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Ateuchus cujuchi n. sp., a new inquiline species of Scarabaeinae (Coleoptera: Scarabaeidae) from tuco-tuco burrows in Bolivia

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In 2012, P. Skelley and J. Wappes were investigating the insect fauna of *Ctenomys* (Blainville, 1826) (Rodentia: Ctenomyidae) burrows at low elevation in Santa Cruz de la Sierra province, Bolivia. A number of beetles were extracted from this microhabitat and among them, 50 specimens belonging to the New World genus *Ateuchus* Weber from the subfamily Scarabaeinae (Coleoptera: Scarabaeidae). The specimens were submitted to the author for identification and did not match any currently described species. Although South American species of the genus *Ateuchus* are critically in need of a modern revision, it is considered important to describe this particular species as it is the first one recorded from mammal burrows in South America and it is easily distinguishable from all other known *Ateuchus*.

Abbreviations used in the text are as follow: BDGC: Bruce D. Gill collection, Woodlawn, Ontario, Canada; BMNH: The Natural History Museum, London, U.K.; CMNC: Canadian Museum of Nature, Gatineau, Quebec, Canada; FGIC: François Génier collection, Gatineau, Quebec, Canada; MNHN: Muséum national d'Histoire naturelle, Paris, France; MNKM: Museo de Historia Natural Noel Kempff Mercado, Santa Cruz de la Sierra, Santa Cruz, Bolivia; NMPC: National Museum, Prague, Czech Republic.

Ateuchus cujuchi Génier n. sp

(Figs. 1–7)

Type locality: BOLIVIA: SANTA CRUZ, Potrerillos de Guendá, elev. 350–400 m (17°40'S, 63°27'W).

Diagnosis. Separated from all other known species by the following combination of characters: dorsum glossy; clypeus bidentate; head simply convex, lacking carina or tubercle; posterior portion of pronotum presenting a distinct impunctate surface medially; elytral lateral portion rounded, not produced into a sharp edge; pygidium distinctly punctate basally.

Description. Holotype ♂ (MNKM): **Body** (Figs. 1, 3). Elongate-oval in dorsal view, strongly convex dorsally. **Size**. Length 6.0 mm, maximum width 4.0 mm. **Color**. Dark reddish brown to black, lacking metallic sheen. **Head** (Fig. 4). Anterior margin slightly upturned; anterior edge arcuate, subangular medially, set with a very small tooth on each side of the broadly v-shaped and rather deep median emargination. Clypeus with fine irregular and confluent punctures; clypeogenal suture well-defined. Gena very finely and irregularly punctate throughout, lacking marginal bead. Vertex convex, minutely and rather densely punctate. **Pronotum**. Transverse, strongly convex; surface glossy, with minute puncture, punctures slightly larger on a small surface adjacent to genae and becoming much larger and more or less luniform posteromedially, with a small impunctate surface adjacent of the juxtasutural interstriae; anterior marginal bead well-defined throughout; lateral declivities slightly tapering downward in frontal view; lateral edges feebly sinuous in lateral view; lateral pronotal fossae very shallow. **Elytra**. Striae fine, very shallowly impressed on disc, becoming well-defined and deeply impressed on apical declivity; strial punctures elongate, slightly wider than stria, separated by 1–3 diameter on disc and apical declivity. Interstriae flat on disc, surface minutely punctate throughout. **Thoracic sterna** (Fig. 2). Proepisternum excavate anteriorly, surface of excavated portion coarsely and densely microsculptured, with fine and rather long setae, bordered posteriorly by a well-defined bead, remaining surface shallowly microsculptured and with some fine punctures. Sternellum glabrous, posterior edge produced posteriorly at proepisternal suture. Mesometasternal suture subangular medially, marginal bead fine, produced posteriorly. Mesosternal surface with irregular puncture, punctures forming fine rugulae posteromedially. Mesepisternum flat, surface microsculptured and

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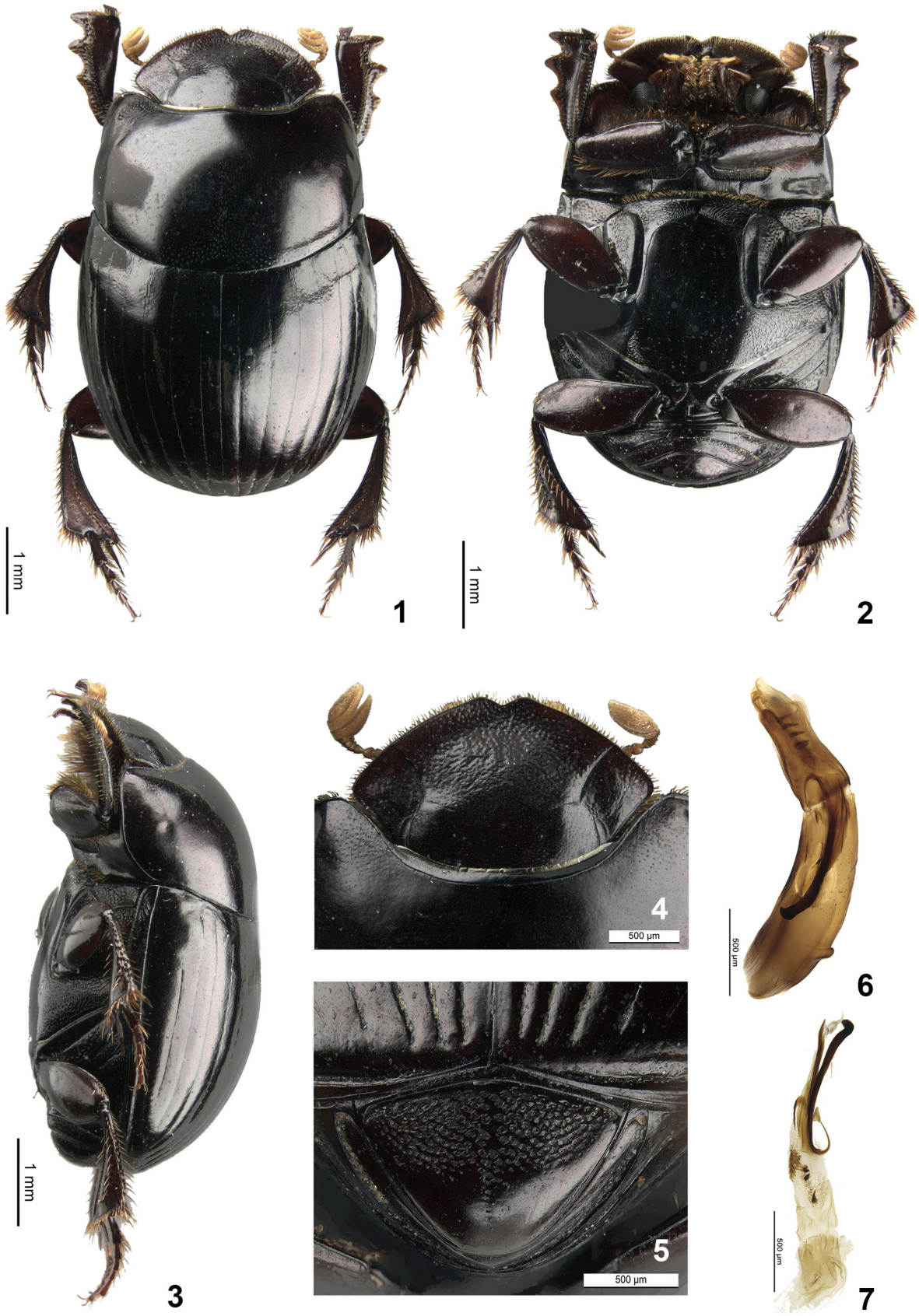

FIGURE 1–7. *Ateuchus cujuchi* **n. sp.** (Figs. 1–6. holotype; Fig. 7, paratype). 1. habitus, dorsal view; 2. habitus, ventral view; 3. habitus, lateral view; 4. head, dorsal view; 5. pygidium, frontal view; 6. aedeagus with internal sac *in situ*, lateral view; 7. internal sac extracted.

finely punctate. Metasternum evenly convex, disc rather densely and minutely punctate, surface glossy between punctures; lateral lobes punctation forming coarse oblique rugulae, surface glossy between rugulae; median lobe with surface glossy, minute punctures finer and more widely spaced anteriorly. **Legs**. Protibia tridentate; apical spur truncate apically, slightly dentate internally at apex. Profemoral surface feebly microsculptured, with fine irregular punctures, with a row of coarse setiferous puncture along external edge. Metatibia obliquely truncate apically, apical surface with uneven setal row; apical spur spiniform, as long as the combined length of metatarsal segment 1–2. Metafemoral anterior surface similar to profemoral posterior surface; posterior edge regularly arcuate; trochanteral internal edge bluntly angular, lacking setiferous punctures. Posterior coxal surface irregularly setiferously punctate on posterior half. **Abdomen**. Sternites 3–7 irregularly punctate and surface distinctly microsculptured laterally, median portion obsoletely microsculptured. Sternite 8 coarsely and irregularly punctate along segment 7 laterally, remaining surface glossy. Pygidium (Fig. 5) with surface flat, with coarse irregular and confluent punctation on basal half, strongly convex and glossy on apical half, basal sulcus fine and deep throughout, marginal bead absent apically. **Male Genitalia**. Parameres (Fig. 6) simple, tapering to apex in lateral view, apical portion rounded in dorsal view. Internal sac (Fig. 6) with 4 teeth, sclerites as in Fig. 7.

Material Studied. **BOLIVIA**: SANTA CRUZ, Potrerillos de Guendá, elev. 350–400 m (17°40'S, 63°27'W), 7–9.ix.2012, coll. P. Skelley, J. Wappes & T. Bonaso—3 ♂♂, 2 ♀♀, (incl. 5 paratypes) (FSCA, MNKM); same locality, 22–24.ix.2012, coll. P. Skelley & J. Wappes—27 ♂♂, 15 ♀♀ (incl. holotype, 41 paratypes) (BDGC, BMNH, CMNC, FGIC, FSCA, MNHN, MNKM, NMPC); same locality, 23.ix.2012, coll. P. Skelley—2 ♂♂, 1 ♀ (incl. 3 paratypes) (FSCA).

Etymology. *Cujuchi*, a name in apposition, which is the local common name for the rodent species creating the burrows in which the new species was found.

Remarks. Variation occurs in size (length 4.3–6.0 mm) and slight variation in size and depth of cephalic, pronotal and pygidial punctures. Females can be separated from males by their slender protibial spur and the smaller punctate pygidial surface.

Ateuchus cujuchi belong to a group of species having the pygidium coarsely punctate basally and will key to couplet 29(30) or *Ateuchus pygidialis* (Harold, 1869) in Balthasar's (1939) key to *Ateuchus* species. It can easily be separated from *A. pygidialis* by the small impunctate surface adjacent to the juxtasutural interstriae on the pronotum and the very feebly impressed and punctate elytral striae on the disc. All other closely related species have the coarse pronotal punctures adjacent to the juxtasutural interstriae. It also differs in having a more convex body shape and very glossy appearance. It is unclear at the moment if this is an adaptation resulting from the inquiline lifestyle of this species.

Ateuchus cujuchi were collected while excavating burrows of tuco-tuco's (*Ctenomys sp*.). These rodents live their entire lives under ground in burrows they create, isolated from the surface. Their life histories are similar to pocket gophers (*Geomyidae*) in North America. Surveys in burrows of pocket gophers (i.e. Hubbell and Goff, 1939; Skelley and Gordon, 2002) have discovered many species of insects that live only in these burrows. Besides *A. cujuchi*, specimens of other insects were collected that need identification, including an *Ataenius sp*. (Scarabaeidae: Aphodiinae) and a *Chaetodius sp*. (Hybosoridae) (Pers. Comm. P. Skelley). Thus, the burrows of tuco-tuco's may be inhabited by other interesting or rare insects. More work is needed to better know this fauna.

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