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ORIGINAL ARTICLE

Description of a new species of the genus *Neotrops* from Colombia (Araneae: Oonopidae)

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A new species of the genus *Neotrops* (Araneae: Oonopidae) from Colombia, *N. ramirezi*, is described on the basis of male and female specimens collected in Yotoco Natural Reserve (Valle de Cauca). It is the third species of the genus reported for the country.

Una nueva especie del género *Neotrops* (Araneae: Oonopidae) de Colombia, *N. ramirezi* se describe en base a especímenes machos y hembras colectados en la Reserva Natural Yotoco (Valle de Cauca). Es la tercera especie del género reportada para el país.

Keywords: taxonomy; goblin spiders; Valle de Cauca; Yotoco Natural Reserve

Introduction

The Neotropical goblin spider genus *Neotrops* Grismado & Ramírez 2013 comprises soft-bodied oonopid spiders with spinose forelegs, and several genital features that distinguish them from other American oonopines: the male palpal conductor connecting with an internal vesicle (which presumably discharges secretion through a slit-like opening), and female internal genitalia without posterior receptacle and a well developed posterodorsal plate (Grismado & Ramírez 2013, figures 10, 15).

Members of this genus are currently known by 27 non-Brazilian species distributed from Panama to Uruguay and central Argentina, and were collected from a wide variety of habitats: forest leaf litter, tree foliage (from low levels and suspended soil to high canopies), bark of trees, and grasslands (Grismado & Ramírez 2013). The Brazilian fauna, still under study, seems to have at least as many species as the other countries together. Preliminary data suggest that *Neotrops* would be probably the most diverse genus of soft bodied Oonopidae in the Neotropical region.

During the print process of the Grismado & Ramírez’s revision, we had access to a small collection of *Neotrops* specimens collected in the Reserva Natural de Yotoco (Valle de Cauca, Colombia) which do not fit in any of the previously known species.

In this contribution we describe and illustrate this new species, the third known for the Colombian fauna.

Material and methods

Descriptions and terminology follow mostly Platnick & Dupérré (2009a, 2009b). Female genitalia were observed in clove oil. Drawings were made with a camera lucida mounted on a compound microscope Olympus BH-2 (Olympus Corp., Tokyo, Japan). Photographs of the preserved specimens were taken with a Leica DFC 290 digital camera mounted on a Leica M165 C stereoscopic microscope (Leica Microsystems, Wetzlar, Germany), and the focal planes were composed with Helicon Focus 4.62.2 (HeliconSoft, <http://www.heliconsoft.com/>). The descriptions were generated automatically from the Species Descriptive Database of the oonopid Planetary Biodiversity Inventory project. The coordinates are not provided on the label, and were estimated using Google Earth (<http://www.google.com/earth/index.html>). All measurements are expressed in mm; only differences from the males are mentioned in the descriptions of females. Leg spination descriptions mention only those surfaces bearing spines, and follows the format detailed in Grismado (2008). High resolution versions of the images will be available on the goblin spider Planetary Biodiversity Inventory (PBI) project’s website (<http://research.amnh.org/oonopidae>). The material examined is deposited at the Instituto de Ciencias Naturales, Universidad Nacional, Bogotá, Colombia (ICN, Eduardo Flórez Daza), and the Arachnological Collection of the Museo Argentino de Ciencias Naturales “Bernardino Rivadavia” (MACN-Ar, Cristina L. Scioscia).

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Results

Taxonomy

Oonopidae Simon, 1890

Neotrops Grismado & Ramírez, 2013

Neotrops ramirezi sp. n. (Figures 1–3)

Type material

Male holotype from Colombia: Valle de Cauca: Yotoco: Reserva Natural de Yotoco, 3°52'27.73"N, 76°, 26'4.72"W, 1500 m, 2–3 December 2011, M. Ramírez, M. Izquierdo, Ligia Benavides, William Eberhard, and Nicolás Hazzi coll., deposited at ICN 7567 (PBI_OON 50271); 1♀ paratype with the same data (ICN 7517 PBI_OON 50273), 1♂, 1♀ paratypes, same data, deposited at MACN-Ar 31126 (PBI_OON 50269), 1♀ paratype, same data (ICN 7568 PBI_OON 50270).

Etymology

The specific name is a noun in apposition in honor of Martín J. Ramírez (MACN), participant of the PBI project, mentor of the authors, and one of the collectors of the specimens studied here.

Diagnosis

The male palp of *N. ramirezi* n. sp. is very similar to that of *N. caparu* Grismado & Ramírez (from Vaupés, Colombia) and *N. trapellus* (Chickering), from Venezuela, in general morphology and the shape of the bulb. It differs from the former by the shorter embolus (not becoming filiform at its tip), and from both by the strong, tooth-like projections of the endites (Figure 1F), and by the gently curved conductor (Figures 2A, C, 3B) which is straight in *N. caparu*, and spinelike, with dorsobasal swelling in *N. trapellus* (Grismado & Ramírez 2013, figure 109B, F). Females resemble those of *N. waorani* Grismado & Ramírez, from Ecuador, and *N. donaldi* (Chickering), from Panama, in the flattened lateral projections of the anterior part of the anterior receptacle (Figure 3A), but are clearly distinguished from the former by its longer, nearly cylindrical shape, and from the latter by having shorter lateral projections and a narrow, proximal stalk.

Description

Male (holotype, PBI_OON 50271). Total length 1.71. Cephalothorax: Carapace light yellow, broadly oval

in dorsal view (Figure 1C), pars cephalica slightly elevated in lateral view (Figure 1D), anteriorly narrowed to 0.49 times its maximum width or less; lateral margin straight, smooth; non-marginal pars cephalica setae dark, needle-like, scattered; non-marginal pars thoracica setae dark, needle-like; marginal setae dark, needle-like. Clypeus setae present, dark, needle-like. Eyes oval, on dark pigment, all subequal; ALE separated by their radius to diameter, ALE-PLE touching, PME touching for less than half their length, PLE-PME separated by less than PME radius. Sternum as long as wide, yellowish white, anterior margin unmodified, posterior margin not extending posteriorly of coxae IV, extensions of pre-coxal triangles present; setae sparse, dark, evenly scattered (Figure 1F). Mouthparts: Chelicerae, endites and labium yellowish white. Chelicerae slightly divergent; setae dark, evenly scattered. Labium elongated hexagon, anterior margin indented at middle; with 3–5 setae on anterior margin. Endites: same as sternum in sclerotization, distally not excavated, anteromedian tip with one strong, tooth-like projection (Figure 1F, see detail), posteromedial part with more sclerotized longitudinal area. Abdomen: dorsum soft portions white (Figure 1A). Book lung covers elliptical. Dorsum setae absent. Setae of epigastric and postepigastric areas dark. Legs: yellow; femur IV thickened, much larger than femora I–III (Figure 1D), patella plus tibia I near as long as carapace. Leg spination (only surfaces bearing spines listed, all spines longer than segment width): leg I: femora d1-1-1, pv0-0-1-1-0, tibiae vr1-1-1-1-1-0, vp1-1-1-1-1-0, metatarsi v2-2-2-2; leg II: femora d1-1-1, pv0-0-1-1-0, tibiae vr1-1-1-1-1-0, vp1-1-1-1-1-0, metatarsi v2-2-2-2; leg III: femora d1-1-1, tibiae d1-0, p1-1, r1-1, v1-1ap, metatarsi d1ap, p1-0-1ap, r1-1ap, v1ap; leg IV: femora d0-1-1-1-1, tibiae d1, p1-1, r1-1, v1-1ap, metatarsi d1ap, p1-1, r1-1, v1-1ap.). Genitalia: Palp not strongly sclerotized, proximal segments yellow; embolus dark, gently sinuous; femur normal size, two or more times as long as trochanter; cymbium yellow, ovoid in dorsal view, not fused with bulb; bulb white, 1 to 1.5 times as long as cymbium, stout, tapering apically, distal part conductor slightly curved to dorsal, with acute tip.

Female (paratype, PBI_OON 50273). As in male except as noted (Figure 1B, E). Total length 2.02. Cephalothorax: Female palp spines absent. Legs: Leg spination (only surfaces bearing spines listed, all spines longer than segment width): leg I: femora d1-1-1, pv0-0-1-1-0, tibiae vr1-1-1-1-1-0, vp1-1-1-1-1-0, metatarsi v2-2-2-2; leg II: femora d1-1-1, pv0-0-1-1-0, tibiae vr1-1-1-1-1-0, vp1-1-1-1-1-0, metatarsi v2-2-2-2; leg III: femora d1-1-1, tibiae d1-0, p1-1, r1-1, v1-1ap, metatarsi d2ap, p1-1, r1-1, v1-1-0-1ap; leg IV:

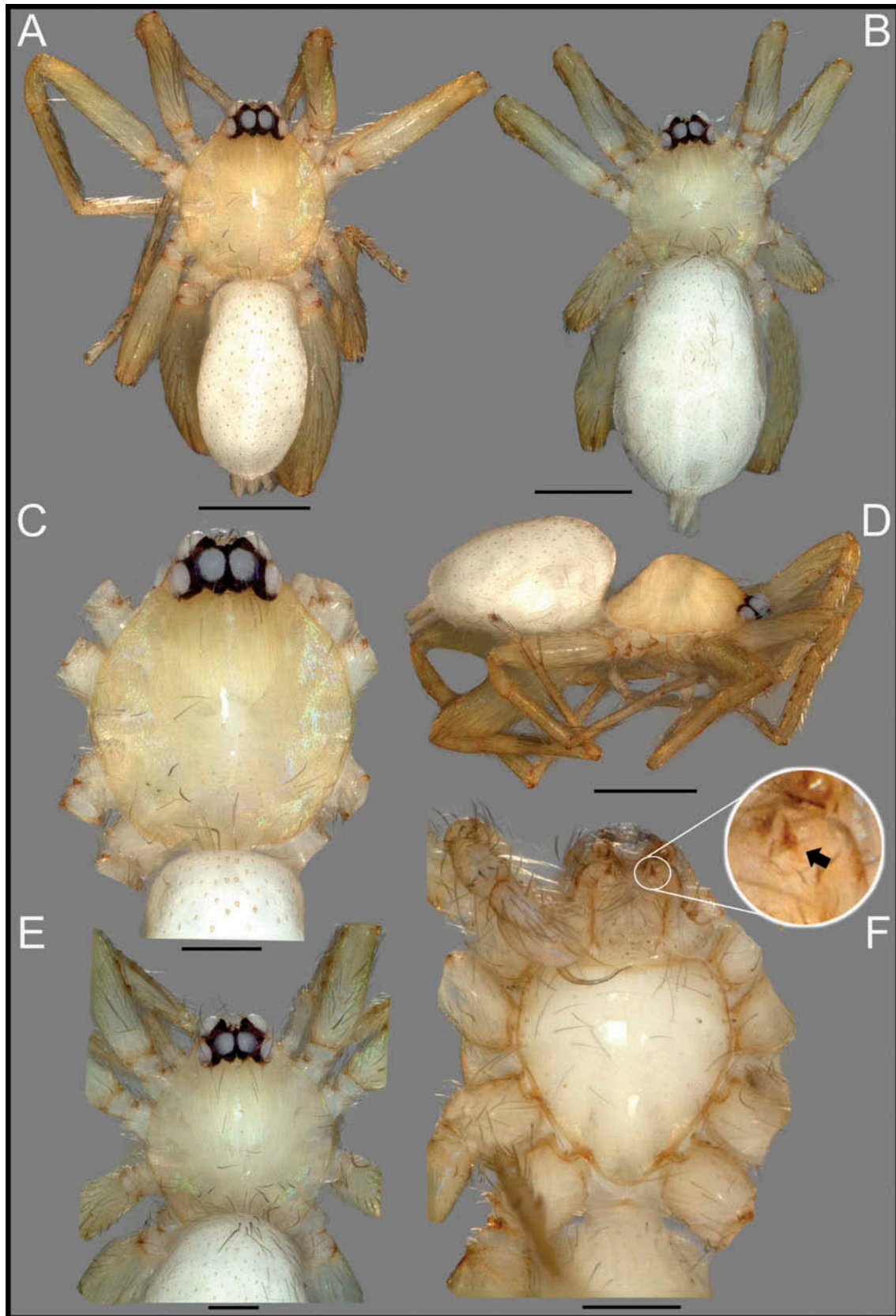


Figure 1. (Color online) *Neotrops ramirezi*, sp. n. A, C, D, F, male holotype; B, E, female paratype (ICN 7517). A, B, habitus, dorsal view; D, habitus, lateral view; C, E, cephalothorax, dorsal view; F, cephalothorax, ventral view (detail: left endite, arrow showing the tooth-like projection) Scale bars: A, B, D = 500 μ m, C, E, F = 200 μ m.

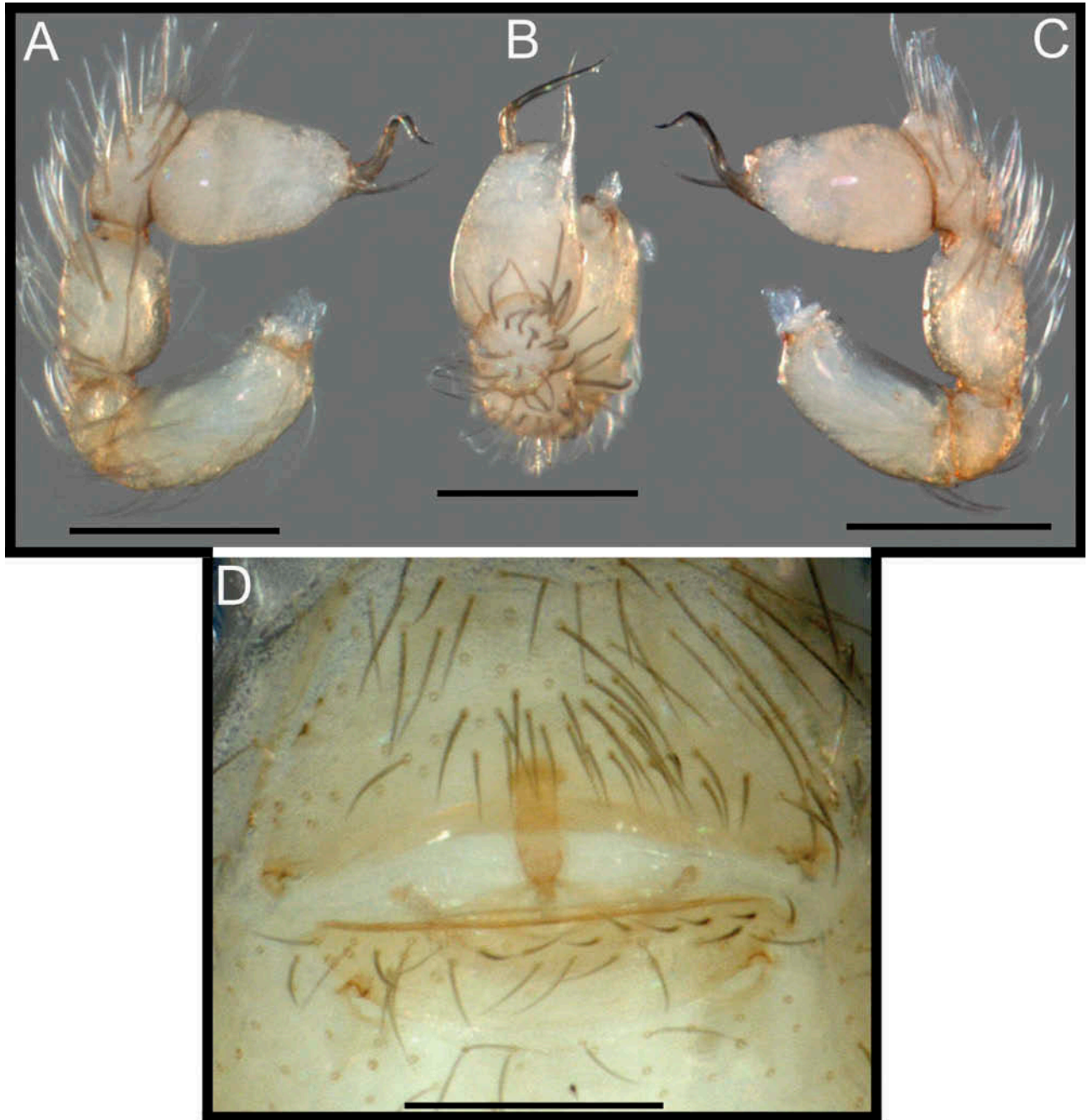


Figure 2. (Color online) *Neotrops ramirezi*, sp. n. A–C, male holotype, left palp; D, female paratype (ICN 7517), epigastrium, ventral view. A, prolateral view; B, dorsal view; C, retrolateral view. Scale bars = 200 μ m.

femora d0-0-1-1-1-1, tibiae d1, p1-1, r1-1, metatarsi d1-0-0, pvlap, rvlap. Genitalia (Figures 2D, 3A): Ventral view: anterior receptacle and procurved transverse ridges visible through cuticle. Dorsal view: posterodorsal plate surpassing anterior receptacle. Uterus externus opening widened anteriorly, narrowed posteriorly. Anterior receptacle nearly cylindrical, with narrow, short, basal stalk and laterally expanded anterior tip, resembling the *Planaria* flatworm's head.

Distribution

Only known from the type locality.

Life history and habitat preferences

The type locality belongs to the eastern slope of the Western Cordillera. The specimens were collected beating the foliage in a tropical mountain forest, and it was observed that (not surprisingly, given their enlarged

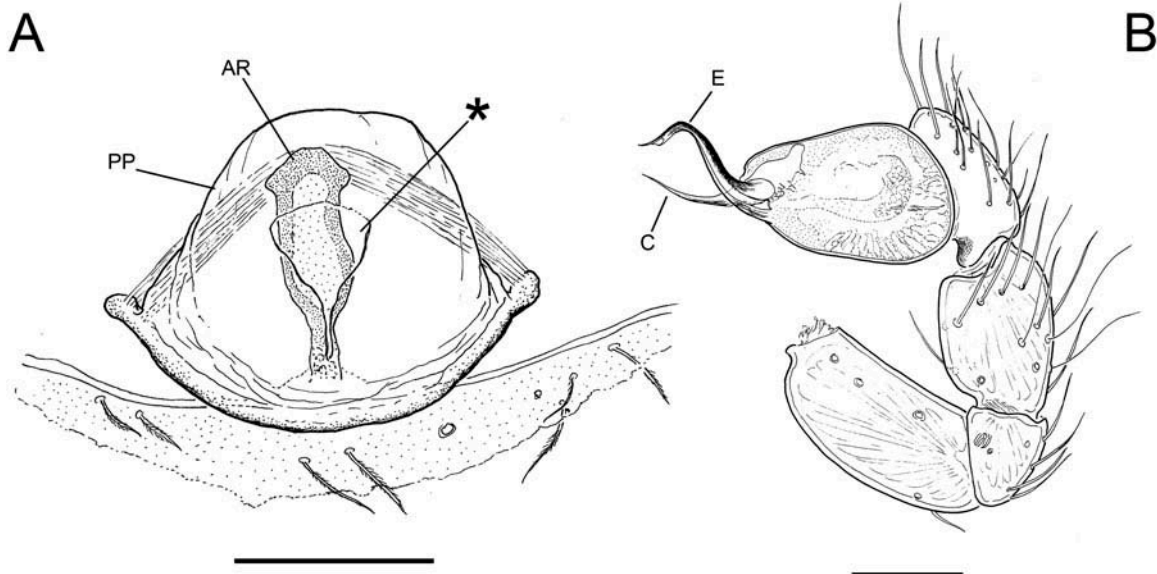


Figure 3. *Neotrops ramirezi* sp. n. A, female paratype (ICN 7517), internal female genitalia, cleared, dorsal view; B, male holotype, left palp, cleared, retrolateral view. Abbreviations: AR = anterior receptacle, C = conductor, E = embolus, PP = posterodorsal plate, asterisk = presumable opening of uterus externus. Scale bars = 100 µm.

femora IV) they jumped in the beating tray, as do the species of the genus *Orchestina* (M. Izquierdo, pers. obs.).

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