

First record of the species *Macraspis phallocardia* Bento, Jameson & Seidel, 2022 (Scarabaeidae: Rutelinae: Rutelini) from Peru

Yulisa Sari Soto-Quispe 

Alliance for a Sustainable Amazon, Potomac, MD, USA & Universidad Nacional de San Antonio Abad del Cusco, Cusco, Perú;

yurisasoki@gmail.com

Julián Clavijo-Bustos 

Entomology section, Biological Collections, Instituto de investigación de recursos biológicos Alexander von Humboldt, Colombia;

jclavijo@humboldt.org.co

Geoffrey Gallice  Pontifical Catholic University of Peru, Lima, Peru; ggallice@pucp.edu.pe

Introduction

The subfamily Rutelinae (Scarabaeoidea: Scarabaeidae) is highly diverse, particularly in the Neotropics, where about 1,350 of the subfamily's approximately 4,900 total species are known to occur (Roskov et al., 2019; Puker et al., 2020). Of the Rutelinae taxa known to occur in the Neotropics, around 270 species contained within 52 genera are found in Perú (Ratcliffe et al., 2015). These beetles are commonly known as leaf chafer beetles, due to the fact that many have metallic coloration on the body. Many species have strong legs of variable sizes, and the overall size ranges from small to large (Jameson, 1997).

The genus *Macraspis* MacLeay, 1819 belongs to the tribe Rutelini and occurs from Mexico to Argentina, and includes 71 described species (Soula, 1998; Roskov et al., 2019; Bento et al., 2022). Adults feed on flowers and larvae are saprophagous (Medeiros et al., 2019; Neita-Moreno, 2014). *Macraspis phallocardia* was described by Bento et al. (2022) based on 18 specimens from the Amazonian state of Rondônia, Brazil. In this paper we record *M. phallocardia* for the first time in Peru.

Results and Discussion

The male specimen was captured by hand at night at Finca Las Piedras, a biological research station in Peru's Madre de Dios region, in the southeastern Peruvian Amazon. The site is situated in upland or terra firme rainforest dominated by emergent tree species such as Brazil nut (*Bertholletia excelsa*) and other hardwoods (e.g., *Eschweilera* spp., *Dipteryx micrantha*, *Apuleia leiocarpa*, among others); the understory has abundant *Piper* spp. and *Geonoma* palms.

Macraspis phallocardia can be recognized from other species of *Macraspis* by its size (length 10.7–11.7 mm), rounded oval body shape, and overall shiny green coloration with two posterolateral yellow maculae on the pronotum; head with supraorbital strigae; anterior bead of pronotum evident and complete; pygidium strongly convex and with concentric sculpturing on its apex; aedeagus of male with apical lateral articular areas of phallobase thickened and deflected outward, and paramera rounded-oval in shape and with apex rounded (Bento et al. 2022).

Despite the great number of specimens belonging to the type series (N=18) of *M. phallocardia*, all are from a single locality in the state of Rondônia, Brazil. We recorded the species in Madre de Dios, southeastern Peru, 34 years after the type series was collected in Brazil. Our collection is the first for *M. phallocardia* in Peru and extends the species's known geographic range by about 750 km. The Peruvian specimen differs slightly from the Brazilian holotype by its smaller size (10.7 mm vs. 11.3 mm), aedeagus with apical lateral articular areas of phallobase more thickened, and paramera more rounded with apex slightly wider.

Acknowledgments

We thank Matheus Bento for confirming the specimen's identity and Calum Maclure for collecting the specimen.

References

- Begha, B. P., Santos, M. H. (2020) Description of the third instar larva and pupa of *Macraspis morio* Burmeister, 1844 (Coleoptera: Scarabaeidae: Rutelinae) from Southern Brazil. *Papéis Avulsos de Zoologia*, 60: e20206034.
<https://doi.org/10.11606/1807-0205/2020.60.34>

Bento, M., Jameson, M. L., Seidel, M. (2022) New species and illustrated key of *Macraspis* (Scarabaeidae, Rutelinae, Rutelini) from the Amazon biome of Brazil. *Zookeys*, 1124: 161–189. <https://doi.org/10.3897/zookeys.1124.91156>

Neita-Moreno, J. C. (2014). A new species of the genus *Macraspis* Macleay (Scarabaeidae «Pleurosticti»: Rutelinae: Rutelini) from Colombia. 4(1), 28–32.

Puker, A., Correa, C. M. A., Silva, A. S., Silva, J. V. O., Korasaki, V., & Grossi, P. C. (2020). Effects of fruit-baited trap height on flower and leaf chafer scarab beetles sampling in Amazon rainforest. *Entomological Science*, 23(3), 245–255. <https://doi.org/10.1111/ens.12418>

Ratcliffe, B. C., Jameson, M. L., Figueroa, L., Cave, R. D., Paulsen, M. J., Cano, E. B., Beza-Beza, C., Jimenez-Ferbans, L., & Reyes-Castillo, P. (2015). Beetles (Coleoptera) of Peru: A Survey of the Families. *Scarabaeoidea*. *Journal of the Kansas Entomological Society*, 88(2), 186–207. <https://doi.org/10.2317/kent-88-02-186-207.1>

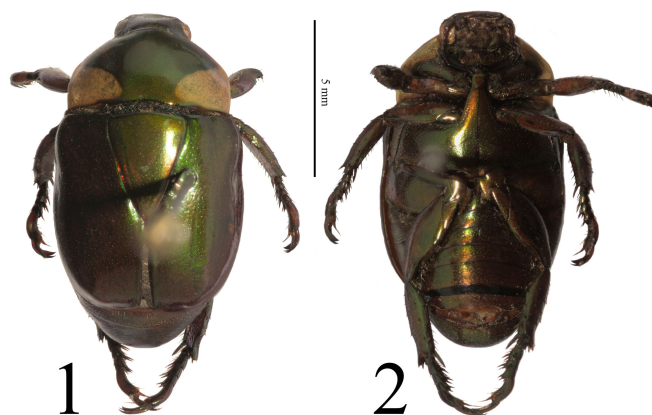
Roskov, Y., Ower, G., Orrell, T., Nicolson, D., Bailly, N., Kirk, P.M., Bourgoin, T., DeWalt, R.E., Decock, W., Nieukerken E.van., Zarucchi, J. & Penev, L. (Eds.) (2019) *Species 2000 & ITIS Catalogue of Life, 2019 Annual Checklist*. Online. Species 2000, Naturalis, Leiden. Available from: www.catalogueoflife.org/data/taxon/5J7L. Accessed 2023-07-29.

Soula, M. (1998) *Les Coléoptères du Monde*, 26.1: Rutelini 2. Révision des Anthicheirina 1. Hillside Books, Canterbury, 116 pp.

Soula, M. (2003) *Les Coléoptères du Monde*, 29: Rutelini 3. Pseudoptenomela – Paraptenomela – Exoptenomela – Ptenomela – Calomacraspis – Paramacraspis – Paradorysthetus – Macraspis – Pseudorysthetus – Dorysthetus – Anticheiroides – Anticheira – Pseudoanthicheiroides. Hillside Books, Canterbury, 79 pp.

Material

https://data.canadensys.net/micropublications/resource?r=specimen_17



Figs 1 & 2. Dorsal (1) and ventral (2) habitus of *Macraspis phallocardia*, specimen 2021-FLP-COL-0111 (scale 5 mm).

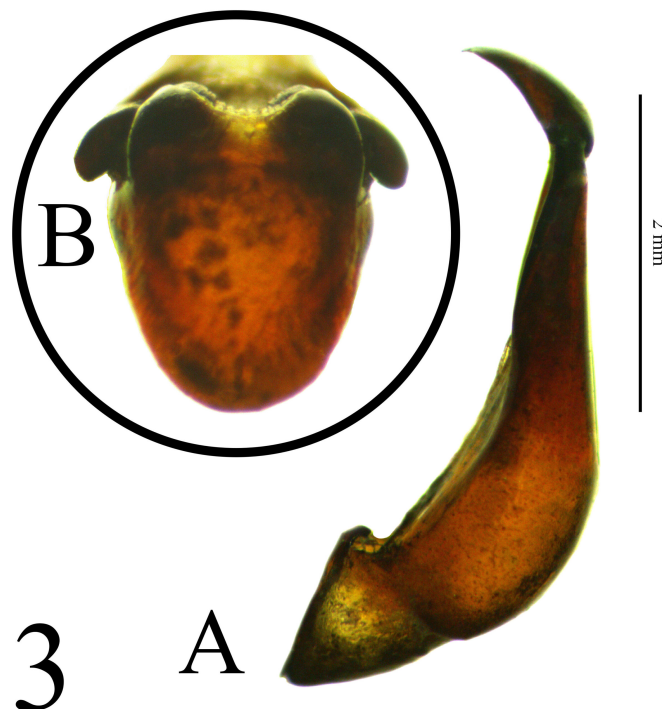


Fig 3. Aedeagus in lateral (A) and frontal (B) views of *Macraspis phallocardia*, specimen 2021-FLP-COL-0111 (scale 2mm)