A NEW SPECIES OF *ECTINOHOPLIA* FROM LAOS WITH NOTES ON SOME OTHER SPECIES (COLEOPTERA: SCARABAEIDAE)

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ABSTRACT: *Ectinohoplia ctenicera* sp. nov. from Laos is described. The new synonyms (*Spinohoplia* Sabatinelli, 1997 = *Ectinohoplia* Redtenbacher, 1868; *Ectinohoplia hispidula* Reitter, 1903 = *Ectinohoplia davidis* Fairmaire, 1889; *Ectinohoplia tonkinensis* Moser, 1912 = *Ectinohoplia guttaticollis* Fairmaire, 1900) and combinations (*Spinohoplia ahrensis* = *Ectinohoplia ahrensis* (Sabatinelli, 1997) comb. nov.; *Ectinohoplia dalatella* = *Hoplia dalatella* (Prokofiev, 2012) comb. nov.; *Ectinohoplia pictipes* = *Hoplia pictipes* (Fairmaire, 1889) comb. nov.) are proposed. The validity of *E. guttaticollis* is confirmed.

KEY WORDS: *Ectinohoplia*, *Hoplia*, taxonomy, South-East Asia.

The taxonomy and faunistics of the Oriental Hopliine beetles are extremely poorly known. During a revisional study of the Hopliines of East Indochina I had an opportunity to examine a wide set of material from South-East Asia including the all survived types of Fairmaire, Brenske, Nonfried and Moser. Within the other undescribed taxa I discovered a very peculiar specimen belonging to a new species of *Ectinohoplia* Redtenbacher, 1868. As this species can not be covered in my currently submitted review of Indochinese *Hoplia* Illiger, 1806, I present its formal description in this separate publication. In addition, the taxonomy and nomenclature of some inadequately known Oriental and Chinese species of *Ectinohoplia* are discussed.

The holotype from my reference collection will be housed in the Zoological Museum, Moscow State University. The body length was measured from the anteriormost point of the clypeus to the apical point of the elytra.

Ectinohoplia ctenicera Prokofiev, sp. nov.

(Figs. 1-5)

Type material: Holotype male: Laos, Khammouane province, Pakhhene, 01-16.06.2013.

Description: Male (Fig. 1): Length 6.5 mm, greatest width 3.5 mm. Integument black, outer half of clypeus and legs reddish-orange. Round to weakly diamond-shaped shining golden scales (many with bluish or greenish glistening) forming the following pattern: a broad band along the side margins and in the lateral thirds of anterior margin of pronotum, a spot-like aggregation on each side of the pronotal base inward from the posterior angles and a narrow band in the bottom of the medial pronotal sulcus; a broad band along the lateral and apical margins of elytra, being curved anteriad inward from the apical umbones, a narrow irregular streak along the sutural margin, a friable aggregation at the sides of scutellum and a narrow transverse band at mid-length of elytra; isolated scales distributed here and there on the disc of elytra; distal half of propygidium,

pygidium and abdominal sternites fully covered by the closely packed scales; scales on strerna are present on the peripheral parts only; legs only partially scaled with scales not closely packed (but probably partially worn here). Tibiae with elongated scales, femora like the body with round scales.

Antennae 10-articulated, with club 3-articulated, short and broad, slightly shorter than the combined length of 2-7th joints and approximately 1.5 times longer than broad; 3-7th joints strongly comb-like, i.e. with a sharp process on their anterior margin (Fig. 2). Clypeus weakly transverse, trapezoidal, with sides converging anteriad and broadly rounded toward the almost straight anterior margin, lacking anterior angles; basis of clypeus smoothly passing into ocular canthus. Head and pronotum bearing sparse short pale setae. Pronotum convex, with moderately deep medial sulcus and shallow rounded depressions on sides at the level of its greatest width, with greatest width at middle, with sides weakly crenulated, crenulations setigerous. Anterior margin of pronotum conspicuously and uniformly concave, anterior angles sharp; sides of pronotum somewhat more convergent anteriad than posteriad, weakly sinuated in anterior half, but much more conspicuously sinuated in posterior half before posterior angles. Basal margin of pronotum almost uniformly convex, but smoothly concave near well-marked posterior angles; thus, posterior angles becoming almost straight. Scutellum triangular, flat, with bluntly pointed apex. Elytra almost parallel-sided, 1.3 times as long as broad; humeral and apical umbones well-marked; humeral umbones long, rib-like; sides of elytra forming a deep vertical plate below the humeri; side margin of elytra moderately concave. Elytra with few rows of sparse short adpressed setae laterally, and with a single long and strong and few short dark setae at the apical sutural angle. Propygidium completely exposed; pygidium flat, vertical, with sparse and very short pale erect setae; each abdominal sternite with a transverse row of very short sparse pale setae.

Fore tibiae with three obtuse teeth, basal tooth rounded and slightly more spaced than the medial and distal teeth; fore tarsi attached on the level of the anteriormost point of the basis of the medial tooth. Upper internal angle of the hind tibiae not produced; distal margin of hind tibiae almost straight; hind tibiae not dilated and not curved; hind tarsi slightly longer than hind tibiae. All claws including posterior ones splitting; long claws of fore and middle tarsi broadened.

Aedeagus, as on Figs 3-5; parameres long, weakly broadened at tips, with hooked inner apical angles and triangular outer apical margin.

Female unknown.

Differential diagnosis: This new species sharply differs from the all known *Ectinohoplia* species in the strongly comb-shaped, saw-like joints 3-7 of the antennal funicle (vs. all joints quadrangular or only joints 5-7 more or less weakly comb-like). In the other characters the new species is most similar to *E. obducta* (Motschulsky, 1857) from Japan and China, but differs in the clypeus trapezoidal (vs. almost semicircular), the sides of the pronotum sinuated before the straight posterior angles (vs. non-sinuated, with the posterior angles obtuse), the head and thorax sparsely (vs. densely) scaled, and in presence of one long and few short modified setae near the apical sutural angle of the elytra (vs. several setae of an unequal length).

Etymology: The species is named after its comb-like antennae.

On the taxonomy and nomenclature of some *Ectinohoplia* species

The last revision of the genus *Ectinohoplia* was published by Arrow (1921); however, this treatment has not covered all the species described at that time and the types of the species described by French and German authors apparently were not studied. As a consequence, some of the names used for the valid species and some synonymies are incorrect according to my data.

Ectinohoplia davidis Fairmaire, 1889 = *Ectinohoplia hispidula* Reitter, 1903, syn. nov. I was unable to examine the types of *E. hispidula*; however, this species is characterized by two characters unique within the other *Ectinohoplia* species: the middle transverse band of elytra is angulate and the firm black setae are distributed along most of the sutural margin of elytra (Reitter, 1903; Arrow, 1921; Medvedev, 1952). A single type specimen of *E. davidis* from Sichuan studied by me possesses all the characters typical for *E. hispidula*; thus, the aforementioned synonymy can be established.

Ectinohoplia guttaticollis Fairmaire, 1900, bona sp. = *Ectinohoplia tonkinensis* Moser, 1912, syn. nov. Arrow (1921: 268) treated *E. variegata* De Borre, 1886, *E. variabilis* Reitter, 1903, *E. nigrotincta* Fairmaire, 1897, *E. guttaticollis* and *E. tonkinensis* as the synonyms of *E. paivae* (Wollaston, 1859). A direct comparison of the types of *E. guttaticollis* and *E. tonkinensis* confirms their synonymy; however, this species can be easily distinguished from *E. paivae* in the pronotal pattern (a pair of round patches and a medial longitudinal streak of scales on the disc of pronotum, absent in *E. paivae*); in the total absence of greenish scales above and below, and in the presence of the rather long and numerous erect hairs on the pygidium. I agree with Arrow's synonymy of *E. variegata* and *E. nigrotincta* (= *E. variabilis*) with *E. paivae*, although all three species were cited as valid in the Catalogue of Palaearctic Coleoptera (Smetana, 2006).

Recently I described *Ectinohoplia dalatella* from Vietnam, a diminutive species having the completely exposed propygidium and golden-blue glistening scales but lacking a specialized setation at the apical sutural angle of elytra (Prokofiev, 2012a). A more thorough study of the group reveals that this is a member of a probably monophyletic association including also *Hoplia albomaculata* Moser, 1912, *H. coeruleosignata* Moser, 1916, *H. grisea* Moser, 1912, *H. montana* Moser, 1921, *H. viridisignata* Moser, 1912, *H. viridissima* Brenske, 1894, *H. viridula* Brenske, 1899, probably few other Indian and Thai species and almost all the Taiwanese species. This group is characterized by the small sizes of beetles, the presence of partially or completely exposed pygidium lacking an interlocked mechanism, brilliant glistening scales on underside of body, more or less concave lateral margin of elytra with the sides of elytra below the humeral umbones forming a rather deep vertical plate. All of these characters except the small sizes unite this group with *Ectinohoplia*; however, its representatives possess no specialized setosity at the apical sutural angle of the elytra, which is only real feature for separation *Ectinohoplia*, as I can conclude now (although it shows considerable variations in degree of development and in structure of the setae). Before a phylogenetic analysis of the Oriental Hopliines I feel that it is more correctly to retain this group within *Hoplia* sensu lato; as a result, the following new combination should be proposed: *Ectinohoplia dalatella* = *Hoplia dalatella* (Prokofiev, 2012) comb. nov.

Ectinohoplia pictipes Fairmaire, 1889 also resembles the members of *Ectinohoplia* in the body shape, but lacks a specialized setosity at the apical sutural angles of elytra; thus, this species should be also treated as *Hoplia pictipes*

(Fairmaire, 1889) comb. nov. It can be easily distinguished from the other externally similar species by the deeply excavated sides of pronotum before its hind angles.

The monotypic Himalayan genus *Spinohoplia* Sabatinelli, 1997 was said to be different from *Ectinohoplia* in the presence of a single long bristle at the apical sutural angle of the elytra, 9-articulated antennae and parameres with a ventral tip (Sabatinelli, 1997). Although Sabatinelli listed the hollowed scutellum as a generic character of *Spinohoplia*, this feature is also known for some *Ectinohoplia* and one undescribed *Hoplia* species. Though my previous report (Prokofiev, 2012b) on the 9-articulated antennae in *Ectinohoplia* was based on the strongly worn specimens of *Hoplia aureola* (Pallas, 1781) with misplaced abdomen, this character has the wide intraspecific, sexual and even individual variations in *Hoplia*. In some *Ectinohoplia* the basis of propygidium is also covered by the elytra on a short distance, like in *S. ahrensis*. *E. harpagon* (Fairmaire, 1887) possess a single long bristle at the apical sutural angle of the elytra like *S. ahrensis*, and *E. ctenicera* bears a single long and few short bristles here. *E. ctenicera* represents a morphological intermediate link between *Spinohoplia* and typical *Ectinohoplia* in the shape of the parameres. Thus, there are no clear differences between the aforementioned genera; as a result, I synonymize *Spinohoplia* with *Ectinohoplia* (syn. nov.) and propose a new combination: *Spinohoplia ahrensis* = *Ectinohoplia ahrensis* (Sabatinelli, 1997) comb. nov.

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LITERATURE CITED

Arrow, G. J. 1921. A revision of the melolonthine beetles of the genus *Ectinohoplia*. Proceedings of the Zoological Society of London, 19: 267-276.

Medvedev, S. I. 1952. Fauna SSSR. Coleoptera. V. 10. N. 2. Plastintshatousye (Scarabaeidae). Subfam. Melolonthinae. Pt. 2. Izdatelstvo Akademii Nauk SSSR, Moscow–Leningrad: 276 p.

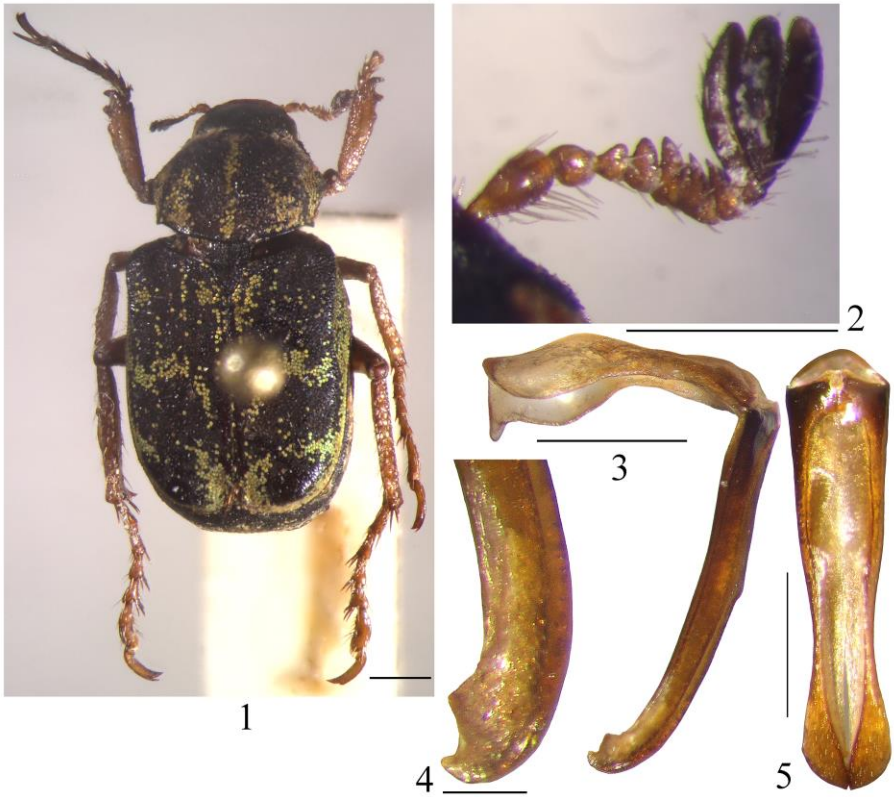
Prokofiev, A. M. 2012a. A new species of *Ectinohoplia* Redtb. (Coleoptera, Scarabaeoidea, Hopliini) from central Viet Nam. Euroasian Entomological Journal, 11 (6): 529-532.

Prokofiev, A. M. 2012b. New and noteworthy pleurostict scarab beetles (Coleoptera: Scarabaeidae). Calodema, 220: 1-33.

Reitter, E. 1903. Bestimmungs-Tabelle der Melolonthidae aus der europäischen fauna und angrenzenden ländern, enthaltend die gruppen der Rutelini, Hoplini und Glaphyrini (Schluss). Verhandlungen des Naturforschenden Vereins, 41: 28-158.

Sabatinelli, G. 1997. Descrizione di *Hoplia testudinis* n. sp. e *Spinohoplia* n. gen. *ahrensis* n. sp. del Nepal. Lambillionea, 97 (1): 64-71.

Smetana, A. 2006. Tribe Hopliini Latreille, 1829. In: Löbl, I., Smetana, A. (Eds.), Catalogue of Palaearctic Coleoptera. V. 3. Apollo Books, Stenstrup: 184-189.



Figures 1-5. *Ectinohoplia ctenicera* sp. nov. (holotype): 1. dorsal habitus; 2. antenna; 3. aedeagus, lateral view; 4. distal tip of parameres, lateral view; 5. parameres, frontal view. Scale bars: 1 = 1.0 mm; 2, 3, 5 = 0.5 mm; 4 = 0.1 mm.