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Notes on the Genus *Teretrius* ERICHSON, 1834 (Coleoptera: Histeridae) from Taiwan

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Abstract Two new species of the genus *Teretrius* from Taiwan are described under the names *Teretrius* (*Neotepetrius*) *shibatai* and *T.* (*T.*) *taichii*. *Teretrius* (*N.*) *formosus* (LEWIS, 1915) is redescribed. Key to the Taiwanese species and note on the male genitalia of the genus are given.

Key words: Histeridae, Abraeinae, *Teretrius*, new species, Taiwan.

Genus *Teretrius* of the tribe Teretriini, subfamily Abraeinae was established by ERICHSON in 1834. It is divided into two subgenera: *Teretrius* and *Neotepetrius* G. MÜLLER, 1937. The former is distributed worldwide except Southeast Asia, and a total of 34 species are known. The latter subgenus *Neotepetrius* is also distributed all over the world, and a total of 37 species are known: 10 of them occur in Oriental, 1 in central Asia, 11 in African, 10 in Nearctic and 5 in Australo-Pacific Regions (MAZUR, 1997). From Taiwanese territory, *T. formosus* has been only known from Lanyu Island so far, off the main Island. Recently MAZUR (2007) reviewed the Taiwanese histerid beetles and recorded *T. formosus* from Nantou province of the main island as well.

In 2007 I was able to study 130 Taiwanese specimens of the family Histeridae from the collection of Mr. Taichi SHIBATA and found among them two species of the genus *Teretrius*. Both the species are unknown; therefore, these are described herein under the name *Teretrius* (*Neotepetrius*) *shibatai* and *T.* (*T.*) *taichii*. These species are named after the late Mr. Taichi SHIBATA who passed away last year. These beetles are named after him and in his honor and I wish to express my deep gratitude to him. My hearty thanks are also due to Dr. Kiyoshi ANDO (Ehime University, Japan) and Dr. Roger BOOTH (The Natiural History Museum, London, UK) for their support that enabled me to complete this study and to Prof. Slawomir MAZUR (Warsaw Agricultural University – SGGW, Poland) and Mr. Tomáš LACKNER (Hokkaido University, Japan) for their useful comments and critical reviews of the manuscript.

Material and Methods

Methods. General observation and dissection were made under a stereoscopic microscope (NIKON SMZ–1000). Some structures were also observed in a SEM (Hitachi S–2250N). Male genitalia were removed from dried specimens and consequently 1) kept in 10 % KOH for about 3 hours or more depending on size; 2) washed and dissected in 80 % ethyl alcohol; 3) transferred into lactic acid containing fuchsin and kept at 60˚C for 3 hours; 4) transferred into a mixture of acetic acid and methyl salicylate (1:1) and left there for 15 minutes, and 5) observed in alpha-terpineol in a small dish.

For the description format, I use the following abbreviations of measurements. PPL: length between anterior angles of pronotum and apex of pygidium, PEL: length between anterior angles of pronotum and apices of elytra, APW: width between anterior angles of pronotum, PPW: width between posterior angles of pronotum, PL: length of pronotum along mid line, EL: length of elytron along sutural line, EW: maximal width between outer margins of elytra, ProW: maximal width of propygidium, ProL: length of propygidium, PyL: length of pygidium, PTL: length of protibia, MSTL: length of mesotibia, MTTL: length of metatibia. See also ÔHARA (1994: 8, fig. 2).

All the type materials newly described in this study are preserved in the Kashihara City Museum of Insect, Nara, Japan.

Taxonomy

Subfamily **Abraeinae** MACLEAY, 1819
Tribe **Teretriini** BICKHARDT, 1914

Genus ***Teretrius*** ERICHSON, 1834
Subgenus ***Neotepetrius*** G. MÜLLER, 1937

Teretrius (***Neotepetrius***) ***shibatai*** M. ÔHARA, new species
(Figs. 1–3)

Description. Male. Body (Fig. 1A) cylindrical, convex. Biometric data (in mm) as follows, PPL 3.19; PEL 2.79; APW 0.93; PPW 1.67; PL 1.27; EL 1.47; EW 1.72; ProW 1.08; ProL 0.44; PyL 0.74; PTL 0.64; MSTL 0.74; MTTL 0.78. Cuticle strongly shining, black; antennal funicle and tibial margin dark brown.

Frontal stria (Fig. 1D) absent; disc of front rather densely and coarsely punctate; punctures separated by 1.5–2 times their diameter; epistoma flattened, anterior margin truncate; surface evenly and finely punctate; interspaces among punctures covered with granulate

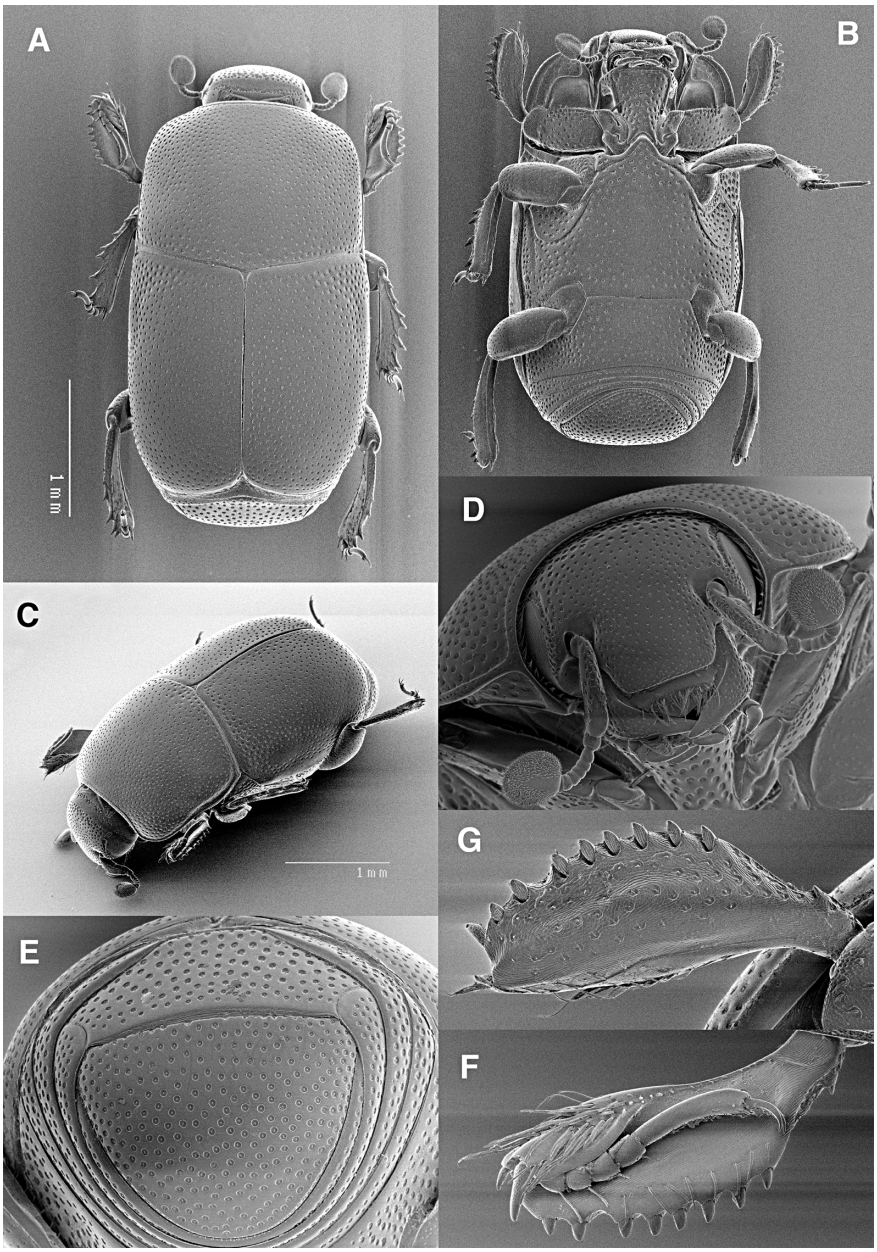

Fig. 1. *Teretrius* (*Neotepetrius*) *shibatai* M. ÔHARA, new species. — A, Habitus, dorsal view; B, ditto, ventral view; C, ditto, dorso-oblique view; D, head, frontal view; E, propygidium and pygidium, caudal view; F, left protibia, dorsal view; G, ditto, ventral view. [Holotype: MO-08-001].

microsculptures. Labrum densely furnished with long hairs; outer-lateral side of mandibles densely and coarsely punctate. Antennal club not segmented, median part without hairs (Fig. 2E).

Pronotal sides (Fig. 1A) parallel in basal 5/6, thence strongly convergent apically; apical angles obtuse. Marginal pronotal stria deeply impressed and complete on anterior and lateral margins; outer side of stria along lateral margin strongly carinate; disc rather densely covered with coarse punctures that are separated by 1–4 times their diameter. Pronotal epipleura deeply concave; anterior and inner lateral margins carinate.

Elytral epipleura impunctate; marginal epipleural and elytral striae absent; oblique humeral, subhumeral and elytral dorsal striae absent (Fig. 1A, C). Surface of elytra evenly and coarsely punctate, punctures separated by 2–5 times their diameter; oblong portion on elytral humeri and narrow bands along anterior and sutural margins impunctate.

Propygidium (Fig. 1E) pentagonal, disc densely covered with large ocelloid punctures, separated by their own to twice their diameter; pygidium strongly convex, evenly covered with large ocelloid punctures that are separated by their own diameter.

Anterior margin of median portion of prosternum (Fig. 2B) straight; marginal stria of prosternal keel deeply and completely impressed anteriorly and laterally, its outer side carinate; disc densely covered with large, round and shallow punctures; medio-basal portion longitudinally convex; basal margin forming emarginate acute angle. Area between prosternal keel and descending lateral striae strongly excavate, making space for retractile antennal club.

Anterior margin of mesosternum (Fig. 2B, D) strongly projected medially forming sharp angle; marginal stria deeply impressed, complete; disc covered with large round punctures that are separated by 1–4 times their diameter. Meso-metasternal suture (Fig. 2D) slightly indicated. Disc of metasternum medially feebly convex, sparsely and irregularly punctate, punctures coarse, separated by 1–5 times their diameter; lateral metasternal stria strongly curved, complete; lateral end of stria attaining suture of mesepimeron; anterior side of stria carinate.

Disc of 1st abdominal sternum (Fig. 2C) laterally without stria; punctures coarse, separated by about twice their diameter.

Protibia (Fig. 1F, G) dorsally bearing single large spur at base of tarsal groove; ventrally with one large (in apical inner corner) + 8 large + one small (basalmost) denticles on outer margin; inner lateral margin densely furnished with very long hairs. Mesotibia with single large spur at dorsal apical inner corner; ventrally with single small and another larger (in apical inner corner) + 2 small (in apical outer corner) + 4 large and 1 small + 1 very small (basalmost) spines on outer margin. Metatibia with single long large spur in dorsal apical inner corner; ventrally with single small and another larger (in apical inner corner) + 2 medium (in apical outer corner) + 2 large + 2 small spines on outer margin.

Male genitalia (Figs. 3A–H): anterior margin of ninth sternum (spicule) round; parameres parallel; apices of parameres with small triangle pad; basal piece not fused on dorsal

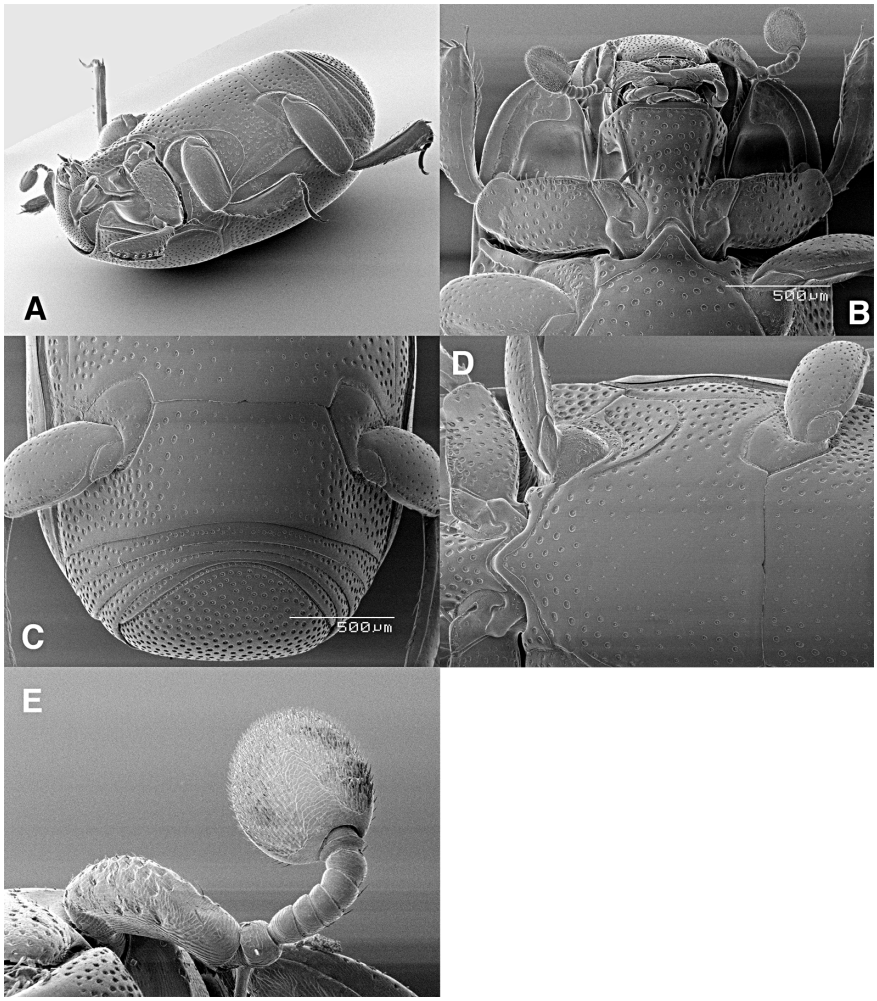

Fig. 2. *Teretrius* (*Neotepetrius*) *shibatai* M. ÔHARA, new species. — A, Habitus, ventro-oblique view; B, pro- and mesosterna, ventral view; C, abdominal sterna, ventral view; D, meso- and metasterna, ventral view; E, left antenna, ventral view. [Holotype: MO-08-001].

side, on ventral side anteriorly elongate; median lobe strongly sclerotized, long and narrow.

Specimen examined. Holotype, male, "Liukuei, Formosa, 14. IV. 1971, S. TAKEDA" (MO-08-001).

Distribution. Taiwan (Kaohsiung).

Etymology. Named in honor of the late Mr. Taichi SHIBATA, the renowned Japanese coleopterist.

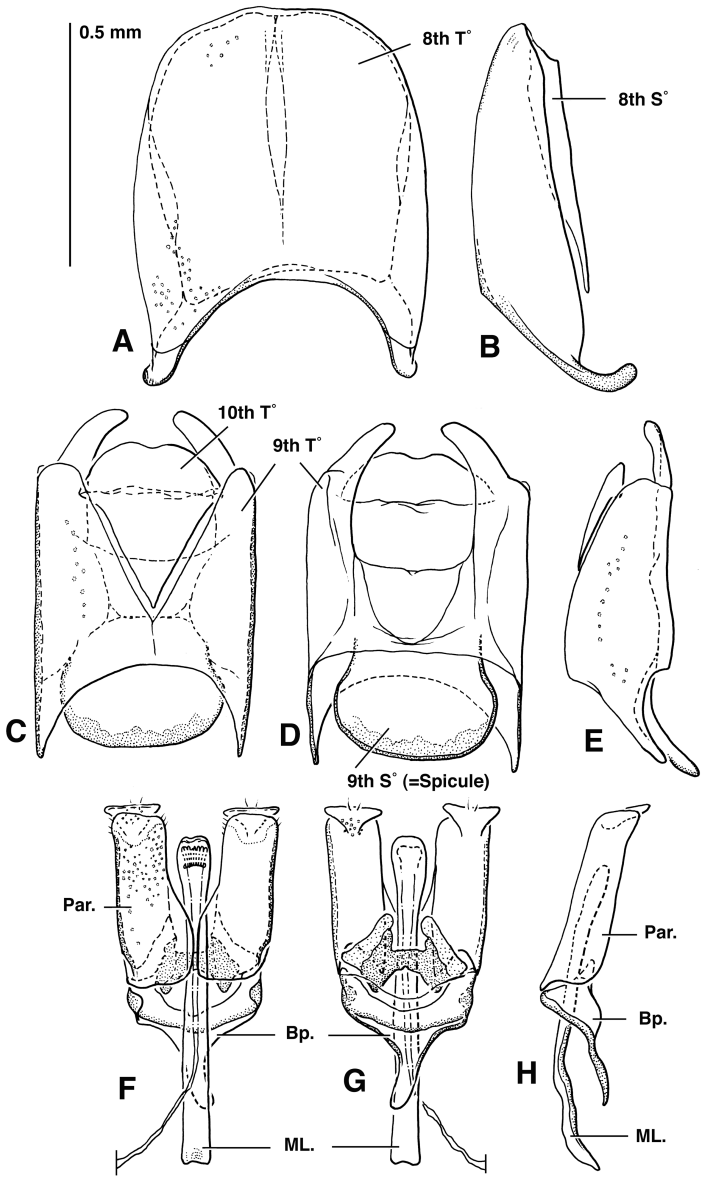

Fig. 3. *Teretrius* (*Neotepetrius*) *shibatai* M. ÔHARA, new species. Male genitalia. — A, Eighth tergite and sternite, dorsal view; B, ditto, lateral view; C, 9th and 10th tergites and spicule (9th sternite), dorsal view; D, ditto, ventral view; E, ditto, lateral view; F, aedeagus, dorsal view; G, ditto, ventral view; H, ditto, lateral view. Par.: Parameres; Bp.: Basal piece; ML.: Median lobe. [Holotype: MO-08-001].

Teretrius **(*Neotepetrius*)** ***formosus*** (LEWIS, 1915)

(Figs. 4–6)

Teretriosoma formosum LEWIS, 1915: 51 [Kotosho (= Lanyu Is.)]
Teretrius (*Neotepetrius*) *formosus*: MAZUR, 1997: 209; MAZUR, 2007: 68 [Nantou: Wushe].

Redescription. Male. Body (Fig. 4A) cylindrical, convex. Biometric data (in mm) as follows, PPL 2.47; PEL 2.23; APW 0.70; PPW 1.34; PL 1.06; EL 1.22; EW 1.42; ProW 0.81; ProL 0.31; PyL 0.60; PTL 0.55; MSTL 0.58; MTTL 0.58. Cuticle shiny and dark blackish brown; margins of pronotum and elytra, legs, antennae, mouthparts and ventral side dark reddish brown.

Frontal stria (Fig. 5A) absent; disc rather coarsely punctate; punctures separated by three times their diameter on vertex and becoming denser and finer apically; interspaces among punctures on apical half sparsely intermingled with microscopic punctures. Epistoma flattened, its anterior margin truncate; surface evenly and finely punctate, punctures separated by their own diameter. Labrum densely furnished with short hairs; outer-lateral side of mandibles along ventral margin coarsely punctate. Antennal club not segmented, on median part without hairs (Fig. 5B).

Pronotal sides (Fig. 4A) parallel on basal 3/4, thence convergent apically; apical angles obtuse; marginal pronotal stria deeply impressed, on anterior and lateral margins complete (Fig. 4D); outer side of stria along lateral margins strongly carinate. Disc covered with coarse and oblong punctures separated by 2–4 times their diameter; punctures becoming denser on lateral portion, separated by their own diameter; interspaces among punctures sparsely intermingled with microscopic punctures and covered with alutaceous microsculpture. Pronotal epipleura slightly concave; anterior and inner lateral margins carinate.

Elytral epipleura impunctate; marginal epipleural and elytral striae absent; oblique humeral, subhumeral and dorsal striae absent (Figs. 4A, C). Surface of elytra coarsely punctate, punctures separated by 2–4 times their diameter, medio-basally becoming sparser; oblong portion on elytral humeri impunctate and feebly convex.

Propygidium (Fig. 4E) pentagonal, disc covered with large round deep punctures, separated by half to twice their diameter; pygidium (Fig. 4E) on basal 2/3 feebly convex, on apical 1/3 depressed; disc evenly covered with large round punctures separated by their own diameter; on apical 1/3 punctures become denser and interspaces among punctures densely covered with reticulate coriaceous microsculptures (Fig. 4F).

Anterior margin of median portion of prosternum (Fig. 5C) straight; marginal stria of prosternal keel anteriorly and laterally deeply and completely impressed, its outer side carinate; disc densely covered with large, round and shallow punctures; interspace among punctures covered with alutaceous microsculptures; basal margin deeply emarginate; area between prosternal keel and descending lateral striae deeply excavate, making space for retractile antennal club.

Anterior margin of mesosternum (Fig. 5C) strongly projected medially, forming sharp

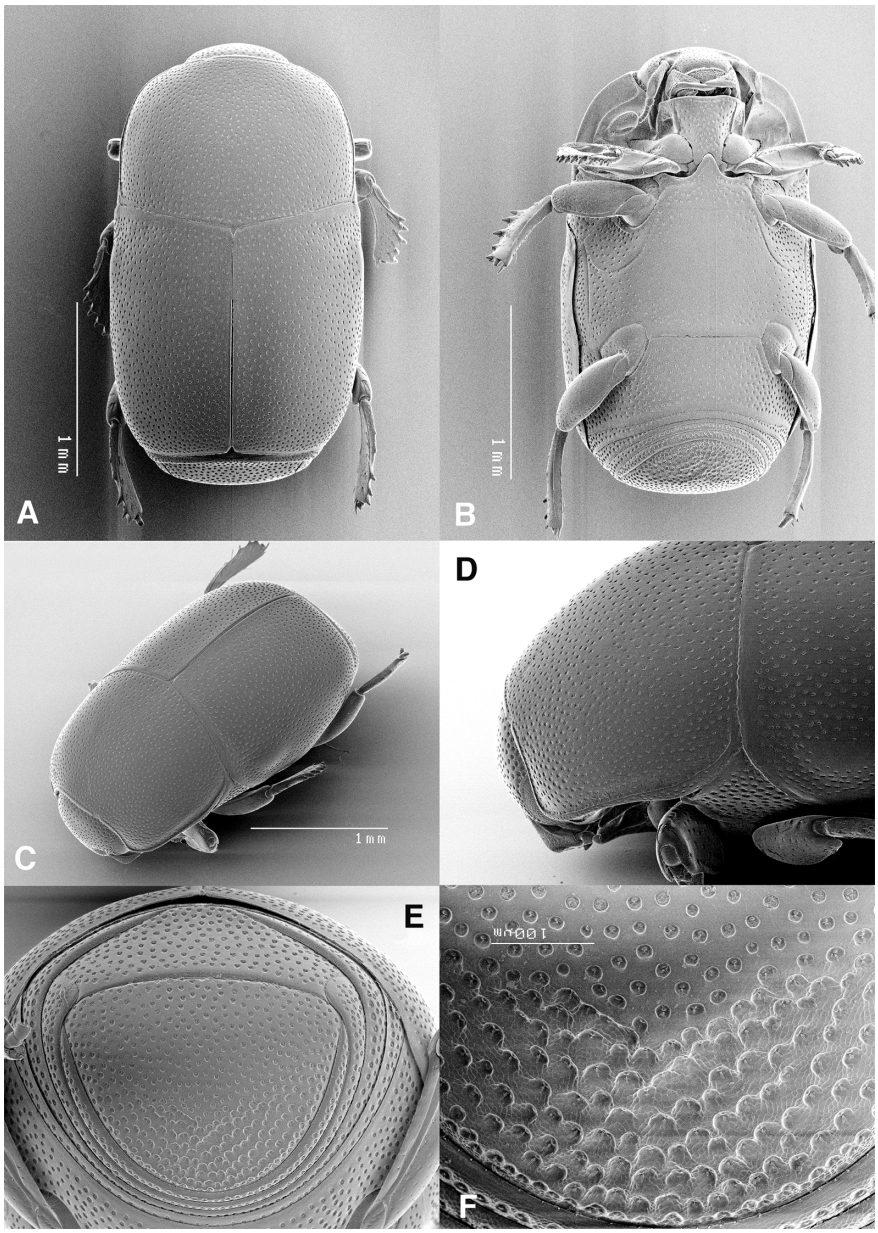

Fig. 4. *Teretrius* (*Neotepetrius*) *formosus* (LEWIS, 1915). —— A, Habitus, dorsal view; B, ditto, ventral view; C, ditto, dorso-oblique view; D, pronotum, lateral view; E, propygidium and pygidium, caudal view; F, apical part of surface of pygidium. [Syntype: MO-08-007].

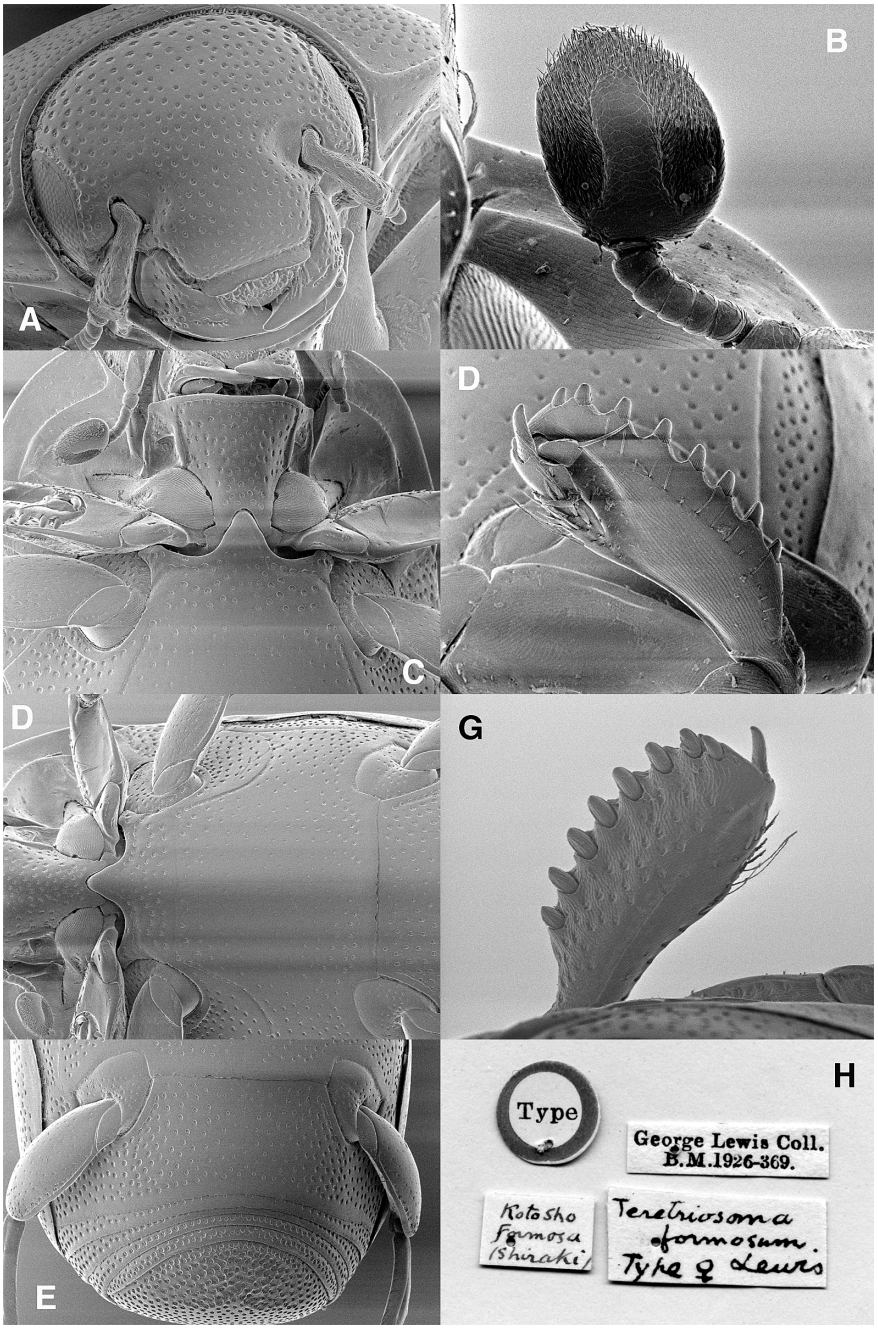

Fig. 5. *Teretrius* (*Neotepetrius*) *formosus* (LEWIS, 1915). —— A, Head, frontal view; B, left antenna, ventral view; C, pro- and mesosterna, ventral view; D, meso- and metasterna, ventral view; E, sterna, ventral view; F, left protibia, dorsal view; G, ditto, ventral view; H, labels. [Syntype: MO-08-007].

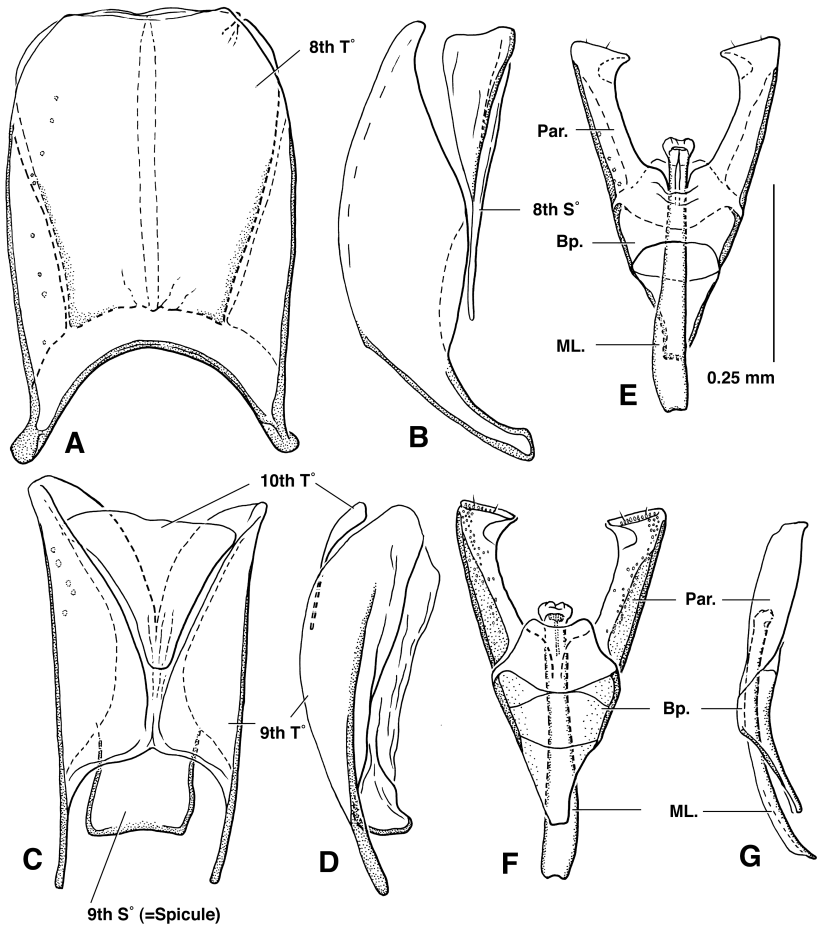

Fig. 6. *Teretrius* (*Neotepetrius*) *formosus* (LEWIS, 1915). Male genitalia. —— A, Eighth tergite and sternite, dorsal view; B, ditto, lateral view; C, 9th and 10th tergites, and spicule (9th sternite), dorsal view; D, ditto, lateral view; E, aedeagus, dorsal view; F, ditto, ventral view; G, ditto, lateral view. [Syntype: MO-08-007].

angle; marginal stria crenate and impressed laterally but interrupted on median portion; disc covered with large round shallow punctures separated by 0.3–0.5 times their diameter; meso-metasternal suture (Fig. 5C) slightly indicated. Disc of metasternum sparsely, irregularly punctate, punctures coarse and separated by 2–8 times their diameter and becoming finer and sparser medially; interspace among punctures covered with alutaceous microsculptures; lateral metasternal stria strongly curved, complete; lateral end of stria

attaining at suture of mesepimeron; anterior side of stria carinate.

Disc of 1st abdominal sternum (Fig. 5E) laterally with short stria on basal half; punctures coarse, oblong, separated by about 2–4 times their diameter; interspace among punctures covered with alutaceous microsculptures.

Protibia (Fig. 5D, G) dorsally bearing single large spur at base of tarsal groove; ventrally with single small (in apical inner corner) + 2 large (in apical outer corner) + 6 large + 1 small (basalmost) denticles on outer margin; inner lateral margin densely furnished with very long hairs. Mesotibia in dorsal apical inner corner bearing single long large spur; ventrally with single large (in apical inner corner) + 2 medium (in apical outer corner) + 4 large + 1 small (on basal 1/6) spines on outer margin. Metatibia in dorsal apical inner corner bearing single long large spur; ventrally bearing with single small and another larger (in apical inner corner) + 2 small (in apical outer corner) + 2 large (on apical half) + 2 small (on basal half) spines on outer margin.

Male genitalia (Figs. 6A–G): anterior margin of 9th sternum (spicule) truncate; parameres posteriorly divergent; apices of parameres with large hooks; parameres and basal piece fused on dorsal side by membrane; basal piece ventrally anteriorly elongate; median lobe sclerotized, narrow.

Specimen examined. Syntype, 1 male, "Type (with red circle)", "Kotosho / Formosa / /Shiraki/", "George Lewis Coll. / B.M. 1926-369.", "Teretriosoma / formosum / Lewis / Type ♀ (hand writing)", housed in the Natural History Museum, London, UK (Fig. 5H; MO-08-007).

Distribution. Taiwan (Nantou; Lanyu Is. = Kôtôshô).

Subgenus ***Teretrius*** ERICHSON, 1834

Teretrius* (*Teretrius*) *taichii M. ÔHARA, new species

(Figs. 7–9)

Description. Male. Body (Fig. 7A) cylindrical, convex. Biometric data (in mm) as follows, PPL 2.16; PEL 1.8; APW 0.6; PPW 1.06; PL 0.81; EL 1.01; EW 1.13; ProW 0.70; ProL 0.26; PyL 0.48; PTL 0.43; MSTL 0.41; MTTL 0.48. Cuticle shiny and blackish brown; margins of pronotum, legs, antennae, mouthparts and ventral side reddish brown; hairs of antennal scape and club golden-yellow.

Frontal stria (Fig. 7D) absent; disc rather densely, coarsely punctate; punctures separated by 1–4 times their diameter; interspaces among punctures sparsely intermingled with microscopic punctures. Epistoma flattened, its anterior margin truncate; surface evenly and finely punctate. Labrum densely furnished with short hairs; outer-lateral side of mandibles along ventral margin coarsely punctate. Anterior margin of antennal scape densely furnished with long hairs; club not segmented, on median part without hairs (Fig. 8D).

Pronotal sides (Fig. 7A) parallel on basal half, thence convergent apically; apical

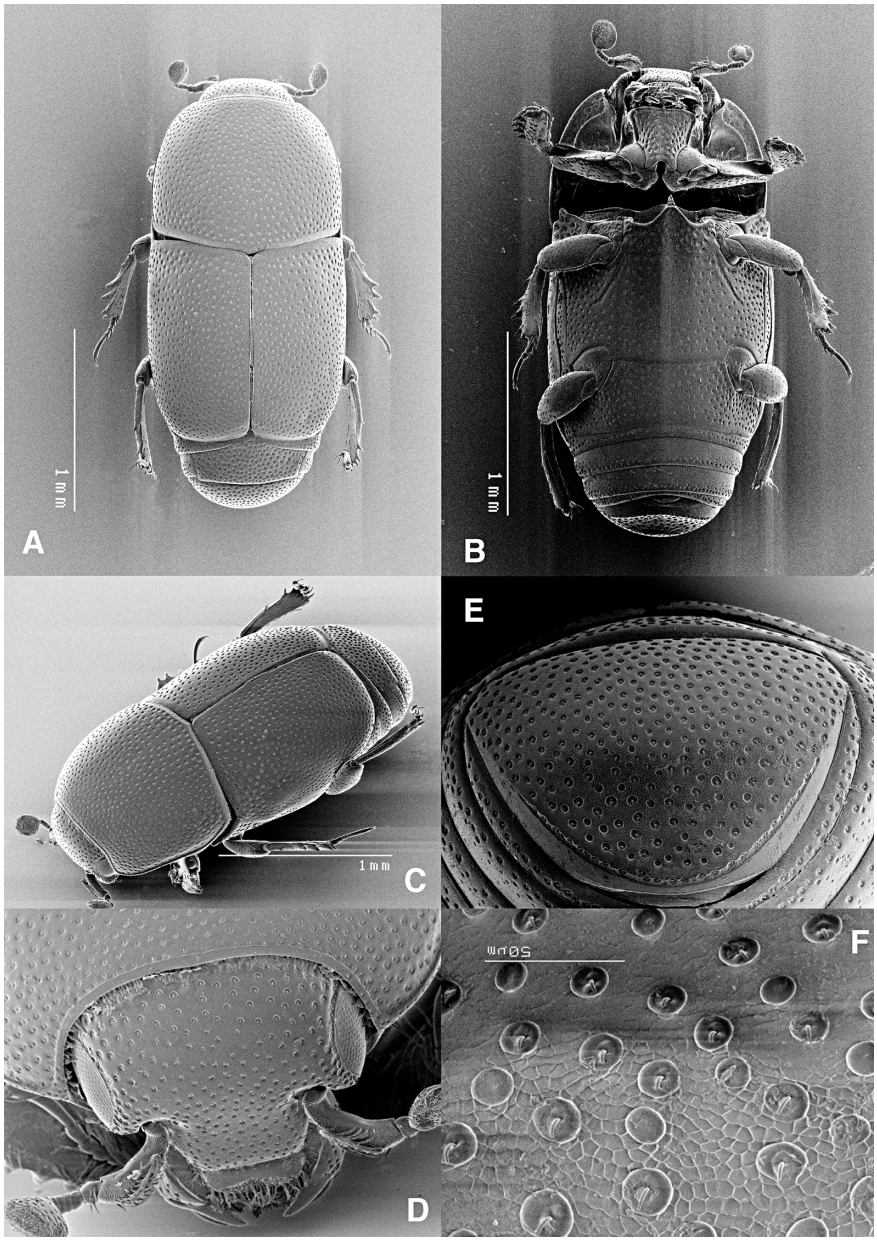

Fig. 7. *Teretrius* (*Teretrius*) *taichii* M. ÔHARA, new species. — A, Habitus, dorsal view; B, ditto, ventral view; C, ditto, dorso-oblique view; D, head, frontal view; E, pygidium, caudal view; F, part of surface of pygidium. [Holotype: MO-08-002].

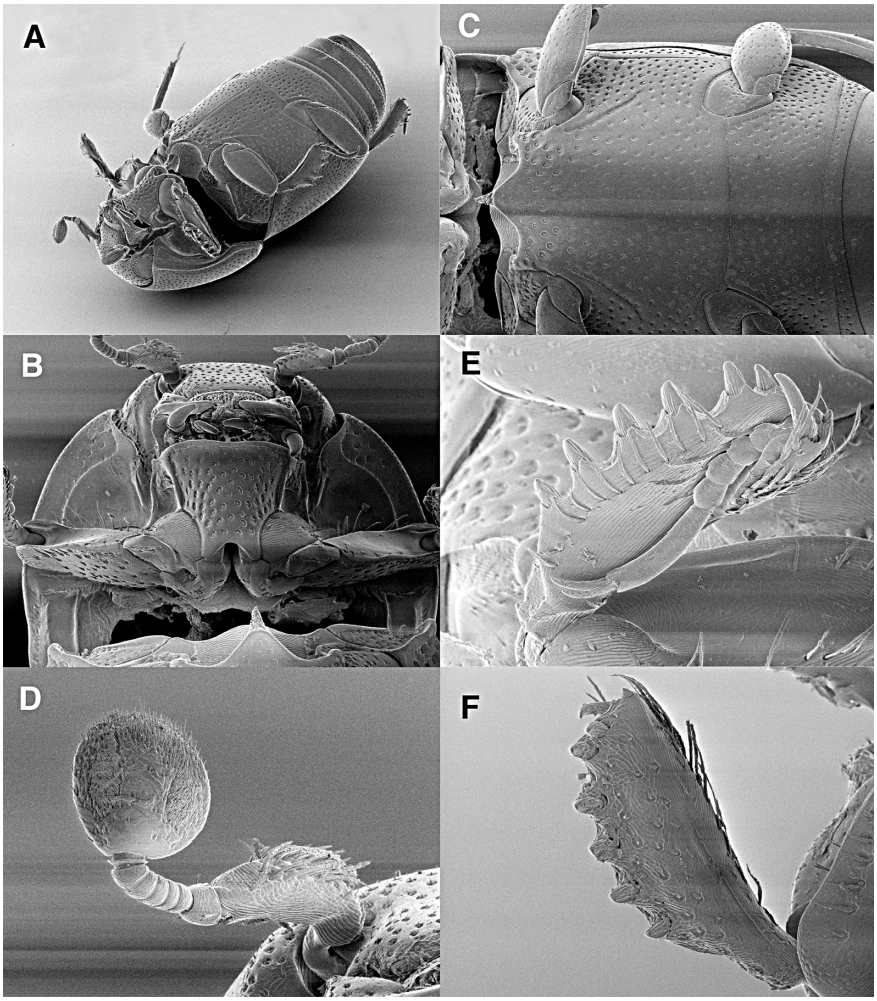

Fig. 8. *Teretrius* (*Teretrius*) *taichii* M. ÔHARA, new species. — A, Habitus, ventro-oblique view; B, prosternum, ventral view; C, meso- and metasterna, ventral view; D, right antenna, ventral view; E, left protibia, dorsal view; F, ditto, ventral view. [Holotype: MO-08-002].

angles obtuse; marginal pronotal stria deeply impressed, on anterior and lateral margins complete; outer side of stria along lateral margins carinate. Disc covered with coarse punctures separated by 2–4 times their diameter; punctures becoming denser on lateral portion, separated by their own diameter; interspaces among punctures sparsely intermingled with microscopic punctures. Pronotal epipleura concave; anterior and inner lateral margins carinate.

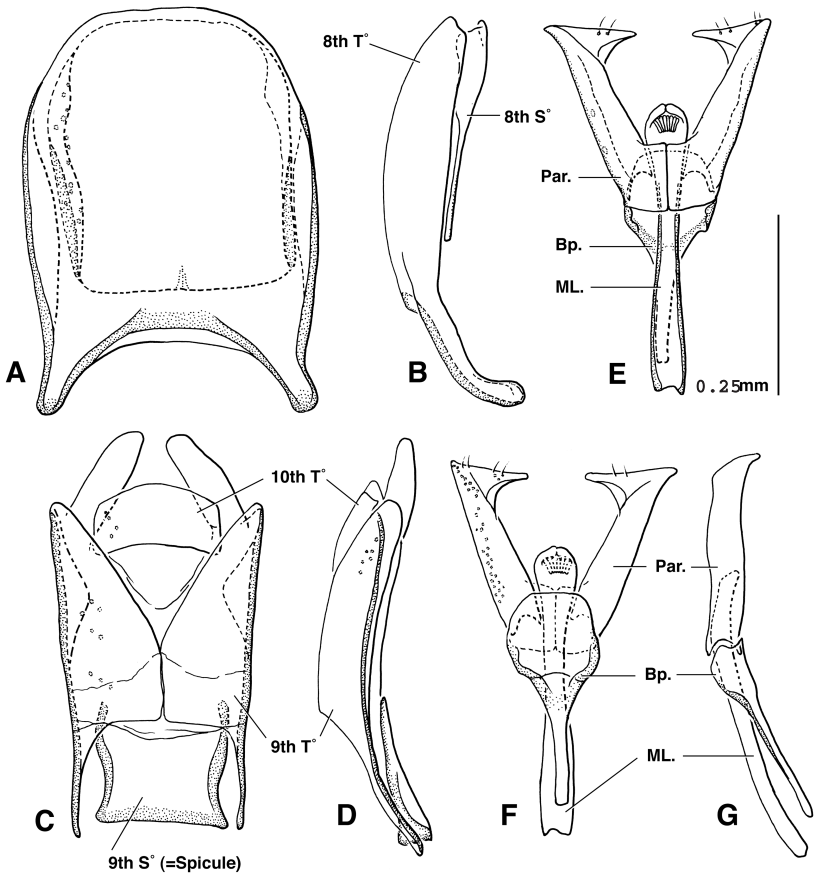

Fig. 9. *Teretrius* (*Teretrius*) *taichii* M. ÔHARA, new species. Male genitalia. — A, Eighth tergite and sternite, dorsal view; B, ditto, lateral view; C, 9th and 10th tergites and 9th sternum (Spicule), dorsal view; D, ditto, lateral view; E, aedeagus, dorsal view; F, ditto, ventral view; G, ditto, lateral view. [Holotype: MO-08-002].

Elytral epipleura impunctate; marginal epipleural and elytral striae absent; oblique humeral, subhumeral and dorsal striae absent (Figs. 7A, C). Surface of elytra coarsely punctate, punctures separated by 1–5 times their diameter, medio-basally becoming sparser; oblong portion on elytral humeri and narrow bands along anterior and sutural margins impunctate.

Propygidium (Fig. 7A) pentagonal, disc densely covered with large ocelloid punctures, separated by half to twice their diameter, becoming sparser laterally; pygidium (Fig. 7E) on basal 2/3 strongly convex, on apical 1/3 excavate; disc evenly covered with large ocelloid

punctures separated by half to their own diameter; on apical half interspaces among punctures with reticulate coriaceous microsculptures (Fig. 7F).

Anterior margin of median portion of prosternum (Fig. 8B) straight; marginal stria of prosternal keel anteriorly and laterally deeply and completely impressed, its outer side carinate; disc densely covered with large, round and shallow punctures; basal margin deeply emarginate; area between prosternal keel and descending lateral striae feebly excavate, making space for retractile antennal club.

Anterior margin of mesosternum (Fig. 8C) strongly projected medially, forming sharp angle; marginal stria absent; disc covered with large round punctures separated by 1–3 times their diameter; meso-metasternal suture (Fig. 8C) slightly indicated. Disc of metasternum sparsely, irregularly punctate, punctures coarse and separated by 2–4 times their diameter; lateral metasternal stria posteriorly extended attaining at mid-length of metasternum; anterior side of stria carinate.

Disc of 1st abdominal sternum (Fig. 8C) laterally without stria; punctures coarse, separated by about twice their diameter.

Protibia (Fig. 8E, F) dorsally bearing single large spur at base of tarsal groove; ventrally with single small (in apical inner corner) + 6 large + 1 small (basalmost) denticles on outer margin; inner lateral margin densely furnished with very long hairs. Mesotibia in dorsal apical inner corner bearing single long large spur; ventrally with single large (in apical inner corner) + 3 medium (in apical outer corner) + 2 large + 2 small (on basal 1/5) spines on outer margin. Metatibia in dorsal apical inner corner bearing single long large spur; ventrally with single large (in apical inner corner) + 2 small + 3 large spines on outer margin.

Male genitalia (Figs. 9A–G): anterior margin of 9th sternum (spicule) truncate; parameres posteriorly divergent; apices of parameres with large hooks; basal piece not fused on dorsal side, ventrally anteriorly elongate; median lobe strongly sclerotized, narrow.

Specimen examined. Holotype, male, "Liukuei, Formosa, 14. IV. 1971, S. TAKEDA" (MO-08-002).

Distribution. Taiwan (Kaohsiung).

Remarks. According to the key to subgenera by YÉLAMOS (2002), this species ranks into the subgenus *Teretrius* by the character-state "lateral metasternal stria does not attain the suture of mesepimeron".

Etymology. Named in honor of the late Mr. Taichi SHIBATA, the renowned Japanese coleopterist.

Key to the Species of the Genus *Teretrius* from Taiwan

1 (4) Lateral metasternal stria strongly curved, attaining the suture of mesepimeron····· ····· Subgenus *Neotepetrius* G. MÜLLER, 1937

2 (3) Body black. Body length more than 3.00 mm. Punctation of apical portion of elytra separated by twice their diameter. Stria on anterior margin of mesosternum complete-

ly impressed. Intercoxal disc of 1st abdominal sternum without lateral stria····· ····· *T*. (*N*.) *shibatai* new species

3 (2) Body dark blackish brown. Body length less than 2.50 mm. Punctation of apical portion of elytra separated by their own diameter. Stria on anterior margin of mesosternum interrupted medially. Intercoxal disc of 1st abdominal sternum laterally with short stria····· *T*. (*N*.) *formosus* (LEWIS, 1915)

4 (1) Lateral metasternal stria posteriorly extended, ending before metacoxa.····· ····· Subgenus *Teretrius* ERICHSON, 1834

Body length less than 2.50 mm. Antennal scape densely furnished with long hairs····· ····· *T*. (*T*.) *taichii* new species

Note on the Male Genitalia of the Tribe Teretriini

YÉLAMOS (2002: 242), based on the species *Teretrius* (*Neotepetrius*) *parasita* MARSEUL, 1862, provided for the first time a drawing of "aedeagus" of the genus *Teretrius*. ŚILPIŃSKI and MAZUR (1999: Table II) and CATERINO and VOGLER (2002: Table 2) analyzed the phylogeny of the family Histeridae using morphological characters of aedeagus, indicated character-states of "aedeagus without basal piece" on *Trypolister* sp. from Peru, and "basal piece of aedeagus is not visible, either fused with tegmen or lost" on *Teretrius* sp. from USA, respectively.

During examination of male genitalia of the above-mentioned species, I recognized a pair of parameres and a basal piece in *Teretrius* (*Neotepetrius*) *shibatai, T*. (*N*.) *formosus* and *T*. (*T*.) *taichii*. Judging from the drawing of "aedeagus" of *T*. (*N*.) *parasita* given in YÉLAMOS (2002), I came to the conclusion that most likely it is not "aedeagus", but probably "median lobe". In the results of ŚILPIŃSKI and MAZUR (1999) and CATERINO and VOGLER (2002), it is impossible to trace the authenticity of their data concerning the matter of "aedeagus" in the tribe Teretriini since there are no descriptive data nor figures of the male genitalia.

The absence of the basal piece of the male genitalia has been a useful character-state for identification of the subfamily Abraeinae. Presence of the basal piece in *Teretrius* therefore, raises a phylogenetic question among tribes of the subfamily. In my observation, states of the male genitalia of *Teretrius* show, apparently, a very primitive condition for the family Histeridae that could be summed-up as follows: ninth sternum (spicule) flat and broad; a pair of parameres not fused, in the shape of "trilobed" aedeagus (generally considered to be the most primitive type in beetles); dorsal side of basal piece not fused. Phylogenetic study of the subfamily Abraeinae is urgently needed.

要　　約

大原 昌宏：台湾産 *Teretrius* 属について（鞘翅目：エンマムシ科）．――― 芝田太一氏のコレクションに含まれる台湾産エンマムシ標本，130点を調査し，*Teretrius* 属の 2種を見いだした．検討の結果，これら 2種は未記載種であり，新種 *Teretrius* (*Neotepetrius*) *shibatai* と *T.* (*T.*) *taichii* として記載した．種小名は，永く日本の甲虫分類学に貢献され，2007年に惜しくも他界された芝田太一氏にちなむ．台湾からの既知種である *Teretrius* (*Neotepetrius*) *formosus* (Lewis, 1915) は再記載を行った．本論文では，本属 3種の記載・再記載を行い，台湾産種の検索表を付した．交尾器形態から Teretriini 族の亜科の所属についての問題を示した．

References

Caterino, M. S. & A. P. Vogler, 2002. The phylogeny of the Histeroidea (Coleoptera: Staphylinifromia). *Cladistics*, **18**: 394–415.

Erichson, W. F., 1834. Uebersicht der Histeroides der Sammlung. *Jahrbücher der Insectenkunde, mit besonderer Rücksicht auf die Sammulung im Königl. Musum zu Berlin,* **1**: 83–208.

Lewis, G., 1915. On new species of Histeridae and notices of others. *Annals and Magazine of Natural History,* (8) **16**: 54–56.

Mazur, S., 1997. A world catalogue of the Histeridae. Genus, supplement, 1997. 373 pp.

――― 2007. On new and little known histerids (Coleoptera: Histeridae) from Taiwan with additional notes on the species composition and zoogeography. *Formosan Entomology,* **27**: 67–81.

Ôhara, M., 1994. A revision of the superfamily Histeroidea of Japan (Coleoptera). *Insecta matsumurana,* new series, **51**: 1–283.

Śilpiński, S. A. & S. Mazur, 1999. *Epuraeosoma*, a new genus of Histerinae and phylogeny of the family Histeridae (Coleoptera, Histeroidea). *Annales Zoologici,* **49** : 209–230.

Yélamos, T., 2002. Coleoptera, Histeridae. *Fauna Iberica*, 17. 411 pp.