

On the synanthropic species of the genus *Scytodes* Latreille (Araneae, Scytodidae) of Brazil, with synonymies and records of these species in other Neotropical countries

Antonio D. Brescovit and Cristina A. Rheims

Laboratório de Artrópodes, Instituto Butantan,
Av. Vital Brasil, 1500, Butantã
05503-900, São Paulo SP, Brazil

Summary

A preliminary review of synanthropic spiders of the genus *Scytodes* Latreille in the Neotropical region is presented. Twelve new synonymies are established: *S. depressiventris* and *S. plumbea* with *S. longipes*; *S. iguassuensis* with *S. fusca*; *S. mexicana*, *S. concolor*, *S. serripes*, *S. chamberlini* and *S. atabey* with *S. univittata*; *S. maculata*, *S. annulata*, *S. scholaris* and *S. aguapeyana* with *S. globula*. The species *S. longipes*, *S. fusca*, *S. univittata* and *S. globula* are re-described or figured. A new species *S. itapevi*, is described from Itapevi, São Paulo, Brazil.

Introduction

Spiders of the genus *Scytodes* Latreille are known for their characteristic hunting behaviour. Commonly known as “spitting spiders”, they eject a sticky substance through external openings in the cheliceral fang, that immobilises the prey (Monterosso, 1928; Bristowe, 1931; Kaston, 1965; Nentwig, 1985). Most of these spiders are nocturnal, hiding during the day in holes or crevices, or lying flat against the substrate (Valerio, 1981).

Some *Scytodes* species are found closely associated with human dwellings and, as such, are considered synanthropic. Valerio (1981) called attention to the pantropical species: *S. fusca* Walckenaer and *S. longipes* Lucas. These species are commonly found inside houses and in gardens and their surroundings. Both species are also found in the field, on vegetation or under logs and rocks or in forest litter. Recent studies, carried out by the authors in the city of São Paulo, Brazil, showed that three other *Scytodes* species are also strongly associated with human environments, and can therefore be considered synanthropic. These are *S. globula* Nicolet, *S. univittata* Simon and a new species, *S. itapevi*, here described from Itapevi, São Paulo.

Forty-three species have been described from the Neotropical region. Ten of these were described exclusively from Brazil: *S. annulata* by Keyserling (1891) from Rio de Janeiro; *S. depressiventris* by Mello-Leitão (1916) from Minas Gerais; *S. campinensis*, *S. concolor*, *S. discolor*, *S. iguassuensis* by Mello-Leitão (1918) from Paraíba and Rio de Janeiro; *S. plumbeus* by Mello-Leitão (1929) from Pernambuco; *S. serripes* by Mello-Leitão (1947) from Minas Gerais; *S. scholaris* by Toledo Piza (1944) from São Paulo; and *S. insperata* by Soares & Camargo (1948) from Mato Grosso. Five other species have been recorded from Brazil: *S. lineatipes* by Taczanowski (1873); *S. vittata* by

Keyserling (1877); *S. maculata* by Holmberg (1876) and Mello-Leitão (1918); *S. fusca* by Walckenaer (1837), Mello-Leitão (1918) and Soares & Camargo (1948); and *S. longipes* by Lucas (1844) and Mello-Leitão (1918). The records of *S. lineatipes* and *S. vittata*, however, require confirmation.

Two of the above species, *S. campinensis* and *S. discolor*, were synonymised by Mello-Leitão (1940) with the pantropical species *S. fusca*. Of the remaining eight Brazilian species, seven are here synonymised with the species that are considered synanthropic in the Neotropical region: three with the pantropical species *S. longipes* and *S. fusca*, two with *S. globula* and two with *S. univittata*. Therefore, of the ten species originally described from Brazil, only one, *S. insperata*, remains valid and apparently is not synanthropic. In addition, some species from other Neotropical countries are included in the synonymies.

Material and methods

The material examined is deposited in the following institutions: BMNH=Natural History Museum, London (P. Hillyard); FCUR=Facultad de Ciencias, Universidad de la República, Montevideo (M. Simó); IBSP=Instituto Butantan, São Paulo (A.D. Brescovit); MCN=Museu de Ciências Naturais, Fundação Zoobotânica de Rio Grande do Sul, Porto Alegre (E.H. Buckup); MCTP=Museu de Ciências e Tecnologia, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre (A.A. Lise); MHCI=Museu de História Natural “Capão da Imbuia”, Curitiba (J.C. Moura-Leite); MNHN=Muséum National d’Histoire Naturelle, Paris (C. Rollard); MNRJ=Museu Nacional do Rio de Janeiro, Rio de Janeiro (A. Kury); MZLQ=Museu de Zoologia da “Luiz de Queiroz”, Piracicaba (A.D. Paschoal); MZSP=Museu de Zoologia, Universidade de São Paulo, São Paulo (J.L. Leme); SMF=Forschungsinstitut und Museum Senckenberg, Frankfurt (M. Grasshoff); SMNK=Staatliches Museum für Naturkunde, Karlsruhe (H. Höfer); UEFS=Universidade Estadual de Feira de Santana, Feira de Santana (I.B. de Queiroz); UFBA=Laboratório de Artrópodes Peçonhentos, Universidade Federal da Bahia, Salvador (T.K. Brazil). Descriptions and terminology follow Valerio (1981). All measurements are in mm. Epigynes were submerged in clove oil to study internal structures. Micrographs were obtained with a JEOL (JSM 840A) scanning electron microscope from the Laboratório de Microscopia Eletrônica do Departamento de Física Geral do Instituto de Física da Universidade de São Paulo (USP).

Scytodes longipes Lucas, 1844 (Figs. 1–4, 9–10)

Scytodes longipes Lucas, 1844: 72 (holotype from Mexico, in MNHN, lost); F. O. Pickard-Cambridge, 1899: 50; Roewer, 1942: 323; Kraus, 1955: 13; Bonnet, 1958: 3985; Valerio, 1981: 84; Platnick, 1989: 117; 1993: 121; 1997: 178.

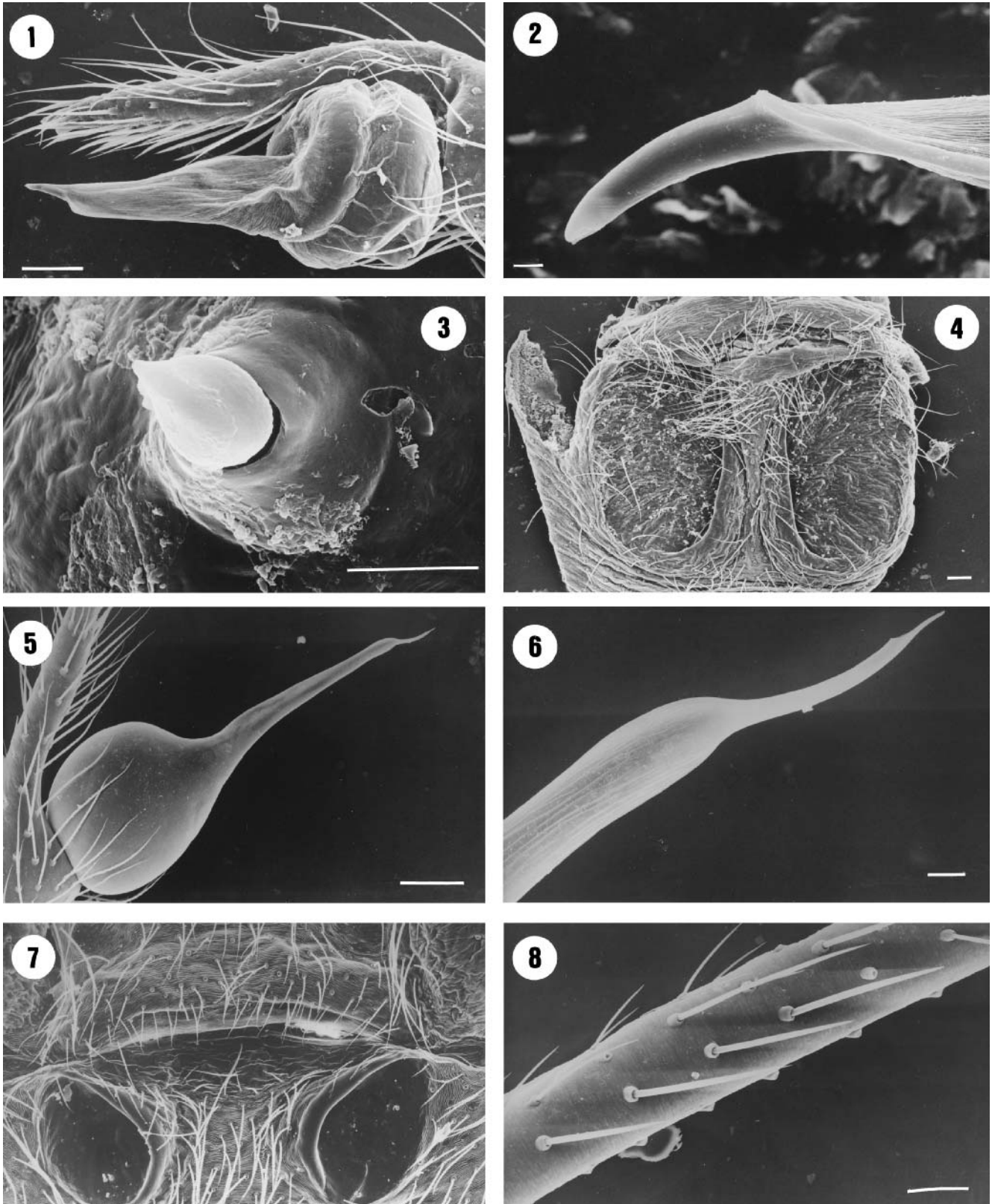
Scytodes depressiventris Mello-Leitão, 1915: 12 (holotype ♀ from São João del Rey, Minas Gerais, Brazil, in MNRJ 788, examined); Roewer, 1942: 329; Bonnet, 1958: 3982. **Syn. nov.**

Scytodes plumbeus Mello-Leitão, 1929: 94 (holotype ♂ from Tapera, Pernambuco, Brazil, in MNRJ 819, examined). **Syn. nov.**
Scytodes plumbea: Roewer, 1942: 330; Bonnet, 1958: 3988.

Note: See complete synonymy in Bonnet (1958) and Roewer (1942).

Synonymy: Examination of the type specimens of *Scytodes depressiventris* and *S. plumbeus* revealed that there are no significant differences between the genitalia of these two species and *S. longipes*.

Diagnosis: *Scytodes longipes* is similar to *S. intricata* Banks and *S. uligocetes* Valerio (see Valerio, 1981:



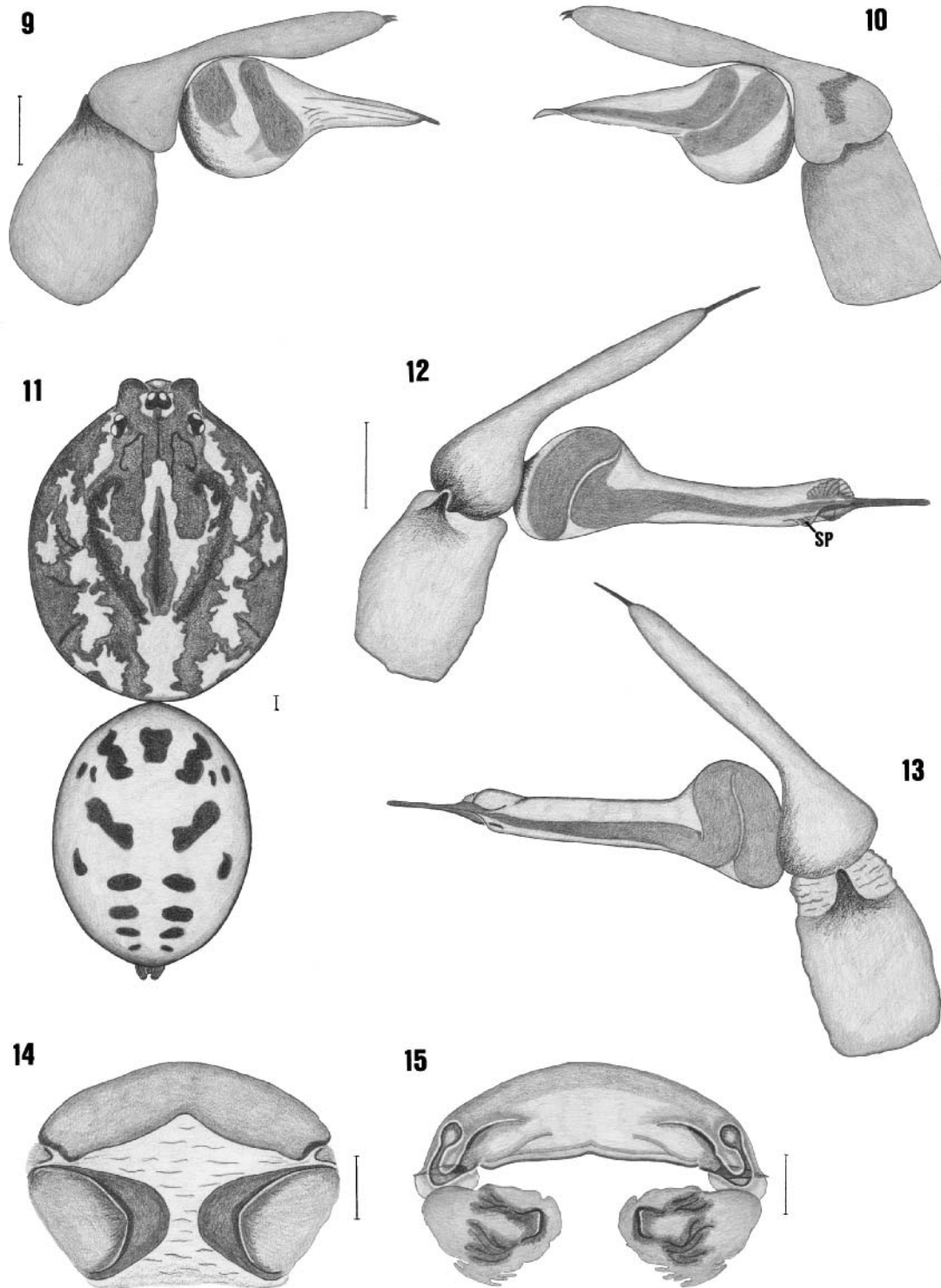
Figs. 1–8: **1–4** *Scytodes longipes*. **1** Left male palp, retrolateral view; **2** Distal part of palpal bulb, prolateral view; **3** Stridulatory pick of palpal femur, dorsal view; **4** Epigynum, ventral view. **5–8** *S. fusca*. **5** Left male palp, prolateral view; **6** Distal part of palpal bulb, prolateral view; **7** Epigynum, ventral view; **8** Spines of male femur I, ventral view. Scale lines=0.01 mm (2, 3, 6), 0.1 mm (1, 4, 5, 7, 8).

figs. 2–3), but differs from these species by the male palp which has a distal curvature of the embolus (Figs. 2, 10) and by the female epigynum, with very long foveae and positioning ridges very close to each other (Fig. 4, cf. Valerio, 1981: fig. 13).

Description: Male and female described by Valerio (1981). Palp as in Figs. 1–2, 9–10. Cymbium with one or two distal spines (Figs. 9–10). Palpal femur with a short, thick stridulatory pick with a rounded, projecting socket (Fig. 3). Epigynum as in Fig. 4.

Distribution: In the Neotropical region it is distributed throughout Central America, Ecuador, Colombia, Venezuela, and north and southeast of Brazil.

Material examined: EL SALVADOR: 1♀, March 1955, Escalon (SMF 30248/a); 2♂ 4♀ 1juv., May 1955, Escalon (SMF 30248/b). ECUADOR: Guaiacuil, 3♂ 2♀, F. Campos R. (MNRJ); Galapagos Archipelago, Tower, 1♀, 18 August 1957, Eibl (SMF 30239). COLOMBIA: Medellin, 2♀ 1juv., 12 November 1952, Pe. H. Daniel (IBSP 5752). VENEZUELA: Trujillo, Guaramacae, La Veja, 1♀, 12 August 1984, S. Pauls (MCN 25805). BRAZIL: Amazonas: 1♀, 1924–1925, W. Ehrhardt (SMF 30247); Pará: Belém, 1♂ 1♀ 1juv.,



Figs. 9–15: **9–10** *Scytodes longipes*, male palp. **9** Left, prolateral view; **10** Left, retrolateral view. **11–15** *S. univittata*. **11** Male body, dorsal view; **12** Left male palp, prolateral view (SP=sinuous projection); **13** Ditto, retrolateral view; **14** Epigynum, ventral view; **15** Ditto, dorsal view. Scale lines=0.25 mm.

15 November 1951, P. Ledoux (IBSP 603); *Rio de Janeiro*: Angra dos Reis, 1♀, August 1945, L. Travassos F° (MZSP 15038).

Scytodes fusca Walckenaer, 1837 (Figs. 5–8)

Scytodes fusca Walckenaer, 1837: 272 (♂ ♀ syntypes from Cayenne, French Guiana, in MNHN, lost); Roewer, 1942: 323; Bonnet, 1958: 3982; Valerio, 1981: 83; Platnick, 1989: 117; 1993: 121; 1997: 177.

Scytodes guianensis Taczanowski, 1873: 108 (5♀ syntypes from Saint Laurent de Maroni and Uassa, French Guiana, should be in Polish Academy of Sciences, Warsaw, not examined); Keyserling, 1891: 165; Roewer, 1942: 323; 1955: 1653 (Syn.); Bonnet, 1958: 3983.

Scytodes hebraica Simon, 1981: 568 (holotype ♀ juv. from St. Vincent, in BMNH, not examined); Pickard-Cambridge, 1899: 50; Valerio, 1981: 83 (Syn.).

Scytodes bajula Simon, 1891: 569 (holotype ♂ from St. Vincent, in BMNH, not examined); Valerio, 1981: 83 (Syn.).

Scytodes campinensis Mello-Leitão, 1918: 133, fig. 37 (holotype ♀ from Campina Grande, Paraíba, Brazil, T. Leitão coll., in MNRJ, 796, examined); Mello-Leitão, 1940: 236 (Syn.); Roewer, 1942: 329; Bonnet, 1958: 3981.

Scytodes discolor Mello-Leitão, 1918: 133 (3♀ syntypes from Nova Iguaçu, Rio de Janeiro, Brazil, B. de Freitas coll., in MNRJ 791, examined); Mello-Leitão, 1940: 236 (Syn.); Roewer, 1942: 329; Bonnet, 1958: 3982.

Scytodes iguassuensis Mello-Leitão, 1918: 133 (holotype ♀ juv. from Nova Iguaçu, Rio de Janeiro, Brazil, B. de Freitas coll., in MNRJ 787, examined); Roewer, 1942: 330; Bonnet, 1958: 3984. **Syn. nov.**

Scytodes nannipes Chamberlin & Ivie, 1936: 8, fig. 3 (holotype ♀ from Barro Colorado Island, Canal Zone, Panama, in American Museum of Natural History, not examined); Valerio, 1981: 83 (Syn.).

Scytodes torquatus Kraus, 1955: 12, figs. 12–13 (holotype ♂ from Cutuco, La Union, El Salvador, in SMF, examined); Valerio, 1981: 83 (Syn.).

Scytodes nanipes: Bonnet, 1958: 3987.

Synonymy: Examination of the immature type specimen of *Scytodes iguassuensis* revealed that it has short legs and the same basic abdominal coloration pattern as *S. fusca*. We consider it a junior synonym of *S. fusca*.

Diagnosis: *Scytodes fusca* differs from the other species by a styliform and distally slender male palpal bulb (Figs. 5–6), and by female epigynum, with short and small, widely separated foveae (Fig. 7) and with stalk of seminal receptacle strongly curved (see Valerio, 1981: fig. 10).

Description: Male and female described by Valerio (1981). Male palp as in Figs. 5–6. Epigynum as in Fig. 7. Femur I, in male, with several rows of prominent spines, in distal median region (Fig. 8).

Variation: Ten males: total length 6.00–9.75; carapace length 3.90–4.65; femur I length 7.65–10.20; bulb 0.97–1.36. Ten females: total length 8.55–12.45; carapace 4.05–5.55; femur I 4.80–6.60. Coloration in females can vary greatly, from dark reddish brown to very light cream colour.

Natural history: Commonly found inside houses or outside walls and surroundings. This species is also very common in the field under rocks and tree bark. Several specimens were collected on *Betholletia excelsa* HBK, Lecythidaceae (Castanheira-do-Pará) in the state of Acre, Brazil.

Distribution: Pantropical.

Material examined: VENEZUELA: *Distrito Federal*: Caracas, 1♂ (IBSP 4391); Cumaná, 4♀ (MCN 8489). COLOMBIA: Espinal, 1♀ (MNRJ 1204); Bogotá, 1♂ 2♀ (MNRJ 595). BRAZIL: *Acre*: Xapuri, 1♀ (IBSP 7547); (Pimenteira), 3♂ 7♀ 6juv. (IBSP 8639, 8646); Rio Branco, 1♂ 2♀ (IBSP 7076, 7077, 6970); (Catuaba), 1♂ 1♀ 1juv. (IBSP 8673); (Humaitá), 7♀ (IBSP 8732, 8797); *Amazonas*: Alto Juruá, 1♀ (MNRJ 778); Manicoré, Barreira do Matupiri, 1♀ (IBSP 8879); Manaus, Tarumã Mirim River, 4♀ (SMNK 273; IBSP 14510); *Pará*: Tucuruí, Rio Tocantins, Usina Hidrelétrica de Tucuruí, 2♂ 2♀ (IBSP 19918, 19917); Xingu, 1♀ (MNRJ 1112); Melgaço, Caxiuana, 1♂ 2♀ (MCTP 8321, 8322, 8327); Santarém, Fátima de Uricurituba, 1♀ (MCN); *Pernambuco*: Tapera, 1♀ (MNRJ 786); 1♀ (MNRJ 766); *Paraíba*: 4♀ (IBSP 795); Campina Grande, 1♀ (MNRJ 772); *Alagoas*: Bebedouro, 1♀ (MNRJ); *Sergipe*: São Cristovão, 1♂ (IBSP 7376); *Tocantins*: Porto Nacional, 1♀ (UEFS 1292); *Bahia*: Feira de Santana, 1♂ 8♀ (UEFS 475, 476, 464, 656, 727, 899, 1375, 1376, 118, 113); Capim Grosso, 1♀ juv. (UEFS 891); São Gonçalo dos Campos, 2♀ (UEFS 657, 860); Coaraci (Fazenda Boa Esperança), 2♂ 4♀ 2juvs. (MNRJ 13314); Camacan (Fazenda Santa Ursula), 2♀ (MNRJ); Pau Brasil (Fazenda São João), 1♀ (MNRJ 13067); Gandu (Fazenda São Rafael), 2♀ (MNRJ 13063); Porto Seguro (Fazenda São José), 5♀ (MNRJ); Trancoso, 1♀ (IBSP 14616); Arquipélago de Abrolhos, Sueste Island, 1♀ 3juv. (IBSP 20109); *Goiás*: Ipameri, 1♀ (IBSP 6596); *Espírito Santo*: São Mateus, Reserva Florestal da Vale do Rio Doce, 2♂ 15♀ 2juvs. (IBSP 16896, 13021); Vitória, Morro Moscoso, 1♀ (MNRJ); *Rio de Janeiro*: Rio de Janeiro, 2♂ 4♀ 2juvs. (MNRJ 58559, 780, 222, 41482); (Cascadura), 1♀ (MNRJ 789); (Niterói), 1♀ (MNRJ 776); Maricá, Reserva Biológica da Ponta do Fundão, 2♀ (MZSP 14991); Búzios, 1♂ (IBSP 5729); Cabo Frio, São Pedro da Aldeia, 4♀ 1juv. (IBSP 2131); Petrópolis, 2♀ (MNRJ 787, 53950); Pinheiro (actually Pinheiral), 1♂ 2♀ (MNRJ 776, 771); Volta Redonda, 1♀ (IBSP 17563); Angra dos Reis, Ilha Grande, Ponta do Aripeba, 2♀ (MCN 24870); *Mato Grosso do Sul*: Parnaíba, 1♂ 2♀ (IBSP 7552, 14080); *Minas Gerais*: Belo Horizonte, 2♂ (MNRJ 793); Paraguaçu, 1♀ (MNRJ 42482); *São Paulo*: Piracicaba, 1♀ (MZLQ); Boituva, 1♂ (IBSP 5732); Itú, 1♀ (IBSP 11834); Águas da Prata, 1♂ 1♀ (IBSP 16251, 17515); Mauá, 1♀ (IBSP 19676); Americana, 2♀ (MZSP); Jundiaí, 1♀ (IBSP 4560); Campinas, 1♀ (IBSP 7556); São Paulo, 4♂ 13♀ (IBSP 11885, 11824, 13976, 10013, 411, 16218, 7559, 7550, 8179, 6376, 13913, 19679, 19678, 19742, 19677); Jarínú, 1♀ (IBSP 5733); Baurú, 1♀ (IBSP 14052); Guararema, 1♂ 1♀ (IBSP 11825, 6749); Tatuí, 1♀ (IBSP 6169); Tietê, 11♀ 4juvs. (IBSP 6380); Ubatuba, 1♂ 1♀ (IBSP 3524, 3267); (Parque Estadual da Serra do Mar, Núcleo Picinguaba), 1♀ (IBSP 6983); Iguape, 1♀ (IBSP 6165); *Santa Catarina*: 1♂ (IBSP 13999); *Rio Grande do Sul*: 1♀ 1juv. (MNRJ 41374).

Scytodes univittata Simon, 1882 (Figs. 11–20)

Scytodes univittata Simon, 1882: 242 (holotype ♀ from Yemen, should be in MNHN, not examined); Brignoli, 1976: 157, figs. 50, 51, 53; Wunderlich, 1991: 335, figs. 247–248; Roewer, 1942: 328; Bonnet, 1958: 3993; Platnick, 1997: 179.

Scytodes mexicanus Banks, 1898: 210, fig. 1 (holotype ♀ from Mexico City, Mexico, should be in California Academy of Sciences, probably destroyed, not examined). **Syn. nov.**

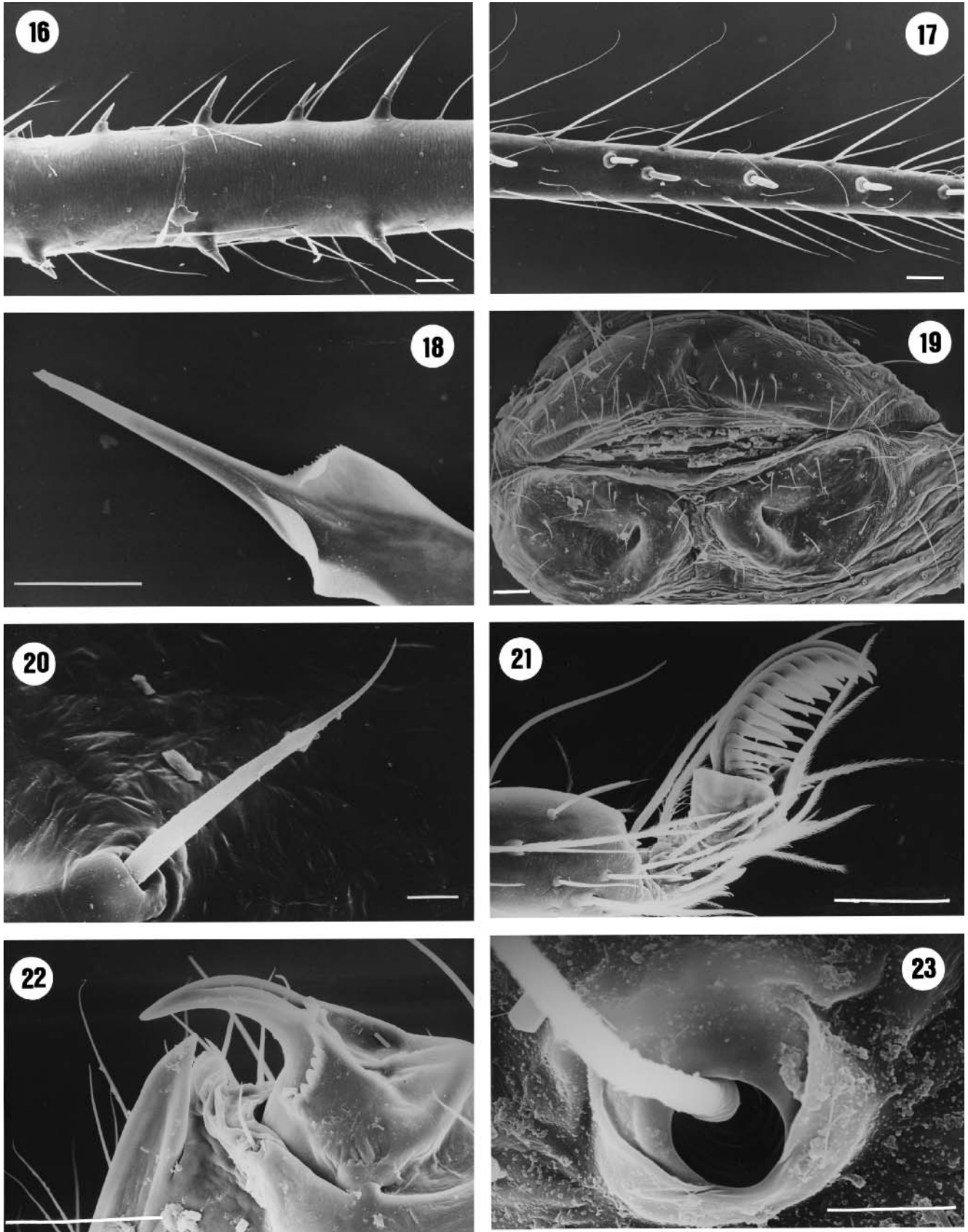
Scytodes mexicana: Roewer, 1942: 330; Bonnet, 1958: 3986.

Scytodes concolor Mello-Leitão, 1918: 132, fig. 36 (holotype ♀ from Niterói, Rio de Janeiro, Rio de Janeiro, Brazil, in MNRJ, lost); Roewer, 1942: 329; Bonnet, 1958: 3982. **Syn. nov.**

Scytodes serripes Mello-Leitão, 1947: 1–2, fig. 40 (holotype ♂ from Carmo do Rio Claro, Minas Gerais, Brazil, J.C.M. Carvalho coll., in MNRJ 13447, examined); Brignoli, 1983: 150. **Syn. nov.**

Scytodes chamberlini Caporiacco, 1955: 295–296, fig. 7 (holotype ♀ from El Junquito, Distrito Federal, Venezuela, December 1948, Marcuzzi coll., in Museo de Biología, Universidad Central de Venezuela, Caracas, no. 554, not found, probably lost); Brignoli, 1983: 149. **Syn. nov.**

Scytodes atabey Alayón, 1992: 1–4, figs. 1–2 (holotype ♀ from Reparto Atabey, Playa, La Habana, Cuba, August 1983, L.F. Armas, in Instituto de Ecología y Sistemática, Academia de Ciencias de Cuba; paratypes: 1♂, from same locality, July 1983, L.F. Armas



Figs. 16–23: **16–20** *Scytodes univittata*. **16** Male femur I, ventral view; **17** Male metatarsus III, ventral view; **18** Left male palp, distal part of bulb, retrolateral view; **19** Epigynum, ventral view; **20** Stridulatory pick of palpal femur, dorsal view. **21–23** *S. globula*, male. **21** Claws of tarsus I; **22** Chelicerae, showing subapical hyaline keel and fang ridge; **23** Trichobothrium, leg I. Scale lines=0.01 mm (20, 23), 0.1 mm (16–19, 21, 22).

coll., in Instituto de Ecología y Sistemática, Academia de Ciencias de Cuba, and 2♂ 9♀ from same locality, reared in laboratory, deposited in private collection of G. Alayón G., not examined); Platnick, 1997: 177. **Syn. nov.**

Synonymy: Examination of the genitalia of the type specimen of *Scytodes serripes* in comparison with the figures of *S. univittata* presented by Brignoli (1976: figs. 50–51, 53) and Wunderlich (1991: figs. 247–248) indicates that *S. serripes* is a junior synonym of *S. univittata*. The synonymies of *S. mexicana*, *S. concolor* and *S. atabey* are based on the figures of the female genitalia presented by Banks (1898), Mello-Leitão (1918) and Alayón (1992), respectively. The figures presented by these authors represent accurately the characteristic foveae of *S. univittata*. The synonym of *S. chamberlini* is based on the coloration pattern of the abdomen, with six transverse interrupted bands, presented by Caporiacco (1955).

Diagnosis: *Scytodes univittata* is distinguished from the other species by the male femur I, with a double row of strong spines (Fig. 16), by the long, slender embolus with a sclerotised, sinuous basal projection (Figs. 12–13, 18) and by the female genitalia with v-shaped foveae and curved, deep positioning ridges (Figs. 14, 19).

Description: **Male** (IBSP 11786): Carapace yellow with dark brownish pattern (Fig. 11). Pedipalps yellow. Labium and endites brownish yellow. Sternum yellow with brown margins. Legs yellow. Abdomen cream with six brownish grey transverse interrupted bands. Total length 10.50. Carapace flattened, 5.85 long, 5.10 wide. Eye diameters: PME 0.34, ALE 0.37, PLE 0.34. Chelicerae with subapical hyaline keel. Labium 0.60 long, 0.75 wide. Sternum 3.45 long, 2.55 wide. Legs long, measurements: I: femur 10.65/patella 1.65/tibia 12.00/metatarsus 15.60/tarsus 1.65/total 41.55. II: 7.95/1.20/9.30/10.80/1.05/30.30. III: 7.20/1.65/6.90/8.10/1.35/25.2. IV: 10.05/1.35/10.35/9.45/1.50/32.70. Femur I with subprolateral and subretrolateral row of spines (Fig. 16). Metatarsus III with single row of prolateral spines (Fig. 17). Palpal femur with long, narrow stridulatory pick with a rounded, projecting socket (Fig. 20). Cymbium with long, slender distal spine (Figs. 12–13). Bulb 1.78 long, distally narrowed, with apical hyaline serrated lamina (Figs. 12, 18). Embolus long, straight, with basal sclerotised, sinuous projection (Fig. 12: SP, 18). Abdomen 4.50 long, 3.90 wide, rounded, covered with large feathery hairs.

Female (IBSP 13293): Coloration similar to male, with darker carapace. Total length 10.95. Carapace slightly arched, 6.30 long, 5.10 wide. Eye diameters: PME 1.39, ALE 1.24, PLE 1.39. Chelicerae with subapical hyaline keel. Labium 0.75 long, 0.90 wide. Sternum 3.15 long, 2.25 wide. Legs long, measurements: I: femur 6.45/patella 1.35/tibia 7.20/metatarsus 9.75/tarsus 1.35/total 26.10. II: 6.00/1.50/5.85/7.35/1.35/22.05. III: 4.50/1.20/4.05/4.50/1.20/15.45. IV: 5.85/1.20/6.60/7.35/1.35/22.35. Abdomen 4.65 long, 3.30 wide, as in male. Foveae separated from each other by one fourth of their width (Figs. 14, 19). Internal genitalia with stalks of seminal receptacles strongly curved, with semicircular sclerotised area adjacent to their base (Fig. 15).

Variation: Ten males: total length 8.55–12.90; carapace length 5.40–6.75; femur I length 8.10–11.55; bulb 1.43–1.68. Twenty females: total length 11.10–18.00; carapace 5.85–8.10; femur I 6.45–9.30.

Natural history: This species was probably introduced into the Neotropical region from Asia. It is found inside houses. Unlike other synanthropic spiders, this species is not found in the field and is very rarely found in gardens and house surroundings.

Distribution: Up to now, this species has only been found in the large cities of Mexico, Venezuela, Cuba, Brazil, Chile and Paraguay.

Material examined: CHILE: *Antofagasta*: Antofagasta, 9♂ 14♀, 1989, J. Vidal (IBSP 4648). PARAGUAY: *Asunción*: 1♂ 1♀, August 1963, W. Bücherl (IBSP 5255). BRAZIL: *Bahia*: 1♀ (UFBA 1528); *Minas Gerais*: Belo Horizonte, 1♀ (IBSP 20108); *Rio de Janeiro*: Rio de Janeiro, 1♀ (MNRJ 790); (Niterói), 1♀ (MNRJ 792); *São Paulo*: Americana, 1♀ 3juvs. (MZSP 15042); São Paulo, 7♂ 16♀ 1juv. (IBSP 19682, 8592, 11786, 8593, 7769, 7549, 7553, 7770, 13293, 8613, 8585, 7543, 7548, 1862, 19765, 7546, 7564, 7747, 14481); *Paraná*: Rio Negro, 1♀ (MNRJ 58923); *Santa Catarina*: 4♀ (IBSP 14002, 6377); *Rio Grande do Sul*: Nonoai, 1♂ 1♀ (MCN 18476); Pinhal, 1♀ (MCTP 1046); Porto Alegre, 7♂ 22♀ 2juvs. (IBSP 14053; MNRJ 58391; MCN 450, 4415, 8161, 1321, 8177, 1078, 1635, 1223, 308, 5602, 9113, 1152, 1179, 1356, 8060, 22544; MCTP 1042, 5054, 5037, 1394, 6624, 1406, 969, 80, 37, 36, 427, 1555); Rio Grande, 1♀ (MCTP 9597).

Scytodes globula Nicolet, 1849 (Figs. 21–27, 30–34)

Scytodes globula Nicolet, 1849: 347, pl. II, figs. 1, 2 (1♂ 4juv. syntypes from Chile, in MNHN 4190, examined; lectotype ♂ and paralectotype juvs. here designated); Roewer, 1942: 329; Bonnet, 1958: 3983; Brignoli, 1976: 173; Ramírez, 1989: 10.

Scytodes globulata: Simon, 1897: 107; 1904: 86 (*lapsus*).

Scytodes maculata Holmberg, 1876: 3, fig. 1 (holotype ♀ from Paso del Pacheco, Rio Colorado, Argentina, Doering coll., depository unknown, not found); 1881: 127–134, pl. III, figs. 3, 3a–k (descr. ♂); Mello-Leitão, 1941: 107; 1943: 155; 1944: 312; Roewer, 1942: 330; Bonnet, 1958: 3986; Brignoli, 1976: 173. **Syn. nov.**

Scytodes annulata Keyserling, 1891: 166, pl. V, figs. 113a–c (2♂ 4♀ syntypes from Serra Vermelha, Rio de Janeiro, Brazil, Göldi coll., in BMNH, examined); Roewer, 1942: 329; Bonnet, 1958: 3986. **Syn. nov.**

Scytodes scholaris Piza, 1944: 266, fig. 3 (3♀ syntypes from Piracicaba, São Paulo, Brazil, A. Zamith & A. Corrêa coll., in MZLQ A0111, examined); Brignoli, 1976: 172, 182; 1983: 150; Paschoal & Barros, 1983: 78. **Syn. nov.**

Scytodes aguapeyanus Mello-Leitão, 1945: 227, fig. 1 (2♀ syntypes from Aguapey, Corrientes, Argentina, M. Birabén coll., in Museo de La Plata 16320 and MNRJ no number, examined); Arrozpide, 1986: 53. **Syn. nov.**

Scytodes aguapeyana: Brignoli, 1976: 182; 1983: 149.

Synonymy: Examination of the type specimens of *Scytodes annulata*, *S. scholaris* and *S. aguapeyanus* revealed that there are no significant differences between the genitalia of these species and *S. globula*. The synonymy of *S. maculata* is based on the figures of the genitalia presented by Holmberg (1881), which represent accurately the characteristic foveae and bulb of *S. globula*.

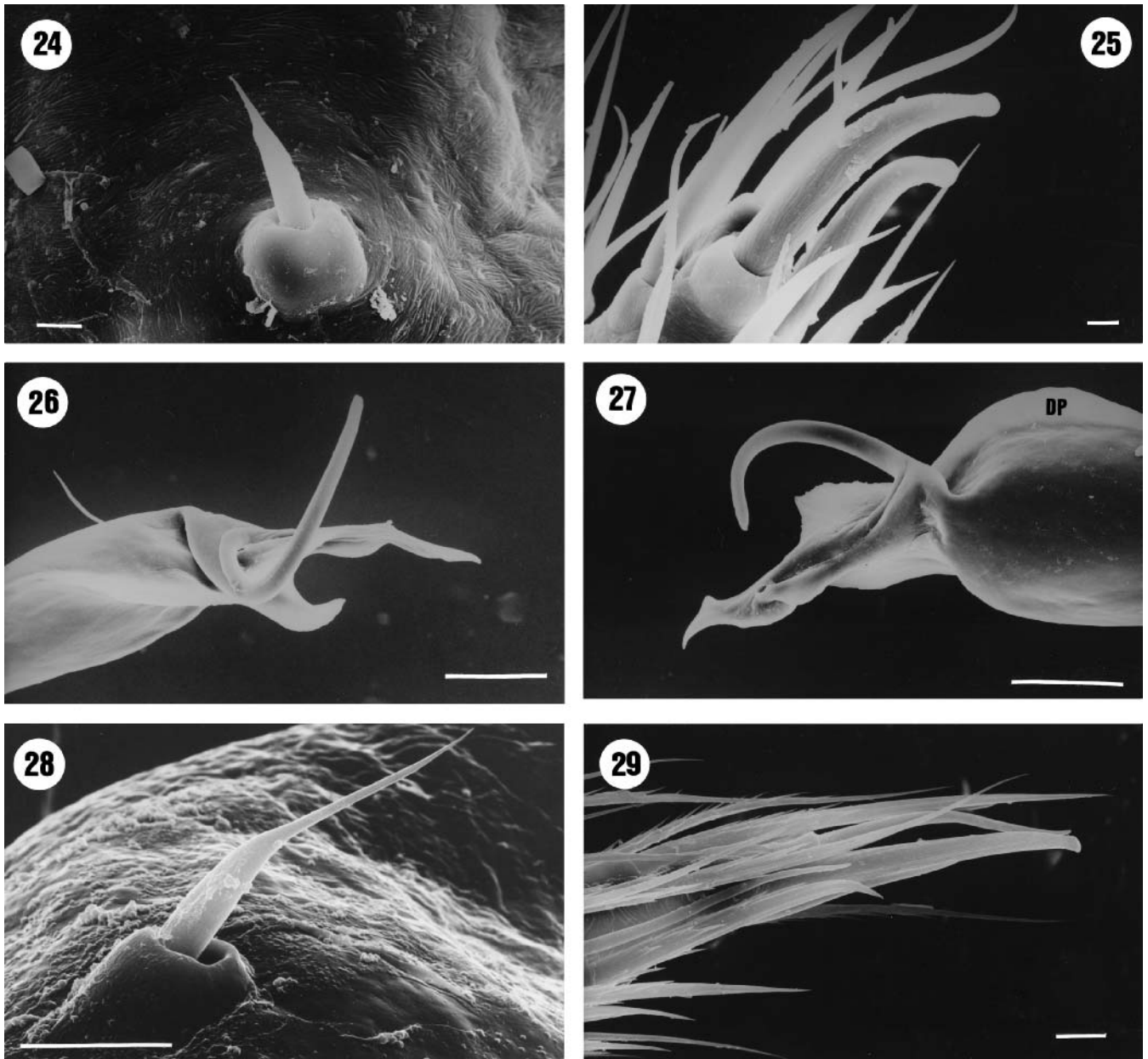
Diagnosis: *Scytodes globula* is similar to *S. itapevi* sp.n. in the curved embolus of the male palpal bulb, but differs by the presence of a dorsal projection on the base of the embolus (Figs. 27, 32: DP) and by the presence of a single hyaline membrane in its distal area (Figs. 27,

32). The female has laterally directed foveae (Fig. 33), and two small seminal receptacles on each side (Fig. 34), instead of one large and one small as in *S. itapevi*.

Description: Male (IBSP 7557): Carapace brown around margins, very dark in centre, with cream coloured pattern as in Fig. 30. Pedipalps yellow with transverse brown bands. Labium and endites brownish. Sternum cream with brownish margin and brown triangular marks in front of each coxa. Legs yellow with transverse brown bands except on tarsi. Abdomen uniformly grey. Total length 15.75. Carapace slightly arched, 7.35 long, 6.15 wide. Eye diameters: ALE 0.37, PME 0.43, PLE 0.37, lateral eyes on a tubercle. Chelicerae with distal hyaline keel, fangs with opening of poison gland forming a deep groove (Fig. 22). Legs long, measurements: I: femur 30.00/patella 2.25/tibia 32.70/metatarsus 42.90/tarsus 2.67/total 110.52. II: 16.80/1.95/16.95/27.90/1.50/65.10. III: 12.15/2.10/10.77/12.45/1.50/

38.97. IV: 31.20/1.80/15.00/16.35/1.95/66.30. Tarsus with long onychium and two claws with at least twelve teeth (Fig. 21). Trichobothria with very long trichoma, bothrium with semicircular rim with a median groove (Fig. 23). Palpal femur with short, distally narrowed stridulatory pick with a rounded, projecting socket (Fig. 24). Cymbium with a pair of slightly curved, slender distal spines (Fig. 25). Bulb 2.20 long, distally narrowed, with distal hyaline lamina (Figs. 27, 32). Embolus strongly curved, with a distal prong originating from its base (Figs. 26–27, 31–32).

Female (IBSP 11792): Coloration: carapace with basic pattern as in male. Pedipalps as in male. Labium and endites brown with cream margins. Sternum as in male. Legs yellow with transverse brown bands, often with brown spots between bands. Abdomen uniformly grey, as in male. Total length 15.9. Carapace slightly arched, 7.35 long, 6.15 wide. Eye diameters: ALE 0.34, PME



Figs. 24–29: **24–27** *Scytodes globula*, male palp. **24** Stridulatory pick of femur, dorsal view; **25** Cymbium, distal area, showing spines; **26** Left, distal part, prolateral view; **27** Ditto, retrolateral view (DP=dorsal projection). **28–29** *S. itapevi*, male palp. **28** Stridulatory pick of femur, dorsal view; **29** Cymbium, distal area, showing spines. Scale lines=0.01 mm (24, 25, 28, 29), 0.1 mm (26, 27).

0.34, PLE 0.37, lateral eyes on a tubercle. Chelicerae as in male. Legs usually shorter than males, measurements: I: femur 12.30/patella 1.65/tibia 13.35/metatarsus 16.65/tarsus 2.25/total 46.20. II: 10.50/1.80/10.05/12.45/1.95/36.75. III: 7.50/1.65/7.20/8.25/1.80/26.40. IV: 9.60/1.65/9.90/10.05/1.80/33.00. Foveae separated from each other by half their width, positioning ridge broad and semi-circular (Fig. 33). Internal genitalia with stalks of seminal receptacles usually curved, varying even within one specimen (Fig. 34).

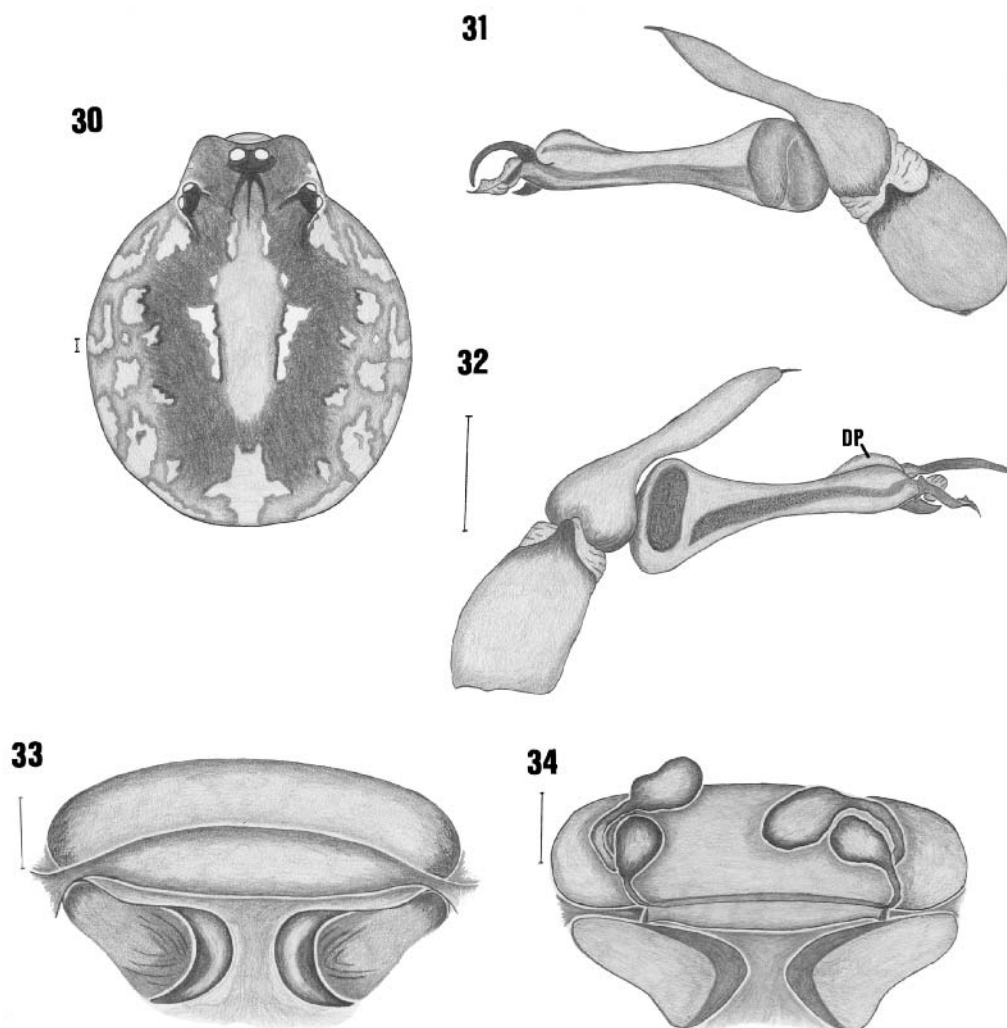
Variation: Twenty males: total length 7.65–18.60; carapace length 3.30–8.55; femur I length 14.10–28.50; bulb 1.15–2.39. Twenty females: total length 13.50–20.10; carapace 6.90–9.60; femur I 9.90–15.00. Juvenile females, for example from São Roque, São Paulo (IBSP 1398), with measurements ranging from 14.10–19.50, can be larger than adults from the same population. Coloration may vary greatly. Larger females have a very dark brown coloration while smaller ones range from a light cream colour to a reddish brown. In males and females the abdomen may have a brownish striped pattern, which can be all over the abdomen or restricted to the posterior region.

Natural history: This species is commonly found in the field but can also be found inside houses or outside walls

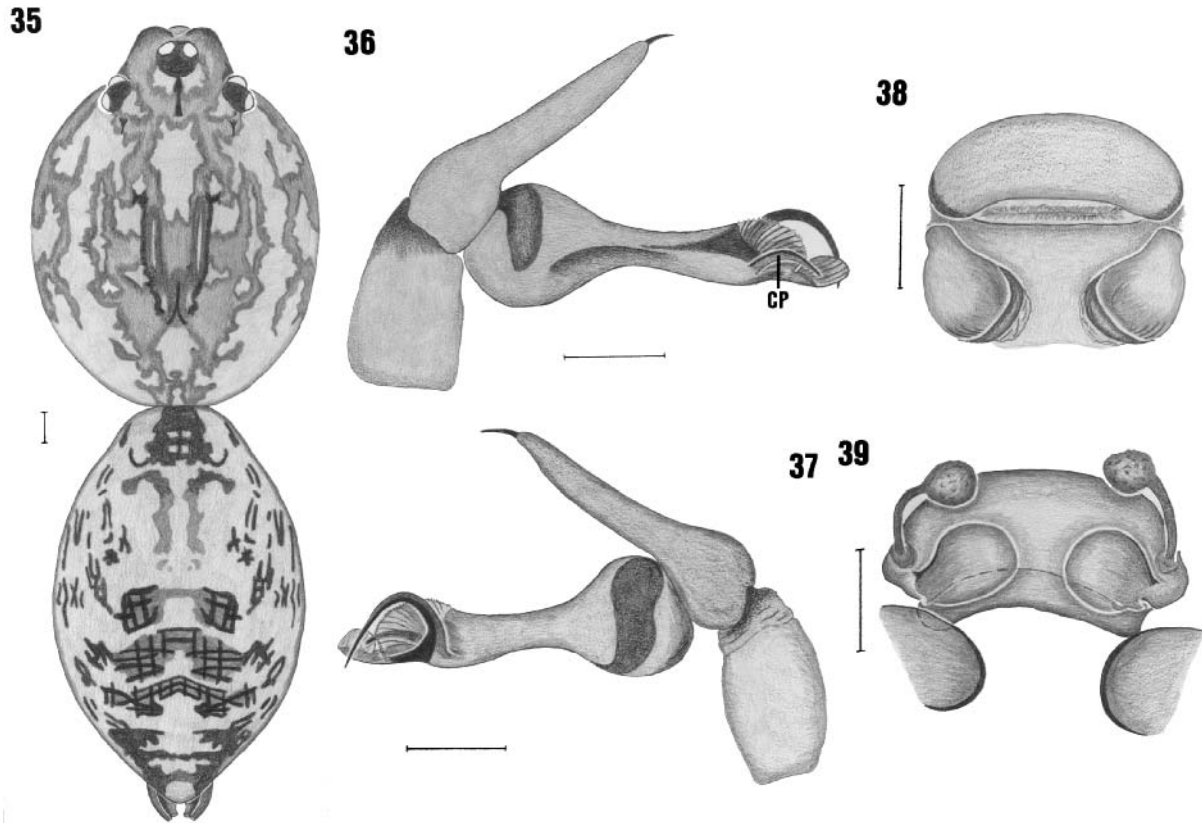
and surroundings. It has been observed preying on species of the genus *Loxosceles* in the field (E. N. Ramires, pers. obs.) and in laboratory studies (Ramires & Ades, 1997). Hitherto there have been no records in the literature of cases involving *Scytodes* bites in humans. Between 1989 and 1998, the Vital Brasil Hospital recorded nine cases of accidental bites. In most of them, the patient was either in bed or getting dressed. Symptoms were recorded in one case (July 1998) and were described as a burning sensation and slight pain immediately after the bite. No spots or wounds were observed.

Distribution: Chile, Bolivia, Argentina, Uruguay, north, southeast and south of Brazil.

Material examined: BRAZIL: *Minas Gerais:* Poços de Caldas, 9♂ 15♀ 9juvs. (MNRJ; IBSP); Pirapora (Bom Jesus), 1♀ (IBSP); Monte Verde, 1♂ 1juv. (IBSP); Ibitipoca, Gruta Fugitivos, 1♀ (IBSP); *Mato Grosso:* Cáceres, 1♀ (IBSP); *Mato Grosso do Sul:* Corumbá, Serra do Urucum, 1♂ 2♀ (MZSP); Bonito (Gruta do Guaviral), 1♀ (IBSP); *São Paulo:* 1♀ (SMF); Corumbataí, 1♂ 3♀ (IBSP); Monções, 2♀ (IBSP); São Pedro, Ribeirão Vermelho, 2♀ (MZLQ); Campos do Jordão, 1♂ (IBSP); Valinhos, 2♂ 3♀ (IBSP); Cajamar, 2♂ 1♀ (IBSP); Itapevi, 4♂ 4♀ 1juv. (IBSP); Santa Rita do Passo Quatro, 1♂ (IBSP); Três Irmãos (Rosana), 1♂ 2♀ 2juvs. (IBSP); Jundiaí, 2♀ (IBSP); Carapicuíba, 1♂ 2♀ 2juvs. (IBSP); São Bernardo do Campo, 3♀ 1juv. (IBSP); Atibaia, 1♀ (IBSP); Ibiúna, 1♀ (IBSP); São Roque, 6♂ 13♀ 3juvs. (IBSP; MZSP);



Figs. 30–34: *Scytodes globula*. **30** Male carapace, dorsal view; **31** Left male palp, retrolateral view; **32** Ditto, prolateral view (DP=dorsal projection); **33** Epigynum, ventral view; **34** Ditto, dorsal view. Scale lines=0.25 mm.



Figs. 35–39: *Scytodes itapevi*. **35** Male body, dorsal view; **36** Left male palp, prolateral view (CP=curved prong); **37** Ditto, retrolateral view; **38** Epigynum, ventral view; **39** Ditto, dorsal view. Scale lines=0.25 mm.

Cocaiá, 5♀ (MZSP); Embú, 1♀ (IBSP); Embú Guaçu, 1♂ 2♀ 1juv. (IBSP); Itapeçerica da Serra, 3♂ 7♀ (IBSP); Diadema, 1♀ (IBSP); Cotia, 4♂ 3♀ 1juv. (IBSP); São Paulo, 22♂ 58♀ 7juvs. (IBSP, MZSP; SMNK); Guarulhos, 8♂ 16♀ 3juvs. (MZSP); between Mairiporã and Atibaia, 1♂ 1♀ 1juv. (IBSP); Mairiporã, 4♂ 10♀ 3juvs. (IBSP); Mairinqui, 1♂ 1♀ (IBSP); Tapirai, 2♂ 3♀ 2juvs. (IBSP); Campo Limpo Paulista, 3♀ (IBSP); Piracaia, 1♀ (IBSP); Itupeva, 1♂ (IBSP); Itararé, 1♂ (IBSP); Barueri, 4♀ (MZSP); Amparo, 3♀ (MZSP); São José do Barreiro, Serra da Bocaina Natural Park, Rio Mambucaba, 1400 m alt., 1♀ (IBSP); Boracéia, 1♂ 2♀ (MZSP); Alcatrazes Island, 1♂ (IBSP); Angatuba, 1♀ (IBSP); Carioba, 2♂ (MZSP); Rio Claro, 1♂ 10♀ (MZSP); Assis, 1juv. (MZSP); Limeira, 1♀ (MZSP); Guataporã, 1♂ 4♀ (MZSP); Botucatu, 1♀ 1juv. (MZSP); Lins, 1♂ (MZSP); Tietê, 2♀ (IBSP); Batatais, 1♀ 1juv. (MZSP); Itú, 2♀ (IBSP); Santana do Parnaíba, 1♀ (IBSP); Iporanga (Gruta do Ouro Grosso), 1♂ (IBSP); *Paraná*: Curitiba, 5♂ 7♀ 3juvs. (IBSP; MHCI); Telêmaco Borba, 1♂ 2♀ (IBSP); Colombo, 3♂ 1juv. (MCN); Jundiá do Sul, 1♂ (MCN); Iguatemi, 1♂ (MCN); Ponta Grossa, 2♂ 1♀ (MZSP); Candói/Mangueirinha, Reservatório do Rio Jordão, 3♂ 4♀ (IBSP); Cascavel, 1♂ 5♀ (IBSP); São José do Patrocínio, Rio Paraná (Ilha Grande), 3♀ (IBSP); Guarapuava, 2♂ 8♀ 7juvs. (IBSP); *Santa Catarina*: Arvoredo Island, 1♀ (MCTP); (Ilha do Arvoredo Biological Reserve), 1♂ 1♀ (MCTP); Taió, 1♂ (MZSP); Rancho Queimado, 1♂ 1♀ (MCN); Videira, 2♀ (IBSP); *Rio Grande do Sul*; 1♂ 3♀ (MNRJ 41640); Derrubadas, Turvo State Park, 27°08'41"S, 53°52'06"W, 1♀ (MCN); Garibaldi, 1juv. (MCN); Caxias do Sul, 1♂ (MCN) (Fazenda Souza), 1♀ (MCTP); Torres, 1♂ 1♀ 1juv. (MCN); Santa Maria, 1♂ 1♀ 1juv. (MCN); Capão da Canoa, 3♂ 3♀ (MCN; MCTP); Osório, Pontal do Dihel, 1♀ (MCN); Novo Hamburgo, 1♀ (MCN); (Morro dos Bois), 1♀ (MCN); São Jerônimo, 4♀ (MCN); Estância Velha, 1♀ (MCN); Montenegro, 1♂ (MCN); Guaíba, 7♂ 14♀ 1juv. (MCTP; MCN); Triunfo, 2♂ 6♀ (MCN); Arroio do Tigre, 7♀ (MCN); Sapiranga, 1♀ (MCN); São Leopoldo, 3♂ 1♀ 2juvs. (MCN); Gravataí, Mato Alto, 3♀ (MCN); Sertão Santana, 1♂ 15♀ 3juvs. (MCN); Taquara, Morro da Pedra, 1♀ (IBSP); Charqueadas, 1♀ (MCN); Porto Alegre, 20♂ 62♀ 8juvs. (IBSP; MCTP; MCN; MZSP; SMNK); Viamão, 2♂ 19♀ 3juvs. (MCTP; MCN); Boçoroca, 1♀ (MCN); Rio Grande, 1♀ (MCN); (Taim

Ecological Station), 4♀ (MCTP); Palmares do Sul, Praia de Quintão, 1♀ (MCN); Tavares/Mostardas (Parque Nacional da Lagoa do Peixe), 1juv. (MCN); Quarai, Estância São Roberto, 4♀ (MCN). ARGENTINA: Córdoba, 3♀ (MNRJ); Cabana, 3♀ (MNRJ); Buenos Aires, 2♀ (MNRJ); Misiones/Corrientes, 2♀ (MCTP). BOLIVIA: Beni: Estación Biológica de Beni, 1♂ (MCN). CHILE: Concepción: 1♀ (IBSP); 1♂ 4juvs. (MNHN, types); Valparaíso, 1♂ (IBSP). URUGUAY: Maldonado (Cerro de Las Animas), 1♀ (FCUR); (Facultad de Maldonado), 1♀ (FCUR); (Sierra de Animas), 1♀ (FCUR); (Abra de la Perdono), 1♂ 1juv. (FCUR); Rivera, Rivera, 1juv. (FCUR); (Sierra de la Aurora), 1♀ (FCUR); San José, Santa Luzia del Este (Km 68), 2♀ (FCUR); Montevideo (Malvin), 1♂ (FCUR); 3♂ 1♀ (FCUR); (Carrasco), 1♀ (FCUR); (Sayago), 1♀ (FCUR); (El Prado), 1juv. (FCUR); Canelones, 2♀ 1juv. (FCUR); (Villa Argentina), 1♂ 1juv. (FCUR); (San José de Carrasco), 1♀ (IBSP); (Baños de Carrasco), 1♂ 1♀ (FCUR); (Ruta 8, Km 47, CNES), 1♀ 1juv. (FCUR); Tacuarembó, Puntas Arroyo Laureles, 1♀ (FCUR); (Rincón de la Vasoura), 2♀ (FCUR); Paysandú, Estancia Quebracho (bajo cortezas de *Eucalyptus*), 2♀ 1juv. (FCUR); Artigas, Arroyo Sepulturas, 1♀ (FCUR); Lavelleja, Arequita (Cerro Arequita, 34°17'S, 55°15'W), 7♀ 1juv. (IBSP); 3♀ 1juv. (MZSP).

Scytodes itapevi, sp. n. (Figs. 28–29, 35–39)

Type material: Male holotype from Itapevi, São Paulo, Brazil, 25 November 1991, F.A.R. de Souza, deposited in IBSP 10000; paratypes: 1♂ 1♀ from Mairiporã, São Paulo, Brazil, 26 February 1996, W. Wuster (IBSP 6756); 1♀ from Reserva Florestal Vale do Rio Doce, São Mateus, Espírito Santo, Brazil, 19–25 July 1997, A.D. Brescovit (IBSP 12796); 1♀ from Macaé de Cima, Nova Friburgo, Rio de Janeiro, Brazil, 30 August 1996, R.S. Bérnils (MZSP 15311).

Etymology: The specific name is a noun in apposition taken from the type locality.

Diagnosis: *Scytodes itapevi* is similar to *S. globula* but differs by the male palpal bulb having a pair of distal hyaline membranes (Figs. 36–37). The female has the foveae directed forwards and positioning ridges narrower and further apart (Fig. 38), and one large and one small seminal receptacle on each side (Fig. 39), instead of two small ones as in *S. globula*.

Description: Male (IBSP 10000): Carapace cream coloured with greyish brown pattern. Pedipalps yellow with brown transverse bands. Labium and endites cream. Sternum cream with triangular marks in front of each coxa. Legs yellow with transverse brown bands. Abdomen white with black pattern (Fig. 35). Total length 11.40. Carapace flattened, 3.24 long, 2.25 wide. Eye diameters: PME 0.21, ALE 0.34, PLE 0.31, lateral eyes on a tubercle. Chelicerae with subapical hyaline keel. Labium 0.45 long, 0.39 wide. Sternum 2.28 long, 1.71 wide. Legs long, measurements: I: femur 15.90/patella 1.50/tibia 16.35/metatarsus 23.40/tarsus 1.95/total 59.10. II: 10.95/1.35/10.05/12.90/1.80/37.05. III: 7.05/1.20/6.60/7.35/1.65/23.85. IV: 10.65/1.05/10.20/11.55/1.95/35.40. Palpal femur with long, distally narrowed stridulatory pick with a rounded, projecting socket (Fig. 28). Cymbium with a long, slender distal spine (Fig. 29). Bulb 1.08 long, narrow, distal area with single short, curved prong and two hyaline membranes (Fig. 36). Abdomen 2.70 long, 2.25 wide, rounded, covered with large feathery hairs.

Female (IBSP 6743): Coloration similar to male, but slightly lighter. Total length 9.00. Carapace slightly arched, 4.05 long, 3.45 wide. Eye diameters: PME 0.24, ALE 0.24, PLE 0.21, lateral eyes on a tubercle. Chelicerae with subapical hyaline keel. Labium 0.39 long, 0.51 wide. Sternum 2.25 long, 1.65 wide. Legs long, measurements: I: femur 6.90/patella 0.90/tibia 6.60/metatarsus 7.80/tarsus 1.35/total 23.55. II: 5.55/0.90/4.95/5.25/1.35/18.00. III: 3.75/0.90/2.85/3.60/1.35/12.45. IV: 6.00/0.90/4.95/5.37/1.50/18.72. Abdomen 4.80 long, 3.75 wide, as in male. Foveae separated from each other by half their width, positioning ridge semicircular and narrow (Fig. 38). Internal genitalia with stalks of small seminal receptacles very long and slightly curved (Fig. 39), and pair of large receptacles.

Variation: Five males: total length 6.45–8.40; carapace length 3.00–4.35; femur I length 10.20–14.25; bulb 0.90–1.15. Ten females: total length 8.10–10.05; carapace 3.15–4.95; femur I 4.80–8.10.

Natural history: There is a possibility that this species was introduced into Brazil but we were unable to find this species described from elsewhere in the literature. All specimens were collected inside houses.

Distribution: North and southeast of Brazil.

Material examined: BRAZIL: *Pará:* Tucuruí, Usina Hidrelétrica de Tucuruí, Rio Tocantins, 1♀ 1juv., 4 August 1984, Eq. IBSP (IBSP 19920); *Tocantins:* Palmas, Serra do Lageado, 2♂ 2♀, 18 October 1992, E.H. Buckup (MCN 18606); *Espirito Santo:* São Mateus, Reserva Florestal Vale do Rio Doce, 1♀, 5–12 January 1998, A.D. Brescovit, on external wall of refectory (IBSP 16598); *Minas Gerais:* Belo Horizonte (UFMG Ecological Station), 1♀, 4 February 1993 (IBSP 20104); 1♀, 26 April 1992 (IBSP 20106); 1♀, 20 May 1993 (IBSP

20105); all coll. H.R. Pimenta; (Campus UFMG), 1♂, 13 October 1995, A.J. Santos (IBSP 20103); *Rio de Janeiro:* Valença, Serra da Concorórdia, Pico Santo Antonio II, 1♀, 6 April 1996, Bérnils & Ribeiro (MZSP 15404); Nova Friburgo, Rio Bengalas, 1♀ 1juv., 21–23 August 1996, R.S. Bérnils, at night (MZSP 15268); Bocaina, Visconde de Mauá, 2♀ 1juv., 5 September 1998, A.D. Brescovit, in bathroom (IBSP 19919); *São Paulo:* Boracéia, 1♂, 20 October 1960, K. Lenko (MZSP 15039); São Paulo, 1♀, 14 February 1996, P. Forjaz (IBSP 6743); 1♂, 24 July 1995, R. Bertani (IBSP 6378); 1♂, 2 November 1977, A. Namnarschmidt (IBSP 19775); 1♀, 18 July 1977, M.S. Shigoki (IBSP 19768); Presidente Epitácio (Usina Hidrelétrica Sérgio Motta), 4♂ 12♀, Eq. IBSP (IBSP 21398); Primavera, 9♂ 29♀ 4juvs., A.D. Brescovit & F.S. Cunha (IBSP 20635); Urupês, 2♂ 2♀, 16 August 1968, Taddei (MZSP 15031); *Paraná:* Iguatemi, 1♂, 16 December 1989, A.M. Geahl (MCN 12292).

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