

A new species of *Antillorena* from Colombia (Araneae: Zodariidae: Lachesaninae)

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Received 9 May 2018

Accepted 17 October 2018

Published 29 November 2018

DOI 10.1590/1678-4766e2018039

ABSTRACT. The genus *Antillorena* Jocqué, 1991 is reported in Colombia for the first time and *A. sanjacintensis* sp. nov. is described for the north of the country. This new species is diagnosed with the type species *Antillorena polli* (Simon, 1887). A taxonomic key and a map with the distribution of all species of the genus are included.

KEYWORDS. Neotropical region, spiders, key.

RESUMEN. Una nueva especie de *Antillorena* de Colombia (Araneae: Zodariidae: Lachesaninae). El género *Antillorena* Jocqué, 1991 es reportado en Colombia por primera vez y *A. sanjacintensis* sp. nov. es descrita para el norte del país. Esta nueva especie se diagnostica con la especie tipo *Antillorena polli* (Simon, 1887). Se incluye una clave taxonómica y un mapa con la distribución de todas las especies del género.

PALABRAS CLAVE. Región Neotropical, arañas, clave.

Antillorena Jocqué 1991 is a genus with Neotropical distribution, which currently includes three valid species from the Lesser Antilles and Brazil (WORLD SPIDER CATALOG, 2018). According to GERTSCH (1961) the species of this genus have cursorial habits and are characterized by building burrows lined with silk and closed with a wafer-type trapdoor. The first species of the genus was described for the Lesser Antilles under the name *Storena pollii* (Simon) (sic) in HASSELT (1887) (current spelling *Storena polli*; see WORLD SPIDER CATALOG, 2018). However, later JOCQUÉ (1991) considered that this species was misplaced, proposing *Antillorena* Jocqué to include *S. polli*. Recently, BRESCOVIT & RUIZ (2011) described two new species of the genus, *A. gaia* and *A. patapata*, expanding distribution to South America. *Antillorena* is distinguished from other members of the family by the long and coiled embolus and conspicuous proximal tegular apophysis in the male palp, as well as, the very long copulatory ducts, with more than three turns surrounding the elongated spermathecae in the female epigynum (JOCQUÉ 1991; BRESCOVIT & RUIZ 2011).

The aim of this study is to describe a new species from Bolívar and Atlántico Departments, northern Colombia, which represents the first record of the *Antillorena* in the country. In addition, an identification key and a distribution

map of all currently known species in the genus are provided, along with supplementary documentation of *A. polli*.

MATERIAL AND METHODS

Specimens were preserved in 96% ethanol. Male palps were detached from the body and illustrated in ventral and retrolateral views. Female epigynum was dissected and immersed in KOH 10%, in order to clarify soft tissue, to study internal structures. Measurements are expressed in millimeters and were preferentially taken in the left side of specimens. The photos were taken with a Leica MC170 HD camera attached to a Leica M125 stereoscope. Terminology and format of descriptions follow JOCQUÉ (1991). Spine notation follows PETRUNKEVITCH (1925). Abbreviations: d, dorsal; p, prolateral; r, retrolateral; v, ventral; ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye; MOQ, median ocular quadrangle. The material examined was deposited in the Arachnological Collection of the Instituto de Ciencias Naturales, Universidad Nacional de Colombia, Bogotá, Colombia (ICN-Ar, E. Flórez) and in the Instituto Butantan, São Paulo, Brazil (IBSP, A. D. Brescovit).

One male specimen of *A. polli* (R. Jocqué, 1991 det.), from Hato, 12°11'20"N 68°57'35"W, Willsmtad, Curaçao, 20-23 Feb. 1960, B. Malkin col., deposited in the collection of the American Museum of Natural History, number 00326278, was used for comparison.

***Antillorena sanjacintensis* sp. nov.**

(Figs 1-11, 14-17)

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Type material. Male holotype from Vereda La Flecha, 9°51'26.61"N, 75°10'48.46"W, 470-520 m, San Jacinto, Bolívar, Colombia, IX. 2014, L. Quijano col. (ICN-Ar 8229). Paratypes: 3♂ from the same locality of holotype (2♂ ICN-Ar 8231; ♂ IBSP 168379) and ♀ (ICN-Ar8230) and 3♂ (2♂ ICN-Ar 8232; ♂ IBSP 168740) from Reserva Campesina La Montaña, 10°46'02.6"N, 75°02'34"W, 160-250 m, Usiacurí, Atlántico, Colombia, III.2016, L. Martínez col.

Other material examined. One subadult male, two subadult female and one juvenile from the same locality of holotype (ICN-Ar 8231).

Etymology. The specific name refer to toponym San Jacinto, one of the municipality where the type specimens were collected.

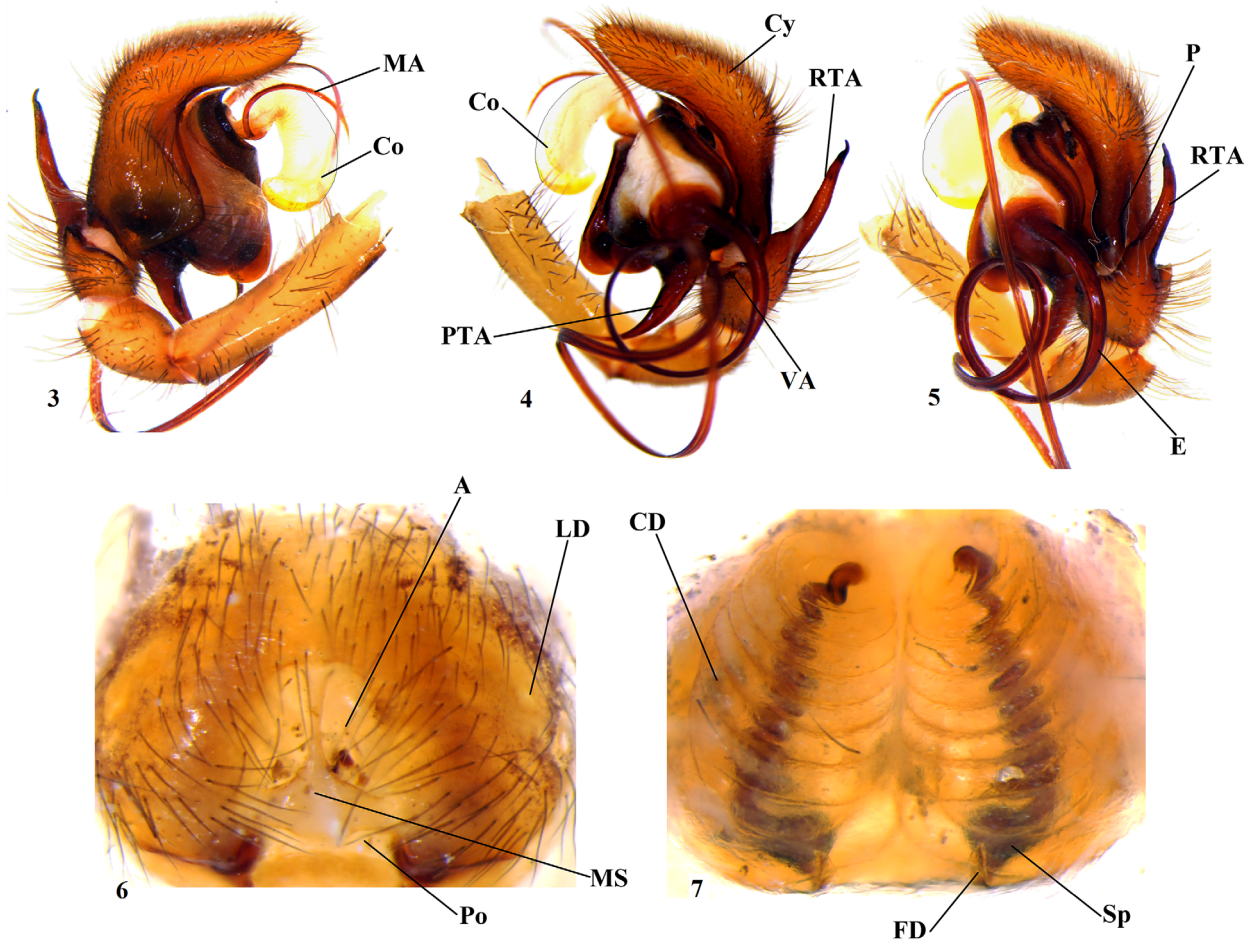
Diagnosis. Males of *A. sanjacintensis* sp. nov. are similar to those of *A. polli* (see Figs 12,13; JOCQUÉ, 1991:35,

figs 48-51, 94) by the simple ventral tibial apophysis, the origin and shape of the cymbium basal projection and by the size, direction and shape of the median apophysis. However, can be distinguished by having the retrolateral tibial apophysis with the distal area shorter and acuminate at the tip, narrower and longer proximal tegular apophysis and by the shorter and bent conductor than in *A. polli* (Figs 3-5; 8,9; 14-17). The females resemble those of the *A. polli* by the long folding of the ducts with more than seven turns, but differs by the pore of the atrium at the posterior border of the median septum (Figs 6, 10) and by presenting eight turns of the ducts (Figs 7, 11).

Description. Male (holotype, ICN-Ar 8229). Total length 7.46. Carapace 3.92 long, 2.65 wide. Carapace pear-shaped, dark brown, highest at the fovea region and clearer. Labium triangular, brown. Endites orange-brown, with white apex. Chelicerae and sternum brown. Legs orange-brown, except the femora with green-brown color. Abdomen dark grey dorsally with a pattern of white spots on the median area arriving just before of the spinnerets, ventrally white with black lines in the lateral and medial areas. Spinnerets orange (Fig. 1). Eye sizes and interdistances: PLE>PME>ALE>AME; AME: 0.114, ALE: 0.125, PME: 0.130, PLE: 0.134, AME-AME: 0.04, AME-ALE: 0.10, PME-PME: 0.07, PME-PLE: 0.18, ALE-PLE: 0.05, MOQ: 0.27 anterior width, 0.33 posterior width, 0.30 long. Leg formula: 4123. Leg measurements: I femur 2.46/ patella 1.29/ tibia 1.97/ metatarsus 1.88/ tarsus 0.90/ total 8.52; II 2.24/ 1.26/ 1.57/ 1.72/ 0.92/ 7.74; III 1.97/ 1.09/ 0.92/ 1.79/ 0.84/



Figs 1, 2. *Antillorena sanjacintensis* sp. nov.: 1, male (holotype, ICN-Ar 8229), dorsal view; 2, female (paratype, ICN-Ar8230), dorsal view. Scale: 2 mm.



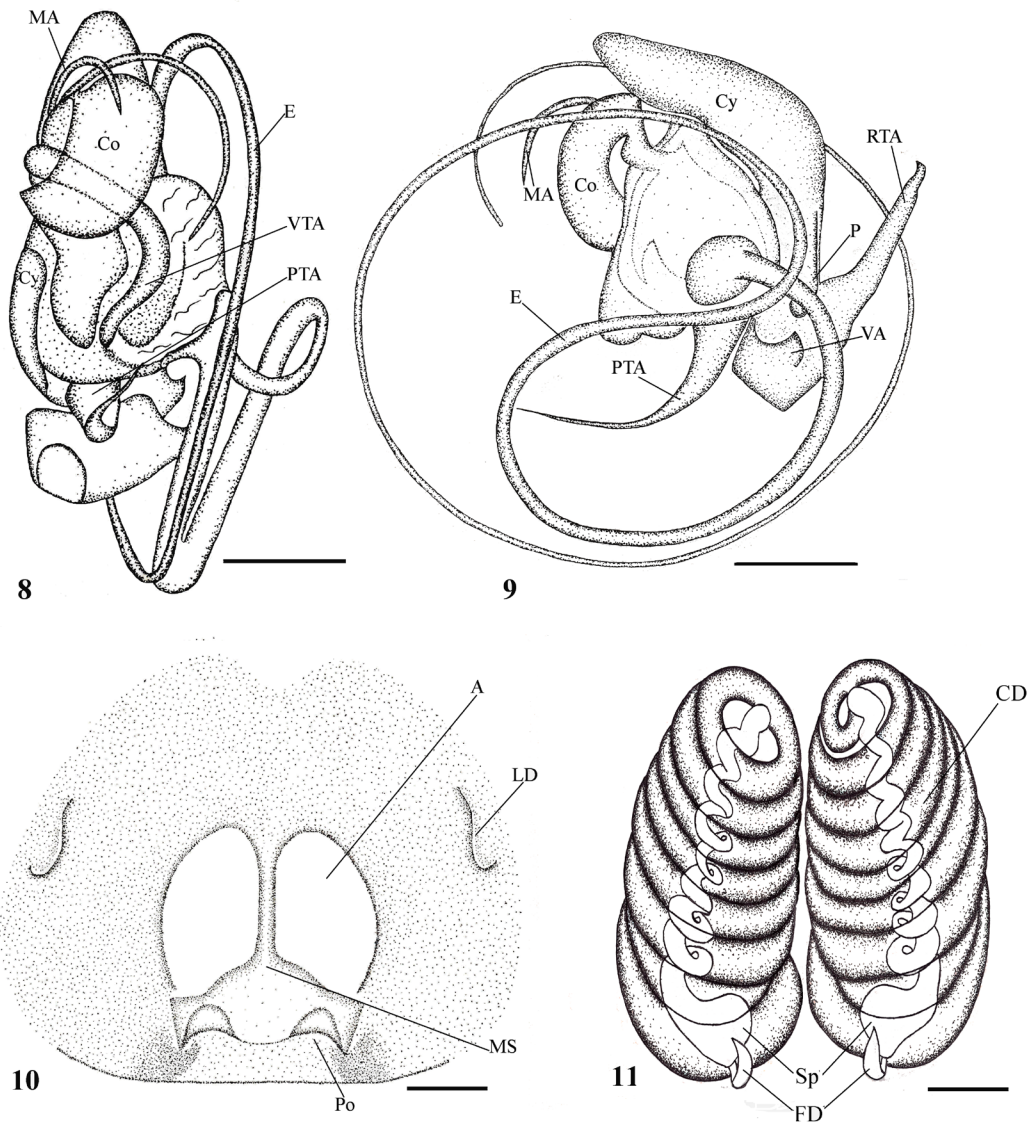
Figs 3-7. *Antillorena sanjacintensis* sp. nov., male palp (holotype, ICN-Ar 8229): 3, prolateral view; 4, retrolateral view, 5, retrodorsal view. Female (paratype, ICN-Ar 8230): 6, Epigynum, ventral view; 7, vulva, dorsal view (A, atrium; Co, conductor; Cy, cymbium; E, embolus; FD, fertilization ducts; LD, lateral depression; MA, median apophysis; MS, median septum; P, cymbial retrolateral projection; Po, pocket; PTA, proximal tegular apophysis; RTA, retrolateral tibial apophysis; VA, ventral tibial apophysis. Scale: palp (0.5 mm); epigynum and vulva (0.2 mm).

6.64; IV 2.35/ 1.25/ 1.55/ 2.64/ 0.95/ 8.76. Leg spination: III patella d0-0-1, p0-1-0, r0-1-1, v0; tibia d1-1-0, p0-1-1, r1-1-1, v2-2-2; metatarsus d1-2-2, p0-0-1, r1-1-1, v2-2-2; tarsus d0, p0, r0, v0-1-2. IV patella d0-0-1, p0-1-0, r0-1-1, v0; tibia d1-1-0, p0-1-1, r1-1-1, v2-2-2; metatarsus d1-2-2, p0-0-1, r1-1-1, v2-2-2; tarsus r0-0-1. Palp: retrolateral tibial apophysis long with a curved tip. Cymbium with a retrolatero-basal projection. Tegulum with a long and curved proximal tegular apophysis and a ventral tegular apophysis; median apophysis long and curved, with base covered by tegulum; hyaline and voluminous apical conductor, embolus S-shaped extremely long, originating from retrolateral side (Figs 3-5; 8, 9; 14-17).

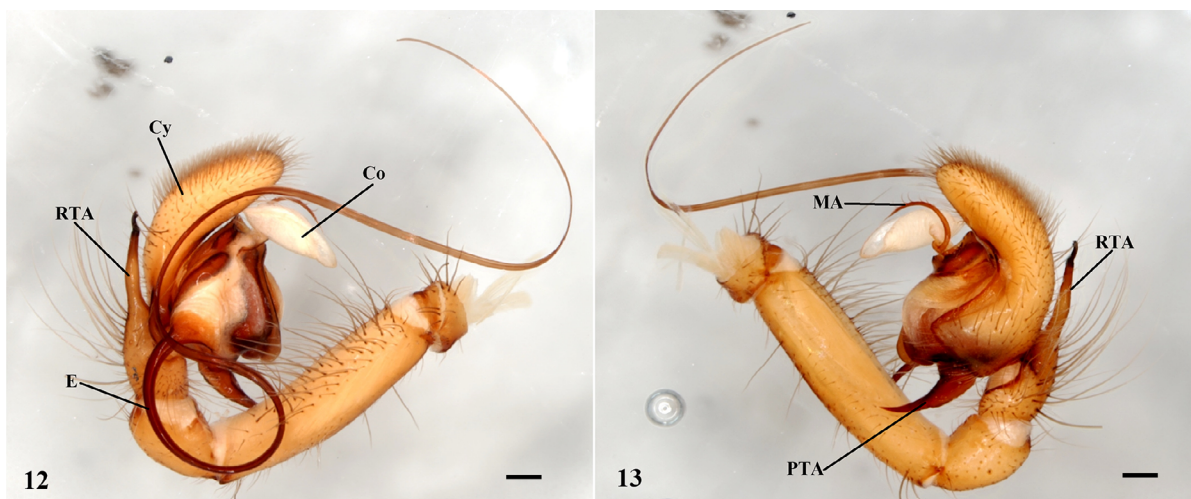
Female (Paratype, ICN-Ar 8230). Total length 8.36. Carapace 3.53 long, 2.16 wide. Carapace pear-shaped, brown, less intense than in the male, highest at the fovea region. Labium triangular, brown. Endites light brown with white apex. Chelicerae and sternum brown. Legs and abdomen as in male (Fig. 2). Eye sizes and interdistances: PLE>PME>ALE>AME; AME: 0.107, ALE: 0.123, PME:

0.127, PLE: 0.135, AME-AME: 0.028, AME-ALE: 0.109, PME-PME: 0.059, PME-PLE: 0.152, ALE-PLE: 0.042, MOQ: 0.226 anterior width, 0.309 posterior width, 0.292 long. Leg formula: 4123. Leg measurements: I femur 1.75/ patella 1.11/ tibia 1.53/ metatarsus 1.23/ tarsus 0.81/ total 6.45; II 1.81/ 0.97/ 1.26/ 1.29/ 0.82/ total 6.18; III 1.59/ 0.82/ 0.89/ 1.35/ 0.79/ total 5.45; IV 2.01/ 0.97/ 1.38/ 1.91/ 0.87/ total 7.16. Leg spination: I metatarsus d0, p0, r0, v2-2-2 II tibia d0, p0, r0, v0-2-0; metatarsus d0, p0, r0, v2-2-2, III patella d0-0-1, p0-1-0, r1-1-0; v0; tibia d1-1-0, p0-1-1, r1-1-1, v2-1-2; metatarsus d2-2-2, p0-0-1, r0-0-1, v2-1-2; tarsus d0, p0, r0-1-0, v0-1-2; IV patella d0-0-1, p0-1-0, r1-1-0, v0; tibia d1-1-0, p0-1-1, r1-1-1, v2-2-2; metatarsus d2-2-2, p0-1-0, r0-1-1, v2-2-2; tarsus d0, p0-1-0, r0, v0-1-2. Epigynum with shallow lateral depressions, atrium oval, median septum triangular with two large pockets (Figs 6, 10); internally, long copulatory ducts, basal rounded spermathecae and long fertilization ducts in the base of spermathecae (Figs 7, 11).

Variation. Length (7 males): total: 6.46-7.98; carapace: 3.48-4.15; femur I: 2.53-2.93.



Figs 8-11. *Antillorena sanjacintensis* sp. nov., male palp (holotype, ICN-Ar 8229): 8, ventral view; 9, retrolateral view. Female (Paratype, ICN-Ar 8230): 10, Epyginum, ventral view; 11, vulva, dorsal view (A, atrium; Co, conductor; Cy, cymbium; E, embolus; FD, fertilization ducts; LD, lateral depression; MA, median apophysis; MS, median septum; P, cymbial retrolateral projection; Po, pocket; PTA, proximal tegular apophysis; RTA, retrolateral tibial apophysis; VA, ventral tibial apophysis, VTA, ventral tegular apophysis. Scale: palp (0.5 mm); epyginum and vulva (0.2 mm).



Figs 12, 13. *Antillorena polli* (Simon, 1887), male palp (AMNH 00326278): 6, retrolateral view; 7, prolateral view (Co, conductor; Cy, cymbium; E, embolus; MA, median apophysis; PTA, proximal tegular apophysis; RTA, retrolateral tibial apophysis). Scale: palp (0.5mm).



Figs 14-17. *Antillorena sanjacintensis* sp. nov., male palp (ICN-Ar 8231): 14, prolateral view; 15, retrolateral view; 16, median apophysis and conductor, prolateral view; 17, proximal tegular apophysis, retrolateral view. Scales: 14, 15 (0.5mm), 16, 17 (0.3mm).



Figs 18, 19. Landscape where *Antillorena sanjacintensis* sp. nov. was found in Colombia: 18, Reserva Campesina La Montaña (Usiacurí); 19, Vereda La Flecha (Bolívar).

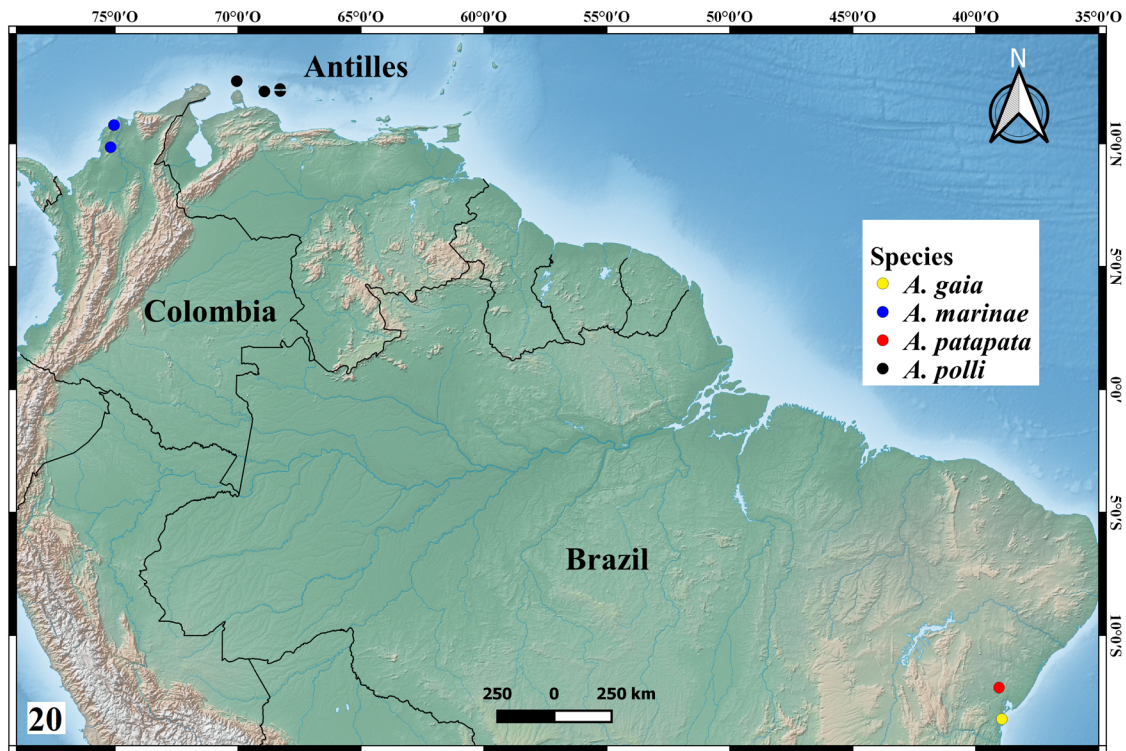


Fig. 20. Distribution records of the genus *Antillorena* in South America and the Lesser Antilles.

Natural history. The specimens of *A. sanjacintensis* sp. nov. were found in leaf litter, open trail and near of low grasslands, in a landscape with dry tropical forest in the northern from Colombia (Figs 18, 19).

Distribution. Atlántico and Bolívar departments, Colombia (Fig. 20).

Key to species of *Antillorena*

- 1. Female..... 2
Male..... 5
- 2. Epigynal plate with broad median septum and globose pockets, internally, copulatory ducts with three coils (BRESCOVIT & RUIZ, 2011: fig. 9) *A. patapata*
Epigynal plate with triangular median septum and elongate pockets, internally, copulatory ducts with more than three coils (Figs 10,11; BRESCOVIT & RUIZ, 2011:fig. 15) 3
- 3. Copulatory ducts with four coils (BRESCOVIT & RUIZ, 2011:fig. 16)*A. gaia*
Copulatory ducts with more than five coils (Fig. 11) 4
- 4. Copulatory ducts with eight coils, oval atrium, medium septum with large pockets (Fig. 11)
..... *sanjacintensis* sp. nov.
Copulatory ducts with seven coils, lung-shaped atrium, medium septum with straight pockets (JOCQUÉ, 1991:fig. 51) *A. polli*
- 5. RTA short and straight, with less than half the length of the cymbium (BRESCOVIT & RUIZ, 2011:fig. 8)
..... *A. patapata*

- RTA elongate, with almost half the length of the cymbium (Figs 3-5, 9, 14, 15; BRESCOVIT & RUIZ, 2011:fig. 14) 6
- 6. RTA with bifid distal tip, short PTA with enlarged base (JOCQUÉ, 1991:fig. 48) *A. polli*
RTA with acuminate distal tip, long PTA with straight base (Figs 3-5; 9; 14, 15; BRESCOVIT & RUIZ, 2011:fig. 14) 7
- 7. Embolus long, almost three times the length of the palp, cymbium without dorsal depression, conductor with conspicuous base and not covered by the tegulum, sinuous RTA (Figs 3-5, 8,9, 14, 15) *A. sanjacintensis* sp. nov.
Embolus short, almost two times the length of the palp; cymbium with dorsal depression, conductor without conspicuous base and covered by the tegulum, straight RTA (BRESCOVIT & RUIZ, 2011:figs 13, 14) *A. gaia*

Acknowledgements. We are grateful to Franklyn Cala, A. B. Bonaldo, D. Candiani and Eduardo Flórez for comments and suggestions on an early version of this manuscript; to Leonel Martínez for sharing the pictures obtained through scanning electron microscopy, to the Universidad del Atlántico and the Instituto de Ciencias Naturales of the Universidad Nacional de Colombia for their logistics support. Finally, to L. Prendini and L. Sorkin (AMNH) by the loan of specimens of *A. polli* and V. Passanha by the pictures of the male palp. This study was supported by CNPq-301776/2004-0 grant to ADB.

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