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A description of *Lucanus adelmae* n. sp., a new stag-beetle from Myanmar (Coleoptera Lucanidae)

Abstract – The new species *Lucanus adelmae* is described; it is related to *L. miwai* and *L. koyamai*, from which it differs through the bigger size, the stouter and duller body, the mandibles which are longer and with a small but well marked tooth placed in the middle of inner margin of the mandible, the antennal club formed by six well developed lamellae, the blackish legs and through the general shape of the aedeagus which is stronger with a short but well developed flagellum and strongly apically curved paramera. *Lucanus dohertyi* Boileau is finally reported for the first time from Myanmar.

Key words: Lucanidae, *Lucanus*, new species, new record, Saga-in, Myanmar.

Riassunto – Descrizione di *Lucanus adelmae* n. sp., un nuovo cervo volante da Myanmar (Coleoptera Lucanidae).

La nuova specie *Lucanus adelmae*, qui descritta, è vicina a *L. miwai* e a *L. koyamai* dai quali differisce per le maggiori dimensioni, il corpo più robusto e opaco, le mandibole più lunghe e con un dente piccolo ma ben evidenziato posto nel mezzo del margine interno della mandibola, la clava antennale formata da sei lamelle ben sviluppate, le zampe nerastre e per la forma generale dell'edeago, più robusto con un flagello corto ma ben sviluppato e con l'apice dei parameri fortemente curvato. *Lucanus dohertyi* Boileau è infine segnalato per la prima volta dalla Birmania.

Parole chiave: Lucanidae, *Lucanus*, nuova specie, nuova segnalazione, Saga-in, Myanmar.

Introduction

Nagai (2000), in his recent checklist of northern Myanmar fauna, censused 87 species, and 3 subspecies of Coleoptera Lucanidae, of which 15 species belonging to the genus *Lucanus* Scopoli. To the latter I can add the recently described *L. aung-sani* and *L. laminifer lucidulus* (Zilioli, 2000).

As I got the chance to study the rich collection of my colleague and friend Kiyotami Fukinuki, I could find two species of *Lucanus*, which are new for Myanmar. One is *L. dohertyi* Boileau, 1911, previously recorded from Assam (NE India) only, of which I examined a conspicuous series from Chin Hills, TungZan, and a single specimen of an unknown taxon, *L. adelmae* n. sp, from Saga-in, hereby described.

Lucanus adelmae n. sp.

Holotype. ♂: W Myanmar, Saga-in, VI.2000, K. Fukinuki Legit. Deposited in the collection of Kiyotami Fukinuki, Hiroshima, Japan.

Measurements: Total length, with mandibles: 34.4 mm. Length, without mandibles: 27.8 mm. Maximum head width, excluding mandibles: 9 mm. Maximum body width: 12 mm.

Description (Holotype). Body black, fairly slender, about 2.3 times as long as wide, wider in front of the middle of elytra, covered with a short and sparse yellowish pubescence, longer and thicker on metasternum. Elytra dark reddish brown, darkening to black toward the side and along the suture. Antennae and palpi black. Legs mostly blackish, femora dark reddish brown with base, dorsal and ventral edges black. Apex of fore tibiae with a slightly reddish brown tinge.

Mandible slender, regularly curved from base to the simply pointed and feebly flattened apex; finely sculptured and matt, sparsely punctured and proximally pubescent. Median tooth small, conical, feebly bent upwards, placed in the middle of the inner margin of the mandible, preceded and followed by one scarcely developed, blunt tubercle.

Head transverse (W/L: 1.73), finely and irregularly sculptured throughout, matt, covered by a sparse appressed yellowish pubescence. Frons trapezoidal, slightly concave, totally fused with the epistoma, the latter apically rounded and densely fringed with yellowish hairs. Frontal ridge concave, more developed laterally and almost vanishing in the middle. Lateral ridge weakly sinuate behind the anterior angle, with rounded and blunted posterior angles. Anterior angle strongly projecting laterally but not exceeding the prominent eye, with canthus penetrating less than half the diameter of the eye. Mentum large, trapezoidal, finely sculptured with widely rounded anterior angles, covered with sparse yellowish hairs. Antennal club formed by antennomeres 5-10. Joints 6-10 with a strong, long and pubescent lamella; joint 5 with a shorter and thinner one, smooth with only few setae.

Pronotum transverse (W/L: 1.72), convex, finely and regularly punctured and microsculptured, matt, anterior angles truncate; posterior angles feebly produced. Prosternum weakly prominent and widely rounded, covered with long and thin yellowish hairs. Scutellum transverse, rounded, slightly pointed posteriorly, deeply punctured and covered with long yellowish hairs throughout except a narrow, smooth lateral margin. Elytra slender, finely and rather closely punctured and very superficially microreticulated, matt, along their lateral margins with sparse and fine yellowish hairs, which are patchily distributed also on the disc. Probably elytral pubescence is almost uniform in freshly hatched specimens. Suture feebly raised in its apical three fourth. Shoulder indistinctly toothed. Legs slender, finely sculptured, covered with sparse and short yellowish hairs, shorter on fore tibiae. Fore and middle tibiae with three preapical spines. Hind tibia with one very small and scarcely produced preapical spine.

Aedeagus (Fig. 1): flagellum short, strongly widened apically; middle lobe slender and shorter than parameres, which are strongly curved apically.

Female unknown.

Derivatio nominis: this species is dedicated to my mother Adelma, who for many years, with endless patience, stood my "strange animals".

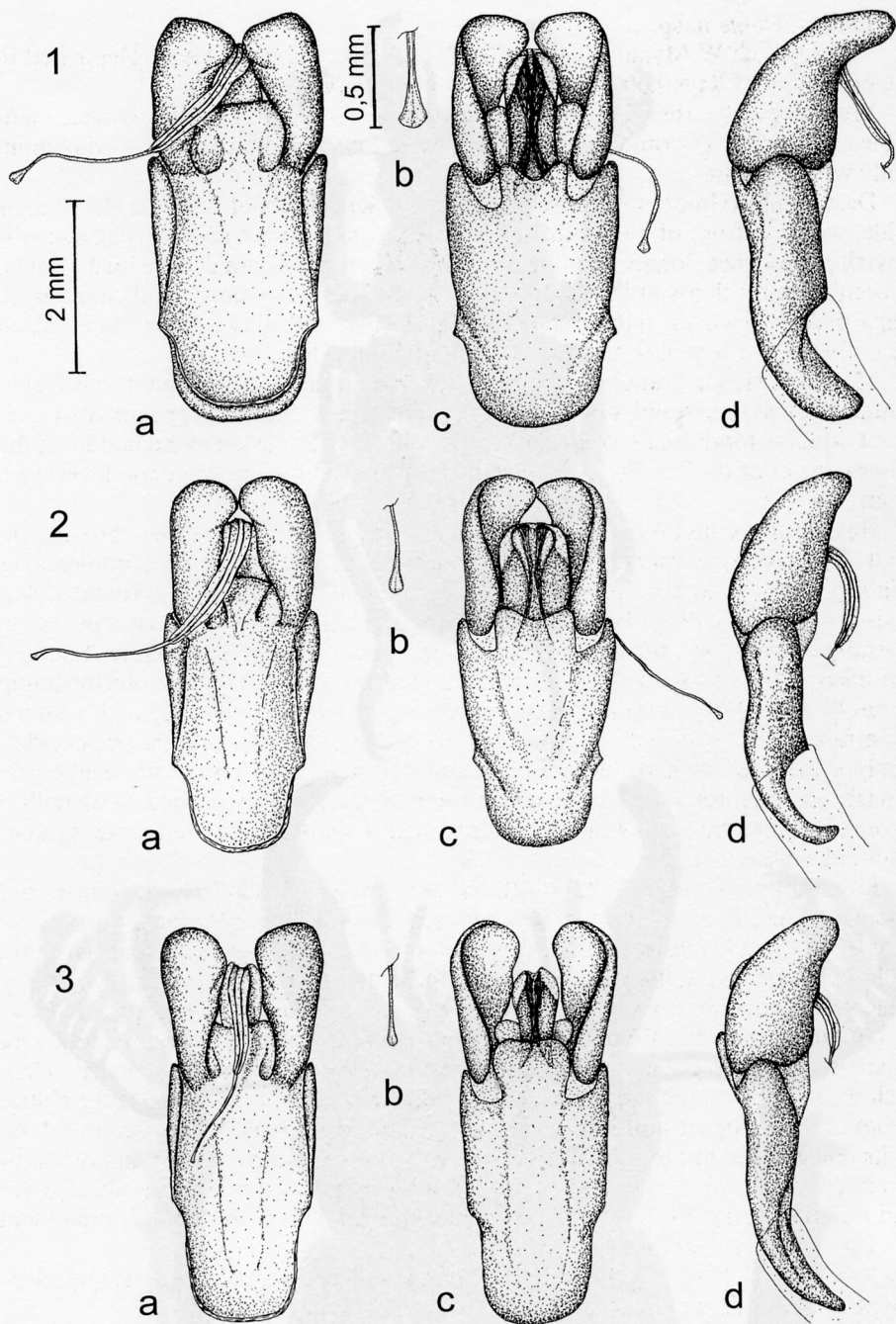


Fig. 1-3 -1) *Lucanus adelmae* n. sp. 2) *Lucanus koyamai* Akiyama & Hirasawa. 3) *Lucanus miwai* Kurosawa. Aedeagus. a) dorsal view; b) apex of flagellum; c) ventral view; d) lateral view.

Fig. 1-3 -1) *Lucanus adelmae* n. sp. 2) *Lucanus koyamai* Akiyama & Hirasawa. 3) *Lucanus miwai* Kurosawa. Aedeagus. a) visione dorsale, b) apice del flagello, c) visione ventrale, d) visione laterale.

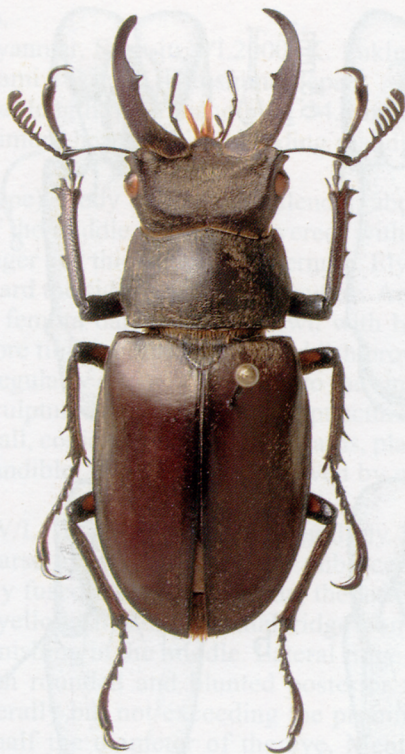


Fig. 4) *Lucanus adelmae* n. sp. Male. Holotype and head's detail (Coll. Fukinuki, Hiroshima, Japan).
 Fig. 4) *Lucanus adelmae* n. sp. Maschio. Olotipo e particolare del capo (Coll. Fukinuki, Hiroshima, Japan).

Remarks

This new species is very similar to *L. apicalis* from Taiwan and *L. apicalis* from North Thailand. However, *L. adelmae* can be distinguished from the two above-mentioned species through the shape of the mandibles. The mandibles of *L. adelmae* are longer than those of *L. apicalis* and bear a small but well-developed tooth at the base of the club formed by six well-developed teeth. The antennae of *L. adelmae* are five-segmented, as in *L. apicalis*, and bear a small but well-developed tooth at the base of the club formed by six well-developed teeth. The antennae of *L. adelmae* are stronger with a short but well-developed tooth at the base of the club formed by six well-developed teeth. The antennae of *L. adelmae* are stronger with a short but well-developed tooth at the base of the club formed by six well-developed teeth.

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Fig. 5) *Lucanus koyamai* Akiyama & Hirasawa. Male Thailand and head's detail (Author's coll.).

Fig. 5) *Lucanus koyamai* Akiyama & Hirasawa. Maschio Thailandia e particolare del capo (coll. dell'autore).



Fig. 5) *Lucanus koyamai* Akiyama & Hirasawa. Male Thailand and head's detail (Author's coll.).

Fig. 5) *Lucanus koyamai* Akiyama & Hirasawa. Maschio Thailandia e particolare del capo (coll. dell'autore).



Fig. 6) *Lucanus miwai* Kurosawa. Male Taiwan and head's detail (Author's coll.).

Fig. 6) *Lucanus miwai* Kurosawa. Maschio Taiwan e particolare del capo (coll.dell'autore).

Remarks

This new species is closely related to *Lucanus miwai* Kurosawa, 1966, from Taiwan and *L. koyamai* Hirasawa & Akiyama, 1990, from North Thailand. However *L. adelmae* can be easily distinguished at glance from the two above mentioned species through the bigger size, the stouter and duller body, the longer mandibles bearing a small, but well evident median tooth on the inner margin, the antennal club formed by six well developed lamellae instead of five as in *L. koyamai* and four as in *L. miwai*, through the blackish legs and the shape of the aedeagus, which is stronger with a short, but well developed, flagellum and strongly apically curved paramera.

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