

Revision of the genus *Phiale* C. L. Koch, 1846 (Araneae, Salticidae). II. *Phiale guttata* (C. L. Koch, 1846) new combination

María Elena Galiano

Consejo Nacional de Investigaciones Científicas y Técnicas,
Av. Angel Gallardo 470,
1405 Buenos Aires, R. Argentina

Summary

Plexippus guttatus C. L. Koch, 1846 is transferred to the genus *Phiale* as a new combination and redescribed. The following species are newly synonymized with *Phiale guttata* n.comb.: *Phiale flavoguttata* (C. L. Koch, 1846), *Phiale magnifica* (Banks, 1909) and *Phiale melanargyra* Mello-Leitão, 1946. *Plexippus selectus* C. L. Koch, 1846 is considered as "*species inquirendae*".

Introduction

This paper, the second in a series on the genus *Phiale*, is concerned with some of the South American species of Salticidae described by Carl Ludwig Koch in 1846.

Through the courtesy of Dr M. Moritz of the Museum für Naturkunde, Humboldt Universität, Berlin, I have recently had the opportunity of examining the type specimens of *Plexippus guttatus*, *Plexippus flavoguttatus* and *Plexippus selectus*. These samples were preserved dry but in spite of their extreme fragility, they permit the study of some structures that had suffered little alteration. As a result of the examination of these types and of unnamed collections from different countries, I am able to show that two of Koch's names refer to the male and female of the same species. The type of *Plexippus guttatus* is the male of the female described as *Plexippus flavoguttatus*. The latter was transferred by Simon (1903: 695) to the genus *Phiale* where it correctly belongs; *guttatus* has priority and *Phiale guttata* new combination is established.

I have also examined the types of *Phiale magnifica* (Banks, 1909) and *Phiale melanargyra* Mello-Leitão, 1946, and have reached the conclusion that

they are synonyms of *Phiale guttata*.

Simon (1903: 702) considered that *Plexippus selectus* C. L. Koch, 1846 (p. 100, f. 1163) was the male of *Phiale flavoguttata* (this statement was ignored by Petrunkevitch and Roewer). I have studied the type specimen of *Plexippus selectus*; it is a male without palps. As the original drawing shows it without the palps, it is likely that they were lacking at the time of the description. The abdomen has red hairs and white spots. In *Phiale guttata* the abdominal hairs are brown or black and the pattern of the patches is not the same. Therefore, *Plexippus selectus* is a different species from *Phiale guttata* and must be considered as "*species inquirendae*" until more specimens with the same pattern can be recognized.

It is curious that *Phiale guttata*, one of the largest species of Salticidae, is rare in museum collections. I have examined a total of 13 males and 11 females, including the types. A small amount of variation has been found in the epigynum of the females, but it is considered an individual variation because it has been seen in females of the same batch.

The measurements and abbreviations are those used in previous papers (Galiano, 1963).

Phiale guttata (C. L. Koch, 1846) new comb. (Figs. 1-7)

Plexippus guttatus C. L. Koch, 1846, p. 96, t.ccccxlvi f.1159 (♂ sp.n.); 1851, p. 52. Petrunkevitch, 1911, p. 775. Roewer, 1954, p. 1634. Bonnet, 1958, p. 3716.

Plexippus flavoguttatus C. L. Koch, 1846, p. 99, t.ccccxlvi f.1161 (♀ sp.n.); 1851, p. 52. Simon, 1903, p. 695, 701, 702, 707, f. 833c. Petrunkevitch, 1911, p. 690. Roewer, 1954, p. 1060. Bonnet, 1958, p. 3506. NEW SYNONYMY.

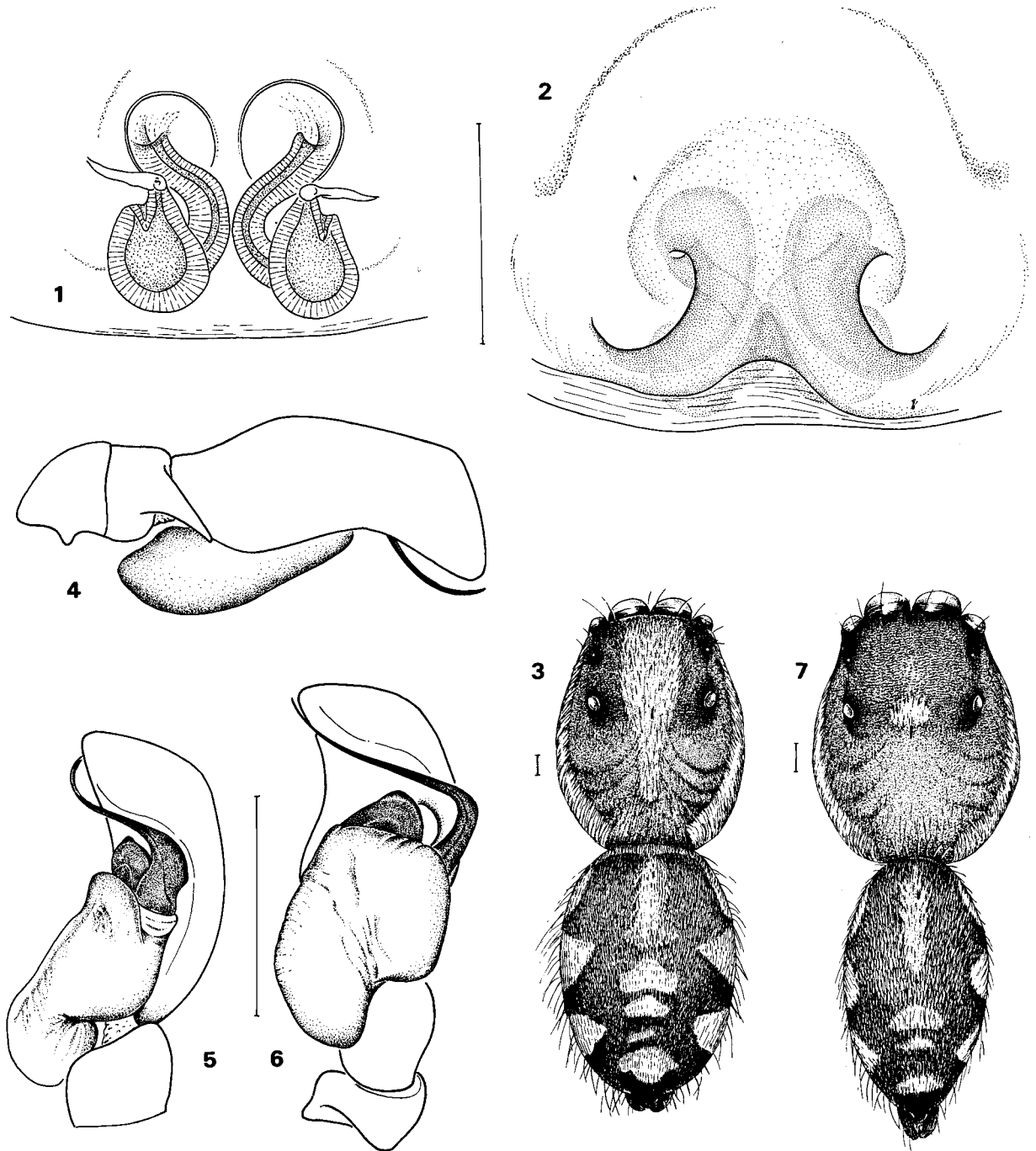
Cyrene magnifica Banks, 1909, p. 223, t.vi f.38 (♀ sp.n.).

Phiale magnifica Banks, 1929, p. 67. Petrunkevitch, 1911, p. 692. Chickering, 1946, p. 226, f.188, 191. Roewer, 1954, p. 1061. Bonnet, 1958, p. 3508. NEW SYNONYMY.

Phiale melanargyra Mello-Leitão, 1946, p. 27, f.8 (♂ sp.n.). Roewer, 1954, p. 1061. NEW SYNONYMY.

Holotype male. Redescription (Figs. 4-6)

Carapace: 4.53 mm long, 3.73 mm wide, 2.07 mm high. Clypeus 0.27 mm high. *Ocular quadrangle*: 1.83 mm long, first row 2.45 mm wide, third row 2.60 mm wide. Small eyes of second row closer to ALE than to PLE. Diameter of AME 0.80 mm. *Chelicerae*: strong, vertical, parallel. Two teeth on



Figs. 1-7: *Phiale guttata* (C. L. Koch, 1846) n.comb. Female No. 7128 MACN: 1 epigynum, cleared, dorsal view; 2 ditto, ventral view; 3 dorsal pattern. Male holotype: 4-6 palp. Male No. 5594 MACN: 7 dorsal pattern. Scale lines = 0.5 mm.

promargin; a single tooth on retromargin. *Legs*: 1432. *Spines*: I: femur dorsal 1-1-1, prolateral distal 2, retrolateral 1-2; patella prolateral 1; tibia ventral 2-2-2, prolateral 1-1; metatarsus ventral 2-2. II: femur dorsal 1-1-1, prolateral distal 2, retrolateral 1-2; patella prolateral 1; tibia ventral 1r-2-2, prolateral 1-1; metatarsus ventral 2-2. III: femur dorsal 1-1-1, prolateral 1-2, retrolateral 1-2; patella prolateral 1, retrolateral 1; tibia ventral 2-2, dorsal basal 1, prolateral 1-1-1, retrolateral 1-1-1; metatarsus ventral 2-2, prolateral 1-2, retrolateral 1-1-2. IV: femur dorsal 1-1-1, prolateral 1-2, retrolateral distal 2; patella prolateral 1, retrolateral 1; tibia ventral 2-2, prolateral 1-1-1, retrolateral 1-1-1; metatarsus ventral 2-2, prolateral 1-1-2, retrolateral 1-1-2. *Palp*: Figs. 4-6.

Male No. 5594 MACN (Fig. 7)

Colour in alcohol: Carapace dark reddish brown with dark hairs. Two broad marginal stripes with white hairs, from opposite PLE to posterior leg. A central white spot on the thoracic groove. Clypeus with only few bristles and several white marginal hairs. Abdomen brown with blackish brown hairs and the following patches covered with white hairs: through the central region a row of four spots, the first a slender stripe and then three spots. On each side, three spots, the first a narrow stripe and then two rounded spots (Fig. 7). Venter greyish with four yellowish stripes. First legs dark brown, with some white hairs on femur. Second, third and fourth legs, brown, with large patches of white hairs on femur and on proximal ends of patella, tibia and metatarsus. Palp brown, with white hairs on distal end of femur and on basal half of tarsus.

Female No. 7128 MACN (Figs. 1-3)

Total length: 11.70 mm. *Carapace*: 5.53 mm long, 4.47 mm wide, 2.67 mm high. Clypeus 0.23 mm high. *Ocular quadrangle*: 2.20 mm long, first row 2.90 mm wide, third row 3.10 mm wide. Small eyes of second row closer to ALE than to PLE. Diameter of AME 0.83 mm. *Chelicerae*: strong. Two teeth on promargin; one tooth on retromargin. *Legs*: 4312. *Spines*: I: femur dorsal 1-1-1, prolateral distal 2, retrolateral 1-2; patella prolateral 1; tibia ventral 2-2-2, prolateral 1-1; metatarsus ventral 2-2. II: femur

dorsal 1-1-1, prolateral distal 2, retrolateral 1-2; patella prolateral 1; tibia ventral 1r-2-2, prolateral 1-1; metatarsus ventral 2-2. III: femur dorsal 1-1-1, prolateral 1-2, retrolateral 1-2; patella prolateral 1, retrolateral 1; tibia ventral 2-2, prolateral 1-1-1, retrolateral 1-1-1; metatarsus ventral 2-2, prolateral 1-2, retrolateral 1-1-2. IV: femur dorsal 1-1-1, prolateral distal 1, retrolateral distal 1; patella prolateral 1, retrolateral 1; tibia ventral 2-2, prolateral 1-1-1, retrolateral 1-1-1; metatarsus ventral 2-2, prolateral 1-1-2, retrolateral 1-1-2. *Epigynum*: Figs. 1, 2.

Colour in alcohol: carapace brown, covered with black hairs. A broad central stripe with white hairs, from anterior border to middle of posterior declivity. Two broad marginal stripes and two narrow stripes of yellow hairs, the latter extending from posterior border of ALE to anterior corner of PLE. Clypeus with yellow hairs. Abdomen brown with blackish hairs and spots of golden yellow hairs, the pattern of which is much the same as in the male except that the patches are larger (Fig. 3). First and second legs reddish brown, with metatarsi and tarsi orange. Third and fourth legs blackish brown, pale at middle of joints. All legs thickly covered with yellow hairs. Palps yellow with yellow hairs.

Colour variation: the female from Belem do Pará has the carapace stripes with white hairs and the fourth tarsus black. The type specimens of *Phiale magnifica* seem to have had the abdominal patches with white hairs.

Type locality: Costa Rica.

Distribution: Costa Rica. Panamá. Colombia. Perú (Iquitos). Brazil (Amazonas, Pará, Bahia and Espiritu Santo). Paraguay.

Material examined: 1 ♂ No. 1749 Type of *Plexippus guttatus* from Brazil, Bahia; 1 ♀ No. 1751 Type of *Plexippus flavoguttatus* from Brazil, Pará and 1 ♂ No. 1750 Type of *Plexippus selectus* from Brazil, deposited in Museum für Naturkunde, Humboldt Universität, Berlin. 1 ♂ No. 17.035 Type of *Phiale melanargyra* from Paraguay, Pto. Pinasco, in Museo de la Plata, R. Argentina. 3 ♀ Types of *Cyrene magnifica* from Costa Rica, San Mateo, in Museum of Comparative Zoology, Harvard. 1 ♂ from Panamá, Barro Colorado Is. col.Eberhard, 1975; 1 ♂ from Colombia,

Boyacá, col.Bequaert, 1936; 1 ♂ from Perú, Iquitos, col.Parrish, 1920; 1 ♀ from Brazil, Teffé, col.Parrish, 1919; 1 ♂, 1 ♀ from New Grenada, col.Keyserling, deposited in Museum of Comparative Zoology. 2 ♂ No. 5594, from Brazil, Eo.Santo, Sooretama, col.A. Martínez, 1962; 1 ♂, 1 ♀ No. 7127 from Paraguay, Cororó, col.Williner, 1965; 1 ♂, 1 ♀ No. 7128 from Brazil, Bahia, Itamarajú, col.Ventocilla, in Museo Argentino de Ciencias Naturales. 2 ♂, 1 ♀ from Brazil, Belem do Pará, col. Galiano, 1970; 1 ♀ from Panamá, Gamboa, col.Robinson, 1976, in Galiano coll. 1 ♂ from Brazil, Bahia, Itamarajú, col.Ventocilla, in Museu Nacional de Rio de Janeiro.

Acknowledgements

I am indebted to the following persons, for providing types and specimens for study: Dr Herbert W. Levi, Museum of Comparative Zoology, Harvard; Dr M. Moritz, Museum für Naturkunde, Humboldt Universität, Berlin; Dra Ana Timotheo da Costa, Museu Nacional, Rio de Janeiro; Dra Olga Blanco, Museo de La Plata, R.Argentina. I thank Miss Elvira Buono for inking in the drawings.

References

- BANKS, N. 1909: Arachnida from Costa Rica. *Proc.Acad. nat.Sci.Philad.* **61**: 194-234.
- BANKS, N. 1929: Spiders from Panamá. *Bull.Mus.comp. Zool.Harv.* **69**(3): 53-96.
- BONNET, P. 1958: *Bibliographia Araneorum* **2**(4): 3027-4230. Toulouse.
- CHICKERING, A. 1946: The Salticidae (Spiders) of Panamá. *Bull.Mus.comp.Zool.Harv.* **97**: 1-474.
- GALIANO, M. E. 1963: Las especies americanas de arañas de la familia Salticidae, descritas por Eugene Simon. Redescripciones basadas en los ejemplares típicos. *Physis B.Aires* **23**(66): 273-470.
- KOCH, C. L. 1846: *Die Arachniden* **13**: 1-234. Nürnberg.
- KOCH, C. L. 1851: *Übersicht des Arachnidensystems* **5**: 1-104. Nürnberg.
- MELLO-LEITÃO, C. 1946: Arañas del Paraguay. *Notas Mus.La Plata (Zool.)* **11**(91): 17-50.
- PETRUNKOVITCH, A. 1911: A synonymic Index-Catalogue of spiders of North, Central and South America with all adjacent islands, Greenland, West Indies, Terra del Fuego, Galápagos, etc. *Bull.Am.Mus.nat.Hist.* **29**: 1-790.
- ROEWER, C. F. 1954: *Katalog der Araneae* **2b**: 925-1751. Bruxelles.
- SIMON, E. 1897-1903: *Histoire Naturelle des Araignées* **2**: 1-1080. Paris.