



Description of the female of *Aysha yacupoi* Brescovit 1992 (Araneae: Anyphaenidae)

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Abstract

The female of *Aysha yacupoi* Brescovit, 1992 is described and illustrated for the first time. Males and female specimens were observed together in the same plants. Some data on natural history are presented.

Key words: Argentina, Atlantic rainforest, ghost spider, spider taxonomy

Introduction

The spider genus *Aysha* Keyserling, 1891 comprises 40 endemic species to South America among which 23 species found only in Brazil, and one species is known from Panamá (Platnick 2012). *Aysha* is easy to separate from another anyphaenids by the greatly advanced placement of the tracheal spiracle, located just behind the epigastric furrow (Platnick 1974). There are other diagnostic characters by Brescovit (1992): anterior median eyes smaller than the rest, male palpus with an annular base of embolus with or without terminal apophysis, tibial apophyses complex, female epigynum with plates on the anterior edge, and spermathecae connected to each side through a long duct with small seminal receptacles.

In the Brescovit's Anyphaeninae revision (Brescovit 1997) the genus *Aysha* was divided into the following species groups: *prospera*, *robusta* and *diversicolor*, which were divided further into subgroups. *Aysha yacupoi* belongs to *prospera* group and *tertulia* subgroup with three other species: *A. tertulia*, *A. bonaldoi* and *A. chicama*. The males of *tertulia*-group have median apophysis with spatulate apical tip and reduced lamella of the tibia, a short dorsal tibial apophysis, and bifid basal tibial process (Brescovit, 1997: figs 85-87). However only *A. tertulia* is known by females, which have epigynal plates adjacent to guide plates, atrium triangular shaped, and ducts of seminal receptacles with a basal loop (Brescovit 1992: figs 74-75).

As a result of an ecological study in Argentinean Atlantic rainforest, female specimens were collected with *A. yacupoi* males at the same time (tree/site), suggesting those specimens are the hitherto unknown matching female, allowing us to describe the female of *A. yacupoi* for the first time.

Methods

Female specimens were collected using Beating method on vegetation in Urugua-í Wildlife Reserve, Misiones Province, Argentina (S25.974345°, W54.116330°). It belongs to the Paranaense phytogeographic region (Cabrera & Willink 1980), comprising subtropical rainforests. Morphological terms and format of description follow in general Brescovit (1992, 1997). Female genitalia were examined after digestion in a hot 10–20% KOH solution.

Temporary preparations were analyzed using a compound microscope. Photographs of the preserved specimens were taken with a Leica® DFC295 digital camera attached to a Leica® M205A stereomicroscope, and focal planes composed with LAS v.3.7 software of Leica®. All measurements are given in millimeters. Abbreviations are the standard as follows Brescovit (1992). Specimens examined were deposited at the arachnological collection of Museo Argentino de Ciencias Naturales “Bernardino Rivadavia” (MACN-Ar, C. Scioscia & M. Ramírez).

Taxonomy

Anyphaenidae Bertkau, 1878

Aysha Keyserling, 1891

Aysha yacupoi Brescovit, 1992

(Figs. 1–2)

Aysha yacupoi Brescovit, 1992: 57, f. 85–87, 174 (Holotype male from Yacú-poi, Misiones, Argentina, October 1954, Orfila coll., MACN-Ar 8739, examined); Platnick, 2012.

Material examined. 2 females and 1 male (MACN-Ar 29395; temporary preparation GDR-0314), Uruguá Wildlife Reserve (S25.974345°, W54.116330°; 261m.a.s.l.), General Manuel Belgrano, Misiones, ARGENTINA, 19-20 September 2009, G.D. Rubio coll.; 3 males (MACN-Ar 15863), Iguazú National Park (S25.684999°, W54.445890°; 188m.a.s.l.), Iguazú, Misiones, ARGENTINA, 8-15 November 1995, M.J. Ramírez coll.

Diagnosis. The female of *A. yacupoi* (Figs. 1–2) can be recognized by the combination of having the epigynal plates contiguous to the guide plates (Figs 1e, f; 2a) plus the atrium wider than long (Figs. 1e, f; 2a–c); which resembles to *A. tertulia* (Brescovit 1992, figs 74–75) or *A. taim* (Brescovit 1992, fig 128), respectively.

Differential diagnosis. *Aysha yacupoi* differs from *A. tertulia* in that the anterior edge of atrium is procurved (Fig. 1e) or slightly folded back (Fig. 1f), not recurved; and, the atrium is not triangular as in that species. Moreover can be distinguished from *A. taim* by having atrium and guide plates different shaped, which leads to a pair of almost parallel copulatory opening; besides the plates are further apart than in *A. taim* (Fig. 1e, f).

Description. Female (MACN-Ar 29395; GDR-0314): Total length 5.74; carapace length 2.80, width 2.03. Chelicerae length 1.07. Eye sizes and interdistances: anterior median eye (AME) 0.09, anterior lateral eye (ALE) 0.14, posterior median eye (PME) 0.12, posterior lateral eye (PLE) 0.14, AME-ALE 0.05, PME-PLE 0.14, ALE-PLE 0.09, AME-AME 0.07, ALE-ALE 0.3, PME-PME 0.14, PLE-PLE 0.52. Abdomen length 2.94, width 2.03. Spiracle–epigastrium 0.50, spiracle–spinnerets 1.39. Legs length: Leg **I**, femur 2.38, patella 1.07, tibia 2.38, metatarsus 1.90, tarsus 1.19; leg **II**, femur 1.95, patella 1.02, tibia 1.78, metatarsus 1.55, tarsus 0.83; leg **III**, femur 1.66, patella 0.86, tibia 1.28, metatarsus 1.43, tarsus 0.66; and leg **IV**, femur 2.43, patella 1.12, tibia 2.09, metatarsus 2.40, tarsus 0.95. Leg formula IV/I/II/III. Color in ethanol (Fig. 1): carapace pale orange, with thick brown stripes on both sides of the fovea; chelicerae, labium and endites pale orange; sternum yellow; legs light brown-yellowish. Abdomen pale orange, with brown spots dorsally and in posterior sides, ventrally pale yellow with some dispersed brown spots. Epigyne (Fig. 1e, f; 2a): large epigynal plates contiguous to the guide plates; atrium wider than long. Vulva (Fig. 2b–c, e): small seminal receptacles at level of anterior edge of atrium, connected to a long and slender duct with a loop.

Variation. Two females: Total length 5.53–5.74; carapace length 2.73–2.80, width 2.03–2.17; Abdomen width 1.96–2.03. The anterior edge of atrium can be procurved or slightly folded back (Fig. 1e, f).

Natural history. Most *A. yacupoi* specimens were found in areas of open canopy rainforest, where are an invasive growth of a native bamboo species (*Chusquea ramosissima* Lindm.). This bamboo can dominate gaps and open forests in the region, particularly after human disturbance (Montti *et al.* 2011). This suggests certain adaptation of the *A. yacupoi* to the anthropic changes in the forest. Adults were found in early spring. The specimens from Iguazú National Park were found in grasses near the waterfalls.

Distribution. Southeastern Brazil (state of Paraná), and Northeastern Argentina (Misiones Province).

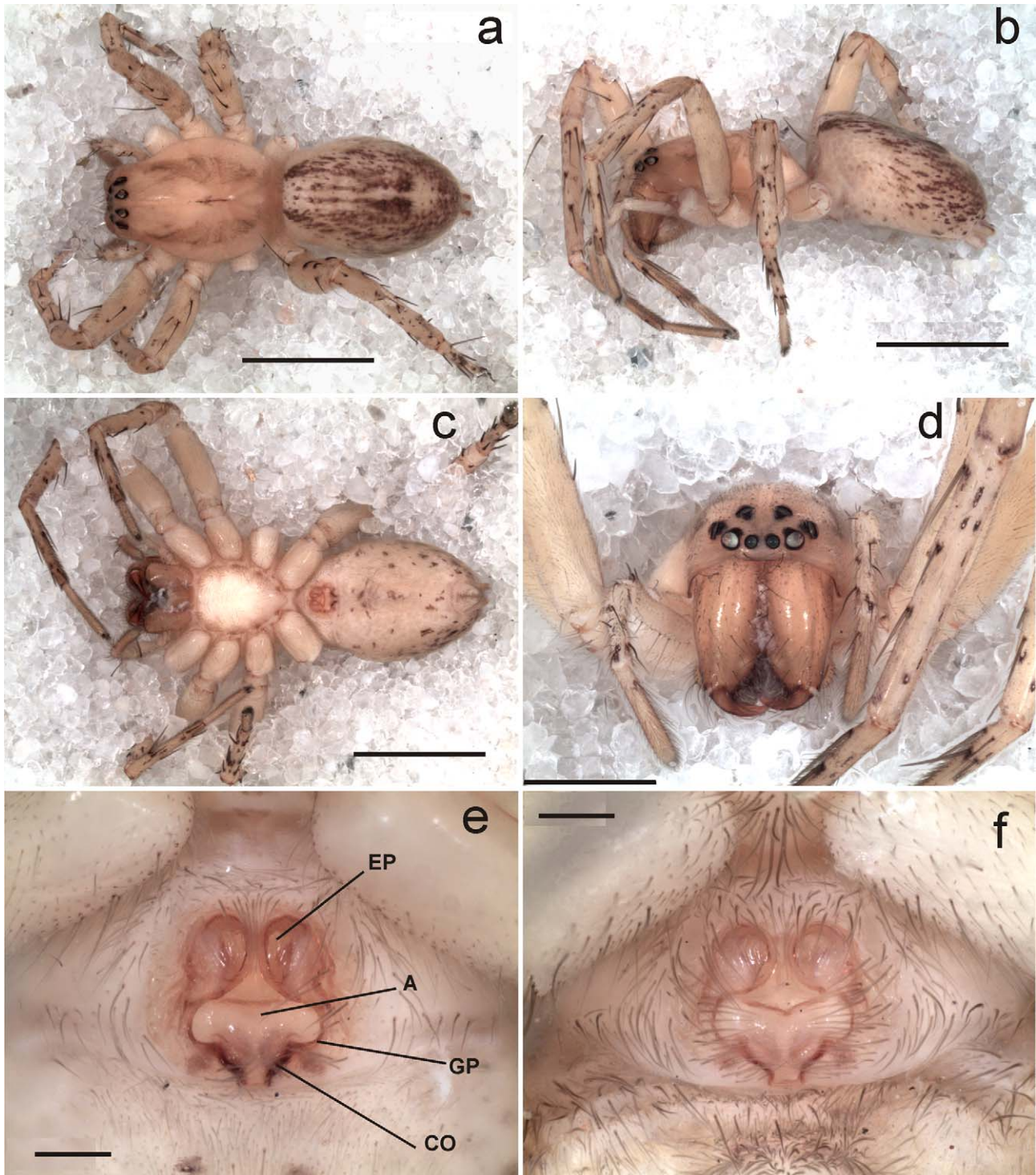


FIGURE 1. *Aysha yacupoi* Brescovit 1992. **a–d**, female habitus (a: dorsal, b: lateral, c: ventral, d: frontal); **e–f**, epigyne ventral, variability of two females from same site (e: specimen 1, f: specimen 2). (A= atrium; CO = copulatory opening; EP = epigynal plate; GP = guide plate). Scale bars: a–c (2 mm); d (1 mm); e, f (0.2 mm)

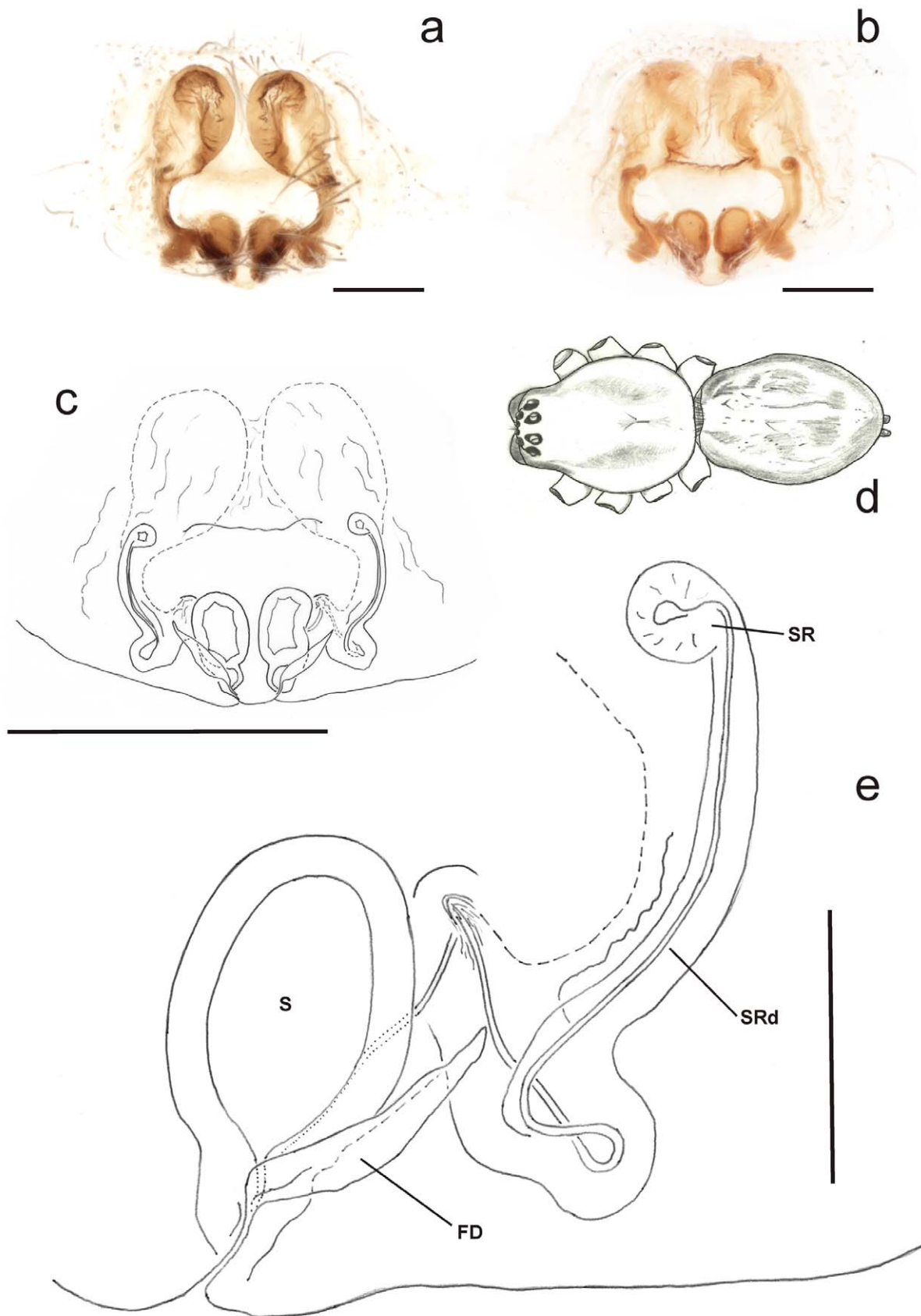


FIGURE 2. *Aysha yacupoi* Brescovit 1992. **a–c, e**, female genitalia (**a**: digested epigyne ventral, **b**: digested vulva, **c**: digested vulva drawing, **e**: details of the vulva); **d**, female habitus dorsal drawing. (FD = fertilization duct; S = spermathecae; SR = seminal receptacle; SRd = duct of SR). Scale bars: **a, b** (0.2 mm); **c** (0.5 mm); **e** (0.1 mm).

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