

An Additional New Species of the Genus *Pachyosa* from Taiwan, with Supplemental Description on the Endophallus of *Pachyosa kojimai* (Coleoptera, Cerambycidae, Lamiinae, Mesosini)

Junsuke YAMASAKO¹⁾ and Wen-I CHOU²⁾

¹⁾ JSPS Research Fellow, Department of General Systems Studies, Graduate School of Arts and Sciences, The University of Tokyo, Komaba 3-8-1, Meguro, Tokyo 153-8902, Japan
e-mail: mesoxmesosa@hotmail.com

²⁾ No. 145–7, Dulan, Donghe Township, Taitung County, 95941 Taiwan

Abstract A new species of the genus *Pachyosa* FAIRMAIRE, 1897, *P. guanyin* sp. nov., is described from the southern part of Taiwan. Supplementary description and a figure of the endophallus of *P. kojimai* (HAYASHI, 1974) are provided.

Introduction

The genus *Pachyosa* was lately revised by YAMASAKO and OHBAYASHI (2012). It was reinstated from a synonym of *Mesosa* (*Saimia*) and five species with one subspecies were included in the genus.

Recently, the second author collected a questionable species from Pingtung County, Taiwan. Upon close examination, we concluded that the species in question should be a new species of the genus. Herein, we describe it as an additional new species of the genus *Pachyosa*. Taking this opportunity, we also describe the endophallic features of *P. kojimai* in fully inflated condition without eversion, which was defectively described and figured in YAMASAKO and OHBAYASHI (2012) because of the broken membranous parts.

Before going into detail, we express our hearty thanks to Nobuo OHBAYASHI for improving this manuscript and commenting on this study.

Materials and Methods

The holotype and a female paratype of the new species in the present paper are deposited in the National Museum of Natural Science, Taichung, Taiwan, and other materials are from our own collection. The verbatim label data indicated by double quotation marks (“ ”) are provided for the holotype, of which line breaks are indicated by a slash (/).

The observational method and terminologies of the endophallus follow YAMASAKO and OHBAYASHI (2011) but use petrolatum jelly to inflate endophallus and endophallic divisions of *Pachyosa* in YAMASAKO and OHBAYASHI (2012). The abbreviations used herein are as follows: APH: apical phallomer; AS: apical sclerites; BPH: basal phallomer; CS: crescent shaped sclerites; CT: central trunk; LSp: large spicules; MPH: median phallomer; MSp: micro spicules; MT: medial tube; PB: pre-apical bulb; SSp: small spicules.

Taxonomy

Pachyosa guanyin sp. n.

(Figs. 1, 2a–g)

Type locality. Longfongshi-temple, the foot of Lilong-shan (Mt.), alt. ca. 200 m, Fonggang, Shihzhih Township, Pingtung County, Taiwan.

Type series. Holotype (Figs. 1a–c, 2a–g): ♂, “[TAIWAN] Lilong-shan (Mt.), / Alt. ca. 200 m, Shihzhih Township, / Pingtung County / 屏東縣獅子鄉里龍山 / 7. VI, 2012, Wen-I Chou leg.” (printed on white label), “HOLOTYPE / *Pachyosa* / *guanyin* / Yamasako et Chou / mihi Det. J. Yamasako” (hand written on red label). Paratypes: 1 ♂, same locality and collector as the holotype, 21–VII–2008; 1 ♂, same locality and collector, 8–V–2012; 2 ♀♀, same locality and collector, 9–V–2012; 2 ♀♀, same locality and collector, 18–V–2012.

Description. Male (n = 3, Figs. 1a–1c): Length from vertex to elytral apices 13.0–16.0 mm, width at elytral humeri 4.9–6.3 mm.

Body black; head and ventral surface dominantly clothed with light ochre pubescence; pronotum and elytra mottled by light ochre and white pubescence, sparsely and irregularly scattered with small black spots; genae, occiput, pronotum, middle of scutellum, elytral humeri, suture, disk and outer margins, abdomen, middle of femora and tibiae scattered with several indistinct patches of pinkish pubescence, but the pinkish patches sometimes disappeared. Antennae with scapes mottled by light ochre and white pubescence, sparsely and irregularly scattered with small black spots; 2nd segments clothed with whitish pubescence; 3rd to 11th segments annulated with whitish pubescence on each basal part and the reminders clothed with brown pubescence. Elytra scattered with several black patches which are transversally arranged on basal 1/4 and apical 1/3, provided with three transverse white bands on basal part, near middle and apices, of which basal one is wide and connected to middle one by obliquely extending along suture, middle one is wide and zigzag, and apical one is narrow and zigzag but sometimes faded. Legs with tibiae annulated with black pubescence near each middle and apex.

Head with eyes subdivided; upper and lower lobes posteriorly connected by a narrow line respectively; lower eye lobes 0.9–1.0 times as long as width, 0.8–0.9 times as long as genae; antennal tubercles well elevated. Antennae thick and long, 1.4–1.5 times as long as body, surpassing elytral apices at apices of 6th segments; each segment fringed beneath by suberect setae which are getting sparser toward apical segments; scapes well thickened apically but rather elongate among the species of the genus, with a developed cicatrix on each apex; 3rd segments slightly longer than scapes and 4th segments; 11th segments medially bent near apices; relative length of each segment as follows: 1.3 : 0.1–0.2 : 1.3–1.4 : 1.2–1.3 : 1.0–1.1 : 0.9–1.0 : 0.9 : 0.8 : 0.7–0.8 : 0.7 : 0.6–0.7. Pronotum slightly expanded laterally, widest near middle, 0.7–0.8 times as long as width, 0.7 times as wide as the conjoint width of elytral humeri, with a small dull projection on each lateral side near apical margin; disk transversally depressed near apical margin, with a pair of swellings on middle and a small swelling near base. Prosternal process roundly sloped with extremity hardly projected below in lateral view. Mesosternal process with a developed tubercle on the center near apex, nearly truncated in lateral view. Elytra 0.7 times as long as body length, 1.7 times as long as width across humeri; each elytron provided with a rudimentary longitudinal swelling behind base, sparsely and irregularly with punctures which are distinct in basal half, thence getting sparser and smaller apically and almost disappeared in apical 1/6; sides feebly constricted behind subquadrate humeri, thence slightly dilated toward middle and arcuately narrowed apically in apical 1/3; apices rounded with subquadrate inner

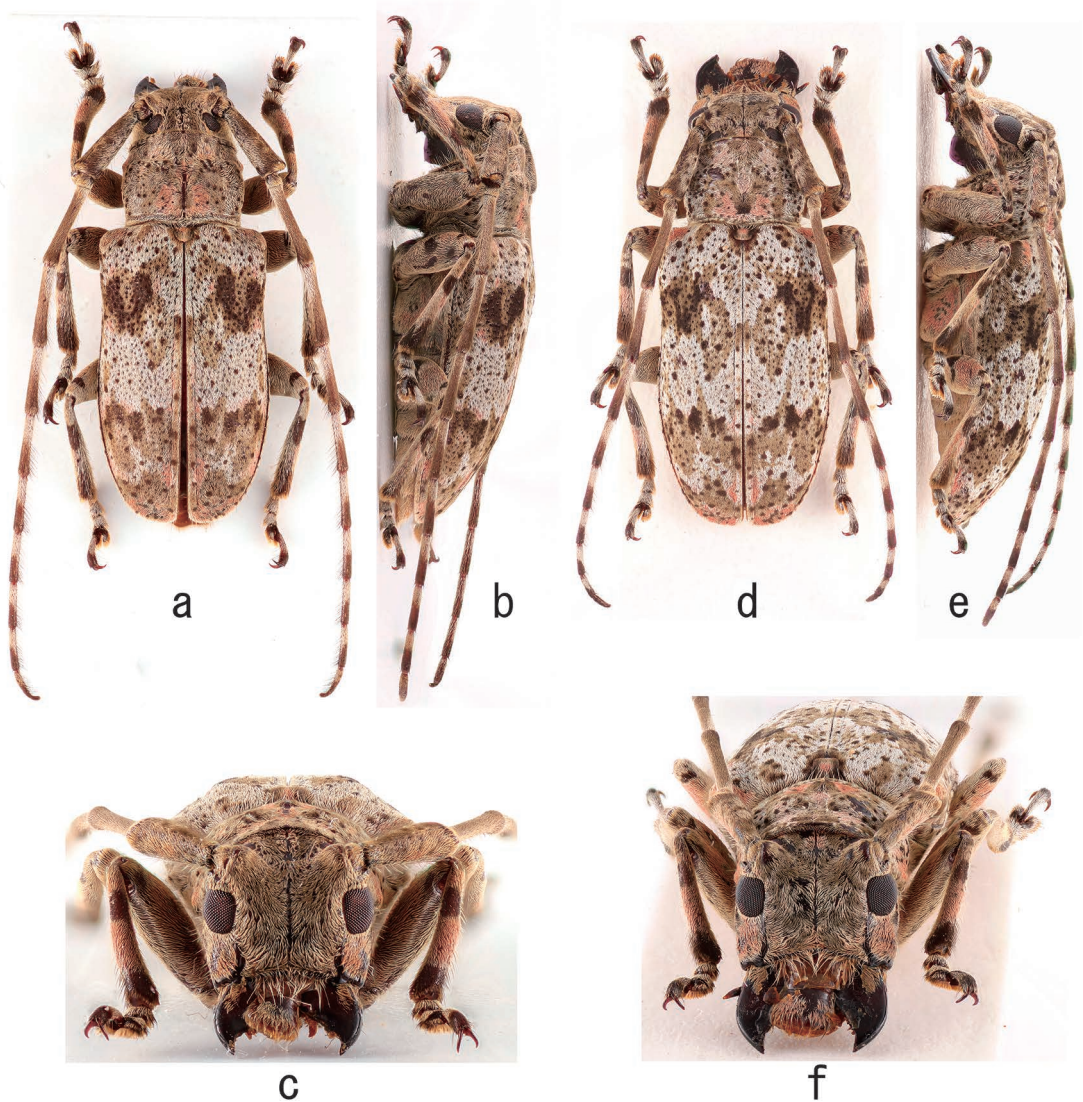


Fig. 1. Habitus of *Pachyosa guanyin* sp. n. — a–c, Male (holotype); d–f, female (paratype); a, d, dorsal view; b, e, lateral view; c, f, frontal view.

angles. Mesotibiae with an indistinct distal notch on each outer margin near middle.

Male genitalia (n = 2, Figs. 2a–g): Tegmen rhombic, widest just behind middle in dorsal view, gently curved in lateral view; lateral lobes in dorsal view about 1/3 of the total length of tegmen, almost straight toward rounded apices, with fine setae in apical halves which are becoming longer apically and mostly concentrated near apices; ringed part arcuately narrowed basally from just behind the middle of tegmen and fused in spatulate shape in basal 1/5. Median lobe in dorsal view thick, gently curved in lateral view; apex obtusely projected in ventral view; median struts diverged before middle. Endophallus in fully inflated condition without eversion about twice as long as median lobe, curved dorsally from middle, divided into BPH, MPH and APH; MPH subdivided into MT, CT and PB by

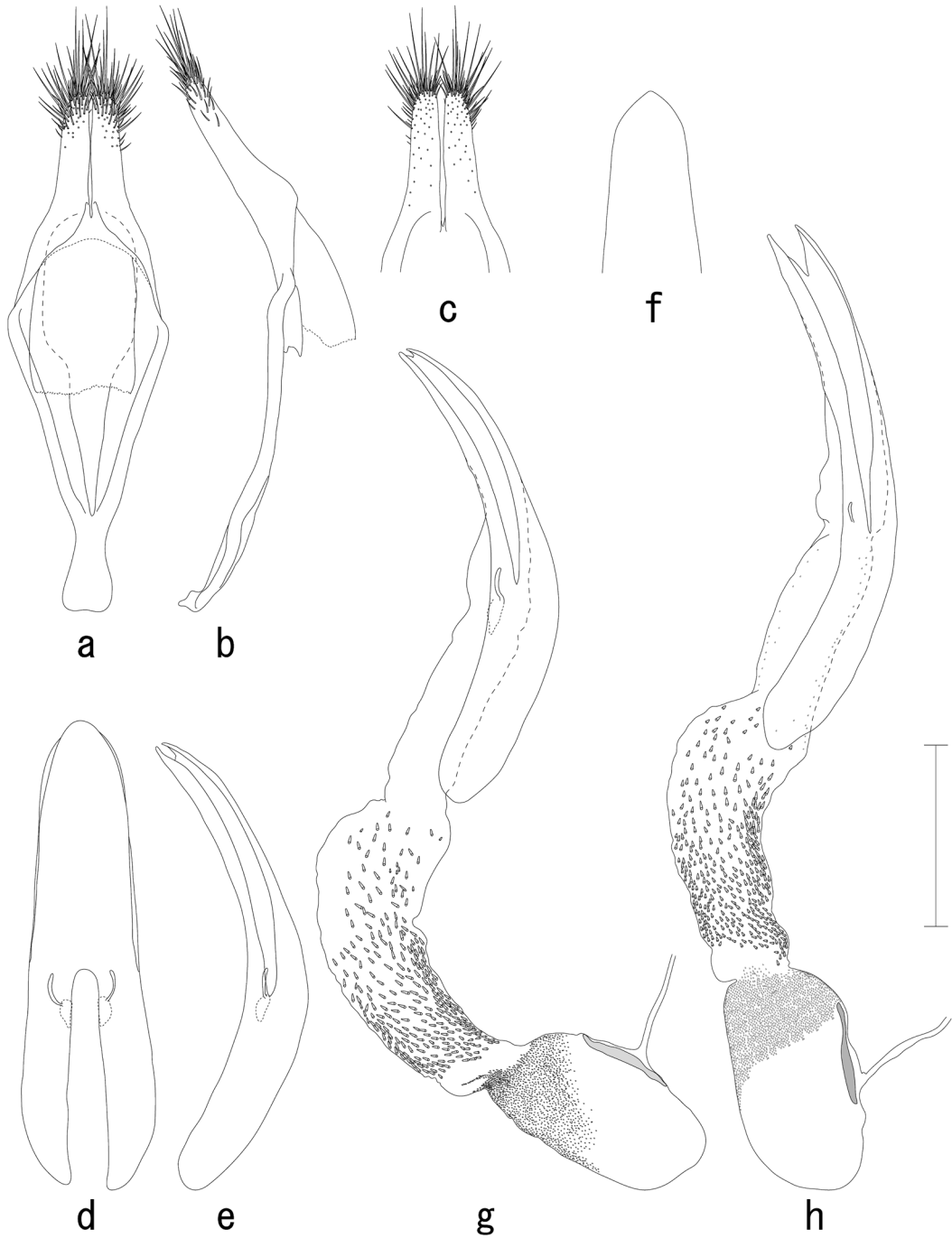


Fig. 2. Male genital organs of *Pachyosa* spp. — a–g, *Pachyosa guanyin* (holotype); h, *P. kojimai*; a–b, tegmen; c, lateral lobes; d–e, median lobe with CS; f, apex of median lobe; g–h, median lobe with fully inflated endophallus without eversion; a, d, dorsal view; b, e, g, h, lateral view, c, f, ventral view. Scale: 1 mm.

constriction, but PB almost fused with APH. BPH, MT, CT and PB+APH almost half length of median lobe respectively; PB short. BPH provided with CS and an indistinct swelling on dorsal side around CS; MT cylindrical; CT well curved dorsally near middle; PB gently inflected dorsally on dorsal side near apex; APH well swollen with PB in cocoon shape, with AS and a single ED on dorsal side near middle. MSp sparsely set on MT; LSp unidentate, sparsely distributed in apical half of CT, thence becoming denser basally; SSp small, unidentate, densely covered PB; AS consisted of a pair of elongate plate like sclerites.

F e m a l e (n = 4, Figs. 1d–1f): Body length 15.4–19.6 mm, body width 6.3–7.8 mm. Similar to male, but body rather robust; antennae rather short, about 1.1–1.2 times as long as body; 11th segments bullet shape, weakly curved medially; relative length of each segment as follows: 1.5 : 0.2 : 1.6 : 1.4 : 1.1–1.2 : 0.9–1.0 : 0.8–0.9 : 0.7 : 0.6 : 0.5 : 0.4–0.5.

Differential diagnosis. This new species is quite similar to *P. atronotata*, but distinguishable from the latter by the following characteristics: antennal scapes relatively elongate; elytral basal white band obliquely extended along suture; PB gently inflected dorsally on dorsal side near apex. It is also different from *P. kojimai* in the following structures: body robust; pronotum slightly constricted near base; elytra rather short, about 1.7 times as long as the conjoint width at humeri, with distinct white bands on base and near middle.

Distribution. Taiwan (Known only from the type locality).

Remarks. All the type specimens were collected by the light at the thpe locality by the second author.

Etymology. The species name is dedicated to "Guanyin", known as Goddess of Mercy, enshrined in the type locality, Longfongshi-temple.

Pachyosa kojimai (HAYASHI, 1974)

(Fig. 2h)

Specimen examined. 1 ♂, Meishan, Taoyuan District, Kaohsiung City, Taiwan, 27–IV–1998, Y. J. CHANG leg.

Additional description. Endophallus in fully inflated condition without eversion (n = 1, Fig. 2h) almost twice as long as median lobe, gently curved dorsally, divided into BPH, MPH and APH; MPH subdivided into MT, CT and PB by constriction, but PB almost fused with APH. BPH, MT, CT and PB+APH almost half length of median lobe respectively; PB short. BPH with indistinct CS and an indistinct swelling on dorsal side around CS; MT cylindrical; CT gently curved dorsally near middle; PB gently inflected dorsally on dorsal side near apex; APH well swollen with PB in cocoon shape, with AS and a single ED on dorsal side near middle. MSp sparsely set on MT; LSp unidentate, sparsely distributed in the apical half of CT, thence becoming denser basally; SSp small, unidentate, densely covered PB; AS consisted of a pair of elongate plate like sclerites.

References

- YAMASAKO, J., & N. OHBAYASHI, 2011. Review of the genus *Paragolsinda* BREUNING, 1956 (Coleoptera, Cerambycidae, Lamiinae, Mesosini), with reconsideration of the endophallic terminology. *Zootaxa*, **2882**: 35–50.
- & ——— 2012. Revision of the reinstated genus *Pachyosa* FAIRMAIRE, 1897 (Coleoptera: Cerambycidae: Lamiinae: Mesosini). *Zool. Studies*, **51**(6): 819–831.