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Redescription and occurrence in Suriname and Colombia of *Cyclocephala guianae* Endrödi (Coleoptera: Scarabaeidae: Dynastinae: Cyclocephalini)

Redescripción y registro de *Cyclocephala guianae* Endrödi (Coleoptera: Scarabaeidae: Dynastinae: Cyclocephalini) en Surinam y Colombia

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ABSTRACT

Cyclocephala guianae Endrödi, known from French Guiana, Colombia, and Brazil, is redescribed and recorded as a new country record from the lowland rainforests of Suriname and as new locality records from the eastern llanos region of Colombia. A redescription is provided with illustrations of diagnostic characters.

Key words: Morphology, Neotropics, character states.

RESUMEN

Se redescribe a *Cyclocephala guianae* Endrödi, conocida de la Guyana Francesa, Colombia y Brasil. Se reporta como nuevo registro para Surinam en selvas tropicales de tierras bajas, y como nuevos registros de localidad en la región de los Llanos Orientales de Colombia. La redescripción es acompañada de ilustraciones de carácteres diagnósticos.

Palabras clave: Morfología, Neotropico, estados de caracter.

The genus *Cyclocephala* Dejean is the largest within the tribe Cyclocephalini and contains more than 350 species (Ratcliffe *et al*. 2013). Species diversity within *Cyclocephala* is concentrated in the Neotropics (Ratcliffe and Cave 2006; Ratcliffe *et al*. 2013). The diversity of the genus in Suriname and Colombia is still unknown, but 70 species have been recorded so far from Colombia (Restrepo *et al*. 2003; Gasca and Amat 2010), although there are likely more to be discovered and described. Endrödi (1969) described *C. guianae* from seven specimens collected in French Guiana without mention of a specific location. Ratcliffe (1992) recorded this species from near Manaus in Amazonian Brazil.

There is little information on the life history of this species. In Brazil, flowers of a palm tree, *Syagrus inajai* Beccari (Arecaceae), are visited by adults of *C. guianae* (Küchmeister *et al*. 1998). In São Gabriel da Cachoeira and Jaú National Park, Amazonas, Brazil, light traps were used to attract adults (Andreazze 2001; Andreazze and Mota 2002). In Colombia, *C. guianae* was reported as one of the species involved in pollination of palm species that are distributed throughout five ecoregions (Nuñez and Neita 2014).

With the aim of contributing to the knowledge of the scarab fauna of the Neotropics and to facilitate identification of *Cyclocephala* species, we redescribe herein *C. guianae* and establish the presence of this species in Department of Meta, Colombia and in Suriname. We believe a redescription is necessary to incorporate greater details of the character states based upon additional specimens and to make the description more generally available through print and electronic means.

MATERIAL AND METHODS

During curatorial work done in the Entomology Collection at the Universidad de Los Andes in Bogotá (E-Andes), we found three specimens of *C. guianae* from collections made by undergraduate students enrolled in the invertebrate course at the university. Additional specimens from Suriname, French Guiana, and Brazil are in the systematics research collections of the University of Nebraska State Museum, and these were also used for the redescription. Photographs were taken through a stereomicroscope Motic SMZ-168 TLED, and measurements were obtained with a digital caliper.

RESULTS

Cyclocephala guianae Endrödi, 1969

(Figs. 1–7)

Cyclocephala guianae Endrödi, 1969: 33

Redescription. Length 11.5–14.4 mm; width across humeri 5.9–6.6 mm. Color dorsally and ventrally testaceous, marginal bead of clypeus piceous, elytra without marks or spots, apices of femora and tibiae piceous.

Male: Head: Frons with small, moderately dense punctures. Clypeus with punctures slightly smaller, less dense, apex strongly parabolic (Fig. 5), with slender marginal bead. Antenna with 10 antennomeres, club subequal in length to segments 2–7. Interocular width equals 3.3 transverse eye diameters. **Pronotum:** Surface with small, moderately dense, glabrous punctures. Base lacking marginal bead. **Elytra:** Surface with punctate striae, punctures dense, moderate in size, glabrous. **Pygidium:** Surface opaque, with small, indistinct punctures; punctures moderate in density, setigerous, setae minute, tawny. In lateral view, surface normally convex. **Legs:** Protibiae bidentate (Fig. 6), apical tooth larger than

second. Protarsus (Fig. 6) enlarged, tarsomeres 2–4 each slightly larger than preceding; 5th large, curved, with longitudinal carina and small tooth on inner edge; median claw large, curved, base with large lobe, apex entire. Metatarsus longer than metatibia. **Venter:**Prosternal process columnar, apex obliquely flattened into transversely suboval disc with anterior half elevated into a raised "button" with fringe of brown setae. **Parameres:** Shape subhexagonal, short, widest at about middle, apices slightly diverging from one another (Figs. 3–4).

Female: As male except in the following respects. **Head:** Surface with punctures slightly denser, clypeus with 2 small spots near apex (Fig. 7). **Pronotum:** Each side usually with small, light brown spot. **Elytra:** Epipleuron slightly expanded and then constricted at level of metacoxa. **Pygidium:** Surface shiny, finely rugulopunctate, punctures moderate in size, moderate to dense, glabrous. In lateral view, surface weakly convex. **Legs:** Protibia tridentate, teeth subequally spaced. Protarsus simple, not enlarged.

Diagnosis: *Cyclocephala guianae* is distinguished by its small size, completely testaceous coloration, pronotum lacking a basal marginal bead, bidentate protibiae in the male, protarsus with inner claw not incised, and especially by the form of the parameres (Fig. 3–4). In Endrödi (1985), it keys out most closely to *C. setidiosa* LeConte and *C. longula* LeConte, both from the USA and with very different parameres.

Material examined. 65 specimens from Brazil, Colombia, French Guiana, and Suriname.

New country record. SURINAME: 2♂, 3♀. Brownsberg National Park, 19 July 1975, D. Engleman coll. **New locality records.** COLOMBIA: 3 specimens, 2♂, 1♀. Meta: San Martín-Villavicencio, mar.2010, Col: Angueya, A., Matamia, N., Plata, C., 1♂ [1794 – Col 248. E-Andes]; 22.mar.2010, Col: Giraldo, D., 1♂ [17918 – Col 244. E-Andes]; San Martín, R. N. Rey Zamuro, 22.mar.2010, Col: Guerrero, D., Torres, M., Wilches, D., 1♀ [1791 – Col 002. E-Andes].

Distribution. *Cyclocephala guianae* is known from French Guiana, Brazil, Colombia, and Suriname. It will probably be found also in Guyana. In Colombia, locality records are from the Reserva Privada Rey Zamuro near San Martín in the Department of Meta. The reserve is located at 3°34´40´´N, 73°26´4´´W, with an elevation of 260–300 m and corresponds to lowland tropical rainforest in transition between piedmont and Amazonian forests (Díaz-Pulido *et al*. 2011). The specimens from Suriname are from forested plateaus in Brownsberg National Park located at 5°01´N, 55°34´W (White 2012). The forest type is lowland Amazonian rainforest.

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LITERATURE CITED

Andreazze, R. 2001. Dinastíneos (Coleoptera, Scarabaeidae, Dynastinae) do Parque Nacional do Jaú, Amazonas, Brasil. *Acta Amazónica* 31(3): 431-435.

Andreazze, R. and C.S. Motta. 2002. Besouros dinastíneos (Coleoptera, Scarabaeidae, Dynastinae) de Querari, Município de São Gabriel da Cachoeira, Estado do Amazonas, Brasil. *Acta Amazonica* 32(4): 725-727.

Díaz-Pulido, A., A. Benítez, C. A. Wagner, and E. Payán. 2011. Grandes vertebrados como OdC en el Magdalena Medio y los Llanos Orientales (pp. 25–42). In: Corzo, G., M. C. Londono-Murcia, W. Ramirez, H. García, C. Lasso, and B. Salamanca (Eds.). *Planeación Ambiental para la Conservación de la Biodiversidad en las Áreas Operativas de Ecopetrol S.A. Localizadas en el Magdalena Medio y los Llanos Orientales de Colombia.* Instituto Alexander von Humboldt and Ecopetrol S.A., Bogotá, D.C., Colombia.

Endrödi, S. 1969. Einige neue Cyclocephalini und Pentodontini. *Acta Zoológica Hungarica* 15: 21–42.

Gasca-Alvarez, H. J. and G. Amat-García. 2010. Synopsis and key to the genera of Dynastinae (Coleoptera, Scarabaeoidea, Scarabaeidae) of Colombia. *ZooKeys* 34: 153–192.

Küchmeister, H., A. C. Webber, I. Silberbauer-Gottsberger, and G. Gottsberger. 1998. A Polinização e sua Relação com a Termogênese em Espécies de Arecaceae e Annonaceae da Amazônia Central. *Acta Amazonica* 28(3): 217-245.

Núñez, L.A. and J. C. Neita. 2014. *In press*. Association of genus *Cyclocephala* (Coleoptera: Scarabaeidae "Pleurosticti: Dynastinae: Cyclocephalini) and their role in pollination of palms (Arecaceae). *PlosOne*.

Ratcliffe, B. C. 1992. New species and country records of Brazilian *Cyclocephala* (Coleoptera: Scarabaeidae: Dynastinae). *Tijdschrift Voor Entomologie* 135:179-190.

Ratcliffe, B. C., and R.D. Cave. 2006. The dynastinae scarab beetles of Honduras, Nicaragua, and El Salvador (Coleoptera: Scarabaeidae: Dynastinae). *Bulletin of the University of Nebraska State Museum* 21: 1–424.

Ratcliffe, B. C., R. D. Cave, and E. B. Cano. 2013. The dynastine scarab beetles of Mexico, Guatemala, and Belize (Coleoptera: Scarabaeidae: Dynastinae). *Bulletin of the University of Nebraska State Museum* 27: 1–666.

Restrepo, H., M. A. Morón, F. Vallejo, L. C. Pardo-Locarno, and A. López-Ávila. 2003. Catálogo de Coleoptera Melolonthidae (Scarabaeidae-Pleurosticti) de Colombia. *Folia Entomológica Mexicana* 42: 239–263.

White, C. 2012. Brownsberg Nature Park Situation Analysis 2012. WWF Guianas Sustainable Natural Resources Management (GSNRM) Project. 43 pp. Available at: http://awsassets.panda.org/downloads/2012_04__brownsberg_nature_park_situation_analysis_white.pdf. Accessed: 2 october 2014.

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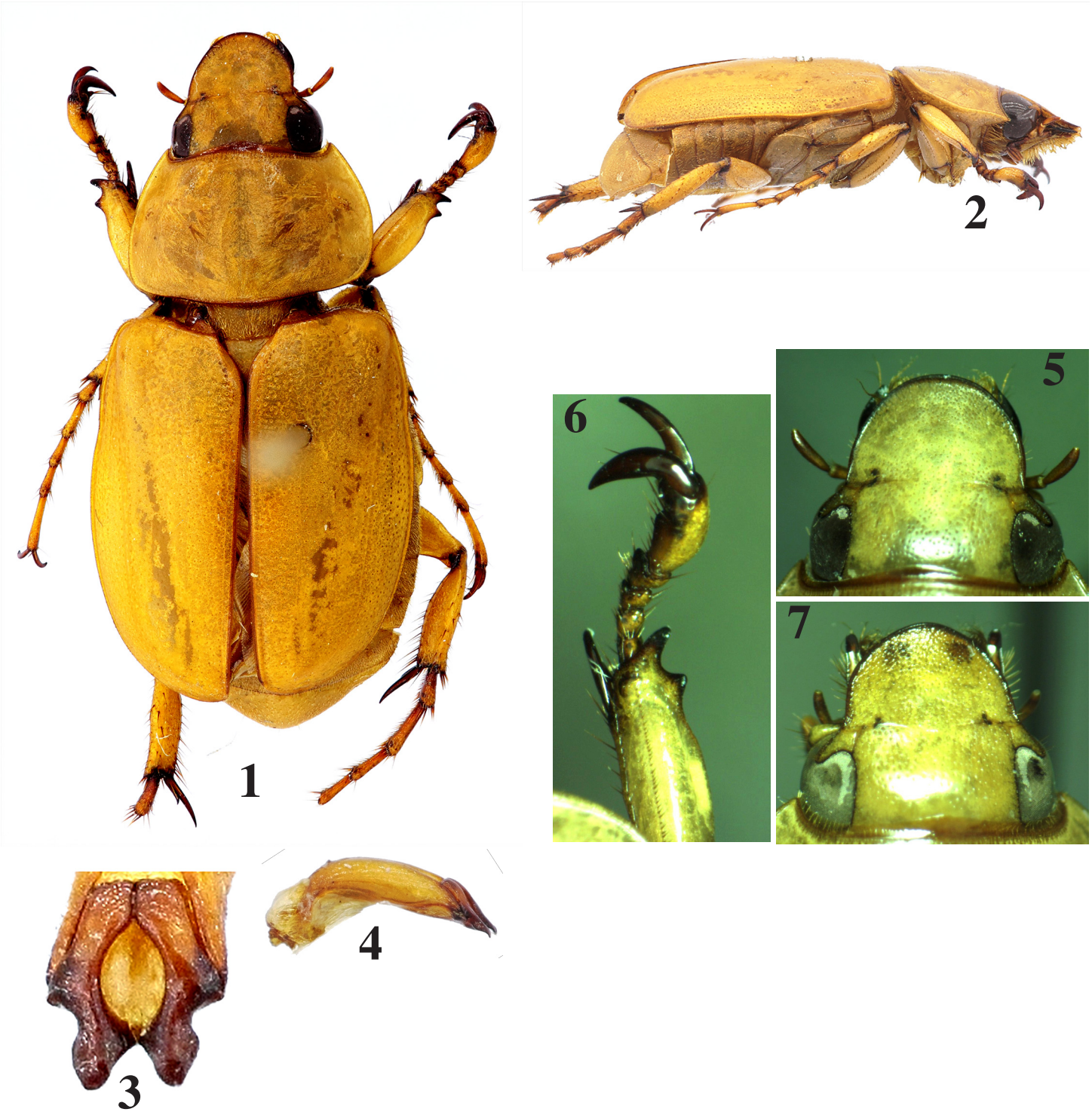

Figures 1-7. Morphology of *Cyclocephala guianae* Endrödi. 1-2. Dorsal and lateral view of Colombian specimen of *Cyclocephala guianae* Endrödi. 3-4. Parameres. 5. Head of male. 6. Protibia and protarsus of male. 7. Head of female.