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## On Neotropical crab spiders: description of a new species of *Onocolus* (Araneae: Thomisidae)

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The systematics and taxonomy of Neotropical stephanopines have been extensively studied over the last years (Machado *et al.* 2015; Silva-Moreira & Machado 2016; Machado *et al.* 2017, 2018; Prado *et al.* 2018). According to Machado *et al.* (2017), the genera *Epicadus* Simon, *Epicadinus* Simon and *Onocolus* Simon form a clade of taxa with characteristic structure of the male genitalia, consisting of a long and filiform embolus, discoid tegulum and the canoe-shaped RTA fused at the basis with an acute and curved DTA. However, the better diagnostic characters are remarkable somatic features and the structure of the female genitalia. While *Epicadus* present large species with three or five stout opisthosomal projections, elevated thoracic portion, sometimes presenting a median spire (Machado *et al.* 2018), *Epicadinus* is composed of smaller spiders with just three pointed opisthosomal projections and the tegument covered by elongated needle-shaped setae, which give these spiders a spiny appearance (Prado *et al.* 2018). The species of *Onocolus*, on the other hand, can be recognized by the dorsoventrally compressed prosoma, pentagonal opisthosoma, female genitalia with coiled or S-shaped copulatory ducts and predominant green body coloration. The genus *Onocolus* has been revised by Lise (1981). Here, we describe *O. ankeri* sp. nov., a species from the Amazon Forest that is remarkable by its size and color (Fig. 1).

The examined specimens are deposited in the Museu Paraense Emílio Goeldi, Belém (MPEG, A. B. Bonaldo), Instituto Butantan, São Paulo (IBSP, A. D. Brescovit) and Instituto de Ciencias Naturales de la Universidad Nacional de Colombia, Bogotá (ICN, A. E. Flórez). All measurements were taken in millimeters and the terminology and dissection procedures follows Machado *et al.* (2018). Photos of the preserved specimen were taken on a Multipurpose Zoom Microscope Leica M205A with a digital camera.

### *Onocolus ankeri* sp. nov. (Fig. 1A–F)

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**Type material: Holotype: BRAZIL: Pará:** Melgaço, Castanhal do Jacaré, 1°44'13.5"S, 51°25'32.8"W, 1 female, 15 April 1997, J.A.P. Barreiros (MPEG 35307).

**Paratypes: BRAZIL: Roraima:** Alto Alegre, Aldeia Budu, 3°12'09"N, 63°23'30"W, 1 female, 20 July to 05 August 2009, C. Kirsh (IBSP 151198). **COLOMBIA: Caquetá:** Solano (Parque Nacional Chiribiquete), 0°44'44,80"N, 72°44'17"W, 1 female, 25 June 2000, F. Quevedo (ICN-AR 8979).

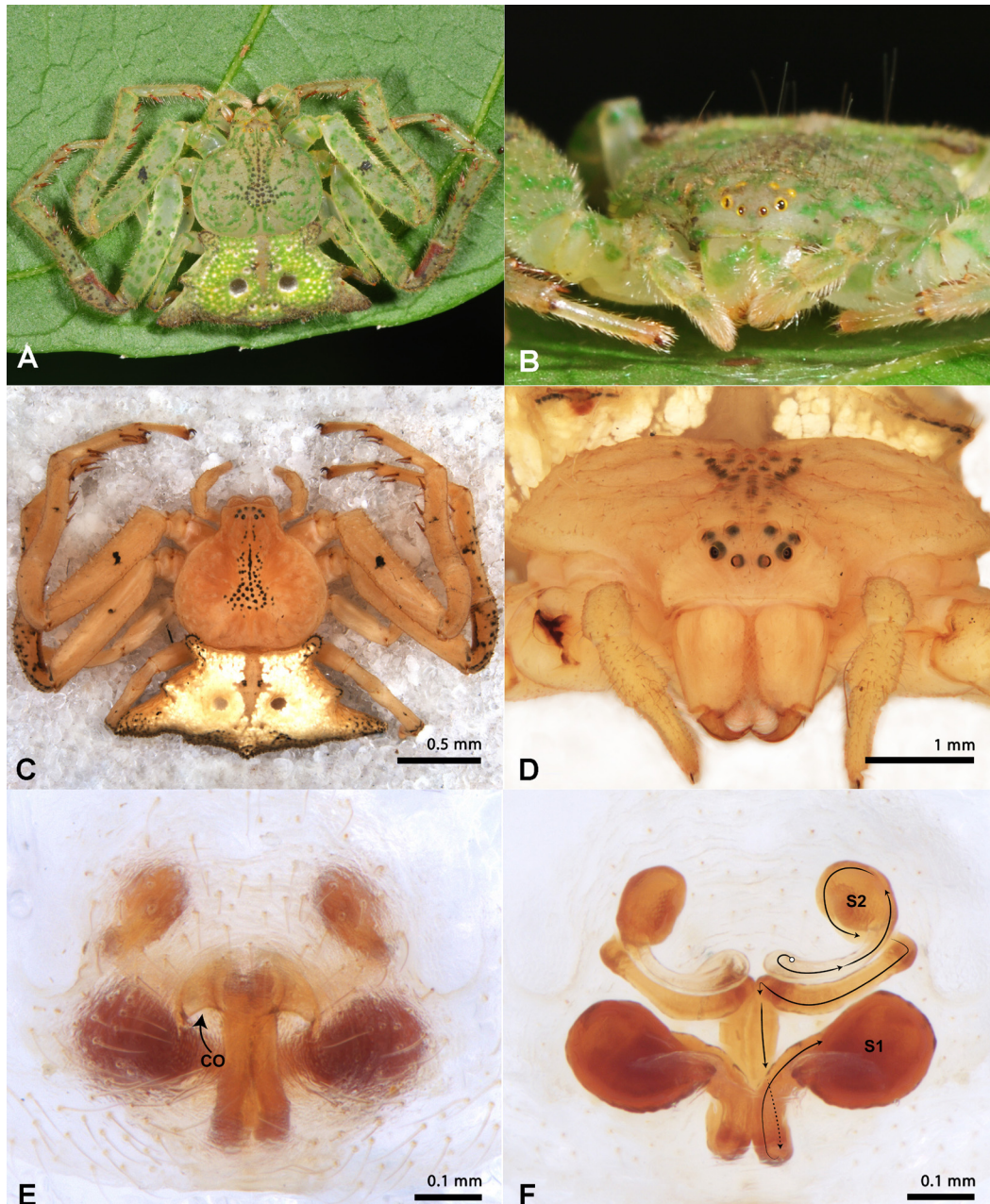
**Etymology.** The epithet is an homage to Dr. Arthur Anker, who kindly provided us with photos of a live specimen. The name was chosen through a popular survey proposed by the Museu de Ciências e Tecnologia da Pontifícia Universidade Católica do Rio Grande do Sul (MCTP—PUCRS) to promote science popularization.

**Diagnosis.** Females of *O. ankeri* sp. nov. show the characteristic green body coloration as other females of the genus (Figs 1A–B, live specimens) and resemble those of *O. simoni* Mello-Leitão in the shape and disposition of the copulatory ducts, with wide anterior curves forming a pair of primary spermathecae (Fig. 1F). However, the new species is distinct from all its congeners by presenting an accentuated curvature on its anterior tibiae (I and II) and three robust pairs of lateral projections on the opisthosoma (Figs 1A, 1C). Also, *O. ankeri* sp. nov. presents diagnostic setiferous tubercles on the median area of the prosoma, which are black pigmented and remarkably contrasting with the green background of the tegument (Figs 1A, 1C, 1D).

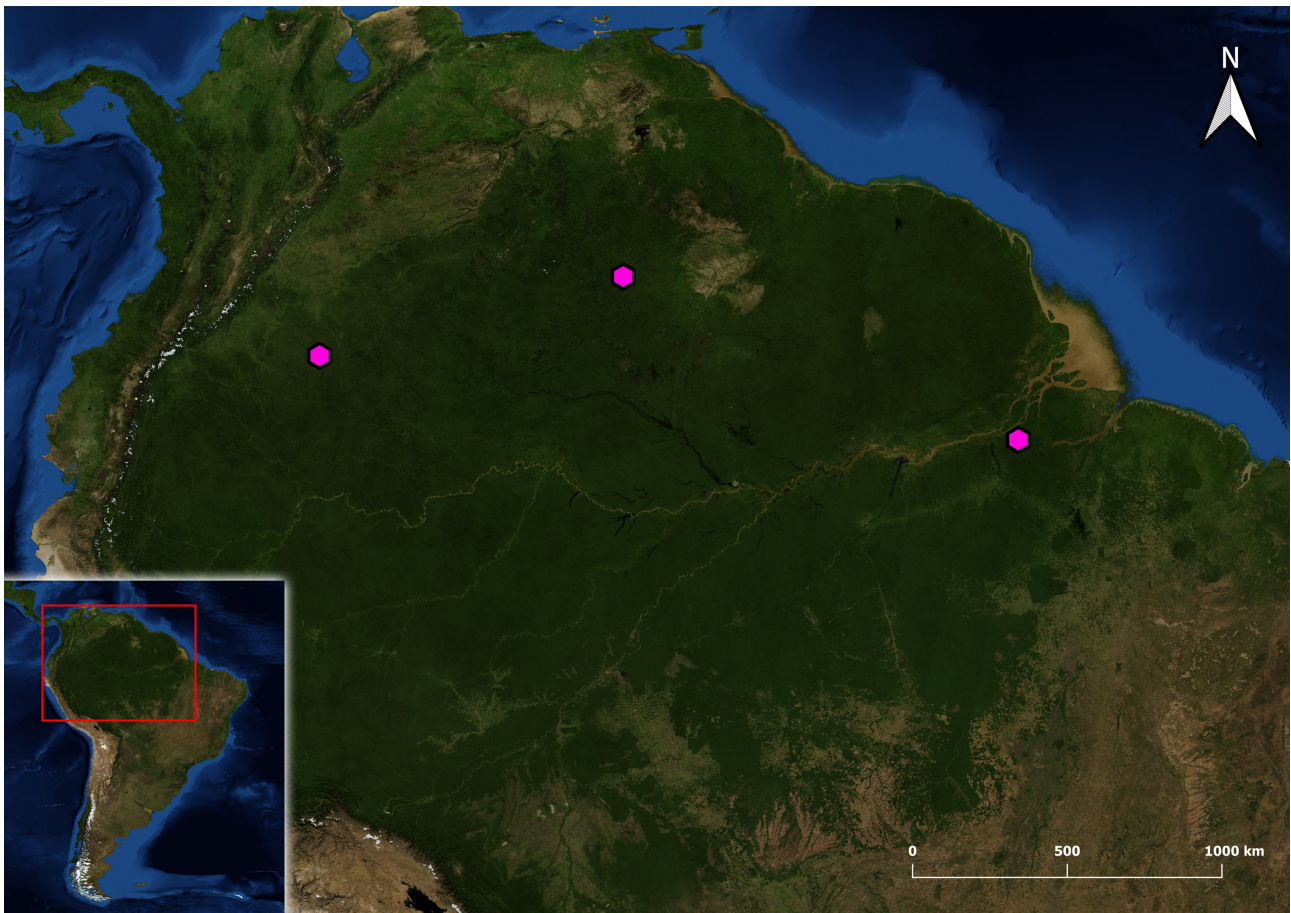
**Description (Holotype).** Anterior eye row recurved, posterior eye row slightly procurved; prosoma whitish-green with darker green spots radially disposed on the prosomal ridges (Figs 1A–D). Legs with same coloration as prosoma; anterior femora robust, with median black spot on the mesial surface (well developed on femora I and smaller on femora

II); metatarsi and patellae II suffused with many dark spots (Figs 1A, 1C). Opisthosoma with three pairs of dorsal sigillae (the median pair largest and most noticeable); three pairs of opisthosomal projections disposed laterally, the anterior and median pairs of equivalent size and the posterior pair more robust and longer (Figs 1A, 1C). Epigynal plate wide and flattened, with copulatory openings oriented anteriorly; copulatory ducts long and hyaline on their first portion (before reaching the secondary spermathecae S2), getting gradually sclerotized along their trajectory towards the primary spermathecae S1 (Figs 1E, 1F). Measurements: eyes diameters and eyes interdistances: AME 0.12, ALE 0.16, PME 0.15, PLE 0.11, AME-AME 0.18, AME-ALE 0.08, PME-PME 0.34, PME-PLE 0.15, MOQ length 0.53, MOQ width 0.62; leg formula: 2-1-3-4: leg I—femur 5.74/ patella 2.66/ tibiae 3.56/ metatarsus 3.22/ tarsus 1.71/ total 16.89; II—5.44/ 2.61/ 4.02/ 3.21/ 1.73/ 17.01; III—2.34/ 1.33/ 1.88/ 1.36/ 0.57/ 7.48; IV—2.06/ 1.30/ 2.24/ 1.28/ 0.58/ 7.46. Total body length 8.85; prosoma 5.05 length, 5.32 wide; opisthosoma length 3.75 (including the projections); clypeus 0.25 height; sternum 2.16 length, 1.95 width; endites 1.20 length, 0.51 width; labium 0.79 length, 0.85 width.

**Distribution.** Amazon rainforest: Brazil (States of Roraima and Amazonas) and Colombia (Caquetá) (Fig. 2).



**FIGURE 1.** *Onocolus ankeri* sp. nov. A–B Live specimens photographed by Arthur Anker at the surroundings of Mamori Lake, near Manaus, Brazil (A habitus dorsal, B prosoma frontal); C–D preserved specimens from MPEG 35307 (C habitus dorsal, D prosoma frontal); E–F epigynum from IBSP 151198 (E epigynum ventral, F vulva dorsal). Arrows indicate the course of the copulatory ducts system. Abbreviations: CO—copulatory openings; S1—primary spermathecae; S2—secondary spermathecae.



**FIGURE 2.** Distribution records of *Onocolus ankeri* sp. nov.

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### References

- Lise, A.A. (1981) Tomisídeos Neotropicais V: Revisão do gênero *Onocolus* Simon, 1895 (Araneae, Thomisidae, Stephanopinae) [Neotropical thomisids V: revision of the genus *Onocolus*]. *Iheringia, Série Zoologia*, 57, 3–97.
- Machado, M., Teixeira, R. A. & Lise, A. A. (2015). Taxonomic notes on the crab spider genus *Tobias* Simon, 1895 (Araneae, Thomisidae, Stephanopinae). *Zootaxa*, 4034 (3), 565–576.  
<https://doi.org/10.11646/zootaxa.4034.3.8>
- Machado, M., Teixeira, R.A. & Lise, A.A. (2017) Cladistic analysis supports the monophyly of the Neotropical crab spider genus *Epicadus* and its senior synonymy over *Tobias* (Araneae: Thomisidae). *Invertebrate Systematics*, 31, 442–455.  
<https://doi.org/10.1071/IS16074>
- Machado, M., Teixeira, R.A. & Lise, A.A. (2018) There and back again: More on the taxonomy of the crab spider genus *Epicadus* (Thomisidae: Stephanopinae). *Zootaxa*, 4382 (3), 501–530.  
<https://doi.org/10.11646/zootaxa.4382.3.4>
- Prado, A.W.; Baptista, R.L.C. & Machado, M. (2018) Taxonomic review of *Epicadinus* Simon, 1895 (Araneae: Thomisidae). *Zootaxa*, 4459 (2), 201–234.  
<https://doi.org/10.11646/zootaxa.4459.2.1>
- Silva-Moreira, T. & Machado, M. (2016) Taxonomic revision of the crab spider genus *Epicadus* Simon, 1895 (Arachnida: Araneae: Thomisidae) with notes on related genera of Stephanopinae Simon, 1895. *Zootaxa*, 4147 (3), 281–310.  
<https://doi.org/10.11646/zootaxa.4147.3.4>