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REVIEW OF THE GENUS *LEIOPSAMMODIUS* RAKOVIČ ON THE WORLD BASIS WITH A KEY TO SPECIES FROM THE WESTERN HEMISPHERE AND DESCRIPTION OF A NEW SPECIES (COLEOPTERA, SCARABAEIDAE, APHODIINAE)

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Abstract

The genus *Leiopsammodius* Rakovič is reviewed on the world basis. The status of the genus and its geographic distribution is discussed. Total of 47 new combinations are proposed. A new species from Chile was described. A new key to species of the Western Hemisphere is presented.

In my former work (Rakovič, 1981a) I have proposed *Leiopsammodius* as a subgenus of the genus *Psammodius* Fallén within the scope of a revision of Old World species, and I have further considered this subgenus in my revision of species of the tribe Psammodiini from the Australian region (Rakovič, 1981b). Pittino et Mariani (1986) raised all the *Psammodius* Fallén subgenera to genera, and I accepted this action, since the differences between these subgenera are at least as remarkable as those between other, generally accepted genera of the tribe Psammodiini. Thus, it is necessary to propose relevant new combinations for species, which were not mentioned in the literature since this action. In addition to this, the genus *Leiopsammodius* Rakovič is represented by its 51 species in all the zoogeographic regions and the species of genus *Psammodius* s. lato from the Western Hemisphere were revised earlier (Cartwright, 1955) than the subgeneric classification was proposed. Thus, it is necessary to unify the nomenclature of the genus *Leiopsammodius* Rakovič. A new species from Chile was found during the present work, and five other species were described after the Cartwright's revision of the species from the Western Hemisphere. For this reason, a new key to the species from the Western Hemisphere was written. It was unnecessary to write similar keys for the Old World and Australian region,

since relevant species were keyed as species of *Psammодиус* sbg. *Leiopsammодиус* in my former works — Rakovič 1986, and 1981b, respectively.

Leiopsammодиус Rakovič

Psammодиус Fallén sbg. *Leiopsammодиус* Rakovič, 1981: 16.

Leiopsammодиус: Pittino et Mariani, 1986: 18.

Type-species: *Psammодиус laevicollis* Klug, 1845: t. 42, f. 10.

Critical characters: Pronotum with reduced pronotal structure (depressed areas in anterior corners, lateral elevated areas, pair of lateral impressions, sometimes also vestigial longitudinal furrow and/or vestiges of some transverse furrows, often marked by rows of coarse punctures). Elytra smooth, non-granulate. Inner wings either reduced or normally developed. Posterior femora essentially wider than intermediate ones. Posterior tibiae robust. Posterior tarsi short, their segments strongly triangularly widened.

Distribution: Africa, S. Europe, Arabic countries, Iran, Oriental and Australian regions, S. America, C. America, Mexico, Southern U.S., N. Jersey, Maryland. The genus *Leiopsammодиус* Rakovič is very widely distributed, however, by contrast to other widely distributed genera of Psammodiini (as e. g. *Rhyssemus* Mulsant), the prevalent occurrence is in southern areas. The genus was quite unknown from Europe till quite recent findings in Greece (Pelopponese), s.w. Bulgaria and S. Hungary. In the Western Hemisphere, only one species penetrates north of Southern U.S.

Key to species: *Leiopsammодиус* Rakovič species from Europe, Asia and Africa may be identified with the help of my keys (Rakovič, 1981a; Rakovič 1986), the former work includes relevant illustrations concerning most Old World species and the later one includes, in addition to this, some recently described species. My further work (Rakovič, 1981b) may be used to identify Australian species. Species from the Western Hemisphere may be identified by using paragraphs 14 to 34 in a revision by Cartwright (1955) which, however, also include 3 species (paragraphs 22 and 23) recently transferred to *Tesarius* Rakovič (Rakovič, 1984). The Cartwright's key also cannot include four rather recently described species from the Western Hemisphere and thus, it would be useful to write a new revision and also to provide illustrations, which are quite missing in the Cartwright's work. This is, however, beyond the scope of the present review.

Species removed from the genus: The author does not intend to discuss all the species with a reduced pronotal structure, which were ever classed into the genus *Psammодиус* s. lato, however, it is useful to mention the removal from the genus of these species that are consi-

dered in rather recent works. Out of palearctic animals, this is a matter of a species, mentioned in my revision (R a k o v i č, 1981a) as *Psammodius (Leiopsammodius) desertorum* (F a i r m a i r e). Dr. Pittino informed me privately that *Bipammopsus boiteli* N o r m a n d is a synonym of this name and we believe that the generic name *Bipammopsus* N o r m a n d is a synonym of *Sicardia* R e i t e r. Out of American species, *Psammodius oregonensis* C a r t w r i g h t, *P. caelatus* (L e C o n t e) and *P. mcclayi* C a r t w r i g h t, mentioned in the revision (C a r t w r i g h t, 1955) and a further species, *P. doyeri* C a r t w r i g h t, described later (C a r t w r i g h t, 1977), were recently transferred to *Tesarius* R a k o v i č (R a k o v i č, 1984).

The present status of species of the genus *Leiopsammodius* R a k o v i č: The species of the genus are listed below. It is to mention two problems. The *Leiopsammodius strumae* (C h r o m ý) **comb. n.** is very similar to, if not identical with the *L. belloi* (P i e r o t t i) **comb. n.** I have seen only single specimens of these two species and thus, I cannot draw a definite conclusions whether the differences are within a range of the variability. The *Leiopsammodius scabrifrons* (W a l k e r) (?) **comb. n.** should be, according to its description, differentiated from all the other species by the presence of oblique ridges on the head vertex, however, according to my knowledge of the tribe, the occurrence of these ridges in animals with reduced pronotal structures is essentially impossible. It is of a high probability that W a l k e r (1871) misinterpreted a transversal swelling behind the clypeofrontal suture (which may be sometimes rather V-shaped) as a pair of oblique ridges. The type of the species probably does not exist and thus, the original name *Psammodius scabrifrons* W a l k e r is most likely a nomen nudum.

Leiopsammodius abyssinicus (M ü l l e r, 1942) **comb. n.**

Psammobius abyssinicus M ü l l e r, 1942: 84.

Psammobius abyssinicus: E n d r ó d i, 1964: 340.

Psammodius (Leiopsammodius) abyssinicus: R a k o v i č, 1981a: 36.

L. c.: Sagan Omo A. O. I., Caschei.

Holotype in Nat. Hist. Mus., Trieste.

Distribution: Congo, Ethiopia, Tanzania.

Leiopsammodius aenictus (C a r t w r i g h t, 1955) **comb. n.**

Psammodius aenictus C a r t w r i g h t, 1955: 456.

L. c.: "S. F. del Chipiriri", Province of Chopardé, State of Cochabamba, Bolivia.

Holotype in coll. of A. Martínez, Buenos Aires, Argentina.

Distribution: Bolivia (State of Cochabamba).

Leiopsammodius armaticeps (F a l l, 1932) **comb. n.**

Psammobius armaticeps F a l l, 1932: 190.

Psammodius armaticeps: C a r t w r i g h t, 1955: 460.

L. c.: Pensacola, Florida.

Holotype in Fall collection, Museum of Comparative Zoology, Cambridge, Mass.
Distribution: U.S.A. (Florida, Georgia).

Leiopsammodius atopus (Cartwright, 1955) **comb. n.**

Psammodius atopus Cartwright, 1955: 457.
L. c.: "S. F. del Chipiriri", Province of Chopardé, State of Cochabamba, Bolivia.
Holotype in coll. of A. Martínez, Buenos Aires, Argentina.
Distribution: Bolivia (State of Cochabamba).

Leiopsammodius belloi (Pierotti, 1980) **comb. n.**

Psammodius belloi Pierotti, 1980.
L. c.: Vrontamas, Greece.
Holotype in Museo St. Nat., Verona.
Distribution: Greece (Pelopponese).

Leiopsammodius bidens (Horn, 1871) **comb. n.**

Psammodius bidens Horn, 1871: 293.
Psammodius bidens: Cartwright, 1955: 451; Chalumeau, 1982 (lectotype designation).
L. c.: U.S.A., probably Georgia.
Lectotype in Museum of Comparative Zoology, Harvard.
Distribution: U.S.A. (New Jersey, Maryland, Virginia, N. Carolina, S. Carolina, Georgia, Florida, Mississippi), Puerto Rico (Humacao).

Leiopsammodius bolivianus (Cartwright, 1955) **comb. n.**

Psammodius bolivianus Cartwright, 1955: 436.
L. c.: Tiguipa, Bolivia.
Holotype in U.S. National Museum, Washington.
Distribution: Bolivia (Tiguipa), Argentina (Tucumán), Paraguay (Boquerón).

Leiopsammodius brunneus (Balthasar, 1961) **comb. n.**

Psammobius brunneus Balthasar, 1961: 126.
L. c.: Rio Segundo, Argentina.
Holotype in National Museum, Prague.
Distribution: Argentina (Rio Segundo).

Leiopsammodius cameneni (Chalumeau, 1976) **comb. n.**

Psammodius cameneni Chalumeau, 1976: 127.
L. c.: Guadeloupe, Viard.
Holotype and **Allotype** in coll. F. Chalumeau, Inst. de Rech. Ent. de la Caraibe, Pointe-a-Pitre, Guadeloupe.
Distribution: French Antilles (Guadeloupe).

Material examined: **Holotype** (male) — Chile B., ex coll. Brown, ex coll. Candéze, Coll. R. I. Sc. N. B.

Holotype in Institut royal des sciences naturelles de Belgique, Bruxelles.

Oval, broader behind, shining, castaneous, 3.6 mm, length-to-width ratio 1 : 0.454.

Head convex, clypeus shallowly emarginate anteriorly, with obtuse, slightly lifted angles each side of emargination. Clypeus lateral margins nearly straight, strongly bent inward just before genae (Fig. 1). Genae protruding, separated from clypeus by small notches. Clypeus lateral margins as well as genae haired. Head anteriorly and medially granulate; anteriorly the granules smaller, distinctly bounded, medially larger and rather indistinctly bounded. Posteriorly a pair of elevate swellings. Depressed areas before and after the swellings coarsely punctate.

Pronotum transversal, length-to-width ratio 1 : 1.53, lateral margins strongly convergent anteriorly (Fig. 2). Posterior angles and lateral margins haired, basal margins with a margin line. Pronotum surface with coarse punctures, arranged prevalently along distinctly impressed vestiges of second and third transverse furrows and posterior longitudinal furrow (see Note to the key to species); posterior longitudinal furrow long, extended up to anterior third of pronotum. Some coarse punctures located at sites of fourth and fifth transverse furrows, which are, however, absent.



Figs. 1—3. *Leiopsammodius chilensis* sp. n.: 1 — the head (dorsal view); 2 — the pronotum (dorsal view); 3 — the aedoeagus (lateral view). Scale line — 1 mm for the pronotum, 0.5 mm for the head, 0.25 mm for the aedoeagus

Elytra broader posteriorly, length-to-width ratio 1 : 0.723, pronotum length — to — elytra length ratio 1 : 2.53, with ten striae and ten intervals. Tenth elytral interval flat, remaining intervals convex. Punctures in striae rather indistinct, slightly notching intervals. Intervals very finely, microscopically punctate.

Posterior tibiae widened apically; upper terminal spur about as long as first to third tarsal segments combined.

Ventral surface reddish brown. Femora as well as abdominal sternites haired. Abdominal sternites finely alutaceous, moderately shining. Metasternum shining, each side with a row of 3 coarse setae-bearing punctures

along posterior margin of metasternal plate. Femora with two longitudinal rows of setae, parallel with anterior and posterior margin. In addition to this, posterior femora with an oblique row of setae in their apical third.

For shape of aedoeagus see Fig. 3.

Leiopsammodius chipiririi (C a r t w r i g h t, 1955) **comb. n.**

Psammodius chipiririi C a r t w r i g h t, 1955: 454.

L. c.: "S. F. del Chipiriri", Province of Chaparé, State of Cochabamba, Bolivia.

Holotype in coll. of A. Martínez, Buenos Aires, Argentina.

Distribution: Bolivia (State of Cochabamba).

Leiopsammodius cruentus (H a r o l d, 1867) **comb. n.**

Psammodius cruentus H a r o l d, 1867: 282.

Psammobius cruentus: S c h m i d t, 1922: 478.

Psammodius cruentus: C a r t w r i g h t, 1955: 461.

L. c.: Chile?

Type — unknown location.

Distribution: U.S.A. (S. Carolina, Georgia), Argentina (Salta, Tucumán, Santiago del Estero, Córdoba, La Rioja, San Juan, Mendoza, Buenos Aires), Paraguay (Boquerón), Bolivia (Tiguipa).

Leiopsammodius decuiella (C h a l u m e a u, 1981) **comb. n.**

Psammodius decuiella C h a l u m e a u, 1981: 176.

L. c.: Río Brazo Seco, Provincia de Oriente, Cuba.

Holotype in Muséum National d'Histoire Naturelle de Paris.

Distribution: Cuba (Provincia de Oriente).

Leiopsammodius endroedii (R a k o v i č, 1981) **comb. n.**

Psammodius (*Leiopsammodius*) *endroedii* R a k o v i č, 1981a: 39.

L. c.: Wankie N. Park, Rhodesia.

Holotype in Hungarian National Museum, Budapest.

Distribution: Rhodesia.

Leiopsammodius evanidus (P é r i n g u e y, 1901) **comb. n.**

Psammobius evanidus P é r i n g u e y, 1901: 446.

Psammobius evanidus: S c h m i d t, 1922: 479; E n d r ó d i, 1964: 338.

Psammodius (*Leiopsammodius*) *evanidus*: R a k o v i č, 1981a: 30 (neotype designation).

L. c.: Cape, Durabrody.

Neotype in South African Museum, Pretoria.

Distribution: RSA, Namibia.

Leiopsammodius fimbriatus (Cartwright, 1955) **comb. n.**

Psammodius fimbriatus Cartwright, 1955: 458.

L. c.: "S. F. del Chipiriri", Province of Charapé, State of Cochabamba, Bolivia.

Holotype in coll. of A. Martínez, Buenos Aires, Argentina.

Distribution: Bolivia, State of Cochabamba.

Leiopsammodius formosus (Cartwright, 1955) **comb. n.**

Psammodius formosus Cartwright, 1955: 453.

L. c.: San Blas, Nayarit, México.

Holotype in U.S. National Museum, Washington.

Distribution: Mexico (Nayarit).

Leiopsammodius freyi (Petrovitz, 1961) **comb. n.**

Psammobius freyi Petrovitz, 1961: 128.

Psammodius (Leiopsammodius) freyi: Rakovič, 1981b: 18.

L. c.: Beswick, North Territory, Australia.

Holotype in Museum Georg Frey, Tutzing bei München.

Distribution: Australia (North Territory).

Leiopsammodius gestroi (Clouët, 1900) **comb. n.**

Psammobius gestroi Clouët, 1900: 13.

Psammobius gestroi: Schmidt, 1922: 480; Balthasar, 1964: 535.

Psammodius (Leiopsammodius) gestroi: Rakovič, 1981a: 38.

L. c.: Birmania, Bhamo.

Lectotype in Museo di Genova.

Distribution: Afghanistan, Pakistan, Nepal, Burma, Cambodia.

Leiopsammodius globatus (Petrovitz, 1972) **comb. n.**

Psammobius globatus Petrovitz, 1972: 163.

L. c.: Brasilien, S. P., Sa. de Paranapiacaba.

Holotype in Muséum d'Histoire Naturelle de Geneve.

Distribution: Brazil.

Leiopsammodius haruspex (Ádám, 1980) **comb. n.**

Psammodius haruspex Ádám, 1980: 17.

L. c.: Algyó, Szeged.

Holotype in Hungarian National Museum, Budapest.

Distribution: Hungary.

Leiopsammodius hydropticus (Horn, 1887) **comb. n.**

Psammodius hydropticus Horn, 1887: 97.

Psammodius hydropticus: Cartwright, 1955: 444.

Psammobius hydropticus: Schmidt, 1922: 444.

L. c.: Savannah, Ga.

Holotype in Academy of Natural Sciences of Philadelphia.

Distribution: U.S.A. (N. Carolina, S. Carolina, Georgia, Mississippi).

Leiopsammodius (?) *implicatus* (Schmidt, 1925) **comb. n.**

Psammobius implicatus Schmidt, 1925: No. 8, p. 3.

Psammobius (?) (*Leiopsammodius*) *implicatus*: Rakovič, 1981a: 19.

L. c.: Kimberley-Distr., North West Australia.

Holotype probably in Naturhistoriska Riksmuseet, Stockholm.

Distribution: Australia (West Australia).

Leiopsammodius indefensus (Schmidt, 1909) **comb. n.**

Psammobius indefensus Schmidt, 1909: 60.

Psammobius indefensus: Schmidt, 1922: 475.

Psammobius indefensus: Cartwright, 1955: 439.

L. c.: Valparaíso, Chile.

Holotype in Schmidt collection, Naturhistoriska Riksmuseum, Stockholm.

Distribution: Chile (Valparaíso, Quillota).

Leiopsammodius indicus (Harold, 1877)

Psammobius indicus Harold, 1877: 100.

Psammobius indicus: Schmidt, 1922: 481; Paulian, 1942: 130; Endrődi, 1964: 339; Balthasar, 1964: 537.

Psammobius indicus: Nomura, 1973: 44.

Psammobius (*Leiopsammodius*) *indicus*: Rakovič, 1981a: 23.

Leiopsammodius indicus: Pittino, 1984: 321.

Psammobius sculpticollis Fairmaire, 1877: 370.

L. c.: Celebes, Macassar.

Holotype in Museo di storia naturale di Genova.

Distribution: Zair, Tanzania, Kenya, Ethiopia, RSA, Rhodesia, Madagascar, The Mascarenes, Seychelles, India, Ceylon, Java, Cocos Keeling Island, Taiwan.

Leiopsammodius inflatus (Cartwright, 1955) **comb. n.**

Psammobius inflatus Cartwright, 1955: 440.

L. c.: Monte Hermoso, District of Cormel Dorrego, Province of Buenos Aires, Argentina.

Holotype in coll. of A. Martínez, Buenos Aires, Argentina.

Distribution: Argentina (Prov. of Buenos Aires).

Leiopsammodius insulcatus (Schmidt, 1916) **comb. n.**

Psammobius insulcatus Schmidt, 1916: 102.

Psammobius insulcatus: Cartwright, 1955: 450.

L. c.: Blumenau, Santa Catarina, Brazil.

Holotype in Schmidt collection, Naturhistoriska Riksmuseum, Stockholm.
Distribution: Brazil (Santa Catarina).

Leiopsammodius integer (Bates, 1887) **comb. n.**

Psammodius integer Bates, 1887: 104.
Psammodius integer: Cartwright, 1955: 452.
Psammobius integer: Schmidt, 1922: 477.
L. c.: Veracruz, México.
Holotype in British Museum of Natural History, London.
Distribution: Mexico (Veracruz).

Leiopsammodius japonicus (Harold, 1878) **comb. n.**

Psammobius japonicus Harold, 1878: 69.
Psammobius japonicus: Schmidt, 1922: 480; Balthasar, 1964: 536.
Diastictus nomurai Tesař, 1949: 60.
Psammodius (Leiopsammodius) japonicus: Rakovič, 1981a: 35.
L. c.: ?
Holotype — unknown location.
Distribution: Japan.

Leiopsammodius jelineki (Rakovič, 1977) **comb. n.**

Psammodius jelineki Rakovič, 1977: 318.
Psammodius (Leiopsammodius) jelineki: Rakovič, 1981a: 318.
L. c.: Tis, SE Iran.
Holotype in National Museum, Prague.
Distribution: Iran.

Leiopsammodius kenyensis (Rakovič, 1978b) **comb. n.**

Psammodius kenyensis Rakovič, 1978: 122.
Psammodius (Leiopsammodius) kenyensis: Rakovič, 1981a: 24.
L. c.: Nairobi, Kenya.
Holotype in Zoological Museum of the University, Helsinki.
Distribution: Kenya (Nairobi, Kibwezi).

Leiopsammodius laevicollis (Klug, 1845)

Psammodius laevicollis Klug, 1845: t. 42, f. 10.
Psammodius (Leiopsammodius) laevicollis: Rakovič, 1981a: 21.
Psammobius laevicollis: Schmidt, 1922: 480; Paulian, 1942: 130; Endrődi, 1964: 339; Balthasar, 1964: 537.
Leiopsammodius laevicollis: Pittino, 1984: 320.
Psammodius pallidus Reitter, 1892: 161.
Psammodius chobauti D'Orbigny, 1898: 148.
L. c.: "Arab. d. ihrb".
Holotype in Museum für Naturkunde der Humboldt-Universität, Berlin.
Distribution: Algeria, Tunisia, Arabic countries, Sudan, Ethiopia, Somalia, Djibouti, Zair.

Leiopsammodius laevis (Paulian, 1942)

Psammobius laevis Paulian, 1942: 130.

Psammobius laevis: Enđrđđi, 1964: 337.

Psammodius (*Leiopsammodius*) *laevis*: Rakovič, 1981a: 29.

Leiopsammodius laevis: Pittino, 1984: 322.

L. c.: Chad, N'Guigmi.

Holotype in Muséum national d'histoire naturelle, Paris.

Distribution: Mali, Benin, Chad, Zair, Ethiopia, Yemen.

Leiopsammodius litoralis (Lea, 1923) **comb. n.**

Psammodius litoralis Lea, 1923: 12.

Psammodius (*Leiopsammodius*) *litoralis*: Rakovič, 1981b: 16.

L. c.: New South Wales.

Holotype in South Australian Museum, Adelaide.

Distribution: Australia (New South Wales).

Leiopsammodius liviae (Pittino, 1979) **comb. n.**

Psammodius liviae Pittino, 1979: 149.

Psammodius (*Leiopsammodius*) *liviae*: Rakovič, 1981a: 39.

L. c.: Birmania, da Prome a Minhla (fiume Irrawaddi).

Holotype in Muso di Storia Naturale di Genova.

Distribution: Burma, Laos.

Leiopsammodius malkini (Cartwright, 1946) **comb. n.**

Psammodius malkini Cartwright, 1946: 90.

Psammodius malkini: Cartwright, 1955: 443.

L. c.: MacDill Field, Tampa, Fla.

Holotype in U.S. National Museum of Natural History.

Distribution: U.S.A. (Florida).

Leiopsammodius manaosi (Cartwright, 1955) **comb. n.**

Psammodius manaosi Cartwright, 1955: 437.

L. c.: Manáos, Amazonas, Brazil.

Holotype in Muséum de Londres.

Distribution: Brazil (Amazonas).

Leiopsammodius mapirii (Cartwright, 1955) **comb. n.**

Psammodius mapirii Cartwright, 1955: 459.

L. c.: Near mouth of Río Mapiri, Río Beni, La Paz, Bolivia.

Holotype in U.S. National Museum, Washington.

Distribution: Bolivia (La Paz).

Leiopsammodius martinezi (Cartwright, 1955) **comb. n.**

Psammobius martinezi Cartwright, 1955: 449.
L. c.: Nova Friburgo, State of Rio de Janeiro, Brazil.
Holotype in coll. of A. Martínez, Buenos Aires, Argentina.
Distribution: Brazil (State of Rio de Janeiro).

Leiopsammodius modestus (Péringuey, 1901) **comb. n.**

Psammobius modestus Péringuey, 1901: 446.
Psammobius modestus: Schmidt, 1922: 477; Endrődi, 1964: 337.
Psammobius (*Leiopsammodius*) *modestus*: Rakovič, 1981a: 27.
L. c.: Natal.
Holotype in South African Museum, Cape Town (according to information from the Transvaal Museum, Pretoria).
Distribution: RSA (Natal).

Leiopsammodius pelluscens (Petrovitz, 1961)

Psammobius pelluscens Petrovitz, 1961: 133.
Psammobius gestroi: Balthasar, 1964: 535 (Part.).
Psammobius pelluscens: Rakovič, 1978a: 140 sp. pr.
Psammobius (*Leiopsammodius*) *pelluscens*: Rakovič, 1981a: 27.
Leiopsammodius pelluscens: Pittino, 1984: 322.
L. c.: Umakot, Scinde, Eastindia.
Holotype in Muséum National d'Histoire Naturelle de Geneve.
Distribution: India, Pakistan.

Leiopsammodius placidus (Schmidt, 1911) **comb. n.**

Psammobius placidus Schmidt, 1911: 38.
Psammobius placidus: Schmidt, 1922: 478.
Psammobius placidus: Cartwright, 1955: 442.
L. c.: Argentina.
Holotype in Schmidt collection, Naturhistoriska Riksmuseum, Stockholm.
Distribution: Argentina.

Leiopsammodius rufus (Rakovič, 1981b) **comb. n.**

Psammobius (*Leiopsammodius*) *rufus* Rakovič, 1981b: 17.
L. c.: Bandi, N.S.W., Australia.
Holotype and **allotype** in Commonwealth Scientific and Industrial Research Organization, Canberra City.
Distribution: Australia (West Australia, North Territory, Queensland, South Australia, Victoria).

Leiopsammodius santaremi (Cartwright, 1955) **comb. n.**

Psammobius santaremi Cartwright, 1955: 438.
L. c.: Santarém, Pará, Brazil.

Holotype in Muséum de Londres.
Distribution: Brazil (Pará).

Leiopsammodius scabrifrons (Walker, 1871) (?) **comb. n.**

Psammobius scabrifrons Walker, 1871: 12.
Psammobius scabrifrons: Schmidt, 1922: 475; Balthasar, 1964: 535.
Psammobius (Leiopsammodius) scabrifrons: Rakovič, 1981a: 40.
L. c.: Kairo.
Holotype probably destroyed.
Distribution: Egypt.

Leiopsammodius seychellensis (Rakovič, 1979) **comb. n.**

Psammobius (Leiopsammodius) seychellensis Rakovič, 1979: 633.
Psammobius (Leiopsammodius) seychellensis: Rakovič, 1981a: 31.
L. c.: Gran Anse, Praslin, Seychelles.
Holotype in Musée Royal de l'Afrique Centrale, Tervuren.
Distribution: Seychelles, Madagascar, Kenya, RSA.

Leiopsammodius soledadei (Petrovitz, 1961) **comb. n.**

Psammobius soledadei Petrovitz, 1961: 130.
L. c.: Soledade bei Jozeiro.
Holotype in Muséum d'histoire naturelle, Geneve.
Distribution: Brazil.

Leiopsammodius somalicus (Petrovitz, 1961) **comb. n.**

Psammobius somalicus Petrovitz, 1961: 129.
Psammobius (Leiopsammodius) somalicus: Rakovič, 1981a: 22.
L. c.: Uarsciek, Benadir-Prov., Somalia.
Holotype in Frey Museum.
Distribution: Somalia.

Leiopsammodius strumae (Chromý, 1983) **comb. n.**

Psammobius (Leiopsammodius) strumae Chromý, 1983: 210.
L. c.: Kresna.
Holotype in National Museum, Prague.
Distribution: SW Bulgaria.

Leiopsammodius subciliatus (Harold, 1869) **comb. n.**

Psammobius subciliatus Harold, 1869: 103.
Psammobius subciliatus: Schmidt, 1922: 479; Endrődi, 1964: 338.
Psammobius (Leiopsammodius) subciliatus: Rakovič, 1981a: 25.
L. c.: ?
Holotype — unknown location.
Distribution: Ethiopian Region (SW Africa, S. Africa, O. Africa).

Leiopsammodius substriatus (Balthasar, 1941) **comb. n.**

Psammobius substriatus Balthasar, 1941: 169.

Psammobius substriatus: Endrődi, 1964: 339.

Psammobius (Leiopsammodius) substriatus: Rakovič, 1981a: 32.

L. c.: Südwestafrika, Okahandja, Farm Okaundua.

Holotype in National Museum, Prague.

Distribution: Namibia.

Leiopsammodius viti (Chalumeau, 1983) **comb. n.**

Psammobius viti Chalumeau, 1983: 83.

L. c.: Guadeloupe.

Holotype in Muséum d'Histoire Naturelle de Geneve.

Distribution: Guadeloupe.

Keys to species

For the key to species from Europe, Asia and Africa see Rakovič (1986).

For the key to species from the Australian region see Rakovič (1981b).

For the key to species from the Western Hemisphere see below.

Key to species from the Western Hemisphere

Note to the key:

For the efficient use of the key, it is necessary to understand properly the thesis and antithesis 1 (24), which serves as a basis of dividing the species of the Western Hemisphere into two large groups. On the pronotum of Psammodiini with a complete pronotal structure (e.g. *Psammobius* Fallén, *Rhyssemus* Mulsant, *Rhyssemodes* Reitter, *Granulopsammodius* Rakovič, etc.) there are five transverse ridges and five transverse furrows, the first and third furrows being usually deeper than the remaining ones. In Psammodiini with a reduced pronotal structure (e.g. *Pleurophorus* Mulsant, *Platytomus* Mulsant, *Leiopsammodius* Rakovič, etc.), there are only vestiges of this structure, in some species only in the form of two pairs of more or less distinct lateral impressions corresponding to the ends of the first and third furrows — thesis 24. In other species, there are vestiges of some furrows (usually at least of the third one), frequently marked by coarse punctures arranged in rows (see e.g. Fig. 2) — thesis 1.

1 (24) Pronotum with at least one, more or less distinct, vestigial transverse furrow.

2 (9) Species smaller than 3 mm, width less than half the length.

3 (4) Longitudinal furrow of metasternal plate indistinct. Reddish brown, 2.5 to 2.8 mm. — Bolivia.

L. bolivianus (Cartwright) **comb. n.**

4 (3) Metasternal plate with a distinct longitudinal furrow.

5 (6) Metasternal plate smooth. Reddish brown, 2.7 mm. — Guadeloupe.

L. viti (Chalumeau) **comb. n.**

6 (5) Metasternal plate finely punctate.

- 7 (8) Width of posterior femora equals one-half of their length. Width of posterior tibia at apex equals one-third of tibia length. Reddish brown, 2.5 mm. — Brazil (Amazonas).
L. manaosi (C a r t w r i g h t) **comb. n.**
- 8 (7) Width of posterior femora exceeding one-half of their length. Width of posterior tibia at apex equals one-half of tibia length. Reddish brown, 2.5 mm. — Brazil (Pará).
L. santaremi (C a r t w r i g h t) **comb. n.**
- 9 (2) Either larger species than 3 mm, or species whose width exceeds half the length.
- 10 (15) Elytral margins fimbriate, with fairly long hairs.
- 11 (14) Tenth elytral interval very flat or even concave: remaining intervals convex.
- 12 (13) Elytra distinctly broader behind. Pronotum remarkably narrowed anteriorly. Metasternum with only three large punctures, arranged in oblique row along posterior metasternal plate margin. Reddish brown, 3.6 mm. — Chile.
L. chilensis **sp. n.**
- 13 (12) Elytra only slightly broader behind. Pronotum only slightly narrowed anteriorly. Large punctures also present close to metasternum lateral margins. Reddish brown, 3.3 mm. — Chile.
L. indefensus (S c h m i d t) **comb. n.**
- 14 (11) Tenth elytral interval convex, not differing from remaining ones. Dark castaneous, 3.8 mm. — Argentina (Prov. of Buenos Aires).
L. inflatus (C a r t w r i g h t) **comb. n.**
- 15 (10) Elytral margins smooth, not fimbriate.
- 16 (17) Eyes vestigial, not visible from above. Rufocastaneous, 2.6 to 3.5 mm. — U.S.A. (N. Carolina, S. Carolina, Georgia, Alabama, Mississippi).
L. hydropicus (H o r n) **comb. n.**
- 17 (16) Eyes normally developed, visible from above.
- 18 (19) Upper terminal spur of posterior tibia longer than first tarsal segment, however, shorter than first and second tarsal segments combined. Reddish brown, 4.2 mm. — Argentina.
L. brunneus (B a l t h a s a r) **comb. n.**
- 19 (18) Upper terminal spur of posterior tibia as long as first and second tarsal segments combined.
- 20 (23) Longitudinal furrow of metasternal plate either deeply impressed medially or fine.
- 21 (22) Clypeus with rounded angles. Pronotum narrowed anteriorly. Rufocastaneous, 2.8 to 3.3 mm. — U.S.A. (Florida).
L. malkini (C a r t w r i g h t) **comb. n.**
- 22 (21) Clypeus weakly dentate. Pronotum not narrowed anteriorly. Dark castaneous, 3.6 mm. — Argentina.
L. placidus (S c h m i d t) **comb. n.**

- 23 (20) Longitudinal furrow of metasternal plate otherwise formed. Yellowish brown, 3.1 mm. — Brazil.
L. soledadei (P e t r o v i t z) **comb. n.**
- 24 (1) Pronotum without vestigial transversal furrows.
- 25 (30) Clypeus more or less angularly rounded each side of its anterior emargination.
- 26 (27) Pronotum with large punctures. A very small species from Cuba. Brown, 2.0 mm. — Cuba.
L. decuiella (C h a l u m e a u) **comb. n.**
- 27 (26) Pronotum with medium-sized punctures. Larger species (longer than 3 mm) from South America.
- 28 (29) Punctures in elytral striae very large and distinct. Metasternum punctate laterally. Black, elytra slightly paler, 3.5 mm. — Brazil.
L. globatus (P e t r o v i t z) **comb. n.**
- 29 (28) Punctures in elytral striae weak. Metasternum impunctate. Piceous, 3.8 mm. — Brazil (State of Rio de Janeiro).
L. martinezi (C a r t w r i g h t) **comb. n.**
- 30 (25) Clypeus dentate each side of its anterior emargination.
- 31 (38) Elytral margins very distinctly fimbriate.
- 32 (35) Pronotum surface uneven, with coarse, irregularly distributed punctures.
- 33 (34) Coarse punctures distributed on the whole pronotum surface. Dark castaneous, 3.4 to 4.0 mm. — U.S.A. (Florida, Georgia).
L. armaticeps (F a l l) **comb. n.**
- 34 (33) Coarse punctures grouped in a transverse band behind the middle of pronotum. Dark castaneous, 3.4 to 4.6 mm. — U.S.A. (S. Carolina, Georgia), Argentina, Bolivia.
L. cruentus (H a r o l d) **comb. n.**
- 35 (32) Pronotum surface even, with fine to medium-sized, more or less uniformly distributed punctures.
- 36 (37) Punctures on pronotal disc densely distributed, separated at most by one diameter. Piceous, 3.5 mm. — Argentina (Buenos Aires).
L. fimbriatus (C a r t w r i g h t) **comb. n.**
- 37 (36) Punctures on pronotal disc sparsely distributed, separated by one to four diameters. Rufopiceous, 3.4 mm. — Bolivia (La Paz).
L. mapirii (C a r t w r i g h t) **comb. n.**
- 38 (31) Elytral margins not fimbriate or very indistinctly fimbriate.
- 39 (40) Basal margin line of pronotum absent. Dark castaneous, 3.75 mm. — Brazil (Santa Catarina).
L. insulcatus (S c h m i d t) **comb. n.**
- 40 (39) Pronotum with a complete basal margin line.
- 41 (42) Posterior tibia with an incomplete transverse ridge. Dark castaneous, 3.2 to 4.2 mm. — U.S.A. (New Jersey, Maryland, Virginia, N. Carolina, S. Carolina, Georgia, Florida, Mississippi), Puerto Rico.
L. bidens (H o r n) **comb. n.**

- 42 (41) Posterior tibia bearing only teeth; transverse ridge never present.
- 43 (48) Pronotal punctures essentially uniform in size almost to anterior margin.
- 44 (45) Oblong, length-to-width ratio of about 1 : 0.5. Piceous, 3.5 mm. — Bolivia.
L. chipiririi (C a r t w r i g h t) **comb. n.**
- 45 (44) Subparallel, length-to-width ratio of about 1 : 0.4.
- 46 (47) Elytral intervals punctate and alutaceous. Rufopiceous, 3.0 mm. — Bolivia.
L. atopus (C a r t w r i g h t) **comb. n.**
- 47 (46) Elytral intervals smooth, shining. Rufopiceous, 3.6 mm. — Bolivia.
L. aenictus (C a r t w r i g h t) **comb. n.**
- 48 (43) Larger pronotal punctures absent over anterior third.
- 49 (50) Larger species from Antilles. Anterior angles of pronotum with strongly depressed areas. Brown, 3.5 to 3.8 mm. — Dominica, Puerto Rico, Guadeloupe.
L. cameneni (C h a l u m e a u) **comb. n.**
- 50 (49) Smaller species from Mexico. Anterior angles of pronotum at most with slightly depressed areas.
- 51 (52) Pronotal punctures relatively densely distributed (separated by one or two diameters). Dark castaneous, 3 mm. — Mexico.
L. integer (B a t e s) **comb. n.**
- 52 (51) Pronotal punctures sparsely distributed (separated by one to eight diameters), absent over anterior third. Rufopiceous, 3.2 mm. — Mexico.
L. formosus (C a r t w r i g h t) **comb. n.**

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