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Description of the female of *Malukandra heterostyla* (Lameere, 1902)  
(Coleoptera, Cerambycidae, Parandrinae)

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Description of the female of *Malukandra heterostyla* (Lameere, 1902)  
(Coleoptera, Cerambycidae, Parandrinae)

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**Abstract.** The female of *Malukandra heterostyla* (Lameere, 1902) (Coleoptera: Cerambycidae) is described and figured for the first time. An identification key to *Malukandra* is provided.

**Resumo.** A fêmea de *Malukandra heterostyla* (Lameere, 1902) (Coleoptera: Cerambycidae) é descrita e figurada pela primeira vez. É fornecida uma chave de identificação para *Malukandra*.

**Key Words.** Halmahera; Indonesia; Parandrini; Taxonomy.

## Introduction

Lameere (1902) described *Parandra heterostyla* (Coleoptera: Cerambycidae) based on a single male from the Indonesian island of Sulawesi (=Celebes). Later, based on information from K. Heller, Lameere (1912) commented that the specimen was extracted from a piece of gum copal sent from Sulawesi. This comment casts doubt on the true origin of the specimen. Santos-Silva et al. (2010) examined the holotype of this species (deposited at Staatliches Museum für Tierkunde, Dresden, Germany) and concluded that the type locality was questionable.

Arigony (1984) examined an additional specimen of *P. heterostyla* deposited at the Muséum national d'Histoire naturelle, Paris, France (MNHN), from Halmahera. Although Arigony did not mention the name of the institution where the specimen was deposited, Santos-Silva et al. (2010) examined this specimen, which has Arigony's label, in the MNHN.

Halmahera is the largest island in the archipelago of the Maluku Islands in the North Maluku Province of Indonesia, east of Sulawesi and west of New Guinea. Halmahera and Sulawesi are separated by Weber's line (a hypothetical boundary between the Oriental and Australasian faunal regions). For the genus *Malukandra* described by Santos-Silva et al. (2010), only the questionable type locality of one species, *M. heterostyla* (Lameere) (Sulawesi) is placed west of Weber's line. The other species of *Malukandra* described by Santos-Silva et al. (2010) (*M. hornabrooki* and *M. jayawijayana*), and the second known specimen of *M. heterostyla* are from east of this boundary.

## Materials

Specimens studied are deposited in the following museums: **MZSP**—Museo de Zoologia, Universidade de São Paulo, São Paulo, Brazil; **USNM**—United States National Museum of Natural History, Smithsonian Institution, Washington, DC, USA.

## *Malukandra heterostyla* (Lameere, 1902)

(Fig. 1–3)

*Parandra heterostyla* Lameere, 1902: 100; 1912: 116; Webb 1994: 327 (note).

*Parandra* (*Parandra*) *heterostyla*; Lameere 1913: 7 (cat.); 1919: 18; Arigony 1984: 89, 90, 95, 96, 97, 109, 111, 125, fig. 16, 60, 64, 65; Santos-Silva 2002: 32 (note).

*Birandra* (*Birandra*) *heterostyla*; Santos-Silva and Shute 2009: 32.

*Malukandra heterostyla*; Santos-Silva et al. 2010: 59.

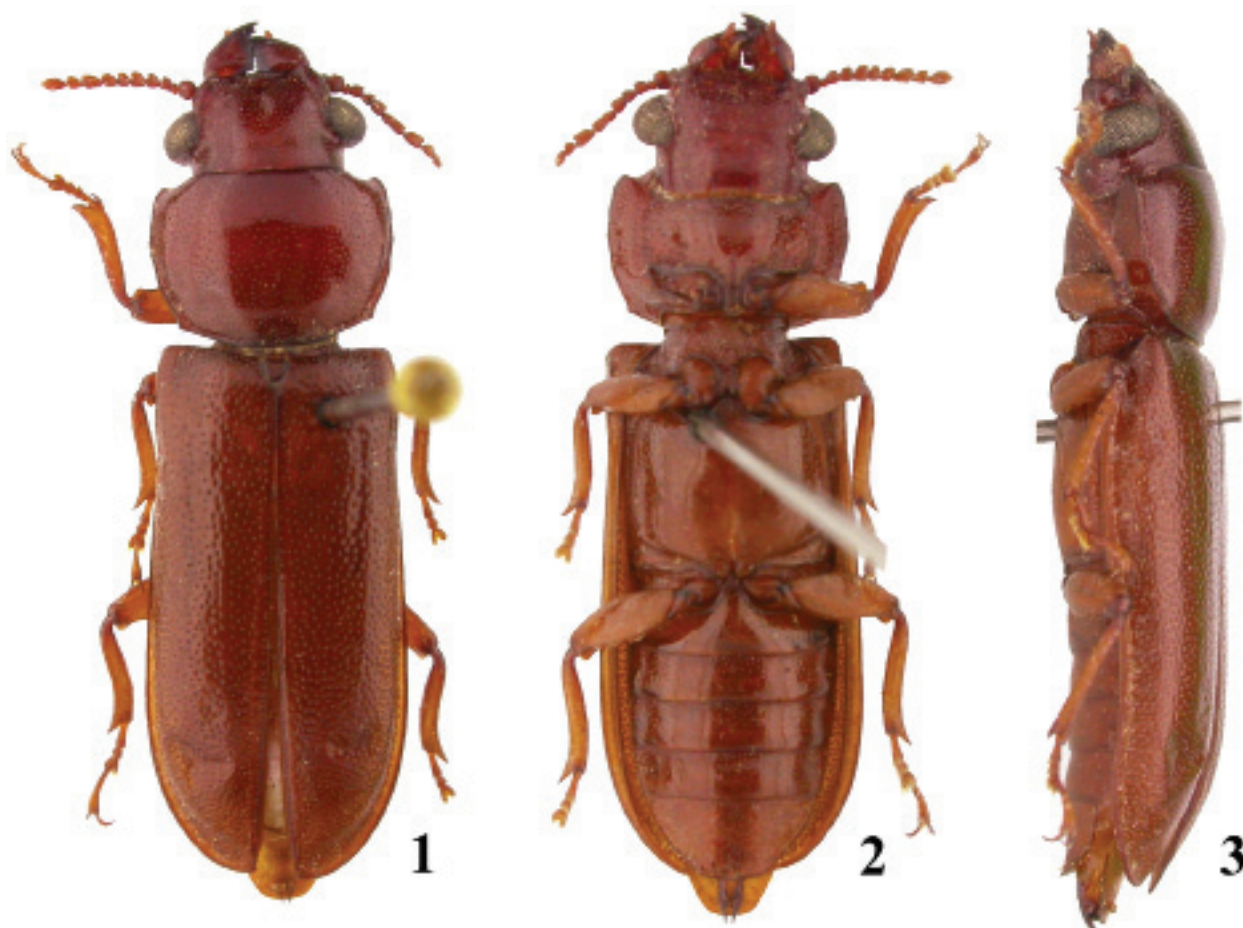
**Description.** Female: General coloration of integument brown; dorsal surface darker than ventral; distal portion of head, parts of mandibles, margins of pro- meso- and metathorax, of scutellum, of elytra (suture and epipleura), of ventrite V, and parts of legs from dark-brown to blackish; extreme distal of ventrites slightly darker than remaining surface. Body not flattened dorsoventrally (Fig. 3). Head elongated behind eyes. Width of head plus eyes equal to 0.9 times that of pronotum at anterolateral angles. Length of mandible equal to 0.7 times that of head; moderately coarsely, sparsely punctate on dorsal surface (sometimes, distinctly coarsely, abundantly punctate on basal half near inner edge), slightly finer towards apex; outer surface vertical, triangularly excavated between base and ventral tooth, moderately coarsely, sparsely punctate on basal half, finer and closer on apical half; pilosity very short, sparse on outer and dorsal surface, somewhat longer near inner edge. Dorsal surface of head coarsely, abundantly punctate, slightly finer towards clypeus and coarser laterally between the eyes and prothorax; sulcus between the gibbosities moderately shallow, enlarged toward clypeus. Clypeus medially in the same level as the area of the sulcus between the gibbosities of the head; laterally slightly lower than centrally; moderately coarsely, sparsely punctate (mainly laterally); pilosity very short, sparse. Clypeolabral suture distinct throughout. Median projection of labrum wide, short, rounded at apex; punctures as in clypeus; pilosity very short, moderately longer on centro-apical region. Ocular carina distinct. Largest width of eyes about 0.6 times length; posterior edge of eyes strongly elevated in relation to the area behind it. Area behind eyes coarsely punctate near apex of upper ocular lobe, gradually sparser, finer towards gula, mainly after apex of lower ocular lobe. Submentum distinctly separated from genae and gula, slightly tumid between gula and anterior third, then distinctly oblique towards anterior edge, somewhat depressed laterally in this region; surface coarsely, moderately sparsely punctate; anterior edge elevated; pilosity short, sparse, with some long hairs in middle area near anterior edge. Antennae not reaching apex of prothorax; antennomere XI 1.7 times longer than X; ventral sensorial area of antennomeres III-X not divided by carinae and not visible from side; XI divided and distinctly visible from side.

Sides of prothorax (Fig. 1–2) nearly parallel or slightly rounded from the area of the middle lateral angles to anterolateral angles, convergent from the former towards posterolateral angles; anterolateral angles projecting forward, acute (not as pronounced and rounded in one female); posterolateral angles acute, projecting; lateral angles absent. Disc of pronotum almost flat centrally, somewhat coarsely punctate centrally, gradually coarser, more abundantly punctate laterally; anterior edge straight, except near anterolateral angles. Metasternum coarsely, abundantly punctate laterally, gradually finer, sparser towards central area. Metepisterna coarsely, abundantly punctate. Elytra abundantly, coarsely, deeply punctate; dorsal carinae distinct or almost indistinct. Ventrites I–IV finely, sparsely punctate centrally, gradually coarser, more abundant laterally; ventrite V moderately coarsely punctate throughout, mainly laterally; pilosity very short and sparse, longer and more abundant on centro-apical region of V. Metatarsomere I about 1.2 times longer than II–III together; length of metatarsomere V (without claws) about 0.9 that of I–III together.

**Dimensions in mm (female) (3 specimens).** Total length (including mandibles), 12.4–16.9; prothorax: length 2.5–3.4; anterior width, 3.1–4.1; posterior width, 2.8–3.8; humeral width, 3.2–4.3; elytral length, 7.7–10.6.

**Diagnosis.** Females of *Malukandra heterostyla* differ from females of *M. hornabrooki* mainly by the sculpture on the dorsal surface of head, between the eyes, formed by coarse and abundant punctures (fine and very sparse in the latter). Females of *M. jayawijayana* remain unknown, but since males of this species have metatarsomere V slightly longer than I–III together, we believe this is also the case in females. In males and females of *M. heterostyla* metatarsomere V is shorter than I–III together.

**Comments.** With the specimens examined in this study, *Malukandra heterostyla* is currently known from five specimens (two males and three females). At the time of the transfer of *Parandra heterostyla* to *Malukandra*, only two males were known. Now we had the opportunity to examine three females that belong to the species. Although we have examined a great number of specimens of Parandrinae



**Figures 1–3.** *Malukandra heterostyla*, female, habitus. 1) Dorsal. 2) Ventral. 3) Lateral.

from the Oriental Region in recent years, few specimens were from Sulawesi. Thus, it is not possible to exclude the possibility of the occurrence of *M. heterostyla* on this island, mainly because of the proximity of Halmahera Island.

**Material examined.** INDONESIA, *North Maluku*: Halmahera Island (“kao Dist., Camp 34, 34 km inland from Pan-Tunggal Lumber Co.; base camp at Tg. Loleo”), 3 ♀, 1-14.II.1981, A. C. Messer & P. M. Taylor coll. (2 from USNM; 1 from MZSP).

**Key to the species of *Malukandra*** [adapted from Santos-Silva et al. (2010)]

1. Dorsal surface of head finely punctate between eyes in both sexes. Papua New Guinea.....  
.....*M. hornabrooki* Santos-Silva, Heffern and Matsuda, 2010
- Dorsal surface of head coarsely punctate between eyes in both sexes..... 2
- 2(1). Male mandible not falciform, without distinct concavity at inner margin. Pronotum coarsely punctate in both sexes. Metatarsomere V not notably slender at basal half in both sexes. Indonesia (Sulawesi?, Halmahera). .....*M. heterostyla* (Lameere, 1902)
- Male mandible sub-falciform, with distinct concavity at inner margin. Metatarsomere V distinctly slender at basal half. Female unknown. Indonesia (Irian Jaya). .....  
.....*M. jayawijayana* Santos-Silva, Heffern and Matsuda, 2010



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