Three new species of the genus *Glenea* Newman, 1842 from the Oriental Region (Coleoptera: Cerambycidae: Lamiinae: Saperdini)

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Abstract

Three new species of *Glenea* Newman, 1842 from the Oriental Region are described: *G. wenhsini* sp. nov. and *G. linwenhsini* sp. nov. from Guizhou, China and *G. paraornata* sp. nov. from China, Laos, Thailand and Vietnam.

Key words: *Glenea*, new species, Oriental Region

Introduction

At the beginning, I planned to review all "Yellow" *Glenea* from Oriental region. The "Yellow" *Glenea* as here defined does not presume synapomorphies, but is used only for identification of species having similar yellow pubescent makings. It comes out to be a long (over 50 pages) monograph and too long for this memorial book. Therefore, in this paper we only described three new species, which had been discussed by the author and Wenhsin Lin during 2008 and 2009. The long monograph of "Yellow" *Glenea* will be published in other places in the future.

The specimens studied are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZAS), the collection of Chang-Chin Chen, Tianjin, China (CCCC), the collection of Carolus Holzschuh, Villach, Austria (CCH), the collection of Ehime University Museum, Matsuyama City, Ehime Pref., Japan (EUMJ), the collection of Petr Viktora, Kutná Hora, Czech Republic (CPV) and some other private European collections.

Glenea wenhsini sp. nov.

(Figures 1–7)

Description. (based on 3 males, female unknown) Length: 11.9–12.3 mm, humeral width: 3.4–3.6 mm. Body black, densely clothed with yellow or black pubescence; head covered by yellow pubescence except the occiput black; antennae reddish brown with basal 3 antennomeres fuscous. Protho-

rax covered with dense yellow pubescence except a small black spot near procoxal cavity on each side (Fig. 1b) and 2 large oblong black spots on the disc (Fig. 2a), usually combined to each other (Fig. 1a.). Scutellum densely clothed with yellowish pubescence. Elytra reddish brown mixed with dark brown or black, each with 1 on lateral base and 6 yellowish pubescence markings on disc: the first one at the base, small but from scutellum to humeral margin; the second one moderate in size, expanded and oblique and not reaching lateral margin, connected to scutellum and the third one along suture, separated from first one by a dark brown area lacking yellow pubescence; the third one located before middle, moderate in size; the fourth together V-shaped; the fifth somewhat rounded, reaching neither suture nor lateral margin; the last is a transverse spot at the apex. Ventral surfaces densely clothed with yellowish pubescence except a campaniform area in middle of metasternum densely covered with silvery brown pubescence; legs yellowish tesceous. Inferior eyelobes rounded-oblong, 3 times as long as genae below; antennomere ratio: 15: 3: 23: 19: 16: 15: 14: 13: 13: 12: 12. Pronotum slightly broader than long, with a thin median longitudinal costa. Elytra with two costae not reaching apex, the first one distinct and the second one obtuse; almost rounded apically, without apical tooth. Only the anterior claw of mid tarsus with a small tooth (Fig. 3).

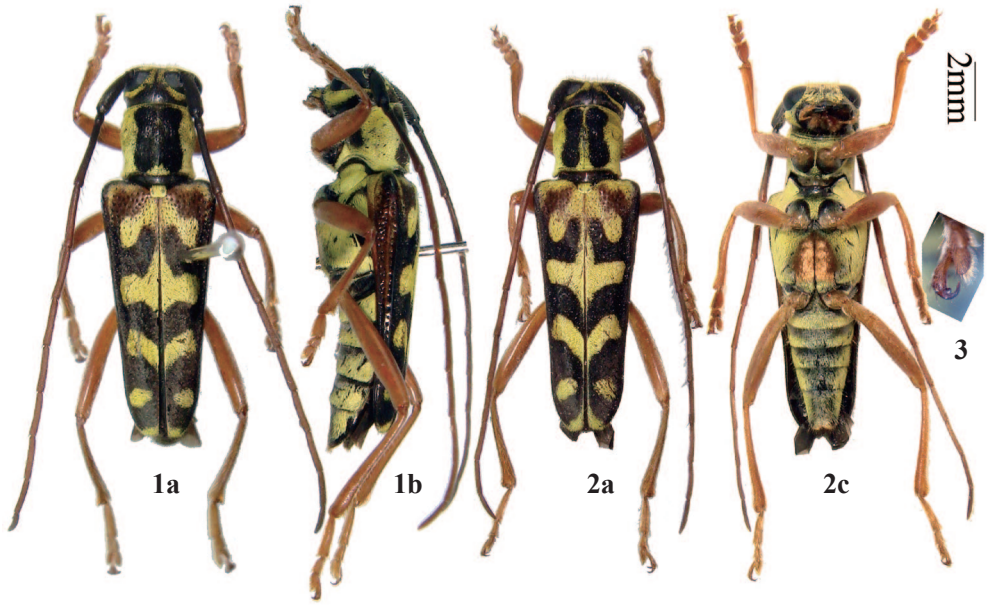
Male terminalia (Figs. 4–7). Tegmen length about 2.5 mm; lateral lobes slender, each about 0.5 mm long and 0.1 mm wide (in middle), apex with long setae slightly shorter than lateral lobes, ventral base with very short setae (Fig. 6); basal piece bifurcated distally; median lobe plus median struts almost straight except the apex slightly curved, slightly longer than tegmen (28:25); the median struts about 2/3 of the whole median lobe in length; dorsal plate not shorter than ventral plate; apex of ventral plate rounded (Fig. 7); internal sac about 2 times as long as median lobe plus median struts, with 2 pairs of basal armature and 4 rods of endofallus (median two almost connected to each other); rods subequal in length and about 2.0 mm, longer than half of tegmen. Tergite VIII (Fig. 4) nearly as broad as long, apex emarginate, with moderately long setae.

Diagnosis. This species is similar to *G. ornata*, but can be easily distinguished by: 1. male claws not all simple but with the anterior claw of mid tarsus with a small tooth; 2. elytral apex almost rounded, not as truncated as that of *G. ornata*; 3. maculae different: first and second yellow pubescent markings on elytral disc combined, and the third longer and narrower; 4. male genitalia with lateral lobes of tegmen stouter and apex of ventral plate of median lobe more round.

Etymology. The species is named after Mr. Wenhsin Lin (Taiwan, China), who collected the holotype.

Distribution. China: Guizhou Prov..

Material examined. Holotype (12.3 mm long): ♂, **China,** Guizhou Prov., Jiangkou county, Mt. Fanjingshan (27°53.976'N 108°42.505'E), alt. 1775 m, 2009.VII.17, leg. Wenhsin Lin (IZAS, IOZ(E) 1905104). **Paratypes:** 1♂, same data but deposited in CCCC; 1♂, same data but leg. Xiao-Dong Yang (IZAS, IOZ(E) 1905105).



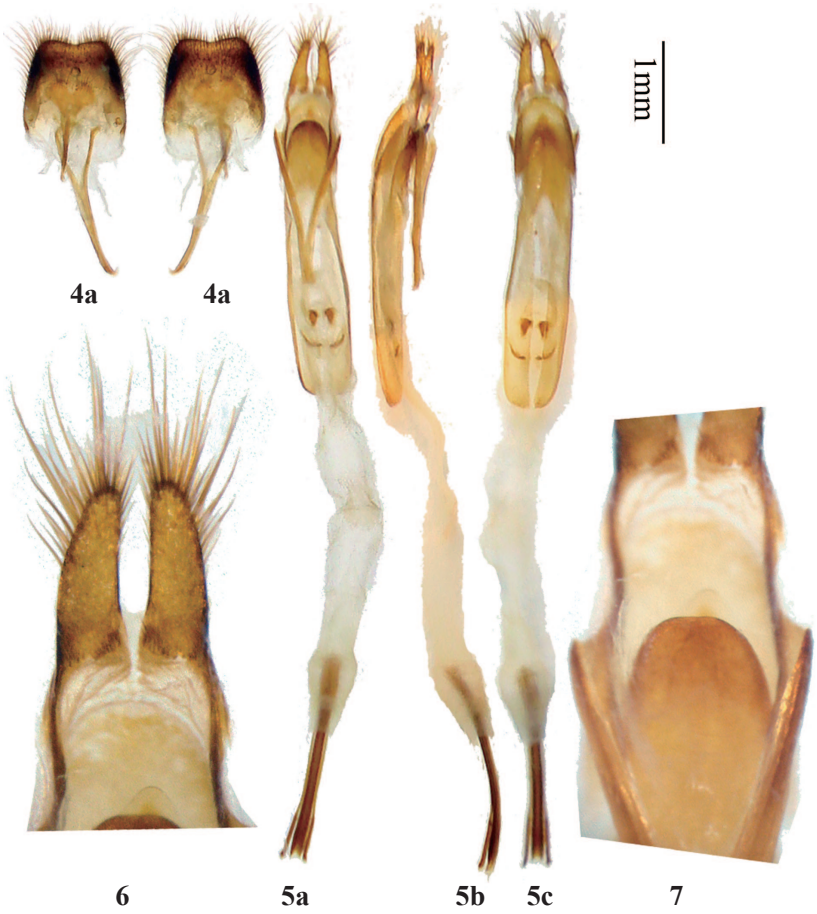
Figures 1–3. *Glenea wenhsini* sp. nov. habitus. 1. holotype, male, from Guizhou; 2. paratype, male, from Guizhou. a. dorsal view, b. lateral view, c. ventral view. 3. claw of mid tarsus, showing the anterior claw with a small tooth. Scale 2 mm. Fig. 3 not to scale.

***Glenea linwenhsini* sp. nov.**

(Figures 8–15)

Description. Male: length: 10.8–13.3 mm, humeral width: 3.1–3.8 mm. Female: length: 12.5–13.4 mm, humeral width: 4.0–4.2 mm. Body black, with yellowish pubescent markings; head usually with an incomplete median line on the frons black (Fig. 9h), occiput black; antennae black. Prothorax yellow with a large oblong median black longitudinal vitta extending to apex but not base of the disc, and with a small black spot near procoxal cavity. Scutellum densely clothed with yellowish pubescence except base. Elytra black, each side only the base yellow pubescent, each disc with 5 yellowish pubescent markings along the suture: the first one at the base, moderate in size, lateral sides emarginate; the second one moderate in size, together semicircle-shaped, always confluent with the first one (the connection of first one and second one forming semicircle margins); the third one together somewhat V-shaped, sometimes with one small spot attached before middle (Fig. 8a); the fourth before apex, almost round-shaped, small; the last is a narrow transverse vitta at the apex. Ventral surfaces (Fig. 8c) densely clothed with yellowish pubescence except middle area of male metasternum with brown pubescence; legs reddish tesceous. Inferior eyelobes rounded-oblong, equal to (female) or 3 times as long as (male) genae below; antennomere ratio: male: 12: 3: 22: 18: 16: 15: 14: 13: 12: 12: 12; female: 14: 3: 21: 18: 15: 14: 14: 13: 13: 12: 12. Elytra with two obtuse

lateral costae on middle half, truncated apically. Anterior claws of fore and mid tarsi of male with basal teeth. Female claws simple.



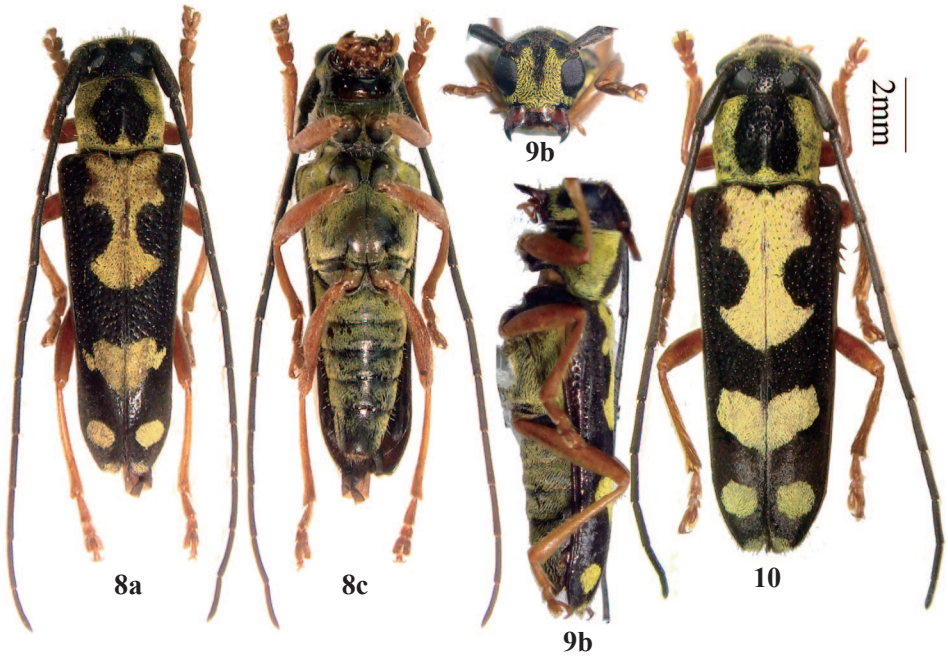
Figures 4–7. Terminalia of *Glenea wenhsini* sp. nov. 4–7. male genitalia. 4. tergite VIII and sternites VIII & IX. 5. male genitalia. 6. showing apex of ventral plate and lateral lobes of tegmen; 7. rods of endophallus; a. ventral view, b. lateral view, c. dorsal view. Scale 1 mm. Figs. 6-7 not to scale.

Male terminalia (Figs. 11–14). Tegmen length about 2.0 mm; lateral lobes slender, each about 0.4 mm long and 0.12 mm wide, apex with short setae about half of lateral lobes in length, with one small finely haired lobes at the base (in ventral view, Fig. 13); basal piece bifurcated distally; median lobe plus median struts slightly curved, slightly longer than tegmen (23:20) ; the median struts more than 1/2 of the whole median lobe in length; dorsal plate slightly shorter than ventral plate; apex of ventral plate round; median foramen elongated, acute angle less than 30 degree; internal sac more than 2 times of median lobe plus median struts in length, with 2 pairs of basal armature and 4 rods of endophallus; rods about 1.5 mm, longer than half of tegmen. Tergite VIII almost as broad (maximum)

as long, apex truncated, with short setae.

Female genitalia (Fig. 15). Spermathecal capsule expanded apically and with short and curved stalk at the base. Tignum much longer than abdomen. In our observation, tignum 7.0 mm for an adult with a 5.8 mm abdomen in ventral view.

Diagnosis. This species is very similar to *G. tatsienlui* Breuning, 1956, but can be easily distinguished by: 1. male claws not all simple but with the anterior claws of fore and mid tarsi with a small teeth; 2. apical tooth at outer angle of elytral apex not as distinct as that of *G. tatsienlui*; 3. elytral yellow pubescent markings different: lateral side of the first one emarginate, the fourth and last never confluent, etc; 4. apex of tergite VIII truncated (distinctly emarginated in *G. tatsienlui*).

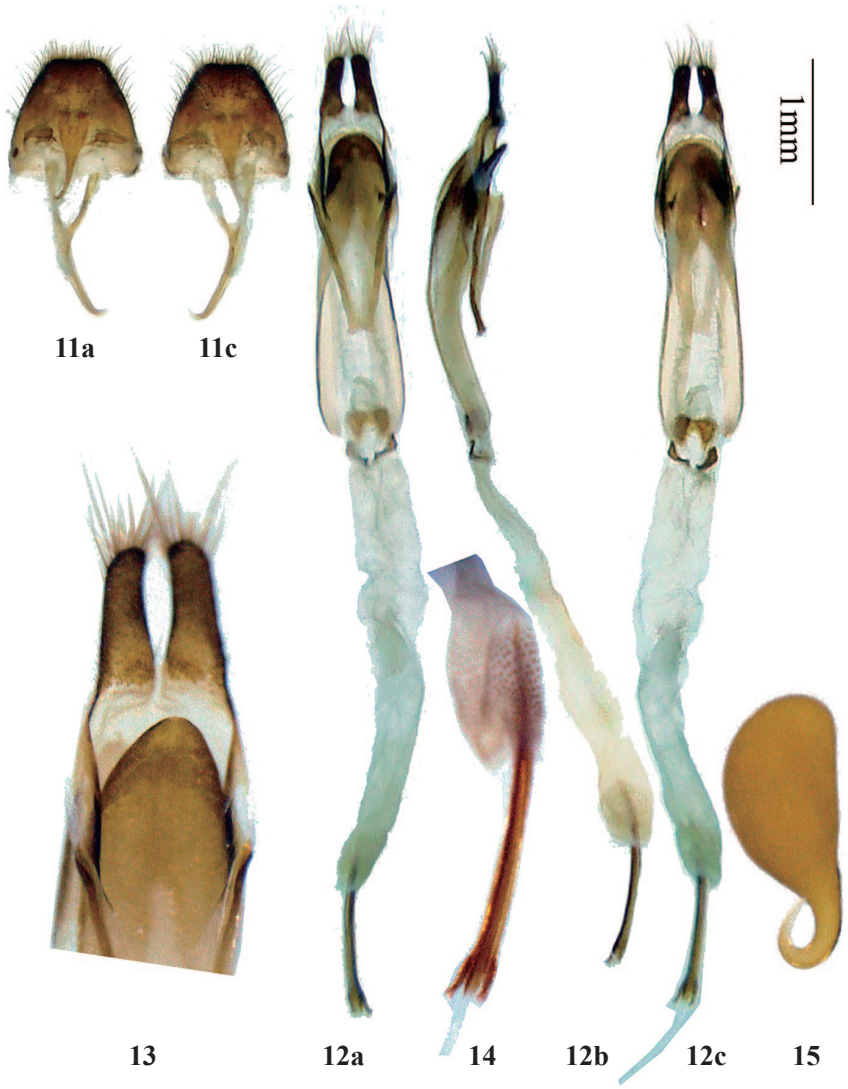


Figures 8–10. *Glenea linwenhsini* sp. nov. habitus. 8. holotype, male, from Guizhou; 9. paratype, another male, from Guizhou. a. dorsal view, b. lateral view, c. ventral view. h. head, frontal view. 10. paratype, female, from Guizhou. Scale 2 mm. Fig. 9 not to scale.

Etymology. The species is named after Mr. Wenhsin Lin (Taiwan, China), who collected many wonderful saperdine specimens for the author. Lin is the family name and here the oriental way (family name + first name) is followed.

Distribution. China: Guizhou Prov..

Material examined. Holotype (13.3 mm long): ♂, China, Guizhou Prov., Jiangkou county, Mt. Fanjingshan (27°53.976'N 108°42.505'E), alt. 1775 m, 2009.VII.10, leg. Wenhsin Lin (IZAS, IOZ(E) 1905106). **Paratypes:** 2♂♂, same data to holotype (IZAS, IOZ(E) 1905107–08); 2♂♂,



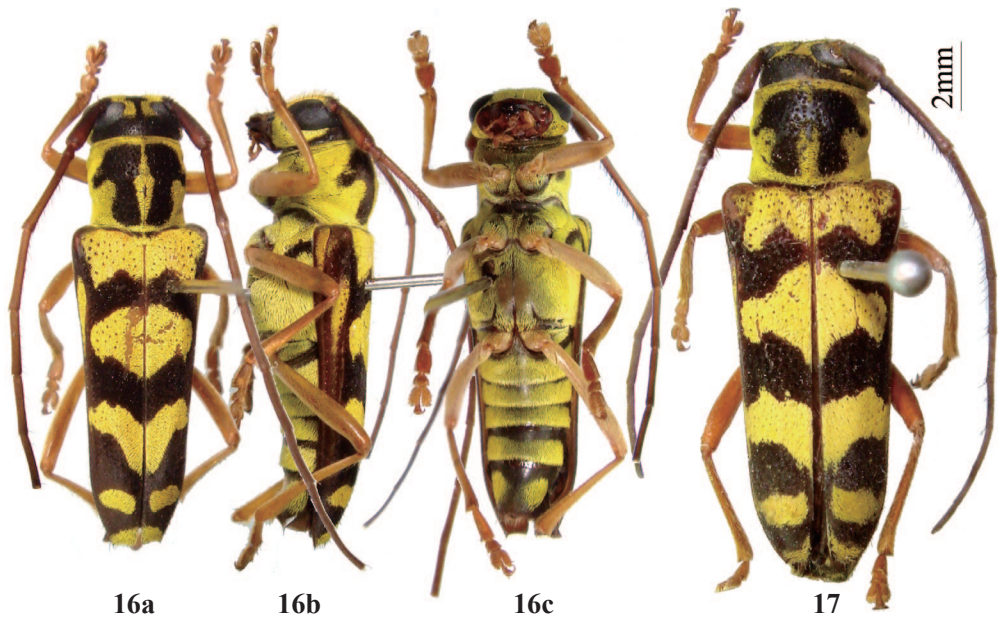
Figures 11–15. Terminalia of *Glenea linwenhsini* sp. nov. 11–13. male genitalia. 11. tergite VIII and sternites VIII & IX. 12. male genitalia. 13. showing apex of ventral plate and lateral lobes of tegmen. 14. rods of endophallus; a. ventral view, b. lateral view, c. dorsal view. 15. spermathecal capsule. Scale 1 mm. Figs. 13–15. not to scale.

same data but 2009.VII.17 (one in IZAS, IOZ(E) 1905109, one in CCCC); 2♂♂, same data but 2009.VI.26 (one in IZAS, IOZ(E) 1905110, one in CCCC); 1♂, Guizhou Prov., Jiangkou county, Mt. Fanjingshan, alt. 1500 m, 2001.VI.15, leg. WenI Chou (IZAS, IOZ(E) 1905111); 2♀♀, same data but 2008.VI.29 (one in IZAS, IOZ(E) 1905112, one in CCCC); 1♀, same data but 2008.VI.30 (CCCC); 1♂, same data but alt. 1600 m, 2008.VII.2 (CCCC); 2♂♂, same data but alt. 1300 m, 2001.VI.20 (CCCC).

***Glenea paraornata* sp. nov.**

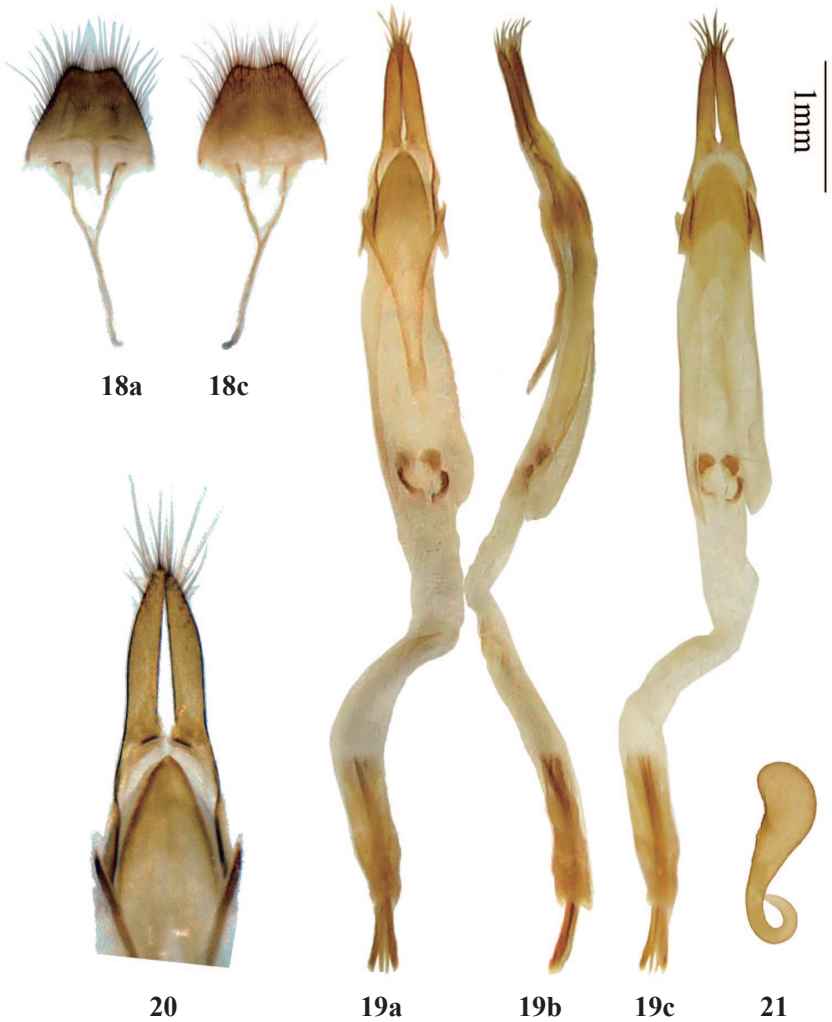
(Figures 16–21)

Description. Male: length: 10.3–13.0 mm, humeral width: 3.1–3.8 mm. Female: length: 12.1–16.8 mm, humeral width: 3.9–5.9 mm. Body black, densely clothed with yellowish pubescence; head usually with a median line and a spot on the frons black, occiput black, without yellow line behind upper eyelobes; antennae fuscous. Prothorax with 2 large oblong black spots on the disc, expanding to sides before middle. Scutellum densely clothed with yellowish pubescence except base. Elytra reddish brown and bare of pubescence at the sides, each with base and a stripe near base yellow pubescent, dark brown to black on the disc, each with 5 yellowish pubescent areas along the suture: the first one at the base, moderate in size, base almost reaching humeral angle, apex not reaching lateral margin, apex emarginated; the second one larger, together somewhat lozenge-shaped, located before middle of elytra; the third one together somewhat Y-shaped; the fourth just before apex, transverse, small, reaching neither suture nor lateral margin; the last is a transverse vitta at the apex. Ventral surfaces densely clothed with yellowish pubescence except middle of male metasternum and sometimes base of sternites V to VII; legs yellowish tesceous. Inferior eyelobes rounded-oblong, equal to (female) or 3 times as long as (male) genae below; antennomere ratio: male: 15: 3: 24: 21: 18: 17: 17: 17: 17: 16: 16; female: 18: 4: 24: 21: 18: 17: 16: 15: 14: 13: 12. Elytra with two obtuse costa reaching past middle, transversely-truncated apically, with the angles faintly dentate. Both male and female with simple claws.



Figures 16–17. Habitus, *Glenea paraornata* sp. nov. 16. male, holotype, from Yunnan. a. dorsal view. b. lateral view. c. ventral view. 17. female, paratype, from Yunnan. Scale 2 mm.

Male terminalia (Figs. 18–20). Tegmen length about 2.6 mm; lateral lobes long and slender, each about 0.7 mm long and 0.1 mm wide, apex with short setae shorter than half of lateral lobes, with one finely haired small lobes at the base (in ventral view, Fig. 20); basal piece bifurcated distally; median lobe plus median struts slightly curved, subequal to tegmen (27:26) ; the median struts about 2/3 of the whole median lobe in length; dorsal plate slightly shorter than ventral plate; apex of ventral plate pointed (Fig. 20); median foramen elongated, acute angle about 30 degree; internal sac about 2 times as long as median lobe plus median struts, with 2 pairs of basal armature and 4 rods of endophallus; rods about 1.5 mm, longer than half of tegmen. Tergite VIII broader (maximum, at the base) than long, apex emarginated, with moderate long setae.



Figures 18–21. Terminalia of *Glenea paraornata* sp. nov. 18. tergite VIII and sternites VIII & IX. 19. male genitalia. a. ventral view. b. lateral view. c. dorsal view. 20. showing apex of ventral plate and lateral lobes of tegmen. 21. spermathecal capsule. Scale 1 mm. Fig. 20–21. not to scale.

Female genitalia (Fig. 21). Spermathecal capsule expanded apically and with short and curved stalk at the base. Tignum much longer than abdomen. In our observation, tignum 11.8mm for an adult with a 8.2 mm abdomen in ventral view.

Diagnosis. This species is very similar to *G. ornata*, but can be easily distinguished by: 1. third antennomere much longer than fourth; 2. maculae different: elytra without a round spot after basal patch, basal patch and lozenge-shaped macula never combined, the middle two maculae extending closer to margin; 3. male genitalia with ventral edge of median orifice more round; 4. spermatheaca more expanded at apex.

Etymology. This species is similar to *G. ornata.*

Distribution. China: Yunnan Prov., Hainan Prov.; **Vietnam:** Hoa Binh Prov., Vinh Phu Prov.; **Laos:** Bolikhamsai Prov., Hua Phan Prov., Louang Namtha Prov., Phongsaly prov.; **Thailand:** Namuang.

Type specimens. Holotype: ♂, **China:** Yunnan, Menghai, Nuoshan, alt. 1200m,1957.IV.24, leg. Ling-Chao Zang (IZAS, IOZ(E) 1859272); **Paratypes: China:** 1♂, Yunnan, Xishuangbanna, Menglun, alt. 650, 1994.IV.3, leg. Huai-Li Xu (IZAS, IOZ(E) 1859273); 1♀, Hainan, Jianfengling, 1984.V.17, leg. Mao-Bin Gu (IZAS, IOZ(E) 1905102). **Vietnam:** 1♀, Tonkin, Hoa-binh, leg. A de

Cooman (IZAS, IOZ(E) 1905103); 1♂, Vinh Phu Prov., Tam Dao, alt. 930 m, 1996.V.1-7, leg. Y. Arita (EUMJ); 1♀, Tam Dao, 1995.V.20–23, leg. M. Sato (EUMJ); 1♀, Tam Dao, 1992.VII.27–VIII.2, leg. N. Ohbayashi (EUMJ); 1♀, Vinh Phuc Prov., Tam Dao NP, alt. 1000 m, 2012.VI. leg. M. Pejcha (CPV). **Laos:** 1♂2♀♀, Laos center, Bolikhamsai Prov., Ban Nape-Kaew Nua Pass, alt. 500–700 m, 1998.IV.18-V.1, leg. Jendek et Šauša (Collection of Roman Hergovits, Bratislava, Slovakia); 1♂6♀♀, Laos, 20 km NW Louang Namtha, alt. 900–1100 m, 1997.V.5–30, leg. C Holzschuh (CCH); 1♀, Houapan Prov., Xamneua, Ban Saleui, Mt. Phu-Pan, 2001.IV.27 (EUMJ); 2♀♀, NE Laos, Hua Phan prov., Ban Saleui, Phou Pan (Mt.), ~20°12'N 104°01'E, alt. 1300–1900 m, 2009. V.17–26, leg. C. Holzschuh (CCH); 1♀, same data but 2009.VI.1–16; 3♀♀, same data but 2010. IV.7, 2010.IV.21 and 2010.V.15 respectively; 8♂♂, same data but 2011.V.6; 3♂♂ 1♀, same data but 2011.V.10; 1♀, same data but 2012.IV.25; 1♂1♀, same data but 2012.V.3; 1♀, same data but 2012.V.6; 1♀, Hua Phan prov., Env. Ban Saluei, Phu Phan Mt., alt 1500–1900 m, 2008.IV.21–V.13, leg. C. Holzshcuh (CCH); 1♂1♀, NE Laos, Hua Phan Prov., Mt. Phu Pane, alt. 900–1600 m, 2010. VI.10–21, leg. St. Jakl and Lao collectors (Collection of Vít Ryjáček, Prague, Czech Republic); 10♂♂5♀♀, NE Laos, Hua Phan Prov., Mt. Phu Pane, alt. 1200–1600 m, 2011.V.10–22, leg. St. Jakl and Lao collectors (Collection of Stanislav, Jákl, Prague, Czech Republic); 4♂♂4♀♀, same data but (CPV); 8♂♂13♀♀, same data but alt. 1500–1900 m, 2007.IV.20–V.15, leg. Lao collectors (CPV); 2♂♂1♀, Laos, Phongsaly prov. Phongsaly, alt. 1500 m, 2003.V.28–VI.20, leg. C. Holzschuh (CCH). **Thailand:** 2♀♀, Namuang, 1993.V.21–26, leg. Pacholatko & Dembicky (CCH).

Other specimens exmined. 1♀, **China** (number 25, IZAS); 1♀, Yunnan Prov., Xishuangbanna, Jinghong, NRWNNR, vic Naban, traps site, alt. 700 m, 2008.VI.6, KF, leg. Steffen Flossmann (unsure

depository, examined by picture only).

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