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A Journal of World Insect Systematics

0285

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of Mexican Aphodiinae (Coleoptera: Scarabaeidae: Aphodiinae)

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Date of Issue: March 8, 2013

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Insecta Mundi 0285: 1-5

ZooBank Registered: urn:lsid:zoobank.org:pub:33643759-5219-411C-8BEF-7B0EC316F063

Published in 2013 by

Center for Systematic Entomology, Inc.
P. O. Box 141874
Gainesville, FL 32614-1874 USA
<http://www.centerforsystematicentomology.org/>

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Cephalocyclus majomaensis and *Oscarinus cabreroi* new species of Mexican Aphodiinae (Coleoptera: Scarabaeidae: Aphodiinae)

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Abstract. The new species *Cephalocyclus majomaensis* and *Oscarinus cabreroi* from Mexico are described and figured.

Key words. Systematics, *Cephalocyclus majomaensis*, *Oscarinus cabreroi*, new species, Mexico, Aphodiinae.

Introduction

While studying specimens from Mexico to complete a systematic revision of the Aphodiinae (Coleoptera: Scarabaeidae) of that region, we found a couple of species new to science. They belong to the genera *Cephalocyclus* Dellacasa, Gordon and Dellacasa, 1998 and *Oscarinus* Gordon and Skelley, 2007, and are described here.

Materials and methods

Terminology used to describe morpho-anatomical features follows that of Dellacasa et al. (2001). Specimens studied are in the following collections:

CMNO – Canadian Museum of Nature, Ottawa, Canada [H. F. Howden Collection]

CNCI – Canadian National Collection, Ottawa, Canada

DCGI – Dellacasa Collection, Genoa, Italy

FSCA – Florida State Collection of Arthropods, Gainesville, Florida, U.S.A.

RHTC – R. H. Turnbow Collection, Enterprise, Alabama, U.S.A.

USNM – United States National Museum, Washington, D. C., U.S.A.

Cephalocyclus majomaensis new species

(Fig. 1-4)

Type locality. Majoma, Zacatecas, Mexico.

Type repository. United States National Museum, Washington, D. C., U.S.A.

Description of male. Length 6.5-7.0 mm; elongate, moderately convex, shiny, glabrous. Testaceous; head and pronotum somewhat darker than elytra. Head with epistome weakly convex on disc, slightly

depressed medially toward clypeal margin, sparsely irregularly not closely punctured, smooth at center; clypeus faintly sinuate at middle, round at sides, very thinly bordered, edge upturned and elongately ciliate laterally; genae angulate, depressed, elongately ciliate, strongly protruding from the eyes; frontal suture not tuberculate, distinctly impressed laterally, obsolete at middle; front finely irregularly, sparsely punctured. Pronotum transverse, moderately convex, shiny, dually punctured; large punctures, three to four time larger than small ones, irregularly sparse on sides, lacking on disc; small punctures, somewhat variously sized, coarser and denser on sides, superficial and sparser on disc; lateral margins moderately arcuate, rather thickly bordered, edge elongately sparsely ciliate; hind angles obtusely round; base distinctly bisinuate, not bordered. Scutellum elongate, alutaceous, sparsely moderately punctured. Elytra very elongate, weakly widened posteriorly, epipleural carina elongately ciliate in basal two thirds; striae very fine, superficially almost indistinctly punctured, not crenulate; interstriae faintly convex, minutely alutaceous, with extremely fine, irregularly sparse and barely perceptible punctures. Hind tibiae superior spur shorter than first tarsal segment; latter shorter than following three segments combined. Aedeagus Fig. 4. Female: unknown.

Type material. MEXICO: Zacatecas: Majoma; 07.III.1934; leg. Smith & Dunkley (**holotype**, male, USNM; 1 **paratype**, male, DCGI).

Distribution. Known from the type locality only.

Etymology. Named after the type locality.

Bionomics. Almost unknown; the specimens of the type series were collected in March.

Discussion. *Cephalocyclus majomaensis* is most similar to *C. howdenorum* Dellacasa, Dellacasa and Gordon, 2007, but can be easily distinguished from that species. It falls *C. howdenorum* in couplet 21 of the key to *Cephalocyclus* in Dellacasa et al. (2011: 35) which has to be modified as follows:

22. Elytra broadly oval; interstriae near imperceptibly pubescent toward apex. Hind tibiae superior spur as long as first tarsal segment; latter as long as following three segments combined. Dark piceous, clypeal margin and pronotal sides somewhat paler; elytra dark yellowish brown. Length 7.0-8.0 mm. Mexico (Nuevo León) ***C. howdenorum* Dellacasa, Dellacasa and Gordon**
 — Elytra very elongate, feebly widened posteriorly, glabrous. Hind tibiae superior spur shorter than first tarsal segment; latter shorter than following three segments combined. Testaceous, head and pronotum somewhat darker. Length 6.5-7.0 mm. Mexico (Zacatecas)
 ***C. majomaensis* new species**

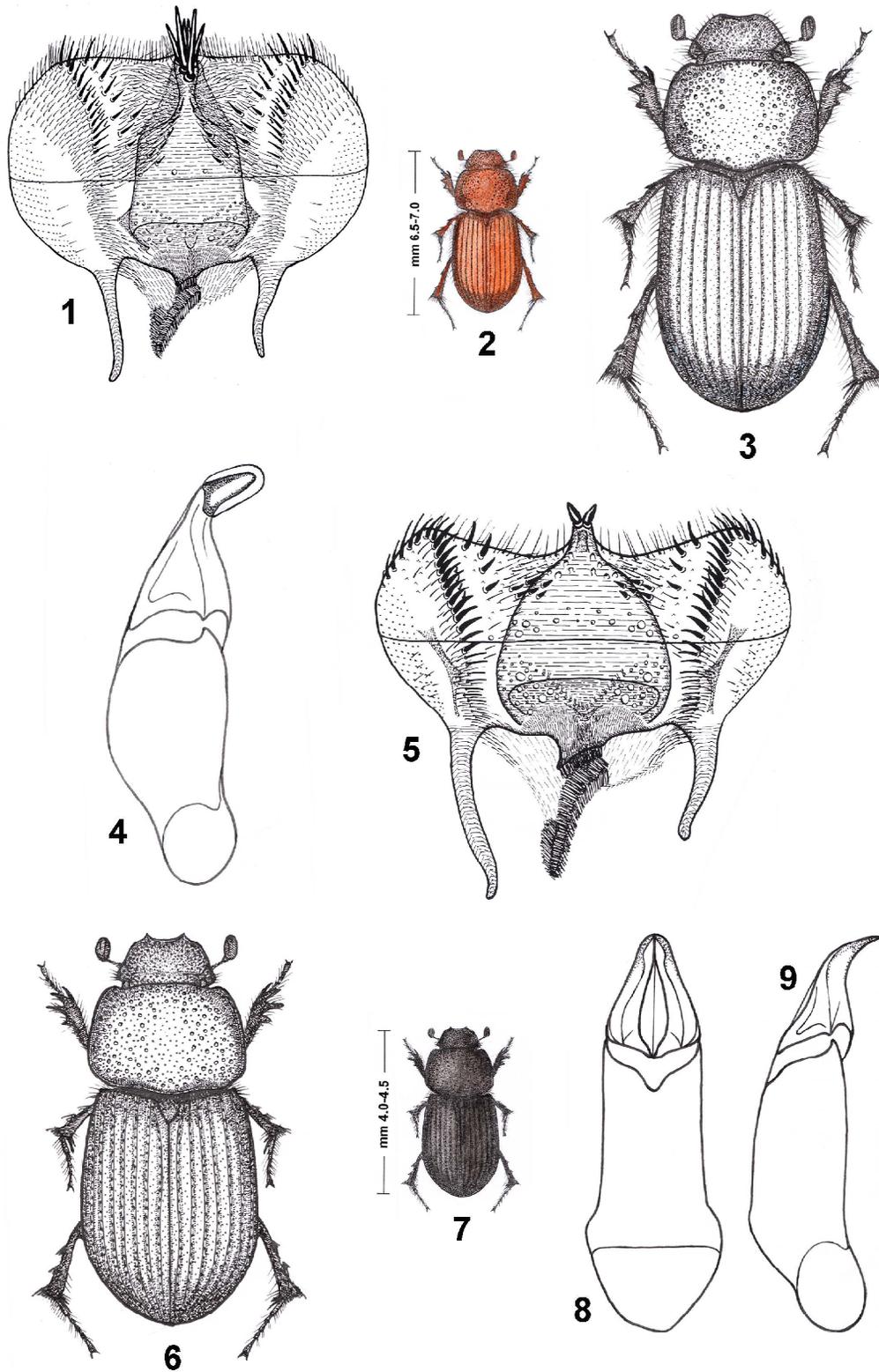
***Oscarinus cabreroi* new species**

(Fig. 5-9)

Type locality. Cerro El Potosí, 24°52'28.1"N-100°13'14.9"W, m 3274, Nuevo León, Mexico.

Type repository. Dellacasa Collection, Genoa, Italy.

Description. Length 4.0-4.5 mm; shortly oval, strongly convex, shiny, almost glabrous. Blackish, clypeal margin, anterior angles of pronotum, base and preapical declivity of elytra shadowy brownish-red; legs brownish; antennal club piceous. Head with epistome moderately convex, irregularly punctured; punctation distally dense, coarse and somewhat confuse, proximally rather fine and sparse; clypeus faintly sinuate at middle, weakly denticulate at sides, very thinly bordered, edge feebly upturned, glabrous; genae angulose, scarcely ciliate, protruding from the eyes; frontal suture finely impressed laterally, almost obsolete medially, not tuberculate; front evenly, rather coarsely, not closely punctured. Pronotum transverse, convex, dually and somewhat irregularly punctured; large, coarse, faintly umbilicate punctures, five times larger than small ones, denser on sides, very sparse on disc; small punctures evenly



Figures 1-9. *Cephalocyclus majomaensis* (Majoma, Zacatecas, Mexico; holotype). 1) Epipharynx. 2-3) Habitus of male (length ideogram and morphological details). 4) Aedeagus (lateral view). *Oscarinus cabreroi* (Cerro El Potosí, Nuevo León, Mexico; holotype). 5) Epipharynx. 6-7) Habitus (morphological details and length ideogram). 8-9) Aedeagus (dorsal and lateral views).

scattered throughout, somewhat finer on disc; lateral margins feebly arcuate, thinly bordered, edge glabrous; hind angles obtusely round, base slightly bisinuate, distinctly bordered. Scutellum somewhat convex, finely, not closely punctured on basal half. Elytra strongly convex, rather elongate, almost subparallel-sided; striae rather deep, very superficially, not closely punctured, not crenulate; interstriae flat, finely sparsely, biserially punctured, punctures denser and coarser on preapical declivity; lateral interstriae, toward apex, with extremely short sparse setae. Hind tibiae superior spur shorter than first tarsal segment; latter somewhat longer than following three segments combined. Male: head and pronotum relatively less densely and less coarsely punctured; fore tibiae spur somewhat stouter and more abruptly downward bent; aedeagus Fig. 8-9. Female: head and pronotum relatively more densely and more coarsely punctured; fore tibiae spur somewhat slender and regularly curved downward.

Type material. MEXICO: Chihuahua: Basaseachi, 28°13'00.9"N-108°13'27.5"W, m 2037, 26.V.2005, leg. Dellacasa M., Fresi C., Martínez I., Cabrero F. & Trotta N. (2 **paratypes**, DCGI); **Nuevo León:** Cerro El Potosí, 24°52'28.1"N-100°13'14.9"W, m 3274, 04.VII.2006, leg. Dellacasa M., Fresi C. & Martínez I., cow dung (**holotype**, male, **allotype** and 41 **paratypes**, DCGI; 2 **paratypes**, FSCA); Cerro Potosí, 10300', 15-16.VII.1963, leg. Howden H. F. (3 **paratypes**, CMNO); *idem*, 12100', 01.VI.1997, leg. Turnbow R. (5 **paratypes**, RHTC); *idem*, 54-55 km W Linares, 17.VII.1988, leg. Turnbow R. (2 **paratypes**, RHTC); Mpio. Galeana, Cerro Potosí, 24°52'18"N-100°13'56"W, m 3720, 26.V.2005, leg. Carillo P., bosque de pino (1 **paratype**, DCGI); Galeana, Cerro Potosí, 04.VI.1983, leg. Kaulbara M. (5 **paratypes**, CMNO); *idem*, 10-12000', 27.VI.1969, leg. Peck S. & J. (8 **paratypes**, CMNO, DCGI); *idem*, m 3750, 04.VI.1983, leg. Peck S. & J., summit litter Berlese (1 **paratype**, CMNO); **San Luis Potosí:** 10 km E Ciudad Valles, 24.VII.1988, leg. Turnbow R. (2 **paratypes**, RHTC); **Sinaloa:** El Palmito, 02.VII.1964, leg. Howden H. F. (5 **paratypes**, CMNO, DCGI).

Distribution. Mexico (Chihuahua, Nuevo León, San Luis Potosí, Sinaloa).

Etymology. Named in honor of our friend and colleague Francisco J. Cabrero-Sañudo, Spanish scarabaeidologist.

Bionomics. Late spring and summer species feeding on cow dung, probably in sheltered areas.

Discussion. *Oscarinus cabreroi* is most similar to *O. spiniclypeus* (Hinton, 1934). It can be easily distinguished from that species by the following key

1. Epistome coarsely punctured distally. Elytra very shortly and sparsely pubescent on preapical declivity, with interstriae distinctly punctured. Color blackish with clypeal margin, sides of pronotum, base and apex of elytra brownish red. Mexico (Chihuahua, Nuevo León, San Luis Potosí, Sinaloa) ***O. cabreroi* new species**
- Epistome granulate distally. Elytra are glabrous, with interstriae almost imperceptibly punctured. Color entirely blackish. Mexico (Distrito Federal [Gordon and Skelley, 2007: 164], Guerrero and México) ***O. spiniclypeus* (Hinton)**

Acknowledgments

Thanks are due to P. Bouchard (Ottawa), H. Howden (Ottawa), R. Turnbow (Enterprise) for loan of material and to P. Bordat (Saint-Cirq) and T. Branco (Porto) for critical reviews of the manuscript.

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Received November 13, 2012; Accepted February 3, 2013.

