Scytotids (Arachnida, Araneae, Scytodidae) of the granitic islands of Seychelles

Michael I. Saaristo
Zoological Museum,
University of Turku, FIN-20014 Turku,
FINLAND
[micsaa@utu.fi]

Key words: *Dictis, Scytodes, Soeuria*

Abstract: Six scytotid spiders are recorded from the granitic Seychelles islands. Of the previously published species *Scytodes velutina* Heineken & Lowe, 1835 is stated to be misidentifications of *Scytodes fusca* Walckenaer, 1837 or *Scytodes amaranthea* Vinson, 1863 and *Scytodes perimensis* Simon, 1890 those of *Scytodes berthelotii* Lucas, 1839 or *S. fusca*. The genus *Dictis* L. Koch, 1872 is revalidated and an undetermined, but apparently close relative of its type species, *Dictis striatipes* L. Koch, 1872, is presented. Finally, one new genus *Soeuria* n. gen. with one new species *Soueria soeur* n. sp., is described.

Introduction

Scytotids or spitting spiders have a large, domed carapace with six eyes in three diads and usually a globular abdomen about the size of the cephalothorax. Legs are thin and fairly long but smaller species usually have relatively shorter legs which is probably connected with their habit of living amongst litter. One Seychelles species, *Scytodes pholcoides* Simon, 1898, has an exceptionally long, cylidrical abdomen and also extremly long legs and thus closely resembs pholcids.

Scytotid females have no epigyne. Instead there are a pair of copulatory pockets (scutula of Brignoli 1976) posterior to the epigastric sulcus. In essence they are more or less depressed, well chitinized areas, with a shallow pocket-like cavity at their mesial edge. There are numerous variations from this basic form.

The family Scytotidae Blackwall, 1864 is another example of conservative taxonomic thinking, reflected by the fact that, at present, all ca.140 species are placed in a single genus. In fact, only one other genus, *Dictis* L. Koch, 1872, has ever been described in the family. Even Brignoli (1976) who dealt with the genus in depth did not mention the possibility of using more genera. However, from his drawings of secondary genital organs it is apparent that several genera are involved.

It is also clear that none of the species found in Seychelles are congeneric with the type species of *Scytodes*, viz. *Aranea thoracica* Latreille, 1802. Therefore, in three cases the generic name has been used in quotation marks to highlight the author's view that the species in question is not a member of the genus *Scytodes*. On the other hand, the genus *Dictis* L. Koch, 1872 is revalidated with a species close to its type species (*Dictis striatipes* L. Koch, 1872) recorded from Coetivy. Furthermore, a new genus with one new species is described.

In literature only a few old records of Seychelles scytotids can be found (Simon 1893 and 1898, Hirst 1911). With the exception of the endemic *S. pholcoides* all have proved to be misidentifications.

The material treated below belong to the following collections:

BMNH = British Museum (Natural History), London
MNHN = Muséum National d'Histoire Naturelle, Paris
MRAC = Musée Royal de l'Afrique Centrale, Tervuren
MZT = Zoological Museum of Turku University, Turku
ZMH = Zoologisches Museum der Universität Hamburg, Hamburg

All measurements cited below are in millimetres. For describing the relative height of the carapace a carapace index (CI = maximum height of carapace/ maximum length) and a leg index (LI = length of carapace/ legth of the first tibia) for the relative length of the leg have been used in the text.

"Scytodes" amaranthea Vinson, 1863

Scytodes amaranthea Vinson, 1863: 297, Pl. 1., f. 2 (female, Réunion)
Scytodes velutina, Simon 1898: 671 (female, misidentification).

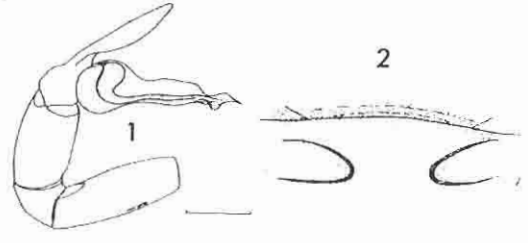
Diagnosis: It may be distinguished from other local scytotids by its small size (male ca.2.5, female 3.4) combined with short legs (CI: male=1.13, female=1.35).

Description: No relevant material was available for a detailed description.

Reference material: "Scytodes" velutina Heineken & Lowe, in Lowe, 1836 males and females from Corsica (Figs. 1-2).

Distribution: This is an Afro-tropical species (Lehtinen, *pers. comm.*) which has been recorded once from Seychelles; **Mahé:** Simon (1898, as *Scytodes velutina*).

Discussion: I have not seen Simon's (1898) material but it seems logical to assume that the species found in Seychelles is the one originally described from Madagascar rather than that living mainly in the Mediterranean area.



Figs. 1-2. *"Scytodes" velutina* Heineken & Lowe 1836 from Corsica. Original figure. Scale bar 0.2 mm. 1). Right male palp ectally. 2). Epigyneal area ventrally.

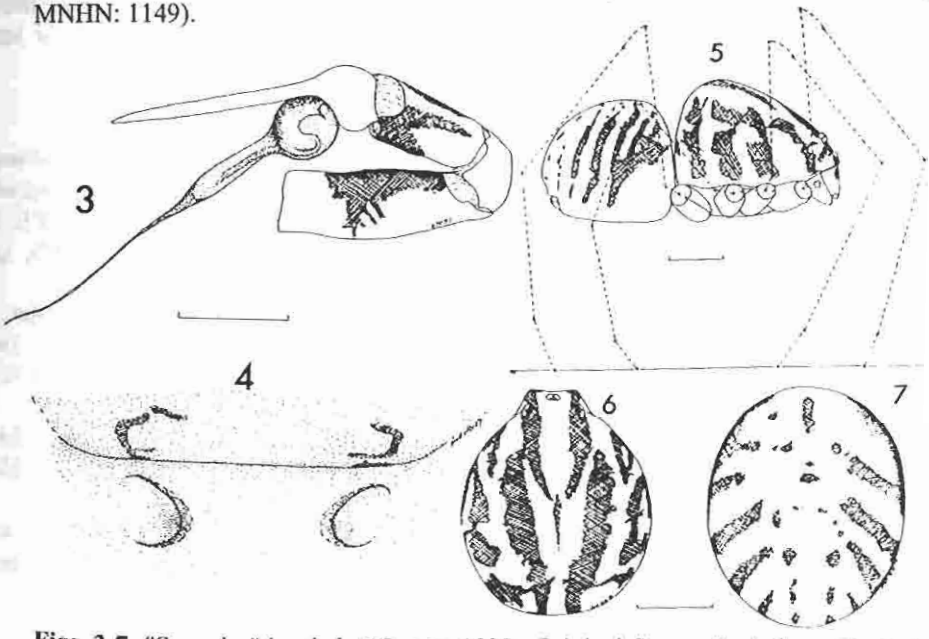
"Scytodes" berthelotii Lucas, 1838 (Figs. 3-7)

Scytodes berthelotii Lucas, 1838: 25, Pl. 9, f. 6 (female: Canary Islands).
Scytodes perimensis, Simon 1898: 371 (juv., misidentification).

Diagnosis: The males of *"S." bethelotii* may be distinguished from the other scytotids by the small spherical bulbus and the very long embolic part, of which two thirds is very thin and thread-like. The females may be distinguished by the somewhat triangular copulatory pockets which are about twice their height apart.

Description: Fairly large and massive species; total length 6.4-7.0. Length of carapace 3.14-3.21. Male carapace much lower than that of female; CI of male = 0.23 and that of female = 0.53. The first two leg pairs of the male somewhat shorter but more slender than those of the female; LI of female = 0.48, that of male = 0.55. Male palpal tibia unswollen. Bulbus small, spherical. Embolic part very long; its basal part (ca. one third of its total length), thick and tapering quite abruptly into a long, thin, almost thread-like distal part. Copulatory pockets of the female well developed, more or less triangular, about twice their height apart.

Distribution: This is a Mediterranean-African (Brignoli 1976) species which has been recorded once from Seychelles; **Mahé:** Simon (1898, as *Scytodes perimensis*, MNHN: 1149).



Figs. 3-7. *"Scytodes" berthelotii* Lucas, 1838. Original figure. Scale bars: Fig. 3-4. = 0.5mm; Fig. 5-7. = 1.0mm. 3). Left male palp ectally. 4). Epigyneal area ventrally. 5). Female dextro-laterally. 6). Carapace dorsally. 7). Abdomen dorsally.

"Scytodes" fusca Walckenaer, 1837 (Figs. 8-12)

Scytodes fusca Walckenaer, 1837: 272 (female, French Guiana)
Scytodes (Dictis) perimensis, Simon 1893: 205 (male, misidentification)
Scytodes velutina, Simon 1898: 371 (misidentification)
" Hirst 1911: 381 (female from Mahé, misidentification).

Diagnosis: The males of *"S". fusca* may be distinguished from other scytotids by the long, narrow embolic part with downwards pointing setaceous tip and by the swollen palpal tarsus. The females have relatively small, unsclerotized sperm pockets connected to the atrium via narrow and fairly strongly sclerotized ducts.

Description: Medium sized species; total length 4.4-5.0. Length of carapace 2.21-2.43. Male carapace much lower than that of female; CI of male = 0.44 and that of female = 0.61. The first two leg pairs of the male much longer than those of the female; LI of female = 0.82, LI of male = 0.53. Male also much lighter coloured than female; cephalothorax and legs pale yellow with dark violet markings, abdomen whitish with dark violet transverse stripes. Female carapace more or less uniformly dark chestnut brown, abdomen dirty white with same kind of dark transverse stripes as the male. Palpal tibia of male clearly swollen. Bulbus somewhat pyriform. Its embolic part long and slender with downwards pointing setaceous tip. Copulatory pockets of the female well developed, more or less triangular, about 1.5 times their height apart.

Distribution: This cosmotropical species is well established in Seychelles:

Mahé: Hirst (1911, as *Scytodes velutina*; BMNH) and Centre, Bon Espoir (300m), 1subad-male, 1 female, 1j., 21.VI.1972, and Sud, Baie Lazare, 1subad-female, 26.VI.1972, P.L.G. Benoit & J.J. Van Mol leg. (MRAC 143.233 & 143.330) and Roche Caiman Bird Sactuary, leaf litter, 23.XII.1993, 1j., Justin Gerlach leg. (MZT AA 0.301).

Praslin: Fond Ferdinand, 1 female, 24.VII.1972, Fond de l'Anse, 3subad-males, 2 females, 9j., 16.-24.VIII.1972, and Grand Anse, 3subad-females, 16.-24.VIII.1972, P.L.G. Benoit & J.J. Van Mol leg. (MRAC 144.724, *143.393 & 143.350*).

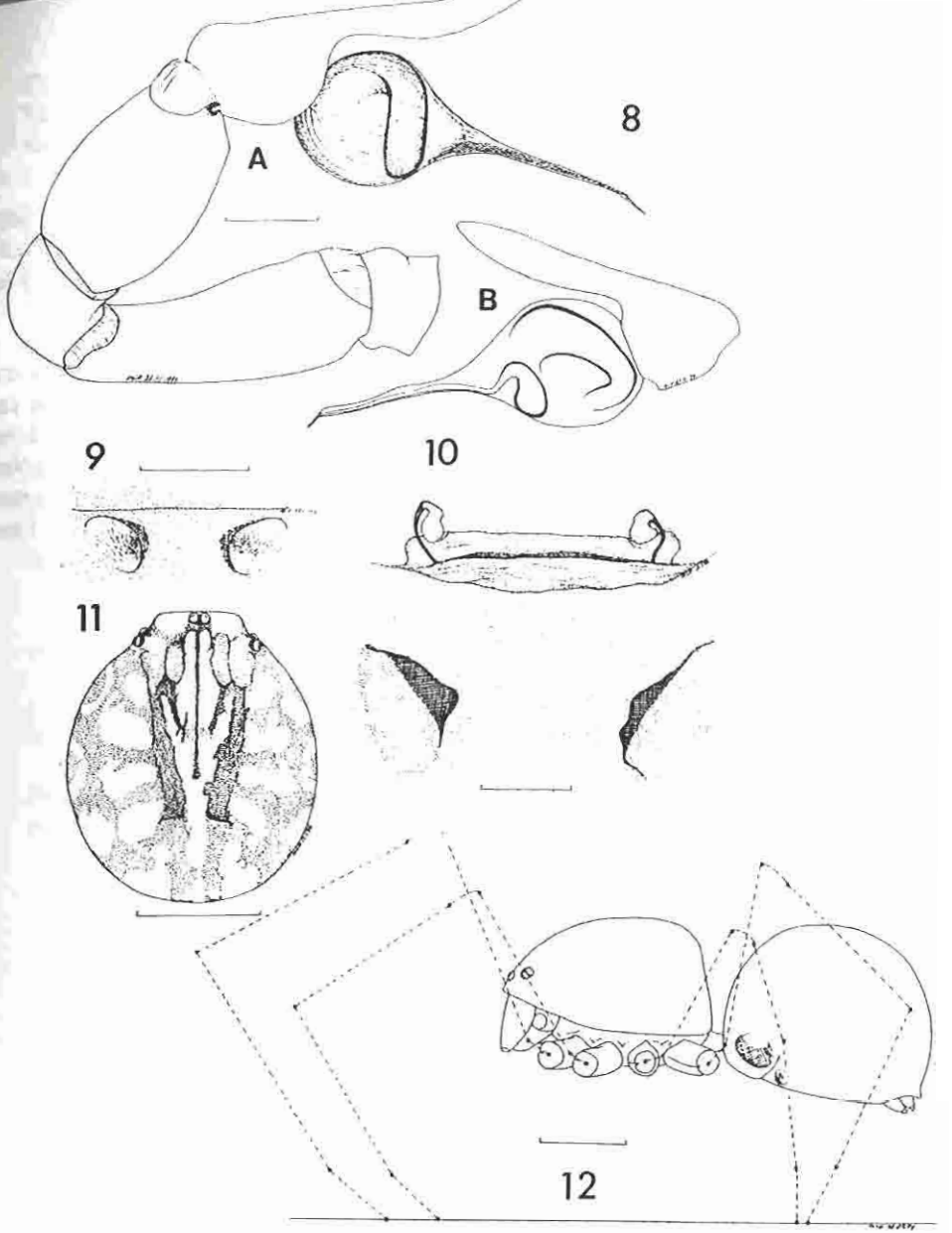
Curieuse: Centre, Foret dégadée, 1j., 17.VIII.1972, and Baie Laraie, dans mangrove, 2subad-males, 2j., 3.VIII.1972, P.L.G. Benoit & J.J. Van Mol leg. (MRAC 143.167 & 143.279)

Aride: 1 female, 9. VIII.1975 and 1j., 11.VIII.1975, M. Mühlenberg leg. (MZT AA 0.324 & 0.325) and 2 males, 1subad-male, 3 females, 1996, Justin Gerlach leg. (MZT AA 0.365)

Cousin: 2 females, 1978, Hugh Watkins leg. (MZT AA 0.056 & 0.326)

La Digue: Simon (1893)

Discussion: I have not seen Simon's (1893) material but his description unambiguously refers to the male of *"S". fusca.*



Figs. 8-12. *"Scytodes" fusca* Walckenaer, 1837. Original figure. Scale bar for Fig. 8. & 10. = 0.2; Fig. 9. = 0.5; Fig. 11. & 12. = 1.0 mm. 8). Right male palp ectally (A) and mesially. (B). 9). Epigyneal area ventrally. 10). Vulva and copulatory pockets dorsally. 11). Male carapace dorsally. 12). Sinistrolateral view of female.

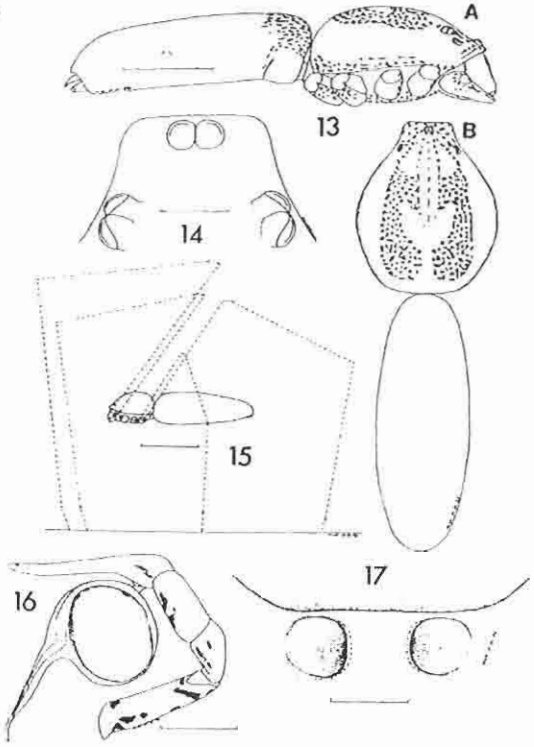
"Scytodes" pholcoides Simon, 1898 (Figs. 13-17)

Scytodes pholcoides Simon, 1898 (male, female)

" Hirst 1911: 381.

Diagnosis: This species may be distinguished from other scytotids by the long, cylidrical abdomen and very long and thin legs. Young specimens are also recognisable for their extremely long legs, although their abdomen is somewhat more compressed.

Description: Large species; total length 8-10. Carapace conspicuosly broad and relatively shallow, CI (female) = 0.49. Abdomen long, cylidrical. Legs thin and very long; LI (female) = 0.28. Basic colour white - yellowish white with very dense dark purplish, almost black markings. Legs densely speckled with dark purplish spots. Bulbus of male palp large, almost spherical with fairly short and stout embolic part. Copulatory pockets of the female well developed, about 1.5 times their height apart.



Figs. 13-17. *"Scytodes" pholcoides* Simon, 1898. Original figure. Scale bar for Fig. 13. = 1.0; Fig. 14. = 0.3; Fig. 15. = 4.0; Fig. 16. & 17. 0.5 mm. 13). Cepalothorax and abdomen of female dextrolaterally (A) and dorsally (B). 14). Eyes of female dorsally. 15). Female sinistrolaterally. 16). Left male palp laterally. 17). Epigyneal area ventrally.

Distribution: Only a few specimen have been collected of this endemic species:
Mahé: Simon (1898), Hirst (1911)
Silhouette: *Pisonia* forest, 1 female, 7j., 1990, Justin Gerlach leg. (MZT AA 0.057 & 0.323).

Discussion: The original syntype series comprize one male, one female and juveniles. All these specimens are in ZMH except one juvenile in MNHN. The ZMH male is herein designated as a lectotype of *Scytodes pholcoides* Simon, 1898.

Genus *Soeuria*, new genus
Type species: Soeuria soeur n. sp.

Diagnosis: At present *Soueria* contains only its type species *Soeuria soeur* and is diagnosed by the same characters as that species.

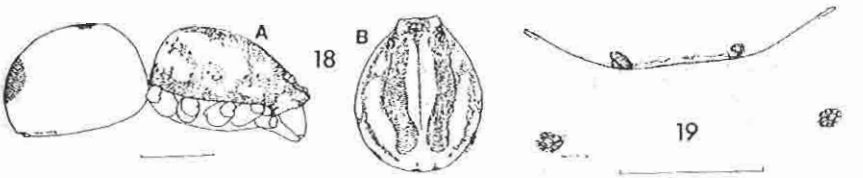
Etymology: The generic name *Soeuria* refers to the origin of the type species.

***Soeuria soeur*, new species** (Figs. 18-19)

Type: Female holotype from Seychelles, Petit Soeur, 24.IX.1975, M. Mühlenberg leg. Deposited in Musée Royal de l'Afrique Centrale, Tervuren (MRAC 177.156).

Diagnosis: The female (male unknown) of *D. soeur* may be distinguished by the reduced copulatory pockets represented by small, squamous areas.

Description: Fairly small species; total length 3.6. Carapace 1.79 long, relatively low, CI = 0.48. Legs rather short; LI = 1.00. Carapace yellow brown with distinct dark brown pattern. Abdomen dirty white with two dorsal dark violet, almost black markings. Distinct dark violet annuli at tip of the femora, base of metatarsi and at both ends of tibiae; patella totally dark coloured. These markings are especially distinct on the last pair. Copulatory pockets reduced to small, squamous areas.



Figs. 18-19. *Soeuria soeur*, new species. Original figure. Scale bar for Fig. 18 = 1.0; Fig. 19 = 0.5 mm. 18). Cepalothorax and abdomen of female dextrolaterally (A) and carapace dorsally (B). 19). Epigyneal area ventrally.

Distribution: Known only from Petit Soeur, Seychelles.

Etymology: The specific epithet is derived from the generic name of the species.

Genus *Dictis* L. Koch, 1872

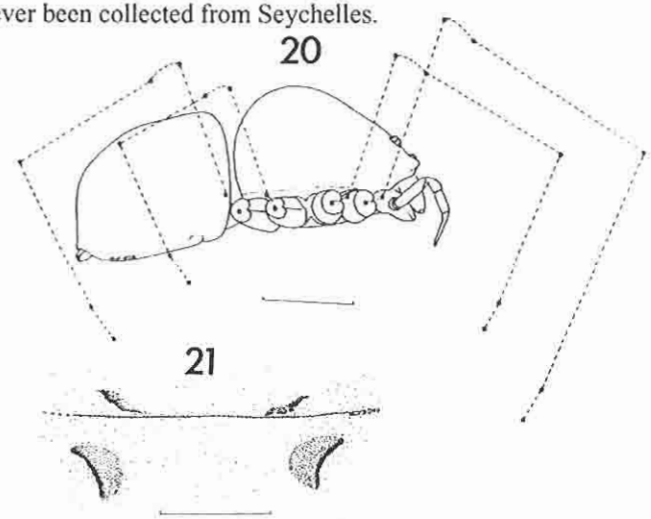
Dictis L. Koch, 1872: 294 - Type species *Dictis striatipes* L. Koch, 1872 from Polynesia.

Dictis sp. (Figs. 23-24)

Diagnosis: Females (no males available) of this species may be distiguished from the other local scytotids by the copulatory pockets which consist of heavily sclerotized, slightly dentate ridges at the lateral edge of a chitinized area.

Description: Large and massive species; total length 7.72. Carapace 3.86 long, rather high, CI = 0.48. Legs rather long; LI = 0.79. Colouration uniformly pale, apparently due to bleaching. Copulatory pockets modified, consisting of heavily sclerotized, slightly dentate ridges, with a chitinized area at their mesial side.

Distribution: Only this unique female specimen from Coetivy, without more specific data, has ever been collected from Seychelles.



Figs. 20-21. *Dictis sp.* from Coetivy. Original figure. Scale bar for Fig. 20 = 1.0; Fig. 21 = 0.5 mm. 20). Female dextrolaterally. 21). Epigyneal area ventrally.

Discussion: According to the structure of the copulatory pockets the species is close to *Dictis striatipes* L. Koch, 1872. However, without a full revision of the genus *Dictis* it is not possible to identify the present specimen more accuratelly.

References

Brignoli, P.M. 1976 - Beiträge zur Kenntnis der Scytodidae (Araneae). *Revue suisse Zool.* **83(1)**; 125-191.

Hirst, A.S. 1911 - The Araneae, Opiliones and Pseudocorpiones. Percy Sladen Trust Expedition to the Indian Ocean in 1905 under the leadership of Mr. J. Stanley Gardiner. *Trans. Linn. Soc. London, Zool.* **14**; 379-395

Koch, L. 1872 - *Die Arachniden Australiens, nach der Natur beschrieben und abgebildet.* Nürnberg, 1872, pp. 105-368.

Lucas 1838 - Arachnides, Myriapodes et Thysanoures. In: Barker-Webb, P. & S. Berthelot, *Histoire naturelle des iles Canaries, II, 2e partie: Zoologie.* Paris: 19-52, Pl. VI-VII.

Simon, E. 1893 - Mission scientifique de M. Ch. Alluaud aux iles Séchelles (Mars, Avril, Mai 1898). Arachnides. *Bull. Soc. Zool. France* **1893 (18)**; 204-211.
1898 - Etudes arachnologiques. 29e Mémoire. XLVI. Araichnides recueillis en par M. le Dr. A. Brauer (de l'Université de Marburg) aus Iles Séychelles. *Ann. Soc. Ent. France* **66**; 370-385.

Walckenaer 1837 - *Histoire naturelle des Insectes. Aptères.* Part 1. Paris. 549 pp.