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Taxonomic redefinition of the genera *Parataenius* Balthasar and
Pseudataenius Brown, with descriptions of three new species
(Scarabaeidae: Aphodiinae: Eupariini)

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Taxonomic redefinition of the genera *Parataenius* Balthasar and *Pseudataenius* Brown, with descriptions of three new species (Scarabaeidae: Aphodiinae: Eupariini)

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Abstract. The New World euparine scarab genera *Parataenius* Balthasar, 1961 and *Pseudataenius* Brown, 1927 are revised. *Ataenius brunneus* Schmidt is transferred to the genus *Parataenius* becoming *Parataenius brunneus* (Schmidt), **new combination**. The monospecific genus *Ataenioides* Petrovitz, 1973, is synonymized with *Pseudataenius* Brown, 1927, (**new synonymy**) and the type species, *Ataenioides gracilitarsis* Petrovitz, is given the **new combination** *Pseudataenius gracilitarsis* (Petrovitz). **New species** of *Parataenius* are described from southern South America: *Parataenius selvae*, *P. estero*, and *P. martinezi*. Keys for species of both genera are presented and pertinent morphological details are illustrated.

Key words. Eupariini, *Parataenius*, *Pseudataenius*, new species, new synonym, new combinations, South America.

Introduction

In 1961, Balthasar proposed the genus *Parataenius* for *P. mirabilis* Balthasar. In studying the name-bearing types of some Neotropical taxa of Eupariini, Chalumeau (1992) stated that *P. mirabilis* is conspecific with *Aphodius derbesis* Solier (1851) and considered *Parataenius* to be formed by two species: *P. derbesis* and *P. simulator* (Harold 1868). Both of these species have been described under various names as noted in the synonymies below. In this paper, we transfer into *Parataenius* one species, *Ataenius brunneus* Schmidt (1922), and describe three new species from Bolivia and Argentina: *Parataenius selvae*, *Parataenius estero*, and *Parataenius martinezi*.

The genus *Pseudataenius* was proposed by Brown (1927) to accommodate *Ataenius socialis* Horn (1871) from the midwestern United States. Cartwright (1974) described *P. contortus* Cartwright from Florida and transferred the Cuban *Ataenius walterhorni* Balthasar to *Pseudataenius*. The latter species was recently returned to the *Ataenius terminalis* group (Stebnicka 2002), which is distributed throughout the Caribbean and penetrates into the southeastern United States. In 1973, Petrovitz proposed the genus *Ataenioides* for the Brazilian species *A. gracilitarsis* Petrovitz, whose characters partially correspond with those of *Pseudataenius*. Consequently, *Ataenioides* is here placed in synonymy with *Pseudataenius*, which now contains three species: *P. socialis*, *P. contortus*, and *P. gracilitarsis*.

Material and Methods

Materials examined and cited in the text are deposited in the following collections: **ABTS** – Andrew B. T. Smith Collection, Ottawa, ON, Canada; **ANSP** – Academy of Natural Sciences of Philadelphia, Pennsylvania, USA; **CFCB** – Carlos Flechtmann Collection, Brasilia, Brazil; **CMNO** – Canadian Museum of Nature, Ottawa, Canada (includes H. and A. Howden Collection); **CNCI** – Canadian National Collection of Insects, Ottawa, Canada; **FSCA** – Florida State Collection of Arthropods, Gainesville, Florida, USA; **HNHM** – Hungarian Natural History Museum, Budapest, Hungary; **IAZA** – Instituto Argentino de

Investigaciones de Zonas Áridas, Mendoza, Argentina; **IRSN** – Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium; **ISEA** – Institute of Systematics and Evolution of Animals, Polish Academy of Sciences, Krakow, Poland; **LEMQ** – Lyman Entomological Museum, McGill University, Ste. Anne de Bellevue, PQ, Canada; **MACN** – Museo Argentino de Ciencias Naturales, Buenos Aires, Argentina; **MHNG** – Muséum d'Histoire Naturelle, Geneva, Switzerland; **MNHN** – Museum National d'Histoire Naturelle, Paris, France; **MNKM** – Museo de Historia “Noel Kempff Mercado,” Santa Cruz de la Sierra, Bolivia; **MSNP** – Museo di Storia Naturale, Università di Pisa, Calci, Italy; **NHRS** – Naturhistoriska Riksmuseet, Stockholm, Sweden (includes A. Schmidt Collection); **NMNH** – National Museum of Natural History, Smithsonian Institution, Washington, DC, USA; **NMPC** – National Museum, Prague, Czech Republic (includes V. Balthasar Collection); **PESC** – Paul E. Skelley Collection, Gainesville, FL, USA; **SMNS** – Staatliches Museum für Naturkunde, Stuttgart, Germany; **SMTD** – Staatliches Museum für Tierkunde, Dresden, Germany; **UNSM** – University of Nebraska State Museum, Lincoln, NE, USA; **ZMHB** – Zoologisches Museum für Naturkunde der Humboldt Universität, Berlin, Germany.

Genus *PARATAENIUS* Balthasar

Parataenius Balthasar 1961: 121 – Dellacasa 1988: 271 (catalogue); Chalumeau 1992: 190-191; Stebnicka and Howden 1996: 139-140; Stebnicka 2001: 25-26; Smith and Skelley 2007: 39.

Type species: *Parataenius mirabilis* Balthasar [= *Aphodius derbesis* Solier], by monotypy.

Diagnosis. Length 3.5-6.0 mm. Body convex, robust, glabrous above; color rusty brown, dark brown to black. Head moderate in size, weakly gibbose at middle, clypeal margin obtuse or subangulate on each side of median emargination, surface usually transversely granulate-rugulose. Pronotum convex, sides and base margined, lateral edge finely crenate, fringed with pale setae. Scutellum triangular. Elytra convex, arcuate or subparallel-sided, striae impressed, punctate. Ventral surface usually with pale setae; mesosternum and metasternum nearly equal in length; abdominal sternites with minute fluting or without fluting along sutures, disc of pygidium usually weakly eroded with scarce setae. Legs moderate in length; meso- and metatibiae relatively robust, more or less dilated apically; apex of metatibia with fringe of short setae, apical spurs slender or slightly flattened, sinuate; basitarsomere of metatarsus usually arcuate. External sexual differences slight, usually disc of pygidium in male longer than in female, and exceptionally, apical spur of protibia in male hooked inwardly at the tip. Male genitalia small, lightly sclerotized.

Remarks. *Parataenius* is most similar to the Australian euparine genus *Australammoecius* Petrovitz (Stebnicka and Howden 1996), and to some Neotropical genera of Psammodiini (Verdú et al. 2005). The genus is most diverse in the Patagonian region of southern South America.

Distribution. Southeastern United States and Neotropical Region; introduced to Australia, New Zealand, Africa, and Europe (Portugal).

Key to the species of *Parataenius*

1. Head coarsely wrinkled, wrinkles broken into segments (Fig. 1-3, 7-9); pronotum with coarse punctures widely scattered along base and on sides **2**
- Head with fine, close, slightly rugose wrinkles (Fig. 4-6, 10-12); pronotum with fine to moderate, close punctures everywhere **4**
- 2(1). Body elongate, moderately convex, reddish brown (Fig. 1, 7); meso- and metatibiae slightly dilated apically, terminal spur of protibia in male hooked inwardly at apex. Argentina, Bolivia ***P. selvae*, new species**
- Body oblong-oval, strongly convex, dark castaneous to black (Fig. 2-3, 8-9); meso- and metatibiae distinctly dilated apically, terminal spur of protibia in both sexes straight **3**

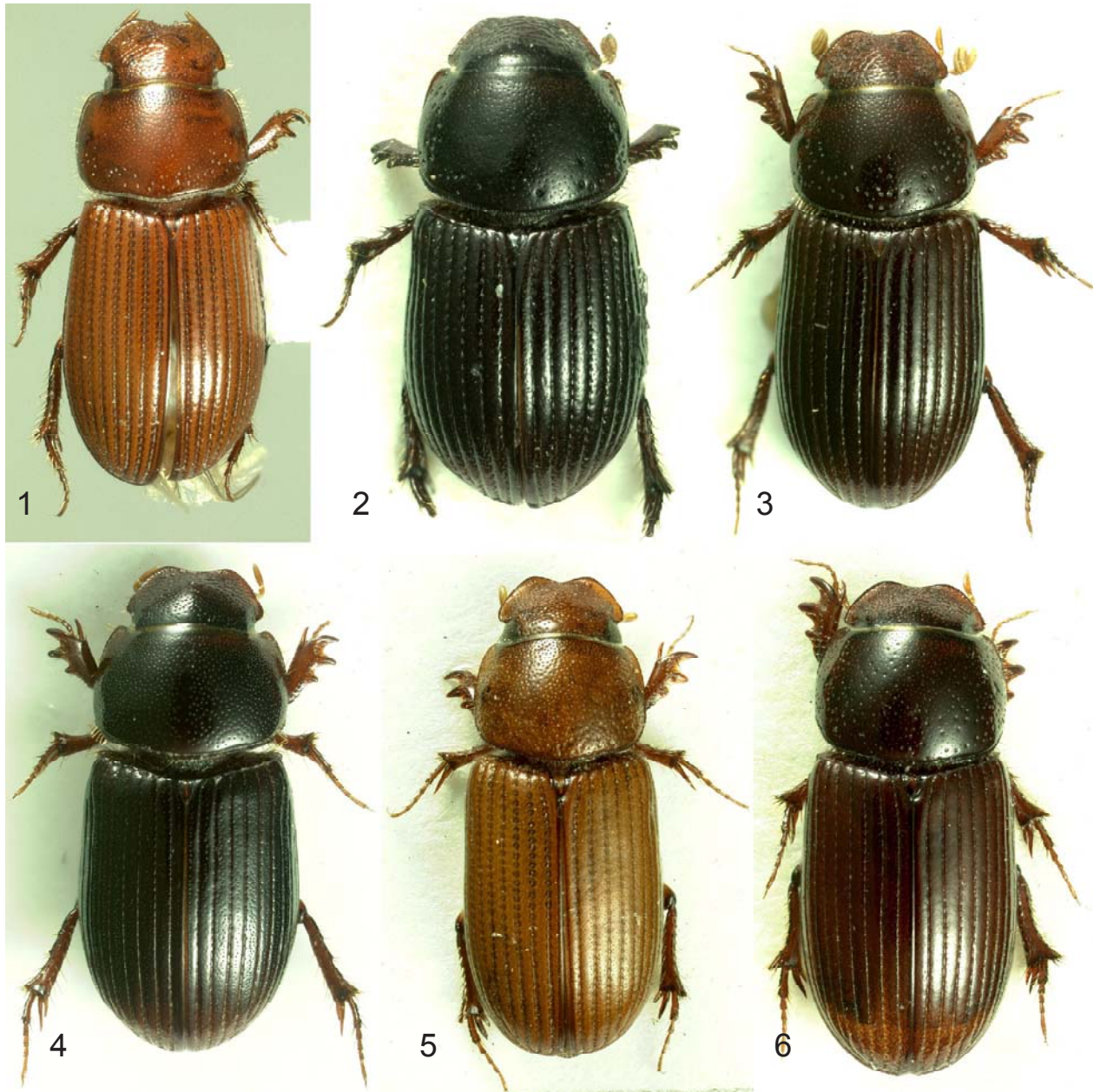


Figure 1-6. *Parataenius* spp., dorsal habitus. 1) *P. selvae*, holotype. 2) *P. estero*, holotype. 3) *P. simulator*. 4) *P. derbesis*. 5) *P. brunneus*. 6) *P. martinezi*, holotype.

- 3(2). Color black; coarse pronotal punctures very few, concentrated on sides (Fig. 2, 8); elytra about 2 times as long as pronotum. Argentina ***P. estero*, new species**
 — Color reddish brown; coarse pronotal punctures more numerous, scattered in posterior half of pronotum and on sides (Fig. 3, 9); elytra about 2.5 times as long as pronotum. Widely distributed ***P. simulator* (Harold)**
- 4(1). Pronotal punctures everywhere fine, uniformly distributed (Fig. 4, 10), punctures separated by about one puncture diameter. Southern South America ***P. derbesis* (Solier)**
 — Pronotal punctures everywhere mixed fine and moderate (Fig. 5-6, 11-12), punctures separated by 1 to 3 times the diameter of a puncture **5**

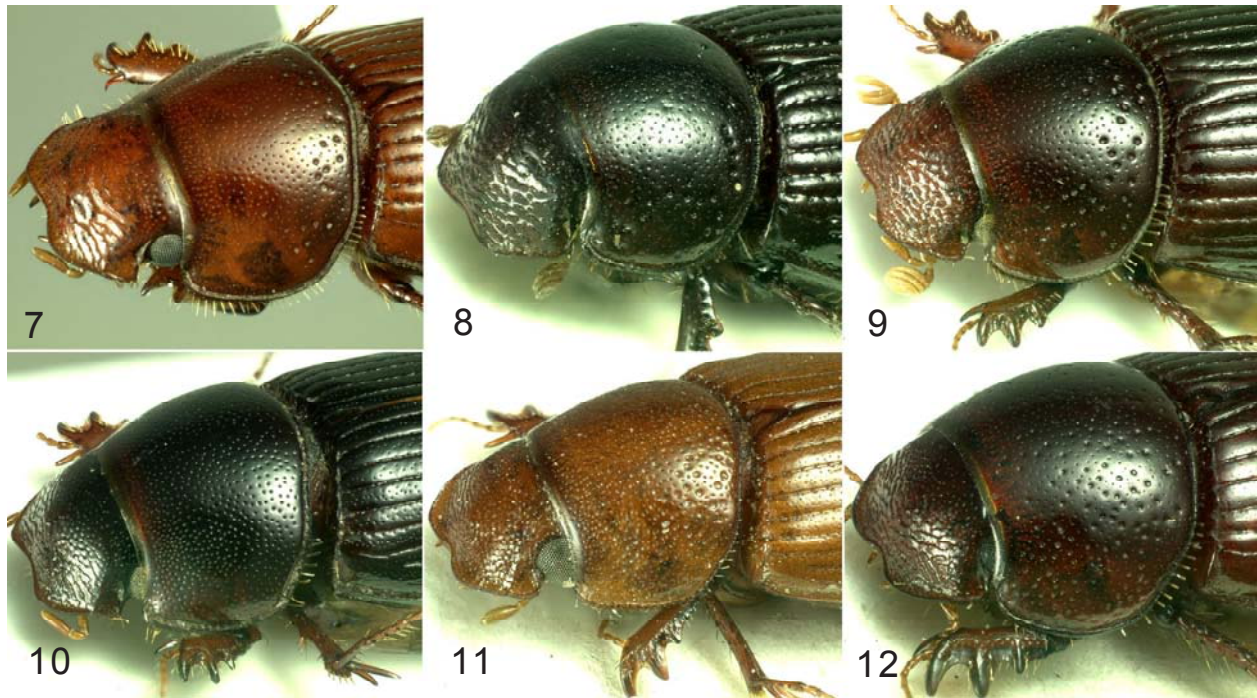


Figure 7-12. *Parataenius* spp., anterolateral view of head and pronotum. 7) *P. selvae*, holotype. 8) *P. estero*, holotype. 9) *P. simulator*. 10) *P. derbesis*. 11) *P. brunneus*. 12) *P. martinezi*, holotype.

- 5(4). Color yellowish brown; punctures of pronotum shallow, close, separated by about one times their diameter (Fig. 5, 11); elytra microreticulate, intervals finely punctate throughout. Argentina *P. brunneus* (Schmidt)
 — Color reddish brown; punctures of pronotum deep, separated by 1 to 3 times a diameter (Fig. 6, 12); elytra shiny, smooth, intervals impunctate. Argentina *P. martinezi*, new species

***Parataenius simulator* (Harold)**

Figure 3, 9, 13

Ataenius simulator Harold 1868: 85 – Schmidt 1922: 439; Cartwright 1964: 103; Woodruff 1973: 130, fig. 226; Cartwright 1974: 74; Harpootlian 2001: 43.

Psammodius schwarzi Linell 1896: 721 – Cartwright 1964: 103 (as synonym of *A. simulator*).

Parataenius granuliceps Petrovitz 1971: 102 – Chalumeau 1992: 193 (as synonym of *A. simulator*).

Ataenius (*Brancotaenius*) *lusitanicus* Paulian 1979: 66 – Chalumeau 1992: 193 (as synonym of *A. simulator*).

Parataenius simulator – Dellacasa 1988: 281 (catalogue); Chalumeau 1992: 193; Stebnicka and Howden 1996: 140-141, fig. 85, 113; Stebnicka 2001: 26, fig. 9, 11, 23; Smith and Skelley 2007: 40, fig. 13, 17, 77.

Diagnosis. Clypeal margin obtusely rounded or slightly angulate each side of middle; surface coarsely transversely rugulose, rugulae usually broken into tubercles. Pronotum convex, everywhere with fine, evenly distributed punctures separated by one diameter or more, and coarse punctures unevenly spaced, mostly in anterior and posterior angles with some scattered across base. Protibia broader than usual; meso- and metatibiae rather short, expanded apically; apex of metatibia with fringe of short setae, triangular accessory spine and slightly flattened spurs; basal segment of metatarsus arcuate, shorter than upper tibial spur.

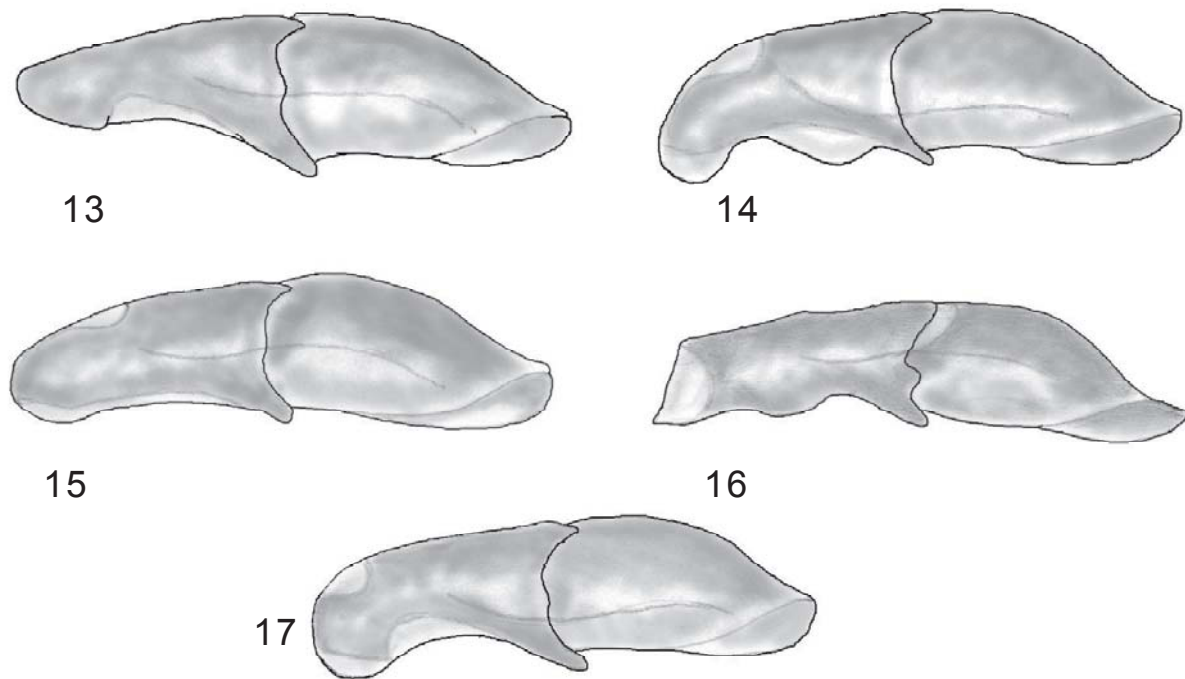


Figure 13-17. *Parataenius* spp., male genitalia. **13)** *P. simulator*. **14)** *P. derbesis*. **15)** *P. brunneus*. **16)** *P. selvae*. **17)** *P. martinezi*.

Description. Length 3.8-5.9 mm. Body convex, shiny, reddish brown to piceous (Fig. 3). Head moderate in size, clypeal margin obtusely rounded or slightly angulate on each side of rather deep median emargination, gena noticeably fringed with setae; clypeal surface coarsely transversely rugulose, rugulae usually broken into tubercles; vertex punctate. Pronotum convex, side and base margined, lateral edge finely crenate, fringed with pale setae (Fig. 9); surface with mixed punctures, everywhere with fine, evenly distributed punctures separated by 1 diameter or more, and coarse punctures unevenly spaced, mostly in anterior and posterior angles of pronotum with some scattered across base. Scutellum triangular, impunctate. Elytra convex, sides slightly arcuate, humeri finely denticulate; striae strongly impressed, deep strial punctures slightly crenating inner margins of intervals; intervals moderately convex with minute, scattered punctures or impunctate. Ventral surface shiny, partially covered with pale setae; mesosternum convex, shagreened; metasternum shiny, midline fine, lateral metasternal triangle elongate and deepest along anterior margin; abdominal sternites shiny, finely fluted along sutures, fluting longer on successive sternites, fine to moderate punctures concentrated on sides; pygidium apically with smooth, wide lip, disc scabrously eroded with scattered long setae. Meso- and metafemora smooth, shiny, finely punctate, 3-4 coarse punctures at apex, posterior femoral lines absent; protibia broader than usual; meso- and metatibiae rather short, strongly dilated apically; apex of metatibia with fringe of short setae, triangular accessory spine and slightly flattened spurs; basal segment of metatarsus slightly arcuate, shorter than upper tibial spur, longer than following 3 tarsomeres combined. Male penultimate abdominal sternite shorter than in female; male genitalia as in Fig. 13.

Type material. *Ataenius simulator*: lectotype (Argentina, Mendoza) designated by Cartwright (1973), in MNHN. *Psammodyus schwarzi*: lectotype (Florida, Jacksonville) designated by Cartwright (1964), in NMNH. *Parataenius granuliceps*: holotype (Australia, Sydney) in MHNG. *Ataenius lusitanicus*: holotype (Portugal, Minho, Foz de Neiva) in MNHN.

Specimens examined. Name-bearing types of *Ataenius simulator*, *Parataenius granuliceps* and *Ataenius lusitanicus* and other specimens (over 1000). **Argentina** – Prov. Cordoba: Tegua; San Vicente; Prov.

Santa Fe: Reconquista; Prov. Buenos Aires: Santa Teresita, Buenos Aires; Patagonia, Bahia Blanca; Prov. Mendoza; Prov. Chaco: Corres, Resistencia; Prov. Santiago del Estero: El Charco; Prov. Neuquen: Chos Malal. **Brazil** – Rio Grande do Sul, Pelotas; Capao de Camoas. **Chile** – Ñuble, Rio Pinto, Chillan; Linares, Puente Malecho, Longavi River; Bio-Bio, Los Angeles. **Mexico** – Baja California, San Jose de Cabo. **Uruguay** – Pampa del Lavalleja. **USA** – Alabama: Tuscaloosa, 14-XII-1943, BD Valentine; Florida: Alachua Co., Gainesville 28-III-1987, P. Skelley, at light; Florida: Highlands Co., Highlands Hammock State Park, 16-VI-1970, G.H. Nelson; Florida: Polk Co., Tiger Creek Preserve, 2.5 mi. SE. Babson Park, 18-19-V-2006, D. Almquist, blacklight; Georgia: Hart Co., Nuberg, VII-1978, FN Young; Georgia: Turner Co., rest area #9 on I-75, 13-V-1987, P. Skelley at light; Mississippi: Sturgis, 2-VII-1985, O. E. Hunt, at light; Mississippi: Biloxi (sic) 29-VII-1964, W.W. Gibson, blacklight; North Carolina: Raleigh, VI-9-1953, G.H. Nelson; South Carolina: Aiken, V-25-1977, O.E. Hunt, at light; South Carolina: Blackville; Pennsylvania: Easton, Sept 1957 Bowl, light; Virginia: Suffolk Co., Suffolk, 16-VIII-1994, C. L. Staines. Specimens of *P. simulator* occur in nearly every collection studied and their full data are too voluminous to present here. Those with data listed above are deposited in CMNO, FSCA, HNHN, NMNH, PESC, SMTD, ZMHB.

Remarks. *Parataenius simulator* is recognizable by its stout body and clypeal surface with coarse transverse granules. It is most common in Argentina and widely distributed in the Americas but occurs locally. It is collected through the year, mostly at light, and frequently taken in large numbers. In Australia, it has been collected in Berlese samples from logs and leaf litter. Larval stages were described by Verdú and Galante (1999). Other specimens from southern South America were studied and reported in Smith and Skelley (2007).

Distribution. Neotropical Region, southeastern United States; introduced to Australia, New Zealand, Africa and Europe (Portugal).

Parataenius derbesis (Solier)

Figure 4, 10, 14

Aphodius derbesis Solier 1851: 72.

Euparia rubripes Boheman 1858: 51 – Chalumeau 1992: 191 (as synonym of *P. derbesis*).

Euparia cribricollis Burmeister 1877: 411 – Chalumeau 1992: 191 (as synonym of *P. derbesis*).

Ataenius laborator Harold 1869: 102 – Schmidt 1922: 439-440; Chalumeau 1992: 191 (as synonym of *derbesis*).

Ataenius cribricollis – Schmidt 1908: 90; 1922: 123.

Parataenius mirabilis Balthasar 1961: 121 – Chalumeau 1992: 191 (as synonym of *P. derbesis*).

Parataenius derbesis – Dellacasa 1988: 120 (catalogue); Chalumeau 1992: 191; Smith and Skelley 2007: 49, fig. 16, 18.

Diagnosis. Clypeal margin rounded each side of deep median emargination, surface up to median convexity with more or less coarse transverse rugulae. Pronotal posterior angles obtusely rounded, surface punctures fine, equal in size, evenly distributed, separated by about one their diameter. Abdominal sternites minutely fluted along sutures. Meso- and metatibiae moderately expanded apically; basal tarsomere of metatarsus arcuate, subequal in length to upper tibial spur.

Description. Length 4.5-5.0 mm. Body dark castaneous, shiny, elytra usually lighter than disc of pronotum (Fig. 4). Clypeal margin slightly reflexed, rounded each side of deep median emargination, surface up to median convexity with more or less coarse transverse rugulae. Pronotal posterior angles obtusely rounded, lateral edge with short setae; surface punctures fine, equal in size, evenly distributed, separated by about one time their diameter (Fig. 10). Elytra slightly arcuate, humeral denticles small; striae narrow and shallow, punctures inside fine, in some striae invisible; intervals flat, each with minute close punctures from base to apex. Ventral sclerites smooth, intercoxal carina obtuse; abdominal sternites minutely fluted along sutures with scattered, setigerous punctures, eroded disc of pygidium finely granular. Femur smooth with few setae; meso- and metatibia moderately expanded, metatibia at apex with short setae and slender

spurs, upper spur arcuate; basal tarsomere of metatarsus arcuate, subequal in length to upper tibial spur and to 3 following tarsomeres combined. Male genitalia as in Fig. 14.

Type material. *Aphodius derbesis*: Neotype (Chile) designated by Chalumeau (1992), in IRSN. *Euparia rubripes*: lectotype (Buenos Aires) designated by Chalumeau (1992), in NHRS. *Euparia cribricollis*: holotype and allotype (Buenos Aires) revised by Chalumeau (1992), in MACN. *Ataenius laborator*: lectotype (Montevideo) designated by Cartwright (1973), in MNHN. *Parataenius mirabilis*: holotype (Argentina, prov. Cordoba) in NMPC (coll. Balthasar).

Specimens examined. Name-bearing types of *Aphodius derbesis*, *Euparia rubripes*, *Ataenius laborator*, and *Parataenius mirabilis* and other specimens (114). **Argentina** – Prov. San Luis: 18 km S Arizona, 250 m, 18-23.I.1982, H. & A. Howden; Prov. Cordoba: St Vincente; Prov. Jujuy: Humahuaca (CMNO); Prov. Mendoza: Reserva La Payunia, Valle del Saino, 36.07S, 68.48W, 1706 m, 6.I.2003. **Brazil** – (MS) Campo Grande, 3.VII.1995, F. Koller; Selviria, 13.X.1991, leg. Rodriguez, 30.V.1992, C. Flechtmann; Tres Lagoas, 2, 9.XI.1993, C. Flechtmann (CFCB). **Chile** – Prov. Arica, Putre, II.1947, R. Gutierrez (NMNH). **Paraguay** – Asuncion; San Bernardino (SMTD). **Uruguay** – 90 km SW Artigas, Pampa del Lavalaja, 27-30.IX. 2001 (numerous specimens), Z. Linek (ISEA, MSNP).

Remarks. *Parataenius derbesis* is externally similar to, and may be confused with, *Ataenius lenkoi* Petrovitz (Stebnicka 2007a, Fig. 96, 96a) but it differs from that species by the presence of clypeal rugulae, the pronotum with posterior angles obtuse, not truncate, and the metatibiae more expanded apically. Specimens examined were collected at black light traps and in pastures in cattle and guanaco droppings.

Distribution. Southern part of South America.

Parataenius brunneus (Schmidt), new combination

Figure 5, 11, 15

Ataenius brunneus Schmidt 1922: 102-103 – Dellacasa 1988: 273 (catalogue).

Diagnosis. Color yellowish to rusty brown. Clypeal margin reflexed, subangulate on each side of deep median emargination; surface with fine, very close transverse rugulae blending into vertical, irregular band of fine punctures. Pronotum convex with lateral tumosity, punctures mixed fine and moderate, the latter shallow, increasingly larger toward base and sides, separated by one times their diameter or less. Abdominal sternites smooth, without fluting along sutures, sternite 5 deeply grooved. Meso- and metatibiae setigerous, moderately dilated apically; spurs slender, a little sinuate; basal tarsomere of metatarsus slightly arcuate, equal in length to upper tibial spur, tarsomere 5 equal in length to combined tarsomeres 3-4.

Description. Length 3.8-4.5 mm. Body shiny, yellowish to rusty brown (Fig. 5). Clypeal margin reflexed, obtusely rounded to subangulate on each side of deep median emargination, sides slightly arcuate toward right-angled genae; clypeal surface with fine very close transverse rugulae blending into vertical, irregular band of fine punctures. Pronotum convex with lateral tumosity, posterior angles obtusely rounded, lateral edge crenulate, fringed with short setae; surface punctures mixed fine and moderate, the latter shallow, increasingly larger toward base and sides, separated by one times their diameter or less (Fig. 11). Scutellum pentagonal. Elytra widest in apical third, humeral denticles minute; striae narrow and shallow, stria punctures fine; intervals flat, each interval from base to apex with very fine, scattered punctures. Ventral sclerites smooth; meso-metasternal carina short; metasternum smooth, disc with minute scattered punctures; abdominal sternites smooth, without fluting along sutures, sternite 5 deeply grooved; surface of sternites from side to side with row of fine punctures bearing adherent, pale setae; disc of pygidium subgranulate and setaceous, not distinctly eroded. Femora smooth except few setigerous punctures apically, posterior line of metafemur short; meso- and metatibiae setigerous, moderately expanded apically; apex of metatibia with row of close setae, without accessory spine, spurs slender, slightly

sinuate; basal tarsomere of metatarsus slightly arcuate, equal in length to upper tibial spur and shorter than following 3 tarsomeres combined, tarsomere 5 equal in length to combined tarsomeres 3-4. Male pronotum wider than in female, metatibiae and tarsal segments usually thicker; male genitalia as in Fig. 15.

Type material. Holotype male, labeled 'Typus', 'Argentinien, Prov. Santiago d' Estero', '*Ataenius brunneus* m.', in NHRS.

Specimens examined. Holotype and other specimens (35). **Argentina** – Prov. La Rioja: Mascasin, November 1962, F.H. Walz (ISEA, NMNH); 6 km E Chepes, 10.XII.1978, black light trap, Woodruff & Runnacles & Cordo (FSCA, NMNH); Prov. Stgo del Estero: Colonia Dora, Oct. 1956, F.H. Walz (NMNH); Prov. Cordoba: 4 km NE Cruz del Eje, 20.II.1982, H. & A. Howden (CMNO).

Remarks. *Parataenius brunneus* is most similar to *P. selvae*, but differs from that species by characters given in the key. Nothing is known about the bionomy of this infrequently collected species.

Distribution. Argentina.

Parataenius selvae, new species

Figure 1, 7, 16

Diagnosis. Very similar to *P. brunneus* in general appearance and in color. *Parataenius selvae* differs from *P. brunneus* by its smaller body size, more slender elytra, and pronotal punctation pattern being similar to that in *P. simulator* and *P. estero*.

Description. Length 3.5-4.0 mm. Body shiny, yellowish to rusty brown (Fig. 1). Clypeal margin subangulate on each side of deep median emargination, sides slightly arcuate, genae right angled, small with clump of pale setae; clypeal surface over median convexity with coarse transverse rugulae, vertical area with few fine, scattered punctures. Pronotum moderately convex, posterior angles obtusely rounded, basal margin slightly grooved, lateral edge crenulate, fringed with short setae; surface punctures fine and coarse, fine punctures everywhere distributed, separated by more than their own diameter, coarse punctures irregularly scattered along base, lacking on sides of pronotum (Fig. 7). Scutellum pentagonal, smooth. Elytra nearly parallel sided, humeral denticles minute, basal bead very fine; striae narrow, shallowly impressed, stria punctures fine, slightly transversely crenate inner margins of intervals; intervals flat, minute scattered punctures not easily seen. Ventral sclerites smooth; meso-metasternal carina obtuse; metasternum smooth from side to side, disc faintly concave; abdominal sternites with very fine fluting along sutures, sternite 5 grooved; surface of sternites at middle smooth, on sides with longitudinal, irregular punctures bearing short, pale setae; disc of pygidium subgranulate and piliferous, not distinctly eroded. Femora smooth except few setigerous punctures at knee, posterior line of metafemur fine, short; meso- and metatibiae setigerous, moderately dilated apically; mesotibia with trace of transverse ridge; apex of metatibia with row of close setae, without accessory spine, spurs slender, faintly sinuate; basal tarsomere of metatarsus slightly arcuate, one-fourth shorter than upper tibial spur and longer than following three tarsomeres combined, tarsomere 5 longer than combined tarsomeres 3-4. Male terminal spur of protibia hooked inwardly at the tip; male genitalia as in Fig. 16. Female clypeal rugulae coarser than in male, terminal spur of protibia straight.

Type material. Holotype male: Bolivia, Santa Cruz, 5 km ESE Warnes, Hotel Rio Selva, 20.X.2000, black light, M.C. Thomas, in MNKM. Paratypes (50): 1 – same data as holotype; 11 – Argentina, Mendoza, Reserva Ecologica de Nacuñan, 34°02'42" S, 67°54'34" W, 824 m, 17.I.2003, Ocampo & Smith; 2 – Prov. Salta, Tanona, XII.1950, coll. Martinez; 2 – Argentina, Mendoza, 40 km N San Rafael, 1100 m, 6.XII.1983, L. Peña; 34 – Argentina, Mendoza, Reserva de la Biosfera Nacuñan, Médanos, 570 m, 4 Feb. 2006, 34°00'12" S, 67°55'08" W, at light, Ocampo, Ruiz, Zalazar. Paratypes are in ABTS, CMNO, FSCA, IAZA, ISEA, LEMQ, UNSM.

Etymology. The species epithet is from the type locality.

***Parataenius estero*, new species**

Figure 2, 8

Diagnosis. Very similar to *P. simulator* with stout body and pronotal punctation pattern. *Parataenius estero* differs from all other species in the genus by its short, stout body and dark coloration.

Description. Length 3.5-3.6 mm. Body stout, convex (Fig. 2) shiny black. Head moderate in size, clypeal margin obtusely rounded on each side of rather deep median emargination, genae right angled, fringed with setae; clypeal surface coarsely transversely rugulose, vertex with very few fine punctures. Pronotum strongly convex, side and base margined, posterior angles rounded, lateral edge finely crenate, fringed with rather short setae; surface everywhere with very fine, shallow, evenly distributed punctures separated by more than their own diameter, and with few coarse punctures widely scattered on each side of disc (Fig. 8). Scutellum pentagonal, impunctate. Elytra convex, sides arcuate, humeri finely denticulate; striae noticeably impressed, stria punctures crenate inner margins of intervals; intervals slightly convex with minute, scattered punctures. Ventral surface shiny, smooth; mesosternum convex, shagreened, intercoxal carina short; metasternum relatively short, smooth from side to side, disc slightly concave; abdominal sternites shiny, finely fluted along sutures, sternite 5 grooved; surface smooth at middle, irregularly, setigerously punctate on sides, penultimate sternite with row of coarse punctures; disc of pygidium subgranulate, piliferous, not deeply eroded. Meso- and metafemora smooth, shiny, 3-4 coarse punctures at apex, posterior femoral lines incomplete; meso- and metatibiae setaceous, moderately dilated apically; apex of metatibia with fringe of short setae, without accessory spine, spurs slender, faintly sinuate; basal tarsomere of metatarsus slightly arcuate, shorter than upper tibial spur and longer than following 3 tarsomeres combined, tarsomere 5 longer than combined tarsomeres 3-4. Male unknown.

Type material. Holotype female: Argentina, Santiago del Estero, Fernandez, XII.1958 (Purchase ex F.H. Walz), in NMNH. Paratype female, same data as holotype, in NMNH.

Etymology. The species epithet is from the type locality.

***Parataenius martinezi*, new species**

Figure 6, 12, 17

Diagnosis. Similar to *P. simulator*, but with different pronotal punctation and clypeal surface. Clypeal margin reflexed, rounded on each side of deep median emargination, surface transversely rugulose throughout from median convexity to vertex. Pronotal punctures mixed minute and fine to moderate, minute punctures everywhere distributed, fine punctures widely scattered on disc, become larger and closer laterally, separated by a diameter or more near lateral border. Elytral striae finely impressed, stria punctures fine; intervals with minute scattered punctures. Abdominal sternites smooth, minutely fluted along sutures, sternite 5 deeply grooved. Meso- and metatibiae setigerous, expanded apically; metatibial spurs rather thick, slightly sinuate; basal tarsomere of metatarsus shorter than upper tibial spur.

Description. Length 4.5-5.0 mm. Body shiny, dark castaneous (Fig. 6). Clypeal margin reflexed, rounded on each side of deep median emargination, sides slightly arcuate toward right-angled genae; clypeal surface transversely rugulose throughout median convexity to vertex, vertical area with fine scattered punctures. Pronotum convex, posterior angles obtusely rounded, lateral edge and posterior angles fringed with moderately, long setae; surface punctures mixed minute and fine to moderate, minute punctures everywhere distributed, fine punctures widely scattered on disc becoming larger and closer laterally, on sides separated by one times their diameter or more (Fig. 12). Scutellum pentagonal. Elytra widest in apical third, humeral denticles very small; striae narrowly, finely impressed, stria punctures fine, weakly crenate margins of intervals; intervals weakly convex, minute punctures inconspicuous, widely scattered. Ventral sclerites smooth; meso-metasternal carina short; metasternum impunctate, smooth from side to side, lateral metasternal triangle slightly alutaceous; abdominal sternites smooth, minutely fluted

along sutures, sternite 5 deeply grooved; surface of sternites impunctate and glabrous at middle, irregularly wrinkled and setaceous laterally; disc of pygidium subgranulate and setaceous, not distinctly eroded. Femora smooth except few setigerous punctures apically, posterior line of metafemur visible only at apex; lateral teeth of protibia large, apical spur relatively long; meso- and metatibia setigerous, expanded apically; apex of metatibia with row of close setae, without accessory spine, spurs rather thick, slightly sinuate; basal tarsomere of metatarsus shorter than upper tibial spur and shorter than following 3 tarsomeres together, tarsomere 5 equal in length to combined. tarsomeres 3-4. External sexual differences slight; male genitalia as in Fig. 17.

Type material. Holotype male: Argentina, Santiago del Estero, El Charco, January 1959 (Purchase ex F.H. Walz), in NMNH. Paratypes (5 females): 1 – Argentina, Santiago del Estero, Ojo de Agua, Feb. 1974, A. Martinez; 4 – Paraguay, Dep. San Pedro, W of Vaca Ihu, Est. Triangulo, 180 m, 25-28.II.1993, and 7-11.XI.1995, F. Bretzendorfer. Paratypes are in: CMNO, FSCA, ISEA, SMNS.

Remarks. *Parataenius martinezi* is most similar to *P. derbesis*, but differs from that species by having a more slender body and pronotal punctures unequal in size and less dense.

Etymology. The species is named in memory of the eminent Argentinian entomologist, Antonio Martínez.

Genus *PSEUDATAENIUS* Brown

Pseudataenius Brown 1927: 290 – Woodruff 1973: 134; Cartwright 1974: 14-16; Dellacasa 1988: 271 (catalogue). Type species: *Ataenius socialis* Horn, by monotypy.

Ataenioides Petrovitz 1973: 150. **New synonymy.** Type species: *Ataenioides gracilitarsis* Petrovitz, by monotypy.

Diagnosis. Head transverse, more flattened in male, eyes large, abdominal sternites weakly coalesced, tarsi slender, protibial spur elongate and inwardly curved in male.

Description. Length 4.3-5.0 mm. Body elongate-oblong, yellowish brown to castaneous, shiny. Head flattened, eyes large. Pronotum slightly convex, finely margined, usually with lateral fringe of setae. Elytral striae fine, intervals minutely punctate. Ventral sclerites shiny; meso-metasternal carina fine or lacking. Abdominal sternites weakly coalesced; pygidium convex, transverse carina fine, disc alutaceous, not deeply eroded. Legs of various length; protibia with 1 to 3 lateral teeth, meso- and metatibia with apical row of setae.

Remarks. The North American members of the genus exhibit strong sexual dimorphism such that females could be mistaken for separate species. The principal differences between the sexes are: general appearance of body, shape and sculpture of the head and pronotum, modification of protibia, and length of tarsi. Besides the characters given in the key, males show a yellowish brown to brown background color, while females are usually darker with elytra lighter or darker than head and pronotum. Male genitalia are similar in shape to those of the West Indian *Ataenius terminalis* group of species (Stebnicka 2002, 2007).

Distribution. Central and southern United States, Brazil, Bolivia.

Key to the species of *Pseudataenius*

1. Clypeal median emargination narrow, deep, genae obtuse, slightly prominent (Fig. 18, 20); posterior angles of pronotum emarginate (Fig. 21-22); protibia in both sexes with 3 lateral teeth. Male terminal spur of protibia long, incurved downwards (Fig. 19). Female clypeal surface with fine, close rugulae (Fig. 22). Brazil, Bolivia ***P. gracilitarsis* (Petrovitz)**
- Clypeal median emargination wide, shallow, genae right angled, protruding (Fig. 24, 26, 29, 31); posterior angles of pronotum contiguously rounded (Fig. 27-28, 32-33); protibia in male with 1

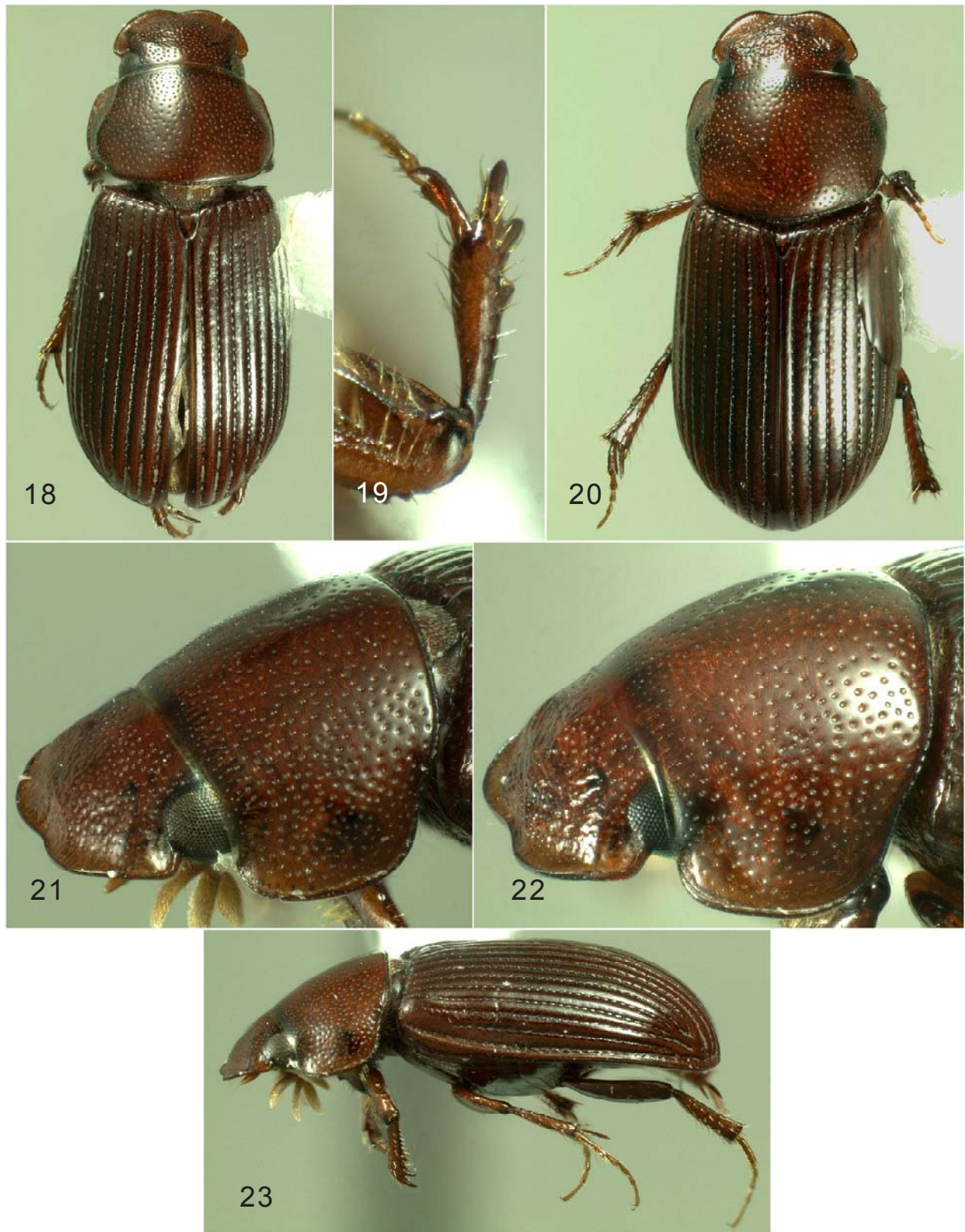


Figure 18-23. *Pseudataenius gracilitarsis*. 18) Male, dorsal habitus. 19) Male, protibia. 20) Female, dorsal habitus. 21) Male, anterolateral view, head and pronotum. 22) Female, anterolateral view, head and pronotum. 23) Male, lateral habitus.

- or 2 lateral teeth (Fig. 25, 30). Male terminal spur of protibia variously shaped. Female clypeal surface punctate or with transverse rugulae. United States 2
- 2(1). Male head minutely punctate; protibia with one lateral, apical tooth (Fig. 25), terminal spur long, twisted, widened apically and bent inward; pronotum with smooth, impunctate midline. Female clypeus deeply, closely punctate (Fig. 26-27). Eastern and southeastern United States ***P. contortus* Cartwright**
- Male head finely punctate; protibia with two lateral teeth (Fig. 30), terminal spur long, parallel, hooked apically; pronotum without smooth midline. Female clypeus strongly transversely wrinkled (Fig. 31, 33). Central United States: Louisiana and Texas to Nebraska ***P. socialis* (Horn)**

***Pseudataenius gracilitarsis* (Petrovitz), new combination**

Figure 18-23, 34

Ataenioides gracilitarsis Petrovitz 1973: 150-151 – Dellacasa 1988: 270 (catalogue).

Diagnosis. Clypeus with median emargination narrow, deep; genae obtuse, slightly prominent; posterior angles of pronotum emarginate; lateral margin lacking setal fringe; protibia in both sexes with three lateral teeth. Male terminal spur of protibia long, incurved downwards. Female clypeal surface with fine, close rugulae.

Description. Length 4.2-4.8 mm. Body (Fig. 18, 20, 23) elongate oblong, dark castaneous, shiny. Head small, flat; clypeal margin finely reflexed, obtusely rounded on each side emargination, sides nearly straight to obtuse, less than right-angled genae; Pronotum transverse, feebly convex, sides and base finely margined, sides arcuate to slightly emarginate posterior angles, lateral edge without fringe of setae; surface with quite evenly spaced, moderate punctures throughout, a little finer anteriorly, larger posteriorly, separated by about one time their diameter. Elytra subparallel, humeri with minute denticle; striae fine, moderately deep, punctures weakly crenate margins of slightly convex intervals; intervals with minute, scattered punctures, 10th interval flat, subopaque. Ventral surface shiny; mesosternum finely shagreened, meso-metasternal carina lacking; metasternum convex with minute, scattered punctures on each side of fine midline, metasternal triangle shallow; abdominal sternites very finely fluted along sutures, fine punctures extending from side to side of sternites; pygidium convex, disc weakly eroded, opaque. All femora shiny, finely punctured; meso- and metatibia slender, apex of metatibia with few short setae and thin spurs; tarsi slender, basal tarsomere of metatarsus equal in length to upper tibial spur and shorter than following 3 tarsomeres together.

Male head densely, deeply punctate, punctures increase in size from anterior margin to middle of head, everywhere separated by one their diameter or less (Fig. 21); protibia narrow, three lateral teeth unequal in size, apical tooth longest, terminal spur long, parallel, bent downward at the tip (Fig. 19); tarsi longer and slenderer than in female. Male genitalia as in Fig. 34.

Female clypeal surface with fine, close transverse wrinkles (Fig. 22); punctures of pronotum coarser than in male, tarsi shorter; protibia with 3 equal lateral teeth, terminal spur short, straight.

Type material. Holotype male, labeled [Bahia] 'Alagoinhas', '*Ataenioides gracilitarsis* Petrovitz', in MHNG; Paratype male, 'Joazeiro Brasilien', in MHNG.

Specimens examined. Holotype, paratype and other specimens (6) including females: **Brazil** – (Pe) Pernambuco, Bonito, 28.I.1903 (ISEA); (MG) Minas Gerais, Pedra Azul 700 m, X.1972, Scabra & Oliveira (CMNO); SP, Faz Campininas, Mogi Guacu, I-1-8-1970, JM & BA Campbell (CNCD); Bahia, Encruzil, 980m, XI.1972, M. Alvarenga (FSCA). **Bolivia** – Santa Cruz, Potrerillos de Guendá, 40km. NW. Santa Cruz de la Sierra, blacklight, 17°40.26S-063°27.44W, 5-20-XI-2004, B. K. Dozier (FSCA).

Remarks. The female of *Pseudataenius gracilitarsis* is here described for the first time. Both sexes of this species are most similar to the females of *P. contortus*, differing by the shape of head with straight



Figure 24-28. *Pseudataenius contortus*. **24)** Male, dorsal habitus. **25)** Male, protibia. **26)** Female, dorsal habitus. **27)** Male, anterolateral view, head and pronotum. **28)** Female, anterolateral view, head and pronotum.

genae, not curved back as in *P. contortus*, and by the shape of the pronotum which also has a punctate midline.

***Pseudataenius contortus* Cartwright**

Figure 24-28, 36

Pseudataenius contortus Cartwright 1974: 16-17, fig. 1a – Woodruff 1973: 134, fig. 290 (as unnamed species); Harpootlian 2001: 36.



Figure 29-33. *Pseudataenius socialis*. 29) Male, dorsal habitus. 30) Male, protibia. 31) Female, dorsal habitus. 32) Male, anterolateral view, head and pronotum. 33) Female, anterolateral view, head and pronotum.

Diagnosis. Male head minutely punctate; protibia with one lateral, apical tooth, terminal spur long, twisted, widened apically and bent inward; pronotum with smooth, impunctate midline. Female clypeus deeply, closely punctate.

Description. Length 4.6-5.1 mm. Male head short and broad (Fig. 24), finely reflexed clypeal margin widely rounded on each side of shallow median emargination, sides arcuate to genae, genae right angled, fimbriate and slightly flaring outward; surface of head minutely alutaceous, minutely to very finely punctate (Fig. 27). Pronotum weakly convex, sides strongly arcuate from widely rounded anterior angles to arcuate base; sides fimbriate with long setae; surface with mixed very fine and fine, evenly distributed punctures except for narrow, impunctate longitudinal midline. Elytra subparallel sided, humeri not distinctly dentate; striae fine, stria punctures shallow; intervals slightly convex with median row of very minute punctures, interval 10 flat, alutaceous. Ventral surface finely punctate; abdominal sternites flat-

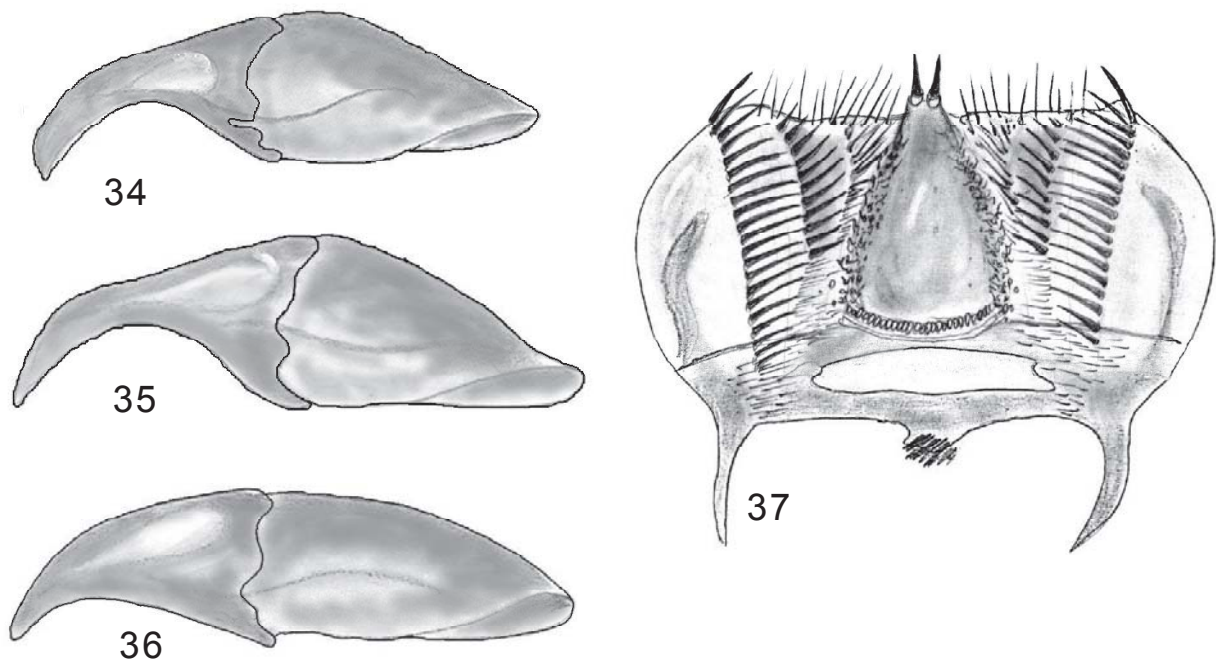


Figure 34-37. *Pseudataenius* spp. **34)** *P. gracilitarsis*, male genitalia. **35)** *P. socialis*, male genitalia. **36)** *P. contortus*, male genitalia. **37)** *P. socialis*, epipharynx.

tened at middle, finely fluted along sutures, surface minutely alutaceous with scattered punctures more noticeable at sides; apical lip of pygidium convex, shiny, eroded area finely roughened. Legs long; meso- and metafemur without posterior lines; protibia without lateral teeth, terminal tooth elongate, subparallel sided and bluntly rounded, spur long, gradually widened, slightly twisted and bent inward (Fig. 25); metatibial apex with long setae and accessory spine; tarsi very long and slender, basal tarsomere of metatarsus longer than upper tibial spur and equal in length to following 3 tarsomeres combined, tarsomere 5 as long as 2 preceding tarsomeres combined. Male genitalia as in Fig. 36.

Female color usually darker than in male; head smaller, clypeus more deeply emarginate at middle (Fig. 26); pronotum more convex, surface of head and pronotum with coarser and closer punctures (Fig. 28). Abdominal sternites convex from side to side, pygidium shorter with narrower apical lip. Legs shorter than in male; meso- and metafemora with fine posterior lines; protibia with 3 normal lateral teeth and slender terminal spur; tarsi shorter than in male.

Type material. Holotype male "Florida, 17 mi N of Tallahassee, Tall Timbers Res. Sta 25.VI-4.VIII.1967, L. Collins", no 71732 NMNH.

Specimens examined. Allotype and 10 paratypes of the same data as holotype and other specimens (88). **USA** – Alabama: Trinity, VI-17-1957, in cow dung (FSCA); Florida, Jefferson Co., Monticello, Big Bend Hort. Lab. 12.VI.1969, W. H. Whitcomb (NMNH, FSCA); Florida: Leon Co., Tall Timbers Research Station, 21-27-VI-1969, L. Collins (FSCA); Florida: Leon Co., Tallahassee, jct. I-90 and Rt. 319, 20-22-VI-1987, P. Skelley at light (PESC); Maryland: Takoma Park, 13-VII-1950, G. H. Nelson, at light (FSCA); Mississippi, Oktibbeha Co., Starkville. 10.VI.1982, W. H. Cross (NMNH); North Carolina: Camp Lejeune, 28-VI-1968, J. M. Hirst, blacklight trap; South Carolina, Colleton Co., Hwy 32 & 320, 24.VI.1948, O.L. Cartwright (NMNH).

Remarks. *Pseudataenius contortus* is very similar to *P. socialis*. The male of this species is easily recognized by its unusual protibial shape, while the female has the clypeal wrinkles inconspicuous or lacking and the pronotal surface less strongly punctate than in *P. socialis*.

Distribution. Eastern and southeastern USA – Alabama, Delaware, Florida, Louisiana, Maryland, Mississippi, New Jersey, South Carolina, Virginia.

***Pseudataenius socialis* (Horn)**

Figure 29-33, 35, 37

Ataenius socialis Horn 1871: 287 – Harold 1874: 174; Horn 1887: 76; Woodruff 1973: 135.

Pseudataenius socialis – Brown 1927: 290; Woodruff 1973: 135; Cartwright 1974: 14-16; Ratcliffe and Paulsen 2008: 239-240.

Diagnosis. Male head finely punctate; protibia with 2 lateral teeth, terminal spur long, parallel, hooked apically; pronotum without smooth midline. Female clypeus strongly transversely wrinkled; protibia with 3 lateral teeth, terminal spur straight.

Description. Length 4.2-5.0 mm. Male head short and broad (Fig. 29), finely reflexed clypeal margin widely rounded on each side of shallow median emargination, sides nearly straight to sharply rounded, fimbriate genae; surface of head uniformly, very finely punctate (Fig. 32). Pronotum weakly convex, sides widely arcuate to slightly sinuate base; sides fimbriate with long setae; surface with mixed very fine and very moderate punctures throughout. Elytra convex, long, subparallel sided humeri not dentate; striae fine, stria punctures shallow; intervals slightly convex with scattered very minute punctures, interval 10 flat. Ventral surface finely punctate; abdominal sternites finely fluted along sutures, surface minutely alutaceous with scattered punctures more noticeable at sides; apical lip of pygidium convex, shiny, eroded area finely roughened. Legs long; meso- and metafemora without posterior lines; protibia narrow with only 2 large teeth, terminal spur long, parallel with tip bent inward (Fig. 30); metatibial apex with long setae and accessory spine; tarsi very long and slender, basal tarsomere of metatarsus longer than upper tibial spur and equal in length to following 3 tarsomeres combined, tarsomere 5 as long as 2 preceding tarsomeres together. Epipharynx as in Fig. 37. Male genitalia as in Fig. 35.

Female color usually darker than in male; head smaller, clypeus more deeply emarginate at middle (Fig. 31), surface transversely wrinkled, posterior clypeus and vertex finely, closely punctate; pronotum more convex, surface with mixed very fine and moderately coarse punctures throughout, coarse punctures irregularly spaced (Fig. 33). Abdominal sternites, pygidium shorter with narrower apical lip. Legs shorter than in male; meso- and metafemur with fine posterior lines; protibia with 3 normal lateral teeth and slender terminal spur; tarsi shorter than in male.

Type material. Lectotype female “La” [Louisiana] designated by Cartwright (1974), No 3609, in ANSP.

Specimens examined. Lectotype and other specimens (75). **USA** – Kansas, Labette Co. Mound Valley. 12.VII.1962, J.R. McCoy (NMNH); Kansas: Lawrence VI-18-[19]37 (PESC); Kansas: Ottawa, VII-27-1923, Calder coll. (FSCA); Kansas: Riley Co., Manhattan, 23-Oct-1995, R. Bauernfeind, UVLL trap (FSCA); Kansas: Topeka, 15.V.1963, B. Moore (ISEA, NMNH); Nebraska: Greeley Co., jct. Hwy 281 & 91, 11-VII-2004, P. Skelley, M. Paulsen; at light in sandhill blowout (PESC); Oklahoma, Latimer Co, VI.1995, VI.1999, K. Stephan (FSCA); Louisiana (no additional data) (SMTD); Texas: Orange, 20-VI-1949, W.E. Stein (FSCA).

Remarks. Species collected at black light traps, in cow dung, and in *Cynomys* burrow - May to July.

Distribution. USA - Kansas, Louisiana, Nebraska, Oklahoma, Texas.

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