

Ochyroceratid spiders of the granitic islands of Seychelles (Araneae, Ochyroceratidae).

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Abstract: Four species of the family Ochyroceratidae are reported from the granitic Seychelles. One is a parthenogenetic pantropical species *Theotima minutissima* (Petrunkevitch, 1929) = *Speocera bonaespei* Brignoli, 1980 n. syn. The other three species are described as new and each represents a new genus: *Ouette ouette* n. gen., n. sp., *Roche roche* n. gen., n. sp., and *Eusora muchlenbergi* n. gen., n. sp.

Key words: *Ochyroceratidae*, taxonomy, Seychelles

Introduction

The family Ochyroceratidae Fage, 1912 consists of minute to small spiders (total length 0.6-3mm). Carapace relatively low, as long as wide or slightly oval and narrowed at the cephalic region. Clypeus large, protruding and slanting downwards. There are six eyes grouped in two rows; four in anterior (= PME's & ALE's; AME's are lost!) and two in posterior row (=PLE's). Chelicerae are free and fairly strong, armed with several denticles in addition to a lamella. Legs delicate and relatively long - very long; the length of the first femur equals with the length of the carapace. Tarsi and metatarsi may have false articulations. At least some species have a tarsal rod on the dorsal surface of the tarsi (Fig. 12). There are three tarsal claws and an onychium. Colulus well developed. Females have no epigyne but their internal secondary genital organs are well developed and often conspicuously complicated. Barros Machado (1964) has presented a good generalized picture of them. A peculiar feature of these organs in Ochyroceratidae is that the copulatory openings of the female are situated at the lateral margins of the epigastric furrow. More often they may be sifted from their original sites e.g. on the dorsal side of the abdomen and then have superficial chitinous copulatory ducts. Sometimes the surroundings of the copulatory openings may look out quite bizarre. The tracheal spiracle is midway between the spinnerets and the genital groove or close to the spinnerets. Eggs are carried by the chelicerae.

Ochyroceratids are found in the tropics living among litter or as troglobionts. They are often dominant species in bamboo leaf litter and some species even live in bamboo internodes (Deeleman-Reinhold 1995). Several species are known to be parthenogenetic. At the present some 100 species and about 10 genera are known. Four species are reported from Seychelles.

All measurements cited below are in millimeters. To illustrate the length of the legs in different species a relative leg length index, RLI, has been calculated according to the following formula: length of tibia/length of carapace.

The material treated below belong to the following collections:

MRAC = Musée Royal de l'Afrique Centrale, Tervuren

MZT = Zoological Museum of Turku University, Turku

Genus *Theotima* Simon, 1893

Theoclia Simon, 1891: 567. - Type species by monotypy *Theoclia radiata* Simon, 1891 from St. Vincent.

Theotima Simon, 1893: 493 (new name for *Theoclia* Simon, 1891 preoccupied by *Theoclia* Pascoe, 1885, Coleoptera).

Diagnosis: As the genus seems to be fairly heterogenic it has not, at the present, been possible to formulate any simple diagnosis for it.

Theotima minutissima (Petrunkevitch, 1929) (Figs. 1-3)

Oonopinus minutissimus Petrunkevitch, 1929: 70, f. 58-60 (female).

Specocera bonaespei Brignoli, 1980: 385, f. 10 (female) n. syn.

Theotima minutissima, Deeleman-Reinhold 1995: 72, f. 201-206 (female, transferred from *Oonopinus* = *Simonocera chamorro* Brignoli, 1986).

-, Baert, Lehtinen & Desender 1997: 16 (transferred from *Oonopinus*).

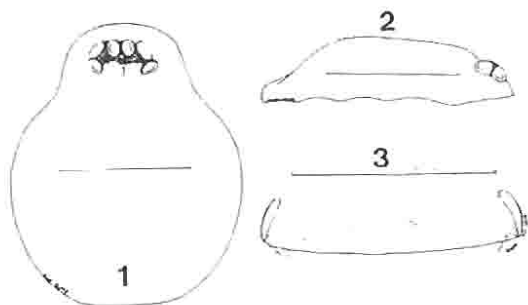
Diagnosis: The female (male unknown) of this species is distinguished by the weakly sclerotized, anteromedially pointing arch at the lateral margins of the epigastric furrow.

Male: Unknown.

Female: Total length ca. 0.96. Carapace 0.47 long, 0.37 wide. Carapace dirty white with violetish pattern. Chelicerae pale yellowish. Sternum, labium, and maxillae almost totally suffused with violet. Apical segment of the female palpus darker than others, strongly suffused with violet. Legs dirty white suffused with violet. Eyes relatively large. Chelicerae with lamella and six denticles.

Material examined: Mahé, Bon Espoir, female (paratype of *S. bonaespei*), 22.6.1972, P. L. G. Benoit & J. J. van Mol legend (MRAC 143.240) and Northolme, 2 females (paratypes of *S. bonaespei*), 27.6.1972, P. L. G. Benoit & J. J. van Mol legend (MRAC 143.422).

Discussion: Dumitresco & Georgesco (1983: 113) transferred the male of *Oonopinus minutissima* sensu Bryant (1944: 264) to *Theotima*. This was an error as being a parthenogenetic species *T. minutissima* has no males. Deeleman-Reinhold (1995) also mention that P.T. Lehtinen designated a lectotype female of *Theotima*.



Figs. 1-3. *Theotima minutissima* (Petrunkevitch, 1929). Original figure. Scale bars = 0.2mm. 1). Carapace dorsally. 2). Carapace dextrilaterally. 3). Epigastral area ventrally.

minutissima (AMNH, F 4003). However, in the original description (Petrunkevitch 1929) the type was clearly designated. In addition to the type Petrunkevitch (1929) mentions three other females which apparently are the specimens studied by Deeleman-Reinhold (1995).

Distribution: This parthenogenetic species is apparently widely distributed in tropics and now recorded from Porto Rico (terra typica), Panama, Malaysian Borneo (Sabah), Indonesia (W. Sumatra, Java), Thailand (Deeleman-Reinhold 1995) and Rapa Nui (Eastern Islands) (Baert *et al.* 1997). From Seychelles it has been found only on Mahé.

Genus *Ouette*, new genus

Type species: *Ouette ouette* n. sp.

Diagnosis: At the present *Ouette* contains only its type species *Ouette ouette* and is diagnosed by the same characters as that species

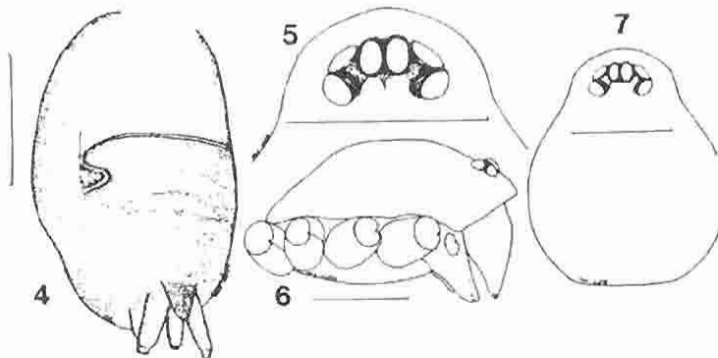
Etymology: Generic name from the type locality: Silhouette.

***Ouette ouette*, new species (Figs. 4-7)**

Type: Female holotype from Seychelles, Silhouette: *Pisonia* forest, leaf litter, 1990, Justin Gerlach legend, deposited in the Zoological Museum, University of Turku (MZT AA 0.074)

Diagnosis: Females (male unknown) of *O. ouette* may be easily recognized by having copulatory openings shifted posteriorly from the epigastric furrow.

Male: Unknown.



Figs. 4-7. *Ouette ouette* n. sp. Original figure. Scale bars = 0.2 mm. 4). Abdomen of female ventrally and slightly aside. 5). Eyes dorsally. 6). Carapace dorsally. 7). Carapace dextrolaterally.

Female: Total length 1.03. Carapace 0.52 long, 0.41 wide. Carapace dirty white with violetish pattern. Chelicerae pale yellowish. Sternum, labium, and maxillae almost totally suffused with violet. Apical segment of the female palpus darker than other segments, strongly suffused with violet. Legs dirty white suffused with violet.

Distribution: Recorded only from Silhouette.

Etymology: The specific name *ouette* denotes that this is the type species of the genus *Ouette*.

Genus *Roche*, new genus

Type species: *Roche roche* n. sp.

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

Etymology: Generic name from the type locality: Roche Caiman Bird Sanctuary, Mahé.

Roche roche, new species (Figs. 8-12)

Types: Female holotype from Seychelles, Mahé, Roche Caiman Bird Sanctuary, leaf litter, 23.12.1993, Justin Gerlach legend and four female paratypes with the same data; all deposited in the Zoological Museum, University of Turku (MZT AA 0.301).

Diagnosis: Female (male unknown) of *R. roche* may be recognized by having copulatory openings at the lateral margins of the epigastric furrow superficially marked by narrow, chitinized curves and by the small eyes.

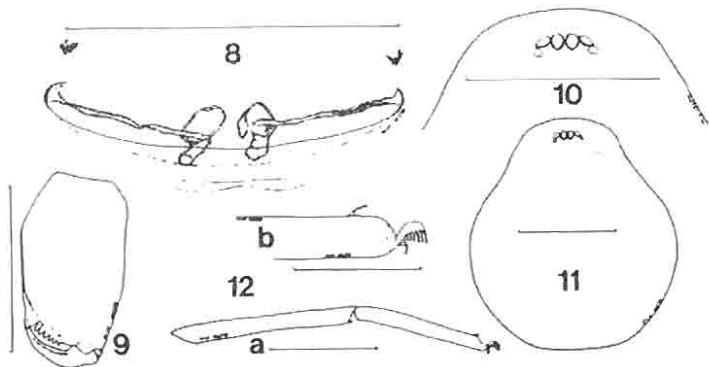


Fig. 8-12. *Roche roche* n. sp. Original figure. Scale bars = 0.2, except for Fig. 9 = 0.1 and for Fig. 12b = 0.05 mm. 8). Vulva ventrally. 9). Left chelicerae anteriorly. 10). Eyes dorsally. 11). Carapace dorsally. 12). Tarsus and metatarsus (a) and tip of tarsus (b).

Description: Total length 1.17. Carapace 0.50 long, 0.40 wide. RLI = 0.69. Prosoma and legs pale whitish; chelicerae yellowish. Abdomen pale grey. Eyes remarkably small. Chelicerae with a lamella and six promarginal and two retromarginal teeth.

Distribution: Recorded only from Mahé, Roche Caiman Bird Sanctuary.

Etymology: The specific name *roche* denotes that this is the type species of the genus *Roche*.

Genus Eusora, new genus

Type species: Eusora muehlenbergi n. sp.

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

Etymology: Generic name is an anagram derived from the type locality: Grande Soeur.

Eusora muehlenbergi, new species (Figs. 13-17)

Types: Male holotype and female allotype from Seychelles, Big Sister (=Grande Soeur), 10.09.1975, M. Mühlenberg legend (MRAC 177.098). Additional paratypes: 2 males, 4 females with the same data as holotype, 1 subad. male, 1 female, Little Sister (=Petite Soeur), 10.09.1975, M. Mühlenberg legend. and 2 males, 2 females, Big Sister (=Grande

Soeur), 17.09.1975, M. Mühlenberg legend (MRAC 177.099, 177.115, 177.128, 177.133, 177.145, 177.149, 177.167, 177.171); all deposited in the Musée Royal de l'Afrique Centrale, Tervuren, Belgium.

Diagnosis: - Male of *E. muehlenbergi* may be easily recognized by having the bulbus partly buried inside the excavation of the swollen tibia and female by having the copulatory openings moved to the sides of the abdomen about level with petiolus.

Male: General appearance as in female. Size somewhat smaller, total length = 0.97. Carapace slightly longer and narrower; 0.50 long, 0.38 wide. Legs slightly longer than those of the female; RLI = 1.00.

No apophysis on the male palp but tibia conspicuously swollen. Bulbus partly lying inside the ventral excavation of the tibia. Bulbus spherical bearing a short, conical embolus and immediately beside it a small, transparent apophysis. When bulbus is viewed anteriorly these two seem to form a wide open V-like figure.

Female: Total length 1.02. Carapace 0.47 long, 0.39 wide. RLI = 0.98. Carapace pale yellowish brown with radiating violetish markings. Chelicerae pale yellowish brown. Sternum, labium, and maxillae somewhat suffused with violetish colour. Apical segment of the female palpus darker than others, lightly suffused with violet. Legs dirty white, sometimes with violetish suffusion. Abdomen pale brown, often strongly mottled with violetish colour. Colulus and spinnerets whitish.

Copulatory openings moved to the sides of the abdomen, about level with petiolus. When the abdomen is viewed ventrally the epigastric furrow and superficial copulatory ducts together seem to form a wide, U-shaped figure.

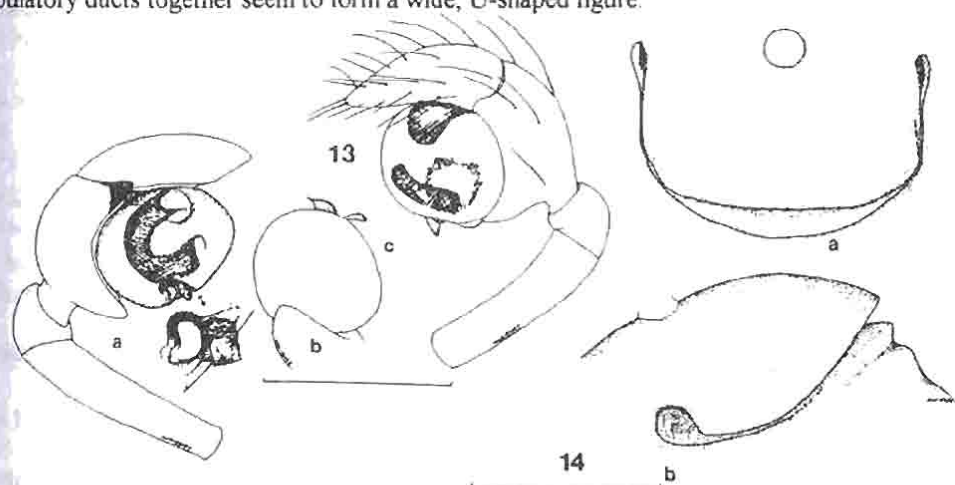


Fig. 13-14. *Eusora muehlenbergi* n. sp. Original figure. Scale bars = 0.2 mm. 13). Right male palp laterally (a), anteriorly (b), and mesially (c). 14). Epigastric area of female ventrally (a) and dextrolaterally (b).

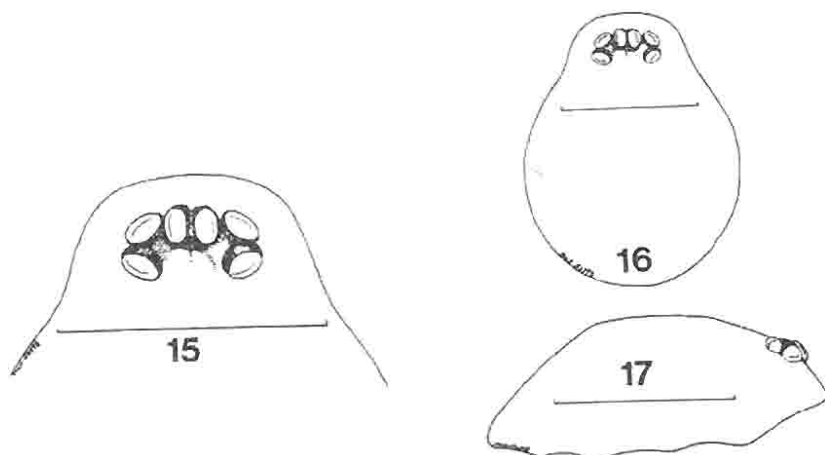


Fig. 15-17. *Eusora muehlenbergi* n. sp. Original figure. Scale bars = 0.2mm. 15). Eyes dorsally. 16). Carapace dorsally. 17) Carapace dextrolaterally.

Distribution: At present the species is known only from Grande Soeur (Big Sister) and Petite Soeur (Little Sister).

Etymology: Named after its collector Prof. M. Mühlenberg.

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