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Two new whip spider species of the genus *Charinus* Simon, 1892, from Guadeloupe and Martinique, Lesser Antilles (Amblypygi, Charinidae)

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<https://zoobank.org/References/51D4719E-A60C-44A8-8DF7-2F297EA0870E>

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Abstract. – Two new whip spider species of the genus *Charinus* Simon, 1892, are described based on seven specimens collected in Guadeloupe (Grande-Terre) and three specimens collected in northern Martinique. The new taxa described here, *Charinus grandisterrae* n. sp. and *C. marechali* n. sp., raise the number of currently recognized species for the genus *Charinus* to 102 and the number of known species occurring in the Lesser Antilles to seven, confirming again that this genus is more widespread across Lesser Antilles than originally suspected. A map of the geographical distribution of the Lesser Antillean *Charinus* species is presented and a key for their identification is provided. Emended diagnosis is also provided for *Charinus martinicensis* Teruel & Coulis, 2017, based on additional material.

Résumé. – Deux nouvelles espèces d'amblypyges du genre *Charinus* Simon, 1892, de Guadeloupe et Martinique, Petites Antilles (Amblypygi, Charinidae). Deux nouvelles espèces d'amblypyges du genre *Charinus* Simon, 1892, sont décrites sur la base de sept spécimens collectés en Guadeloupe (Grande-Terre) et trois spécimens collectés dans le nord de la Martinique. La description de ces deux nouveaux taxons, *Charinus grandisterrae* n. sp. et *C. marechali* n. sp., porte à 102 le nombre total d'espèces actuellement reconnues pour le genre *Charinus* et à sept le nombre d'espèces dans les Petites Antilles, confirmant de nouveau que la répartition de ce genre à travers les Petites Antilles est plus importante qu'originellement suspectée. Une carte de répartition des espèces de *Charinus* dans les Petites Antilles est présentée et une clé d'identification est proposée. Une diagnose révisée de *Charinus martinicensis* Teruel & Coulis, 2017, est également présentée sur la base de matériel supplémentaire.

Keywords. – Taxonomy, morphology, endemism, islands, West Indies.

The genus *Charinus* was established by SIMON (1892), having as type species, by original designation, *Phrynus australianus* L. Koch, 1867, described from the Samoan islands. It is the most diverse genus of whip spiders with 100 species described from tropical America, Africa and Oceania, occurring in a wide range of dark micro-habitats including forest litter, tree barks, bromeliads, caves, termite and ant nests (WEYGOLDT, 2000, 2005; TERUEL *et al.*, 2009; MIRANDA & GIUPPONI, 2011; JOCQUÉ & GIUPPONI, 2012; RÉVEILLON & MAQUART, 2015; MAQUART & RÉVEILLON, 2016; MIRANDA *et al.*, 2021).

In the West Indies, with the exception of *Charinus muchmorei* Armas & Teruel, 1997, described from the U.S. Virgin Islands – geologically considered part of the Greater Antilles but politically part of the Lesser Antilles (ARMAS & TERUEL, 1997) –, the genus *Charinus* was originally considered to be only distributed in the Greater Antilles, until ARMAS (2006) documented a (yet undescribed) *Charinus* species from the Lesser Antilles, in the Grenadines islands. Few years later, TERUEL & QUESTEL (2011) officially described the first species from the Lesser Antilles, *Charinus bruneti* Teruel & Questel, 2011, from the French Overseas Territory of Saint-Barthélemy. Then in the following years, two additional species were described also from two other French Overseas Territories: *Charinus desirade* Teruel & Questel, 2015, from Guadeloupe (La Désirade island) and *Charinus martinicensis* Teruel & Coulis, 2017, from Martinique (TERUEL & QUESTEL, 2015; TERUEL & COULIS, 2017). More recently, ARMAS *et al.* (2023) described a new species from Saint Vincent island, *C. diomedesi* Armas, Miranda, Santos-Murgas & Castillo, 2023.

A soil invertebrate survey conducted in northern Martinique in 2017 yielded some *Charinus* specimens that were suggested to belong to an undescribed species by TERUEL & COULIS (2017) based on examination of photographs. The study of specimens from this survey as well as from a more recent one (2019) confirmed this suggestion and the new species is described here: *Charinus marechali* n. sp. The latter survey also allowed the collection of male specimens of *C. martinicensis* (originally described based on females) and so an emended diagnosis of the species is herewith presented.

More recently (2023), a soil invertebrate survey conducted in Guadeloupe (Grande-Terre and Basse-Terre islands) also yielded some *Charinus* specimens, representing the first record of the genus in these two islands. The status of the single specimen collected in Basse-Terre is still unclear but the study of the specimens from Grande-Terre leads to the description of another new species, *Charinus grandisterrae* n. sp.

MATERIAL AND METHODS

Illustrations and measurements were made with the aid of a Motic SMZ-1713 stereo-microscope with an ocular micrometer, together with a digital camera Tucsen HD Lite. Maps were made using Google Maps and Adobe Photoshop software. All external morphological designation terms follow MIRANDA *et al.* (2021). The terminology of the male gonopods follows GIUPPONI & KURY (2013) and GIUPPONI & MIRANDA (2016); see figures for abbreviations. Trichobothrial terminology follows WEYGOLDT (1970, 2000) and the following abbreviations are used to describe the trichobothria present on distitibia: **bf**, basal frontal; **bc**, basal caudal; **sbf**, subbasal frontal; **sc**, caudal series; **sf**, frontal series.

Specimens studied herein are preserved in 70% ethanol and will be deposited in the MNHN (Muséum national d'Histoire naturelle, Paris, France), CIRAD collection of the CBGP (Centre de Biologie pour la Gestion des Population, Montferrier-sur-

Lez, France, <https://doi.org/10.15454/D6XAKL>), MNRJ (Museu Nacional, Rio de Janeiro, Brazil) and EYCP (Éric Ythier private collection, Romanèche-Thorins, France).

Collecting permit in Guadeloupe was obtained from the *Parc national de la Guadeloupe* (n°2023-04).

TAXONOMY

Family **Charinidae** Quintero, 1986

Genus *Charinus* Simon, 1892

Charinus martinicensis Teruel & Coulis, 2017 (fig. 1-8, 33, 36, table I)

Material examined. – 1 ♂, Martinique, Sainte-Anne, Morne Caritan, 14.428, -60.884, under rocks, M. Coulis coll., 8.II.2019 (N°208/150) (MNHN); 1 ♂ and 1 ♀, Martinique, Sainte-Anne, Morne Manioc, near summit, 14.443, -60.857, under rocks, M. Coulis coll., 20.X.2019 (N°2211/5265) (EYCP); 1 unsexed juvenile, Martinique, Sainte-Anne, Morne Aca, 14.463, -60.899, under rocks, M. Coulis coll., 22.XI.2017 (N°95/17891) (MNRJ); 1 unsexed juvenile, Martinique, Sainte-Anne, Morne Aca, 14.463, -60.899, under rocks, M. Coulis coll., 22.XI.2017 (N°17892/17350) (CBGP).

Emended diagnosis. – Measurements of two males in table I.

Adult size medium to moderately large (3.9-6.7 mm) for the genus. This species can be separated from other *Charinus* species in the Lesser Antilles, and notably from the morphologically and geographically closest species (*C. marechali* n. sp., *C. grandisterrae* n. sp. and *C. desirade*) by means of the following combination of main characters: median eyes well developed; female and male carapace with width/length ratio 1.25-1.29 and 1.20-1.26, respectively; pedipalp femur with three dorsal and three ventral spines; size of pedipalp femur dorsal spine II half to two-thirds of spine I, femur dorsal spine III one-fourth to half of spine II and patella ventral spine II one-third to half of spine I; tibia of leg I with 23 articles, tarsus of leg I with 37 articles; basitibia of leg IV with three pseudo-articles, distibia of leg IV with trichobothrium bc closer to bf than to sbf. Secondary sexual dimorphism: male is very similar to female, with only slight secondary sexual dimorphism in body (usually larger in female), pedipalps (proportionally shorter in female), carapace (usually proportionally slightly wider in female, with frontal margin more convex and less prominent). Male gonopods with fistula apex and base of the sclerotized lateral lobe and with the union between the two, forming an almost vertical line (in *C. grandisterrae* n. sp. this line is diagonal); reduced PI with blunt fingertip shape and apex; finger-shaped LaM tapering gently from base to apex and with a slightly blunt tip; LoL1 long and curved, with a wider and less sclerotized base, progressively reducing width until LoL2; LoL2 short and wide, and subdivided. Female genital operculum with six large setae posteromedially and some smaller ones near margin; gonopods rounded and cushion-like. For more detailed information on characters distinguishing *C. martinicensis* from each of the three above mentioned species, see the 'Comparisons' section in the new species descriptions.

Distribution. – These new data extend the distribution of *C. martinicensis* to several new localities, which are still located in southern Martinique and correspond to the island's ancient geological zones (between 12 and 25 million years ago) (see fig. 43).

Ecology. – *Charinus martinicensis* has always been collected under rocks in xerophilous forests. The new localities show, however, that the species is not restricted to limestone areas, as it has also been found at Morne Aca, which is of volcanic origin.

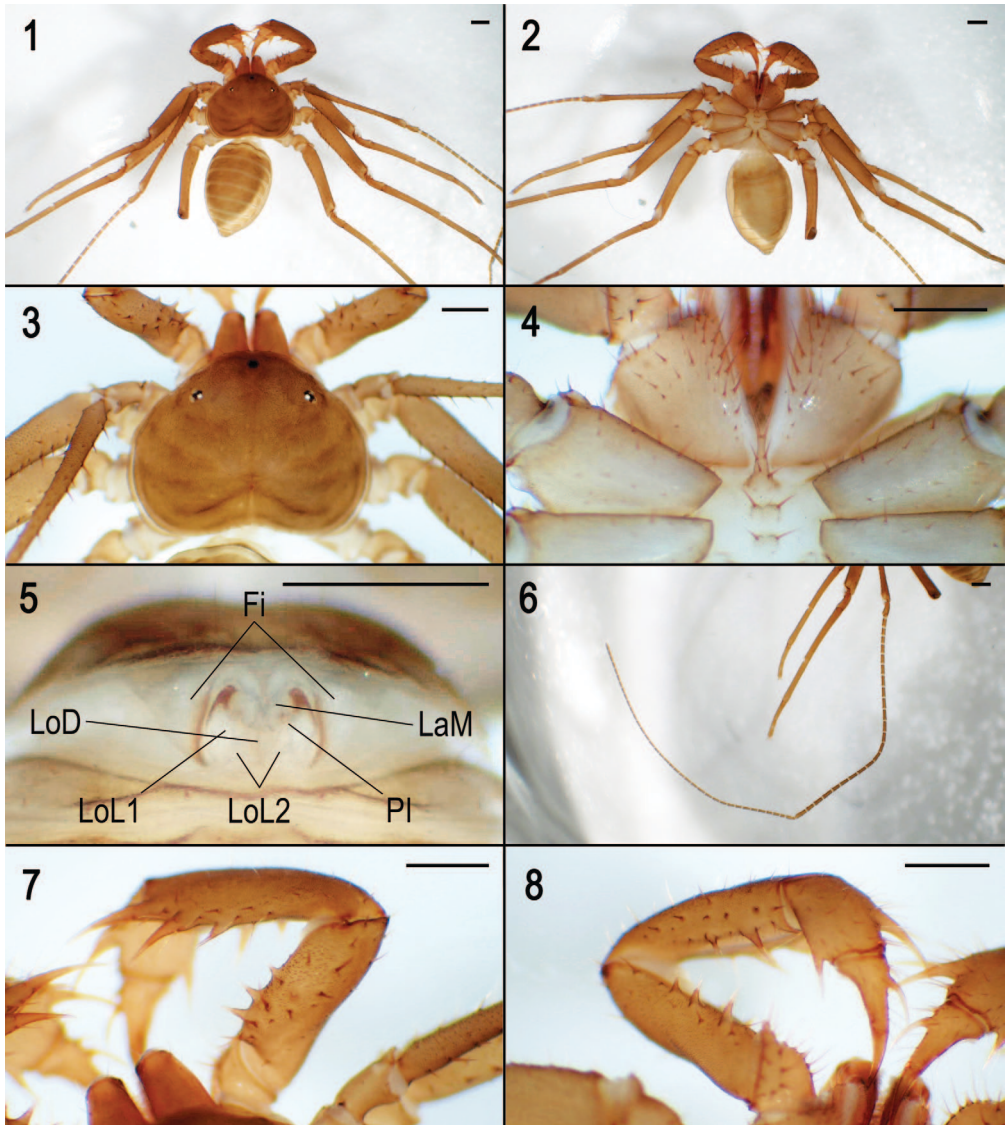


Fig. 1-8. – *Charinus martinicensis* Teruel & Coulis, ♂. – 1-2, Habitus: 1, dorsal aspect; 2, ventral aspect. – 3, Carapace, dorsal aspect. – 4, Anterior half of sternum and coxae of pedipalps and leg I-II, ventral aspect. – 5, Genital operculum, ventral aspect, showing the gonopods. Fi: fistula (gonopod tube); LaM: lamina medialis; LoD: lobus dorsalis; LoL1: lobus lateralis primus; LoL2: lobus lateralis secundus; PI: processus internus. – 6, Leg I tibia and tarsus, dorsal aspect. – 7-8, Pedipalp: 7, dorsal aspect; 8, ventral aspect. Scale bars: 0.5 mm.

***Charinus grandisterrae* n. sp.** (fig. 9-24, 34, 37, table I)

<https://zoobank.org/NomenclaturalActs/558b7c76-5ce2-4dec-835a-120896225940>

Type material. – HOLOTYPE: ♀, Guadeloupe, Grande-Terre, Saragotte, 16.273609, -61.396609, T. Ramage coll., 19.II.2023 (N°NT554) (MNHN).

PARATYPES: 3 ♂, Guadeloupe, Grande-Terre, Saragotte, 16.273624, -61.399148, T. Ramage coll., 19.II.2023 (N°NT555/17351) (CBGP); 1 ♀, Guadeloupe, Grande-Terre, Anse-Bertrand, Barre de Cadoue, on the plateau, 16.47, -61.463, under rocks, T. Ramage & M. Coulis coll.,

27.II.2023 (N°3603/17553) (EYCP); 1 ♂, Guadeloupe, Grande-Terre, Anse-Bertrand, Grande Vigie road, ravine, 16.493, -61.485, in dead wood on the ground, M. Coulis & T. Ramage coll., 27.II.2023 (N°3663/17570) (MNRJ); 1 ♂, Guadeloupe, Grande-Terre, Anse-Bertrand, Grande Vigie road, ravine, 16.493, -61.485, in dead wood on the ground, M. Coulis & T. Ramage coll., 27.II.2023 (N°3663/17571) (EYCP).

Distribution. – All collected specimens were found in the island of Grande-Terre, Guadeloupe (see fig. 43).

Ecology. – *C. grandisterrae* n. sp. was collected under rocks or in dead wood on the ground, in xerophilous forests in limestone areas.

Description based on female holotype and female and males paratypes. – Measurements of holotype, one female and two males paratypes in table I.

Coloration (alcohol preserved specimens). General coloration yellowish brown to olivaceous brown. Prosoma: carapace yellowish brown. Opisthosoma: tergites olivaceous brown; sternites olivaceous yellow. Pedipalps yellowish brown with spines reddish brown. Legs olivaceous brown.

Carapace. Three pairs of anterior spiniform setae; frontal process rounded. Fine punctuation between ocular triads and among sulci. Median eyes absent, replaced by a pair of minute translucent spots (absent in some paratype specimens); lateral eyes well developed.

Sternum. Tritosternum projected anteriorly, long, surpassing the base of pedipalp coxae, with five to six pairs of setae (one apical, one median and one basal pairs of large setae, plus two to three basal pairs of smaller setae); tetrasternum convex with two pairs of setae (one pair of large setae in its apex and one pair of smaller setae at its base); pentasternum convex, slightly smaller than tetrasternum, with one to two pairs of setae (one pair of large setae in its apex and in some specimens one pair of smaller setae at its base).

Opisthosoma. Oblong, with fine punctuation on tergites; sternites smooth.

Genitalia. Female genital operculum lighter, with six large setae posteromedially and some smaller ones near margin; darker in male with fewer and shorter setae. Female gonopods rounded and cushion-like. Male gonopods with fistula apex and base of the sclerotized lateral lobe; reduced PI with blunt tip shape and apex; LaM teardrop-shaped with the distal portion suddenly acuminate; reduced LoD, typical of Charinidae, LoL1 long and curved, with a wider and sclerotized base, progressively reducing width until LoL2; LoL2 short and wide, in a way irregular oval shape.

Chelicerae. Four internal teeth; the proximal one big, two median teeth of about half size of proximal one; distal tooth about half size of proximal one, bifid, with distal cusp larger. Claw with five teeth.

Pedipalps. Femur with three dorsal spines and three ventral spines; two prominent setiferous tubercles between dorsal spine I and proximal margin; dorsal spine III half the size of spine II which is four-fifths to equal the size of spine I; ventral spine III half the size of spine II which is two-thirds the size of spine I. Patella with three dorsal spines in primary series and two ventral spines; a prominent setiferous tubercle distal to dorsal spine I, one-fifth the size of spine I; dorsal spine III half the size of spine II which is two-thirds the size of spine I; ventral spine II half the size of spine I. Tibia with ventral spine distally and seta between spine and distal margin. Tarsus with two dorsal spines, proximal spine one-third the size of distal spine; cleaning organ with 28 setae in ventral row.

Legs. Tibia of leg I with 23 articles; tarsus I with 41 articles; length of first tarsal article equal to sum of lengths of subsequent two articles in male, a bit less than subsequent two articles in female. Leg IV basitibia with three pseudo-articles, without sclerotized, denticulate margin projecting from apex of articles; trichobothrium bt situated proximally on last pseudo-article; distitibia trichobothrium bc situated closer to sbf than to bf, sc and sf series each with five trichobothria.

Secondary sexual dimorphism. Female and male are very similar, with only slight secondary sexual dimorphism in body (usually larger in female), pedipalps (proportionally shorter in female), carapace (usually proportionally slightly wider in female, with frontal margin more convex and less prominent).

Etymology. – The specific name refers to the latinized name of the island of Grande-Terre in Guadeloupe, where the new species was found.

Comparative diagnosis. – *Charinus grandisterrae* n. sp. can be easily distinguished from other *Charinus* species in the Lesser Antilles by the combination of the following main characters:

- (i) tibia of leg I with 23 articles (22 in *C. bruneti*);
- (ii) tarsus of leg I with 41 articles (37 in *C. martinicensis*, 37-39 in *C. muchmorei* and 39 in *C. bruneti*);

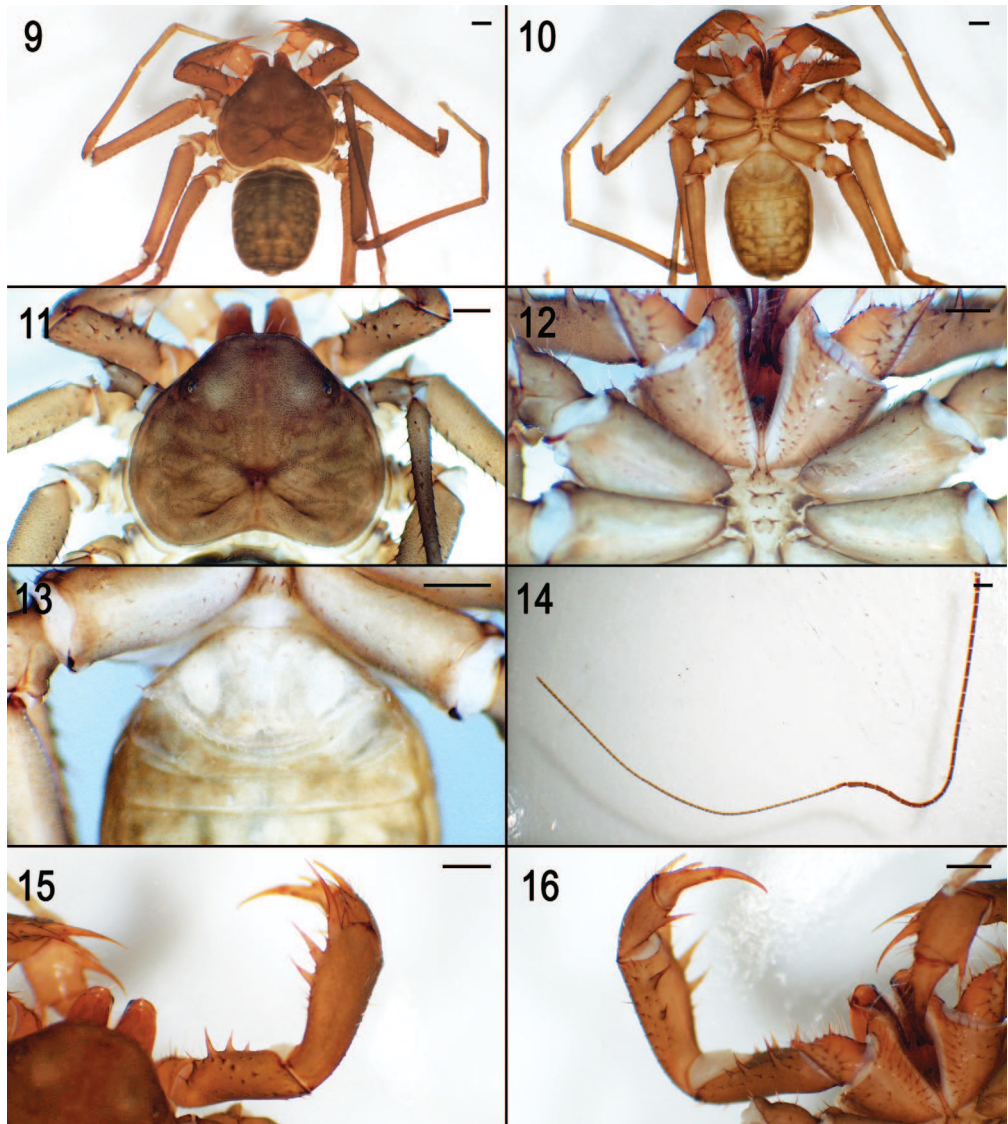


Fig. 9-16. – *Charinus grandisterrae* n. sp., ♀ holotype. – 9-10, Habitus: 9, dorsal aspect; 10, ventral aspect. – 11, Carapace, dorsal aspect. – 12, Anterior half of sternum and coxae of pedipalps and leg I-II, ventral aspect. – 13, Genital operculum, ventral aspect. – 14, Leg I tibia and tarsus, dorsal aspect. – 15-16, Pedipalp: 15, dorsal aspect; 16, ventral aspect. Scale bars: 0.5 mm.

- (iii) median eyes absent (well developed in *C. martinicensis* and *C. bruneti*);
 (iv) pedipalp femur with three dorsal and three ventral spines (two dorsal and two ventral spines in *C. desirade*, four dorsal and three ventral spines in *C. bruneti*);
 (v) size of pedipalp femur dorsal spine II four fifths to equal to spine I (spine II smaller in *C. marechali* n. sp. and *C. martinicensis*, half to two thirds of spine I), femur dorsal spine III half of spine II (spine III smaller in *C. marechali* n. sp., one fifth to one fourth of spine II) and patella ventral spine II half of spine I (spine II smaller in *C. marechali* n. sp., one fourth of spine I);

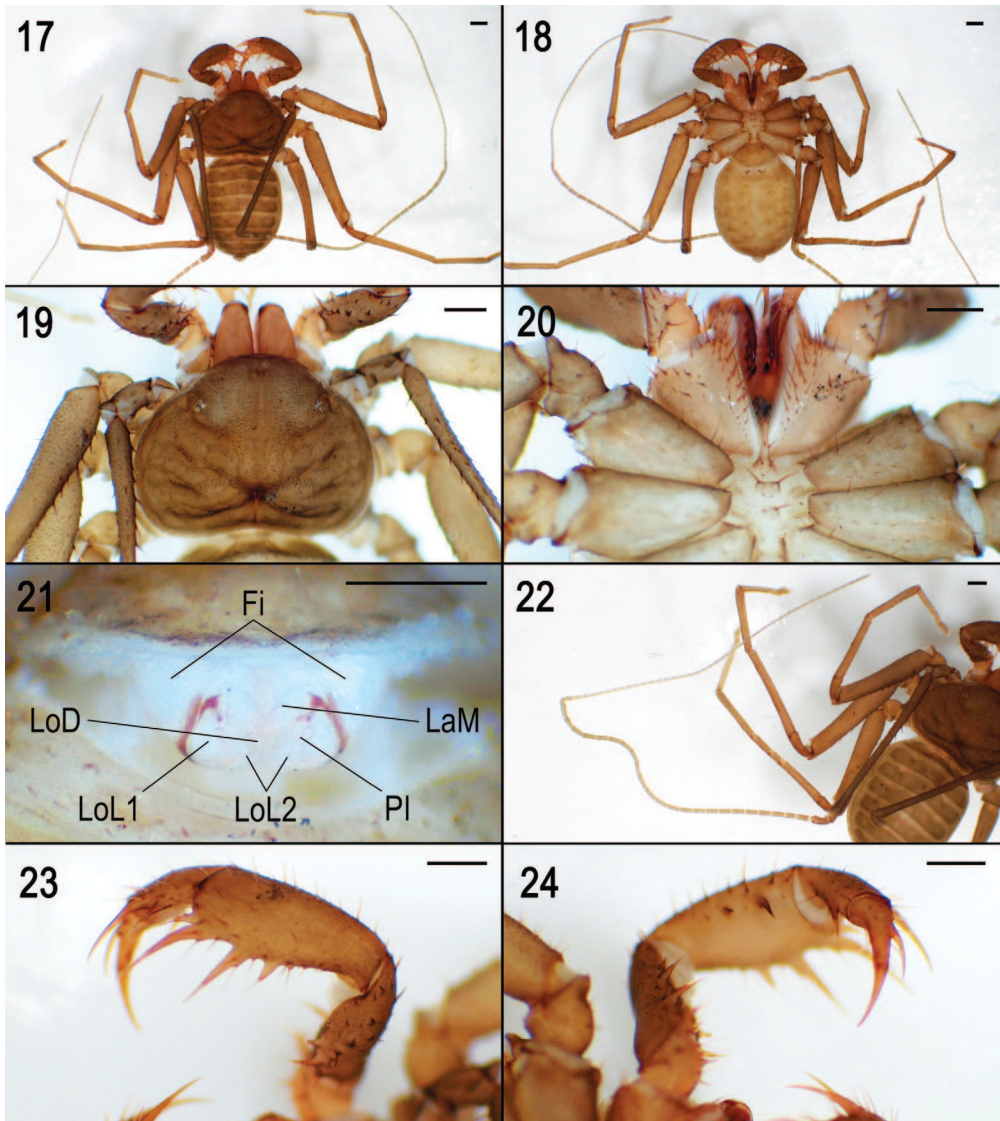


Fig. 17-24. - *Charinus grandisterrae* n. sp., ♂ paratype. - 17-18, Habitus: 17, dorsal aspect; 18, ventral aspect. - 19, Carapace, dorsal aspect. - 20, Anterior half of sternum and coxae of pedipalps and leg I-II, ventral aspect. - 21, Genital operculum, ventral aspect, showing the gonopods. Fi: fistula (gonopod tube); LaM: lamina medialis; LoD: lobus dorsalis; LoL1: lobus lateralis primus; LoL2: lobus lateralis secundus; PI: processus internus. - 22, Leg I tibia and tarsus, dorsal aspect. - 23-24, Pedipalp: 23, dorsal aspect; 24, ventral aspect. Scale bars: 0.5 mm.

(vi) female carapace width/length ratio 1.21-1.24 – narrower in female *C. marechali* n. sp., with width/length ratio 1.14-1.19, larger in females *C. martinicensis* (1.25-1.29), *C. desirade* (1.30), *C. bruneti* (1.36) and *C. muchmorei* (1.39-1.40) –; male carapace with width/length ratio 1.16-1.26 – larger in males *C. bruneti* (1.31) and *C. muchmorei* (1.30-1.41) –;

(vii) distibia of leg IV with trichobothrium bc closer to sbf than to bf (closer to bf than to sbf in *C. martinicensis* and *C. marechali* n. sp.).

Table I. – Morphometric values (mm) of adult specimens of *Charinus martinicensis* Teruel & Coulis, *C. grandisterrae* n. sp. and *C. marechali* n. sp.

Sex	<i>C. martinicensis</i>		<i>C. grandisterrae</i> n. sp.				<i>C. marechali</i> n. sp.	
	♂	♂	♀ holotype	♀ paratype	♂ paratype	♂ paratype	♀ holotype	♀ paratype
Sample N°	208/150	2211/5265	NT554	3603/17553	3663/17570	NT555	3687/17893	2219/8845
Total length	5,30	4,39	6,28	4,59	5,84	5,46	5,83	5,72
Carapace length	2,05	1,77	2,84	2,07	2,33	2,05	2,42	2,44
Carapace width	2,47	2,23	3,49	2,56	2,93	2,37	2,88	2,79
Opisthosoma length	3,25	2,62	3,44	2,52	3,51	3,41	3,41	3,28
Pedipalp - Femur length	1,41	1,21	2,13	1,31	1,51	1,31	1,67	1,64
Pedipalp - Patella length	1,41	1,05	2,03	1,25	1,54	1,25	1,67	1,57
Pedipalp - Tibia length	0,66	0,52	1,11	0,72	0,89	0,66	0,95	0,92
Pedipalp - Tarsus length	0,52	0,49	0,79	0,52	0,62	0,52	0,66	0,66
Pedipalp - Claw length	0,33	0,33	0,59	0,39	0,46	0,49	0,52	0,49
Leg I - Femur length	3,28	2,98	5,97	3,87	4,85	3,93	4,79	4,52
Leg IV - Femur length	2,30	2,00	3,90	2,72	3,15	2,62	3,11	3,02
Leg IV - Basitibia I length	1,05	0,85	1,80	1,31	1,54	1,28	1,54	1,44
Leg IV - Basitibia II length	0,30	0,26	0,59	0,33	0,36	0,33	1,43	0,39
Leg IV - Basitibia III length	0,52	0,46	0,79	0,59	0,66	0,62	0,66	0,66
Leg IV - Distitibia length	1,38	1,15	2,03	1,51	1,70	1,31	1,74	1,77
Leg IV - Basitarsus length	0,69	0,59	1,31	0,95	0,98	0,75	0,98	0,95
Leg IV - Other tarsal articles length	0,52	0,46	0,72	0,56	0,66	0,59	0,62	0,69

Charinus marechali n. sp. (fig. 25-32, 35, 38, 42, table I)

<https://zoobank.org/NomenclaturalActs/e5db835c-cc43-4342-bad3-1a04281c2738>

Type material. – HOLOTYPE: ♀, Martinique, Le Lorrain, Rivière Sylvestre, forest path, 14.78, -61.056, in dead wood on the ground, A. Herry coll., 17.VIII.2017 (N°3687/17893) (MNHN).

PARATYPES: 1 ♀, Martinique, Marigot, Bois Duhaumont, forest near river, 14.787, -61.0547, in dead wood on the ground, T. Ramage & M. Coulis coll., 22.X.2019 (N°8845/17352) (CBGP); 1 unsexed juvenile, Martinique, Le Lorrain, Rivière Sylvestre, forest path, 14.78, -61.056, in dead wood on the ground, A. Herry coll., 17.VIII.2017 (N°3687/17893) (MNHN).

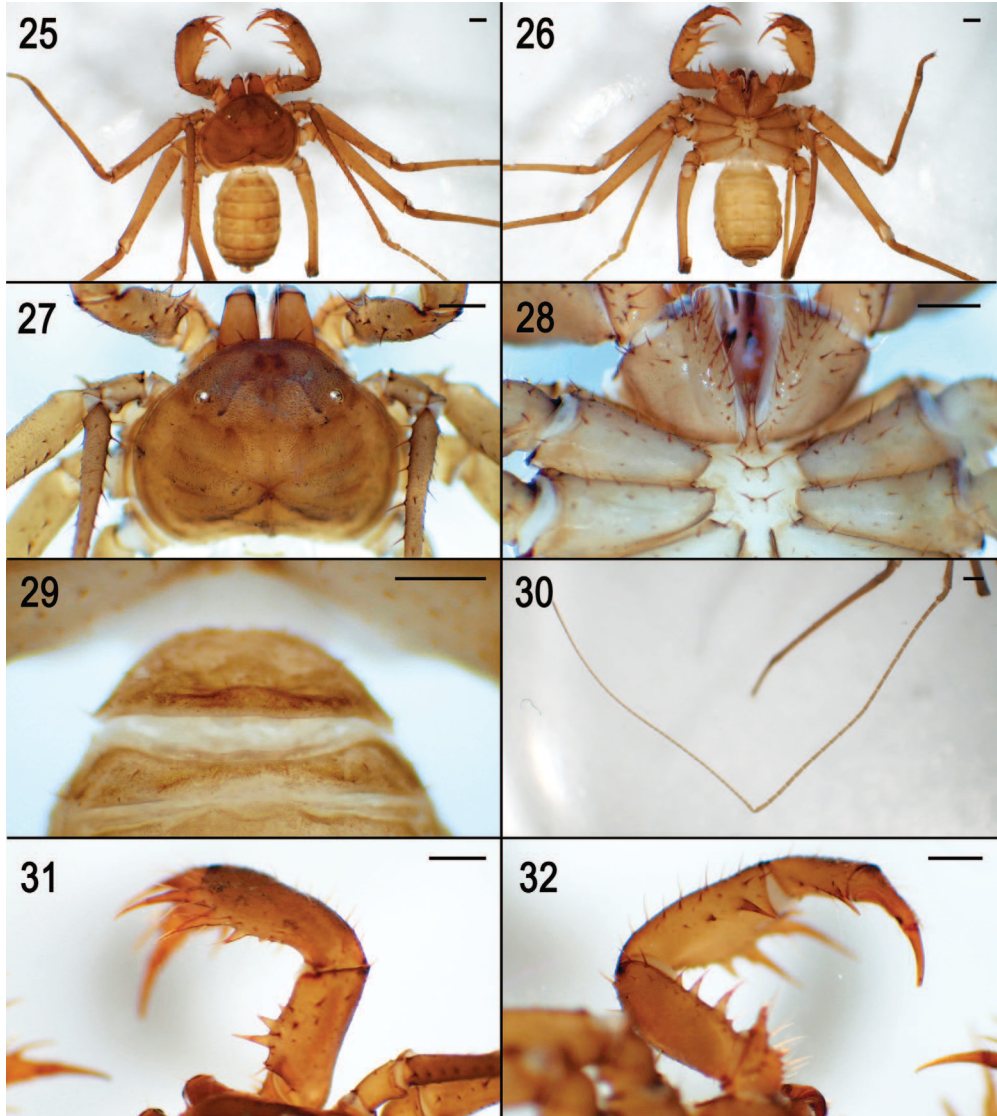


Fig. 25-32. – *Charinus marechali* n. sp., ♀ holotype. – 25-26, Habitus: 25, dorsal aspect; 26, ventral aspect. – 27, Carapace, dorsal aspect. – 28, Anterior half of sternum and coxae of pedipalps and leg I-II, ventral aspect. – 29, Genital operculum, ventral aspect. – 30, Leg I tibia and tarsus, dorsal aspect. – 31-32, Pedipalp: 31, dorsal aspect; 32, ventral aspect. Scale bars: 0.5 mm.

Distribution. – All collected specimens were found in the northern part of Martinique (see fig. 43).

Ecology. – *Charinus marechali* n. sp. was collected in dead wood or stumps in humid forests located in volcanic zones.

Description based on female holotype and female paratype. – Measurements of holotype and female paratype in table I.

Coloration (alcohol preserved specimens). General coloration olivaceous yellow to olivaceous brown. Prosoma: carapace yellowish brown. Opisthosoma: tergites yellowish to olivaceous yellow; sternites yellowish. Pedipalps yellowish brown with spines reddish brown. Legs olivaceous yellow.

Carapace. Three pairs of anterior spiniform setae; frontal process rounded. Fine punctuation between ocular triads and among sulci. Median eyes absent, replaced by a pair of minute translucent spots (absent in paratype female); lateral eyes well developed.

Sternum. Tritosternum projected anteriorly, long, surpassing the base of pedipalp coxae, with five to six pairs of setae (one apical, one median and one basal pairs of large setae, plus two to three basal pairs of smaller setae); tetrasternum convex with two pairs of setae (one pair of large setae in its apex and one pair of smaller setae at its base); pentasternum convex, slightly smaller than tetrasternum, with two pairs of setae (one pair of large setae in its apex and one pair of smaller setae at its base).

Opisthosoma. Oblong, with fine punctuation on tergites; sternites smooth.

Genitalia. Female genital operculum darker, with six large setae posteromedially and some smaller ones near margin. Female gonopods rounded and cushion-like.

Chelicerae. Four internal teeth; the proximal one big, two median teeth of about half size of proximal one; distal tooth about half size of proximal one, bifid, with distal cusp larger. Claw with five teeth.

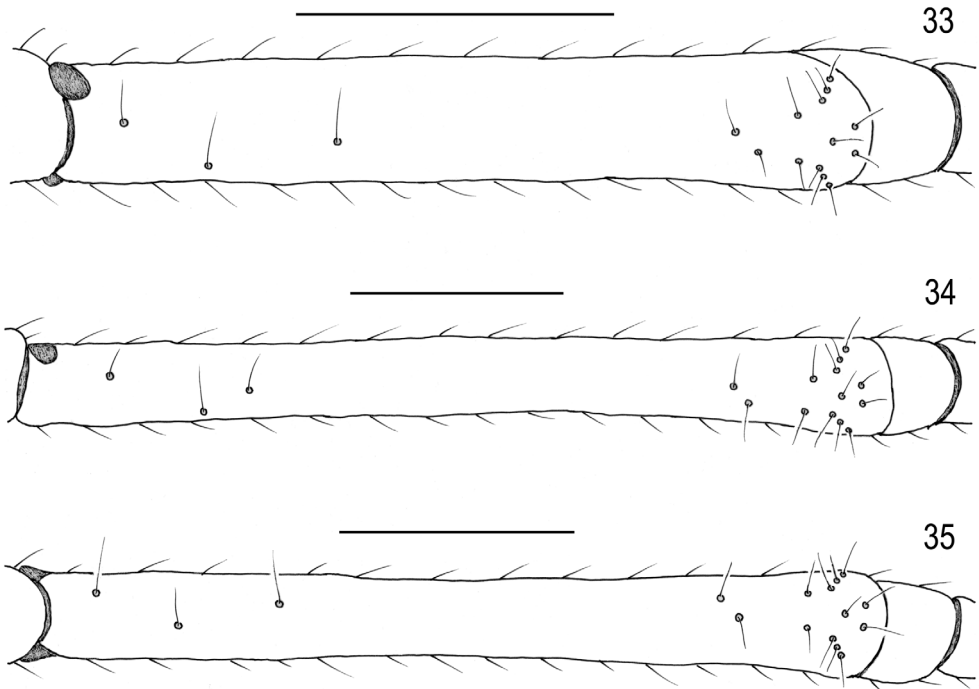


Fig. 33-35. – *Charinus* spp., trichobotrial pattern of distitibia IV, dorsal view. – 33, *C. martinicensis* Teruel & Coulis, ♂. – 34, *C. grandisterrae* n. sp., ♀ holotype. – 35, *C. marechali* n. sp., ♀ holotype. Scale bar: 0.5 mm.

Pedipalps. Femur with three dorsal spines and three ventral spines; two prominent setiferous tubercles between dorsal spine I and proximal margin; dorsal spine III one fifth to one-fourth the size of spine II which is half to two thirds the size of spine I; ventral spine III half to two thirds the size of spine II which is two thirds the size of spine I. Patella with three dorsal spines in primary series and two ventral spines; a prominent setiferous tubercle distal to dorsal spine I, one fifth the size of spine I; dorsal spine III one third the size of spine II which is two thirds the size of spine I; ventral spine II one fourth the size of spine I. Tibia with ventral spine distally and seta between spine and distal margin. Tarsus with two dorsal spines, proximal spine one third the size of distal spine; cleaning organ with 28 setae in ventral row.

Legs. Tibia of leg I with 23 articles; tarsus I with 41 articles; first tarsal article slightly longer than second article. Leg IV basitibia with three pseudo-articles, without sclerotized, denticulate

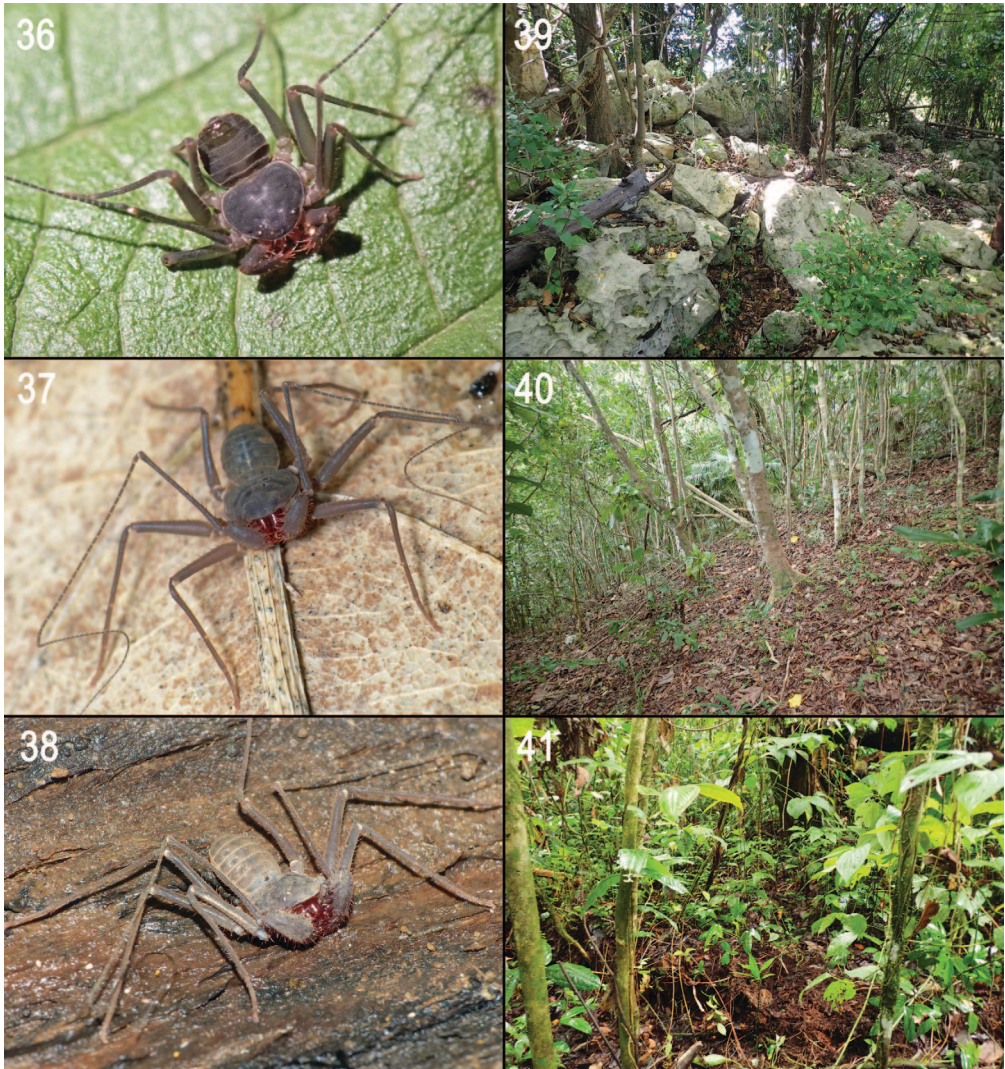


Fig. 36-41. - *Charinus* spp. alive in their habitat. - **36**, *C. martinicensis* Teruel & Coulis. - **37**, *C. grandisterrae* n. sp. - **38**, *C. marechali* n. sp. - **39**, Habitat of *C. martinicensis* in Morne Manioc, Martinique. - **40**, Habitat of *C. grandisterrae* n. sp. in Saragotte, Grande-Terre, Guadeloupe. - **41**, Habitat of *C. marechali* n. sp. in Bois Duhaumont, Marigot, Martinique.

margin projecting from apex of articles; trichobothrium bt situated proximally on last pseudo-article; distitibia trichobothrium bc situated closer to bf than to sbf, sc and sf series each with five trichobothria.

Secondary sexual dimorphism. Male unknown.

Etymology. – The specific name honours Dr Patrick Marechal for his contributions to the study and the conservation of arachnids from Martinique.

Comparative diagnosis. – *Charinus marechali* n. sp. can be easily distinguished from other *Charinus* species in the Lesser Antilles by the combination of the following main characters:

- (i) tibia of leg I with 23 articles (22 in *C. bruneti*);
- (ii) tarsus of leg I with 41 articles (37 in *C. martinicensis*, 37-39 in *C. muchmorei* and 39 in *C. bruneti*);
- (iii) median eyes absent (well developed in *C. martinicensis* and *C. bruneti*);
- (iv) pedipalp femur with three dorsal and three ventral spines (two dorsal and two ventral spines in *C. desirade*, four dorsal and three ventral spines in *C. bruneti*);
- (v) size of pedipalp femur dorsal spine II half to two-thirds of spine I (spine II larger in *C. grandisterrae* n. sp., four fifths to equal to spine I), femur dorsal spine III one fifth to one fourth of spine II (spine III larger in *C. grandisterrae* n. sp., half of spine II) and patella ventral spine II one fourth of spine I (spine II larger in *C. grandisterrae* n. sp., half of spine I, and in *C. martinicensis*, one third to half of spine I);
- (vi) female carapace width/length ratio 1.14-1.9 – larger in females *C. grandisterrae* n. sp. with width/length ratio 1.21-1.24, *C. martinicensis* (1.25-1.29), *C. desirade* (1.30), *C. bruneti* (1.36) and *C. muchmorei* (1.39-1.40) –;



Fig. 42. – *Charinus marechali* n. sp., alive, female with pullus.

(vii) distibia of leg IV with trichobothrium bc closer to bf than to sbf (closer to sbf than to bf in *C. grandisterrae* n. sp.).

COMPOSITION OF THE GENUS *CHARINUS* IN THE LESSER ANTILLES AND KEY TO SPECIES

- *Charinus muchmorei* Armas & Teruel, 1997 (U.S. Virgin Islands: Saint John)
- *Charinus bruneti* Teruel & Questel, 2011 (Saint-Barthélemy)
- *Charinus desirade* Teruel & Questel, 2015 (Guadeloupe: La Désirade)
- *Charinus martinicensis* Teruel & Coulis, 2017 (Martinique)
- *Charinus diomedesi* Armas, Miranda, Santos-Murgas & Castillo, 2023 (Saint Vincent)
- *Charinus grandisterrae* n. sp. (Guadeloupe: Grande-Terre)
- *Charinus marechali* n. sp. (Martinique)

1. Median eyes well developed 2
- Median eyes absent 3
2. Leg I tibia with 22 articles *C. bruneti* Teruel & Questel
- Leg I tibia with 23 articles *C. martinicensis* Teruel & Coulis
3. Leg I tibia with 21 articles *C. diomedesi* Armas, Miranda, Santos-Murgas & Castillo
- Leg I tibia with 23 articles 4
4. Leg I tarsus with 37-39 articles *C. muchmorei* Armas & Teruel
- Leg I tarsus with 41 articles 5
5. Pedipalp femur with two dorsal and two ventral spines *C. desirade* Teruel & Questel
- Pedipalp femur with three dorsal and three ventral spines 6
6. Leg IV distibia trichobothrium bc closer to sbf than to bf *C. grandisterrae* n. sp.
- Leg IV distibia trichobothrium bc closer to bf than to sbf *C. marechali* n. sp.

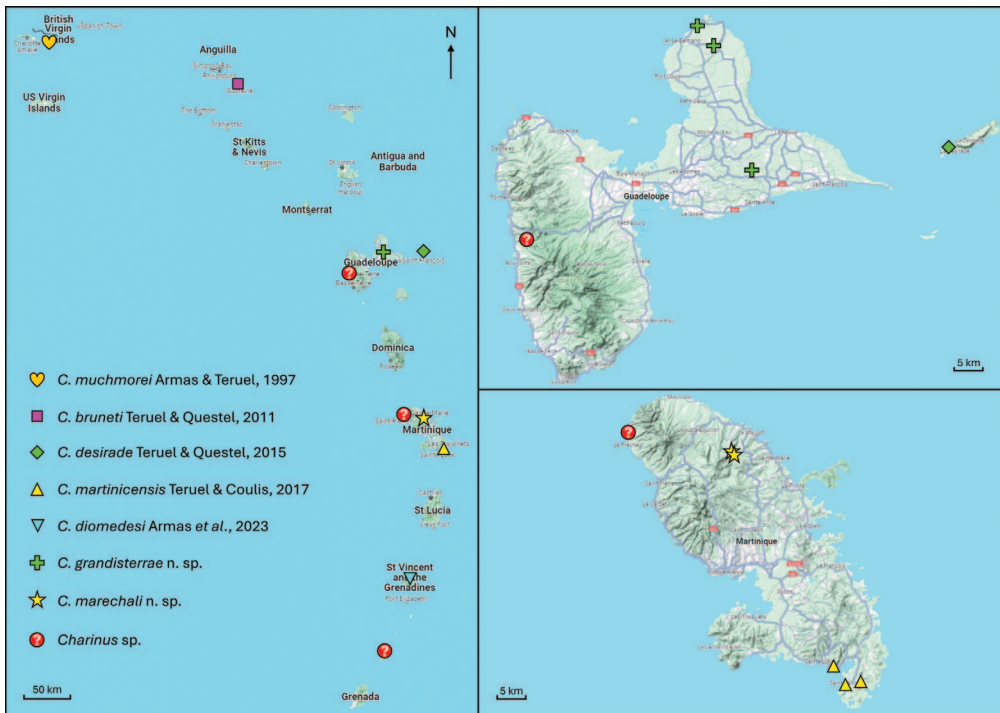


Fig. 43. – Map of the known distribution of *Charinus* species in Lesser Antilles and more specifically in Guadeloupe and Martinique. Populations of *Charinus* with unclear status are represented by circles with question marks.

CONCLUSION

With the description of *C. grandisterrae* n. sp. and *C. marechali* n. sp., the number of *Charinus* species in the Lesser Antilles is now raised to seven, which confirms again that this genus is more widespread than originally suspected. All seven *Charinus* species appear to be possibly endemic from the islands they have been described from, so more new species are expected as other islands of the Lesser Antilles become better sampled (TERUEL & COULIS, 2017). So far, one undescribed species occurs in the Grenadines islands (ARMAS, 2006) and the specific status of specimens collected in Basse-Terre (Guadeloupe) and north-western Martinique still needs to be clarified (see fig. 43). The new taxa described here raise the total number of currently recognized species for the genus to 102 (YTHIER & GIUPPONI, 2023; ARMAS *et al.*, 2023; SOUSA *et al.*, 2024; WAC, 2024).

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