

Two New Species of the Harplaine Selenophori Group (Coleoptera, Carabidae) from North Vietnam

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Abstract Two new species of the genera *Coleolissus* BATES and *Hyphaereon* MACLEAY are described from North Vietnam under the names of *Coleolissus (Tenuistilus) satoi* sp. nov. and *Hyphaereon planipennis* sp. nov.

Species of the harplaine Selenophori group are well diversified in Asia, Africa and South America. Recently, some expeditions to Southeast Asia were attempted and some unknown species were discovered and described. I obtained an opportunity to examine many specimens collected by Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.) and others, and through his courtesy I found invaluable specimens.

In this paper, I am going to describe a part of them under the names as following: *Coleolissus (Tenuistilus) satoi* and *Hyphaereon planipennis*. Vietnam has been a blank area of the genera *Coleolissus* and *Hyphaereon* between Malaysia and Taiwan through the northern areas of the Indo-Chinese Peninsula. Discovery of those new species are important for filling the blank areas.

The specific name “*Coleolissus satoi*” is dedicated to the late Dr. Masataka SATÔ. He greatly contributed to the coleopterology, especially to the systematic study of aquatic beetles. Also, he always kindly supported me in the course of my study by offering numerous invaluable materials and literature to me. Unfortunately, in the summer of last year, he passed away in spite of being young yet. This was a very large loss for the coleopterology not only in Japan but also in the world. I wish to express my cordial indebtedness to him by dedication of his name to a new species from Vietnam where he enthusiastically worked in the field.

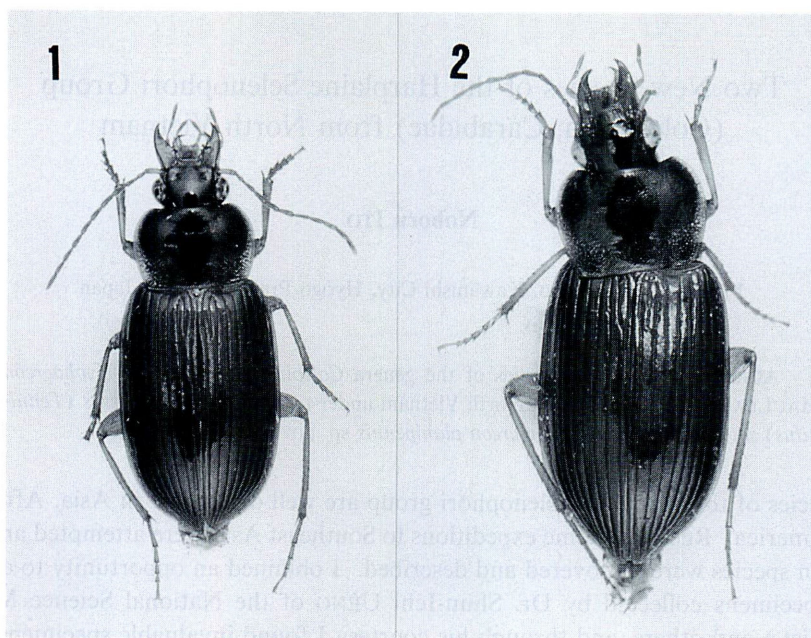
Before going further, I heartily thank Dr. Shun-Ichi UÉNO for his kindly offering important materials for my study.

All the holotypes are preserved in the collection of the National Science Museum (Nat. Hist.), Tokyo. Concerning measurement of body parts, see former papers of mine.

Coleolissus (Tenuistilus) satoi N. ITO, sp. nov.

(Figs. 1 & 3)

Body suboval, flattened, black or very slightly brownish, shiny, with strongly



Figs. 1–2. Habitus of species of the Selenophori group. — 1, *Coleolissus (Tenuistilus) satoi* sp. nov.; 2, *Hyphaereon planipennis* sp. nov.

iridescent lustre on elytra and barely so laterally on pronotum; labial and maxillary palpi, antennae, lateral areas of pronotum and of elytra, and legs reddish brown to a little reddish brown, sutural intervals dark brown.

Head moderate in largeness, 0.65 times as wide as the pronotal width, weakly raised, very sparsely and microscopically punctate, with narrow interocular space a little less than two-thirds of the width of head including eyes; labrum subquadrate, shallowly emarginate at apex; clypeus widely triangularly produced at lateral angles, straight between the angles; clypeal suture obscure or thinly but clearly engraved; frontal impressions arcuately divergent behind, gradually shallowed towards supraorbital grooves; eyes well prominent, hemispherical; temples short, steeply oblique; genuine ventral margins of eyes adjoining buccal fissure; mandibles stout, elongate, acute at tips; antennae slender, not long, 10th and 11th segments surpassing beyond the pronotal base, 3rd segment weakly dilated apicad, pubescent in apical half, as long as the 4th and 1.7 times as long as the 2nd; labial palpi slender; ligula abruptly expanded apicad, acute at apical angles, truncate at apex; mentum with median tooth rounded at apex, epilobes gradually widened apicad; microsculpture more or less clear, consisting of isodiametric meshes.

Pronotum transverse, approximately a half wider than long, weakly convex, rounded throughout at sides, a little reflected near base; apex gently emarginate, entirely bordered; base barely produced behind, straight in middle, with complete border; apical

angles widely arcuate; basal angles much larger than right angle, angularly rounded at tips; lateral furrows wide even near apex, gradually expanded towards base, fallen into basal foveae which are large; both front and hind transverse impressions vague; median line clearly carved, not reaching apex and base; dorsal punctures absent on disc, very sparse and minute near apex, rather coarse and moderate in lateral furrows and basal foveae, and sparse in middle of base; microsculpture clearly impressed, mostly consisting of fine transverse meshes and of isodiametric meshes near punctures of lateral furrows and basal foveae.

Elytra oblong-oval, 1.54 times as long as wide, three-tenths wider than the pronotal width, flattened, with microscopic punctures small in number; sides gently arcuate in humeri, sublinear in middle, gently curved towards apices, shallowly sinuate preapically; apices produced backwards, narrowly rounded at distal margins, angulate at sutural angles, not separated from each other; bases each oblique at side, forming an obtuse and angulate angle with lateral margin; striae wide and shallow throughout, scutellar striole long; intervals not raised, 3rd interval with a series of five to eight setiferous pores; marginal series interrupted in middle, composed of (8–10) + (9–11) umbilicate pores; microsculpture invisible under 80× magnification. Hind wings fully developed.

Ventral surface mostly smooth, very sparsely and minutely punctate on prosternum; metepisternum elongate, a half longer than wide; 6th abdominal sternite bisetose at each side in both sexes, with apex almost truncate in ♂ and produced and narrowly rounded in ♀.

Legs slender; hind femora each bisetose along hind margin; fore tibiae weakly dilated apicad, sulcate in basal fourth, trispinous along apico-external margin; tarsi long, 1st segment of mid tarsus in ♂ adhesively bisquamous only at apex of ventral surface, hind tarsus in ♂ as long as and in ♀ slightly shorter than the width of head, 1st segment equal in length to the 2nd and 3rd taken together, 2nd a half longer than the 3rd which is two-fifths longer than the 4th, claw segment bisetose along each ventral margin.

Aedeagus (Fig. 3) gently curved, weakly sinuate at apex, with relatively large basal bulb; dorsal orifice wide, inner sac without any distinct sclerites, but its surface is partly shagreened and therefore darkened in the parts; apical lobe subtrapezoidal, weakly rounded and thickly bordered at distal margin.

Length: 8.3–9.0 mm. Width: 3.5–4.0 mm.

Holotype. ♂, Tam Dao, alt. 930 m, Vinh Phu Prov., 20–V–1995, S. UÉNO leg. Paratypes: 1♀, same data as the holotype; 1♀, Mt. Pia Oac, alt. 1,200 m, Cao Bang Prov., N. Vietnam, 23–V–1999, S. UÉNO leg.; 1♀, ditto, alt. 1,500 m, 27–V–1999; 2♀, Tam Dao, N. Vietnam, 17–VI–1997, S. NOMURA leg.

Remark. This new species resembles *Coleolissus (Tenuistilus) kiyoyamai* N. ITO from Malaysia, but the pronotum is more arcuate basad from middle and more light yellowish at sides, and more obtuse at basal angles, the elytra are more light colored at sides and sutural intervals, and the aedeagus is much more arcuate and not acutely reflected dorsad.

The present new species is somewhat similar to *Coleolissus (Tenuistilus) teradai*

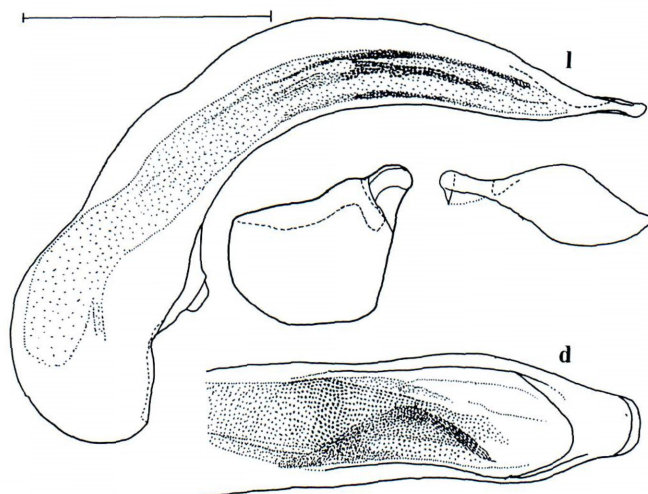


Fig. 3. Male genitalia of *Coleolissus (Tenuistilus) satoi* sp. nov.; d, dorsal aspect; l, lateral aspect. Scale: 1 mm.

(HABU) from Taiwan, but is discriminated from the latter by the pronotum more arcuate basad at sides from middle and with basal angles much less rounded, and the aedeagus is constricted before the tip which is less thickened ventrad. Judging from characteristics of the male genitalia, the present new species is more closely related to *C. teradai* than to *C. kiyoyamai*.

Etymology. Etymology is described in the introduction of this paper.

Hyphaereon planipennis N. ITO, sp. nov.

(Figs. 2 & 4)

Body similar in outline to that of *Hyphaereon laosensis* N. ITO, flat, black or slightly brownish, very shiny, clearly iridescent on elytra; lateral areas of pronotum and legs light brownish yellow, maxillary and labial palpi, and 1st antennal segment light reddish brown, mandibles and the remaining antennal segments reddish brown, lateral areas of elytra dark brown.

Head rather small, 0.63 times as wide as the pronotal width, weakly elevated, very sparsely and minutely punctate, with several vague wrinkles on frons; labrum quadrate, truncate apically; clypeus depressed along apex which is shallowly and obtrapezoidally emarginate, smooth on surface; clypeal suture obscure or more or less clear; frontal impressions shallower than those of *H. laosensis*, obliterated at middle between apices and supraorbital grooves and not attaining the grooves; eyes a little less prominent than in *H. laosensis*; temples short, abruptly convergent behind; genuine ventral margins of eyes adjoining buccal fissure; labial palpi short and somewhat massive; ligula weakly widened forwards, obliquely truncate laterally at apex; paraglossae narrow, surpassing

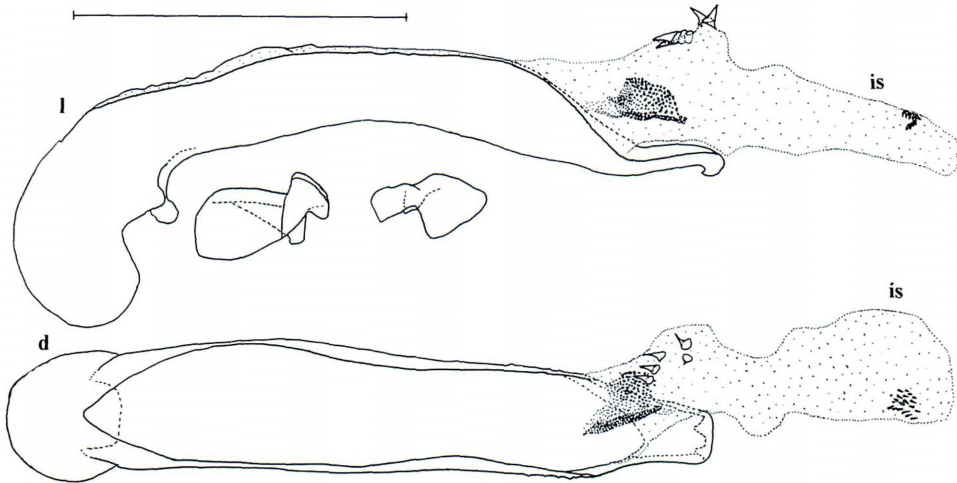


Fig. 4. Male genitalia of *Hyphaereon planipennis* sp. nov.; d, dorsal aspect; l, lateral aspect; is, everted inner sac. Scale: 1 mm.

ligula; mental tooth more weakly protrudent than that of *H. laosensis*; microsculpture visible as fine isodiametric meshes, clearer in ♀ than in ♂.

Pronotum transverse, widest at apical third, 1.45–1.46 times as wide as long, flattened on disc, weakly declivous apico-laterad, wholly rounded at sides, a little more strongly convergent apicad than basad; apex rather deeply and obtrapezoidally emarginate, entirely bordered; base approximately one-fifth wider than apex, hardly bisinuate, with border widely interrupted in middle; apical angles fairly protruding, somewhat widely rounded; basal angles angulate, much larger than right angle, edentate at each tip; lateral furrows wide, gradually expanded backwards, fused with basal foveae; basal foveae each flat, large, with small and shallow groove at inner side; front transverse impression very shallow, the hind one obsolete; median line thin, shallow, reduced near apex and base; dorsal surface smooth on narrow central area, moderately and not coarsely punctate in apical portion, lateral furrows and basal foveae, whose punctures in paratype specimen are a little coarser in basal foveae; microsculpture fine, clearer in ♀ than in ♂, largely consisting of transverse meshes and of isodiametric ones near punctures of lateral furrows and basal foveae in ♂, and mostly of isodiametric ones in ♀.

Elytra elliptical, 1.24–1.28 times as wide as the pronotal width, nearly a half longer than wide, almost flat, impunctate; sides gently arcuate in humeri, thence subparallel to apical third, shallowly sinuate before apices; apices more or less produced behind, narrowly rounded at distal margins, acute at sutural angles; bases shallowly emarginate, obtusely and angularly meeting with lateral margins; striae moderately deep, wide, and clearly crenulate, scutellar striole long; intervals not convex, with a series of 5–6 setiferous pores along 2nd stria on each 3rd interval; marginal series interrupted

medially, composed of (9–10)+(10–11) umbilicate pores; microsculpture invisible under $80\times$ magnification. Hind wings fully developed.

Ventral surface almost smooth, same in the mode of pubescence as in the other known species; metepisternum not so elongate as in usual species, nearly one-third longer than wide; 6th abdominal sternite in ♂ unisetose at each side and notched at apex and in ♀ bisetose at the sides and well produced backwards and narrowly rounded there.

Legs long; hind femur bisetose; fore tibiae slender, clearly sulcate lengthwise, with one or two spines along apico-external margin; hind tarsi slim, one-third in ♂ and one-sixth in ♀ longer than the width of head, 1st segment as long as the 2nd and 3rd taken together and three-fourths longer than the 2nd, 3rd one three-fourths as long as the 4th, claw segment bisetose ventrally along each side.

Aedeagus (Fig. 4) elongate, weakly arcuate in middle, thinned at apex, with two hooks ventrally at tip; apical orifice open mostly occupying dorsal surface, inner sac shagreened behind aedeagal apex, armed with two clusters of sclerites, one of which consists of five conical sclerites beside the shagreened area and the other one of which consists of very small sclerites near the apex in everted condition; apical lobe subtrapezoidal, slightly rounded at distal margin.

Length: 8.3–8.6 mm. Width: 3.3–3.6 mm.

Holotype. ♂, Deo Pha Dinh, E. side, alt. 1,350 m, Son La Prov., North Vietnam, 28-V-1998, S. UENO leg. Paratype: 1♀, same data as the holotype.

Remarks. This new species is allied to *Hyphaereon laosensis* N. ITO from Laos, but is distinguished from the latter, in addition to the characters mentioned in the description, by the pronotum less clearly microsculptured and the aedeagus ventrally hooked at the tip instead of being smooth.

The present new species is also similar to *Hyphaereon masumotoi* (N. ITO) from Thailand, but the microsculpture of pronotum is more weakly visible, the hind tarsi are slenderer, and the aedeagus is armed with large sclerites less in number and a cluster of very small spines instead of not bearing such a sclerites and hooked ventrally at the tip.

The present species, *H. masumotoi* from Thailand and Laos, *H. laosensis* from Laos and *H. shibatai* from Taiwan are closely related to one another. A common ancestral species may have been widespread and speciated.

Species of the two genera have been known from areas between Malaysia and Taiwan through Thailand, Laos, Myanmar, and South China, but are not previously recorded from Vietnam, that is, Vietnam has been a blank area for the genera. Judging from the biogeographical aspect, occurrence of their representatives in Vietnam has naturally been surmised. This expectation was fulfilled by the present discovery.

Etymology. The specific name “*planipennis*” means flat (= *plani*) elytra (= *pennis*) in Latin.

要 約

伊藤 昇: ベトナム北部産 *Selenophori* 種群の 2 新種。—— ベトナム北部から, *Selenophori* 種

群の2新種を, *Coleolissus (Tenuistilus) satoi* sp. nov. および *Hyphaereon planipennis* sp. nov. と命名記載した。ベトナムはラオス, 中国および台湾との間に位置するにもかかわらず, *Coleolissus* 属および *Hyphaereon* 属の記録はなく空白地帯となっていたが, 上野俊一博士らの遠征調査により発見され, 詳細な検討により新種と判明した。後者の近縁種は, タイ北部およびラオス北部にそれぞれ分布しており, 分布を広げながら種分化が起こったものと思われる。前種の種名“*satoi*”は, 水生甲虫の研究を中心に甲虫全般にわたって多大な学問的貢献をされた名古屋女子大学名誉教授故佐藤正孝博士にちなむ。若くして佐藤博士が急逝されたことは, 日本のみならず世界の甲虫学発展にとって大きい損失である。また佐藤博士は, 標本や文献で個人的に筆者の研究を惜しみなく援助してくださった。深い哀悼と感謝の意をこめて, 献名させていただいた。

References

- HABU, A., 1978. *Tenuistilus teradai*, gen. nov. and sp. nov., from Formosa (Coleoptera, Carabidae, Harpalini). *Proc. Jpn. Soc. syst. Zool.*, **15**: 51–55.
- ITO, N., 1987. Three new species of the genus *Coleolissus* (Harpalini) from Southeast Asia, with subgeneric note (Coleoptera, Carabidae). *Ent. Rev. Japan, Osaka*, **42** (Supplement): 21–29.
- 1990. Study on Carabidae, I (Coleoptera). *Ibid.*, **45**: 81–86.
- 1991 a. Study on Carabidae, II (Coleoptera). *Ibid.*, **46**: 21–26.
- 1991 b. Study on Carabidae, III (Coleoptera). *Ibid.*, **46**: 157–169.
- 2004. Descriptions of four new species of the Selenophori group (Harpalini: Carabidae) from Asia, including first record of the genera *Coleolissus* and *Hyphaereon* from Laos (Coleoptera). *Ibid.*, **59**: 275–286.
- KATAEV, B., D. W. WRASE & N. ITO, 2003. Subtribe Harpalina. In: LÖBL, I., & A. SMETANA (eds.), 2003. *Catalogue of Palaearctic Coleoptera*, Archostemata – Myxophaga – Adephaga, 1: 367–397. Apollo Books Publisher, Stenstrup.