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## New genera and new species of Cryptophagidae (Coleoptera) from USA and Mexico

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**A b s t r a c t :** Two new genera and three new species of Cryptophagidae were described from USA and Mexico.

**K e y w o r d s :** Cryptophagidae, new genera, new species, Nearctic Region, USA, New Mexico, Mexico.

### Introduction

Among several Cryptophagidae collected in New Mexico (USA) by R. A. Buss were specimens which resemble to *Salebius* sp. due to the two teeth on each margin of pronotum additional to the anterior callosity. Further another species from Oaxaca (Mexico) from the ZMLU collection resembles to the specimens from New Mexico in bearing two teeth on each margin of pronotum. Examining these specimens shows the necessity to create new genera for them.

The two new genera lacking glandular pori on the tip of all tooth. They have pori only at the anterior callosity. *Salebius* CASEY, 1900 bears pori on all three tooth. The tooth are in *Salebius* strong and distinct, more a very strong undulation (like in *Paramecosoma* CURTIS, 1833).

### Material and methods

The material examined is deposited in the following collections:

ZMLU.....Zoological Museum Lund, Sweden

cBU.....Richard J. Buss, Albuquerque (NM), USA

cES.....author's private collection, Berlin, Germany

The morphological studies were conducted using a Euromex DZ-1605 and Euromex BB.1153.PLI. Photographs were created with a ToupCam 14MP (ToupeTek).

Body length was measured from the head to the apex of the elytra, length of pronotum in the middle, broadness on the broadest part.

## Description of new genera

### *Omissophagus* nov.gen. (fig. 1, 2)

Type species: *Omissophagus tsoodzilianus* nov.sp.

Etymology: From the Latin word *omissus* – overlooked and the Greek word *phagos* – to feed.

Description: Body small, 2.1 to 2.2 mm, reddish-brown, membranous wings absent. Surface with fine punctation, extremities stout (fig. 1, 2). Eyes small, slightly rounded or nearly flat, with just a few ommatidia. Pronotum with sides moderately or hardly rounded, with one small tooth-like anterior callosity and two small teeth on each side. Glandular porus only at the anterior callosity visible. Male tarsal formula 5-5-4, females with 5-5-5.

Comment: Similar to several *Cryptophagus* HERBST, 1792 but easily distinguishable by the second teeth on sides of pronotum. *Salebius* CASEY, 1900 (fig. 4) differs from *Omissophagus* gen. nov. by having two strong tooth (or strong undulation) with glandular porus on each tip instead of fine tooth without pori. *Remotophagus* gen. nov. (fig. 3) differs by a more transverse pronotum with sides flattened, antennae and legs slender, hemispherical eyes and its more convex and stout general shape.

### *Remotophagus* nov.gen. (fig. 3)

Type species: *Remotophagus oaxacanensis* nov.sp.

Etymology: From the Latin word *remotus* – remote and the Greek word *phagos* – to feed.

Description: Body small, 1.9 mm, reddish-brown, membranous wings absent. Surface with moderately strong and dense punctation, extremities slender (fig. 3). Eyes hemispherical rounded, of normal size and with medium fine ommatidia. Pronotum with sides moderately rounded, with one small tooth-like anterior callosity and two small teeth on each side. Glandular porus only at the anterior callosity visible. Male tarsal formula 5-5-4, females with 5-5-5.

Comment: Quite similar to *Omissophagus* gen. nov. but differs by its more transverse pronotum with sides broadly flattened, hemispherical eyes, slender extremities and convex general shape.

## Description of new species

### *Omissophagus tsoodzilianus* nov.sp. (fig. 1)

Type material: Holotype ♂: "USA: NM Cibola Co., 35°17.71N, 107°36.04W, Mt. Taylor oak-detr, 29-IX-2007 elev 8827" [cES].

Paratypes: 1 ♀ "USA: NM Cibola Co., 35°15.32N, 107°35.24W, Mt. Taylor Dead Spruce, 8-X-2005" [cES]; 1 ♀ "25-AUG-1995, Mt. Taylor, New Mexico / pitfall trap" [cBU]; 1 ♂ "20-VIII-1999, Mt. Taylor, NM rjb" [cBU]; 1 ♂, 1 ♀ "summer-1997, Mt. Taylor, NM, pitfall, RJB" [cBU]; 1 ♂, 2 ♀♀ "26-AUG-1997, Mt. Taylor, NM, pitfall, RJB" [cBU]; 4 ♀♀ "25-JUL-1996, Mt. Taylor, NM, pitfall, RJB [cBU]; 1 ♂ "06-SEP-1997, Mt. Taylor, NM, RJB" [cBU]; 3 ♂♂, 1 ♀ "USA, NM, Cibola Co., 35°15.25N, 107°35.32W, Cibola NF-Mt. Taylor, 16-IX-2006" [cBU]; 3 ♀♀ "USA, NM, Cibola Co., 35°15.32N, 107°35.24W, Mt. Taylor, dead spruce, 06-X-2005 [cBU]; 4 ♂♂, 1 ♀

"USA, NM, Cibola Co., 35°17.71N, 107°36.04W, Mt. Taylor, oak detr., 29-IX-2007, elev. 8827"  
[cBU]; 141 ex "USA: NM: Cibola Co., Mt. Taylor, pitfall trap, N35°15.21 W107°34.17, leg. R. J.  
Buss, 04.08.2017" [cBU, cES].

**E t y m o l o g y :** Named after the Navajo word for the Mount Taylor in New Mexico – Tsoodzil – where the types were collected.

**D e s c r i p t i o n :** Male, 2.2 mm, reddish-brown, membranous wings absent, extremities stout. Surface with fine punctation, on head and pronotum somewhat finer and denser than on elytra (basal third). Pubescence sparse and fine, yellowish and decumbent. Eyes small, slightly rounded, with just a few ommatidia. Antennae 11-segmented with a 3-segmented club. Segment I short and drop-shaped, segment II smaller and also drop-shaped. Segment III longer than wide, segment IV to VIII rounded and more or less equal. Segment IX short and transverse, segment X wider than IX, moderately transverse. Segment XI drop-shaped but asymmetric, tip acute. Pronotum convex with sides moderately rounded, with one small tooth-like anterior callosity and two small teeth on each side. Sides at the second tooth slightly angled. Glandular porus only at the anterior callosity visible. Rim of the sides of pronotum indistinct. Pronotum moderately transverse, 1,5 x wider than long. Elytra elongated, nearly straight in the medium third, humeral callus absent. Tarsal formula 5-5-4 (females with 5-5-5).

**C o m m e n t :** Similar to *Omissophagus sandianus* nov.sp. but differs in more transverse pronotum, rounded eyes and different antennae. So far known restricted to the Mount Taylor range in New Mexico.

### ***Omissophagus sandianus* nov.sp. (fig. 2)**

**T y p e m a t e r i a l :** Holotype ♂: "USA: NM Bernalillo Co., 35°14.075N, 106°26.979W, Survey Tr-9968' elev. 09-X-2010-R.J.Buss" [cES].

**Paratypes:** 1♀ "USA: NM Bernalillo Co., Sandia Mnts, TreeSprTriHD-detritus, 01-X-2010-R.J.Buss" [cES]; 1♀ "USA: NM: Bernalillo Co., SurveyTri-pitfall trap, 02-SEP-2015, R. J. Buss" [cBU]; 2♂♂ "USA: NM: Bernalillo Co., 25-XII-2005, detritus, Upper Tree Spring" [cBU, cES]; 1♀ "USA: NM Bernalillo Co., 35°11.40N, 106°24.96W, 30-X-2006, detritus, 9149' elev., UpTreeSprng" [cBU, cES]; 2♀♀ "USA: NM: Bernalillo Co., 35°12.55N, 106°26.13W, 24-XI-2005, DougFirDetr, 9950', 10K trail" [cBU].

**E t y m o l o g y :** Named after the Sandia Mountains in New Mexico where the types were collected.

**D e s c r i p t i o n :** Male, 2.1 mm, reddish-brown, membranous wings absent, extremities stout. Surface with fine punctation, on head and pronotum somewhat finer and denser than on elytra (basal third). Pubescence sparse and fine, yellowish and decumbent. Eyes small, flat, with just a few ommatidia. Antennae 11-segmented with a 3-segmented club. Segment I short and drop-shaped, segment II smaller and also drop-shaped. Segment III somewhat longer than wide, segment IV to VIII rounded and more or less equal. Segment IX short and transverse, segment X hardly wider than IX, moderately transverse. Segment XI drop-shaped and nearly symmetric, tip rounded. Pronotum convex with sides hardly rounded, with one small tooth-like anterior callosity and two fine teeth on each side. Glandular porus only at the anterior callosity visible. Rim of the sides of pronotum indistinct. Pronotum moderately transverse, 1,25 x wider than long. Elytra elongated, humeral callus absent. Tarsal formula 5-5-4 (females with 5-5-5).

**C o m m e n t :** Similar to *Omissophagus tsoodzilianus* nov.sp. but differs in less transverse pronotum, less rounded eyes and different antennae. So far known restricted to the Sandia Mountains in New Mexico.

***Remotophagus oaxacanensis* nov.sp. (fig. 3)**

**T y p e m a t e r i a l :** Holotype ♂: "Mexico: Oaxaca, 23 km N Oaxaca City, hwy 175, 2650 m, 8.X.1990, leg. R. Baranowski / sifting litter, pine-oak forest" [ZMLU].

**Paratypes:** 4♂♂, 7♀♀ "Mexico: Oaxaca, 21 km N Villa Diaz Ordaz, 3100 m, 7.IX.1990, leg. R. Baranowski / sifting litter, boreal forest" [ZMLU, cES]

**E t y m o l o g y :** Named after the Mexican state Oaxaca where the types were collected.

**D e s c r i p t i o n :** Body small, 1.9 mm, reddish-brown, membranous wings absent, extremities slender. Surface with moderately strong and dense *punctation*, more strong on head and pronotum. Pubescence yellowish, long and decumbent (fig. 3). Eyes hemispherical rounded, of normal size and with medium fine ommatidia. Antennae 11-segmented with a 3-segmented club. Segment I nearly long as wide, segment II smaller and slightly longer, segment III nearly 2 x long as wide. Segment IV to VIII decreasing in length, VIII rounded. Segment IX and X hardly transverse, X wider than IX, XI drop-shaped. Segments IX, X and XI are asymmetric. Pronotum with moderately rounded, with one small tooth-like anterior callosity and two small teeth on each side. Glandular porus only at the anterior callosity visible. Sides broad flattened, median area convex. Side margin distinctly rimed, also basal margin. Pronotum transverse (about 1,5 x wider than long). Elytra stout and rounded, oviform, humeral callus absent. Tarsal formula 5-5-4 (females with 5-5-5).

**C o m m e n t :** See description of *Remotophagus* nov.gen. Known only from the type locality.

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**Zusammenfassung**

Zwei neue Gattungen und drei neue Arten von Cryptophagidae werden aus den USA und Mexiko beschrieben.

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**Figs. 1-2:** (1) *Omissophagus tsoodzilianus* nov.gen. & nov.sp. holotype, male; (2) *Omissophagus sandianus* nov.gen. & nov.sp. holotype, male.



**Fig. 3-4:** (3) *Remotophagus oaxacanensis* nov.gen. & nov.sp., paratype, female; (4) *Salebius octodentatus* (MÄKLIN, 1852), female.

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