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This is the second part of a series of papers dealing with the oribatid fauna of Uruguay, and is based on the collections made by one of the authors (M. Sarasola) from soil samples obtained from litter of forest in the Lake Merin (Laguna Merin) basin, Southeast Uruguay.

The following species are described or recorded in the present paper (number of specimens in brackets).

*Sphaerochthonius uruguayensis* n. sp. (129)
*Plasmobates carboneli* n. sp. (12)
*Austrocarabodes butiae* n. sp. (8)
*Gibbicepheus austroamericanus* Mahunka, 1984 (1)
*Pseudotocepheus pauliensis* Pérez-Iñigo & Baggio, 1993 (3)
*Pseudotocepheus septemtuberculatus* Balogh & Mahunka, 1978 (2)
*Furcoppia (Monofurcoppia) austroamericana* Pérez-Iñigo & Sarasola, 1951 (1)
*Ramusella (Rectoppia) fasciata sudamericana* ssp. n. (1)

**DESCRIPTION OF THE NEW TAXA**

The descriptions are based on a series of specimens whenever possible. Single specimens, designed as holotypes for reference purposes, will be deposited in the Museo Nacional de Ciencias Naturales, Madrid, in due course, and paratypes will be preserved in the oribatid collection of Dr Pérez-Iñigo.

*Sphaerochthonius uruguayensis* n. sp.

(Figs. 1–4)

Locality data: The numerous specimens examined were taken from litter samples collected from San Miguel mountain forest, near the San Luis and
Cebollati Rivers. This mountain is slightly above sea level, the forest is not thick and the predominant vegetation has a mesophyloidal and xerophyloidal character.


Rostrum rounded, with a weak central peak, corresponding to the end of a short rostral keel. Rostral, lamellar and interlamellar setae biramous and of papillate type, exobothridial seta exa and exp uniramous and inserted close together. Sensillus with a short, glabrous stalk and an enlarged head, provided with numerous papillae and a small number of minute barbs on ventral side. Prodorsal surface covered by a network pattern of irregular mesh—mostly quadrangular—of cerotegumentary origin. The posterior part of prodorsum lacks this cerotegumentary layer.

Notogaster: Almost circular in outline, a transversal fissure (“coupure” after Grandjean) is present, dividing the notogaster into an anterior field and a posterior field or pygidium. All notogastral setae of papillate type. Anterior field bears the four setae of series c, all T-shaped, the anterior branch being shorter than the posterior one. Pygidium bears twelve pairs of setae, anterior pair (d1 and d2) very reduced and difficult to observe, inserted on anterior margin of pygidium, in the part covered by the posterior part of the anterior field. Series e and f each with two pairs of setae inserted on two transversal ridges; all uniramous and rather long. Setae h1, h2, h3, ps1, ps2, and ps3 biramous. Setae ps2 and ps3 inserted on ventral plate. Entire surface of covered by a network-like cerotegumentary layer, consisting of more or less regular polygonal figures. Only the membrane uniting the anterior field and the pygidium is free from cerotegument.

Genito-anal region: genital and anal plates fused: with eight pairs of genital setae, smooth, thin and difficult to see; no aggenital setae are present. A suture separates anal and adanal plated; 9–10 pairs of short, fine, smooth anal setae and four pairs of papillate, biramous, adanal setae. The T-shaped arms
of the adanal setae are so long that they join together, making it difficult to count their number. We therefore made dissections to ascertain that only 4 adanal setae are present.

Epimeral region: Coxisternal formula 3-2-4-4, all coxisternal setae thin and smooth, but easily visible. Seta 3c on a rounded apophysis.

Legs: All tarsi bear three claws, scarcely incurved, the central one thicker than the others.

Discussion: Only S. wallworki Lee, 1982 (from Ghana), S. strinatii Mahunka, 1982 (from the Fiji Islands), S. pallidus Muñoz-Mingarro, 1986 (from Central Spain), and the new species show setae f1 and f2 inserted on a transverse ridge (the other species do not have a second transverse ridge). S. wallworki and S. strinatii have setae f1 and f2 biramous, though the anterior branch is much shorter than the posterior one. S. pallidus has like the Uruguayan species, setae f1 and f2 uniramous, but the Spanish species is smaller (216–240 μm), the cerotegumentary structure of prodorsum is quite different, and the notogaster is oval rather than circular in outline.

Mahunka (1985) created the genus Sphaerochthoniella, with Sphaerochthonius transversus Wallwork, 1960 as type-species; the main characters of this genus being the presence of ten (exceptionally nine) pairs of anal, and five pairs of adanal setae. Many specialists do not accept Mahunka's genus (e.g. J. Balogh & P. Balogh, 1992) but, in any case, the new species is easily distinguished from S. transversus by the different shape of setae e and f.

Two other species are known from the Neotropical region, S. fungifer Mahunka, 1983 (from Guatemala) and S. phyllophorus Balogh & Mahunka, 1969 (from Brazil), but both these species are easily distinguished from the new one by the different shape and structure of dorsal setae.

Plasmobates carboneli n. sp.
(Figs. 5–8)

Localities: The specimens were collected from litter of gallery forests near the San Luis and Cebollati Rivers, in the basin of Lake Merin, which marks the boundary between Uruguay and Brazil.

Number of specimens: 8 adults (5 with cerotegument and juvenile exuviae).


The mites are covered by a thick cerotegumentary layer and the exuviae of juvenile stages, placed one on top of the other; only the mouthparts sensilli, claws and the distal ends of some setae can be seen free from the cerotegument. The exuviae show a remarkable network pattern, with a polygonal mesh.

Rostrum separated by a deep transverse groove. There is a pair of strongly developed rostral plates over the rostral margin. These plates (rostral lamellae) show two well developed points, the outer one bears the insertion of the rostral seta and the inner very sharp point, is in contact with the inner point of the other plate, such that a sort of central acute angle is formed. Rostral setae rather thick and curved inwards. A very short and thin lamellar seta is inserted on a very small tubercle on the outer margin of each plate, near its base. Large bothridia, protruding, opened laterally, with an almost transparent border. Sensillus long and thin, glabrous, slightly enlarged towards the apex. Interlamellar setae short and thick, like small rods, on little tubercles. Prodorsal surface smooth, apart from a certain number of round hollow marks at both sides, between the rostral groove and the bothridia.

Notogaster almost circular; a sort of tube is present at each side, directed outwards and forwards. Notogastral surface pustulate, especially in its central region. A pair of elevated, rounded warts is present near the posterior margin. Dorsal setae very difficult to see; one pair is inserted a little in front of the lateral tubes; another pair is visible on the posterior warts; and one pair is scarcely visible in front of these warts. Ventral view: Apodema 1, 2, sj and 3 well developed, but none is complete. Apodeme sj bifurcate, apodeme 4 very reduced. Epimeral surface with some irregular foveolae. Coxisternal setae strongly reduced, formula apparently 2-1-3-2. Genital opening near to anal opening. Seven setae on each genital plate, thin and smooth but easily discernible, arranged in a longitudinal row. Two pairs of short anal setae and three pairs of adanal setae; ad3 preanal. No aggenital setae are visible; iad parallel and close to anal rim.
Four pairs of very short setae can be seen on the posterior margin, in a zone corresponding to the notogaster, the two posterior pairs on rounded warts, like the dorsal ones, the other pairs scarcely visible. Tarsi monodactyl, claws with a noticeable tooth of their base. Femora I and II with a dorsal apophysis near distal end.

**Discussion:** The ten species of the genus *Plasmobates* known to date show the notogastral surface smooth or covered with foveolae; the new species is the only one known to show a pustulate notogastral surface. Three other species of *Plasmobates* have been described from the American continent: *Plasmobates pagoda* Grandjean, 1929, from Martinique; *P. carinatus* Hammer, 1961, from Peru, and *P. schubarti* Pérez-Iñigo & Baggio, 1988, from Brazil.

**Derivatio nominis:** This species has been named in honour of Prof. Carlos Carbonel, well-known Uruguayan entomologist, founder and director of the Entomology Department since 1946.

**Austrocarabodes butiae** n. sp.

(Figs. 9–12)

Localities: The specimens were collected from the small woods immediately outside the gallery forest of the San Luis River. The palm tree *Butia capitata* grows in these small woods and has a very restricted distribution: only a small zone in the South of Brazil and the East of Uruguay. Today, it is in danger of extinction due to the introduction...
of pasturing, which impedes the growth of the seedlings.

Number of specimens: 18 adults.
Dimensions: 510–616 × 286–390 µm (average: 570.5 × 330.6 µm).

Cerotegument: A thick cerotegumentary layer covers greater part of the body in the specimens.

Prodorsum: Rostrum rounded. Lamellae very broad with a smooth surface, anterior ends almost triangular and protruding like free cups. Anterior part of lamellae connected by a transverse ridge that shows a round apophysis at each side where the rostral seta is inserted; this seta is long and broad, directed forwards. Lamellar setae broad, bent inwards near the base, with irregular edges, inserted on ventral side of lamellae, close to the margin. Interlamellar setae long and broad, broader towards the apex, with finely indented edges, inserted on the centre of prodorsum, very close to lamellae; they are almost vertical at the base and then arched laterally. Bothridia broadly opened laterally, sensilli long, curled upwards and densely set with short barbs. Median surface of prodorsum with indistinct foveolae.

Notogaster: Anterior margin weakly arched, with small humeral plates. Notogastral surface covered with rounded granules that are lacking on the humeral regions. Fourteen pairs of rather long, leaf-shaped setae, more or less arched and with irregular edges.

Ventral surface: Only apodeme 1 is complete, apodeme 3 short. Coxisternal formula: 3-1-3-3; 1b, 3b, 3c, 4a, 4b, and 4c long and thin, the other setae short or vestigial. Four pairs of genital setae reduced to their alveoles, except seta g1, which is short and thin; one pair of aggenital setae and two pairs of anal ones, all
short and thin; three pairs of adanal setae, long and phylliform, similar to the dorsal ones.

Lungs: All tarsi monodactyl.

Discussion: More than fifty species of *Austrocara­bodes* are known, but only a few show a transversal ridge uniting the anterior part of lamellae, namely: *A. davisi* (Balogh & Mahunka, 1969) (from Brazil); *A. travei* (Balogh & Csiszar, 1963) (from Argentina); *A. schauenbergi* Mahunka, 1978 (from Reunion); *A. obsoletus* (Berlese, 1917) (from Somalia); *A. costulatus* (Balogh, 1958) (from Angola); *A. crenellatus* Mahunka, 1983 (from Tanzania); *A. glabrus* Mahunka, 1982 (from Ethiopia); *A. curvisetiger* Aoki, 1982 (from Southern Japan); *A. szentivanyi* (Balogh & Mahunka, 1967) (from Vietnam); *A. polytrichus* Balogh & Mahunka, 1978 (from Australia); *A. imper­fectus* (Sellnick, 1959) (from the Pacific Islands) and *A. maculatus* Hammer, 1966 (from New Zealand). The size and shape of the notogastral setae, the length and form of sensillus and the peculiar lamellar cusps can be used to distinguish the new species from the other congeners.

**Ramusella (Rectoppia) fasciata sudamericana** subsp. n.

Dimensions: 338 × 169 μm (one male).

The specimen found differs from the European ones describe by Bernini (1973) in only two characters: 1) Exostigmatic setae covered with short cilia, instead of being smooth; 2) Broader head of sensillus, with straight distal margin, with ten branches, the

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first five of the same length, the following three longer and the other two a little shorter, but all of them noticeably longer than in the European specimens. In spite of having studied only one specimen, we think the erection of a new subspecies is justified.

COMMENTS ON OTHER SPECIES


Figs. 13–16


Thirteen species of *Gibbicephus* Balogh, 1958, are currently known, of which four are Ethiopian (Angola and the Seychelles Islands), five Asiatic (Japan, Korea, Vietnam, Indonesia and the Philippines), three Australian and Polynesian (Australia, New Guinea and the Tonga Islands) and only one is Neotropical *G. austroamericanus* Mahunka, 1984, described from Paraguay. The finding of this species in Uruguay extend its known geographic distribution.

*Pseudotocepheus septemtuberculatus*

Balogh & Mahunka, 1978

The specimens found in Uruguay are identical to those from Brazil described by Balogh & Mahunka (1978) and to the species described by Pérez-Iñigo & Baggio (1980) under the name of *Pseudotocepheus simplex*, also from Brazil. Pérez-Iñigo & Baggio established the synonymy in 1989. The specimens from Uruguay measure 726 × 330 μm and 682 × 308 μm.

*Pseudotocepheus pauliensis*

Pérez-Iñigo & Baggio, 1983.

The specimens from Uruguay measure 594–726 × 270–325 μm; the measurements of the holotype (from Juquitiba, São Paulo, Brazil) are 720 × 356 μm.

REFERENCES


