

THE FEMALES OF *ANELOSIMUS DUBIOSUS* AND *ANELOSIMUS JABAQUARA* (ARANEAE, THERIDIIDAE)

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ABSTRACT. The females of *Anelosimus dubiosus* Keyserling 1891 and *Anelosimus jabaquara* Levi 1956 are described and illustrated based on specimens collected in Jundiá, São Paulo, Brazil.

Keyserling (1891) described *Anelosimus dubiosus* based on a male collected in Nova Friburgo, Rio de Janeiro, Brazil. Levi (1956) described *Anelosimus jabaquara* also based on a male. This latter species, however, was considered a junior synonym of *A. dubiosus* by the same author in 1963 (Levi 1963). Levi & Smith (1982) revalidated *A. jabaquara*, but until now the two species were known only from males.

Both species build communal webs of similar size and architecture and are sympatric in some places, as in Serra do Japi, a forest reserve close to Jundiá, São Paulo, Brazil. During studies on the ecology of social spiders in this area, we encountered these and three other species of the genus, *A. jucundus* (O.P.-Cambridge 1896), *A. ethicus* (Keyserling 1884) and *A. studiosus* (Hentz 1850).

Adult males of *A. jabaquara* and *A. dubiosus* are found in colonies only during the reproductive period. During the rest of the year the identification of the species is based on the females, which are described in this paper.

METHODS

The format of the description follows Levi (1963). Complete measurements were taken from one specimen of each species, and additional measurements of total length, carapace length and width were taken from six specimens of each species. All measurements are in mm. The epigyna were observed and drawn using an Olympus SZH10 dissecting microscope. For observation of the internal genitalia, the epigyna were immersed and examined in clove oil and drawings were made using an Olympus Bx50 microscope with a camera lucida attached. Coloration was de-

scribed using specimens that had been fixed for two days. The material is deposited in the collection of Instituto Butantan, São Paulo (IBSP, Curator: A.D. Brescovit).

Anelosimus dubiosus (Keyserling 1891)
(Figs. 1–3)

Theridium dubiosum Keyserling 1891: 187, pl. 6, fig. 133 (Male holotype from Nova Friburgo, Rio de Janeiro, Brazil, in British Museum of Natural History, not examined)

Anelosimus dubiosus: Levi 1963: 34; Levi & Smith 1982: 277, fig. 4

Diagnosis.—*Anelosimus dubiosus* males can be distinguished from all other species of *Anelosimus*, except *A. jabaquara*, by the presence of a half-moon shaped tegular process. This species differs from *A. jabaquara* by the long and filamentous embolus (Levi & Smith 1982, fig. 4). The females are similar to *A. jucundus* and *A. jabaquara* in coloration and shape of the epigynum, but can be separated from these and other species of the genus by the lateral loops of copulatory ducts (Fig. 3).

Description.—*Female*: Carapace red with black rings around the eyes, clypeus and chelicerae orange, sternum and labium red, endites orange. Legs light brown with distal ends of segments darker, tibiae and femora with dark rings in the middle. Abdomen light brown with a dorsal median band with black spots (Fig. 1) ending with four transverse red strips, venter with a central dark band with a black ring around spinnerets. Posterior median eyes little more than their diameter apart, slightly less from laterals. Epigynum a lightly sclerotized, folded plate, with a small posterior projection (Fig. 2). Total length 4.29, carapace 1.65 long and 1.12 wide. First femur

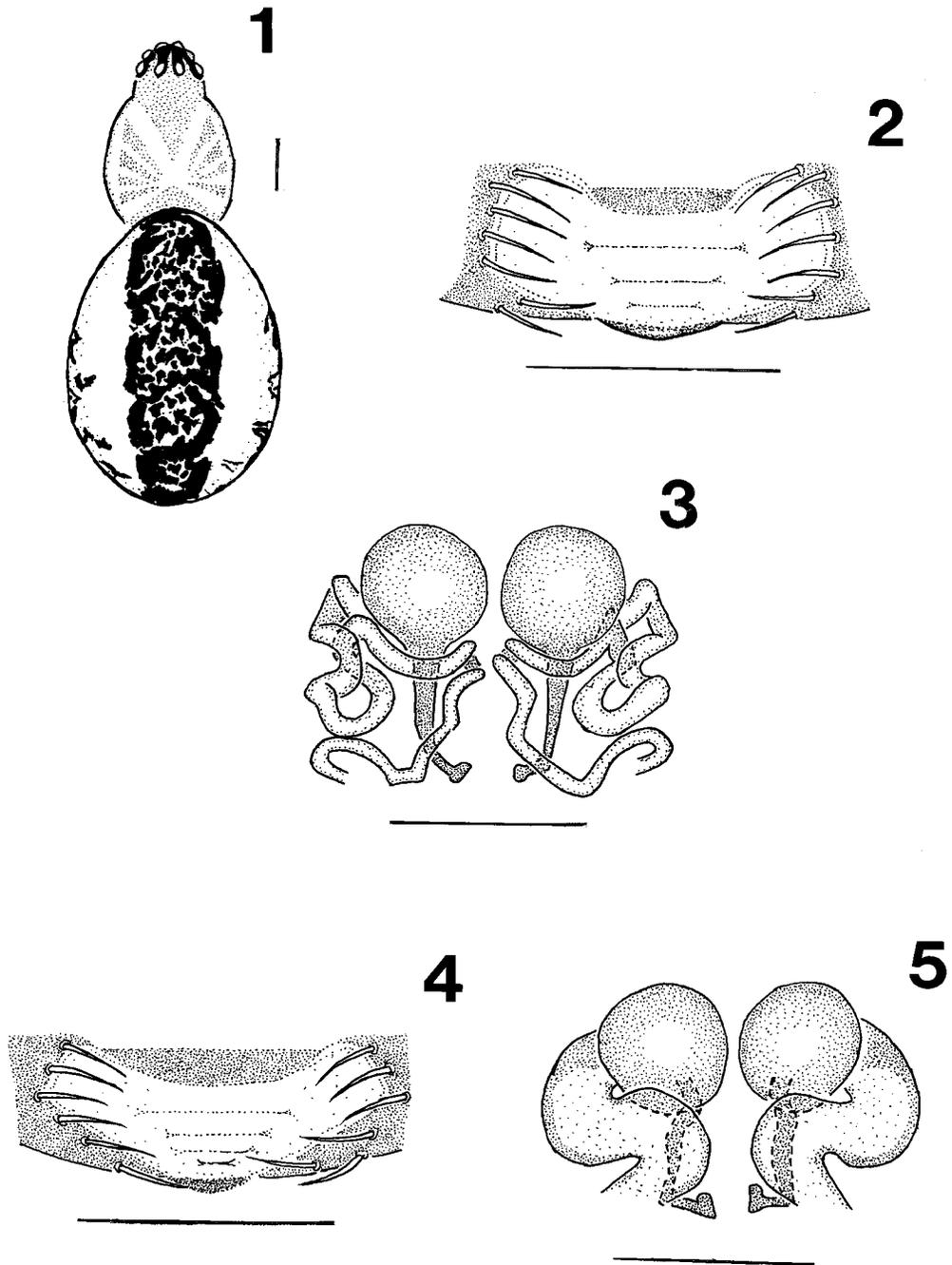


Figure 1–5.—*Anelosimus dubiosus* and *Anelosimus jabaquara*. 1. *A. dubiosus*, dorsal view of carapace and abdomen; 2. *A. dubiosus*, epigynum, ventral view; 3. *A. dubiosus*, internal genitalia, dorsal view; 4. *Anelosimus jabaquara*, epigynum, ventral view; 5. *A. jabaquara*, internal genitalia, dorsal view. Scales: Figs. 1, 2, 4 = 0.5 mm; Figs 3, 5 = 0.25 mm.

1.79, patella and tibia 2.04, metatarsus 1.34, tarsus 0.75. Second patella and tibia 1.42, third 1.2, fourth 1.7.

Variation: Endite apex, distal ends of legs segments, lung plates and base of chelicerae may be red. Dorsal median band and sternum are sometimes totally black, mainly in males. Spermathecae occasionally visible externally. Measurements (mean and standard deviation, $n = 7$): Total length 4.27 ± 0.36 , carapace length 1.37 ± 0.14 , carapace width 1.22 ± 0.08 .

Material examined.—**BRAZIL:** *São Paulo*, Jundiá, Serra do Japi, 13–16 November 1997 (M.O. Gonzaga), 21 ♀ 1 ♂ (IBSP 14403).

Anelosimus jabaquara Levi
(Figs. 4–5)

Anelosimus jabaquara Levi 1956: 414, fig. 18 (Male holotype from Jabaquara, São Paulo, São Paulo, Brazil (H. Sick col.), in American Museum of Natural History, not examined); Levi & Smith 1982: 277 (revalidated).

Anelosimus dubiosus (Keyserling): Levi 1963: 34.

Diagnosis.—Males of *A. jabaquara* can be distinguished from *A. dubiosus* by the short embolus and smaller half-moon tegular process (Levi 1963, fig. 18). The coloration and epigynum of females are similar to that of *A. dubiosus* and *A. jucundus*, from which it can be separated by the structure of the internal genitalia. Like *A. domingo* Levi 1963, this species has broad copulatory ducts, but differs by their lateral insertion on the spermathecae and their trajectory, which covers the fertilization ducts almost completely (Fig. 5).

Description.—*Female:* Coloration as in *A. dubiosus*. Posterior median eyes little more than their diameter apart, slightly less from

laterals. Epigynum a lightly sclerotized, folded plate, with a posterior small projection (Fig. 4). Total length 4.29, carapace 1.79 long and 1.26 wide. First femur 2.24, patella and tibia 2.57, metatarsus 1.9, tarsus 0.89. Second patella and tibia 1.73, third 1.48, fourth 1.9.

Variation: Coloration varies as in *A. dubiosus*. Spermathecae occasionally visible externally. Measurements (mean and standard deviation, $n = 7$): Total length 4.1 ± 0.18 , carapace length 1.62 ± 0.14 , carapace width 1.2 ± 0.07 .

Material examined.—**BRAZIL:** *São Paulo*, Jundiá, Serra do Japi, 13–16 November 1997 (M.O. Gonzaga), 18 ♀ 4 ♂, 2 juv. (IBSP 14404).

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