



Two new species of *Emmallodera* Blanchard, 1842 (Coleoptera: Tenebrionidae) from western Argentina

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Abstract

Two new species of the genus *Emmallodera* Blanchard (Tenebrioninae: Scotobiini) from western Argentina are described, *Emmallodera rugosa* **sp. nov.** from the Patagonian steppe and *Emmallodera telteca* **sp. nov.** from lowlands in the Mendoza province. Distributional data, habitat records, and photographs of habitus and pronota for these two new species are included, with comparisons to other known species of the genus.

Key words: Tenebrionidae, Scotobiini, *Emmallodera*, new species

Introduction

The genus *Emmallodera* Blanchard, 1842 belongs to the Scotobiini, a Neotropical tribe of Tenebrioninae, with five genera endemic to arid and semiarid lands of South America (Kulzer 1955). According to the last revision (Kulzer 1955) and subsequent descriptions (Kaszab 1964; Peña 1974), *Emmallodera* comprises 11 species and four subspecies prior to this study. They are distributed from northwestern Argentina to the southern part of Patagonia in Argentina and Chile, with two species inhabiting Tierra del Fuego island (Kulzer 1955). Species of *Emmallodera* inhabit the biogeographic provinces Patagonia and Monte (Morrone 2006).

Emmallodera species are characterized by having one spine on the profemur, the last antennomere pointed, and the tarsomeres loosely articulated to each other, with the last tarsomere more prominent (Kulzer 1955).

As part of recent research projects in central-western Argentina, several sampling explorations with pitfall traps partly filled with water, propylene glycol and detergent (Flores *et al.* 2004; Sackmann & Flores 2009) were conducted and specimens belonging to two new species of *Emmallodera* were found. The objectives of this paper are to describe and illustrate these two new species of *Emmallodera* from Argentina.

Material and methods

Type material housed until now in IADIZA will be deposited in the following collections:

ENTCNP	Colección Entomológica, Centro Nacional Patagónico (CENPAT), Puerto Madryn, Argentina,
FMNH	Field Museum of Natural History, Chicago, United States of America,
HNHM	Hungarian Natural History Museum, Budapest, Hungary,
IADIZA	Instituto Argentino de Investigaciones de las Zonas Áridas, Mendoza, Argentina,
IMCN	Instituto y Museo de Ciencias Naturales de la Universidad Nacional de San Juan, Argentina,
IFML	Fundación e Instituto Miguel Lillo, San Miguel de Tucumán, Argentina,

LEULS	Laboratorio de Entomología Ecológica, Universidad de La Serena, Chile,
MACN	Museo Argentino de Ciencias Naturales Bernardino Rivadavia, Buenos Aires, Argentina,
MLPA	Museo de La Plata, La Plata, Argentina,
MNNC	Museo Nacional de Historia Natural, Santiago, Chile,
NHMB	Natural History Museum, Basel, Switzerland

Body length was measured dorsally, along the midline, from anterior margin of labrum to elytral apex. Terminology used in the descriptions follows Kulzer (1955), without including the common characters at the generic level. Digital photographs of type specimens were taken with a Canon S50 adapted to a Leica MZ6 stereomicroscope. Final images of type specimens (Figs 1–4) were produced with the image stacking freeware CombineZM (Hadley 2006). Type material information is cited on separate labels, indicated in brackets.

Results

Emmallodera rugosa sp. nov.

(Figs 1–2)

Sackmann & Flores 2009: Appendix 1 (as *Emmallodera* sp.)

Diagnosis. Pronotum rugose; widest at midpoint or behind midpoint, anterior margin concave, with anterior angles rounded and not produced (Fig. 2). Elytron with longitudinal parallel rows of small serrate tubercles, the seventh row with 80 to 110 tubercles, without tubercles in the space between rows (Fig. 1). *Emmallodera rugosa* superficially resembles *E. perlifera* Burmeister 1875 in general body configuration, especially in body size and longitudinal rows of elytral tubercles. It differs from *Emmallodera perlifera*, which has pronotum with punctures, elytron with few tubercles in the spaces between rows of tubercles, and the seventh row with 40 to 60 tubercles. It differs from *E. crenaticostata crenaticostata* Blanchard 1842 and from *E. crenaticostata opacula* Kulzer 1955 which have pronotum with punctures and the anterior angles produced.

Description. Length 19.0–25.0 mm. Body black, dull, antennae and tarsi dark brown. **Head.** Labrum reddish, with round punctures, anterior margin concave, anterior margin with golden setae. Clypeus with regular punctures, clypeal suture not covered by frons; frons with regular punctures twice size of clypeal punctures. Antennae short, reaching midpoint of lateral margin of pronotum; antennomere 2 shorter than remainder, antennomere 3 longer than remainder, antennomeres 4 to 7 longer than wide, antennomeres 8 to 11 wider than long. **Thorax.** Pronotum (Fig. 2) wider than long with conspicuous margin, widest at midpoint or behind midpoint; anterior margin concave, with anterior angles rounded, not produced; lateral margins concave, raised; posterior margin straight to concave, posterior angles rounded; anterior margin wider than posterior margin; pronotum rugose, with punctures twice the size of elytral punctures, some punctures grouped forming wrinkles (Fig. 2). **Elytron** with seven rows of serrate tubercles (Fig. 1), the first, second sometimes only visible posteriorly, outer (third to sixth) with small, regular tubercles more densely grouped, seventh with 80 to 110 protuberances. Spaces between rows rugose, with small punctures. Suture flat. Pseudoepipleuron with two continuous rows of serrate tubercles. Epipleuron conspicuous throughout, with serrate edge lacking row of long setae, of equal width throughout. **Legs.** Femur and tibia punctate, each puncture with a central seta. Metafemur without spine, metatibia straight at base. Metafemoral–tibial articulation not reaching elytral apex.

Type material. Holotype, male: [Argentina Neuquén/ Dto. Lacar, RN (National route) 237, 24 km S/ bajada Collón Curá/ I-2005 coll: P. Sackmann] [40.548° S/ 70.739° W/ 813 m] [*Emmallodera/ rugosa* sp. n./ HOLOTYPE male/ Det. V. Silvestro and/ G. Flores 2012] (IADIZA); allotype, female: [Argentina Neuquén/ Dto. Collón Curá, RN (National route) 237/ km 1498, Corral de/ piedra XI-2004/ coll: P. Sackmann] [40.366° S/ 70.023° W/ 989 m] (IADIZA); 9 paratypes with the same data as holotype except date: XI-2004, 3 (IADIZA), 1 (NHMB); I-2005, 2 (IADIZA), 1 (FMNH); I-2006, 1 (IADIZA), 1 (HNHM); one paratype with the same data as allotype except date: I-2006 (IADIZA); one paratype: [Argentina Neuquén/ Dto. Collón Curá, RN (National route) 237/ I-2006/ coll: P. Sackmann] [40.414° S/ 70.591° W/ 895 m] (IADIZA); one paratype: [22-XI-1955/ Neuquén capital/ leg. A. Giai] (MLPA); one paratype: [X-1955/ Zapala/ Prov. Neuquén/ leg. A. Giai] (MLPA); one paratype: [Zapala. Neu-

quén/ Argentina)/ 27-XI-1955/ Col. (ection) H.J. Molinari] [leg. A. Giai] (IADIZA); one paratype: [Argentina: Río Negro, Dto. Valcheta/ Meseta Somuncurá, Pto. San Nicolás/ 15-XI-2009/ coll: G. Cheli] [41° 43` 50.19``S/ 66° 26` 15.86``W/ 898 m] (ENTCNP); one paratype: [Cerro Negro/ Chubut 25-XII-1926] (MACN); one paratype: [Chubut] (MACN).

Etymology. Named “*rugosa*” after the wrinkled pronotum, that is unique in the genus.

Distribution and habitat. Argentina (Neuquén, Río Negro and Chubut provinces) in the Central and Payunia districts within the Patagonia biogeographic province (Morrone *et al.* 2002). Most specimens were collected using pitfall traps in a steppe environment (Sackmann & Flores 2009, Appendix 1). It shares the habitat with other tenebrionid species such as *Emmallodera obesa costata* Kulzer, *Epipedonota nitida* Philippi & Philippi, *Nyctelia grandis* Fairmaire, *N. suturacava* Fairmaire, *Praocis fimbriata* Burmeister, *P. molinari* Kulzer, *Scotobius obscurus* Kulzer and *S. punctithorax* Kulzer (Sackmann & Flores 2009, Appendix 1).

***Emmallodera telteca* sp. nov.**

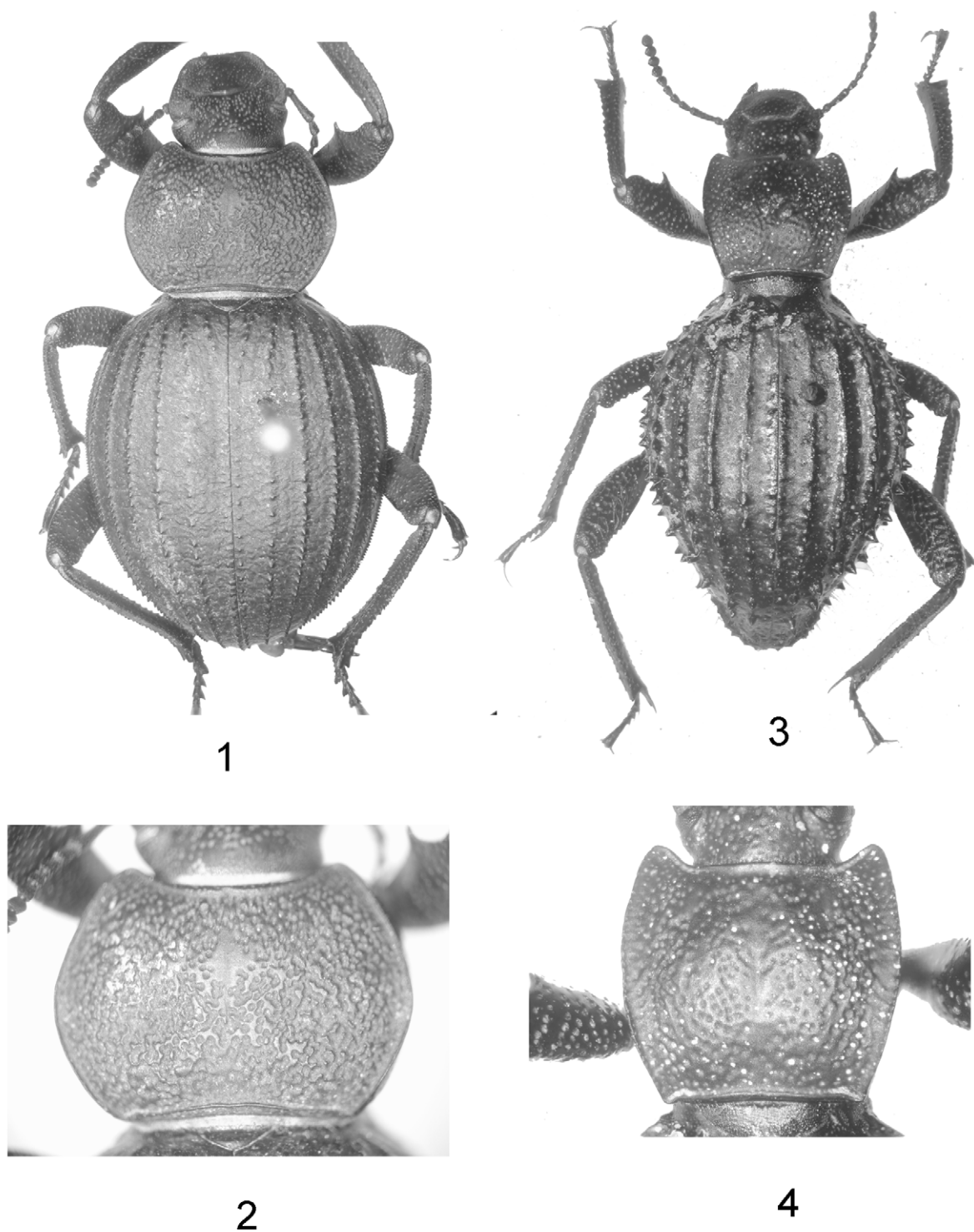
(Figs 3–4)

Flores *et al.* 2004: 77, 82 (misidentified as *Emmallodera hirtipes* Kulzer 1955).

Diagnosis. Pronotum densely punctate, anterior margin wider than posterior margin, with anterior angles produced (Fig. 4); elytron with longitudinal parallel rows of large conical tubercles, the seventh row with 18 to 23 tubercles (Fig. 3); epipleuron and femora with smooth long hairs. *Emmallodera telteca* superficially resembles *E. hirtipes* in pronotal aspect and punctures, and in having smooth long hairs on the posterior half of the epipleuron and metafemora. It differs from *E. hirtipes*, which has the anterior and posterior margins of the pronotum of the same width, and small serrate tubercles on the elytron, with 80 to 110 tubercles in the seventh row.

Description. Length 12.0–17.0 mm. Body black, shiny; antennae and tarsi dark brown. **Head.** Labrum small, with punctures and golden setae on anterior margin. Clypeus, frons with regular punctures, each with central, short seta; frons with two kinds of punctures: one same size as punctures of clypeus, another larger than punctures of clypeus; clypeal suture not covered by frons. Antennae short, reaching midpoint of lateral margin of pronotum; antennomere 2 shorter than remainder, antennomere 3 longer than remainder, antennomeres 4 to 7 longer than wide, antennomeres 8 to 11 wider than long. **Thorax.** Pronotum narrow, slightly wider than long, concave, with punctures and conspicuous margin (Fig. 4). Anterior margin wider than posterior margin, posterior margin straight to concave. Anterior angles strongly produced; lateral margins elevated, posterior angles pointed (Fig. 4). Elytron rounded, narrowing backwards, with seven longitudinal parallel rows of large conical tubercles (Fig. 3), the first and second rows only posteriorly visible, the first row very close to elytral suture, sometimes elevating the suture, the third and fourth rows of tubercles fused in anterior half forming a carina (Fig. 3); the outer, fifth to seventh rows with tubercles throughout, the seventh row with 18 to 23 tubercles (Fig. 3). Spaces between rows rugose, with small punctures and wrinkles. Pseudoepipleuron with a row of a few sparse tubercles. Epipleuron with conspicuous margin and smooth long hairs on posterior half. **Legs** with punctures, each with a central short seta. Pro-, mesofemur with sparse long hairs in distal half of ventral surface, metafemur without spur, with hairs over the entire ventral surface and in distal half of interior surface. Metatibia straight at the base. Metafemoral–tibial articulation not reaching elytral apex.

Type material. Holotype, male: [Argentina Mendoza Dto. Lavalle/ Reserva Telteca 548 m/ 32° 22` 59.58``S, 68° 03` 14.16``W/ 15-XII-1994 al 3-II-1995/ coll: G. Flores-S. Roig] [*Emmallodera/ telteca* sp. n./ HOLOTYPUS male/ Det. V. Silvestro and/ G. Flores 2012] (IADIZA); allotype, female: (IADIZA) and 20 paratypes with the same data as holotype; 54 paratypes (IADIZA) with the same data as holotype except date: 22-IX-1994 to 1-XI-1994, 5; 15-II-1996 to 25-III-1996, 15; 26-III-1996 to 2-V-1996, 4; 29-IX-1996 to 5-XI-1996, 1; 1-XII-1994 to 15-XII-1994, 5; 24-XII-1995 to 15-II-1996, 3; 3-XII-1996 to 6-I-1997, 3; 5-XI-1996 to 3-XII-1996, 2; 25-XI-1995 to 25-XII-1995, 3; 14-IV-1995 to 11-V-1995, 1; 1-III-1994, 5; 28-III-1994, 4; 25-II-1994, 1; 14-XII-1994, 1; 16-III-1995, 1; 43 paratypes with the same data as holotype, except date and collector: 3-I-2002, coll: F.C. Ocampo, 1 (IADIZA), 11-IV-2008, coll: L. Muñoz, 4 (FMNH), 4 (HNHM), 2 (IADIZA), 12-IV-2008, coll: L. Muñoz, 4 (IFML), 4 (LEULS), 5 (MACN), 13-IV-2008, coll: L. Muñoz, 4 (MLPA), 4 (MNNC), 4 (NHMB), (3 IADIZA), 2 (ENTCNP), 14-IV-2008, coll: L. Muñoz, 2 (IMCN).



FIGURES 1–4. Habitus in dorsal view and pronotum of *Emmallodera rugosa* sp. nov. (1–2) and *E. telteca* sp. nov. (3–4).

One paratype: [Argentina, San Luis/ Quines, 350 m/ 4-I-2002/ coll: F. Ocampo] (IADIZA). One paratype: [Argentina, San Juan/ Dto. 25 de Mayo/ 12 km E El Encón/ 10-XII-2002 coll: G. Flores] (IMCN).

Etymology. Named “*telteca*” because most specimens were collected at the type locality, Reserva Telteca in Mendoza, Argentina.

Distribution and habitat. *Emmallodera telteca* sp. nov. is known from the type locality in Reserva Telteca, Mendoza province, in San Juan province at 40 km from Reserva Telteca and in San Luis province, near the two first localities. It inhabits the Monte biogeographic province in its Central area (Roig-Juñent *et al.* 2001). Some

specimens were found walking on dunes during the night. Most specimens were collected using pitfall traps. It was one of the five most abundant coleopteran species in Reserva Telteca (Flores *et al.* 2004) during the survey. Fig. 6 in Flores *et al.* (2004) shows the seasonal fluctuations of this species (misidentified as *Emmallodera hirtipes*), whose abundance peaks are in spring and summer. It shares the habitat with other tenebrionid species such as *Emmallodera perlifera* Burmeister, *Epipedonota ebenina* (Lacordaire), *Entomoderes erebi* (Lacordaire), *Leptynoderes strangulata* Fairmaire, *Megelenophorus americanus* (Lacordaire), *Nyctelia puncticollis* Waterhouse, *Platyholmus dilaticollis* (Lacordaire) and *Psectrascelis nitida* Kulzer (Flores *et al.* 2004, Appendix 1).

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