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RESEARCH PAPER

Feabatrus gen. nov., a conspicuous new genus of Batrisitae from Myanmar and China (Coleoptera: Staphylinidae: Pselaphinae)

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Abstract. A highly distinctive genus of pselaphine tribe Batrisini, *Feabatrus* gen. nov., is described based on Leonardo Fea's historical collection housed in the Museo Civico di Storia Naturale "G. Doria" di Genova, Italy. The genus includes two new species from Myanmar, *F. myanmarensis* sp. nov. and *F. leonardoi* sp. nov. *Feabatrus* gen. nov. is characterized and can be separated from related genera by large-sized body with long, suberect setae on the dorsal surface and antennae, pronotum with large marginal, discal and antebasal spines, elytra with a smooth disc and shallow discal striae, inner two basal foveae close, and lacking subhumeral fovea, distinct constriction between the elytra and the abdomen, and the female possessing an asymmetric genital complex as well as a flat, sub-trapezoidal tergite 5 (VIII) that has a small nodule in the middle of the posterior margin. A single female from Yunnan, southwestern China, representing a third species, is briefly described but left unnamed.

Key words. Coleoptera, Staphylinidae, Pselaphinae, Batrisini, ant-loving beetles, new genus, new species, taxonomy, China, Myanmar, Oriental Region

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Introduction

The tribe Batrisini, the main group of the supertribe Batrisitae, represents one of the most diverse lineages of ant-loving beetles (Staphylinidae: Pselaphinae). According to Newton (2022), a total of 223 genera and approximately 1980 species of the tribe have been described, with the majority of them found in the tropical and subtropical areas around the world. Although the relationships of the subtribes and many included genera are poorly understood, recent efforts to document the regional diversity of the tribe in the Oriental Region revealed a large number of undescribed genera and species (e.g., Nomura 1991, Löbl & Kurbatov 2001, Yin 2022).

Recently, we examined the historical collection of the Natural History Museum of Genova, Italy, and discovered in it two conspicuous batrisine species collected from Myanmar in 1887 and 1888 by the Italian naturalist Leonardo Fea. Both species show a combination of characters that is unique within the tribe, notably a large-sized body with long, suberect setae on the dorsal surface and antennae, large spines of the pronotum and abdomen, shiny, smooth elytra with shallow discal striae and lacking a subhumeral fovea, a constricted base of the abdomen, and an asymmetric female genital complex. These species are described as new and assigned to a new genus. We additionally found a third species from Yunnan, southwestern China, represented by a single female. It also possesses long spines on the abdomen, as one of the Myanmar species, and is briefly described but left unnamed.

Material and methods

The type material of the new species described in this paper is deposited in the Museo Civico di Storia Naturale "G. Doria" di Genova, Italy (MSNG) and the Insect Collection of Shanghai Normal University, Shanghai, China (SNUC). The text of the specimen label is quoted verbatim in quotation marks (‘’).

Dissected parts were preserved in Euparal on plastic slides that were placed on the same pin with the specimen. The habitus images of the beetles were taken using a Canon

5D Mark III camera in conjunction with a Mitutoyo M Plan Apo 10x objective lens, and two Godox V860III-C TTL Li-Ion flashes were used as the light source. Images of the morphological details were produced using a Canon G9 camera mounted to an Olympus CX31 microscope under reflected or transmitted light. Zerene Stacker (version 1.04) was used for image stacking. All images were modified and grouped into plates using Adobe Photoshop CC 2020.

Measurements were taken as follows: the total body length was measured from the anterior margin of the clypeus to the apex of the abdomen; the head length was measured from the anterior margin of the clypeus to the head base, excluding the occipital constriction; the head width was measured across the eyes; the length of the pronotum was measured along the midline, the width of the pronotum equals the maximum pronotum width; the length of the elytra was measured along the suture; the width of the elytra was measured as the maximum width across both elytra; the length of the abdomen is the length of the dorsally exposed part of the abdomen along its midline, the width is the maximum width of the abdomen.

The terminology follows Chandler (2001) and Yin (2022); the abdominal tergites and sternites are numbered in Arabic (starting from the first visible segment) and Roman (reflecting true morphological position) numerals, e.g., tergite 1 (IV), or sternite 1 (III). Paired appendages in the description of the new species are treated as singular.

Taxonomy

Feabatrus gen. nov.

Chinese common name: 棘蚁甲属

Type species. *Feabatrus myanmarensis* sp. nov., here designated.

Diagnosis. Body large-sized, ranging from 3.2–4.3 mm, with smooth, shiny elytra and abdomen. Head slightly wider than long, sub-rounded at base, with U-shaped sulcus connecting vertexal foveae, with long mediobasal carina, eyes prominent; antenna elongate, lacking modification. Pronotum with broad, laterally carinate median longitudinal sulcus and short, curved discal carinae, with three pairs of large antebasal, discal and marginal spines, with distinct median antebasal and inner and outer pair of basolateral foveae. Each elytron with three basal foveae, discal stria shallow and short, lacking subhumeral fovea. Abdomen elongate, constricted at base and narrowing apically; tergite 1 (IV) longest, with thin inner and thick and short outer marginal carinae; sternites 3–5 (V–VII) each with one pair of basolateral foveae. Aedeagus stout, endophallus armature composed of elongate and curved sclerite.

Description [figures based on a completely articulated male of *F. leonardoi*]. Body length 3.2–4.3 mm; habitus elongate, dorsal surface of body covered with long, suberect setae; antenna relatively elongate, extending to more than half of elytral length when bent backward.

Head (Figs 1A–C) roundly rectangular, wider than long; lacking frontal rostrum, antennal tubercles weakly raised, posterior margin with distinct lateral postantennal pit (Fig. 1A; *lpp*); vertexal foveae (dorsal tentorial pits) (Fig. 1A; *vf*) relatively small, asetose, connected by reversed U-shaped sulcus, with long mediobasal (Fig. 1A; *mbc*) and thick lateral carinae; eyes prominent, ocular-mandibular carinae (Fig. 1B; *omc*) complete, extending to mandible. Venter with small gular foveae (posterior tentorial pits) (Fig. 1C; *gf*) originating from shared opening, thin gular carina (Fig. 1C; *gc*) extending from opening anteriorly to mouthparts; antenna with 11 antennomeres, club indistinct, loosely formed by apical three antennomeres; maxillary palpus with small palpomere 1, 2 basally pedunculate and broad at apex, 3 subtriangular, 4 fusiform, with small cone at apex.

Pronotum (Figs 1D–F) moderately transverse, lateral margin convergent anteriorly and constricted at basal 1/2, anterolateral margins with small denticles in front of middle, anterior and posterior margin slightly carinate; lateral sides with row of dense pubescence, with broad laterally carinate median and lateral longitudinal sulci (Figs 1D, E; *mls*, *lls*) and short mediobasal and curved discal carinae (Fig. 1D; *mbc*, *dc*), lateral antebasal foveae (Figs 1D, E; *laf*) asetose, with one median antebasal (Fig. 1D; *maf*) and two pairs of basolateral foveae (Fig. 1D; *oblf, iblf*), with large marginal, discal and antebasal spines, lacking transverse antebasal sulcus; with thin hypomeral carinae (Fig. 1E; *hc*) and small pit; prosternum with small lateral procoxal foveae (Fig. 1F; *lpcf*).

Elytra constricted and truncate at bases, each elytron with three basal foveae (Fig. 1G; *bef*), inner two close,lacking subbasal fovea; with shallow and short discal (Fig. 1G; *ds*) and complete sutural striae, lacking subhumeral fovea, slightly carinate marginal striae (Fig. 1H; *ms*) extended from approximately middle to posterior margin of elytra.

Mesoventrite with median foveae (Fig. 2A; *mmsf*) widely separated, in shared transverse opening, with large lateral mesoventral foveae (Fig. 2A; *lmsf*) forked internally; metaventrite with large, setose lateral coxal foveae (Fig. 2A; *lmcf*), lateral metaventral foveae (Fig. 2A; *lmtf*) separated, posterior margin with deep, narrow split in middle; metaventral coxae broadly separated.

Abdomen elongate; tergite 1 (IV) longest, with mediobasal and two pairs of basolateral foveae (Fig. 2C; *mbf*, *blf*), with thin inner marginal carinae, outer marginal carinae thick and short, with short, nodule-like discal carinae; tergites 2–4 (V–VII) each with one pair of basolateral foveae (Fig. 2B; *blf*) and thin lateral carinae; sternite 2 (IV) with one pair of mediobasal (Fig. 2D; *mbf*) and three pairs of basolateral foveae (Fig. 2D; *blf*), sternites 3–5 (V–VII) each with one pair of small basolateral foveae (Fig. 2B; *blf*).

Legs elongate, tarsomeres 2 and 3 subequal in length, with one major and one setiform claw.

Male has relatively longer antennae than female; trochanters and mesofemora with spine or projection on ventral margin; abdomen greatly elongate in at least one species; aedeagus asymmetric, stout, median lobe with large basal capsule, dorsal lobe short, flat, endophallus armature markedly long and curved. Female with long spines on tergites 2–4 (V–VII) in two species; tergite 5 (VIII) trapezoidal, flat or weakly arched, posterior margin weakly emarginate and with small nodule at middle; genital complex asymmetric, weakly sclerotized.

Comparative notes. *Feabatrus* gen. nov. belongs to a group of Oriental genera including *Tribasodites* Jeannel, 1960, *Coryphomodes* Jeannel, 1960, and those genera that possess spinose pronotal lateral margins and have three basal foveae on each elytron (= *Tribasodes*-group of Nomura & Idris 2003). *Feabatrus* differs from all known Asian genera of this group in a combination of 1) large-sized body with long, suberect setae on dorsal surface and antennae; 2) pronotum with large marginal, discal and antebasal spines; 3) elytra each with a smooth disc,

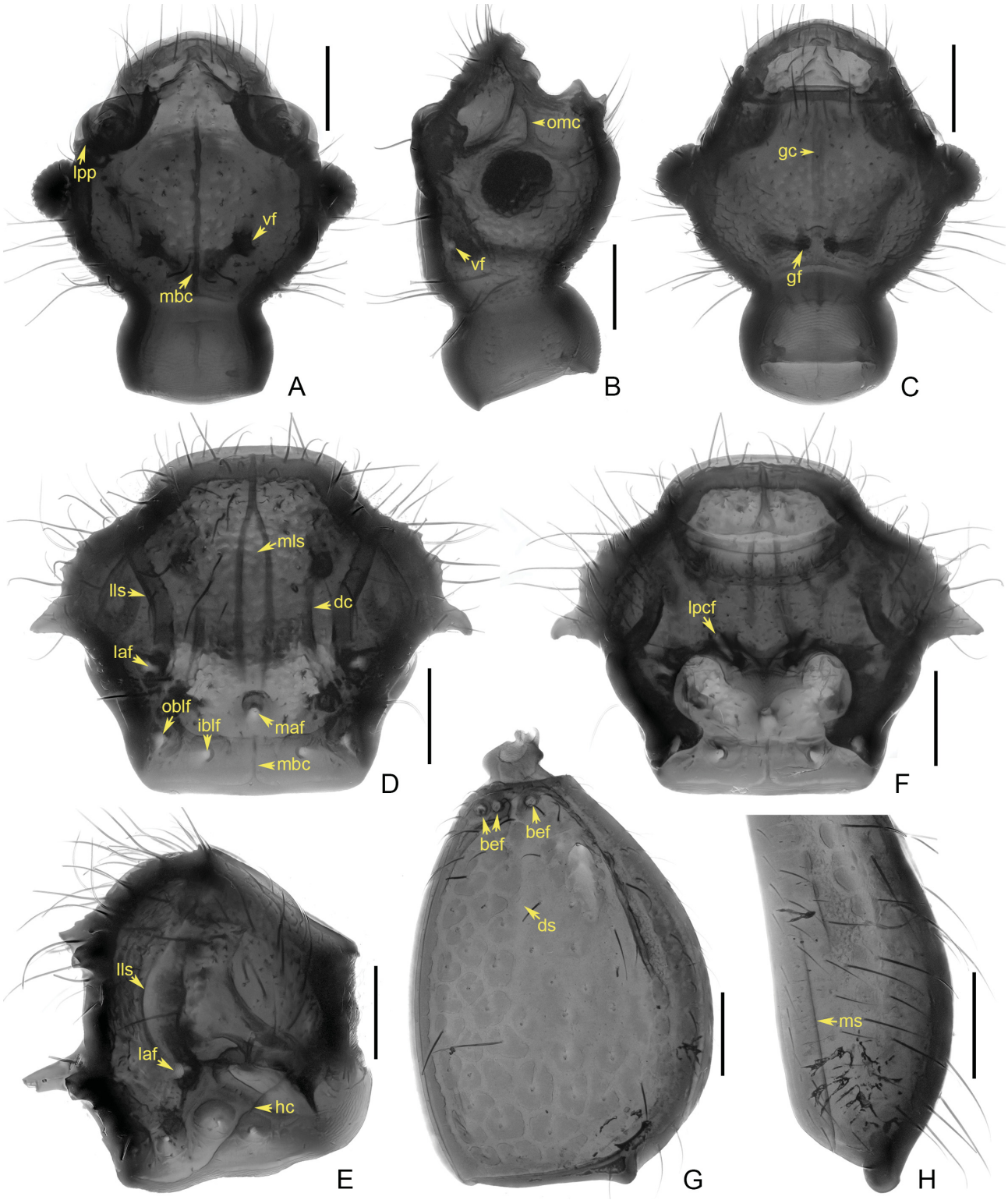

Fig. 1. Morphology of *Feabatrus* gen. nov. A–C – head, dorsal (A), lateral (B), and ventral (C); D–F – prothorax, dorsal (D), lateral (E), and ventral (F); G – right elytron; H – apical half of elytron, lateral. Abbreviations: bef – basal elytral foveae, dc – discal carina, ds – discal stria, gc – gular carina, gf – gular fovea, hc – hypomeral carina, iblf – inner basolateral fovea, laf – lateral antebasal fovea, lls – lateral longitudinal sulcus, lpcf – lateral procoxal fovea, lpp – lateral postantennal pits, maf – median antebasal fovea, mbc – mediobasal carina, mls – median longitudinal sulcus, ms – marginal stria, oblf – outer basolateral fovea, omc – ocular-mandibular carina, vf – vertexal fovea. Scale bars: 0.2 mm in A–F; 0.25 mm in G, H.

inner two basal foveae close, discal stria shallow, lacking subhumeral fovea; 4) sternites 3–5 (V–VII) with only one pair of small basolateral foveae; 5) constriction between elytra and abdomen distinct, and 6) flat, sub-trapezoidal female tergite 5 (VIII) in middle with a small nodule of the posterior margin.

Etymology. The generic name is a combination of the family name of Leonardo Fea, an Italian naturalist who collected the material of both new species described here, and a partially abbreviated name of *Batrisus* Aubé, 1833, the type genus of the Batrisitae.

Comments on biology. The female genital complexes of all three species are slightly asymmetric, with membranous structures pressing genital plate to one side. For Batrisini this character state has not been known by us, and is postulated to be associated with an undocumented, specialized mating behavior of the species. Note that the female of two of the three *Feabatrus* species (see below) possesses long dorsal spines on tergites 2–4 (V–VII), and a similar condition can be found in a few species of the genera *Intestinarius* Kurbatov, 2007 (Batrisini) and *Horniella* Raffray, 1905 (Pselaphitae: Tyrini), etc. The function of such spines in Pselaphinae is unknown, but a comparable case has been documented for the water strider *Gerris incognitus* Drake & Hottes, 1925. Arnqvist & Rowe (1995) provided experimental evidence that female abdominal

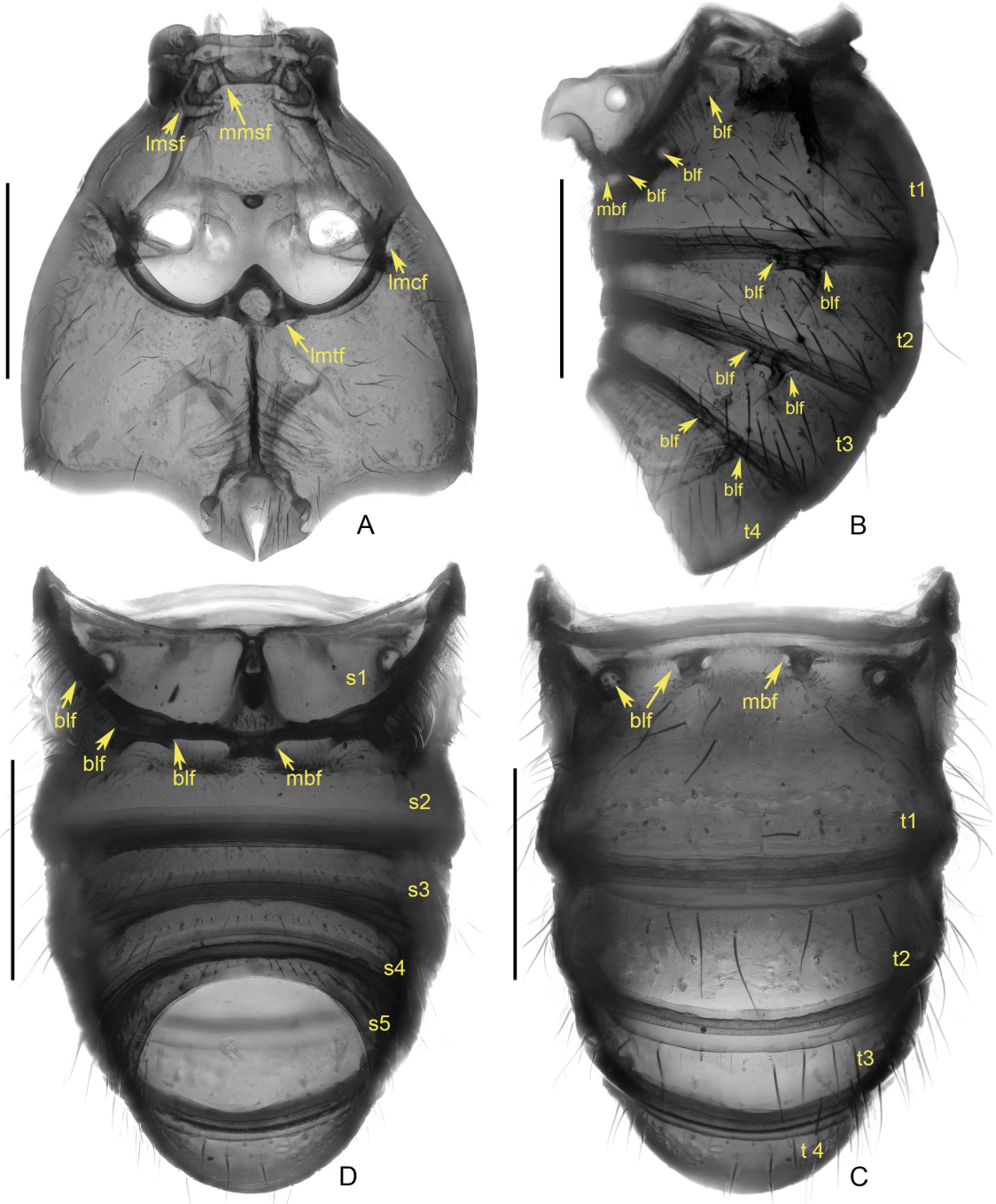

Fig. 2. Morphology of *Feabatrus* gen. nov. A – meso- and metaventrite; B–D – abdomen, lateral (B), dorsal (C), and ventral (D). Abbreviations: blf – basolateral fovea, lmcf – lateral mesocoxal fovea, lmsf – lateral mesoventral fovea, lmtf – lateral metaventral fovea, mbf – mediobasal fovea, mmsf – median mesoventral fovea, s1–5 – sternites 1–5 (III–VII), t1–4 – tergites 1–4 (IV–VII). Scale bars: 0.5 mm.

spines of *G. incognitus* are used to thwart harassing males, while increasing female control over copulation. However, this 'sexual-conflict' hypothesis has never been tested for Pselaphinae, and further field observations or laboratory experiments are needed.

Feabatrus myanmarensis sp. nov.

(Figs 3, 4)

Chinese common name: 缅甸棘蚁甲

Type material. HOLOTYPE: **MYANMAR:** ♂, 'Carin Asciuii Ghecù (approximate coordinate: 19°41'N, 97°00'E), 1400-1500 m, L. Fea. III-IV. (18)88. / Museo Civico di Genova' (MSNG). PARATYPES: **MYANMAR**: 4 ♂♂ 5 ♀♀, same data as that of holotype (MSNG, SNUC).

Diagnosis. ***Male.*** Body elongate, length over 4.0 mm; dorsal surface of body and antennae with long suberect setae. Head sub-rounded at base, narrower than pronotum, tempora moderately long, vertex with long mediobasal carina, with distinct lateral carinae from head base to posterior margin of antennal tubercles; antenna elongate, lacking modification. Pronotum with laterally carinate median and lateral longitudinal sulci, with pair of curved discal carinae, with pair of large discal, antebasal and marginal spines. Elytra sparsely punctate, disc smooth, shiny, discal striae shallow, indistinct. Legs elongate, mesotrochanter with broad ventral spine, mesotibia with small apical spur; meta-

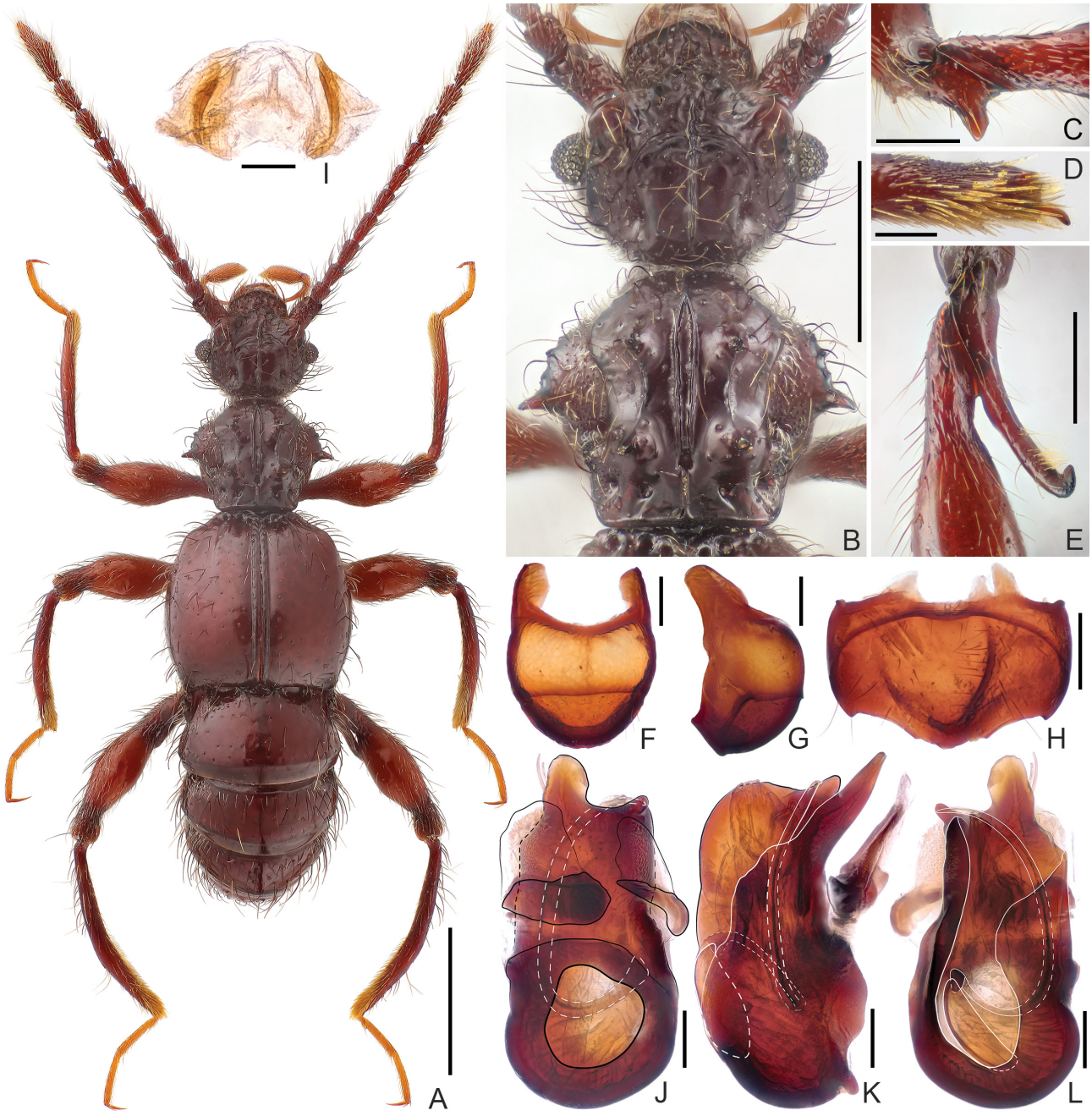

Fig. 3. Morphology of *Feabatrus myanmarensis* sp. nov., male. A – dorsal habitus; B – head and pronotum; C – mesotrochanter; D – mesotibia; E – metatrochanter; F, G – tergite 5 (VIII), dorsal (F), and lateral (G); H – sternite 6 (VIII); I – sternite 7 (IX); J–L – aedeagus, ventral (J), lateral (K) and dorsal (L). Scale bars: 1.0 mm in A; 0.5 mm in B; 0.3 mm in E; 0.2 mm in C, F–H; 0.1 mm in D, I–L.

trochanter with conspicuously long and curved projection. Abdomen elongate and greatly curved ventrally. Aedeagus asymmetrical, median lobe with large basal capsule and foramen, ventral lobe dorso-ventrally abruptly narrowed at apex; dorsal lobe short and flat; endophallus armature composed of extremely slender and curved sclerite; parameres developed into two semi-membranous structures which are sclerotized at bases.

Female. Body length slightly over 4.0 mm. Legs lacking modification. Abdomen shorter than male, tergite 2–4 (V–VII) each in middle with one large spine before posterior margin, tergite 5 (VIII) flat. Genital complex asymmetric, shape as in Figure 4F.

Description. ***Male.*** Body (Figs 3A, 4A) elongate, length 4.15–4.23 mm; color reddish-brown, tarsi and mouthparts lighter. Dorsal surface of body covered with relatively sparse, long and suberect setae.

Head (Fig. 3B) sub-rounded at base, wider than long, length 0.75–0.76 mm, width across eyes 0.85–0.86 mm; vertex with U-shaped sulcus connecting relatively small, but distinct asetose foveae (dorsal tentorial pits), mediobasal carina long, extending from head base anteriorly to middle of frons, lateral carina thick, extending from posterior margin of antennal tubercle toward postocular margin; posterolateral margin weakly angulate; frons anteriorly demarcated from clypeus by oblique carinae merged in middle and extending anteriorly to near apex of clypeus, area between moderately raised antennal tubercles impressed; clypeus with rough surface, its entire anterior margin strongly carinate and moderately raised; ocular-mandibular carina complete. Venter with granulate surface; small gular foveae (posterior tentorial pits) originating from shared transverse opening, with thin median carina extending from opening anteriorly to mouthparts. Compound eyes prominent, each composed of approximately 70 ommatidia. Antenna elongate, lacking distinct club or modification, length 2.40–2.53 mm; antennomere 1 thick, subcylindrical, 2 shortest, approximately as long as wide, 3–8 each elongate, 8 smaller than 7 and 9, 9–11 slightly broad, with relatively dense setae, 11 largest, slightly longer than 9 and 10 combined (42:38), nearly fusiform.

Pronotum (Fig. 3B) wider than long, length 0.78–0.81 mm, width 1.02–1.03 mm, widest in middle; lateral margin with small extra denticles in apical half, convergent apically and basally; disc slightly convex, broad median longitudinal sulcus with prominent carinate margins, posteriorly confluent with median antebasal fovea and short mediobasal carina, with pair of short discal carinae connecting large discal and antebasal spines; lateral longitudinal sulcus thick and long; with dense pubescence lateral to sulcus; with pair of large marginal spines; lateral antebasal foveae large and asetose; with distinct outer and inner pair of basolateral foveae. Prosternum with anterior part longer than coxal part, with small but deep lateral procoxal foveae; thin but distinct hypomeral carina extending from base to level of lateral procoxal foveae, with two antebasal hypomeral pits; margin of coxal cavity moderately carinate.

Elytra slightly wider than long, length 1.15–1.17 mm, width 1.23–1.28 mm, disc smooth and shiny, sparsely punctate; each elytron with three moderately large, asetose basal foveae; discal striae shallow, extending posteriorly from outer basal foveae to approximately 2/5 of elytral length; humeri roundly prominent, lacking subhumeral fovea, carinate marginal striae extending from basal 2/3 to posterior margin of elytra.

Mesoventrite short, demarcated from metaventrite by transverse, oblique carinae lateral to mesocoxal cavities; median mesoventral foveae moderately separated, originating from shared transversal opening, large lateral mesoventral foveae forked internally, with short mesoventral process, with complete marginal striae. Metaventrite moderately projected admesally, inclined towards middle, with well-developed lateral mesocoxal and two lateral metaventral foveae, posterior margin with deep, narrow split in middle.

Legs elongate, mesotrochanter (Fig. 3C) with broad, blunt ventral spine, mesotibia (Fig. 3D) with small, short apical spine; metatrochanter (Fig. 3E) with conspicuously long ventral projection which is greatly curved at apex, projection densely setose before apex; metatibia slightly curved in middle.

Abdomen conspicuously elongate and curved ventrally, widest at lateral margins of tergite 1 (IV), length 1.80–1.86 mm, width 1.10–1.12 mm. Tergite 1 (IV) approximately 1.2 times as long as 2 (V), lacking basal sulcus, with one pair of mediobasal and two pairs of basolateral foveae, with pair of short, nodule-like discal carinae, inner marginal carinae thin and complete; outer marginal carinae thick, present in basal 1/2; tergite 2 as long as 3 (VI) but shorter than 4 (VII), 2–4 each with one pair of basolateral foveae and thin marginal carinae; tergite 5 (VIII) semicircular (Figs 3F, G), elongate, posterior margin broadly and moderately deeply emarginate in middle. Sternite 2 (IV) with one pair of mediobasal and three pairs of basolateral foveae, lacking lateral carina; midlength of sternites 2–5 (IV–VII) gradually shorter, each sternite with one pair of small basolateral foveae, sternite 6 (VIII) (Fig. 3H) transverse, deeply impressed in middle, posterior margin medially protruding, sternite 7 (IX) (Fig. 3I) composed of pair of subtriangular, membranous structures.

Aedeagus (Figs 3J–L) 0.62 mm long, asymmetric, stout; median lobe with large basal capsule and foramen, basoventral projection short; ventral stalk narrowed apically, with two small elongate sclerites before apex; dorsal lobe short and flat; endophallus armature extremely elongate, C-shaped in dorsal view; parameres composed of two semi-membranous, basally sclerotized structures.

Female. Similar to male in external morphology. Body (Figs 4B, C) and antenna shorter. Each compound eye composed of approximately 70 ommatidia; legs lacking modification; tergites 1–4 (IV–VII) shorter than male, 2–4 each in middle with one large spine before posterior margin, tergite 5 (VIII) flat (Fig. 4D), trapezoidal, posterior margin shallowly emarginate and with small nodule in middle; sternite 6 (VIII) transverse (Fig. 4E), posterior margin broadly emarginate, with pair of round projections in middle. Measurements (as for male): body length 4.06–4.12 mm; length/width of head 0.72–0.73/0.83–0.85 mm,

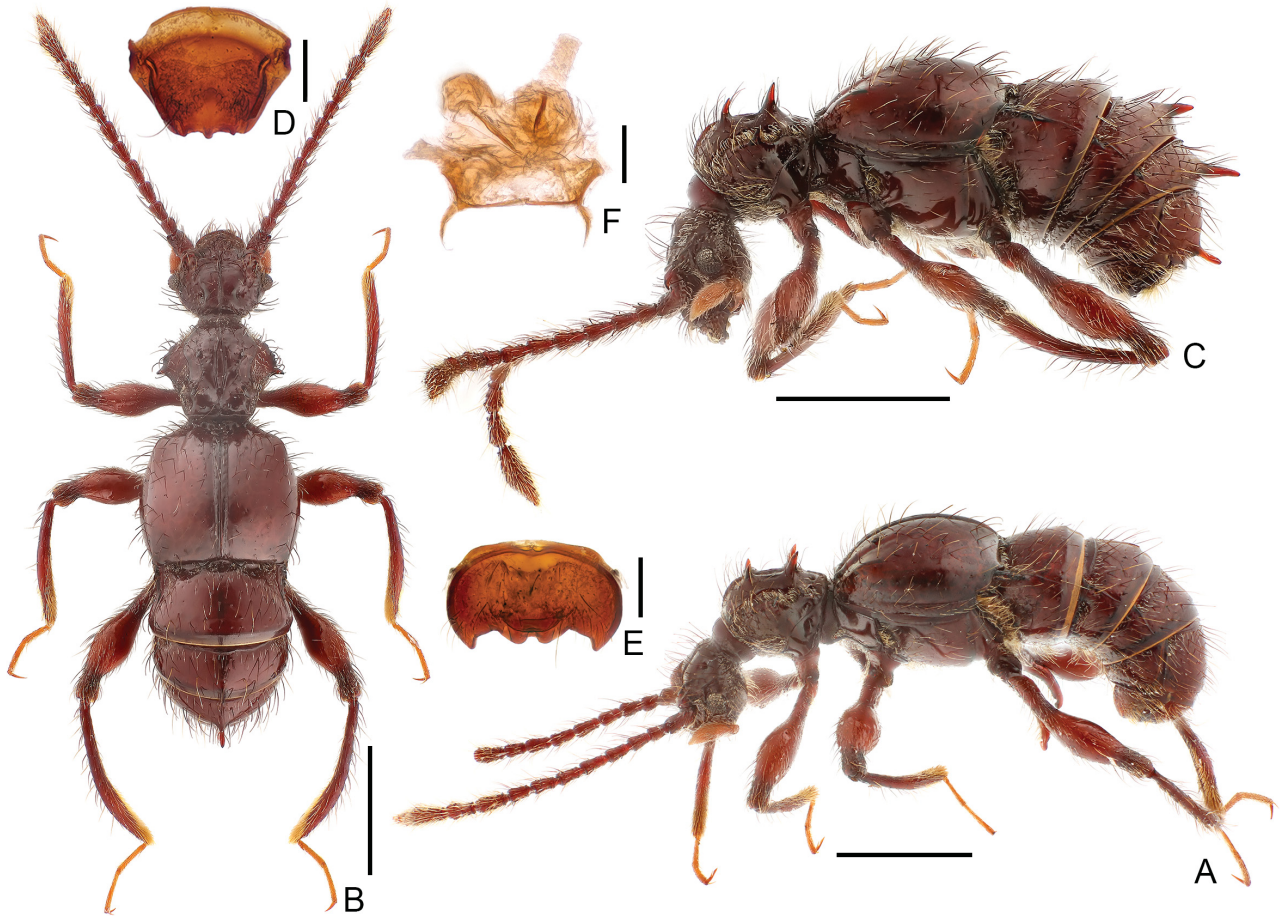

Fig. 4. Morphology of *Feabatrus myanmarensis* sp. nov., male (A), female (B–F). A, C – lateral habitus; B – dorsal habitus; D – tergite 5 (VIII); E – sternite 6 (VIII); F – genital complex. Scale bars: 1.0 mm in A, B, C; 0.2 mm in D, E; 0.1 mm in F.

pronotum 0.78–0.80/0.99–1.00 mm, elytra 1.09/1.26–1.28 mm; abdomen 1.65–1.71/1.15–1.17 mm; length of antenna 2.17–2.28 mm; maximum width of genital complex (Fig. 4F) 0.39 mm.

Comparative notes. This species is morphologically similar to *F. leonardoi* described below. They can be readily separated by the larger body size (4.06–4.23 mm vs. 3.28–3.43 mm), a much more elongate and greatly curved male abdomen, longer projection of male metatrochanter, male sternite 6 (VIII) with a broad, deep median impression (impression lacking in *F. leonardoi*), and presence of long spines on female tergites 2–4 (V–VII).

Etymology. The new species is named after Myanmar, where its type locality is located; adjective.

Distribution. Central Myanmar: southern Shan State (Fig. 7).

Feabatrus leonardoi sp. nov.

(Figs 5, 6A–D)

Chinese common name: 莱氏棘蚁甲

Type material. Holotype: **MYANMAR:** ♂, 'Carin Chebà, 500–1000 m (approximate coordinate: 19°11'N, 96°53'E), L. Fea. XII. (18)87. / Museo Civico di Genova' (MSNG). Paratypes: **MYANMAR:** 7 ♂♂ 6 ♀♀, same data as that of holotype (MSNG, SNUC).

Diagnosis. ***Male.*** Habitus elongate; body length 3.28–3.34 mm; dorsal surface of body and antennae with long suberect setae. Head sub-rounded at base, narrower than pronotum, tempora moderately long, vertex with long mediobasal carina extending anteriorly to frons, with distinct lateral carina from head base to posterior margin of antennal tubercle; antenna elongate, lacking modification. Pronotum with laterally carinate median and lateral longitudinal sulci, with pair of curved discal carinae, with large discal, antebasal and marginal spines. Elytron sparsely punctate, disc smooth, shiny, discal stria extending posteriorly to approximately 1/3 of elytral length. Legs elongate, mesotrochanter with short ventral spine, mesotibia with small apical spur; metatrochanter with long hook-like projection. Abdomen normal, slightly curved ventrally. Aedeagus asymmetric; median lobe with large basal capsule and foramen, ventral stalk narrowed apically, with two thin and elongate sclerites before apex; dorsal lobe short, recumbent; endophallus armature extremely slender and curved; parameres reduced to single membranous structure, sclerotized near base.

Female. Body length 3.28–3.43 mm. Head with long vertexal mediobasal carina extending from head base anteriorly to sulcus. Legs lacking modification. Tergites 2–4 (V–VII) lacking dorsal spine. Genital complex asymmetric, shape as in Figure 6D.

Description. ***Male.*** Body (Fig. 5A) length 3.28–3.34 mm; color reddish-brown, tarsi and mouthparts lighter. Dorsal

surface of body and antennae covered with long suberect setae.

Head (Fig. 5B) sub-rounded at base, wider than long, length 0.64–0.65 mm, width across eyes 0.74–0.76 mm; vertex with U-shaped sulcus connecting relatively small, but distinct asetose foveae (dorsal tentorial pits), anterior margin of vertexal sulcus carinate, mediobasal carina long, extending anteriorly from head base to anterior part of frons, lateral carina thick, extending from posterior margin of antennal tubercle towards postocular margin; posterolateral margin weakly angulate; frons demarcated from clypeus by irregular carinae merged in middle and extending anteriorly to apex of clypeus, area between moderately raised antennal tubercles impressed; clypeus with rough surface, its entire anterior margin strongly carinate and moderately raised; ocular-mandibular carina complete. Venter with granulate surface; small gular foveae (posterior tentorial pits) originating from shared transverse opening, with thin median carina extending from opening anteriorly to mouthparts. Compound eyes prominent, each composed of approximately 65 ommatidia. Antenna elongate, lacking distinct club or modification, length 1.99–2.12 mm; antennomere 1 thick, subcylindrical, 2 as long as 8, shortest, slightly longer than wide, 3–7 each elongate, 9–11 slightly broad, with relatively dense setae, 11 largest, as long as 9 and 10 combined (39:39), nearly fusiform.

Pronotum (Fig. 5B) wider than long, length 0.70–0.73 mm, width 0.88–0.89 mm, widest in middle; lateral margin with small denticles in apical 1/2, convergent apically and basally; disc slightly convex, broad median longitudinal

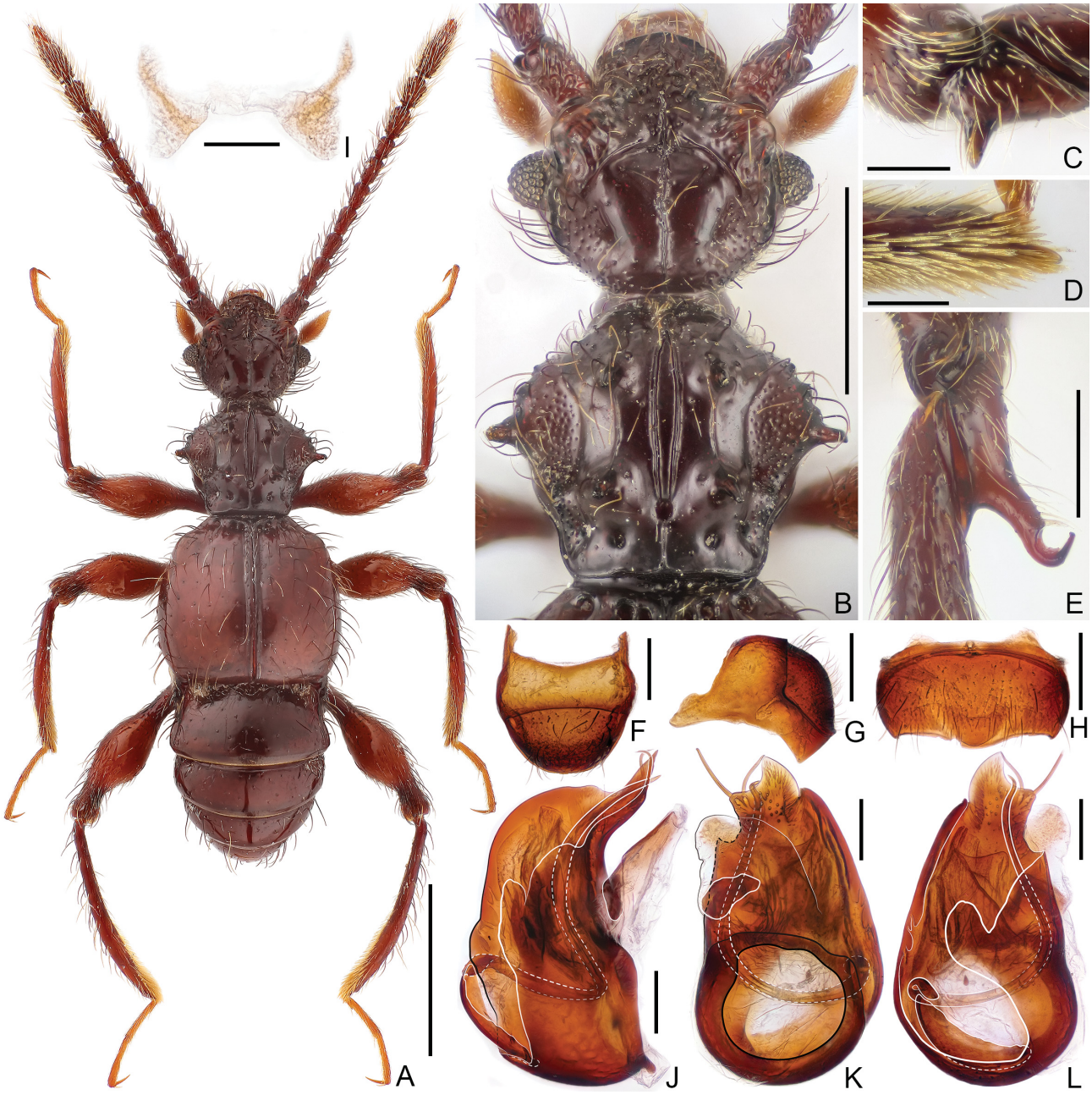

Fig. 5. Morphology of *Feabatrus leonardoi* sp. nov., male. A – dorsal habitus; B – head and pronotum; C – mesotrochanter; D – mesotibia; E – metatrochanter; F, G – tergite 5 (VIII), dorsal (F), and lateral (G); H – sternite 6 (VIII); I – sternite 7 (IX); J–L – aedeagus, lateral (J), ventral (K) and dorsal (L). Scale bars: 1.0 mm in A; 0.5 mm in B; 0.2 mm in E–H; 0.1 mm in C, D, I–L.

sulcus with prominent carinate margins, posteriorly confluent with median antebasal fovea and short mediobasal carina, with pair of curved discal longitudinal carinae connecting large discal and antebasal spines; lateral longitudinal sulcus thick and long; with dense pubescence lateral to sulcus; with pairs of large marginal spines; lateral antebasal foveae large and asetose; with distinct outer and inner pair of basolateral foveae. Prosternum with anterior part longer than coxal part, with small but deep lateral procoxal foveae; distinct hypomeral carina extending from base to level of lateral procoxal foveae, with two pairs of lateral antebasal hypomeral pits; margin of coxal cavity moderately carinate.

Elytra slightly wider than long, length 0.88–0.96 mm, width 1.05–1.10 mm; each elytron with three moderately large, asetose basal foveae; discal stria shallow, extending posteriorly from outer basal fovea to approximately 1/3 of elytral length; humerus roundly prominent, lacking subhumeral fovea, thin, carinate marginal stria extending from basal 4/5 to posterior margin of elytron.

Mesoventrite short, demarcated from metaventrite by oblique carinae lateral to mesocoxal cavity; median mesoventral foveae moderately separated, originating from shared transversal opening, large lateral mesoventral foveae forked internally, with short mesoventral process, with complete marginal stria. Metaventrite moderately projected admesally, inclined towards middle, with well-developed lateral mesocoxal and two lateral metaventral foveae, posterior margin with deep, narrow split in middle.

Legs elongate, mesotrochanter (Fig. 5C) with short ventral spine, mesotibia (Fig. 5D) with small apical spur; metatrochanter (Fig. 5E) with long hook-like ventral projection, ventral margin of projection with long thickened seta.

Abdomen slightly elongate, widest at lateral margins of tergite 1 (IV), length 1.19–1.24 mm, width 0.91–0.93mm. Tergite 1 (IV) approximately 1.6 times as long as 2 (V), lacking basal sulcus, with one pair of mediobasal and two

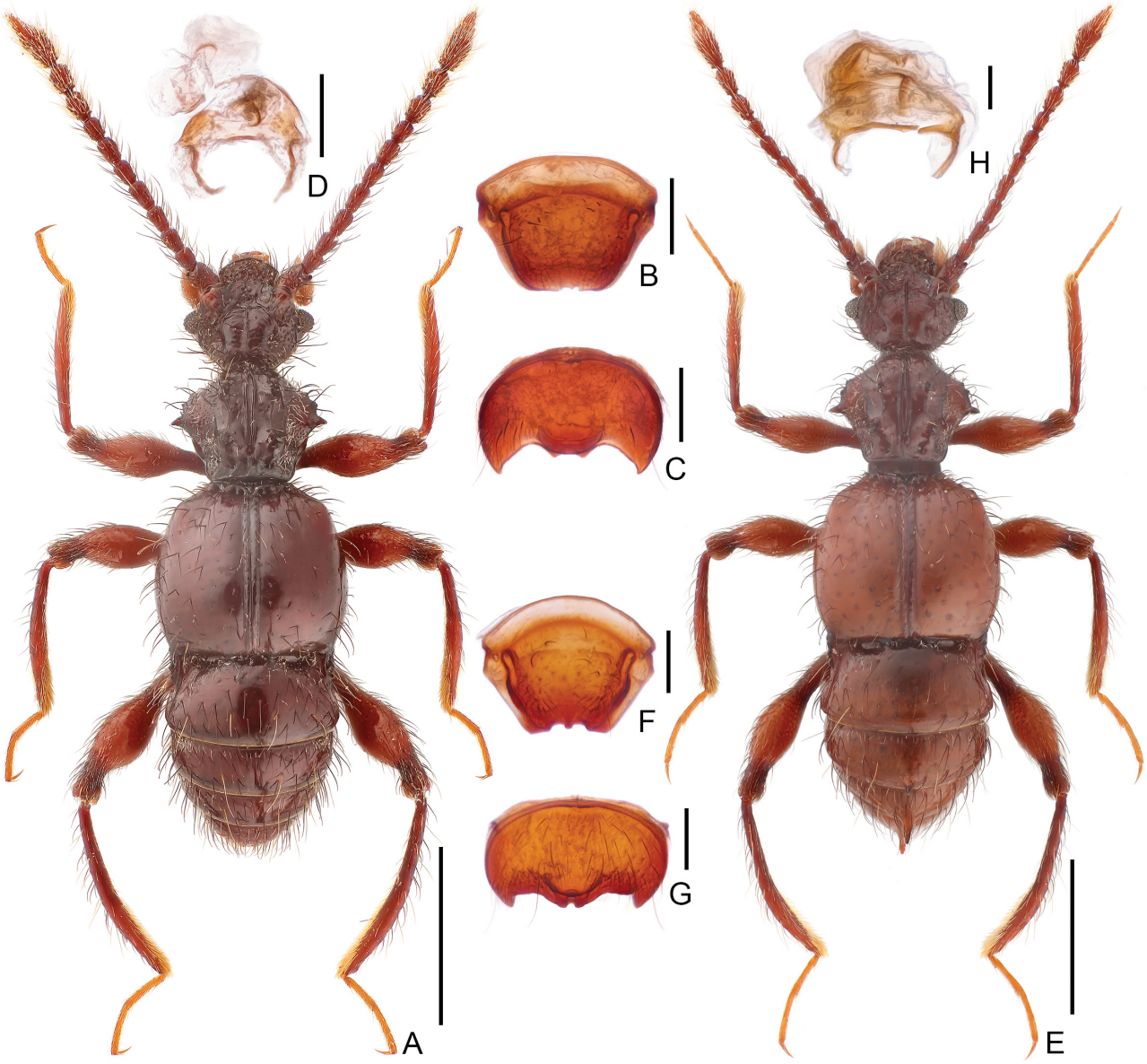

Fig. 6. Morphology of female *Feabatrus* species, *F. leonardoi* sp. nov. (A–D), *Feabatrus* sp. (E–H). A, E – dorsal habitus; B, F – tergite 5 (VIII); C, G – sternite 6 (VIII); D, H – genital complex. Scale bars: 1.0 mm in A, E; 0.2 mm in B–D, F–H.

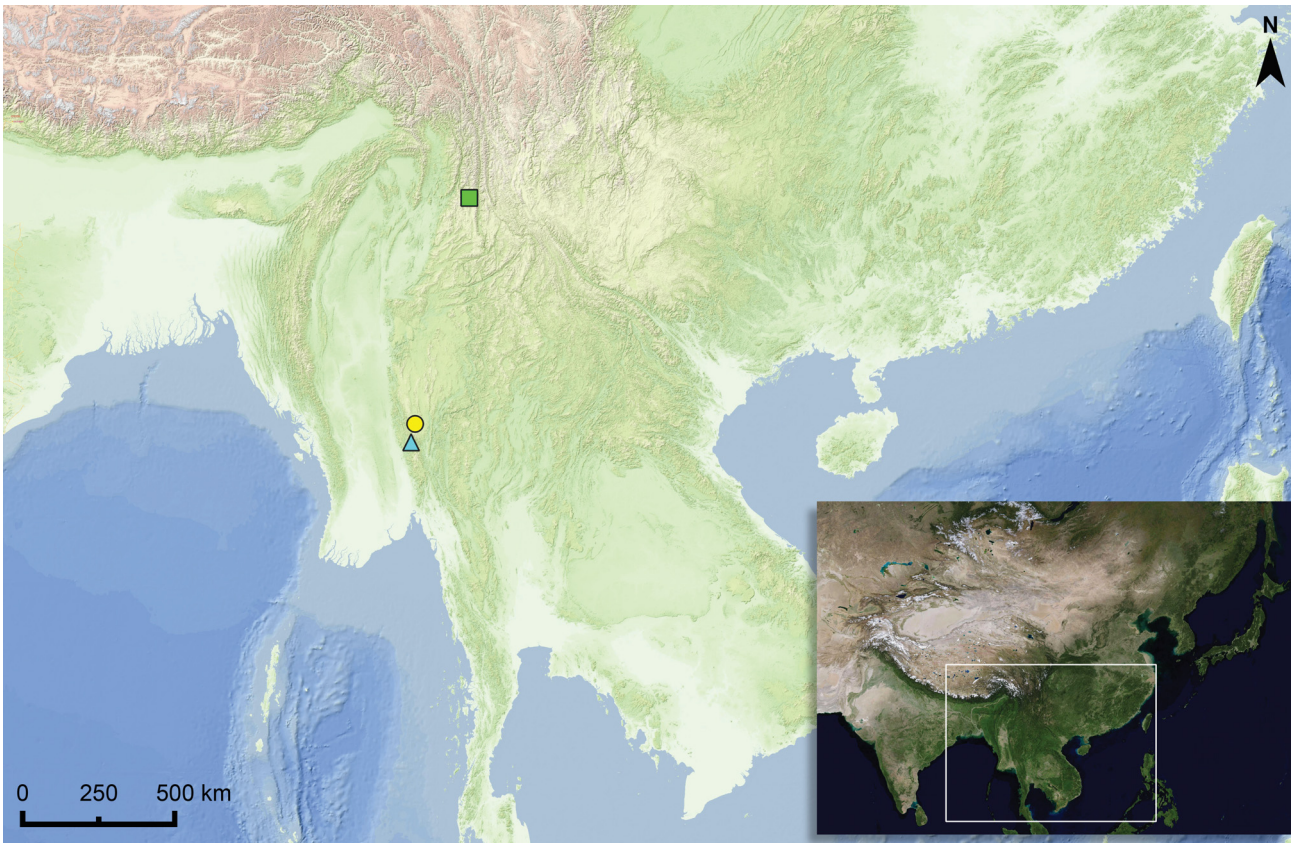

Fig. 7. Distribution of *Feabatrus* species, circle: *Feabatrus myanmarensis* sp. nov.; triangle: *Feabatrus leonardoi* sp. nov.; square: *Feabatrus* sp.

pairs of basolateral foveae, with pair of short, nodule-like discal carinae, inner marginal carinae thin and complete; outer marginal carinae thick, present in basal 1/2; tergite 2 approximately 1.5 times as long as 3 (VI), 3 as long as 4 (VII), 2–4 each with one pair of basolateral foveae and thin marginal carinae; tergite 5 (VIII) semicircular (Figs 5F, G), posterior margin broadly and moderately deeply emarginate in middle. Sternite 2 (IV) with one pair of mediobasal and three pairs of basolateral foveae, lacking lateral carina; midlength of sternites 2–5 (IV–VII) gradually shorter, each with one pair of small basolateral foveae, sternite 6 (VIII) transverse (Fig. 5H), barely impressed in middle, posterior margin slightly protruding in middle, sternite 7 (IX) (Fig. 5I) composed of pair of triangular, membranous structures.

Aedeagus (Figs 5J–L) 0.54 mm long, asymmetric, stout; median lobe with large basal capsule and foramen, basoventral projection short; ventral stalk narrowed apically, with two thin, elongate sclerites before apex; dorsal lobe short and recumbent; endophallus armature extremely elongate and curved; parameres reduced to single membranous structure, sclerotized near base.

Female. Similar to male externally (Fig. 6A). Head with shorter mediobasal carina extending from head base anteriorly to sulcus. Antenna slightly shorter. Each compound eye composed of approximately 55 ommatidia; legs lacking modification; tergite 5 (VIII) weakly arched (Fig. 6B), sub-trapezoidal, posterior margin shallowly emarginate; sternite 6 (VIII) transverse (Fig. 6C), posterior margin broadly emarginate, with pair of small projections in middle. Measurements (as for male): body length 3.28–3.43 mm; length/width of head 0.62–0.64/0.73–0.74 mm, pronotum 0.69–0.70/0.86–0.89 mm, elytra 0.88–0.93/1.07–1.09 mm; abdomen 1.26–1.30/0.97–0.98 mm; length of antenna 1.86–1.93 mm; maximum width of genital complex (Fig. 6D) 0.33 mm.

Comparative notes. This species morphologically resembles *F. myanmarensis* described above, but differs in the smaller body size (3.28–3.43 mm vs. 4.06–4.23 mm), a differently shaped projection of the male metatrochanter, a relatively much shorter male abdomen, lack of a median impression on male tergite 5 (VIII), and lack of a dorsal spine on female tergites 2–4 (V–VII).

Etymology. The species is named after Leonardo Fea, collector of the holotype.

Distribution. Southern Myanmar: Tanintharyi (Fig. 7).

Feabatrus sp.

(Figs 6E–H)

Material examined. CHINA: Yunnan: 1 ♀, 'China: Yunnan, Baoshan City, Tengchong County, Mingguang Town, Zizhi Village. 25°43′46″N, 98°34′17″E, 1900 m, 26.iv.2013, Dai, Song & Peng leg.' (SNUC).

Description. Each compound eye composed of approximately 55 ommatidia. Antenna elongate, lacking distinct club and modification; antennomere 1 thick, subcylindrical, 2–8 each elongate, 8 smallest, 9–11 slightly broadened, with relatively dense setae, 11 largest, slightly longer than 9 and 10 combined (41:38), nearly fusiform. Legs lacking modification; tergite 2–4 (V–VII) each in middle with one large spine before posterior margin, tergite 5 (VIII) flat

(Fig. 6F), sub-trapezoidal, posterior margin emarginate and with small nodule in middle; sternite 6 (VIII) transverse (Fig. 6G), posterior margin broadly emarginate, in middle with pair of small nodules. Measurements: body length 3.80 mm; length/width of head 0.68/0.79 mm, pronotum 0.75/0.96 mm, elytra 1.03/1.20 mm; abdomen 1.31/1.11 mm; length of antenna 2.04 mm; maximum width of genital complex (Fig. 6H) 0.35 mm.

Comments. This female (Figs 6E–H) is similar to that of *F. myanmarensis* in the presence of dorsal spines on tergites 2–4 (V–VII), but is distinctly smaller in size (3.80 mm vs. 4.06–4.12 mm) and has differently shaped tergite 5 (VIII) and sternite 6 (VIII).

Distribution. Southwest China: Yunnan (Fig. 7).

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