



Three new species of *Melolontha* Fabricius from southern China (Coleoptera: Scarabaeidae: Melolonthinae)

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Abstract

Three new species of the *M. aeneicollis* species group of the genus *Melolontha* Fabricius, 1775 are described from southern China: *M. jianbini* **sp. nov.** from Gutian County, Fujian province; *M. tianlongi* **sp. nov.** from Suichuan County, Jiangxi province; and *M. xui* **sp. nov.** from Yangshan County, Guangdong province. A key to the species of the *M. aeneicollis* species group is also provided.

Key words: Melolonthini, taxonomy, Nanling Mountains, Fujian, Guangdong, Jiangxi

Introduction

The genus *Melolontha* is mainly distributed in the Palaearctic and Oriental region (Bezděk 2016; Li *et al.* 2010). Of China, this genus currently counts 25 species and one subspecies (Bezděk 2016; Blanchard 1871; Brenske 1896a, b; Fairmaire 1878, 1889, 1891; Guérin-Méneville 1838; Keith 2008; Keith *et al.* 2012; Kobayashi 1985; Li *et al.* 2010; Moser 1918; Nijima & Kinoshita 1923; Nomura 1952, 1977; Semenov 1896; Zhang 1983, 1987). Except for five species, 35 taxa from eastern and southeastern Asia were arranged into 10 species groups based on the shape of male genitalia and external morphological characters (Li *et al.* 2010): *M. guttigera* species group, *M. virescens* species group, *M. phupanensis* species group, *M. rufocrassa* species group, *M. aeneicollis* species group, *M. reichenbachi* species group, *M. chinensis* species group, *M. japonica* species group, *M. carinata* species group, and *M. incana* species group. Four species are recognized in the *Aeneicollis* species group (Li *et al.* 2010): *M. aeneicollis* Bates, 1891 from India and Pakistan (Keith & Saltin 2012); *M. cuprescens* Blanchard, 1871 from India and China (Blanchard 1871; Gupta *et al.* 2023); *M. costipennis* Fairmaire, 1889 and *M. sculpticollis* Fairmaire, 1891 from China (Brenske 1903; Fairmaire 1889, 1891). This group can be identified from others by a combination of several characteristics as: surface of pronotum coarse, disc more or less raised, protuberant area deeply, sparsely, largely punctate, the longitudinally midline depressed anteriorly, setae on the midline longer and denser than on disc; costae of elytra distinct; mesometasternal process weakly produced; apical portion of pygidium distinctly extended, apex rounded or slightly bifurcate; protibia bidentate or tridentate (proximal tooth rather weak); parameres generally symmetric, sides gradually narrowed apically, lateral convexity rather weak.

After examining the specimens in the Mianyang Normal University (MYNU), three new species of the *Aeneicollis* species group from the Chinese provinces Fujian, Guangdong, and Jiangxi were discovered and are described hereafter. These findings bring the total number of *Melolontha* species and subspecies from China to 29. Additionally, a key is also provided for the identification of the species in *M. aeneicollis* species group.

Material and Methods

Habitus and genitalia photos were taken using a Canon® D60 digital camera with Canon® AF 100 mm macro lens. All photos were modified with software Adobe Photoshop® CC 2018. Type specimens of the new species described

in this work bear the following labels, separate label lines are indicated by a slash (/), and separate labels by a double slash (//): HOLOTYPE (or PARATYPE) // *Melolontha* species name / F.-L. Wang det. 2024 // collecting data labels. All materials in this study are deposited in the Invertebrate Collection of Mianyang Normal University, Mianyang, Sichuan, China (MYNU).

Taxonomy

Melolontha jianbini sp. nov.

Chinese common name: 建斌胸突鳃金龟

(Figs 1–8)

Type material. HOLOTYPE: CHINA: male (MYNU): CHINA: Fujian, Ningde City / Gutian County, Baiyanxianjing / 20.VI.2019, alt. 1300 m / Jian-Bin Huang leg. // HOLOTYPE // *Melolontha jianbini* / F.-L. Wang det. 2024.

Description (male holotype). *Habitus* (Figs 1–3). Length: 32.1 mm, width: 14.9 mm. Body elongate ovoid, distinctly convex in profile.

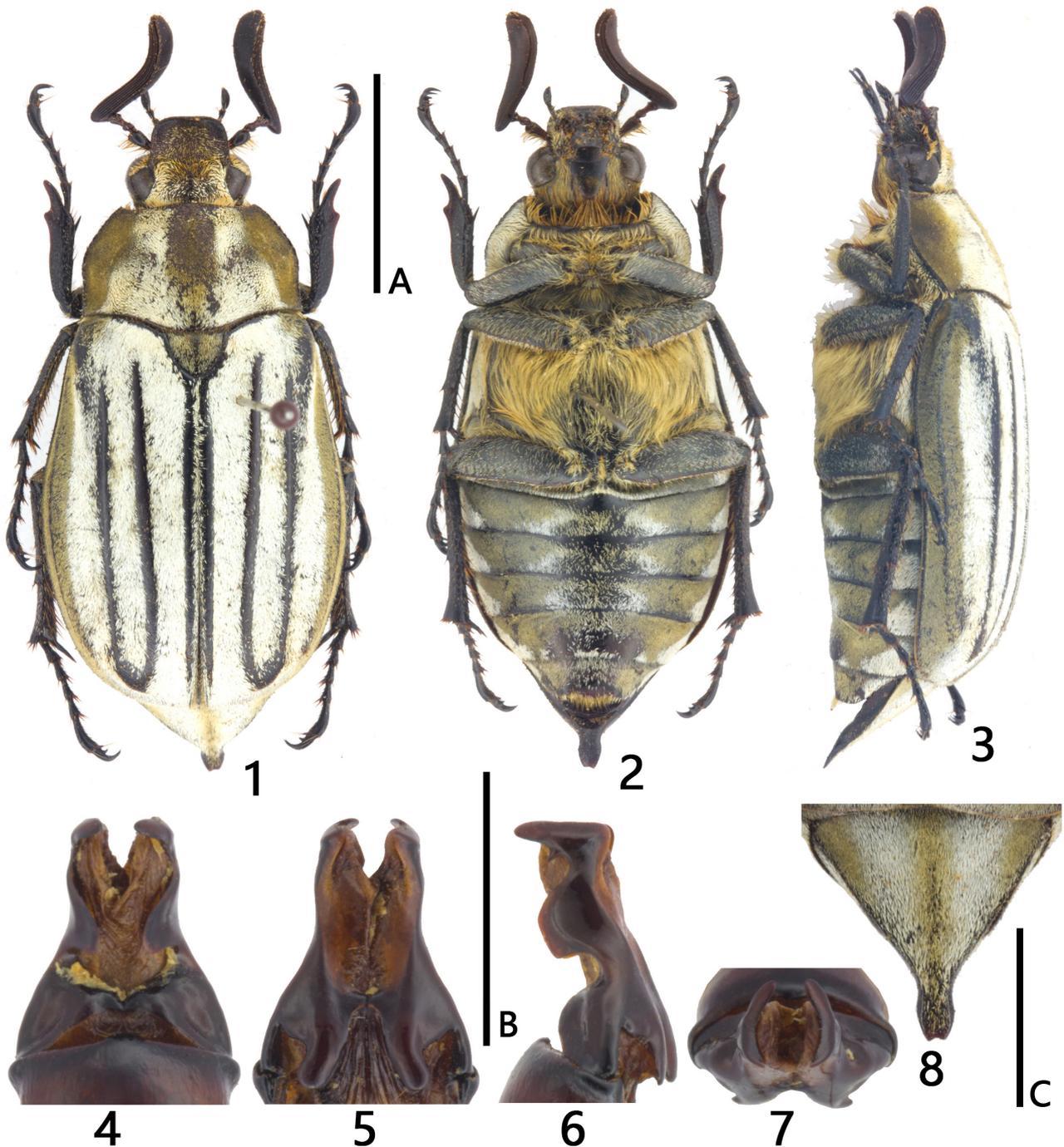
Color. Entire body dark black-brown; middle longitudinal area and the lateral longitudinal area of pronotum and pygidium with yellow-brown setae, sub-lateral longitudinal area with white setae; costal intervals 1 and 2 of elytra with white setae, interval 3 with white setae on the inner two-thirds, outer third with yellow-brown setae, interval 4 with yellow-brown setae; surface of sternites and propygidium with yellow-brown setae, middle area additionally with white setae, sides of sternites and propygidium with white patches, densely covered with white setae. *Head.* Clypeus rectangular, anterior margin reflexed and straight, apical angles rounded; disc depressed, surface with dense rugose punctures, covered with short yellow-brown setae. Clypeofrontal suture indistinct. Frons densely, largely punctate, surface with long, yellow-brown setae anteriorly, setae becoming posteriorly and laterally white, sparser on disc; canthus with long, yellow-brown setae. Maximum transverse head width 1.81 times interocular distance. Antenna with 10 antennomeres; antennal club composed of 7 antennomeres, slightly curved in the middle, 2.5 times longer than antennomeres 1–3 combined. Labrum strongly depressed at middle, dorsal side with dense short setae along depression; mentum concave centrally, surface with several scattered setae; maxillary palpus with apical palpomere subequal in length to combination of palpomeres 2–3.

Pronotum transverse, longitudinal midline moderately depressed anteriorly, disc moderately raised on both sides of longitudinal midline. Disc with dense rugose punctures, larger and sparser on the raised area; middle longitudinal area with moderately long, yellow-brown setae, sparser anteriorly; sub-lateral area with moderately long, white setae, becoming shorter towards the sides; broad lateral area with rather short, yellow-brown setae, areas with different colored setae clearly demarcated. Lateral margin convergent in the middle, with fine serrations, posterior 1/5 weaker; middle of anterior margin ridged before middle, middle area raised; posterior margin distinctly ridged. Anterior angles obtuse, posterior angles acute, weakly extended.

Scutellum arcuate, apex angle recognizable; surface densely, finely punctate, covered with dense yellow-brown setae, narrowly reduced along longitudinal midline.

Elytra with four costae (costa I as sutural costa), costae nearly glabrous, only with several white setae; costa II longer than costa III, both fused before basal area abruptly, fused together at apical protrusion; costa IV starts from outer side of humeral umbone. Elytra with four intervals (interval 4 as area between costa 4 and epipleura), intervals densely, shallowly punctate; intervals 1 and 2 with dense, moderately long, white setae; interval 3 with dense, moderately long, white setae on the inner two-thirds, the outer one-thirds with shorter yellow-brown setae; interval 4 with rather short, yellow-brown setae; area around apical angles and apical protrusion with white setae; anterior area of humeral umbone with yellow-brown setae. Epipleura narrow, invisible before apical protrusion. Humeral umbone rather prominent; apical protrusion moderately prominent; basal margin and margin along scutellum moderately raised, surface glabrous.

Pygidium (Fig 8) triangular, sides gradually narrowed apically, apical area extended abruptly, swollen before apex, apex slightly bifurcated. Surface covered with yellow-brown setae along middle longitudinal area, broad sublateral area with white setae, the triangular area around basal angles of sides with yellow-brown setae; setae reduced on the extended area apically.



FIGURES 1–8. *Melolontha jianbini* sp. nov., holotype. 1–3. Habitus. 4–7. Male genitals. 8. Pygidium. 1, 4. Dorsal view. 2, 5. Ventral view. 3, 6. Lateral view from left. 7. Apical view. Scale bars: 10 mm in A: Figs 1–3; 5 mm in B: Figs 4–7; 5 mm in C: Fig 8.

Ventral surface. Hypomeron covered with long, yellow-brown setae; metasternum with moderately long, yellow-white setae; metepisternum covered with long, white setae, setae slightly yellow-brown anteriorly. Mesometasternal process weakly produced to slightly beyond mesocoxae. Surface of sternites densely, shallowly punctate, covered with short, yellow-brown setae, sparser and lighter medially. Sides of sternites I–IV with large, triangular patches, densely covered with white setae; sub-lateral area of sternites I–III with white setae; posterior margin of sternite IV with white setae. Disc of propygidium with sparse yellow-brown setae, setae lighter on disc, sides with white bands, apical margin with longer yellow-brown setae.

Legs. Protibia bidentate, terminal tooth slender, prolonged, proximal tooth obtuse. Mesotibia and metatibia cylindrical, apex widened, both with two spurs unequal in length, outer side with pubescent carina at apical 2/5; surface moderately dense, short setae, apex glabrous; inner side with row of long setae.

Genitalia see Figs 4–7.

Female unknown.

Diagnosis. *Melolontha jianbini* **sp. nov.** is similar to *M. aeneicollis* Bates, 1891, *M. costipennis* Fairmaire, 1889, and *M. cuprescens* Blanchard, 1871, but can be distinguished it from *M. aeneicollis* by the parameres being generally symmetric (left paramere distinctly larger in *M. aeneicollis*, see Gupta *et al.* 2023); from *M. costipennis* by the body color black-brown, covered with white and yellow-brown setae, different colored areas clearly demarcated (body color red-brown, covered with grey-yellow to yellow-brown setae in *M. costipennis*, Fairmaire 1889); and from *M. cuprescens* by pronotum with very weak metallic coppery luster (pronotum with stronger metallic green luster in *M. cuprescens*, see Gupta *et al.* 2023). This new species is very similar to *M. sculpticollis* Fairmaire, 1891 as the body surface has white and yellow-brown setae, but it can be distinguished by the body color being black-brown and pronotum with a rather weak metallic coppery luster (the body color red-brown and pronotum with metallic green luster in *M. sculpticollis*, see Fairmaire 1891). *Melolontha jianbini* **sp. nov.** is also similar to *M. tianlongi* **sp. nov.** in habitus, but can be distinguished from it by: sides of elytra more rounded; setae narrowly reduced along longitudinal midline of scutellum; middle of sternites I–III with white setae, sides of sternites I–IV with large, triangular patches, densely covered with white setae; and the protrusion in the middle section of the parameres towards the dorsal rectangular (sides of elytra weakly crooked; scutellum with even yellow-brown setae; middle of sternites I–III without white setae, sides of sternites I–IV with smaller triangular patches, densely covered with white setae; and the protrusion in the middle section of parameres towards the dorsum rounded, Figs 1–3, 6, 9–11, 14). The parameres of this new species are very similar to *M. xui* **sp. nov.** but: the pronotum, elytra, and pygidium have white and yellow-brown setae, different colored areas clearly demarcated; surface of pronotum covered with dense setae; elytra with four costae; apical processes of left parameres weakly crooked in apical view, and the protrusion in the middle section of parameres towards the dorsum rectangular in *M. jianbini* (pronotum, elytra, and pygidium only with yellow-brown setae; surface of pronotum glabrous; elytra with five costae, costa IV clear but weak; apical processes of left parameres strongly crooked in apical view, and the protrusion in the middle section of parameres towards the dorsum rounded in *M. xui*, Figs 1, 7, 8, 17, 23, 24).

Etymology. The new species is named after Mr. Jian-Bin Huang who collected the type specimen.

Distribution. Known so far only from the type locality Gutian county, Fujian province, China.

Melolontha tianlongi **sp. nov.**

Chinese common name: 天龙胸突鳃金龟

(Figs 9–16, 25)

Type material. **HOLOTYPE: CHINA: male** (MYNU): CHINA: Jiangxi / Jinggangshan City, Suichuan County/ Wuzhifeng Forestry Station, Dabali / alt. 1700 m, 28. VI. 2022 / Tian-Long He & Zi-Dan Xu leg. // **HOLOTYPE** // *Melolontha tianlongi* / F.-L. Wang det. 2024. **PARATYPES: CHINA: 1 male and 1 female** (MYNU): same data as the holotype.

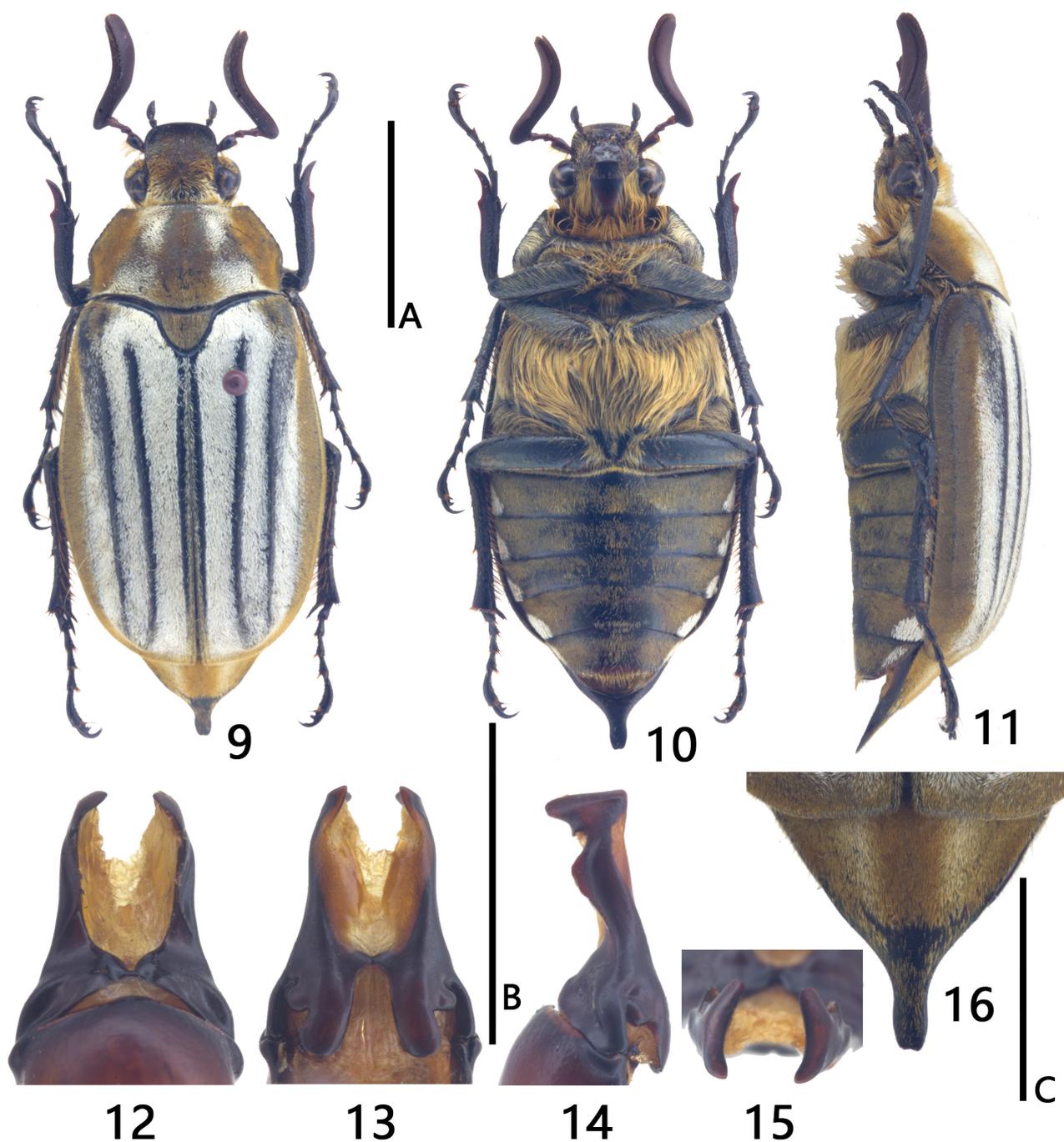
Description (male holotype). *Habitus* (Figs 9–11). Length: 31.9 mm, width: 14.7 mm. Body elongate ovoid, distinctly convex in profile.

Color. Whole body dark black-brown; middle longitudinal area and lateral longitudinal area of pronotum with yellow-brown setae, sub-lateral longitudinal area with white setae, areas with different colored setae clearly demarcated; costal intervals 1–3 of elytra with white setae, intervals 4 and 5 with yellow-brown setae; surface of sternites and propygidium with yellow-brown setae, sides with white patches, densely covered with white setae.

Head. Clypeus rectangular, anterior margin reflexed and moderately emarginate, apical angles broadly rounded; disc rather depressed, surface with dense, fine rugose punctures, covered with short, yellow-brown setae. Clypeofrontal suture distinct. Frons densely, largely punctate, longitudinal midline slightly raised, surface with long, yellow-brown setae anteriorly, sparser on disc, setae becoming white posteriorly; canthus with moderately long, yellow-brown setae. Maximum transverse head width 1.85 times interocular distance. Antenna with 10 antennomeres; antennal club composed of 7 antennomeres, curved in the middle, 2.52 times longer than antennomeres 1–3.

combined, antennomere 1 with rather long, yellow-brown setae. Labrum strongly depressed at middle, dorsal side with moderately dense short setae along depression; mentum concave centrally, surface with several scattered setae; maxillary palpus with apical palpomere subequal in length to combination of palpomeres 2–3, apical palpomere with shorter setae than on palpomeres 2–3.

Pronotum transverse, longitudinal midline moderately depressed in anterior 3/5, disc moderately raised on both sides of longitudinal midline. Disc densely, finely punctate, punctures on raised area larger and sparser; middle longitudinal area with moderately long, yellow-brown setae; the sub-lateral area with moderately long, white setae; the broad lateral area with short, yellow-brown setae, areas with different colored setae clearly demarcated. Lateral margin convergent in the middle, with fine serrations; middle of anterior margin raised; posterior margin well ridged. Anterior angles and posterior angles obtuse.



FIGURES 9–16. *Melolontha tianlongi* sp. nov., holotype. 9–11. Habitus. 12–15. Male genitalia. 16. Pygidium. 9, 12. Dorsal view. 10, 13. Ventral view. 11, 14. Lateral view from left. 15. Apical view. Scale bars: 10 mm in A: Figs 9–11; 5 mm in B: Figs 12–15; 5 mm in C: Fig 16.

Scutellum arcuate, apex angle unrecognizable; surface densely, finely punctate and evenly setose.

Elytra with five costae (costa I as sutural costa), costae nearly glabrous, only with several yellow-brown setae; costa II longer than costa III, fused before basal area abruptly, fused together at apical protrusion; costa IV weak; costa V starts from outer side of humeral umbone. Elytra with five intervals (interval 5 as area between costa 5 and epipleura), intervals with dense punctures; intervals 1 and 3 with dense, moderately long, white setae; intervals 4 and 5 with denser, shorter yellow-brown setae; area around apical angles and apical protrusion with yellow-brown setae; humeral umbone with yellow-brown setae anteriorly. Epipleura narrow, invisible before apical protrusion. Humeral umbone and apical protrusion prominent, apical protrusion weaker; basal margin and margin along scutellum moderately raised, glabrous.

Pygidium (Fig 16) triangular, sides gradually narrowed apically, apical area rather extended, apical part widened, apex slightly incurved. Surface with dense yellow-brown setae, sublateral area with weak, longitudinal white band, setae sparser on the apical part.

Ventral surface. Hypomeron covered with long, yellow-brown setae, metasternum with shorter, lighter, grey-yellow setae; metepisternum with long, yellow-white setae. Mesometasternal process weakly produced, slightly beyond mesocoxae. Sternites densely, shallowly, finely punctate, covered with short yellow-brown setae, sparser in the middle. Sides of sternites I–IV with triangular patches, densely covered with white setae. Disc of propygidium with similar setae to those on sternites, sparser on disc, sides with white bands, apical margin with long yellow-brown setae.

Legs. Protibia bidentate, terminal tooth slender, prolonged, proximal tooth obtuse, weak. Mesotibia and metatibia cylindrical, apex widened, both with two spurs unequal in length, outer side with pubescent carina at apical 2/5; surface moderately dense, short setae, apex glabrous; inner side with row of long setae.

Genitalia see Figs 12–15.

Female similar to male in body color, but body plumper and more convex in profile; body length 30.2 mm, greatest width 13.7 mm; antennal club shorter; terminal tooth of protibia more curved; apical angle of pygidium rounded.

Variation in males. Body length 31.4–31.9 mm, width 14.3–14.7 mm. The holotype and the male paratype show no differences in the shape of the aedeagus, but apical area of pygidium of the male paratype is less extended.

Diagnosis. *Melolontha tianlongi* **sp. nov.** can be distinguished from *M. aeneicollis*, *M. costipennis*, and *M. cuprescens* by: the body color black-brown, surface covered with white and yellow-brown setae, areas with different colored setae clearly demarcated; parameres with a large, rounded protrusion in the middle section towards the dorsum (Fairmaire 1889; Gupta *et al.* 2023). This new species is very similar to *M. sculpticollis* in dorsal surface color, but can be distinguished from it by the body color black-brown, pronotum with rather weak green luster, and antennal club shorter (body color red-brown, pronotum with stronger green luster, and antennal club distinct long in *M. sculpticollis*; Fairmaire 1891). *Melolontha tianlongi* **sp. nov.** is similar to *M. jianbini* **sp. nov.** (China: Fujian) in body color and paramere, but can be distinguished from it by habitus and the shape of parameres (see diagnosis of *M. jianbini* **sp. nov.** above). This new species also resembles *M. xui* **sp. nov.** (China: Guangdong) in parameres, but we can identify this new species by: pronotum, elytra, and pygidium with white and yellow-brown setae, areas with different colored setae clearly demarcated; surface of pronotum covered with dense setae; sides of sternites I–IV with moderately large, triangular patches, densely covered with white setae; apical processes of left parameres weakly curved in apical view, and the area of basal parameres in ventral side with two protrusions, the small one prolonged and rounded (pronotum, elytra, and pygidium only with yellow-brown setae; surface of pronotum glabrous; sides of sternites I–IV with more rounded, large, triangular patches, densely covered with white setae; apical processes of left parameres strongly crooked in apical view, and the area of basal parameres in ventral side with two protrusions, the small one weakly raised in *M. xui* **sp. nov.**, Figs 1, 7, 8, 17, 23, 24).

Etymology. The new species is named after Mr. Tian-Long He, who is one of the collectors of this new species.

Distribution. Known so far only from the type locality Suichuan county, Jiangxi province, central China.

Melolontha xui **sp. nov.**

Chinese common name: 许氏胸突鳃金龟
(Figs 17–24, 26–28)

Type material. HOLOTYPE: CHINA: male (MYNU): CHINA: Guangdong, Qingyuan City / Yangshan County, Pingjia Town / Nanling National Forest Park / Shikengkong, alt. 1650 m / 11.VI.2023, Jun-Qiang Xu leg. // HOLOTYPE // *Melolontha xui* / F.-L. Wang det. 2024; **PARATYPES: CHINA: 3 males** (MYNU): same data as the holotype; 4 males and 1 female (MYNU): CHINA: Guangdong, Qingyuan City / Yangshan County, Pingjia Town / Nanling National Forest Park / Shikengkong, alt. 1500 m / 10.V.2024, Jun-Qiang Xu leg.

Description (male holotype). *Habitus* (Figs 17–19). Length: 35.0 mm, width: 14.4 mm. Body elongate ovoid, distinctly convex in profile.

Color. Entire body dark red-brown. Body surface with yellow-brown setae and sides of sternites and propygidium with white patches, densely covered with white setae.

Head. Clypeus rectangular, slightly widened apically, anterior margin reflexed and straight, apical angles broadly rounded; surface with dense punctures, covered with short yellow-brown setae posteriorly. Clypeofrontal suture distinct. Frons densely, largely punctate, sparser in the middle, covered with sparser setae, gradually becoming longer to the sides and vertex; canthus with yellow-brown setae. Maximum transverse head width 1.93 times interocular distance. Antenna with 10 antennomeres; antennal club composed of 7 antennomeres, strongly curved in anterior 2/5, 2.85 times longer than antennomeres 1–3 combined. Labrum strongly depressed at middle, dorsal side with dense short setae; mentum strongly concave centrally, surface with several scattered setae; maxillary palpus with apical palpomere subequal in length to combination of palpomeres 2–3, apical palpomere with dense short setae.

Pronotum transverse, longitudinal midline area moderately depressed. Surface of disc densely punctate, covered with short, yellow-brown setae, setae denser and shorter on the broad area laterally, longer on longitudinal midline, posterior margin with yellow-brown tufts between posterior angles and scutellum. Anterior margin broadly raised in the middle, gradually becoming narrow and weak to anterior angles; posterior margin finely ridged, broadest in the middle, gradually becoming narrow to posterior angles; lateral margin convergent in the middle, with serrations in the anterior 3/4, posterior 1/4 with weak lateral marginal ridge. Anterior angles obtuse, posterior angles acute and slightly extended.

Scutellum arcuate, apex angle unrecognizable; surface glabrous, without punctures.

Elytra with five costae (costa I as sutural costa), costae glabrous; costa II and III fused before basal area, fused together at apical protrusion; costa IV clear but weak; costa V starts from outside of humeral umbone, fused together with extension of apical protrusion. Elytra with five intervals (interval 5 as area between costa V and epipleura); intervals densely, shallowly punctate; intervals with yellow-brown setae; interval 5, area around apical angles, and apical protrusion with denser, shorter yellow-brown setae. Epipleura narrow, becoming weak before apical protrusion. Humeral umbone rather prominent; apical protrusion moderately prominent; basal margin of elytra moderately raised, glabrous.

Pygidium triangular, sides gradually narrowed apically, apical area rather extended, apical part raised, apex slightly incurved. Surface covered with rather dense yellow-brown setae, shorter and denser to the basal angles, narrowly reduced on sides and apex area, lateral margins with row of long, erect setae (Fig 24).

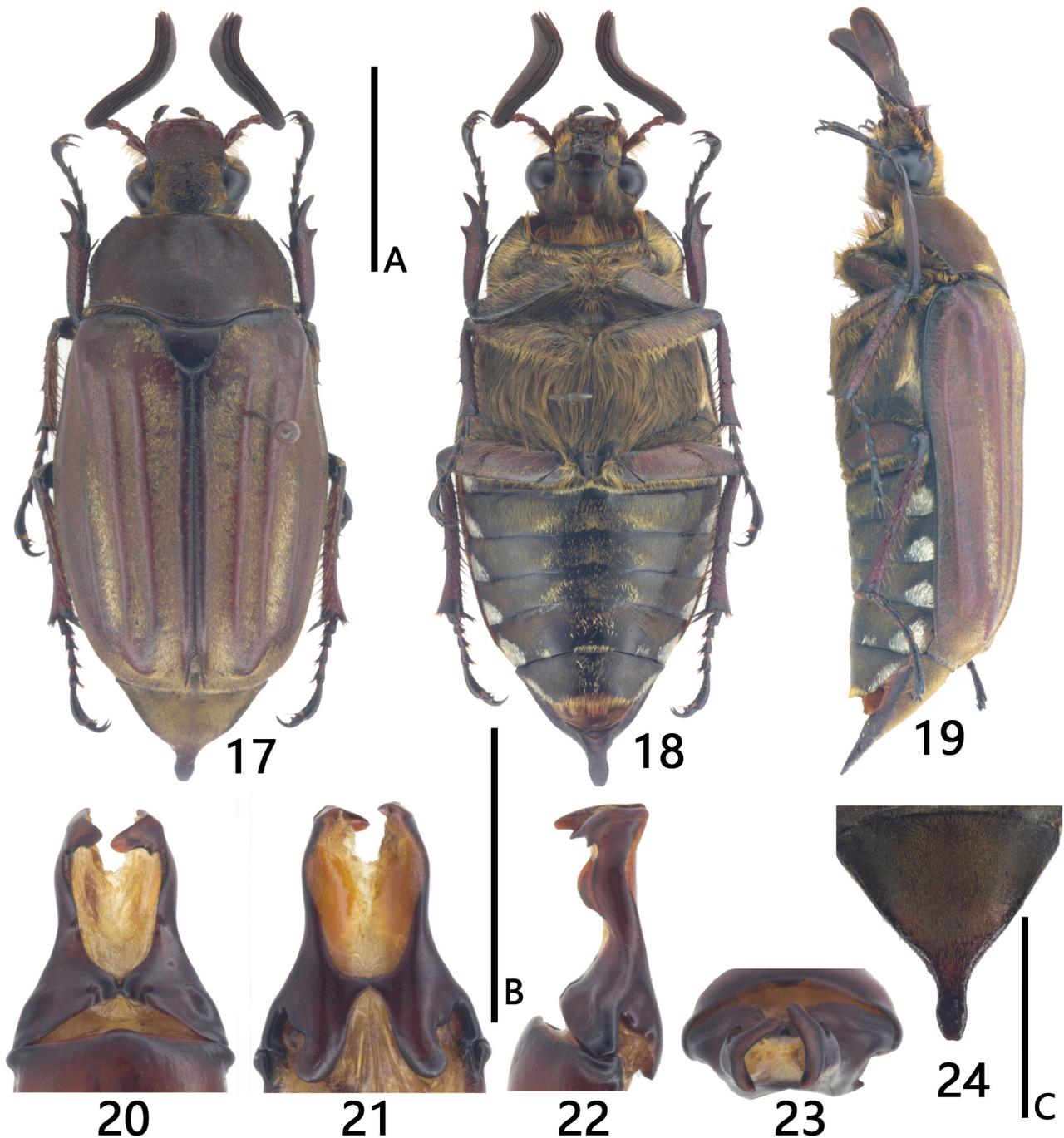
Ventral surface. Hypomeron overall covered with long yellow-brown setae; metasternum with lighter, shorter yellow-brown setae; metepisternum with long, yellow-white setae. Mesometasternal process weakly produced, slightly beyond mesocoxae. Sternites densely, shallowly punctate, sparse in the middle; surface with yellow-brown setae, sparser and lighter medially, posterior 2/5 of sternite IV nearly glabrous, only with several setae. Sides of sternites I–IV with triangular patches, densely covered with white setae; sublateral area of sternite IV with feeble white tufts. Disc of propygidium with sparse lighter setae, sides with white bands, apical margin with long yellow-brown setae.

Legs. Protibia strongly bidentate, surface glabrous, terminal tooth curved, rather prolonged, proximal tooth acute. Mesotibia and metatibia cylindrical, apex widened, both with two unequal spurs, outer side with two in the middle pubescent carinae; surface coarse, apex glabrous; inner side with row of long, erect setae.

Genitalia see Figs 20–23.

Female: with white setae, sides of sternites and propygidium with more rounded. Body plump and more convex in profile; body length 34.7 mm, greatest width 15.6 mm; antennal club shorter, with 6 antennomeres; protibia with rather weak third tooth; apical angle of pygidium rounded.

Variation in males. Male: body length 34.3–35.0 mm, width 14.3–14.4 mm. The holotype and male paratypes show no differences in the shape of the aedeagus.



FIGURES 17–24. *Melolontha xui* sp. nov., holotype. 17–19. Habitus. 20–23. Male genitals. 24. Pygidium. 17, 20. Dorsal view. 18, 21. Ventral view. 19, 22. Lateral view from left. 23. Apical view. Scale bars: 10 mm in A: Figs 17–19; 5 mm in B: Figs 20–23; 5 mm in C: Fig 24.

Diagnosis. *Melolontha xui* sp. nov. can be identified by the protibiae bidentate, apex of pygidium extremely extended, mesometasternal process short, sides of sternites 1–4 with triangular patches, densely covered with white setae, and parameres asymmetrical, each parameres with a large rounded protrusion in the middle section towards the dorsum. This new species is similar to the other two new species described in this paper, and for the differences, see the diagnosis of *M. jianbini* sp. nov. and *M. tianlongi* sp. nov. given above.

Etymology. The new species is named after Mr. Jun-Qiang Xu, who collected the type specimens.

Distribution. Known so far only from the type locality Yangshan county, Guangdong province, southern China.



FIGURES 25–28. *Melolontha* spp. **25.** Type locality of *Melolontha tianlongi* sp. nov., Dabali forest farm, Suichuan county, Jiangxi (photo by Tian-Long He). **26, 27.** A living male of *M. xui* sp. nov. in bush (photos by Jun-Qiang Xu). **28.** Collecting *M. xui* sp. nov. around light in the Nanling Mountains, Yangshan County, Guangdong (photo by Jun-Qiang Xu).

Key to males of *M. aeneicollis* species group

- 1 Surface of pronotum, elytra and pygidium with yellow-brown or grey-yellow setae or scales 2
- Surface of pronotum, elytra and pygidium with yellow-brown and white setae, areas with different colored setae clearly demarcated 3
- 2 Surface of elytra with acicular scales, parameres asymmetrical, left apical process larger *M. aeneicollis* Bates, 1891
- Surface of elytra with setae, parameres generally symmetric 4
- 3 Body color and legs red-brown; antennal club 3.2 times longer than antennomeres 1–3 combined, rather curved before middle; protibia moderately bidentate, terminal tooth short, moderately prolonged, proximal tooth acute; apical area of pygidium moderate long and broad *M. sculpticollis* Fairmaire, 1891
- Body color and legs black-brown; antennal club less than 2.9 times longer than antennomeres 1–3 combined, weakly curved in the middle; protibia strongly bidentate, terminal tooth long, rather prolonged, proximal tooth weak, obtuse; apical area of pygidium rather extended and narrow 5
- 4 Protibia tridentate, proximal tooth distinct but weak *M. costipennis* Fairmaire, 1889
- Protibia strongly bidentate 6
- 5 Radian of sides of elytra weaker; scutellum with uniform yellow-brown setae; middle of sternites I–III without white setae, sides of sternites I–IV with smaller triangular patches, densely covered with white setae; apical process of parameres short in lateral view and the protrusion in the middle section of parameres towards the dorsum rounded *M. tianlongi* sp. nov.
- Radian of sides of elytra strong; setae narrowly reduced along the longitudinal midline of scutellum; middle of sternites I–III with white setae, sides of sternites I–IV with large, triangular patches, densely covered with white setae; and apical process of parameres longer in lateral view and the protrusion in the middle section of parameres towards the dorsum rectangular *M. jianbini* sp. nov.
- 6 Head, pronotum, and scutellum without metallic luster, pronotum covered with short, fine setae, longitudinal midline less depressed; surface of pronotum glabrous *M. xui* sp. nov.
- Head, pronotum, and scutellum with strong metallic green luster, pronotum covered with moderately long setae, longitudinal midline deeply depressed; surface of pronotum covered with setae *M. cuprescens* Blanchard, 1871

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中国南方胸突鳃金龟属*Melolontha*三新种 (鞘翅目: 金龟科: 鳃金龟亚科)

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摘要: 描述胸突鳃金龟属*Melolontha*长尾胸突鳃金龟*M. aeneicollis*种团三新种, 即产自福建古田县的建斌胸突鳃金龟*M. jianbini* **sp. nov.**, 江西遂川县的天龙胸突鳃金龟*M. tianlongi* **sp. nov.**和广东阳山县的许氏胸突鳃金龟*M. xui* **sp. nov.**; 还提供了长尾胸突鳃金龟种团所有物种的分类检索表。

关键词: 鳃金龟亚科; 分类; 南岭; 福建; 广东; 江西