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New species and interesting new records of spiders from Seychelles (Arachnida, Araneaea)

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Abstract: Seven new species are described from Seychelles, namely *Conothele truncicola* (Ctenizidae), *Clubiona hitchinsi* (Clubionidae), *Aridella bowleri*, *Lionneta veli* and *Opopaea suspecta* (Oonopidae), *Cenemus mikehilli* (Pholcidae) and *Prodida stella* (Prodomidae) as well as one new oonopid genus, viz. *Aridella.* Furthermore the following are recorded as new for Seychelles: *Creugas gulosus* Thorell, 1878 and *Oedignatha scrobiculata* Thorell, 1881 (Corinnidae), *Odontodrassus aphanes* (Thorell, 1897) (Gnaphosidae), *Agyneta pogonophora (*Locket, 1968) n. comb., and *Metalepthyphantes praecipuus* Locket, 1968 (Linyphiidae), *Orthobula impressa* Simon, 1896 (Liocranidae), *Ero comorensis* Emerit, 1996 (Mimetidae), *Palicanus caudatus* Thorell, 1897 (Miturgidae), *Cosmophasis squamata* Kulczynski, 1910 and *Epocilla calcarata* (Karsch, 1880)(Salticidae) and *Loxosceles rufescens* Heineken & Lowe, 1832 (Sicariidae). Earlier records of *Oedignatha scrobiculata* refer to *O. mogamoga* Marples, 1955. Unknown males of *A. pogonophora, C. squamata* and *Pseudicius seychellensis* Wanless, 1984 and females of *Orthobula impressa* Simon, 1896 and *M. praecipuus* are described.

Introduction

This paper describes seven new species from different families collected from Seychelles. In addition, eleven new species and one new family (Sicariidae, Loxoscelininae) for Seychelles are presented. Thus the spider fauna of the granitic Seychelles now consists of 203 species divided between 40 families. In addition several other species, primarily from the families Araneidae, Oonopidae, Tetragnathidae and Theridiidae (Roberts 1983, Saaristo 2001), have been reported from the other parts of Seychelles. Further new records of some rarely collected species are given. Unknown opposite sexes of five species are also described.

The material treated in this report has been provided by several persons as acknowledged later.

Abbreviations:
MRAC = Musée Royal de l'Afrique Centrale, Tervuren, Belgium.
MZT = Zoological Museum of Turku University, Finland.
ZMH = Zoologisches Museum der Universität Hamburg, Germany.
ZMMU = Zoological Museum of the Moscow University, Russia.

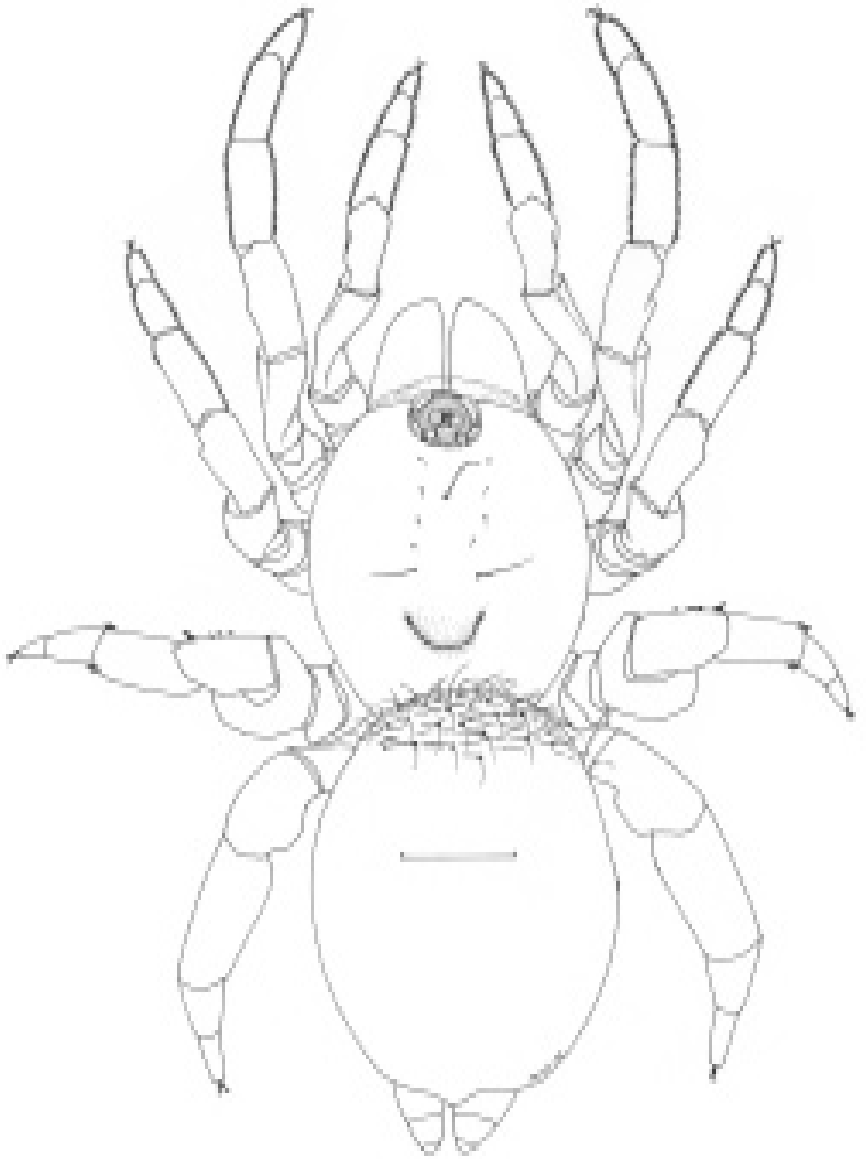


Fig. 1. *Conothele truncicola* n. sp. - Female dorsally. - Scale bar = 2.0 mm. Orig.
TL = total length.
CL = length of carapace.

CW = width of carapace.
DSL = length of dorsal scutum.
DSW = Width of dorsal scutum.

Family CTENIZIDAE Thorell, 1887 - cork-lid trapdoor spiders

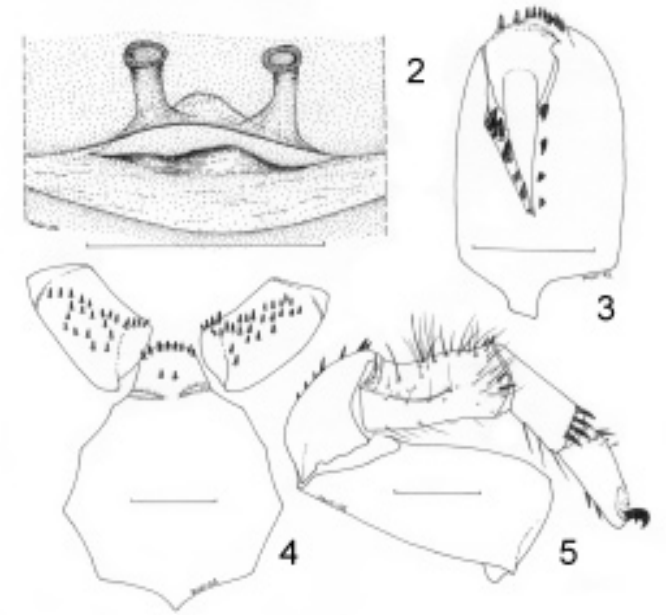
Conothele Thorell, 1878

Conothele truncicola n. sp. (Figs. 1-5)

Conothele sp. ?, Hirst 1911: 49.
Gen. sp. ign., Saaristo 1999: 1.

Types: Holotype female from Silhouette, Belle Vue, on *Syzygium cuminis*, 18.01.1999, M. Saaristo & J. Gerlach leg. (MZT AA 0.724) and 6 juvenile paratypes with same data (MZT AA 0.725).

Other material examined: Silhouette, Belle Vue, one juvenile. 11.09.1999, J. Gerlach leg. *(*MZT AA 1.304) and in the valley above Anse Mondon, one juvenile, 10.08.2000, J. Gerlach leg.(MZT AA 1.317); Mahé: Morne Blanc, 350m, secondary tropical rainforest, 1f, 01.08.1984, USSR. Zool. Exped. (ZMMU);.



Figs 2-5 *Conothele truncicola* n. sp 2: Vulva ventarally. 3: Right chelicer ventrally. 4: Maxillae, labium, sternum. 5: Right tibia III laterally. Scale = 1 mm. Orig.

Etymology: Named as *truncicola* which refers to its habit of building its well camouflaged, silken tubes in small crevices on tree trunks.

Diagnosis: This medium-sized (TL=ca.12), dark coloured species can be distinguished from all other Seychellian therasophids by the U-shaped fovea on carapace.

Description: Female holotype (male unknown): Carapace length 5.04, length of abdomen 6.58. Carapace and appendages very dark brown, sternum and ventral sides of coxae lighter. Abdomen blackish with purplish hue, venter lighter. Carapace glabrous, with a few hairs. Eyes in three rows on small, rounded elevation. Fovea U-shaped. Chelicerae with 5 promarginal and 4 retromarginal teeth; rastellum formed by some 12 special hairs. Endites with numerous short, black special hairs, apex of labium with some eight similar hairs and two of them near the base of labium. Legs spinose; pro- and retrolateral sides of tarsi, metatarsi, and tibiae of palps and legs I and II densely covered with short, hooked spines. Tibia III with a basal, saddle-like, glabrous depression. Vulva consisting a triangular sack with a pair of dorsal tubular, thin walled extensions with more or less spherical, thick walled end parts.

Distribution: This apparently endemic species is found on Mahé (Hirst 1911: *Conothele* sp. ?) and Silhouette (Saaristo 1999: *Gen. sp. ign*).

Discussion: According to Main (1985) most *Conothele* species are terrestrial but at least one, *C. arboricola* Pocock, 1898 from New Britain is arboreal. Considering the long distance between Seychelles and New Britain as well as the sedentary life style of mygalomorphids as general, I assume that the Seychellian species is different from that found on New Britain.

Family CLUBIONIDAE Wagner, 1887 - sac spiders

Clubiona Latreille, 1804

Clubiona hitchinsi n. sp. (Figs. 6-10)

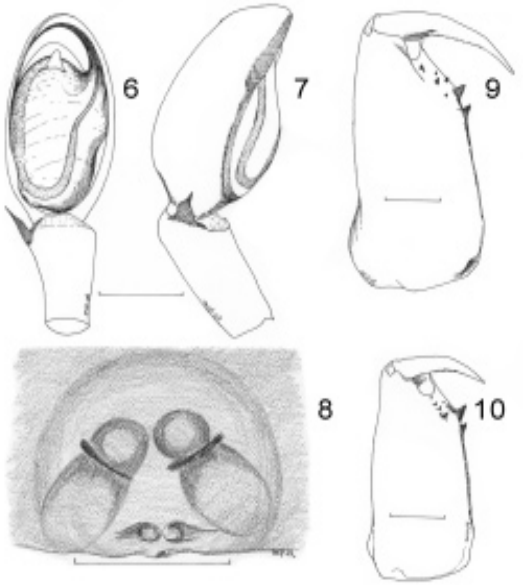
Types: Holotype male and two female paratypes from Cousine, 23.01.1999, M. Saaristo leg. (MZT AA 0.990); 5 male and 3 juvenile paratypes from Aride, litter sampling, July-November 2000, John Bowler leg. (MZT AA 2.118); one male and one female paratype from North, 30.07.2000, J. Gerlach leg.(MZT AA 1.327)*;* one male, 3 female and 2 juvenile paratypes from Silhouette, La Passe, 06.-19.01.1999, M. Saaristo leg. (MZT AA 0.991, 0.992, and 0.995); 2 male, 6 female and 10 juvenile paratypes from Silhouette, Anse Cimitiere, 17.-18.01.1999, M. Saaristo leg. (MZT AA 0.993 and 0.994); one female paratype from Silhouette, Belle Vue, (pitfall traps), 16.-20.07.1999, J. Gerlach leg. (MZT AA 1.312); one male paratype from St. Francois, 08.04.2001, J. Gerlach leg. (MZT AA 2.202).
Other material examined: Alphonse, 1juv., 09.04.2001, J. Gerlach leg. (MZT AA 2.165); Mahé, 1juv., 03.12.1993, J. Gerlach leg. (MZT AA 0.989) and Roche Caiman

Bird Sanctuary, among vegetation, 1j., (MZT AA 0.308); Silhouette, La Passe, 1juv., Dec. 1993, J. Gerlach leg. (MZT AA 0.988),

Etymology: Named for my friend Mr. Peter Hitchins who kindly invited me to Cousine during my arachnological excursion to Seychelles in 1999 I then learned his deep concern about the future of the native flora and fauna of Seychelles and especially that of the hawksbill turtle (*Eretmochelys imbricata*).

Diagnosis: C. hitchinsi is readily distinguished from the other Seychellian *Clubiona* species, viz. *C. mahensis* Simon, 1893 by having only two small, well separated teeth on the lateral side of the biggest one while in *C. mahensis* there are five teeth touching each other; this character seems to hold true even for very small juveniles.

Description: Medium-sized species; female larger than male (TL = 4.4-6.4, CL = 2.2-2.9). Carapace pale orange - brown; chelicerae and endites dark brown; sternum and legs pale yellowish; abdomen mouse grey, venter lighter. Chelicerae protruding with 4 promarginal and 3 retromarginal teeth. Male palpal tibia with simple, pointed apophysis; embolus long, whip-like. Vulva consisting of a pair of large, somewhat club-like receptaculae; their posterior ends are wide apart while apical ends almost touch each other; dark, transverse collar-like bands form a border between the spherical anterior parts and the larger posterior parts of receptaculae.



Figs. 6-10. *Clubiona hitchinsi* n. sp. (Figs. 6-9) and *C. mahensis* Simon, 1893 (Fig. 10). - 6: Right male palp ventrally. - 7: Right male palp laterally. - 8: Epigyne ventrally. - 9 and 10: Right chelicer from behind. - Scale bars = 0.2

mm. Orig.
Discussion: Earlier (Saaristo 1995) I wrongly determined the Roche Caiman Bird Sanctuary juvenile as *"C." mahensis* as is now shown by the cheliceral dentition.

Family CORINNIDAE Karsch, 1880
Subfamily CORINNINAE Karsch, 1880 - dark sac spiders

Creugas Thorell, 1878

Creugas gulosus (Thorell, 1878) (Figs. 11-15)
Creugas gulosus Thorell, 1878b: 175 (Dj.)
Corinna gulosa, Simon 1898a: 196.
Corinna gulosa, Deeleman-Reinhold 2001: 260, f. 337-347 (mf).
-"-, Kamura 2001: 57, f. 24-30 (mf).
Creugas gulosus, Platnick 2002.
NB. For more references and synonyms see Platnick (2002).

Material examined: Aride, litter sampling, 1m, July-November 2000, John Bowler leg. (MZT AA 2.120); Cousin, in house, 1m, 10.11.1996, O. Bourquin leg. (MZT AA 0.387); Cousine, 2mm, Oct. 1996, Stella Le Maitre leg. (MZT AA 0.406), 2subad. mm, May/June 1998, Stella Le Maitre leg. (MZT AA 0.416 & 0.417), 2juvs., March 1998, J. Kelly leg. (MZT AA 1.283 & 1.284), E-end, among rotten coconut leaves, 1m1subad.m3ff16juvs., 24.-25.01.1999, M. Saaristo leg. (MZT AA 0.442-0.445); Mahé, Sans Soucis, 1m1f, Febr. 2002, Pat Matyot leg., (MZT AA 2.215); Silhouette, Anse Cimitiere, under *Casuarina* bark, 2juvs., 17.01.1999, M. Saaristo leg. (MZT AA 0.446), La Passe, pile of coconut husks near Gerlachs, 1juv., 07.01.1999, M. Saaristo leg.(MZT AA 0.447), La Passe (in house), 1m, 10.07. 1999, J. Gerlach leg. (MZT AA 1.303)

Diagnosis: A medium-sized (total length ca. 7.5-8 mm), dark reddish brown species with dense, fine granulation on carapace. It can be distinguished from all other Seychellian corinnids by the transverse, bipartite chilum separate from clypeus.

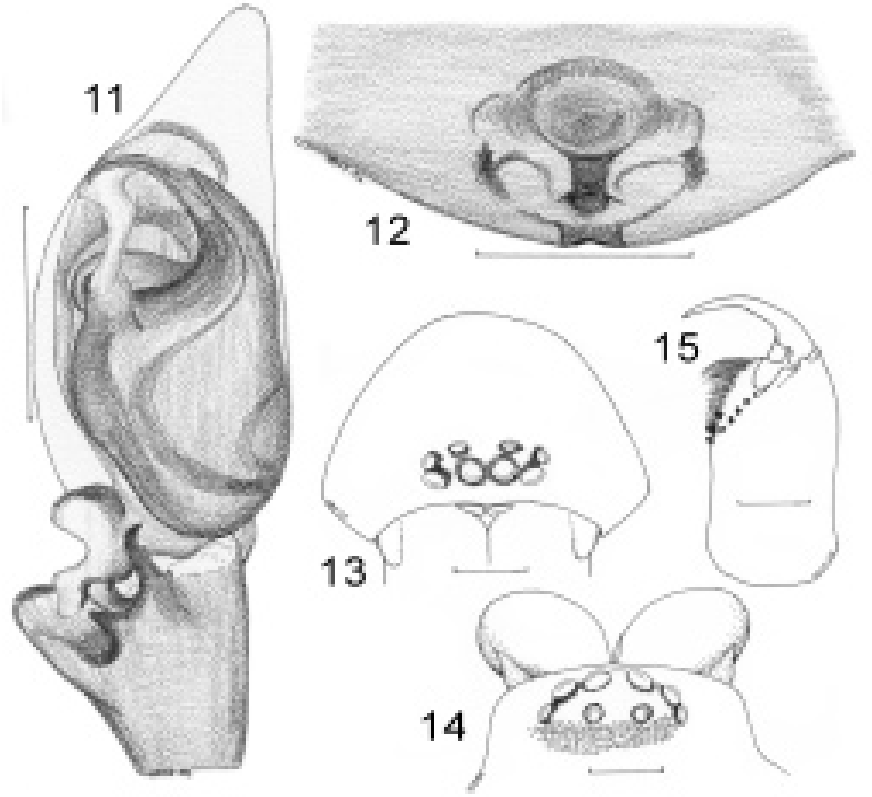
Description: Well described by Deeleman-Reinhold (2001) and Kamura (2001).

Distribution: Cosmopolitan (Platnick 2002). Seychelles records from Aride(*), Cousin(*), Mahé(*), Cousine and Silhouette (Saaristo 1999: *Genus ign. 2., sp. ign.*).

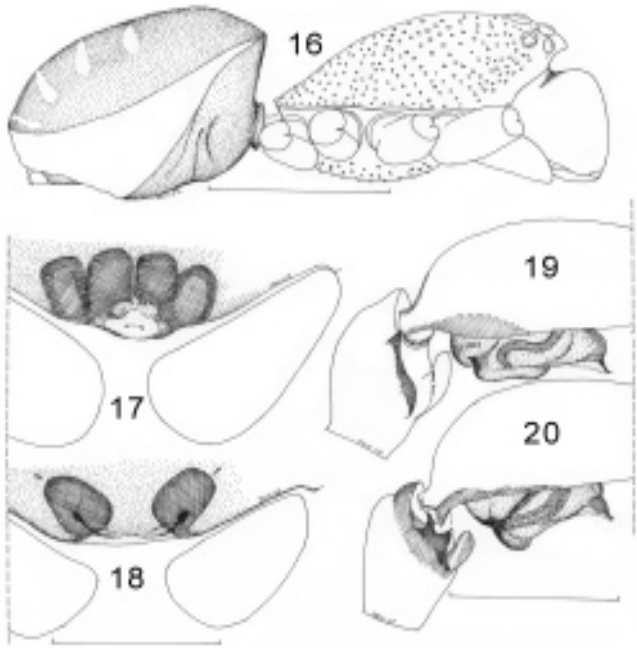
Oedignatha Thorell, 1881

Oedignatha mogamoga Marples, 1955 (Figs. 16,17,19)
Oedignatha mogamoga Marples 1955a: 467, pl. 57, f. 6-7, 9-10 (Dm).
Oedignatha scrobiculata, Saaristo 1978: 112, f. 109-117 (f, misidentification).
Paccius quadridentatus, Benoit, 1978k: 941, f. 1A-F (mf, misidentification).

Oedignatha mogamoga Deeleman-Reinhold, 2001: 273, f. 367-370 (mf).
Material examined: Aride, 5mm5juvs., 1975, M. Mühlenberg leg. (MZT AA 0.170-0.175); Cousin, 2mm4ff4juvs., 1978, Hugh Watkins leg. (MZT AA 0.176-0.184); Cousine, 3mm1juv., 1998, Stella Le Maitre leg. (MZT AA 0.407-0.409) and 4mm4ff1juv., 23.-25.01.1999, M. Saaristo leg. (MZT AA 0.979-0.983); Farquhar Atoll, 9mm19ff31juvs., 16.-19.08.1984, USSR. Zool. Exped. (ZMMU); La Digue, 1m, 1994, USSR. Zool. Exped. (ZMMU); Mahé, golf green of the Reef Hotel, 4mm1f, 24.10. 1975, M. Saaristo leg. (MZT AA 0.020), Roche Caiman Bird Sanctuary, leaf litter, 2juvs., 23.12.1993, J. Gerlach leg. (MZT AA 0.303-0.304) and 1m2ff2juvs., 1994, J. Gerlach leg. (MZT AA 0.305), 3mm2ff, Jan. 1999, M. Saaristo, Pat Matyot & Maureen Kirkpatrick (MZT AA 0.984-0.985); Petite Soeur, 1f, 17.09.1975, M. Mühlenberg leg. (MRAC 177.106); Poivre Atoll, 5mm33ff3juvs., 05.-09.08.1994, USSR. Zool. Exped. (ZMMU); Praslin, 7mm4ff10juvs., 28.10.1975, M. Saaristo leg. (MZT AA 0.021); Silhouette, various places, 13mm19ff1juv., 06.-23.01.1999, M. Saaristo & J. Gerlach leg. (MZT AA 0.965-0.978) and 3mm6ff9juvs., 1994,



Figs. 11-15. *Creugas gulosus* Thorell, 1878. - 11: Right male palp ventrally. - 12: Epigyne ventrally. - 13: Carapace frontally. - 14: Ocular area and chelicerae dorsally. - 15: Right chelicer from behind. - Scale bars = 0.5 mm. Orig.



Figs. 16-20. *Oedignatha mogamoga* Marples, 1955 (Figs. 16, 17, 19) and *O. scrobiculata* Thorell, 1881 (Figs. 18, 20). - 16: Opistosoma and abdomen laterally. - 17 and 18: Epigyne ventrally. - 19 and 20: Right male palp laterally. - Scale bars = 1.0 mm. Orig.

Diagnosis: Habitually *O. mogamoga* is very similar to *O. scrobiculata* and both species have 4 pairs of light spots on abdomen. The black, retrolateral apophysis on the tibia of male palp of the former species is long and its dorsal end is drawn in a straight, rather blunt pointed outgrowth while the latter species has a short apophysis with crooked, sharp pointed dorsal end. Females of *O. mogamoga* have bipartite seminal receptaculae which almost touch in the middle line while *O. scrobiculata* have simple ones, wide apart from each other.

Description: The species has been well described by Saaristo (1978: *Oedignatha scrobiculata*), Benoit (1978: *Paccius quadridentatus*) and Deeleman-Reinhold (2001).

Distribution: Outside Seychelles the species have been recorded from Malaysia, Borneo, and Samoa (Platnick 2002). In Seychelles it seems to be common and, at least locally, highly abundant. It has been collected from the following islands: Aride (Bowler *et al*. 1999), Cousin (*), Cousine (Saaristo 1999), Curieuse (Benoit 1978), Farquhar Atoll (*), La Digue (*), Mahé (Saaristo 1978 & 1999, Benoit 1978), Petit Soeur (*), Poivre Atoll (*), Praslin (Saaristo 1978, Benoit 1978), and Silhouette (Saaristo 1999). Saaristo 1978 records as *O. scrobiculata,* Benoit 1978 records as

Paccius quadridentatus

Discussion: All earlier records of *O. scrobiculta* from Seychelles (Saaristo 1978 and 1999 and Bowler et al. 1999) in fact refer to *O. mogamoga*. It is also easy to see from Benoit's (1978k) figures that he is dealing with *O. mogamoga* not with *Paccius quadridentatus*. This has also been partly noticed by Platnick (2000b: 116): "his specimens are clearly just misidendified members of *Oedignatha*".

Oedignatha scrobiculata Thorell, 1881 (Figs. 18,20)
Oedignatha scrobiculata Thorell, 1881: 209 (Df)
Oedignatha scrobiculata, Deeleman-Reinhold 2001: 267, f. 348-356(mf).

Material examined: Bijoutier, 1f, 08.04.2001, J. Gerlach leg. (MZT AA 2.194); MALAYSIA: Johor, Kota Tinggi, 2mm9ff, 03.11. 1976, P. T. Lehtinen leg. (MZT AA 5.634).

Diagnosis: See diagnosis *O. mogamoga*.

Description: The species has been well described by Deeleman-Reinhold (2001).

Distribution: India to Philippines and Malay Archipelago (Deeleman-Reinhold 2001). According to Deeleman-Reinhold (2001) *O. scrobiculata* and *O. mogamoga* occur syntopically over a wide range. This is the first record from Seychelles (so far only from Bijoutier).

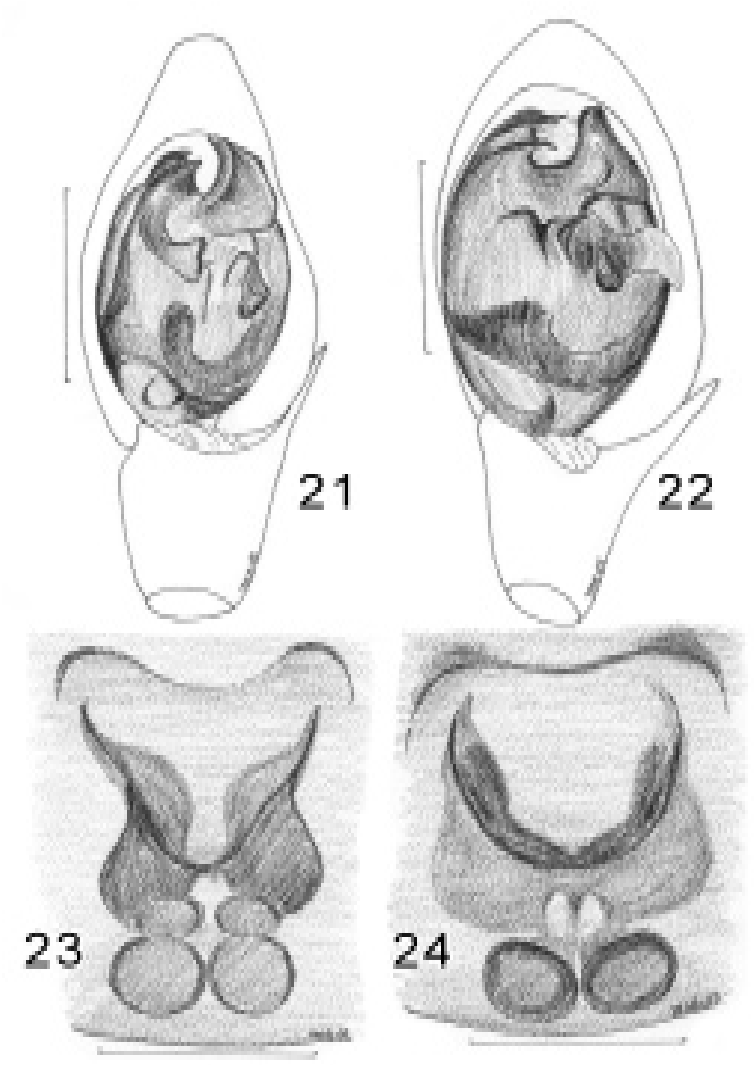
Family GNAPHOSIDAE Banks, 1892 - flat-bellied ground spiders

Camillina Berland, 1919

Camillina aldabrae (Strand, 1907) (Figs. 21,23)
Echemella aldabrae Strand, 1907: 726 (Dmf).
Camillina aldabrae Platnick & Murphy, 1987: 7, f. 9-12 (Tmf from *Echemella*).
-"-, Bowler *et al*. 1999: 48 (misprinted as *C. aldabae*).

Material examined: Aride, 2m, 13.08.1975, M. Mühlenberg leg. (MZT AA 0.097); Petite Soeur, 1f, 17.09.1975, M. Mühlenberg leg. (MRAC 177.104).

Diagnosis: The male of *C. aldabrae* is distinct from the other *Camillina* species found on Seychelles, viz. *C. cordifera* (Tullgren, 1910) (Figs. 22,24) by the abruptly narrowed tip of the distal point of the terminal apophysis which in the later species is blunt-tipped. The female of *C. aldabrae* has a U-shaped epigynal plate while that of *C. cordifera* is more or less triangular.



Figs. 21-24. *Camillina cordifera* (Tullgren, 1910*)* (Figs. 21, 23) and *C. aldabrae* (Strand, 1907) (Figs. 22, 24). - 21 and 22: Left male palp ventally. - 23 and 24: Epigyne ventrally. - Scale bars = 0.2 mm. Orig.

Description: The species has been well described by Platnick & Murphy (1987).

Distribution: Central Africa south to Natal, Aldabra, and Borneo (probably introduced) (Platnick & Murphy 1987). In the granitic Seychelles known from Aride (Bowler *et al*. 1999) and Petite Soeur.

Odontodrassus Jézéquel, 1965

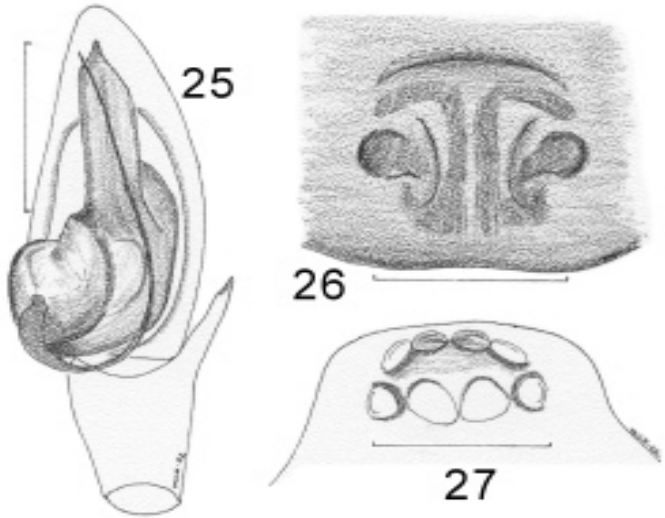
Odontodrassus aphanes (Thorell, 1897) (Figs. 25-27)

Drassus aphanes Thorell, 1897a: 218 (Df).
Scotophaeus javanus Kulczyn'ski, 1911b: 470, pl. 21, f. 21, 24 (Df).
Drassodes ciusi Berland, 1924a: 192, f. 54-56 (Dm).
Drassodes ciusi, Berland 1929a: 393, f. 3-4 (Df).
*Odontodrassus javanus,*Platnick 1981: 332, f.1-4 (Tf from *Zelotes* per Roewer, Sm).
-"-, Kamura, 1990: 32, f. 1-2 (f).
Odontodrassus aphanes, Deeleman-Reinhold 2001: 530, f.915-921 (Tf from *Drassodes*, Sm).
Material examined: Bird, 1m, 06.04.2001, J. Gerlach leg. (MZT AA 2.183).

Diagnosis: This is a smallish (TL=5-5.8), light coloured species; carapace pale orange, abdomen dorsally mouse-grey with a small, triangular dark coloured apical scutum covered with long, curved and thickened hairs, venter creamy white. Male palp with enlarged embolar base bearing a long, whip-like embolus running along the retrolateral edge of large, flat conductor. Female epigynum with a wide median ridge covering two long, parallel median ducts with laterally directed anterior ends.

Description: The species has been well described by Platnick (1981: *Odontodrassus javanus)* and Deeleman-Reinhold (2001).

Distribution: The species seems to be widely distributed in the tropics, probably partly due to human introductions (Platnick 1981, Deeleman-Reinhold 2001). This is the first record of the species from Seychelles and so far found only from Bird.



Figs. 25-27. *Odontodrassus aphanes* (Thorell, 1897). - 25: Left male palp ventrally. - 26: Epigyne ventrally. - 27: Ocular area. - Scale bars = 0.2 mm. Orig.

Family LINYPHIIDAE Blackwall, 1859 - dwarf or money spiders

Agyneta Hull, 1911

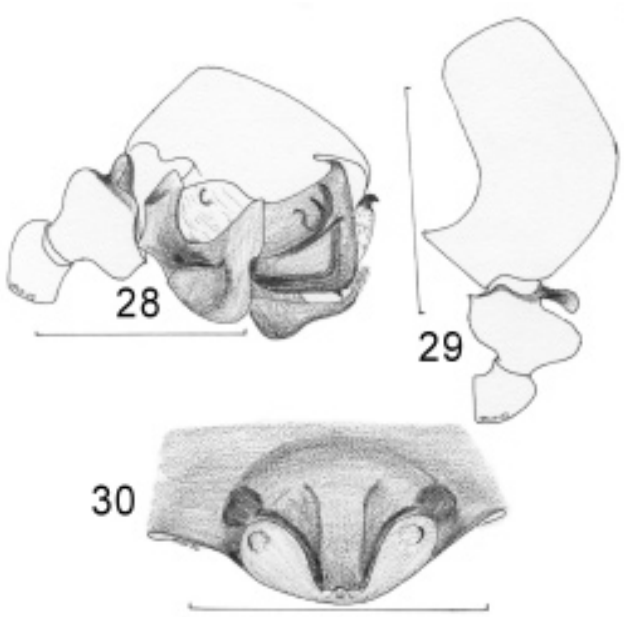
Agyneta pogonophora (Locket, 1968) n. comb. (Figs. 28-30)
Meioneta pogonophora Locket, 1968: 71, f. 2A-C (Dm).
Meioneta sp. Locket, 1968: 84, f. 13C (Df).

Material examined: Alphonse, 1m, 09.04.2001, J. Gerlach leg. (MZT AA 2.166), Poivre Atoll, 1f, USSR. Zool. Exped. leg. (ZMMU).

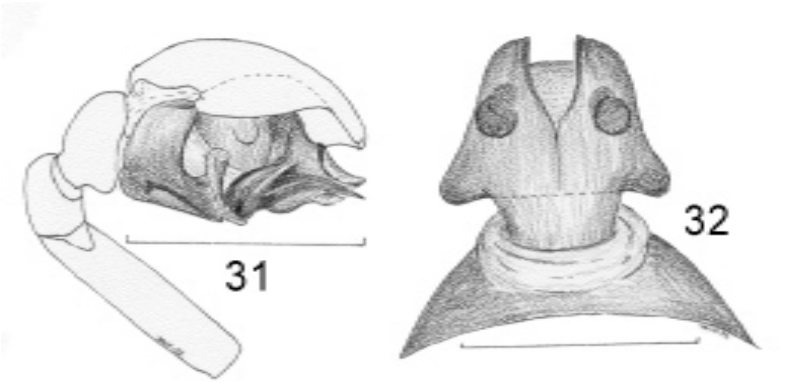
Diagnosis: The male of *A. pogonophora* is easily recognised by the tongue-like, laterally pointing apicodorsal tibial apophysis and the female by the small, protruding epigyne with strongly diverging lateral lobes.

Description: Female (male well described by Locket 1968): Small, dark, long legged species (TL = 1.33, CL = 0.57, CW = 0.43). Carapace dark, blackish brown; abdomen uniform greenish black; legs pale yellowish, strongly suffused with black. Epigyne small, protruding with strongly diverging lateral lobes.

Distribution: Previously known only from Angola (Locket, 1968). The first records of the species from Seychelles are from Alphonse and Poivre Atoll.



Figs. 28-30. *Agyneta pogonophora* (Locket, 1968). - 28: Right male palp laterally. - 29: cymbium and tibia dorsally. - 30: Epigyne ventrally. - Scale = 0.2 mm. Orig.



Figs. 31-32. *Metalepthyphantes praecipuus* Locket, 1968 - 31: Right male palp laterally.- 32: Epigyne ventrally. - Scale bars = 0.2 mm. Orig.

Metalepthyphantes Locket, 1968

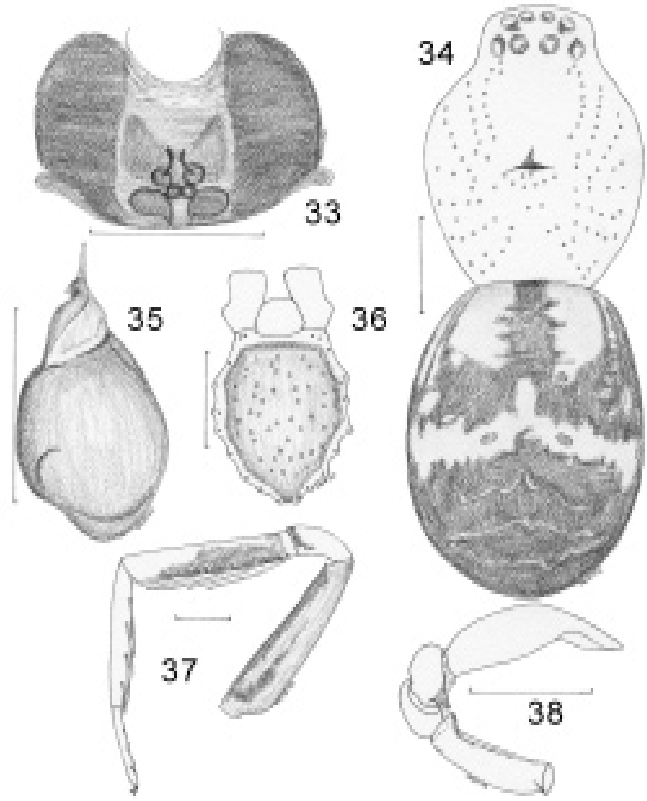
Metalepthyphantes praecipuus Locket, 1968 (Figs. 31-32)
Metalepthyphantes praecipuus Locket, 1968: 109, f. 33A-D (Df).

Material examined: Assumption, 1m1f, 12.-14.8.1984, USSR. Zool. Exped. leg. (ZMMU); Poivre, cocos (F-22), 2mm3ff, 7.8.1984, USSR. Zool. Exped. leg. (MZT AA 2.214 and ZMMU).

Diagnosis: The male of *M. praecipuus* is easily recognised by two parallel, slightly curved apophyses on the lateral side of the palp and the female by the voluminous, spavin-like epigyne which is connected to the abdomen by a wide, weakly chitinized stalk.

Description: Male (female well described by Locket 1968): Small, dark, long legged species (TL = 1.36, CL = 0.60, CW = 0.43). Carapace light brownish; abdomen uniform dark grey; legs pale yellowish. No tibial apophysis on male palp; cymbium and bulbus somewhat elongated; two parallel, slightly curved apophyses on lateral side of palp.

Distribution: Previously known only from Angola (Locket, 1968). The first record from Seychelles are from Assumption and Poivre.



Figs. 33-38. *Orthobula impressa* Simon, 1896. - 33: Epigyne ventrally. - 34: Carapace and abdomen dorsally. - 35: Bulbus of male palp. - 36: Sternum. - 37: First leg. - 38: Right male palp without bulbus laterally. - Scale = 0.2 mm. Orig.

Family LIOCRANIDAE Simon, 1897
Subfamily Phrurolithinae Banks, 1892

Orthobula Simon, 1897

Orthobula impressa *Simon,* 1897 (Figs. 33-38)
Orthobula impressa Simon, 1897b: 498 (Dmf).
-"-, Deeleman-Reinhold, 2001: 431, f. 697-699 (m, not f).

Material examined: Aride, 1f, 13.01.1997, J. Gerlach leg., Michael Saaristo det. (MZT AA 0.373); Silhouette, La Passe , 1f, 06.01.1999, M. Saaristo leg. (MZT AA 0.437), Chemin Montagne Posee, 1m, 09.01.1999, M. Saaristo leg. (MZT AA 0.438), Jardin Marron, *Lodoicea* litter, 1m, 20-22.01.1999, M. Saaristo & J. Gerlach leg. (MZT AA 0.439), Anse Lascars, Takamaka leaves, 2mm, 18.01.1999, M. Saaristo

& J. Gerlach leg. (MZT AA 0.440), and La Passe, "chicken house", *Pandanus* & Coconut leaves, 2mm3ff1juv., 11.01.1999, M. Saaristo & J. Gerlach leg. (MZT AA 0.441); Mahé, 3juvs., June 1994, J. Gerlach leg. (MZT AA 0.987); North, 1f, 30.07.2000, J. Gerlach leg., M. Saaristo det. (MZT AA 1.351).

Diagnosis: A rather small (TL=1.6-2.0), somewhat ant-like species, with dark orange, very punctate carapace; dorsum of abdomen green-black with dirty white pattern (in some specimens almost unicolorous), venter of abdomen whitish; legs contrastingly marked with five pairs of long, ventral spines on the first tibia. Tibia of the male palp with sharp-pointed, triangular apophysis. Bulbus large but simple with apical, spine-like anteriorly pointing embolus. Epigyne of the female with a pair of large, oval-shaped spermathecae close to epigastric furrow and anteriorly two pairs of small, spherical ones; two short laterally curving tubes from last pair of spermathecae.

Description: A more detailed description will be given in a later paper.

Distribution: Previously know only from Sri Lanka (Deeleman-Reinhold 2001). This is the first record from Seychelles (Aride, Silhouette, Mahé and North).

Discussion: The structure of the female epigyne presented by Deeleman-Reinhold (2001) differs fundamentally from my specimens; it was not collected together with the male and apparently belongs to another taxon.

Family MIMETIDAE Simon, 1881 - pirate spiders

Ero C. L. Koch, 1836

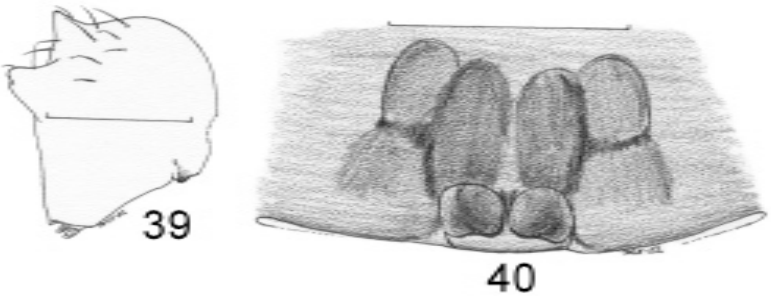
Ero comorensis Emerit, 1996 (Figs. 39-40)

Ero comorensis Emerit, 1996: 102, f. 7D,9&11C (Dm).

Material examined: Silhouette: La Passe, 1f1j., 15.01.1999, M. Saaristo leg. (MZT AA 0.702) and 1f, 1994, USSR. Zool. Exped. (ZMMU).

Diagnosis: This rather small species (TL = 2.3) is easily recognised by the two pairs of dorsal tubercles on the abdomen; also the densely freckled legs are characteristic.

Description: Female (male well described by Emerit 1996): Somatic characters as in male. Epigyne protruding, with a pair of large, rounded openings; seminal receptaculae conspicuously large, bipartite, almost touching in the midline



Figs. 39-40. *Ero comorensis* Emerit, 1996: - 39: Abdomen of female dextrolaterally. - 40: Epigyne ventrally. - Scale bars: 39 = 1.0, 40 = 0.2 mm. Orig.

Discussion: No male has been collected from Seychelles while Emerit (1996) had only a single male at his disposal when describing *E. comorensis*. However, as the Seychelles females resemble the Comores male in having four prominent dorsal abdominal tubercles, it is provisionally considered to belong to the same taxon.

Distribution: Previously known only from Comores (Emerit 1996). This is the first record from Seychelles and so far found only from Silhouette.

Family MITURGIDAE Lehtinen, 1967 - forest-floor spider

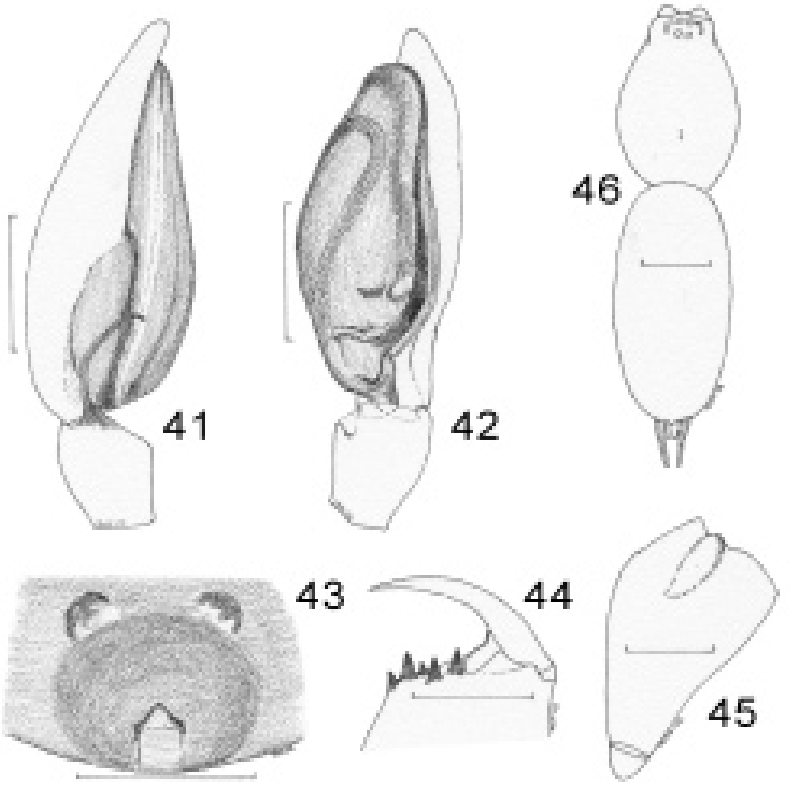
Palicanus Thorell, 1897

Palicanus caudatus Thorell, 1897 (Figs. 41-46)

Palicanus caudatus Thorell, 1897a: 227 (Dm).
-"-, Deeleman-Reinhold, 2001: 220, f. 266-271 (m,Df).

Material examined: Aride, 1 juv., 18.08.1975, M. Mühlenberg leg. (MZT AA 2.333); Silhouette, La Passe, rocky slope behind Gerlachs, coconut leaves, 2f, 13.01.1999, M. Saaristo leg. (MZT AA 0.433), La Passe "chicken house" *Pandanus* & coconut leaves, 1subad.f, 11.01.1999, M. Saaristo leg., Michael Saaristo det. (MZT AA 0.434), La Passe, lumber pile near Gerlachs, subad.1m, 08.01.1999, M. Saaristo leg., Michael Saaristo det. (MZT AA 0.435), and La Passe, pile of coconut hulls near Gerlachs, 1m1subad.m, 07.01.1999, M. Saaristo leg., Michael Saaristo det. (MZT AA 0.436).

Diagnosis: This rather large (TL = ca. 8.0), mouse-grey species is easily recognized from all other ground-living Seychellian spiders by the conically elongated apical segments of the posterior spinnerets. Male palp characterized by the long and thin, slightly crooked tibial apophysis. In the middle of epigyne a small triangular depression; its dark sides form an anteriorly pointing chevron.



Figs. 41-46. *Palicanus caudatus* Thorell, 1897. 41: - Right male palp laterally. - 42: Right male palp mesially. - 43: Epigyne ventrally. - 44: Apex of left chelicer from behind. - 45: Left chelicer laterally. - 46: Carapace and abdomen dorsally. - Scale bars = 0.2 mm. Orig.

Description: The species has been well described by Deeleman-Reinhold (2001).

Distribution: Recorded from Myanmar, S China and E Indonesia (Deeleman-Reinhold 2001). From Seychelles known only from Silhouette (Saaristo 1999: Miturgidae: *Gen. sp. ign*.) and Aride (*).

Discussion: Palicanus was transferred to Miturgidae from the Clubionidae by Lehtinen, 1967: 255. Removed from Clubionidae: Systariinae by Deeleman-Reinhold (2001: 219) but retained in Miturgidae by Platnick (2002).

Family NESTICIDAE Simon, 1894 - cave cobweb spiders

Nesticella Lehtinen & Saaristo, 1980

Nesticella sechellana (Simon, 1897) (Figs. 47-49)

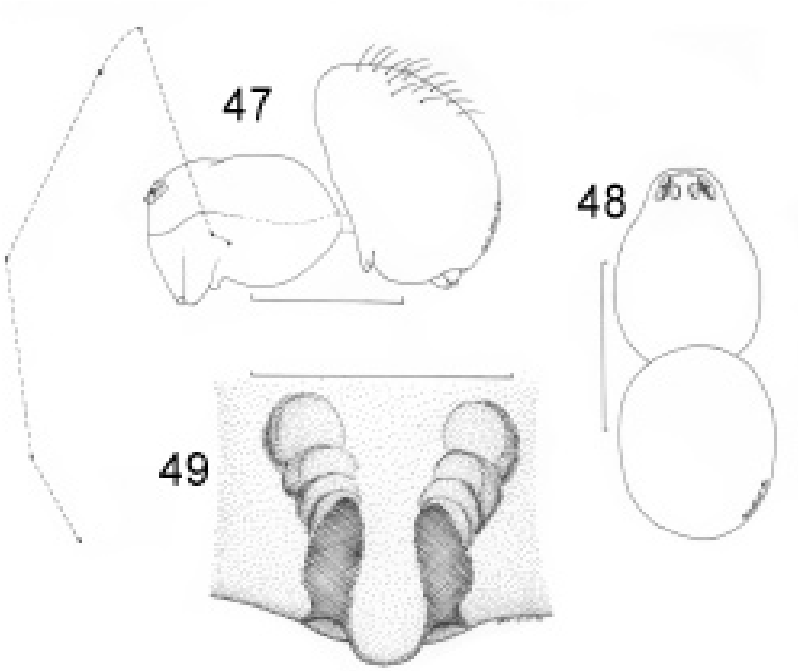
Nesticus sechellana Simon, 1897: 378 (Df).
-"-, Hubert 1970: 81, f. 9-10 (f).
Nesticella sechellana, Lehtinen & Saaristo 1980: 56 (f).

Material examined: Mahé, holotype f (ZMH) and Silhouette, forest litter, 590m, 1f, 1994 USSR. Zool. Exped. (ZMMU).

Diagnosis: This small (TL = 2.7), unicolorous grey species can be distinguished from all other long legged Seychellian spiders by having eight eyes and tarsi IV with ventral row of serrated bristles.

Description: Female (male unknown) well described by Hubert (1970).

Distribution: Mahé (Simon 1897, Hubert 1970) and Silhouette (*).



Figs. 47-49. *Nesticella sechellana* (Simon, 1873). - 47: Female sinistrolaterally. - 48: Carapace and abdomen dorsally. - 49: Epigyne ventrally. - Scale bars: 47,46 = 1.0, 48 = 0.2 mm. Orig.

Family OONOPIDAE Simon, 1890 - dwarf hunting spiders

Aridella n. gen.

Type species: Aridella bowleri n. sp.

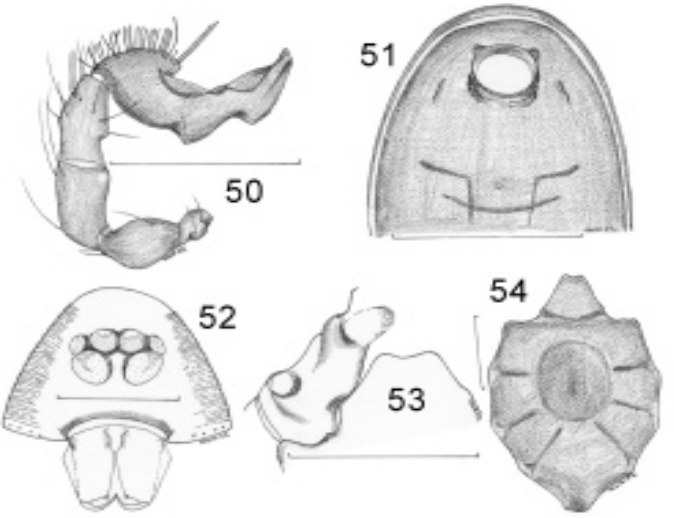
Etymology: The generic name is derived from the name of the type locality of its type species, considered feminine in gender.

Diagnosis: According to its heavily sclerotized, pitch black palps with entirely fused cymbium and bulbus the genus resembles *Brignolia* Dumitresco & Georgesco, 1983 and *Lisna* Saaristo 2001 but the structure of bulbal elements of the male palp are more like in *Opopaea* s. str. which, on the other hand, has normally sclerotized male palps with strongly swollen palpal patella. Also the large, oval-shaped, shallow depression on sternum may be of generic value.

Aridella bowleri n. sp. (Figs. 50-54)

Types: Holotype male from Aride, litter sampling, July-November 2000, John Bowler leg. (MZT AA 2.130) and one subadult male paratype with same data (MZT AA 2.131).

Diagnosis: In addition to the genital organs the male (female unknown) of *A. bowleri* can be easily distinguished from all other Seychellian oonopids by its large anterior eyes and the median, oval-shaped depression on sternum.



Figs. 50-54. *Aridella bowleri* n. sp. 50: Right male palp laterally. 51: Anterior part of the abdomen ventrally. 52: Carapace and chelicerae frontally. 53: Maxilla and labium ventrally. 54: Sternum and labium ventrally. - Scale = 0.2mm. Orig.

Description: Medium-sized (TL = 1.61, CL = 0.71), completely chitinized species. Cephalothorax and abdomen light brown, legs pale brown. Carapace dorsally smooth, sides with numerous longitudinal striae. AMEs ca. twice as big as PMEs, which are ca. twice as big as PLMs. Small warts on either side of basal parts of chelicerae. Apical part of maxillae with curved, blunt-tipped extension bearing a

strong, curved hair. Sternum with shallow, median oval-shaped depression and radial furrows. Operculae small, slit-like. Male palp pitch black. Cymbium and bulbus fused together; cymbial part conspicuously small in relation to long bulbal part. Upper edge of bulbal part with two semicircular "windows", lower edge with two fairly deep excavations.

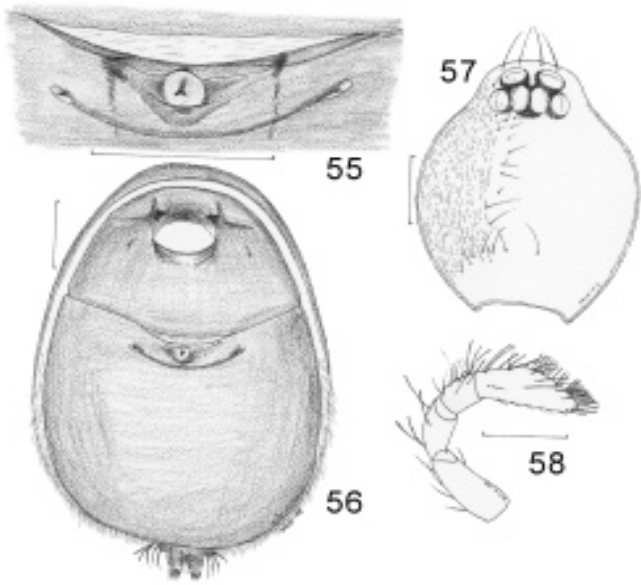
Opopaea Simon,1891

Opopaea suspecta n. sp. (Figs. 55-58)

Types: Holotype female from Praslin, Vallée de Mai, 19.03.2002, J. Gerlach leg. (MZT AA 2.298).

Etymology: Named as *suspecta* because it is not clear that the species is truly a member of the genus *Opopaea*.

Diagnosis: Female (male unknown) of *O. suspecta* can be recognized by having thick, erect hairs on palpal tibia and behind the epigastric furrow a round depression with a short, spiny extension at its middle.



Figs. 55-58. *Opopaea suspecta* n. sp. 55: Epigastric area of female. 56: Abdomen ventrally. 57: Carapace dorsally. 58: Right palp latererally. Scale=0.2 mm. Orig.

Description: Female (male unknown). Medium-sized (TL = 1.61, CL = 0.71), completely chitinized species. Cephalothorax and abdomen brown, legs pale yellowish. Carapace dorsally smooth, sides with numerous longitudinal striae. Four long hairs on clypeus; on either sides of the upper surface of carapace some ten

hairs in irregular rows and ten in a transverse row on posterior part of carapace. Eyes almost equal in size. Apical half of tarsus with numerous, erect thick hairs; similarly thickened hairs also on other palpal segments and legs. Operculae small, slit-like. Dorsolateral petiolar tube corners with triangular lobes opposed with boomerang-shaped ridges on epigastric scutum. Hairs on anal ring conspicuously thickened. On posterior side of epigastric furrow a light, round depression with dark, claw-like median elevation.

Discussion: This species is assigned to *Opopaea* with some hesitation. The structure on the posterior side of epigastric furrow resembles that of *Opopaea silhouettei* (Benoit, 1979) and also the triangular lobes on petiolar tube are typical for the genus *Opopaea*. On the other hand, the form of operculae, presence of thickened hairs and large size are all typical of *Lisna trichinalis* (Benoit, 1979). Finding the male is essential for the proper generic placement of the species.

Lionneta Benoit, 1979

Lionneta veli n. sp. (Fig. 59)

Lionneta spp. inquirendae, Saaristo 2001: 333, f. 90A-C (f).

Types: Holotype from Curieuse, pitfall, 12.01.2000, Hill & Vel leg. (MZT AA 1.584), paratype male from Grande Soeur, pitfall, 22.07.1999, Hill & Vel leg. (MZT AA 1.585), and paratype female from Grande Soeur [locality wrongly given as Petite Soeur in Saaristo 2001: 333], 17.09.1975, M. Mühlenberg leg. (MRAC 177.129).

Etymology: Named for Mr. Terence Vel, who collected invertebrates as a technician on the BLS "Management of Avian Ecosystems Project" in 1999-2001.

Diagnosis: L. veli n. sp. resembles *L. sechellensis* Benoit, 1979 in having 4 prolateral and no retrolateral spines on the first femur. It differs in having a smooth carapace (finely but distinctly granulated in *L. sechellensis*). Also the embolus of *L. veli* is much shorter than that of *L. sechellensis* resembling more that of *L. praslinensis* (Benoit, 1979) or *L. mahensis* (Benoit, 1979) which have different spine formulae.

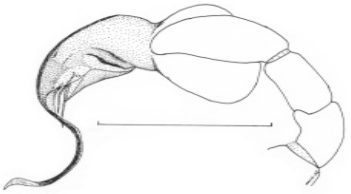


Fig. 59. *Lionneta veli* n. sp. - Right male palp mesially. - Scale = 0.2 mm. Orig.

Description: Female slightly larger than male; TL = 1.71-1.79, CL = 0.82, CW = 0.71, DSL = 0.71-0.75, DSW = 0.46-0.50. Cephalothorax light yellow-brown, abdominal scuta brownish, legs yellowish. Cephalothorax smooth, abdominal scutum

likewise, well covered with short, suberect hairs. Fe I with four prolateral spines, no retrolateral ones. Embolus relatively long, U-shaped, with a transparent, slightly dilated apex; two dark, ribbon-like extensions close to base of embolus.

Family PHOLCIDAE C. L. Koch, 1851 (8; 40-568) - daddy-long-legs spiders

Cenemus Saaristo, 2001

Cenemus mikehilli n.sp. (Fig. 60)

Types: Holotype female from Marianne by sweeping, 23.10.1999, Hill & Vel leg. (MZT AA 1.598) and paratype female from La Digue, 20.10.2001, J. Gerlach leg. (MZT AA 2.289).

Etymology: Named after Dr. Michael Hill, who collected the holotype specimen while working on the BLS "Management of Avian Ecosystems Project".

Diagnosis: Female (male unknown): Colouration and size (TL = ca. 4.5) of *C. mikehilli* n. sp. is indistinguishable from *C. culiculus* (Simon, 1898) and *C. silhouette* Saaristo, 2001. It is, however, easily recognised by its very wide genital lip which almost reaches the lateral sides of the abdomen.

Description: See diagnosis.

Distribution: Presumably this is an endemic species and found on La Digue and Marianne.

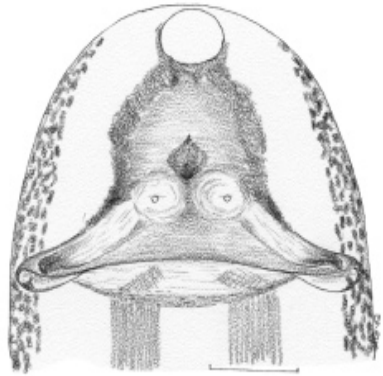


Fig. 60. *Cenemus mikehilli* n. sp. - Epigyneal area ventrally. Scale=0.2 mm. Orig.

Family PRODIDOMIDAE Simon, 1884 - long-spinneret ground spiders

Prodida de Dalmas, 1918

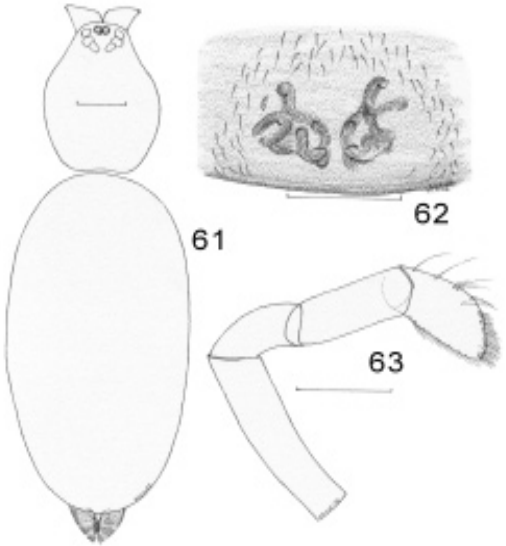
Prodida stella n.sp. (Figs. 61-63)

Type: Female holotype from Cousine, under the bark of *Casuarina*, 25.01.1999, M.Saaristo leg.(MZT AA 0.432).

Etymology: The specific name is a noun in apposition taken from the Christian name of Mrs. Stella Hitchins whose contribution to the reintroduction of the Seychelles magpie robin (*Copsychus sechellarum*) to Cousine has been essential.

Diagnosis: This medium-sized, conspicuously light coloured species is easily recognised from all other Seychellian spiders by the circular arrangement of eyes, diverging chelicerae and large, elongated abdomen.

Description: Female (male unknown). Medium-sized (TL = 4.5, CL = 1.35), light coloured species; carapace, chelicerae and legs light orange, sternum and abdomen pale yellowish. Eyes in circular arrangement; PMEs dark, circular, others light and more or less irregular in shape. Chelicerae divergent with long, curved fangs, toothless. First leg conspicuously heavier built than the others; coxa IV as long as trochanter IV. Palpal tarsus short, truncate with a bunch of short, rather thick, erect hairs apically. Epigynal plate roundish, bordered by black, curved hairs; more or less irregularly convoluted vulval tubes shining through the integument.



Figs. 61-63. *Prodida stella* n. sp. - 61: Female dorsally. - 62: Epigyne ventrally. - 63: Right palp laterally. - Scale bars = 0.2 mm. Orig.

Discussion: P. stella is close to *P. longiventris* de Dalmas, 1918 from Philippines. Epigyne of the unique specimen of *P. longiventris* seems to be lost. Differences between the epigyne of *P. stella* and de Dalmas (1918) figure of *P. longiventris* are small. Only after discovery of the males will it be possible to verify the taxonomic

status of these two species.

Family SALTICIDAE Blackwall, 1841 - jumping spiders

Cosmophasis Simon, 1901

Cosmophasis squamata Kulczynski, 1910 (Figs. 64-69)

Cosmophasis squamata Kulczynski, 1910: 402, pl. 17, f. 12 (Df).
-*"*-, Prószynski 1984: 24 (f).

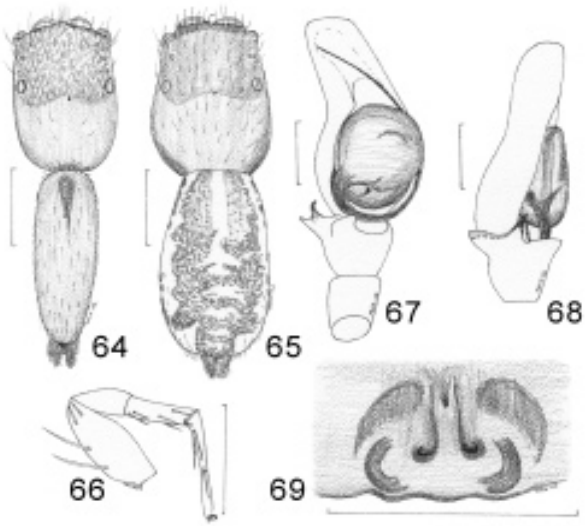
Material examined: Bird (#179), sweeping, 2f10juvs., March 2000, Hill & Vel leg. (MZT AA 2.067 and 2.068); Mahé, La Rosiére, 1f, Jan. 1999, P. Matyot leg. (MZT AA 0.597), La Rousette, 1f, 01.01.1999, M. Saaristo leg. (MZT AA 0.598), and Sans Soucis, 1m1f, Febr. 2002, Pat Matyot leg. (MZT AA 2.219).

Diagnosis: Male of this smallish salticid is easily recognised by its slender, orange abdomen with black apex and spinnerets and female by having a distinct dorsal pattern formed by dark, squamous hairs.

Description: Rather small salticid (TL=4.8-5.9, CL=2.19, CW=1.51); female larger than male due the bigger abdomen. Carapace of both sexes orange brown, ocular area densely cowered with squamous, dark brown hairs. Legs pale yellowish. Male abdomen narrow, cowered with squamous, orange hairs; dark lateral stripes on anterior part; apex and spinnerets black. Female abdomen with distinct pattern of dark, squamous hairs. Tibia of male palp with bifid apophysis. Bulbus disk-like; long, whip-like embolus starting from its posterolateral part, running around it, ending close to tip of cymbium. Epigyne with narrow, median ridge, deeply V-shaped notched anteriorly; openings of fertilising ducts on either sides of posterior part; on both sides of duct openings close to epigastric furrow dark, medially opening arches.

Distribution: Previously know only from Solomon Islands. This is the first record of the species from Seychelles and has been found on Bird and Mahé.

Discussion: Previously only one female specimen was known of this species. Epigyne figures were presented by Kulczynski (1910) and Proszynski (1984). Epigynes of my specimens correspond to them closely. The male is described here for the first time.



Figs. 64- : dorsally. - 65: Female dorsally. - 66: Right leg I of male laterally. - 67: Right male palp ventrally. - 68: Right male palp laterally. - 69: Epigyne ventrally. - Scale bars: 64-66 = 1.0, 67-69 = 0.2 mm. Orig.

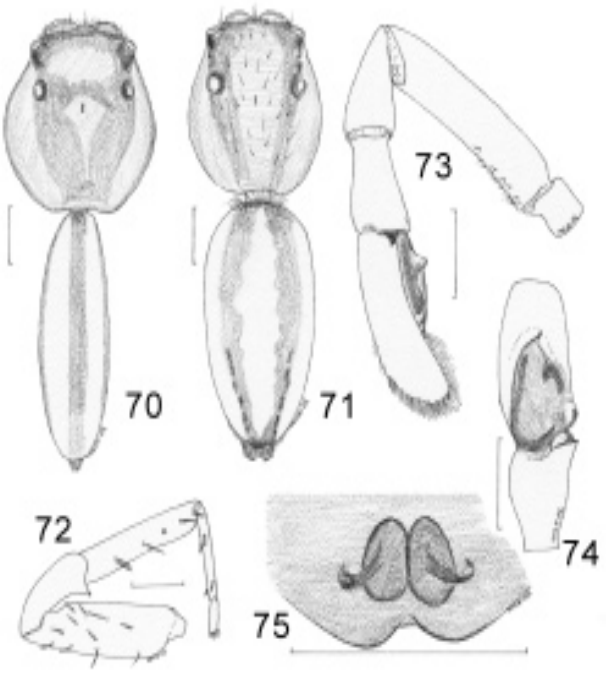
Epocilla Thorell, 1887

Epocilla calcarata (Karsch, 1880) (Figs. 70-75)

Plexippus calcaratus Karsch, 1880c: 398 (Dm).
Goajara crassipes Peckham & Peckham, 1907: 616 (Dm).
Epocilla calcaratus, Zabka 1985: 217, f. 132-148 (Tm from *Plexippus*, S).
-"-, Feng 1990: 218, f. 193.1-6 (mf).
-"-, Chen & Zhang, 1991: 315, f. 335.1-6 (m).
-"-, Peng et al. 1993: 51, f. 129-137 (mf).
-"-, Song, Zhu & Chen 1999: 509, f. 292H-I, 325D-E (mf).

Material examined: Conception, sweeping, 1m, Febr. 2000, Hill & Vel leg. (MZT AA 2.069) and 1f, Febr. 2002, Pat Matyot leg. (MZT AA 2.231); Mahé, Sans Soucis, 1f, Febr. 2002, Pat Matyot leg. (MZT AA 2.220).

Diagnosis: Male of this handsome, rather large salticid (TL = ca. 6.7) is easily recognised by the heavily build, dark brown first legs and bands of white hairs on the lateral sides of the broad carapace; abdomen slender with a orange median scutum which reaches about its middle and is covered with orange, squamous hairs. Female pale coloured with bright orange, lateral bands of squamous hairs both on carapace and abdomen.



Figs. 70-75. *Epocilla calcarata* (Karsch, 1880). - 70: Male dorsally. - 71: Female dorsally. - 72: Right leg I of male laterally. - 73: Right male palp laterally.- 74: Right male palp ventrally. - 75: Epigyne ventrally - Scale bars: 70-72 = 1.0, 73-75 = 0.2 mm. Orig.

Description: The species has been well described by Zabka (1985).

Distribution: The species has a wide distribution from China to Sulawesi and Hawaii (Platnick 2002). This is the first record of the species from Seychelles and found from Conception and Mahé.

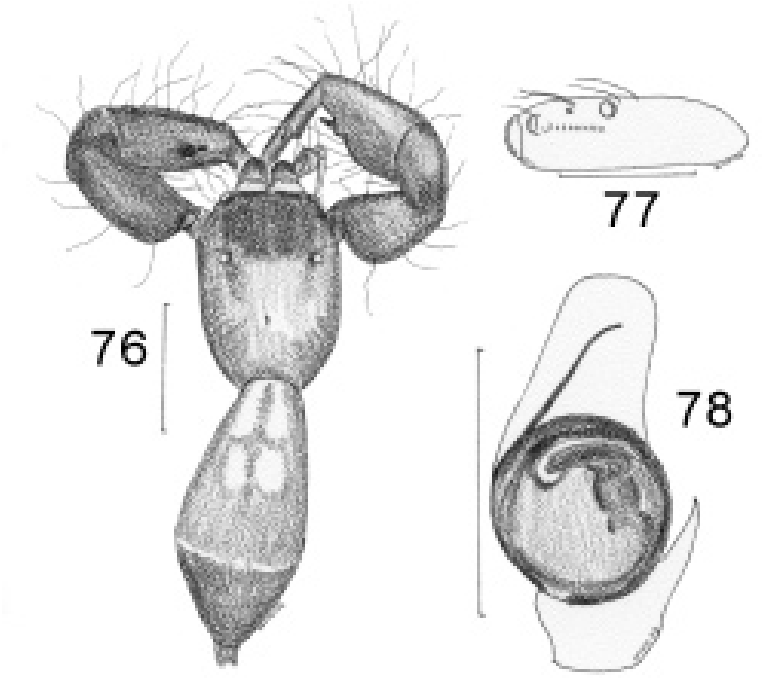
Pseudicius Simon, 1885

Pseudicius seychellensis Wanless, 1984 (Figs. 76-78)

Pseudicius seychellensis Wanless, 1984

Material examined: Aride, litter sampling, 1m, July-November 2000, John Bowler leg. (MZT AA 2.135)

Diagnosis: P. seychellensis is readily distinguished from all other known salticids in Seychelles by the row of trichobothria below the posterior lateral eyes.



Figs. 76-78. *Pseudicius seychellensis* Wanless, 1984. - 76: Male dorsally. - 77: Carapace sinistrolaterally. - 78: Right male palp ventrally. - Scale bars: 76,77 = 1.0, 78 = 0.2 mm. Orig.

Description: Male (female well described by Wanless 1984) in general appearance much like female but legs I still heavier built, black. Male palp with spine-like tibial apophysis. Bulbus flattened, disk-like; long, whip-like embolus starting from its apicomesal part, running around it, ending close to tip of cymbium.

Distribution: This is an endemic species of which for the present, only two specimens have been collected: Mahé (Wanless 1984) and Aride (*).

Family SEGESTRIIDAE Simon, 1893 - tubeweb spiders

Ariadna Savinyi & Audouin, 1825

Ariadna ustulata Simon, 1898 (Figs. 79-83)

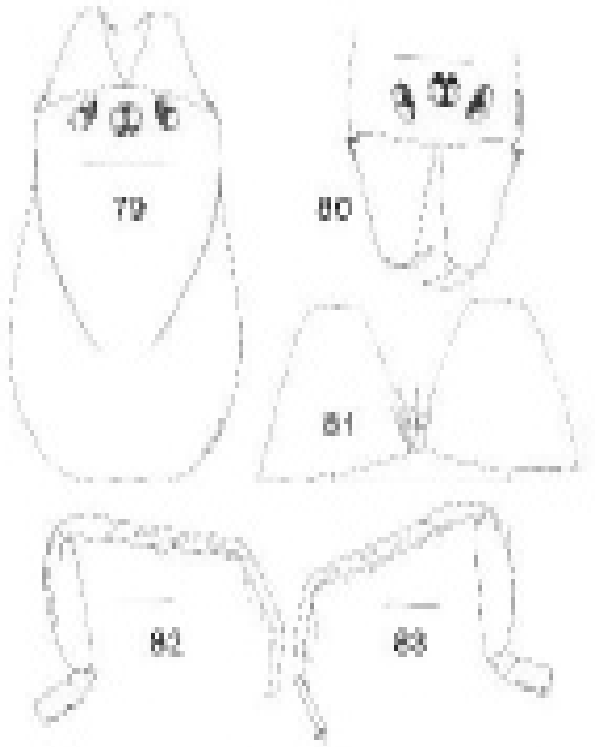
Ariadna ustulata Simon, 1898: 372 (Dj).

Material examined: Mahé, holotype, immature female (ZMH); Silhouette, Mt. Dauban, moss/litter 3juv., 09.07.2000, J. Gerlach leg. (MZT AA 1.384) and 1f, 09.08.2000, J. Gerlach leg. (MZT AA 2.169).

Diagnosis: A. ustulata is readily distinguished from all other Seychellian spiders by having six eyes in two rows, protruding chelicerae with strong, blunt-tipped lateral bosses, and distinct tracheal spiracles close to epigastric groove.

Description: Female (male unknown). This is a medium-sized (TL = 4.6, CL = 2.38, CW = 1.54), dull coloured, relatively hairy species. Chelicerae black; carapace chestnut brown; sternum pale orange; abdomen dorsally dark brown, ventrally lighter; spinnerets pale yellow; legs pale orange, strongly suffused with black, especially femora which are almost totally black. Carapace densely covered with dark appressed hairs; abdomen sparsely clothed with long subdecumbent hairs in addition to the thick, appressed hairy coat; legs hairy with numerous, relatively short spines. In the middle of the epigyneal area a short, dark-coloured slightly convoluted streak.

Distribution: This is an endemic species of which only the type specimen from Mahé was known previously. Now also collected on Silhouette.



Figs. 79-83. *Ariaana ustulata* Simon, 1898. - 79: Carapace and chelicerae dorsally. - 80: Carapace and chelicerae frontally. - 81: Colulus. - 82: Right leg I mesially. - 83: Right leg I laterally. - Scale bars: 79-81 = 0.2, 82, 83 = 2.0 mm. Orig.

Family SICARIIDAE Keyserling, 1880

Subfamily Loxoscelinae Simon, 1890 - violin spiders

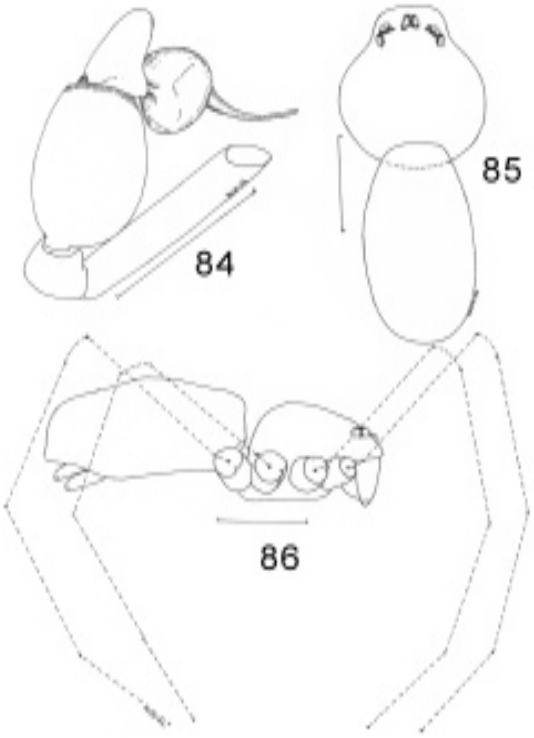
Loxosceles Heineken & Lowe, 1832

Loxosceles rufescens (Dufour, 1820) (Figs. 84-86)

Scytodes rufescens Dufour, 1820c: 203, pl. 76, f. 5 (Dm).
Loxosceles rufescens, Gertsch & Ennik, 1983: 353, f. 341-343, 348-351 (mf).
For more references see Platnick (2002).

Material examined: Assumption, 1f, 1984, USSR. Zool. Exped. (ZMMU) and Cousin, 1j., 1978, Hugh Watkins leg. (MZT AA 0.327).

Diagnosis: This is a medium-sized (TL = 7-7.5), dull orange-brown species with long and slender legs and six eyes in three diads. Legs and body thickly covered with two kinds of hairs; (1) long, suberect, denticulate hairs and (2) between them fine, procumbent, basally feathered hairs.



Figs. 84-86. *Loxosceles rufescens* (Dufour, 1820). - 84: Right male palp laterally. - 85: Carapace and abdomen dorsally. - 86: Male dextrolaterally with out palp. - Scale bars: 84 = 0.2, 85,86 = 2.0 mm. Orig.

Description: The species has been well described by Gertsch & Ennik (1983).

Distribution: L. rufescens is a cosmopolitan species (Platnick 2002). This is the first

record of the species from Seychelles and found on Assumption and Cousin.

Discussion: Violin spiders live on dark places on the ground or under bark, some species are cavernicolous. They do not make a real web by rather spin a few irregularly placed strands of silk that serve as retreats. Loxoscelids are notorious for their bites which may cause cutaneos necrosis, known as "necrotic arachnidism" or "loxoscelism". Their venom is mainly cytotoxic and to a lesser extent also haemotoxic and neurotoxic.

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