form prominent ridges in *G. nodulosa* (Figs. 14 & 15), whereas relatively rudimentary and obtuse in *G. laosica* (Figs. 17 & 18), and indistinct in *G. taiwana* n. sp. (Figs. 2, 3, 5 & 6). Except for the prominences, those species are well congeneric due to basically sharing general appearances defined by PIC (1932) and BREUNING (1963), and also to similarity in their male genital structures. The presence of prominent ridges of elytra, therefore, should be omitted from the definition of the genus *Gibbomesosella* (see BREUNING, 1963 for other defining features).

Acknowledgements

We express our hearty thanks to Azadeh TAGHAVIAN (MNHN), Anne FREITAG (MZL) for examining the type materials for comparison, and to Jia-Fong CHEN (Tainan, Taiwan), Chia-Mu CHEN (Tainan, Taiwan), Yu-Long LIN (Taipei, Taiwan), Daniel J. HEFFERN (Texas, USA), Takashi KURIHARA (Tochigi Prefectural Museum, Utsunomiya, Japan), Hiroyuki WAKAHARA (Vientiane, Laos) for kindly offering the type material, also to Tatsuya NISATO (Bioindicator Co., Ltd., Shinjuku, Japan) for useful comments on the original draft of this paper. We also thank three anonymous reviewers for their constructive comments.

要 約

山迫淳介・周 文一：台湾産 *Gibbomesosella* 属 (鞘翅目カミキリムシ科フトカミキリ亜科サビカミキリ族) の 1 新種。——*Gibbomesosella* 属は、これまでインドシナ産 2 種のみから成る小属であった。筆者らによる台湾産カミキリムシの研究過程で、これまで長らく不明種とされてきた台湾産のサビカミキリ族の 1 種は、本属の未記載種であることが明らかとなった。そこで、その種を本稿にて *Gibbomesosella taiwana* n. sp. として命名、記載した。なお、本新種記載により *Gibbomesosella* 属が初めて台湾から記録されたこととなる。本新種は、外部形態の類似性から、ベトナムに分布する *G. nodulosa* よりも地理的により離れたラオスに分布する *G. laosica* に近縁であると考えられる。

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Manuscript received 25 February 2018;
revised and accepted 16 April 2018.

Appendix

The data of the specimens figured for comparison.

Gibbomesosella nodulosa (PIC, 1932): 1 ♀ (syntype, MNHN, Figs. 19 & 20), “Pho-vi / 10.07 / Tonkin”; 1 ♂ (CJY, Figs. 13–15), Tamdao, Vĩnh Phúc, Vietnam, 5–10.VI.1995, T. KURIHARA coll.

Gibbomesosella laosica BREUNING, 1969: 1 ♀ (holotype, MZL, Figs. 21 & 22), “LAOS: Ban Van Heue / 20km E of Phou-kow- / kuei, 15-31.V.1965”; 1 ♂ (CJY, Figs. 16–18), Xam Neua, Houa Phan, Laos, 22.V.2007, H. WAKAHARA coll.