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Description of a new species of the genus *Paraleprodera* from Xizang, China (Coleoptera, Cerambycidae, Lamiinae, Monochamini)

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Key words *Paraleprodera,* new species, taxonomy, Oriental region
Abstract. A new species *Paraleprodera mesophthalma* sp. n. is described from southeast Xizang, China. It can be distinguished from other known species by the remarkable eyelike marking on the middle of elytra. It is the ninth species of this genus from China. Illustrations of the habitus and genitalia including everted endophallus are provided.

INTRODUCTION

The genus *Paraleprodera* was established by Breuning (1935), designating *Lamia crucifera* Fabricius, 1792 as its type species. Up until now the genus comprises 23 species (include two subspecies) and flourishes mainly in the Oriental Region (Titan database, Tavakilian & Chevillotte, 2012). There were 8 species (including one subspecies) reported from China (Löbl & Smetana, 2010). The genus has been mainly categorized under Monochamini by the following characters: inferior eyelobe transverse; antennal normal, scape with a complete cicatrix, third antennal segment longer than fourth, without a tuft of hairs, basal segments distinctly fringed beneath; lateral prothoracic tubercles quite distinct; elytra without erect hairs; prosternal intercoxal process not angularly enlarged, lower than coxae, mesosternal intercoxal process tuberculate; middle tibia with an external oblique groove (Gressitt, 1951; Rondon & Breuning, 1971).

In 2008, the first author found two old but remarkable specimens collected from Motuo county (=Mêdog), Xizang (=Tibet) from the collection of Shanghai Entomology Museum (SHEM). With the identification of only generic level, he posted the photograph in

an online forum and asked for further advice (www.insect-fans.com/bbs/forum.php?mod=viewthread&tid=28549). Guanglin Xie mentioned that it should be a new species which was described by Wenkai Wang (College of Agriculture, Yangtze University) in his postdoctoral thesis, which was not officially published.

In recent years we made several expeditions to the southeast region of Xizang, and brought back enough material to complete the description. Thus *Paraleprodera mesophthalma* sp. n.is officially described in this paper.

MATERIALS AND METHODS

Types are deposited in the following institutions, museums or private collections:

CBWX: Collection of Wenxuan Bi, Shanghai, China

CCCC: Collection of Chang-chin Chen, Tianjin, China

CCH: Collection of Carolus Holzschuh, Villach, Austria.

CJM: Collection of Ming Jin, Shanghai, China

IZAS: Institute of Zoology, Chinese Academy of Sciences, Beijing, China

SHEM: Shanghai Entomology Museum, Chinese Academy of Sciences, Shanghai, China

For the observational method, corresponding terms of endophallus and terminology, please refer to Yamasako & Ohbayashi (2011).

The following terminology abbreviations of endophallic structures are used in the text: BPH-basal phallomer; MPH-median phallomer; APH-apical phallomer; CS-crescent shaped sclerites; BS-basal swelling; MT-medial tube; CT-central trunk; PB-preapical bulb; MSp-micro spicules; LSp-large spicules; SSp-small spicules; AS-sclerite of apical phallomer.

RESULTS

Paraleprodera mesophthalma sp. n. (Figs 1-7)

Description. Male (Figs 1a-1d): Body length 19.5-25.0 mm, humeral width 6.1-7.5 mm. Body black, with yellowish to tawny pubescence. Head sparsely clothed with grayish to yellowish pubescence; occiput with three longitudinal vittae of tawny pubescence of which the middle one is narrow and short, and the lateral ones are slightly wider and laid to the half of occiput. Antennal scape clothed with grayish pubescence, third to eighth antennal segments intermixed sparsely pale and densely yellowish pubescence of which become darker apically, last three segments entirely dark brown. Pronotum sparsely clothed with grayish pubescence, with two longitudinal bands of tawny pubescence on disc and other two indistinct longitudinal bands on the lateral sides, the discal bands neither reaching base nor apex of pronotum, about half of the whole pronotum in length. Scutellum densely clothed with tawny pubescence. Elytra densely clothed with brick reddish brown pubescence, with light yellowish pubescence forming dotted line along suture from base to apex, with the same pubescence forming four indistinct bands contiguous to suture behind humeri, near middle, on apical one-third, and extreme apices; first band weak, hardly reaching lateral margin, second band reaching lateral margin and contain with a large round free spot of black pubescence forming a complete eyelike marking near margin, black spot two-thirds as wide as elytral width at middle, third band narrow, zigzag continuously, fourth band weak, sometimes dispersed into small dots (Fig 1c).Ventral surface clothed with tawny pubescence forming scattered maculae which are sparse in the middle and dense near the margin. Legs with femora and tibiae with sparsely intermixed pale and tawny brown pubescence.

Body elongated, oblong oval in shape. Head as wide as pronotal width at base, sparsely sculptured with fine punctures on occiput; eyes emarginate, rather coarsely facetted; lower lobes slightly prominent, wider than long, almost as long as gena below it (Fig 1d).

Antennae moderately thick and long, about 2 times as long as body length, approximately surpassing elytral apices at the tip of fifth segment, third segment the longest, about 2 times as long as scape and about 1.4 times as long as fourth; scape expanded with well punctures on the surface, basal three segments distinctly fringed beneath by suberect short setae which become sparser towards the fourth segment.

Pronotum moderate in size, slightly convex above, strongly and acutely spined at upper middle of each side, widest about 1.5 times as wide as long; base of pronotum as wide as apex, about 0.6 times as wide as elytral width at humeri; sparsely sculptured with shallow puncture throughout, with transverse rugae on disc and indistinct transverse furrow near base and apex. Scutellum ligulate.

Elytra long, about 1.9 times as long as width at humeri, about 3 times as long as pronotal length, narrowed after basal three-fifths, and rounded near apex; each disk moderately punctured which slightly denser near suture, densely distributed developed round to transverse oval shining granules on basal fifth which become weak backwards, the tubercles sometimes welding together.

Leg slender, foretibiae with a tooth beneath at one fifth of the apex, mesotibiae with an external oblique groove between middle and apex, metafemora reaching elytral apices.

Male genitalia (Figs 3-6). Tegmen (Fig. 3) in lateral view moderately curved, about 3.4 mm in length, rhombic in shape and widest near middle in ventral view; lateral lobes stout, length about 2 times of width, widest near base in antero-dorsal view, about one-fourth of total length of tegmen; apical third of each lobe intermixed with two kinds of setae of which one is long, thin and the other is rather short and thick. Median lobe (Fig. 4) subequal to tegmen in length; moderately curved in lateral view; apex subacuminate in antero-dorsal view, median struts less than half of the whole median lobe in length. Tergite VIII (Fig 6) trapezoidal, apex emarginated and rounded at sides, length 0.6 times as long as width, provided with median long setae along apical and anterior lateral sides; sternite VIII and IX Y-shaped, with two kinds of setae on the former. Endophallus (Fig 5) slightly longer than triple length of median lobe. The relative length of median lobe and endophallus with each broad membrane area as follow: median lobe: total length

of endophallus: BPH: MPH: APH=3.2:10:1.7:7.6:0.7. MPH with MT+CT almost 0.8 times as long as endophallus; PB rather short, about 0.03 times as long as endophallus. APH rather short, semi-spherical in shape. MSp sparsely distributed in basal half of MT+Ct. LSp moderately distributed in apical one-forth of MT+CT, densely zonal along the ventral side; with fine rounded tubercles sparsely provided on dorsal and lateral sides of LSp area. SSp evenly covered PB. MSp area and LSp area adjacent. LSp area and SSp area close to each other but can delimited by annular constriction. Lacking AS in the related area.

Female (Fig 2). Body length 19.7-24.0 mm, body width 6.0-7.3 mm. Almost identical to male in general appearance. Antennae about 1.3-1.4 times as long as body, surpassing elytral apices at the apex of seventh segment. Leg slightly shorter, metafemora does not reach elytral apices.

Female genitalia (Fig 7). Spermathecal capsule strongly curved at basal one-third, apical lobe well extend, subparallel sided, truncated at apex. Tignum longer than abdomen. In our observation, tignum 14.0 mm for an adult with a 11.0 mm abdomen in ventral view.

Diagnosis. This new species is unique in the genus in having the brick reddish brown elytra provide with a free eyelike marking on the outer side of middle. It is somewhat similar to *P. flavoplagiata* Breuning, 1938 from Myanmar, but can be easily distinguished from the latter by more slender pronotum; elytra tuberculated at basal, with more rounded and complete eyelike marking at middle and with continuously zigzag third band instead of separate spots.

Etymology. The new species is named after its remarkable eyelike marking on the elytra.

Distribution. Known only from the type locality, Southeast Xizang, China.

Type material. Holotype: male, Xizang, Motuo, Hanmi, 2011.VIII.1-4, 2100m, leg. Wenxuan Bi (IZAS). Paratypes: 4 male, Xizang, Motuo, Hanmi, 2011.VII.23-28, 2100m, leg. Wenxuan Bi (CBWX); 1 male, same data but (CCH); 1male, same data but (CJM); 6 female, same data; 1 female, same data but 2011.VIII.23, leg. Ye Liu (CBWX); 1 female, same data but (CCH); 1 female, same data but (CJM); 1 male, Xizang, Hanmi, 2011.VIII.1-4, 2100m, leg. Wenxuan Bi (CBWX); 1 femal, same data; 2 male, Xizang, Motuo, Hanmi, 2011.VIII.3, 2100m, leg. Xiaodong Yang (CCCC); 1

female, same data; 1 female, Xizang, Motuo, Hanmi, A'niqiao, 2011.VIII.5, 1060m, leg. Xiaodong Yang (CCCC); 1 femal, same data but 2011.VIII.6; 1 femal, same data but 2011.VIII.8; 1 male, same data but 2008.VIII, leg. Hao Huang; 1 femal, Xizang, Linzhi, Motuo, Hanmi, A'niqiao, 2006.VIII.13, N 29.32874, E 95.14866,1080m, leg. Ming Bai (IZAS); 1 female, Xizang, Motuo, A'niqiao, 1750 m, 1979.VII.20, leg. Gentao Jin & Jianyi Wu (SHEM 24200690).

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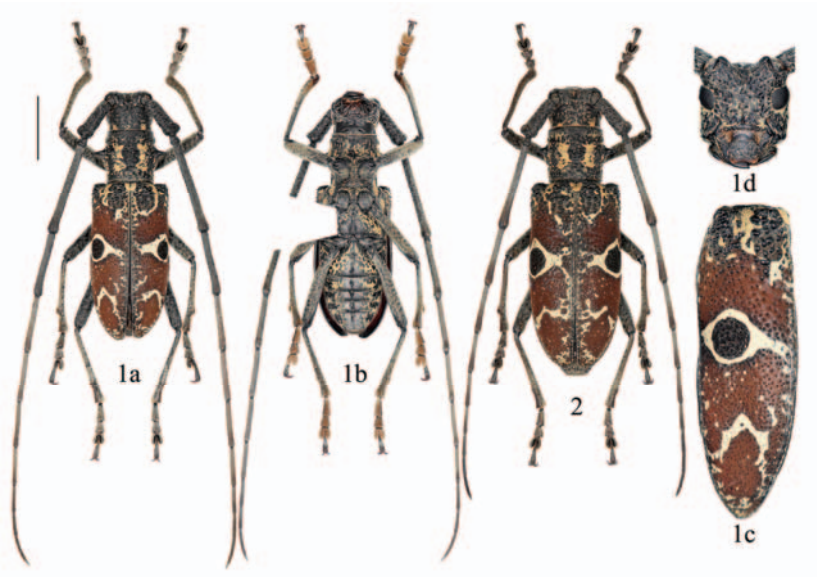
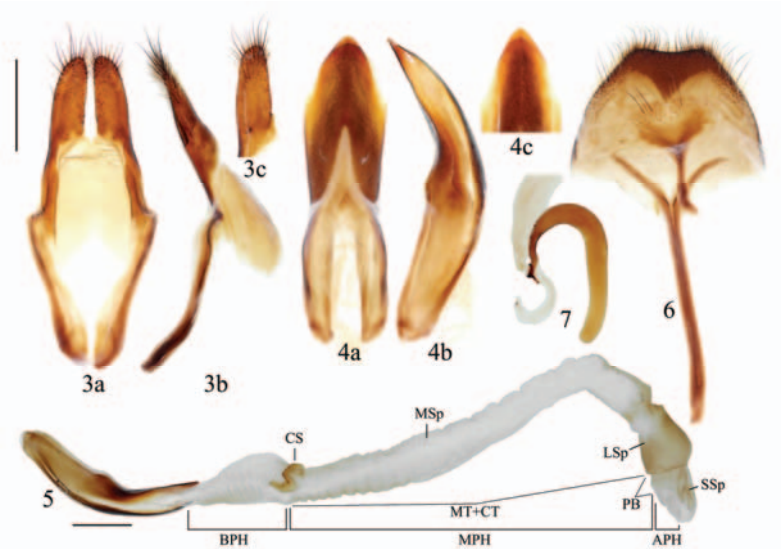


Figures 1-2. Habitus of *Paraleprodera mesophthalma* sp. n.
1. holotype, male, from Xizang, China. a. dorsal view. b. ventral view. c. dorso-lateral view. d. frontal view.
2. paratype, female, from same locality. 1c. showing markings on the disc of left elytron. Scale 5 mm. 1c, 1d. not to scale.



Figures 3-7 (3-6. male, from Xizang, China; 7. female, from same locality). Genitalia of *Paraleprodera mesophthalma* sp. n.
3. tegmen.
4. median lobe. a. vetral view. b. lateral view. c. antero-dorsal view.
5. median lobe with everted endophallus in lateral view.
6. tergite VIII and sternites VIII & IX in ventral view.
7. spermathecal capsule. Scale 1 mm.

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Key words: kinds of paradigms, training paradigm, self-education paradigm, peculiarity of self-education paradigm at a higher school, didactical complex of selfeducation.

Abstrct: The article settles the self-education paradigm in comparison with particular and local pedagogical paradigms. Historical succession, information trend and realization in attributes of training are considered as a methodological basis of self-education paradigm.

[Text of article]

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