

Two New Species of the Selenophori Group (Coleoptera, Carabidae, Harpalini) from Asia

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Abstract Two new species of the Selenophori group in the carabid tribe Harpalini are described from the Malayan Peninsula and India, respectively.

In this paper I am going to describe a new species of the genus *Hyphaereon* MACLEAY from Malaysia and Thailand and one of the genus *Calathomimus* BATES from India, under the names of *Hyphaereon lawrencei* and *Calathomimus splendens*, respectively. The former species is distinguishable from *Hyphaereon masumotoi* (N. ITO, 1991) by the pronotum not sinuate at the sides, the shorter hind tarsi, and so on. The latter species is similar in general appearance to *Coleolissus (Tenuistilus) teradai* (HABU, 1978), but is different in having the pronotum narrower and more densely punctate and the elytra punctate.

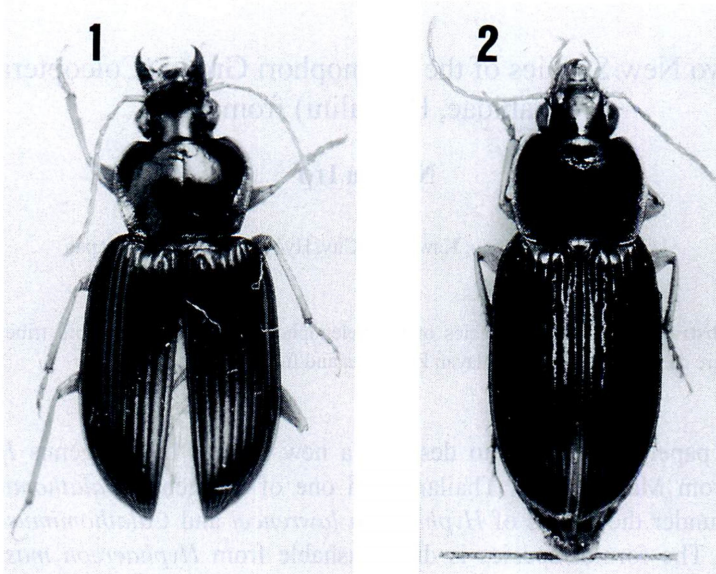
I wish to express my deep gratitude to Dr. John F. LAWRENCE of CSIRO (the Commonwealth Scientific and Industrial Research Organisation), Canberra, for his kindly loaning many important materials of the Australian National Insect Collection. The specific name of the former species is given after him. Also I cordially thank Dr. Fritz HIEKE of the Museum der Naturkunde der Humboldt-Universität zu Berlin, Dr. Martin BAEHR of the Zoologische Staatssammlung, München, Dr. Ivan LÖBL of the Muséum d'Histoire naturelle, Genève, and Dr. David W. WRASE, Berlin, for their kindly offering the materials for my study. Further, my thanks are due to Mr. Taichi SHIBATA, Nishinomiya, for his kind guidance on my study.

Hyphaereon lawrencei N. ITO, sp. nov.

(Figs. 1, 3–4)

Body widely oblong, subdepressed, black, shiny, weakly iridescent on elytra; palpi, antennae and legs yellowish brown, lateral margins of pronotum and elytra dark brown, mandibles dark reddish brown.

Head narrow, about three-fifths the pronotal width, weakly raised in vertex and flat in frons, very sparsely and vaguely punctate; labrum subtrapezoidal, truncate at apex; clypeus thin, finely rugose near sides, with shallowly emarginate apex; clypeal suture fine and shallow; frontal impressions deep only near apices, abruptly shallowed behind and almost obsolete near supraorbital grooves; eyes large and relatively promi-



Figs. 1-2. Habitus of the new species of the Selenophori group. — 1, *Hyphaereon lawrencei* N. ITO, sp. nov.; 2, *Calathomimus splendens* N. ITO, sp. nov.

ment; temples short, steeply contracted behind, angularly meeting with neck constriction; genuine ventral margin of eye narrowly separated from buccal fissure; mandibles more or less robust, gently curved inwards, sharpened at apices, retinacular tooth of left mandible blunt, that of right mandible small and triangularly prominent; antennae slender, reaching basal fifth of elytra, 3rd segment pubescent in apical half, as long as the 4th and twice the 2nd; labial palpi more or less thick, 3rd segment as long as the 2nd; ligula wide, constricted just before arcuate apex; paraglossae narrow, prolonged forwards beyond ligula, truncate at apices; median tooth of mentum not distinct, rounded at apex, epilobes strongly widened apicad, parallel to each inner margin; microsculpture mostly invisible, observable as square meshes near clypeal apex and supraorbital setae.

Pronotum transversely quadrate, widest at apical two-fifths, a half wider than long and three-fourths the elytral width, widely explanate at sides as in *Colpodes japonicus* BATES, gently raised, somewhat coarsely and moderately punctate in the explanate portions and basal area; sides clearly curved in front and straightly convergent behind from the widest point; apex shallowly emarginate and finely bordered throughout; base almost straight, somewhat arcuate laterally, with the border fine and interrupted medially; apical angles weakly produced, narrowly rounded; basal angles angulate though obtuse, very minutely toothed at tips; basal foveae long, linked with the explanate portions; front and hind transverse impressions shallow and obscure; median line fine and reduced near both the impressions; surface finely microsculptured, transversely meshed.

Elytra suboval, a little less than one and a half as long as wide (1.46–1.48 in ratio), one-third wider than pronotal width, gently declivous laterad, very sparsely and microscopically punctate; sides clearly arcuate at humeri, with shallow apical sinus; apices narrow, relatively produced and narrowly separated from each other; each base shallowly emarginate, forming a very obtuse angle with lateral border; striae more or less wide and deep, finely and clearly crenulate; intervals gently convex on disc, becoming a little more convex towards sides and apices, 3rd interval bearing a row of 6–7 setiferous pores; marginal series interrupted in middle, composed of (9–10)+(10–11) umbilicate pores; microsculpture partly observable, consisting of obscure transverse lines. Hind wings fully developed.

Ventral surface not punctate; metepisternum more or less elongate, about two-thirds longer than wide; abdomen bearing short and sparse pubescence along middle of 2nd to 6th segments, 6th in ♂ unisetose at each side and relatively notched at apical margin, in ♀ bisetose at the side and well arcuate at the margin.

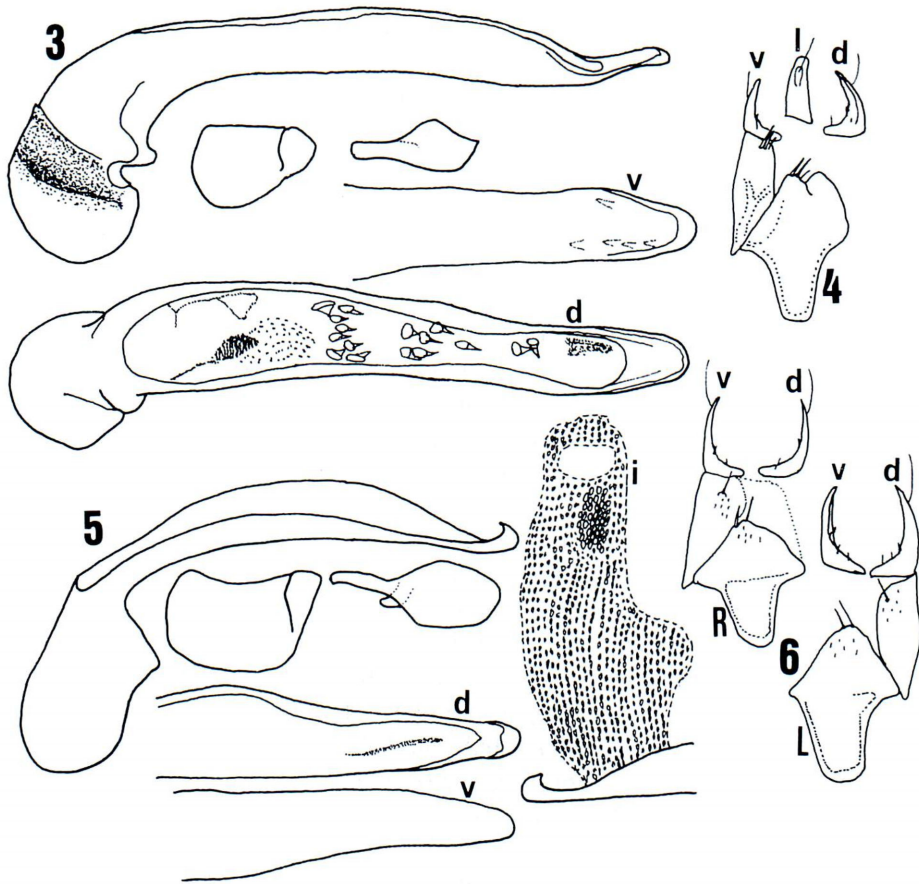
Hind femur bisetose along hind margin; fore tibia slender, clearly sulcate on dorsal side, sharply protuberant in middle of apex, unispinose apico-externally in the holotype and trispinose in the paratypes; mid tarsus in ♂ ventrally furnished with biseriate adhesive squamae in 1st segment as well as the following three segments, hind tarsus one-fifth longer than the width of head including eyes in ♂ and as long as that in ♀, 1st segment two-ninths longer than the 2nd and 3rd together and twice the 2nd, 3rd two-fifths longer than the 4th, claw segment bisetose along each ventral margins.

Aedeagus (Fig. 3) slender, thinned and gently oblique at apex; apical lobe as long as wide, widely rounded at tip; apical orifice open almost up to basal part, inner sac armed with two conical sclerites near apex, four behind middle and many in the middle; basal part widely depressed at both sides. Stylus (Fig. 4) small, bearing a very small spine basally along external ventral margin and a fine and short seta at an internal portion of the dorsal margin; basal segment trisetose apico-externally; valvifer bi- or trisetose at apex.

Length: 8.0–8.5 mm. Width: 3.5–4.2 mm.

Holotype: ♂, 1,500 ft., upper Kombak Val., near Kuala Lumpur, Malaysia, 13–VII–1968 (preserved in CSIRO, the Australian National Insect Collection). Paratypes: 1 ♀, 300–400 m, Kaeng Krachan Nat. Pk., Phetchaburi, Thailand, 17–XI–1985, BURKHARDT & I. LÖBL leg.; 1 ♀, 100 m, Salendang, Endau-Rompin National Park, Pahang/Johor, Malaysia, 28–II–12–III–1995, M. ŠTRBA and R. HERGOVITS leg.

This new species is allied to *Hyphaereon masumotoi* (N. ITO, 1991), but is distinguished from the latter by the pronotum wider, not sinuate before base, more widely explanate at sides, smooth on disc and more sparsely punctate in lateral furrows and basal foveae, and the hind tarsus shorter and with claw segment trisetose instead of being bisetose.



Figs. 3–6. Genitalia of the new species of the Selenophori group. — 3–4, *Hyphaereon lawrencei* N. ITO, sp. nov.; 5–6, *Calathomimus splendens* N. ITO, sp. nov.; 3, 5, male genitalia; 4, 6, female genitalia; d, dorsal aspect; l, lateral aspect; v, ventral aspect; L, left segment; R, right segment.

Calathomimus splendens N. ITO, sp. nov.

(Figs. 2, 5–6)

Body elongate-oblong, flat, black, shiny, rather strongly iridescent on elytra; antennae, lateral margins of pronotum and legs yellowish brown, palpi, apical and lateral margins of labrum, and lateral margins and sutural intervals of elytra light reddish brown, mandibles reddish brown.

Head gently convex, more or less flattened in triangular area from vertex to clypeus, very sparsely and minutely punctate, with vague transverse rugosities on vertex; labrum subsquare, shallowly emarginate at apex; clypeus slightly depressed near sides, where the surface is obscurely rugose; clypeal suture fine and obscure, not deep even near each end, from which shallow frontal impression extends obliquely to eye

and is reduced near eye; eyes large, widely arcuately prominent; temples short, rapidly contracted behind and obtusely meeting with neck constriction; genuine ventral margin of eye adjoining buccal fissure; mandibles long and robust, gently curved inwards, retinacular tooth of left mandible small, that of right one well produced; antennae slender and moderate in length, 3rd segment pubescent in apical three-fifths, as long as the 4th and twice the 2nd; palpi slender, 2nd segment as long as the 3rd; ligula weakly widened forwards, sharply protrudent laterad at apical corners, with truncate apex; paraglossae fan-shaped, prolonged in front beyond ligula and fused with ligula to just behind the protrusions; mentum subsquare, clearly sutured with submentum, median tooth very weak in the examples from North India and prominent in those from South India, epilobes strongly expanded forwards; microsculpture mostly observed as obscure transverse meshes and lines and clearly so as isodiametric meshes near apex of clypeus.

Pronotum subquadrate, two-fifths wider than long and one and two-thirds the width of head including eyes, weakly arcuate throughout at sides and widest at apical two-fifths, gently convex and flattened widely on disc, wholly covered with rather coarse and dense punctures except for central area sparsely and minutely punctate, the punctures confluent baso-medially; apex trapezoidally emarginate, bordered throughout; base two-sevenths wider than apex, shallowly bisinuate, gently reflexed near basal angles, with complete border; apical angles narrowly rounded and relatively prominent; basal angles a little larger than rectangle and completely rounded; lateral furrows narrow, weakly widened behind; basal foveae small and rather deep, isolated from lateral margins by furrows; front transverse impression shallow and obscure, but not invisible like the hind one; median line fine and clear, reduced near apex and base; microsculpture mostly invisible under $80\times$ magnification, rarely observed as obscure transverse lines near punctures in basal foveae.

Elytra narrowly elliptical, a little more than one and a half as long as wide (1.58–1.61 in ratio), flat on disc and weakly declivous towards sides and apices, finely and sparsely punctate; sides subparallel, gently arcuate at humeri and clearly curved inwards in apical fourth, apical sinus very shallow; apices more or less protrudent behind, narrowly separated from each other; bases deeply emarginate; humeral angles sharp and well produced forwards; striae wide and moderately deep, finely and clearly crenulate, scutellar striole fully long; intervals almost flat on disc, becoming more convex towards sides and apices, 3rd interval bearing a row of 9–13 setiferous pores along 2nd stria; marginal series continuous, composed of 27–34 umbilicate pores; microsculpture very obscure, visible as short and sparse transverse lines only near striae. Hind wings entire.

Ventral surface sparsely and finely punctate on pro- and metepisterna, mesosternum, and laterally on metasternum, possessing sparse and very short pubescence medially on pro- and metasterna and wholly on 2nd to 6th abdominal segments; metepisternum not strongly contracted behind, a half longer than wide; 6th abdominal segment bisetose at each side in both sexes, almost truncate in ♂ and clearly arcuate in ♀ at apex.

Fore tibia slender, clearly sulcate on dorsal side, unispinose apico-externally, with a triangular protuberance in middle of apex, terminal spur lanceolate; 1st segment of mid tarsus in ♂ squamous only at apex, hind tarsus one-fourth longer in ♂ and one-fifth longer in ♀ than the width of head, 1st segment a little longer than the 2nd and 3rd taken together (1.08 in ratio) and one and two-thirds the 2nd, 4th two-thirds the 3rd, claw segment trisetose along each ventral margin.

Aedeagus (Fig. 5) thin and straightly produced; apex thickened and hooked above; apical orifice wide, inner sac without any pieces; apical lamella one-third longer than wide, rounded at tip; depression of basal bulb small and shallow. Stylus (Fig. 6) slender and weakly curved, with a small spine at each external margin; basal part unisetose near apex; valvifer bisetose at apex.

Length: 8.2–10.8 mm. Width: 3.2–4.0 mm.

Holotype: ♂, 600 m, 19 km SW Dehra Dun, south region of Shiwalikette, Upper Pradesh, North India, 20–VIII–1985, F. HIEKE leg. (preserved in the Museum of Humboldt University). Paratypes: 1 ♀, 600 m, 13 km SW Dehra Dun, north region of Shiwalikette, Upper Pradesh, North India, 21–VIII–1985, F. HIEKE leg.; 1 ♂, 1 ♀, Chandigar, North India, VIII–1986, K. WAGNER leg.; 1 ♂, Delhi, India, VIII–1984, BRAUN leg.; 2 ♀♀, Karikal, Pondicherry State, South India; 1 ♂, Ceylon (=Sri Lanka), NIETNER leg.; 1 ♀, Tissa-Maharama, Sri Lanka, 1–XI–1994; 1 ♀, 1,400 ft., Coimbatore, Madras, India, XI–1966, P. S. NATHAN leg.; 1 ♂, Shankiniketan, W. Bengal, India, 9–IX–1967, Gy. TOPÁL leg.; 1 ♂, between Hetaura and Pipeley, Nepal, 26–28–III–1968, B. WOYNAROVICH leg.

The new species is similar to *Coleolissus (Tenuistilus) teradai* (HABU, 1978) in spite of belonging to another genus, but is easily distinguished from the latter by the pronotum less wide and more densely punctate, and the elytra longer and finely and sparsely punctate instead of being quite smooth.

要 約

伊藤 昇：アジア産 Selenophori 群の2新種。—— マレー半島から *Hyphaereon* 属の、インドから *Calathomimus* 属の新種をそれぞれ *Hyphaereon lawrencei* および *Calathomimus splendens* として記載した。前者は、*Hyphaereon masumotoi* (N. Ito) に類似しているが、前胸背板がより幅広くて側縁が波曲しないこと、後付節がより短いことなどで異なる。後者は、一見同属の種よりむしろ *Coleolissus (Tenuistilus) teradai* (HABU) に似ているが、より幅狭くより密な点刻をもつ前胸背板および点刻された上翅などで容易に区別できる。前者の種名は、Australian National Insect Collection の貴重な標本を快くご貸与下さった CSIRO の John F. LAWRENCE 博士に捧げた。

References

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