

## Research article

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**Additions to the genus *Neostasina* Rheims & Alayón (Araneae: Sparassidae: Sparianthinae)**Cristina A. RHEIMS<sup>1,\*</sup> & Giraldo ALAYÓN<sup>2</sup><sup>1</sup>Laboratório de Coleções Zoológicas, Instituto Butantan – Av. Vital Brasil, 1500, 05503-900, São Paulo, SP, Brazil.<sup>2</sup>Museo Nacional de Historia Natural – Obispo No. 61, Ciudad de La Habana, C.P. 10100, Cuba.\*Corresponding author: [carheims@gmail.com](mailto:carheims@gmail.com)<sup>2</sup>Email: [moffly@infomed.sld.cu](mailto:moffly@infomed.sld.cu)<sup>1</sup>urn:lsid:zoobank.org:author:C25D9F53-D1FD-42FB-B844-40B67EA6BD97<sup>2</sup>urn:lsid:zoobank.org:author:F36CAFD1-2373-499B-A2E2-A5ECE70F0B6D

**Abstract.** The genus *Neostasina* Rheims & Alayón is revisited. New material is examined, resulting in the description of seven new species: *N. aceitillar* sp. nov. (♀), *N. bani* sp. nov. (♂♀), *N. demaco* sp. nov. (♀) from Dominican Republic, *N. juanita* sp. nov. (♀), *N. paraiso* sp. nov. (♂♀), *N. toronegro* sp. nov. (♀) from Puerto Rico, and *N. maisi* sp. nov. (♂♀) from Cuba. New distribution records are given for *N. amalie*, *N. cachote*, *N. guanaboa*, *N. iberia*, *N. saetosa*, *N. siempreverde* and *N. turquino*. In addition, an updated identification key and updated distribution maps for all species of the genus are provided.

**Keywords.** Caribbean, new records, new species.

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**Introduction**

Sparianthinae Simon, 1887, as currently delimited (see Rheims 2019), includes 122 species distributed in 13 genera: *Decaphora* Franganillo, 1931 (five species), *Diminutella* Rheims & Alayón, 2018 (one species), *Extraordinarius* Rheims, 2019 (four species), *Neostasina* Rheims & Alayón, 2016 (27 species), *Pleorotus* Simon, 1898 (one species), *Rhacocnemis* Simon, 1898 (one species), *Sparianthis* Simon, 1880 (13 species), *Stasina* Simon, 1877 (nine species), *Stipax* Simon, 1898 (one species), *Strandiellum* Kolosváry, 1934 (one species), *Thelcticopis* Karsch, 1884 (51 species), *Thomasettia* Hirst, 1911 (one species) and *Uaiuara* Rheims, 2013 (seven species) (World Spider Catalog 2022). *Pleorotus*, *Rhacocnemis*, *Thomasettia* and *Stipax* are endemic to the Seychelles Islands and *Strandiellum* and *Thelcticopis* are mostly Oriental. *Decaphora*, *Diminutella*, *Extraordinarius*, *Neostasina*, *Sparianthis* and *Uaiuara* are exclusively Neotropical and have all been recently described (Rheims 2013, 2019; Rheims & Alayón 2016, 2018) or recently revised (Rheims & Alayón 2014; Rheims 2017, 2020). *Stasina* is more widespread and includes four Neotropical species. Nevertheless, they are considered misplaced and the genus is probably restricted to the Oriental region (Rheims & Alayón 2016).

*Neostasina* was originally proposed by Rheims & Alayón (2016) to include four Neotropical species erroneously allocated to the genus *Stasina* including *Stasina portoricensis* Petrunkevitch, 1930, *N. macleayi* (Bryant, 1940), *N. lucasi* (Bryant, 1940) and *N. saetosa* (Bryant, 1948). *Neostasina antiguensis* (Bryant, 1923) was transferred to the genus from *Pseudosparianthis* Simon, 1887 and *Neostasina bicolor* (Banks, 1914) from *Olios* Walckenaer, 1837, the latter considered a senior synonym of *S. portoricensis* and *O. darlingtoni* Bryant, 1942. With the additional 22 species, described in the latter paper, the genus reached the number of 27 nominal species, all endemic to the Caribbean (Rheims & Alayón 2016; World Spider Catalog 2022).

In this paper we revisit the genus *Neostasina* and, based on recently acquired material, describe seven new species and list new distribution records for seven known species. The identification key is updated to include the new species and updated distribution maps are provided for all known species.

## Material and methods

Specimens described in this paper were examined at the Laboratório de Coleções Zoológicas, Instituto Butantan, under a LEICA MZ12.5 stereo microscope. All measurements are in millimeters. Species are listed in alphabetical order. Leg measurements are listed as: total length (femur, patella, tibia, metatarsus, tarsus); eye diameters as AME, ALE, PME, PLE and interdistances as AME-AME, AME-ALE, PME-PME, PME-PLE, AME-PME, ALE-PLE. Palp and leg spination patterns follow those described for the genus (Rheims & Alayón 2016). Coloration patterns are described based on specimens preserved in 70% ethanol. Positions of male tegular appendages are given according to clock positions, based on the left palp in ventral view. Female epigynes were dissected and immersed in clove oil for better visualization of internal structures, according to Levi (1965). In schematic courses of female internal duct system, copulatory openings are marked with a circle, glandular appendages with a ‘T’, and the end of the fertilization duct in direction of uterus externus with an arrow. Illustrations were made using a stereo microscope LEICA MZ 12.5, with camera-lucida. Photographs of genital structures and specimens were made using a Leica DFC 500 digital camera, mounted on a Leica MZ 16A stereo microscope. Extended focal range images were composed with the program Leica Application Suite ver. 2.5.0. Geographic coordinates of collection localities were obtained from the labels (given in parentheses) or from Google Earth (given in square brackets). Distribution maps were prepared on SimpleMappr (Shorthouse 2010).

## Abbreviations

### Depository institutions and curators

MCZ	=	Museum of Comparative Zoology, Harvard University, Cambridge, USA (G. Giribet)
MNHNCu	=	Museo nacional de Historia Natural, La Habana, Cuba (G. Alayón)
MNHNPEJM	=	Museo Nacional de Historia Natural “Profesor Eugenio de Jesús Marcano”, Santo Domingo, Dominican Republic (G. de los Santos & S. Carrero)
USNM	=	National Museum of Natural History, Smithsonian Institution, Washington D.C. USA (J.A. Coddington & H. Wood)

### Somatic morphology

ALE	=	anterior lateral eyes
AME	=	anterior median eyes
PLE	=	posterior lateral eyes
PME	=	posterior median eyes

### Genitalia (♂)

C	=	conductor
dRTA	=	dorsal branch of RTA

E	=	embolus
eRTA	=	extra retrolateral tibial apophysis
MA	=	median apophysis
pt	=	tegular protrusion
RpPt	=	cymbial retroproximal protrusion
TBC	=	tegular projection at base of conductor
TBE	=	tegular projection at base of embolus
vRTA	=	ventral branch of RTA
VTA	=	ventral tibial apophysis

#### Genitalia (♀)

ag	=	anterior groove
am	=	anterior margin of median septum
ar	=	anterior rim
EF	=	epigynal field
FD	=	fertilization duct
GP	=	glandular projection
LL	=	lateral lobe
MS	=	median septum
SP	=	spermathecae

## Results

### *Descriptions of new species*

Class Arachnida Cuvier, 1812  
Order Araneae Clerck, 1757  
Family Sparassidae Bertkau, 1872  
Subfamily Sparianthinae Simon, 1887

Genus *Neostasina* Rheims & Alayón, 2016

*Neostasina* Rheims & Alayón 2016: 304 (type species by original designation: *Stasina macleayi* Bryant, 1940).

#### Diagnosis

Species of the genus *Neostasina* resemble those of *Decaphora* by the ventral spination of tibiae and metatarsi of legs I–II, with three and one pair respectively, but can be distinguished by the male palps with dRTA simple, without spines (Figs 5B–C, 11B–C, 14B–C; Rheims & Alayón 2016: figs 15, 28, 42) (complex, with many spines in *Decaphora*, see Rheims & Alayón 2014: figs 17, 24, 31) and by the female epigynes with lateral lobes not touching each other (Figs 2A, 5E, 8D; Rheims & Alayón 2016: figs 17, 20, 30, 37) (touching each other posteriorly in *Decaphora*, see Rheims & Alayón 2014: figs 19, 26, 34). Species of *Neostasina* can be distinguished from those of *Sparianthis* by having only one pair of ventral spines on metatarsi I–II (two in *Sparianthis*) and from those of *Uaiuara* by having three pairs of ventral spines on tibiae I–II (8–9 in *Uaiuara*) (Rheims & Alayón 2016).

#### Description

See Rheims & Alayón (2016).

**Included species**

*Neostasina aceitillar* sp. nov., *N. amalie* Rheims & Alayón, 2016, *N. antiguensis* (Bryant, 1923), *N. bani* sp. nov., *N. baoruco* Rheims & Alayón, 2016, *N. bermudezi* Rheims & Alayón, 2016, *N. bicolor* (Banks, 1914), *N. bryantae* Rheims & Alayón, 2016, *N. cachote* Rheims & Alayón, 2016, *N. croix* Rheims & Alayón, 2016, *N. demaco* sp. nov., *N. elverde* Rheims & Alayón, 2016, *N. granpiedra* Rheims & Alayón, 2016, *N. guanaboa* Rheims & Alayón, 2016, *N. gunboat* Rheims & Alayón, 2016, *N. iberia* Rheims & Alayón, 2016, *N. jamaicana* Rheims & Alayón, 2016, *N. juanita* sp. nov., *N. liguanea* Rheims & Alayón, 2016, *N. lucasi* (Bryant, 1940), *N. lucea* Rheims & Alayón, 2016, *N. macleayi* (Bryant, 1940), *N. maisi* sp. nov., *N. mammee* Rheims & Alayón, 2016, *N. maroon* Rheims & Alayón, 2016, *N. montegordo* Rheims & Alayón, 2016, *N. oualie* Rheims & Alayón, 2016, *N. paraiso* sp. nov., *N. saetosa* (Bryant, 1948), *N. siempreverde* Rheims & Alayón, 2016, *N. taino* Rheims & Alayón, 2016, *N. toronegro* sp. nov., *N. turquino* Rheims & Alayón, 2016 and *N. virginensis* Rheims & Alayón, 2016.

**Distribution**

Endemic to the Caribbean (Fig. 17).

**Updated key to species of *Neostasina***

1. Males..... 2
  - Females..... 22
2. TBE single, with only one branch (Fig. 5D; Rheims & Alayón 2016: figs 34, 41)..... 3
  - TBE bifid, with two branches (Rheims & Alayón 2016: figs 16, 27)..... 11
3. Tegulum with protrusion arising between 3 and 6 o'clock (Rheims & Alayón 2016: figs 58, 69)..... 4
  - Tegulum smooth, without pt (Fig. 5B; Rheims & Alayón 2016: figs 34, 41)..... 8
4. Tegulum with pt arising between 5–6 o'clock (Rheims & Alayón 2016: figs 69, 133)..... 5
  - Tegulum with pt arising at 3 o'clock position (Rheims & Alayón 2016: fig. 58).....  
*N. granpiedra* Rheims & Alayón, 2016
5. eRTA present (Rheims & Alayón 2016: figs 90, 100)..... 6
  - eRTA absent (Rheims & Alayón 2016: figs 69–70)..... *N. gunboat* Rheims & Alayón, 2016
6. dRTA single (Rheims & Alayón 2016: figs 91, 101)..... 7
  - dRTA bifid, one branch three times as long as wide and the other smaller and triangular (Rheims & Alayón 2016: fig. 134)..... *N. siempreverde* Rheims & Alayón, 2016
7. eRTA cylindrical arising retro-proximally from tibia; TBC shaped as an elf hat (Rheims & Alayón 2016: figs 100–101)..... *N. macleayi* (Bryant, 1940)
  - eRTA represented by a strong spine-like apophysis; TBC rounded (Rheims & Alayón 2016: figs 90–91)..... *N. lucasi* (Bryant, 1940)
8. E arising from tegulum at 9 o'clock position (Fig. 5B; Rheims & Alayón 2016: figs 34, 137)..... 9
  - E filiform, arising from tegulum at 6:30 o'clock position (Rheims & Alayón 2016: figs 40–41)..... *N. bryantae* (Bryant, 1948)
9. E bifid; vRTA absent (Rheims & Alayón 2016: figs 137–139)..... *N. taino* Rheims & Alayón, 2016
  - E simple, vRTA present (Fig. 5B–C; Rheims & Alayón 2016: figs 34–36)..... 10

10. vRTA sickle-shaped; dRTA distally tapering; TBC present, shard-like (Rheims & Alayón 2016: figs 34–35)..... *N. bicolor* (Banks, 1914)  
 – vRTA reduced to small bump at base of dRTA; dRTA distally bifid; TBC absent (Fig. 5B–C)..... *N. bani* sp. nov.
11. Tegulum with pt arising between 5–7 o'clock (Fig. 11B; Rheims & Alayón 2016: figs 65, 73) ..... 12  
 – Tegulum smooth, without pt (Fig. 14B; Rheims & Alayón 2016: figs 14, 27)..... 17
12. dRTA single, with only one branch (Fig. 11C; Rheims & Alayón 2016: figs 66, 84) ..... 13  
 – dRTA bifid (Rheims & Alayón 2016: figs 73–74)..... *N. iberia* Rheims & Alayón, 2016
13. eRTA present (Rheims & Alayón 2016: figs 107, 114)..... 14  
 – eRTA absent (Fig. 11C; Rheims & Alayón 2016: figs 65, 83)..... 15
14. vRTA bifid; pt arising at 7 o'clock; embolus with long subdistal dorsal keel (Rheims & Alayón 2016: figs 114, 116)..... *N. maroon* Rheims & Alayón, 2016  
 – vRTA single; pt arising at 5:30 o'clock; E filiform, twisted at tip (Rheims & Alayón 2016: figs 107–109)..... *N. mammee* Rheims & Alayón, 2016
15. vRTA smaller than dRTA; TBC smaller than MA; TBE almost as wide as or wider than embolus (Rheims & Alayón 2016: figs 65–66, 83–84) ..... 16  
 – vRTA as large as dRTA; TBC massive, larger than MA; TBE slender, filamentous (Fig. 11B–C)..... *N. maisi* sp. nov.
16. vRTA laminar, ventral margin bifid in retrolateral view; E with subdistal pointed dorsal keel (Rheims & Alayón 2016: figs 65–67) ..... *N. guanaboa* Rheims & Alayón, 2016  
 – vRTA slender and pointed in retrolateral view; E with two dorsal keels (Rheims & Alayón 2016: figs 83–85)..... *N. liguanea* Rheims & Alayón, 2016
17. eRTA present (Rheims & Alayón 2016: figs 15, 125) ..... 18  
 – eRTA absent (Fig. 14C; Rheims & Alayón 2016: figs 51, 55)..... 19
- 18(17) eRTA represented by strong spine-like apophysis; TBC absent (Rheims & Alayón 2016: figs 124–125)..... *N. oualie* Rheims & Alayón, 2016  
 – eRTA small, triangular, TBC present (Rheims & Alayón 2016: figs 14–15) ..... *N. amalie* Rheims & Alayón, 2016
19. vRTA as long as dRTA (Fig. 14C; Rheims & Alayón 2016: fig. 55) ..... 20  
 – vRTA small, developed as small bump at the base of dRTA (Rheims & Alayón 2016: figs 28, 51).... 21
20. VTA arising medially; vRTA distally blunt; TBE with secondary branch arising subdistally, close to tip (Rheims & Alayón 2016: figs 54–56) ..... *N. elverde* Rheims & Alayón, 2016  
 – VTA arising medial-retrolaterally; vRTA pointed; TBE with secondary branch arising medially (Fig 14B–D)..... *N. paraiso* sp. nov.
21. TBC elongate, more than three times as long as wide (Rheims & Alayón 2016: fig. 50)..... *N. croix* Rheims & Alayón, 2016  
 – TBC short, roughly squared, as long as wide (Rheims & Alayón 2016: fig. 27)..... *N. bermudezi* Rheims & Alayón, 2016

22. ar of epigyne divided (Fig. 11E; Rheims & Alayón 2016: figs 17, 23).....	23
– ar of epigyne continuous (Figs 2A, 8D, 16A; Rheims & Alayón 2016: figs 20, 43).....	30
23. MS smooth (Fig. 11E; Rheims & Alayón 2016: figs 30, 61).....	24
– MS with anterior procurved groove (Rheims & Alayón 2016: fig. 46).....	
.....	<i>N. cachote</i> Rheims & Alayón, 2016
24. Lateral parts of ar oblique, almost straight (Rheims & Alayón 2016: figs 37, 146).....	25
– Lateral parts of ar roughly transversal, slightly C-shaped (Fig. 11E; Rheims & Alayón 2016: figs 17, 30, 61) .....	26
25. MS shaped like a cocktail glass (Rheims & Alayón 2016: fig. 146).....	
.....	<i>N. virginensis</i> Rheims & Alayón, 2016
– MS shaped as an irregular pentagon with posterior margin strongly projecting posteriorly (Rheims & Alayón 2016: fig. 37).....	<i>N. bicolor</i> (Banks, 1914)
26. Lateral parts of ar widely separated (Fig. 11E; Rheims & Alayón 2016: figs 23, 61).....	27
– Lateral parts of ar almost touching each other (Rheims & Alayón 2016: figs 17, 30).....	29
27. MS roughly triangular (Fig. 11E; Rheims & Alayón 2016: fig. 23).....	28
– MS roughly rectangular with posterior margin medially pointed (Rheims & Alayón 2016: fig. 61).....	<i>N. granpiedra</i> Rheims & Alayón, 2016
28. SP inverted U-shaped with outer lateral margins with indentations (Rheims & Alayón 2016: fig. 24).....	<i>N. baoruco</i>
– SP globose at anterior twist, with smooth lateral margins (Fig. 11F–G).....	<i>N. maisi</i> sp. nov.
29. MS roughly T-shaped resembling the profile of a mammalian leg bone extremity (Rheims & Alayón 2016: fig. 17).....	<i>N. amalie</i> Rheims & Alayón, 2016
– MS pentagonal, with lateral margins parallel (Rheims & Alayón 2016: fig. 30).....	
.....	<i>N. bermudezi</i> Rheims & Alayón, 2016
30. MS with chalice-shaped scape (Rheims & Alayón 2016: fig. 43).....	
.....	<i>N. bryantae</i> Rheims & Alayón, 2016
– MS without scape (Figs 5E, 8A, 14E; Rheims & Alayón 2016: figs 93, 126).....	31
31. MS with posterior median protrusion (Rheims & Alayón 2016: figs 79, 96).....	32
– MS without posterior median protrusion (Figs 2A, 8A, 16A; Rheims & Alayón 2016: figs 20, 103).....	33
.....	
32. EF with recurved anterior groove; posterior median protrusion rounded; ar straight (Rheims & Alayón 2016: fig. 79).....	<i>N. jamaicana</i> Rheims & Alayón, 2016
– EF smooth, posterior median protrusion triangular; ar strongly recurved (Rheims & Alayón 2016: fig. 96).....	<i>N. lucea</i> Rheims & Alayón, 2016
33. MS with posterior margin rebordered (Rheims & Alayón 2016: figs 76, 103).....	34
– MS with posterior margin normal, not rebordered (Figs 5E, 8A, D; Rheims & Alayón 2016: figs 20, 120).....	35

34. ar recurved (Rheims & Alayón 2016: fig. 103); SP with anterior twist and five additional twists; GP almost five times as long as wide (Rheims & Alayón 2016: figs 104–105).....  
 ..... *N. macleayi* (Bryant, 1940)  
 – ar medially depressed, procurved (Rheims & Alayón 2016: fig. 76); SP with anterior twist and one additional twist; GP two times as long as wide (Rheims & Alayón 2016: figs 77–78).....  
 ..... *N. iberia* Rheims & Alayón, 2016
35. MS with deep posterior groove (Rheims & Alayón 2016: fig. 93)..... *N. lucasi* (Bryant, 1940)  
 – MS smooth (Figs 2A, 5E, 16A; Rheims & Alayón 2016: figs 117, 120) ..... 36
36. ar recurved or roughly straight (Figs 2A, 16A; Rheims & Alayón 2016: figs 86, 126) ..... 37  
 – ar strongly depressed, procurved, almost M-shaped (Rheims & Alayón 2016: fig. 143) .....  
 ..... *N. turquino* Rheims & Alayón, 2016
37. MS oval (Rheims & Alayón 2016: figs 126, 130) ..... 38  
 – MS of different shape (Figs 5E, 8A, 16A; Rheims & Alayón 2016: figs 86, 120)..... 39
38. MS smooth (Rheims & Alayón 2016: fig. 126); GP elongate, two times as long as wide (Rheims & Alayón 2016: fig. 127)..... *N. oualie* Rheims & Alayón, 2016  
 – MS with deep procurved anterior groove (Rheims & Alayón 2016: fig. 129); GP short, rounded on wide base (Rheims & Alayón 2016: fig. 130)..... *N. saetosa* (Bryant, 1948)
39. EF with recurved, medially depressed anterior groove (Fig. 14E)..... *N. paraiso* sp. nov.  
 – EF smooth (Figs 2A, 8D, 16A; Rheims & Alayón 2016: figs 17, 30, 61)..... 40
40. ar relatively straight (Fig. 8A; Rheims & Alayón 2016: fig. 110) ..... 41  
 – ar recurved (Figs 2A, 8D, 16D; Rheims & Alayón 2016: figs 86, 117, 120) ..... 42
41. MS subpentagonal, with posterior margin extending posteriorly beyond tips of posterior projections of LL (Rheims & Alayón 2016: fig. 110)..... *N. mammee* Rheims & Alayón, 2016  
 – MS subrectangular, with posterior margin not extending beyond tips of posterior projections of LL (Fig. 8A) ..... *N. demaco* sp. nov.
42. ar completely covering anterior margin of MS (Figs 8D, 16A; Rheims & Alayón 2016: fig. 120)....  
 ..... 43  
 – ar not completely covering anterior margin of MS (Figs 2A, 5E; Rheims & Alayón 2016: figs 85, 140) ..... 45
43. ar gently curved (Figs 16A; Rheims & Alayón 2016: fig. 120); GP conspicuous (Fig. 16B; Rheims & Alayón 2016: fig. 121) ..... 44  
 – ar medially angled (Fig. 8D); GP inconspicuous (Fig. 8E) ..... *N. juanita* sp. nov.
44. MS slightly as long as wide, shaped like a light bulb, with posterior margin not reaching the tips of posterior projections of LL (Rheims & Alayón 2016: fig. 120); SP packed within sclerotized structure with internal ducts inconspicuous (Rheims & Alayón 2016: fig. 121).....  
 ..... *N. montegordo* Rheims & Alayón, 2016  
 – MS as wide as long, subpentagonal, with posterior margin extending beyond tips of posterior projections of LL (Fig. 16A); SP packed within sclerotized structure with internal ducts visible by transparency (Fig. 17B) ..... *N. toronegro* sp. nov.

45. MS with anterior margin straight (Rheims & Alayón 2016: figs 20, 140) ..... 46  
 – MS with anterior margin procurved or medially indented (Figs 2A, 5E; Rheims & Alayón 2016: figs 86, 117) ..... 47
46. ar medially angled (Rheims & Alayón 2016: fig. 140); SP with internal ducts packed within oblong sclerotized structure; GP small, rounded, with wide base ..... *N. taino* Rheims & Alayón, 2016  
 – ar rounded (Rheims & Alayón 2016: fig. 20); SP S-shaped, winding before anterior twist; GP elongate, at least two times as long as wide (Rheims & Alayón 2016: figs 21–22) .....  
 ..... *N. antiguensis* (Bryant, 1923)
47. MS with anterior margin procurved (Rheims & Alayón 2016: figs 86, 117) ..... 48  
 – MS with anterior margin medially indented (Figs 2A, 5E) ..... 49
48. MS roughly triangular, as wide as long (Rheims & Alayón 2016: fig. 117) .....  
 ..... *N. maroon* Rheims & Alayón, 2016  
 – MS roughly rectangular, wider than long (Rheims & Alayón 2016: fig. 86) .....  
 ..... *N. liguanea* Rheims & Alayón, 2016
49. ar strongly recurved, reaching almost half EF length; MS with medial anterior indentation extending posteriorly along more than half MS length (Fig. 2A); SP with two twists (Fig. 2B–C) ..... *N. aceitillar* sp. nov.  
 – ar gently recurved, not reaching half EF length; MS with anterior median indentation not extending posteriorly (Fig. 5E); SP with three twists (Fig. 5F–G) ..... *N. bani* sp. nov.

*Neostasina aceitillar* sp. nov.

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Figs 1–2, 19

**Diagnosis**

Females of *N. aceitillar* sp. nov. resemble those of *N. bani* sp. nov. (Figs 4D–E, 5E–G) by the epigyne with MS heart-shaped, with anterior median indentation and by the SP packed within a sclerotized structure with internal ducts with more than one twist. They are distinguished from those of the latter species by the indentation extending posteriorly, surpassing half MS length (Figs 1C, 2A) (not extending posteriorly in *N. bani* sp. nov.) and by the SP bearing only two twists (Figs 1D, 2B–C) (three in *N. bani* sp. nov.). Males are unknown.

**Etymology**

The specific name refers to the type locality; noun in apposition.

**Material examined**

**Holotype**

DOMINICAN REPUBLIC • 1 ♀; Pedernales Province, Las Mercedes, El Aceitillar [18.1251, 71.5616]; Carretera Km 17; 1 Feb. 2005; A. Sanchez leg.; MNHNPEJM

**Paratypes**

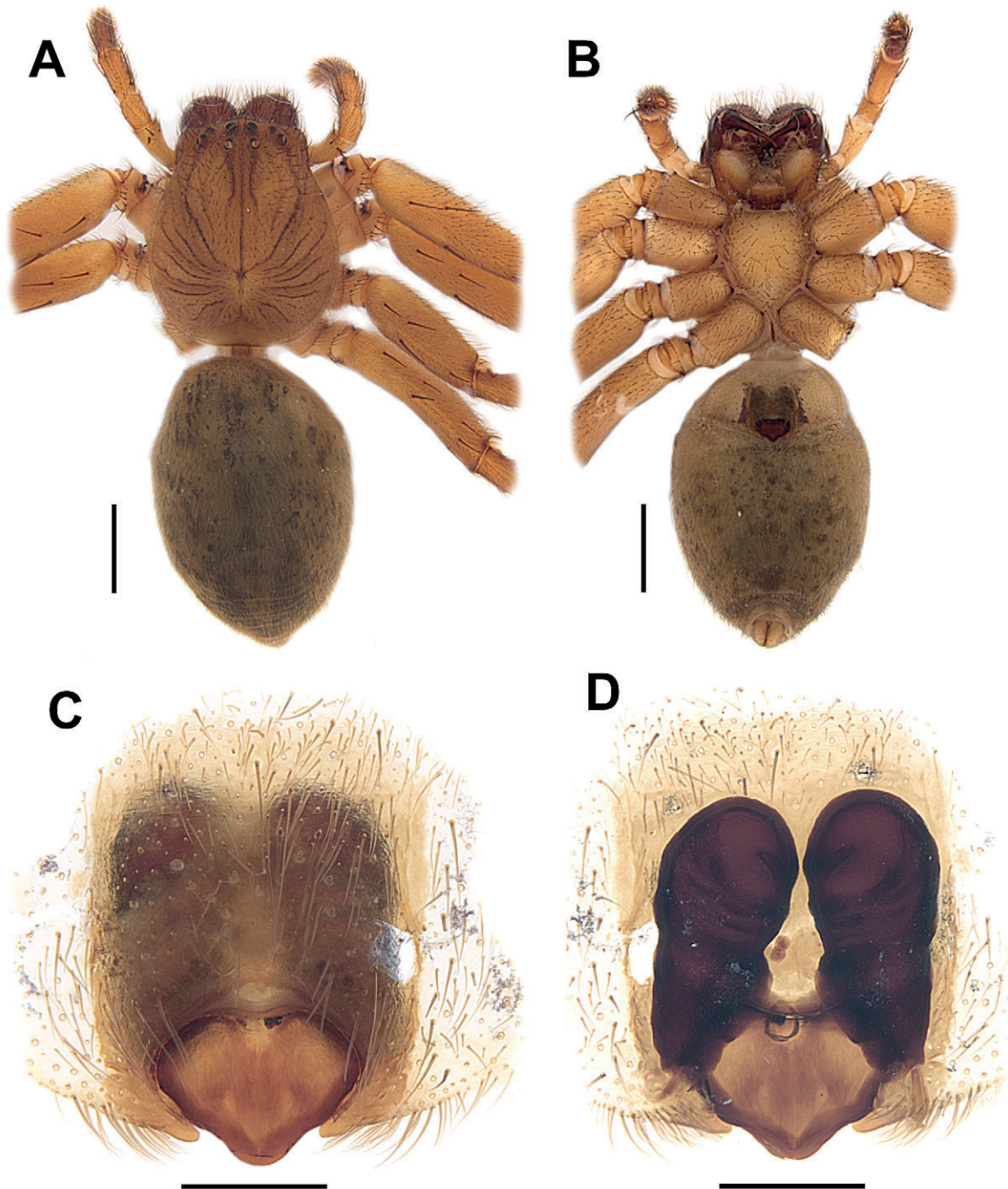
DOMINICAN REPUBLIC • 1 ♀; Duarte Province, Yuma region, Guaraguao, Parque Nacional del Este [18.1011, 68.8161]; La Romana; 7 Jan. 1987; E. Marcano leg.; MNHNPEJM • 2 ♀♀; Independencia Province; El Naranjo [18.3333, 71.6167]; Puerto Escondido, Sierra de Baoruco; 26–27 Jan. 1991; G. Alayón leg.; MNHNPEJM.



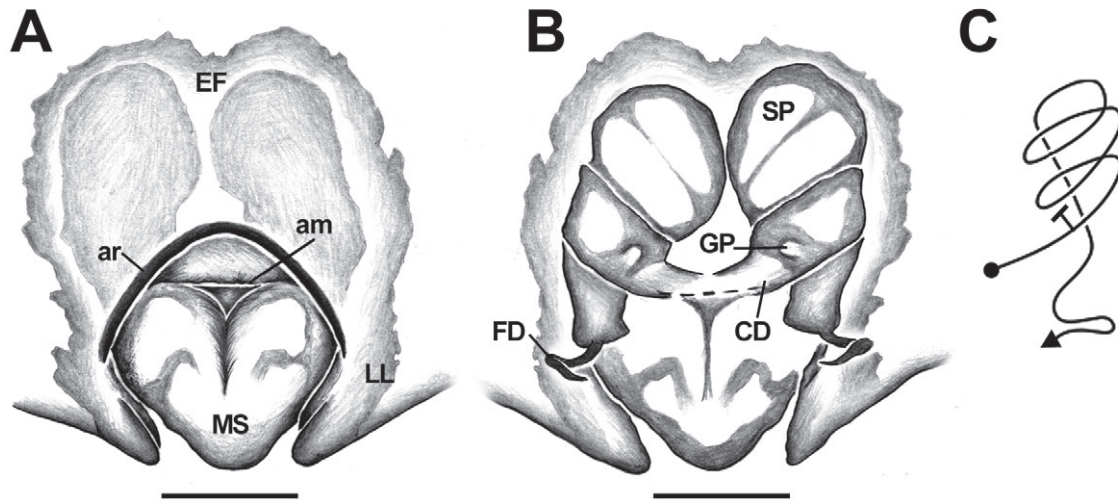
## Description

### Female (holotype)

COLOR. Prosoma pale brownish orange; cephalic region with pair of dark brown stripes extending posteriorly from PME; thoracic region with brown striae extending from fovea to lateral margins; fovea brown; eye borders black. Chelicerae brown, slightly darker than prosoma with pair of longitudinal



**Fig. 1.** *Neostasina aceitillar* sp. nov., A–B: paratype, ♀ (MNHNPJEM), C–D: holotype, ♀ (MNHNPJEM). A. Habitus, dorsal view. B. Habitus, ventral view. C. Epigyne, ventral view. D. Vulva, dorsal view. Scale bars: A–B = 2 mm; C–D = 0.5 mm.



**Fig. 2.** *Neostasina aceitillar* sp. nov., A–B: holotype, ♀ (MNHNPEJM). **A.** Epigyne, ventral view. **B.** Vulva, dorsal view. **C.** Schematic course of internal duct system. Abbreviations: am = anterior margin; ar = anterior rim; CD = copulatory duct; FD = fertilization duct; GP = glandular projection; LL = lateral lobe; MS = median septum. Scale bars = 0.5 mm.

dark brown stripes. Legs and palps pale brownish orange, slightly lighter than prosoma. Labium dark brown, distally cream colored. Endites brown, distally cream colored. Sternum pale brownish orange with slightly darker margins. Opisthosoma brownish gray; dorsally with faint brown pattern of scattered irregular marks; ventrally with few scattered brown spots. Spinnerets pale yellowish brown (Fig. 1A–B).

**MEASUREMENTS.** Total length 16.1, prosoma length 6.6, width 5.3, opisthosoma length 8.8, width 5.5. Eye diameters: 0.41, 0.33, 0.22, 0.32, interdistances: 0.33, 0.40, 0.60, 0.66, 0.30, 0.20. Legs (4213): I: 20.4 (6.0, 3.2, 5.5, 4.6, 1.1); II: 20.9 (6.2, 3.2, 5.2, 5.1, 1.2); III: 17.0 (5.3, 2.8, 3.8, 4.1, 1.0); IV: 21.2 (6.4, 2.5, 4.7, 6.0, 1.6).

**EPIGYNE.** EF longer than wide; ar entire, strongly recurved, not covering the anterior margin of MS; MS wider than long, posterior margin at level with tips of posterior projections of LL (Figs 1C, 2A).

**VULVA.** GP longer than wide, antero-mediad; FD mediad (Figs 1D, 2B–C).

### Distribution

Known from the Dominican Republic (Pedernales and Independencia Provinces) (Fig. 19).

### *Neostasina bani* sp. nov.

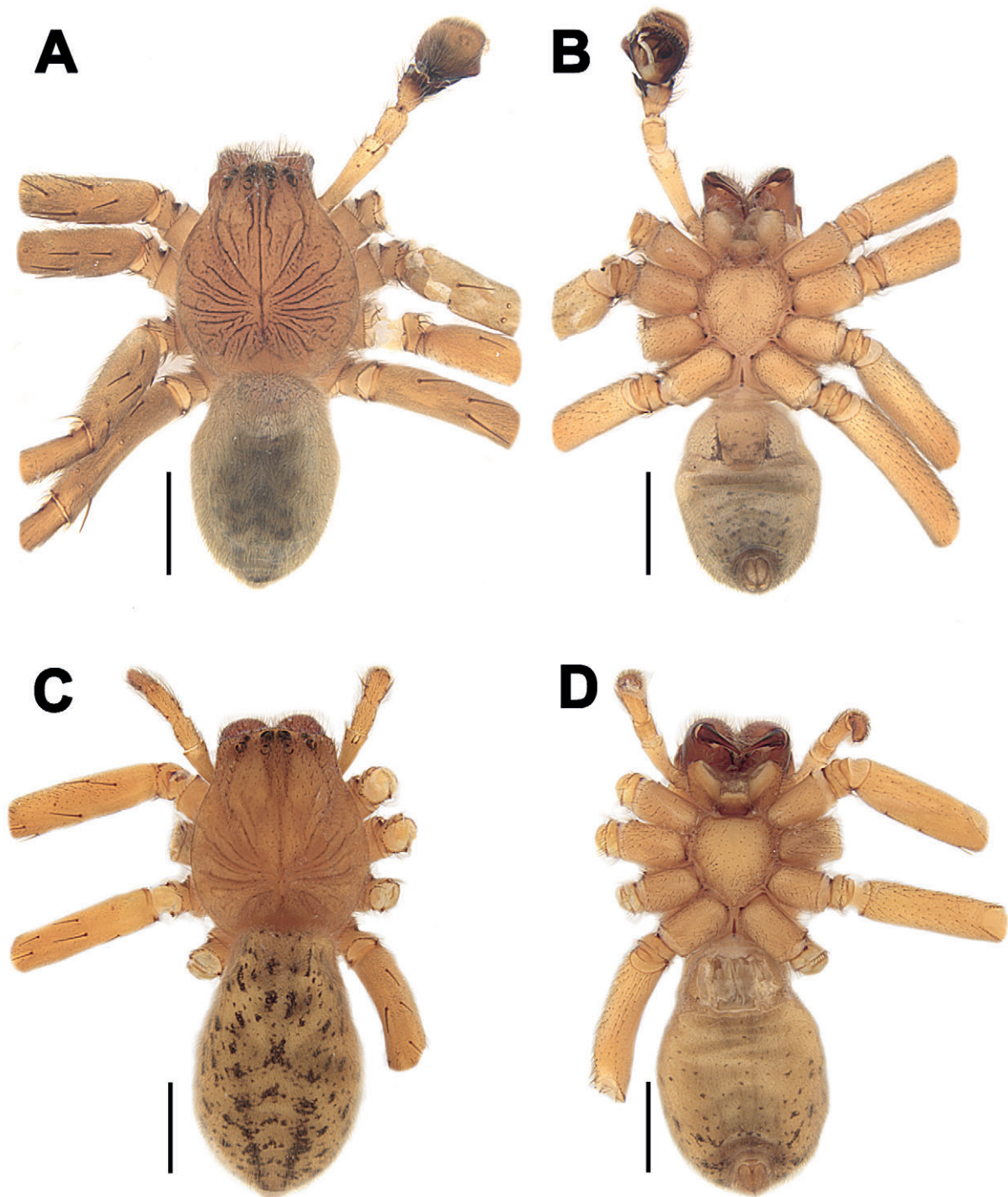
urn:lsid:zoobank.org:act:BE862A5A-CDB1-49D7-A969-4084F68B1C09

Figs 3–5, 19

### Diagnosis

Males of *N. bani* sp. nov. resemble those of *N. oualie* (Rheims & Alayón 2016: figs 123–125) by the palps with vRTA reduced to a small bump at the base of dRTA and by lacking TBC. They are distinguished by

lacking spine-like eRTA, by TBE single and E arising from tegulum at 9 o'clock position (Fig. 5B–D) (eRTA present, TBE bifid and E filiform, arising from tegulum at 7 o'clock position in *N. oualie*). Females resemble those of *N. acetillar* sp. nov. (Figs 1C–D, 2A–C) by the epigyne with MS heart-shaped, bearing a medial anterior indentation and by the SP packed within a sclerotized structure with internal



**Fig. 3.** *Neostasina bani* sp. nov., A–B: holotype, ♂ (MNHNPEJM), C–D: paratype, ♀ (MNHNPEJM). A. Habitus, dorsal view. B. Habitus, ventral view. C. Habitus, dorsal view. D. Habitus, ventral view. Scale bars = 2 mm.

ducts bearing more than one twist. They are distinguished from those of the latter species by the medial indentation not extending posteriorly (Figs 4D, 5E) (extending posteriorly, surpassing half MS length in *N. acitillar* sp. nov.) and by the SP bearing three twists (Figs 4E, 5F–G) (only two in *N. acitillar* sp. nov.).

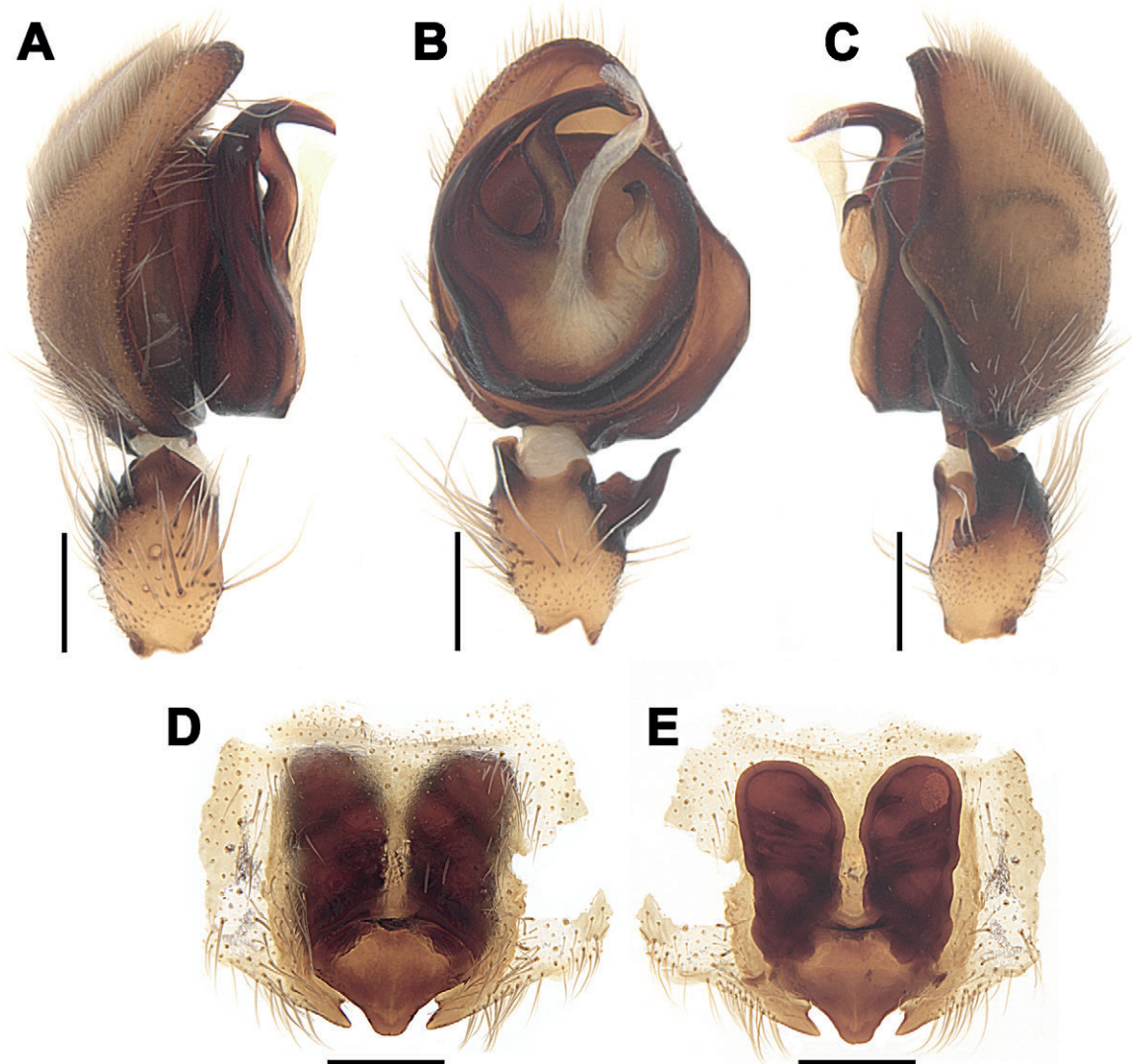
### Etymology

The specific name refers to the type locality; noun in apposition.

### Material examined

#### Holotype

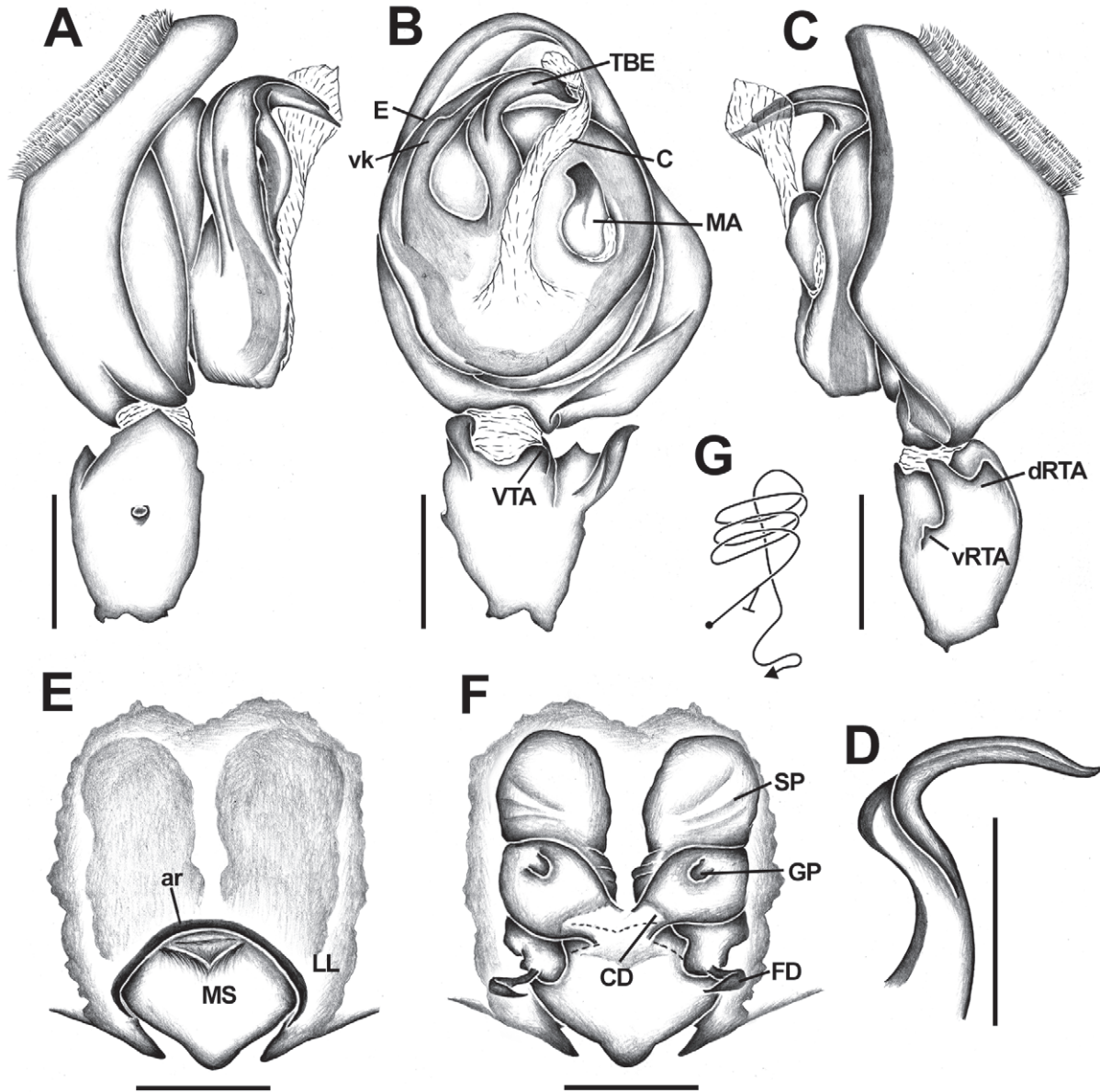
DOMINICAN REPUBLIC • 1 ♂; Peravia Province, Valdesia region, Baní [18.2796, 70.3318]; between Honduras-Matadero; 17 Dec. 2009; E. Gutierrez, A. Perez and H. Andújar leg.; MNHNPEJM.



**Fig. 4.** *Neostasina bani* sp. nov., A–C: holotype, ♂ (MNHNPEJM), D–E: paratype, ♀ (MNHNPEJM). A. Left palp, prolateral view. B. Left palp, ventral view. C. Left palp, retrolateral view. D. Epigyne, ventral view. E. Vulva, dorsal view. Scale bars = 0.5 mm.

**Paratypes**

DOMINICAN REPUBLIC • 1 ♀, 4 juveniles; same collection data as for holotype; MNHNPEJM • 1 ♀, 4 juveniles; same collection data as for holotype; MNHNPEJM • 2 ♀♀; Independencia Province, Isla Cabritos; [18.4830, 71.6830]; Lago Enriquillo; 28 Mar. 1986, Cicero and Marcano leg.; MNHNPEJM.



**Fig. 5.** *Neostasina bani* sp. nov., A–D: holotype, ♂ (MNHNPEJM), E–F: paratype, ♀ (MNHNPEJM). A. Left palp, prolateral view. B. Left palp, ventral view. C. Left palp, retrolateral view. D. TBE, detail, ventral view. E. Epigyne, dorsal view. F. Vulva, ventral view. G. Schematic course of internal duct system. Abbreviations: ar = anterior rim; C = conductor; CD = copulatory duct; dRTA = dorsal branch of RTA; E = embolus; FD = fertilization duct; GP = glandular projection; LL = lateral lobe; MA = median apophysis; MS = median septum; SP = spermathecae; TBC=tegular projection at base of conductor; TBE = tegular projection at base of embolus; vk = ventral keel; vRTA = ventral branch of RTA; VTA = ventral tibial apophysis. Scale bars = 0.5 mm.

## Description

### Male (holotype)

COLOR. Prosoma pale orange; cephalic region with brown lines along lateral margins end extending posteriorly from PME; thoracic region with brown lines extending from fovea to lateral margins; fovea brown; eye borders black. Chelicerae orange, slightly darker than prosoma. Legs and palps pale orange. Labium pale brown, distally pale yellow. Endites pale yellow, distally cream colored. Sternum pale yellow. Opisthosoma greyish cream colored; dorsally with barely distinguishable pattern with brown chevrons on posterior half; ventrally with few scattered brown spots. Spinnerets pale orange, distally lighter (Fig. 3A–B).

MEASUREMENTS. Total length 8.2, prosoma length 3.9, width 3.6, opisthosoma length 4.3, width 2.9. Eye diameters: 0.30, 0.23, 0.17, 0.22; interdistances: 0.15, 0.15, 0.37, 0.36, 0.17, 0.09. Legs (1243): I: 16.8 (4.8, 2.2, 4.4, 4.4, 1.0); II: 16.6 (4.7, 2.2, 4.4, 4.3, 1.0); III: 12.8 (3.9, 1.7, 3.0, 3.3, 0.9); IV: 15.4 (4.6, 1.2, 3.8, 4.7, 1.1).

PALP. VTA large, distally rounded, displaced retrolaterally; dRTA distally bifid with two points, the ventral one longer; cymbium bulging retrolaterally, without retroproximal protrusion; bulb lacking protrusions; E with long ventral keel; TBE strongly curved subdistally; C distally fanned; MA arising from tegulum at 9 o'clock position (Figs 4A–C, 5A–D).

### Female (paratype)

COLOR. Coloration pattern as in male; prosoma with less conspicuous brown markings; opisthosoma with stronger brown pattern of scattered brown marks laterally and undefined chevrons medially down posterior half (Fig. 3C–D).

MEASUREMENTS. Total length 11.7, prosoma length 5.0, width 4.2, opisthosoma length 6.1, width 3.4. Eye diameters: 0.30, 0.25, 0.20, 0.25; interdistances: 0.22, 0.30, 0.47, 0.45, 0.23, 0.10. Legs (2143): I: 16.1 (4.6, 2.7, 4.0, 3.9, 0.9); II: 16.7 (4.9, 2.7, 4.2, 4.0, 0.9); III: 12.9 (4.0, 2.0, 3.0, 3.0, 0.9); IV: 16.0 (4.9, 2.0, 3.7, 4.4, 1.0).

EPIGYNE. EF longer than wide; ar entire, recurved, not covering anterior margin of MS; MS wider than long with posterior margin slightly surpassing tips of posterior projections of LL (Figs 4D, 5E).

VULVA. GP slightly longer than wide, postero-mediad; FD hook-shaped mediad (Figs 4E, 5F–G).

## Variation

Two females: total length 10.7–13.3; prosoma length 4.7–5.5; femur I length 3.9–4.6.

## Distribution

Known from the Dominican Republic (Peravia and Independencia Provinces) (Fig. 19).

### *Neostasina demaco* sp. nov.

urn:lsid:zoobank.org:act:A8C47D2D-06BE-4D20-AC69-6E860212D77B

Figs 6, 8A–C, 19

## Diagnosis

Females of *N. demaco* sp. nov. resemble those of *N. turquino* (Rheims & Alayón 2016: figs 143–145) by the epigyne with MS subrectangular. They are distinguished from the latter species by the ar mostly straight and posterior margin of MS at level with tips of posterior projections of LL (Fig. 8A) (ar M-shaped and MS surpassing tips of posterior projections of LL in *N. turquino*). Males are unknown.

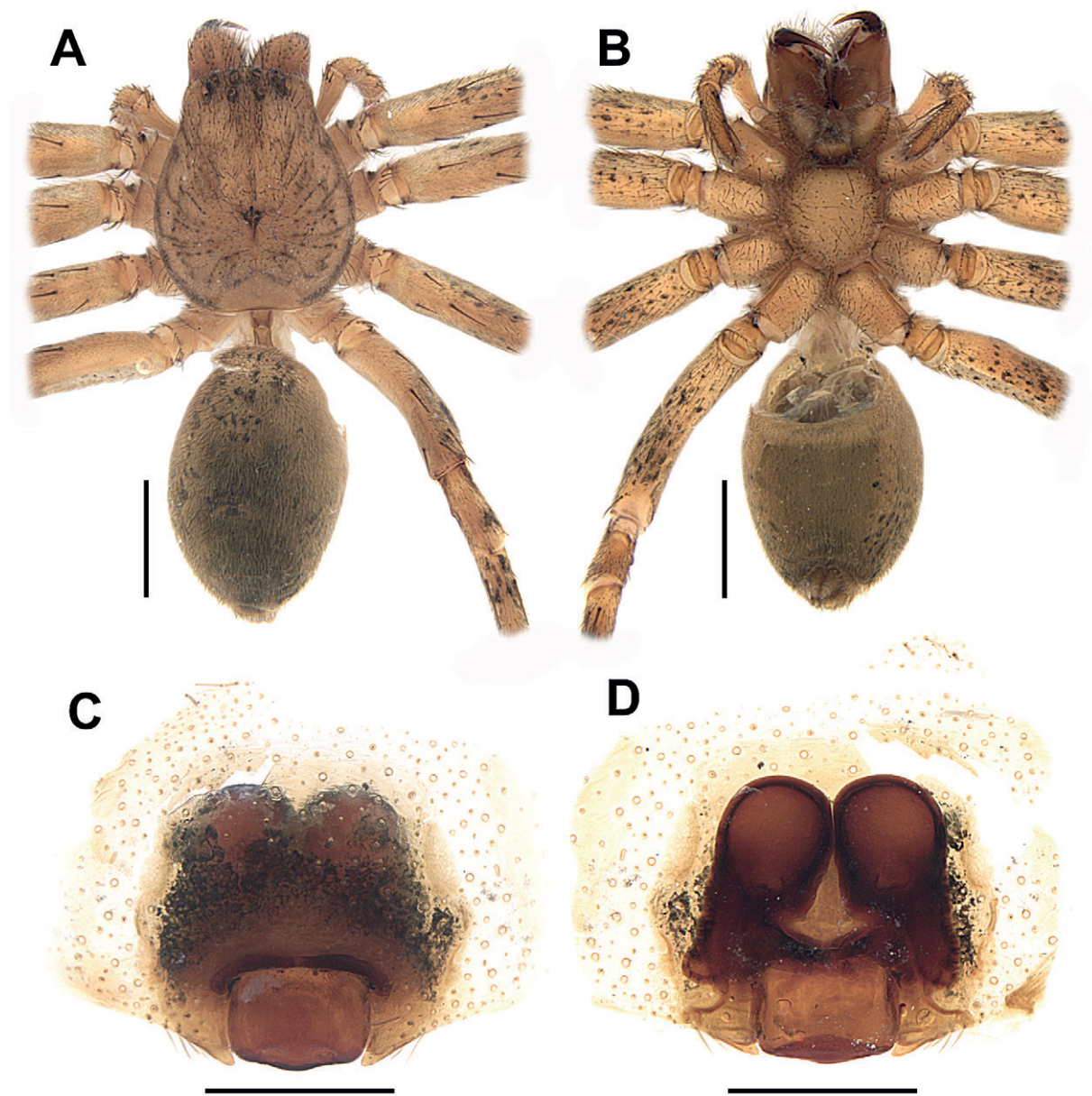
### Etymology

The specific name refers to the type locality; noun in apposition.

### Material examined

#### Holotype

DOMINICAN REPUBLIC • 1 ♀; Santiago Rodríguez Province; Parque Nacional Nalga de Maco [19.2000, 71.4833]; 7 Dec. 2009, G. Alayón leg.; MNHNPEJM.



**Fig. 6.** *Neostasina demaco* sp. nov., holotype, ♀ (MNHNPEJM). **A.** Habitus, dorsal view. **B.** Habitus, ventral view. **C.** Epigyne, ventral view. **D.** Vulva, dorsal view. Scale bars: A–B = 2 mm; C–D = 0.5 mm.

## Description

### Female (holotype)

COLOR. Prosoma pale brown; cephalic region with faint lines extending posteriorly from PME; thoracic region with brown margins and scattered markings between thoracic striae; fovea brown; eye borders black. Chelicerae brownish orange, slightly darker than prosoma. Legs and palps pale brown with scattered brown spots. Labium and endites brown, distally pale brown. Sternum pale brown with slightly darker margins. Opisthosoma brownish gray; dorsally with few gray spots anteriorly (Fig. 6A–B).

MEASUREMENTS. Total length 10.3, prosoma length 5.1, width 3.4, opisthosoma length 4.6, width 3.0. Eye diameters: 0.23, 0.20, 0.15, 0.19; interdistances: 0.22, 0.17, 0.40, 0.36, 0.22, 0.10. Legs (2143): I: 12.3 (3.6, 2.0, 3.2, 2.8, 0.7); II: 12.8 (3.8, 2.0, 3.2, 3.0, 0.8); III: 10.0 (3.2, 1.6, 2.2, 2.3, 0.7); IV: 12.2 (3.9, 1.5, 2.5, 3.4, 0.9).

EPIGYNE. EF as long as wide; ar entire; MS wider than long (Figs 6C, 8A).

VULVA. GP longer than wide, postero-mediad; SP encapsulated within sclerotized structure, with internal ducts inconspicuous; FD postero-mediad (Figs 6D, 8B–C).

## Distribution

Only known from the type locality in the Dominican Republic (Santiago Rodríguez Province) (Fig. 19).

### *Neostasina juanita* sp. nov.

urn:lsid:zoobank.org:act:C888A953-6E72-42B8-9210-BDAD0925E354

Figs 7, 8D–F, 21

## Diagnosis

Females of *N. juanita* sp. nov. resemble those of *N. taino* (Rheims & Alayón 2016: figs 140–142) and *N. toronegro* sp. nov. (Fig. 16A–C) by the epigyne with ar entire, recurved and MS subpentagonal. They are distinguished from both species by the spermathecae free, not encapsulated within a sclerotized structure (Fig. 8E) (encapsulated in the other species). They are additionally distinguished from *N. taino* by the ar completely covering the anterior margin of MS (not covering the anterior margin in *N. taino*) and from *N. toronegro* sp. nov. by the ar medially angled (Fig. 8D) (evenly curved *N. toronegro* sp. nov.). Males are unknown.

## Etymology

The specific name refers to the type locality; noun in apposition.

## Material examined

### Holotype

PUERTO RICO • 1 ♀; Maricao [18.1808, 66.9799]; Hacienda Juanita; old coffee plantation, 660 m a.s.l.; 2 Apr. 1989; H.L. Levi leg.; MCZ 30720.

## Description

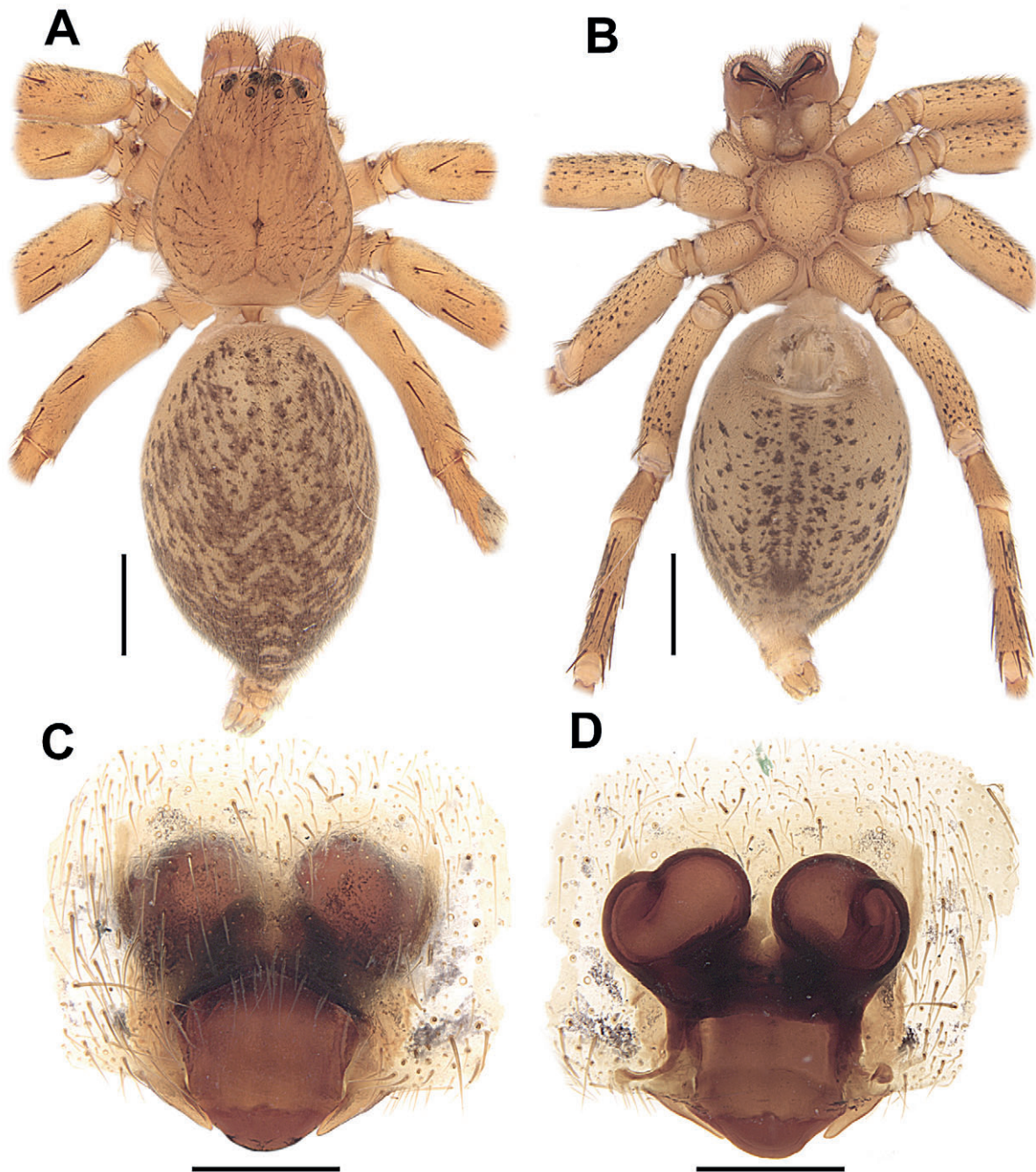
### Female (holotype)

COLOR. Prosoma pale orange brown; cephalic region with faint brown lines extending posteriorly from PME and PLE; thoracic region with faint brown margins and scattered margins between thoracic striae; fovea brown; eye borders black. Chelicerae slightly darker than prosoma. Legs as prosoma, slightly lighter; ventrally with scattered brown spots. Palps as prosoma. Labium brown, distally pale orange,



Endites pale brownish orange, distally pale brownish yellow. Sternum pale orange brown with faint pale brown margins. Opisthosoma yellowish cream colored; dorsally with scattered irregular marks laterally and on anterior half and six median brown chevrons down posterior half (Fig. 7A–B).

MEASUREMENTS. Total length 13.0, prosoma length 4.9, width 4.1, opisthosoma length 7.8, width 4.9. Eye diameters: 0.30, 0.25, 0.16, 0.22; interdistances: 0.25, 0.25, 0.53, 0.46, 0.21, 0.10. Legs (2143): I: 15.5



**Fig. 7.** *Neostasina juanita* sp. nov., holotype, ♀ (MCZ 30720). **A.** Habitus, dorsal view. **B.** Habitus, ventral view. **C.** Epigyne, ventral view. **D.** Vulva, dorsal view. Scale bars: A–B = 2 mm; C–D = 0.5 mm.

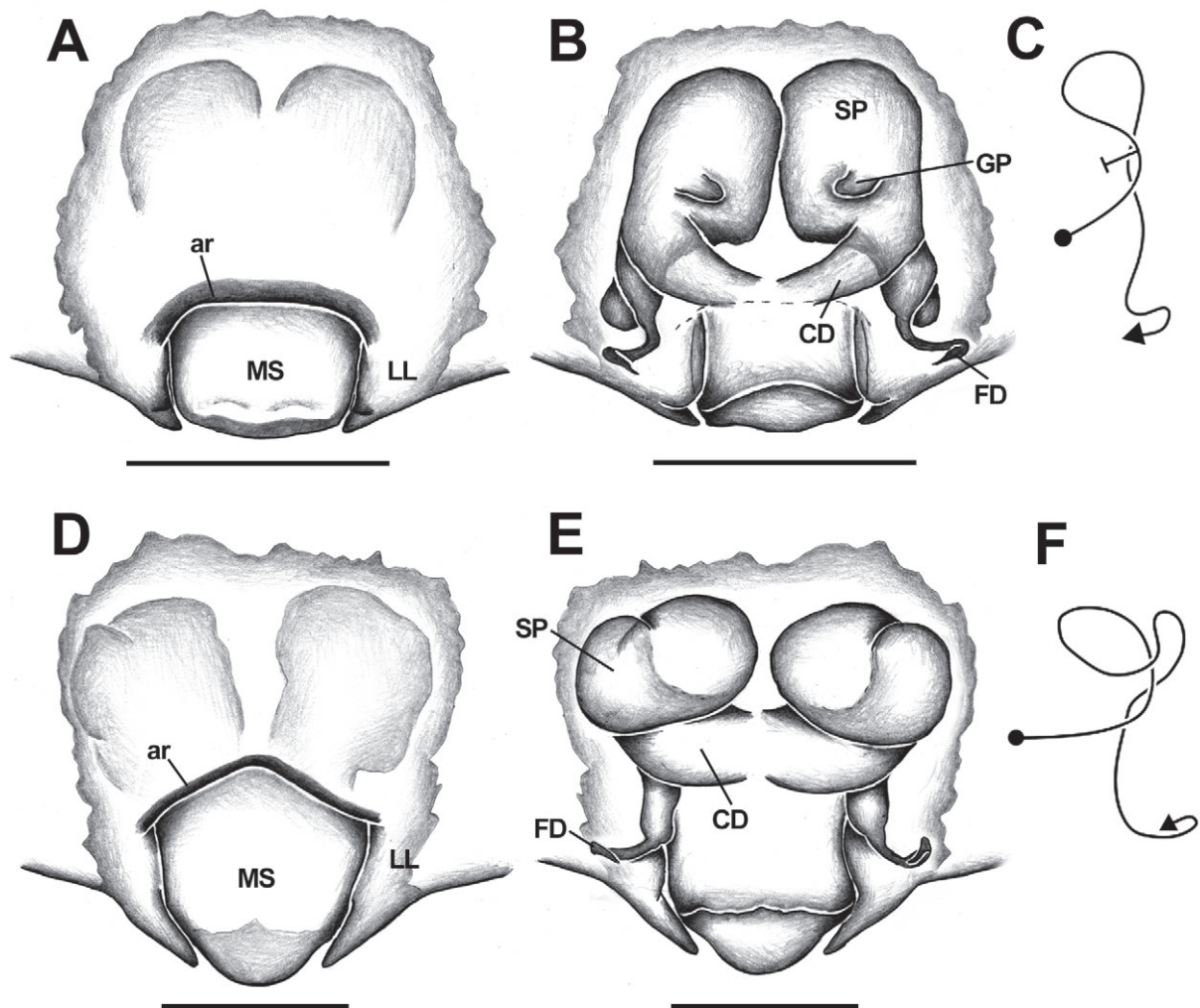
(4.4, 2.3, 4.3, 3.6, 0.9); II: 16.2 (4.9, 2.5, 4.2, 3.7, 0.9); III: 12.9 (4.0, 2.1, 2.9, 3.0, 0.9); IV: 14.8 (4.5, 1.7, 3.5, 4.0, 1.1).

EPIGYNE. EF slightly longer than wide; MS roughly as long as wide with posterior margin rounded slightly surpassing tips of posterior projections of LL (Figs 7C, 8D).

VULVA. GP inconspicuous; SP with single anterior twist; FD postero-medial (Figs 7D, 8E–F).

### Distribution

Only known from the type locality in Maricao, Puerto Rico (Fig. 21).



**Fig. 8.** A–C. *Neostasina demaco* sp. nov., holotype, ♀ (MNHNPEJM). A. Epigyne, ventral view. B. Vulva, dorsal view. C. Schematic course of internal duct system. D–F. *Neostasina juanita* sp. nov., holotype, ♀ (MCZ 30720). D. Epigyne, ventral view. E. Vulva, dorsal view. F. Schematic course of internal duct system. Abbreviations: ar = anterior rim; CD = copulatory duct; FD = fertilization duct; GP = glandular projection; LL = lateral lobe; MS = median septum. Scale bars = 0.5 mm.

*Neostasina maisi* sp. nov.

urn:lsid:zoobank.org:act:1CA9AFFC-3FD1-4A3A-9755-BE4B998212D9

Figs 9–11, 18

**Diagnosis**

Males of *N. maisi* sp. nov. are distinguished from all congeners by the palps with TBE bifid, with longer branch filiform and the other small and thorn-like (Fig. 11 B–C). Females resemble those of *N. baoruco* (Rheims & Alayón 2016: fig. 23) by the epigyne with ar divided and MS roughly triangular. They are distinguished from the latter species by the spermathecae anteriorly globose with smooth lateral margins (Fig 11A) (inverted U-shaped with outer lateral margins bearing indentations in *N. baoruco*).

**Etymology**

The specific name refers to the type locality; noun in apposition.

**Material examined**

**Holotype**

CUBA • 1 ♂; Guantanamo Province, Maisi [20.2667, 74.2000]; Punta de Maisi; 8 Aug. 1998; A. Sánchez leg.; MNHNCu.

**Paratypes**

CUBA • 2 ♀♀; same collection data as for holotype; MNHNCu.

**Description**

**Male (holotype)**

**COLOR.** Prosoma pale brownish orange; cephalic region with pale brown lines extending posteriorly from PME and PLE; thoracic region darker along thoracic striae, with thin brown lines extending from fovea to lateral margins; fovea brown; eye borders black. Chelicerae slightly darker than prosoma. Legs and palps lighter than prosoma. Labium brown distally pale brown. Endites pale brown distally yellowish cream colored. Opisthosoma yellowish cream colored; dorsally with brown pattern of irregular elongated marks laterally, four pairs of irregularly rounded marks around cardiac mark and six median chevrons down posterior half; ventrally with few elongated marks laterally and few scattered spots. Spinnerets yellowish cream colored (Fig. 9A–B).

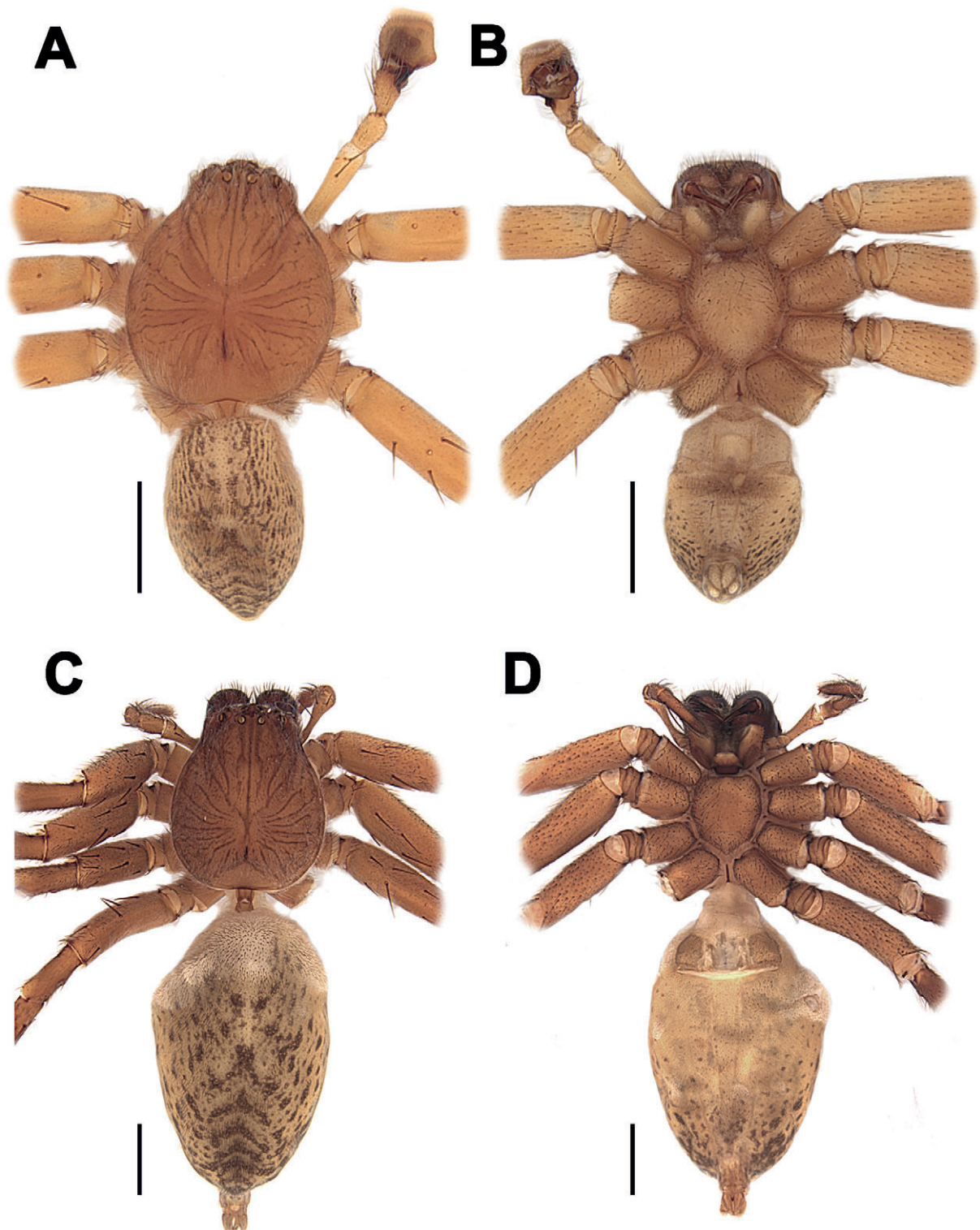
**MEASUREMENTS.** Total length 8.4, prosoma length 4.4, width 3.8, opisthosoma length 3.8, width 2.5. Eye diameters: 0.30, 0.25, 0.20, 0.25; interdistances: 0.18, 0.14, 0.30, 0.32, 0.15, 0.09. Legs: I: 15.7 (4.4, 2.3, 4.0, 4.0, 1.0); II: 16.4 (4.8, 2.4, 4.2, 4.0, 1.0); III: 12.8 (4.0, 2.0, 2.9, 3.0, 0.9); IV: absent.

**PALP.** VTA reduced to small medial bump; vRTA as large as dRTA fin-shaped in ventral view, club-shaped in retrolateral view; dRTA tapering in ventral view; cymbium bulging retrolaterally; bulb with pt at 7 o'clock position; E arising from tegulum at 8–9 o'clock position; TBC massive, thumb-shaped; MA arising from tegulum at 4 o'clock position; C with the same width throughout its entire length (Figs 10A–C, 11A–D).

**Female (paratype)**

**COLOR.** Coloration pattern as in male; prosoma, chelicerae, legs and palps darker (Fig. 9C–D).

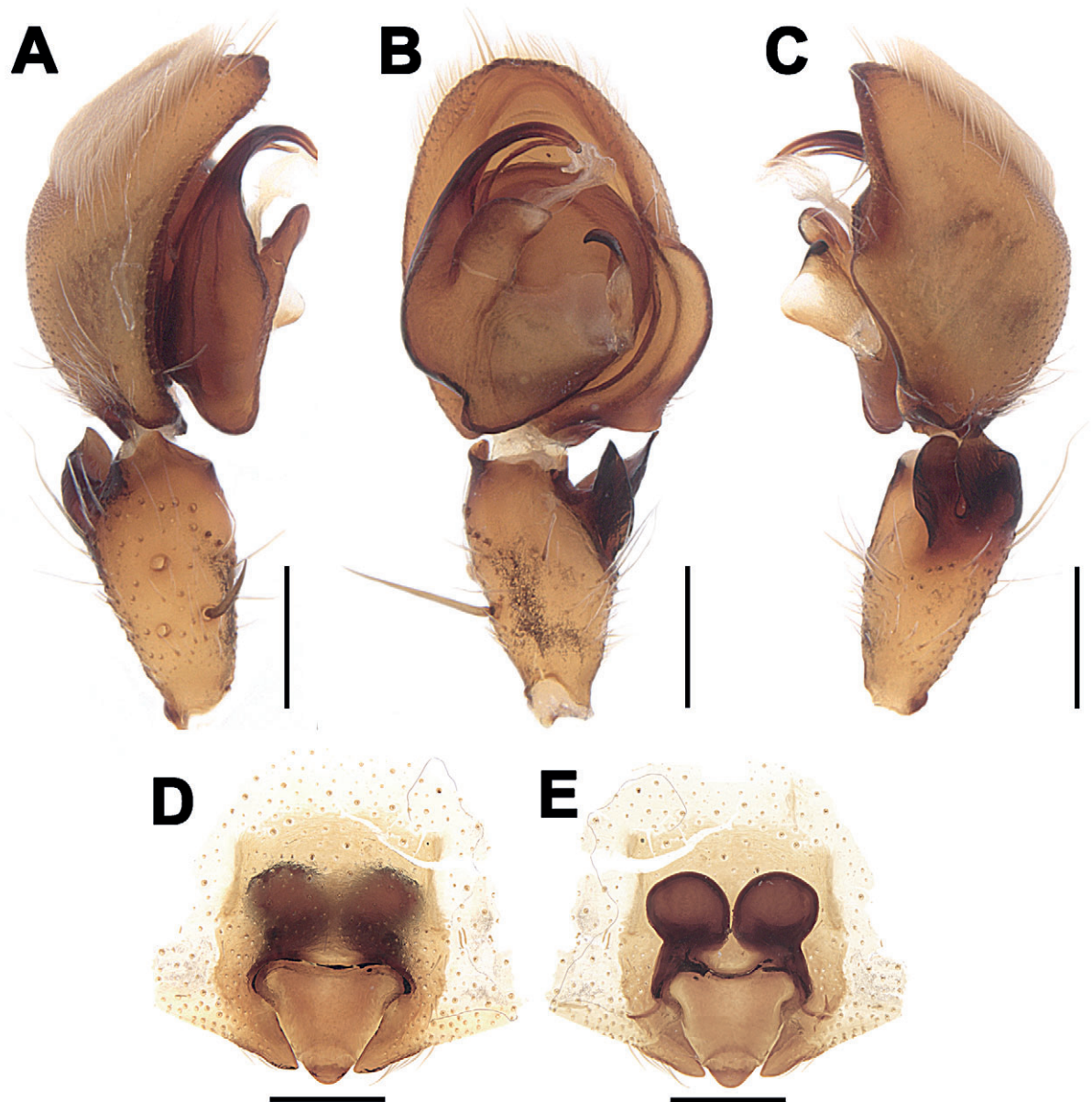
**MEASUREMENTS.** Total length 13.9; prosoma length 5.1, width 4.4; opisthosoma length 8.4, width 5.0. Eye diameters: 0.32, 0.25, 0.21, 0.26; interdistances: 0.20, 0.25, 0.42, 0.45, 0.19, 0.12. Legs (2413): I: 15.1 (4.3, 2.5, 3.9, 3.5, 0.9); II: 15.7 (4.6, 2.5, 4.0, 3.7, 0.9); III: 12.9 (4.1, 2.1, 2.9, 3.0, 0.8); IV: 15.5 (4.7, 2.0, 3.6, 4.2, 1.0).



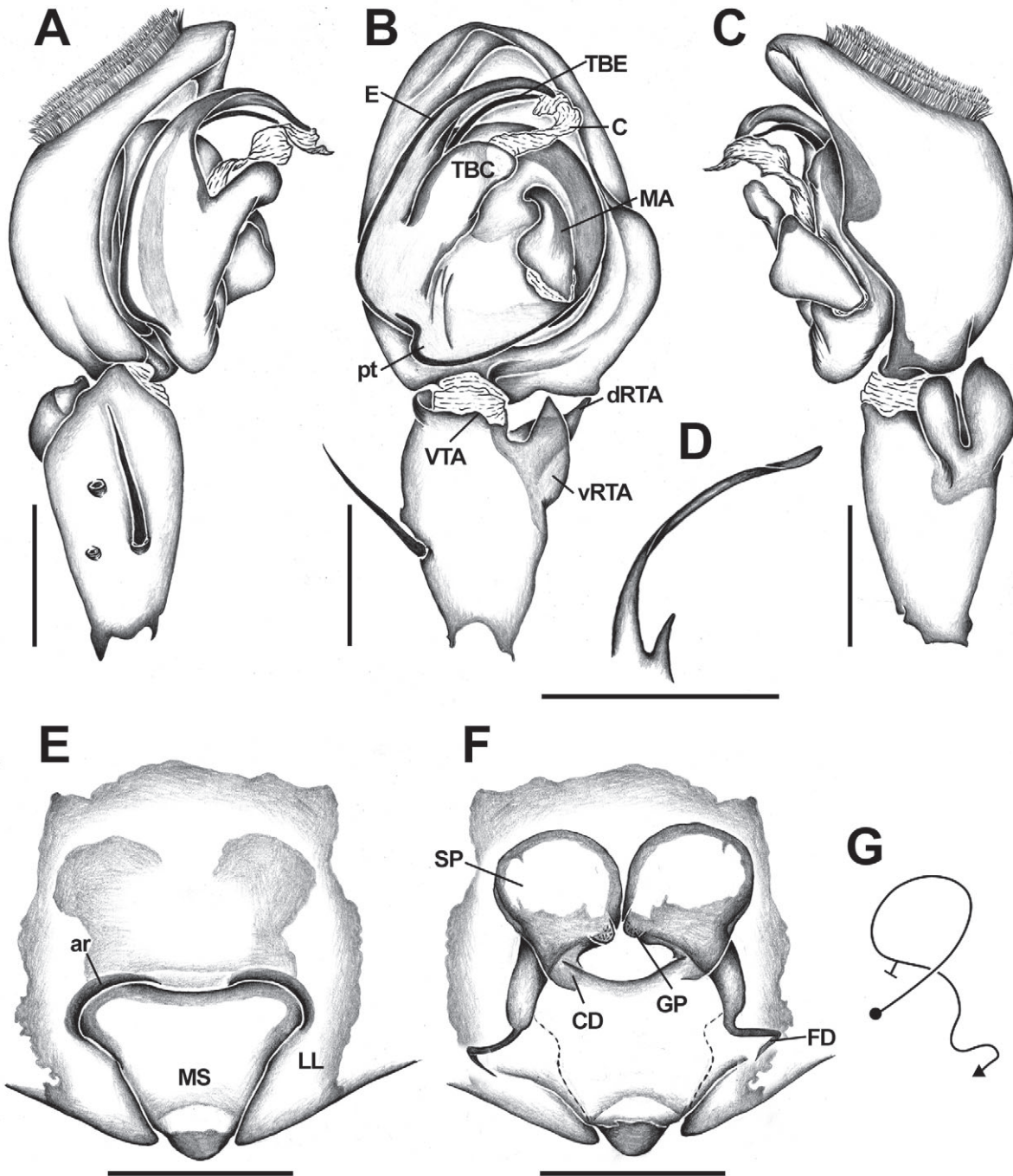
**Fig. 9.** *Neostasina maisi* sp. nov., A–B: holotype, ♂ (MNHNCu), C–D: paratype ♀ (MNHNCu). A. Habitus, dorsal view. B. Habitus, ventral view. C. Habitus, dorsal view. D. Habitus, ventral view. Scale bars = 2 mm.

EPIGYNE. EF longer than wide; ar gently curved; MS wider than long with posterior margin rounded, slightly surpassing tips of posterior projections of LL (Figs 10D, 11E).

VULVA. GP rounded, slightly wider than long, postero-mediad; FD hook-shaped, postero-mediad (Figs 10E, 11F–G).



**Fig. 10.** *Neostasina maisi* sp. nov., A–C: holotype, ♂ (MNHNCu), D–E: paratype, ♀ (MNHNCu). **A.** Left palp, prolateral view. **B.** Left palp, ventral view. **C.** Left palp, retrolateral view. **D.** Epigyne, ventral view. **E.** Vulva, dorsal view. Scale bars = 0.5 mm.



**Fig. 11.** *Neostasina maisi* sp. nov., A–D: holotype, ♂ (MNHNCu), E–F: paratype, ♀ (MNHNCu). **A.** Left palp, prolateral view. **B.** Left palp, ventral view. **C.** Left palp, retrolateral view. **D.** TBE, detail, ventral view. **E.** Epigyne, dorsal view. **F.** Vulva, ventral view. **G.** Schematic course of internal duct system. Abbreviations: ar = anterior rim; C = conductor; CD = copulatory duct; dRTA = dorsal branch of RTA; E = embolus; FD = fertilization duct; GP = glandular projection; LL = lateral lobe; MA = median apophysis; MS = median septum; pt = tegular protrusion; SP = spermathecae; TBC = tegular projection at base of conductor; TBE = tegular projection at base of embolus; vRTA = ventral branch of RTA; VTA = ventral tibial apophysis. Scale bars = 0.5 mm.

### Variation

Two females: total length 13.9–14.3; prosoma length 5.1–6.4.

### Distribution

Only known from the type locality in Guantanamo province, Cuba (Fig. 18)

### *Neostasina paraiso* sp. nov.

urn:lsid:zoobank.org:act:A94F3A61-5AE2-46A5-A900-170C0E8880C5

Figs 12–14, 21

### Diagnosis

Males of *N. paraiso* sp. nov. resemble those of *N. elverde* (Rheims & Alayón 2016: figs 53–56) by the vRTA and dRTA of similar size, E filiform, TBE bifid and subdistally bent retrolaterally and TBC slightly longer than MA. They are distinguished from the latter species by the vRTA pointed and TBE with secondary branch arising medially (Figs 14B–D) (vRTA distally blunt; TBE with secondary branch arising subdistally, close to tip in *N. elverde*). Females resemble those of *N. jamaicana* (Rheims & Alayón 2016: figs 79–81) by the epigyne with EF bearing an anterior groove. They are distinguished from the latter species by the medially depressed groove and by the smooth MS (Fig. 14E) (strongly recurved groove and MS bearing a posterior medial protrusion in *N. jamaicana*).

### Etymology

The specific name refers to the type locality; noun in apposition.

### Material examined

#### Holotype

PUERTO RICO • 1 ♂; Ponce [18.1167, 66.5333]; Hacienda Paraiso; Dec. 1993; E. Gutierrez and A. Pérez leg.; USNM.

#### Paratypes

PUERTO RICO • 1 ♂; Junquillo; El Yunque; Pico del Este [18.2333, 65.7667]; 24 Feb. 2008; J. Mercado leg.; USNM • 1 ♀, Junquillo; El Yunque [18.2833; 65.8000]; 1 Apr. 2008, J. Mercado leg.; USNM.

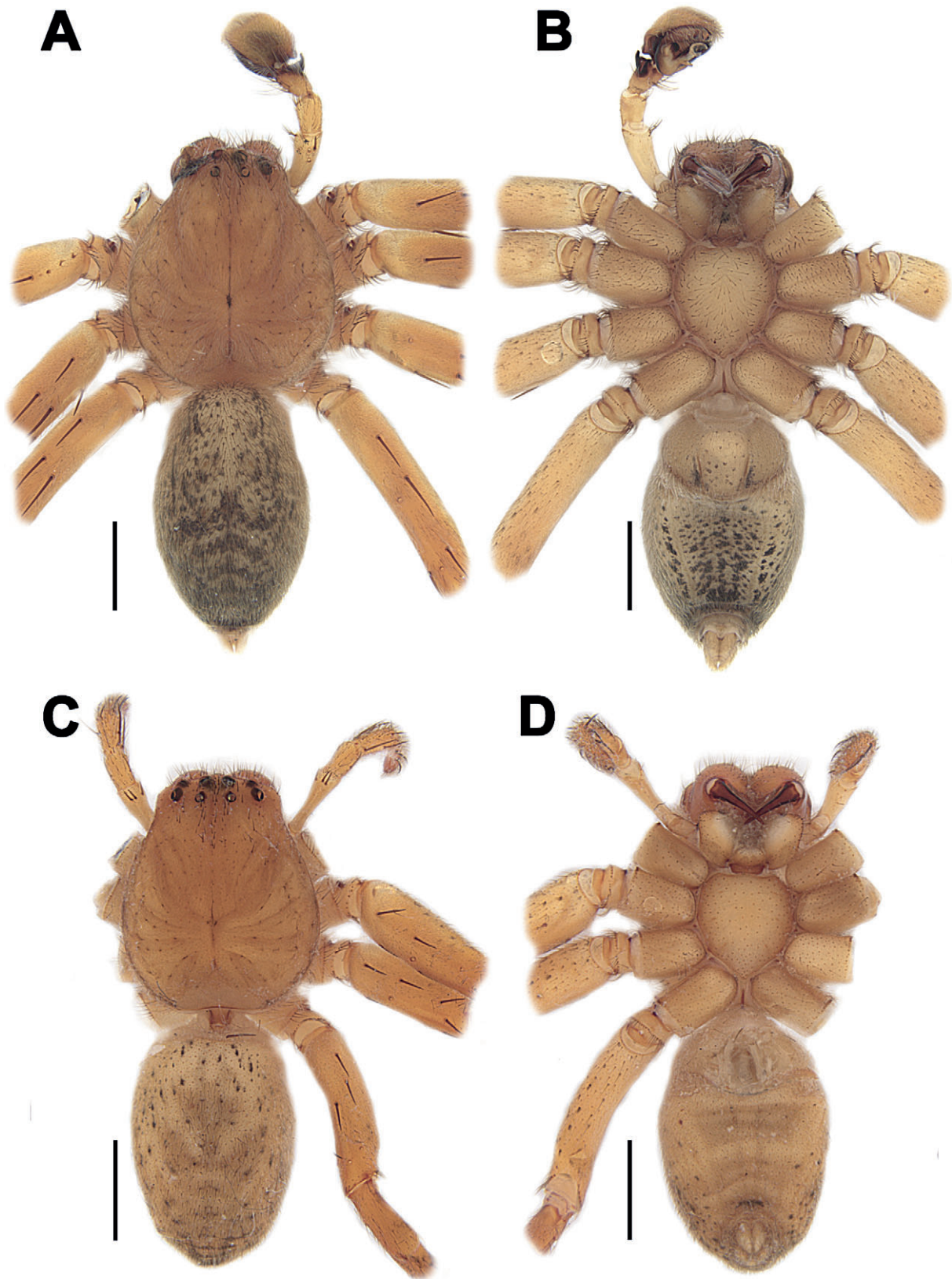
### Description

#### Male (holotype)

COLOR. Prosoma brown with darker margins and few small, scattered brown spots on thoracic region; fovea brown; eye border black. Chelicerae brown. Legs and palps pale brown, with few scattered brown spots ventrally. Labium brown, distally pale orange. Endites pale orange distally pale yellow. Sternum pale orange with slightly darker margins. Opisthosoma brownish gray; dorsally with brown pattern of irregular marks laterally; scattered spots on anterior half and five median chevrons down posterior half; ventrally with scattered brown marks. Spinnerets yellowish cream colored (Fig. 12A–B).

MEASUREMENTS. Total length 11.1; prosoma length 5.3, width 4.7, opisthosoma length 5.6, width 2.9. Eye diameters: 0.38, 0.30, 0.21, 0.27; interdistances: 0.24, 0.19, 0.55, 0.42, 0.18, 0.09. Legs (1/243): I: 21.2 (5.7, 2.8, 5.6, 5.6, 1.5); II: 21.2 (6.0, 2.9, 5.5, 5.4, 1.4); III: 16.5 (5.0, 2.3, 3.9, 4.2, 1.1); IV: 19.1 (5.5, 2.1, 4.5, 5.6, 1.4).

PALP. dRTA pointed in ventral view, distally rounded in retrolateral view, with slender base; VTA arising medial-retrolaterally; cymbium bulging retrolaterally, with large retroproximal protrusion; tegulum



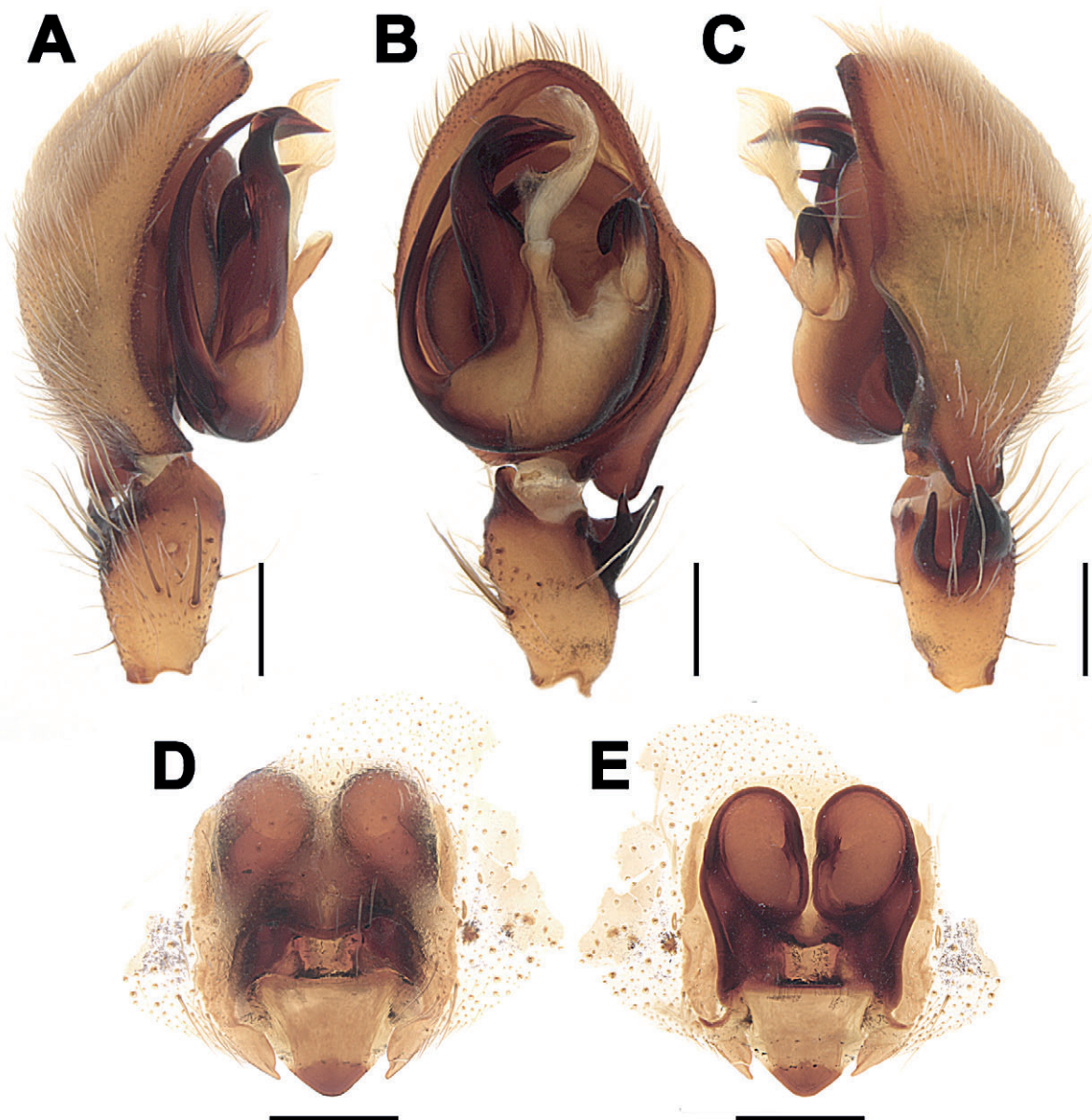
**Fig. 12.** *Neostasina paraiso* sp. nov., A–B: holotype, ♂ (USNM), C–D: paratype, ♀ (USNM). **A.** Habitus, dorsal view. **B.** Habitus, ventral view. **C.** Habitus, dorsal view. **D.** Habitus, ventral view. Scale bars = 2 mm.



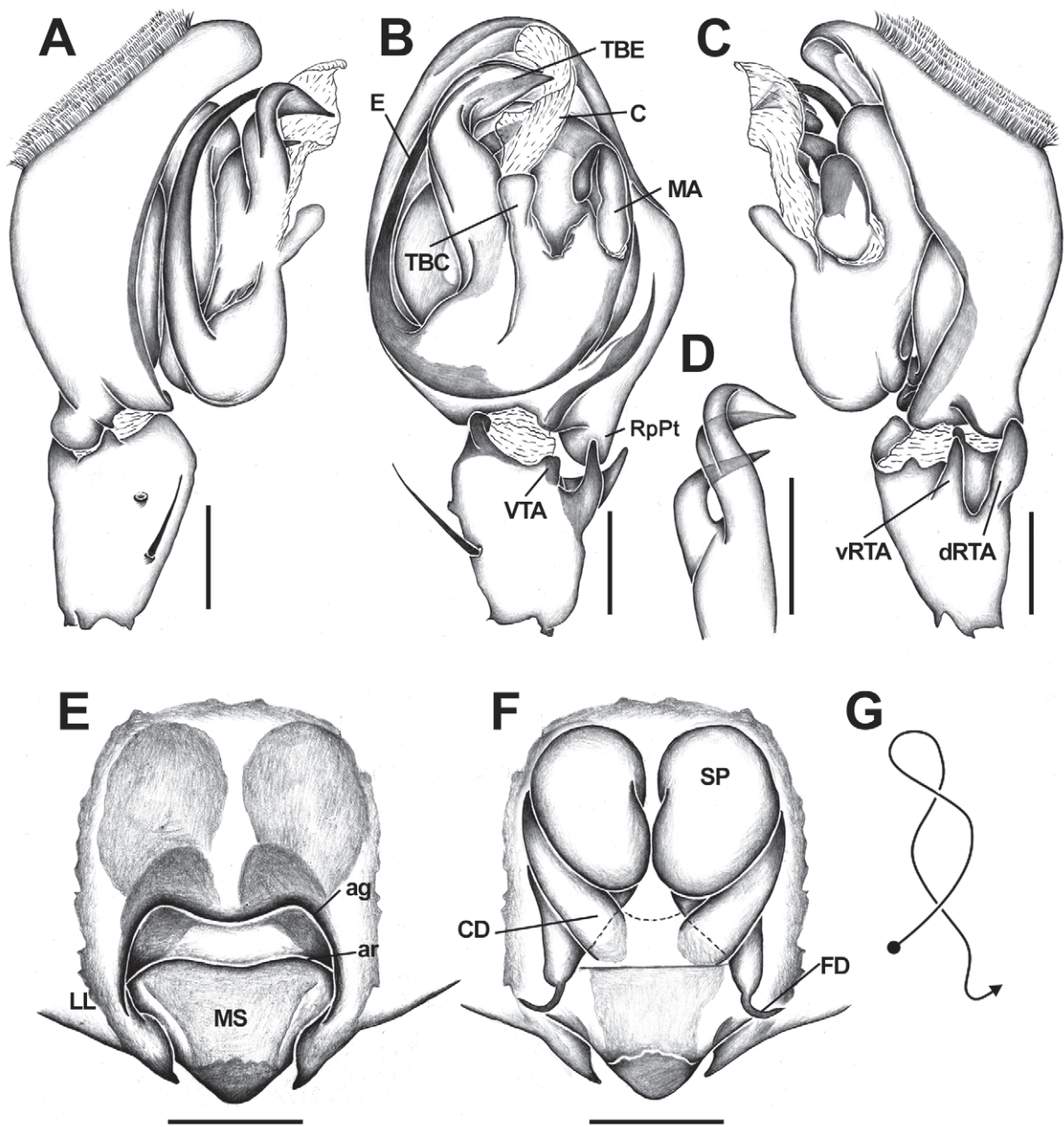
without pt; E filiform, arising from tegulum at 7:30 o'clock; C distally fanned; MA arising from tegulum at 3 o'clock position (Figs 13A–C, 14A–D).

**Female (paratype)**

**COLOR.** Coloration pattern as in male, slightly lighter, with opisthosoma with few scattered brown spots dorsally and no distinctive pattern ventrally (Fig. 12C–D).



**Fig. 13.** *Neostasina paraiso* sp. nov., A–C: ♂, holotype (USNM), D–E: paratype, ♀ (USNM). **A.** Left palp, prolateral view. **B.** Left palp, ventral view. **C.** Left palp, retrolateral view. **D.** Epigyne, ventral view. **E.** Vulva, dorsal view. Scale bars = 0.5 mm.



**Fig. 14.** *Neostasina paraiso* sp. nov., A–D: holotype, ♂ (USNM), E–G: paratype, ♀ (USNM). **A.** Left palp, prolateral view. **B.** Left palp, ventral view. **C.** Left palp, retrolateral view. **D.** TBE, detail, ventral view. **E.** Epigyne, dorsal view. **F.** Vulva, ventral view. **G.** Schematic course of internal duct system. Abbreviations: ag = anterior groove; ar = anterior rim; C = conductor; CD = copulatory duct; dRTA = dorsal branch of RTA; E = embolus; FD = fertilization duct; LL = lateral lobe; MA = median apophysis; MS = median septum; pt = tegular protrusion; RpPt = cymbial retroproximal protrusion; SP = spermathecae; TBC = tegular projection at base of conductor; TBE = tegular projection at base of embolus; vRTA = ventral branch of RTA; VTA = ventral tibial apophysis. Scale bars = 0.5 mm.

MEASUREMENTS. Total length 9.7, prosoma length 4.6, width 3.9, opisthosoma length 4.7, width 3.2. Eye diameters: 0.31, 0.25, 0.18, 0.24; interdistances: 0.26, 0.21, 0.51, 0.45, 0.25, 0.15. Legs: I: absent; II: 14.7 (4.5, 2.3, 4.0, 3.1, 0.8); III: 12.1 (3.8, 1.9, 2.8, 2.8, 0.8); IV: 14.6 (4.3, 1.7, 3.5, 4.0, 1.1).

EPIGYNE. EF longer than wide; MS roughly triangular, wider than long with posterior margin at level with tips of triangular projections of LL (Figs 13D, 14E).

VULVA. GP inconspicuous; SP not encapsulated, with single anterior twist; FD laterad (Figs 13E, 14F–G).

### Variation

Two males: total length 7.8–11.1; prosoma length 3.8–5.3; femur I length 4.4–5.7.

### Distribution

Known from central and eastern Puerto Rico (Fig. 21).

### *Neostasina toronegro* sp. nov.

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Figs 15–16, 21

### Diagnosis

Females of *N. toronegro* sp. nov. resemble those of *N. juanita* sp. nov. and *N. taino* (Rheims & Alayón 2016: figs 140–142) by the subpentagonal shape of the MS. They are distinguished from the latter species by the ar evenly curved (Fig. 16A) (medially angled in the other species). Males are unknown.

### Etymology

The specific name refers to the type locality; noun in apposition.

### Material examined

#### Holotype

PUERTO RICO • 1 ♀; Orocovis; Toro Negro State Forest [18.1667, 66.4833]; 29 Aug. 1967; MCZ 30719.

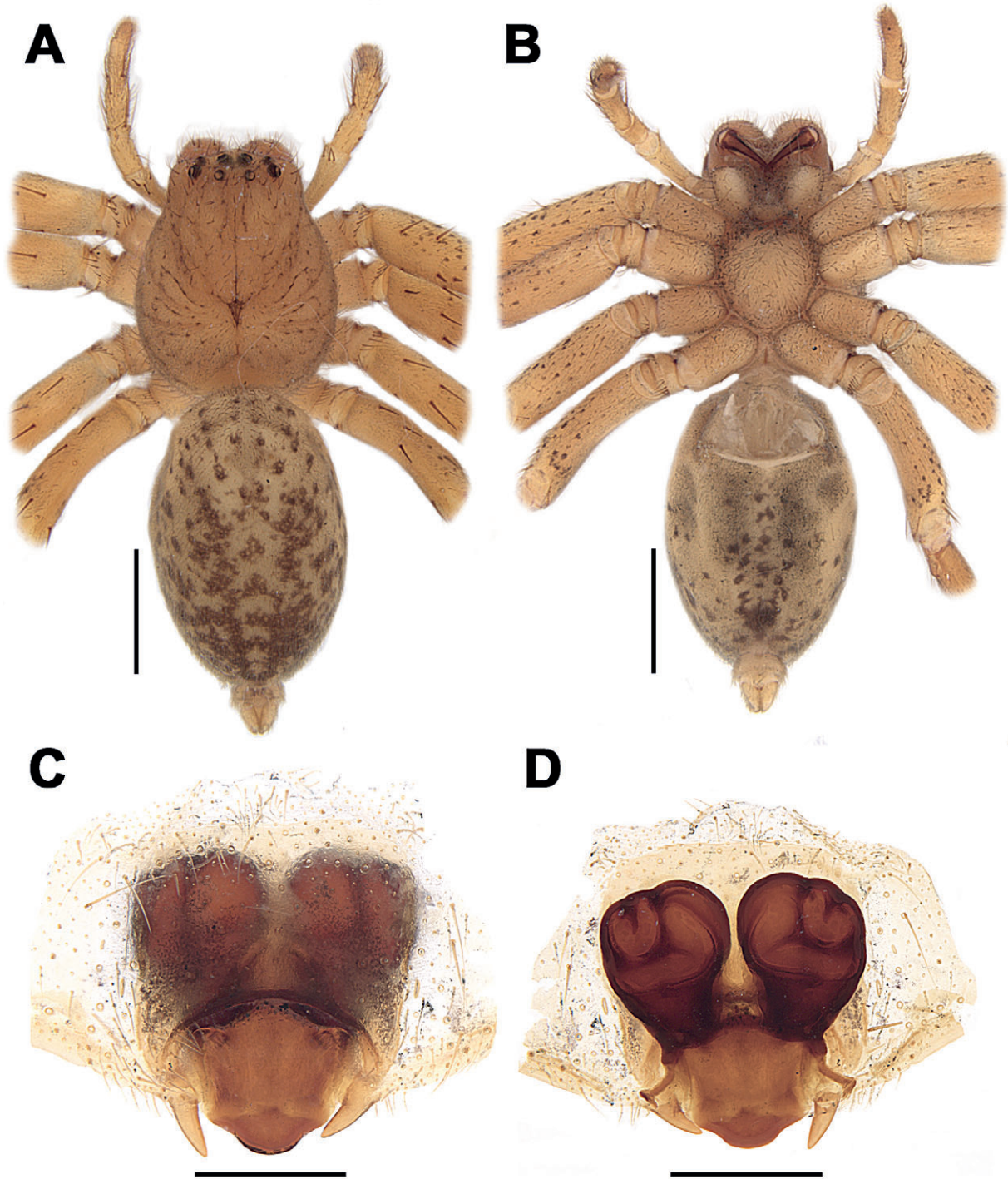
### Description

#### Female (holotype)

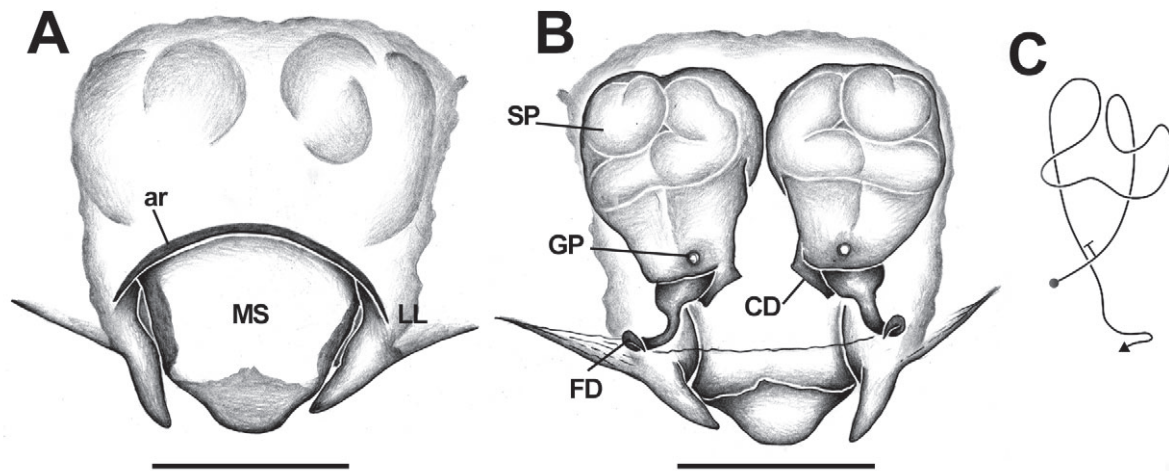
COLOR. Prosoma orange brown; cephalic region with faint lines extending posteriorly from PME and medially towards fovea; thoracic region with faint brown roughly dashed lines extending from fovea to lateral margins; fovea brown; eye borders black. Legs pale brownish orange, ventrally mottled with brown dots. Palps pale brownish orange. Labium brown, distally lighter brown. Endites brownish orange, distally pale brownish yellow. Sternum brownish orange with pale brown margins. Opisthosoma yellowish cream colored; dorsally with brown pattern of irregular marks laterally and on anterior half and four incomplete chevrons down posterior half. Spinnerets pale brownish yellow (Fig. 15A–B).

MEASUREMENTS. Total length 9.0, prosoma length 3.9, width 3.2, opisthosoma length 5.0, width 3.2. Eye diameters: 0.23, 0.18, 0.13, 0.19; interdistances: 0.25, 0.18, 0.40, 0.38. Legs (2143): I: 12.1 (3.5, 1.8, 3.2, 2.8, 0.8); II: 12.4 (3.8, 1.9, 3.1, 2.8, 0.8); III: 9.2 (3.1, 1.6, 2.2, 2.3, 0.7); IV: 11.8 (3.5, 1.5, 2.7, 3.2, 0.9).

EPIGYNE. EF slightly longer than wide; ar recurved; MS as wide as long with posterior margin surpassing tips of triangular projections of LL (right projection moved during handling).



**Fig. 15.** *Neostasina toronegro* sp. nov., holotype, ♀ (MCZ 30719). **A.** Habitus, dorsal view. **B.** Habitus, ventral view. **C.** Epigyne, ventral view. **D.** Vulva, dorsal view. Scale bars: A–B = 2 mm; C–D = 0.5 mm.



**Fig. 16.** *Neostasina toronegro* sp. nov., A–B: holotype, ♀ (MCZ 30719). **A.** Epigyne, ventral view. **B.** Vulva, dorsal view. **C.** Schematic course of internal duct system. Abbreviations: ar = anterior rim; CD = copulatory duct; FD = fertilization duct; GP = glandular projection; LL = lateral lobe; MS = median septum. Scale bars = 0.5 mm.

**VULVA.** GP small, round; SP packed within sclerotized structure, with internal ducts convoluted; FD hook-shaped, medio-posteriad (Figs 15D, 16B–C).

#### Distribution

Only known from the type locality in Puerto Rico (Fig. 21).

#### New geographic records

*Neostasina amalie* Rheims & Alayón, 2016

#### Material examined

BRITISH VIRGIN ISLANDS • 1 ♂; Guana Island; [18.4667, 64.6167]; 0–80 m a.s.l.; 9–23 Jul. 1987; S.E. Miller and V.O. Becker leg.; USNM.

*Neostasina cachote* Rheims & Alayón, 2016

#### Material examined

DOMINICAN REPUBLIC • 2 ♀♀, 1 juvenile; Pedernales Province; Isla Beata; [17.5167, -71.6167]; 6 Nov. 2005; J.A. Genaro leg.; MNHNPEJM.

*Neostasina guanaboa* Rheims & Alayón, 2016

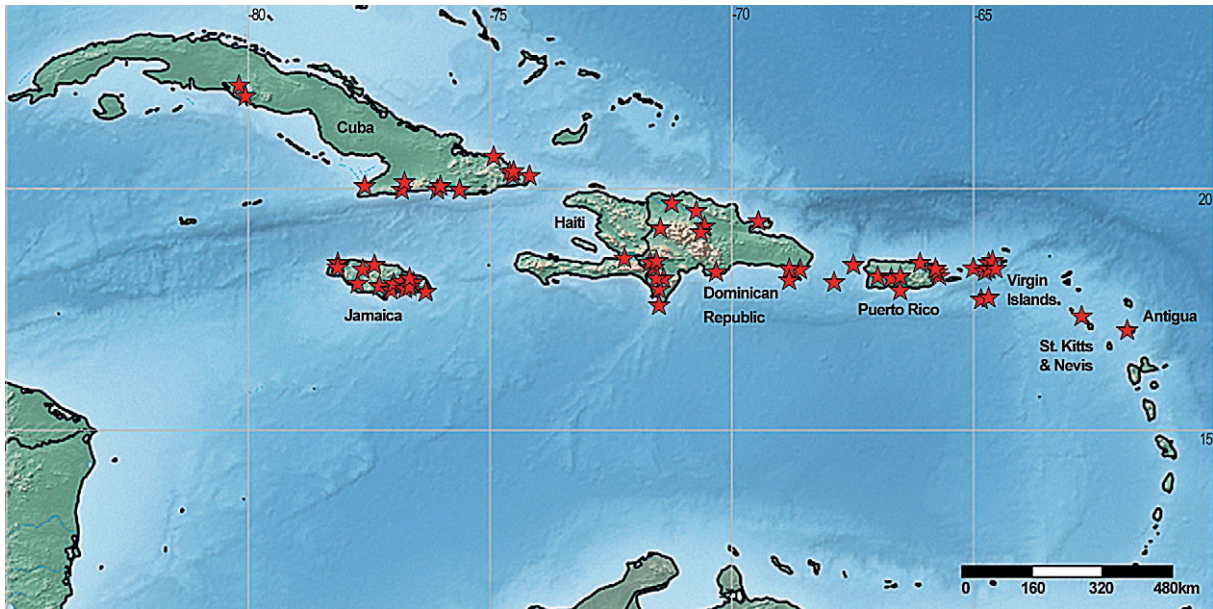
#### Material examined

JAMAICA • 1 ♂; Discovery Bay; [18.4500, -77.3833]; 1–6 Sep. 1974; S. Peck leg.; MCZ 30716.

*Neostasina iberia* Rheims & Alayón, 2016

**Material examined**

CUBA • 1 ♂; Holguín Province; Moa; [20.6500, 74.9333]; Meseta cabezadas del Río Piloto; 15 Mar. 1996; L.F. Armas and L. Echenique leg.; MNHNCu.



**Fig. 17.** Distribution map for all species of the genus *Neostasina* Rheims & Alayón, 2016.

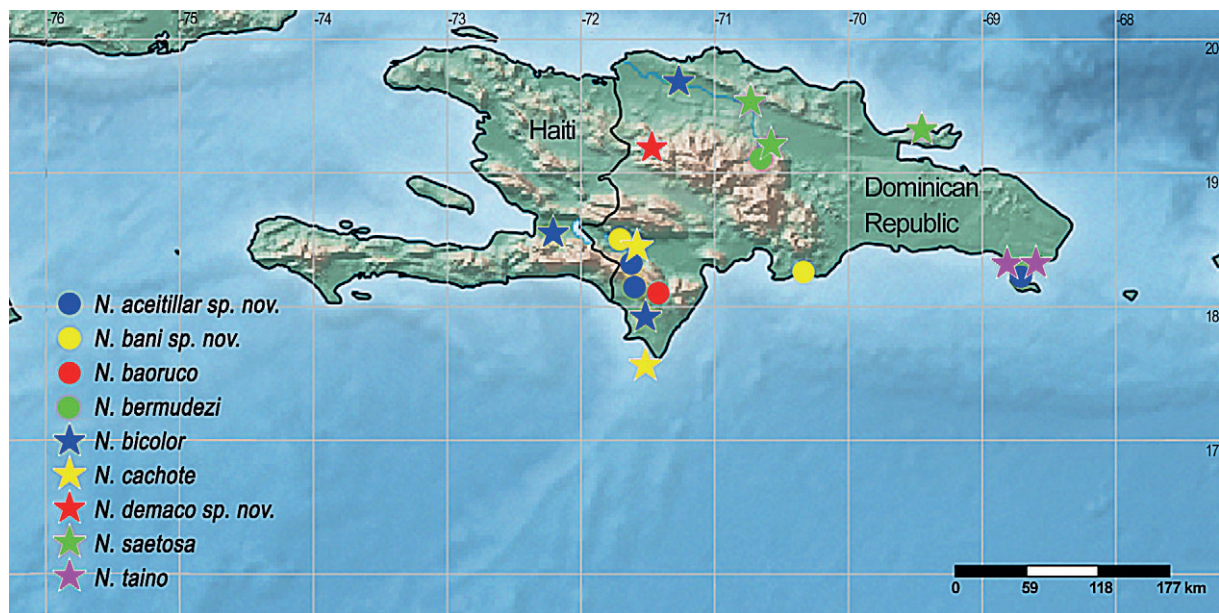


**Fig. 18.** Distribution map for the genus *Neostasina* Rheims & Alayón, 2016 (Cuba).

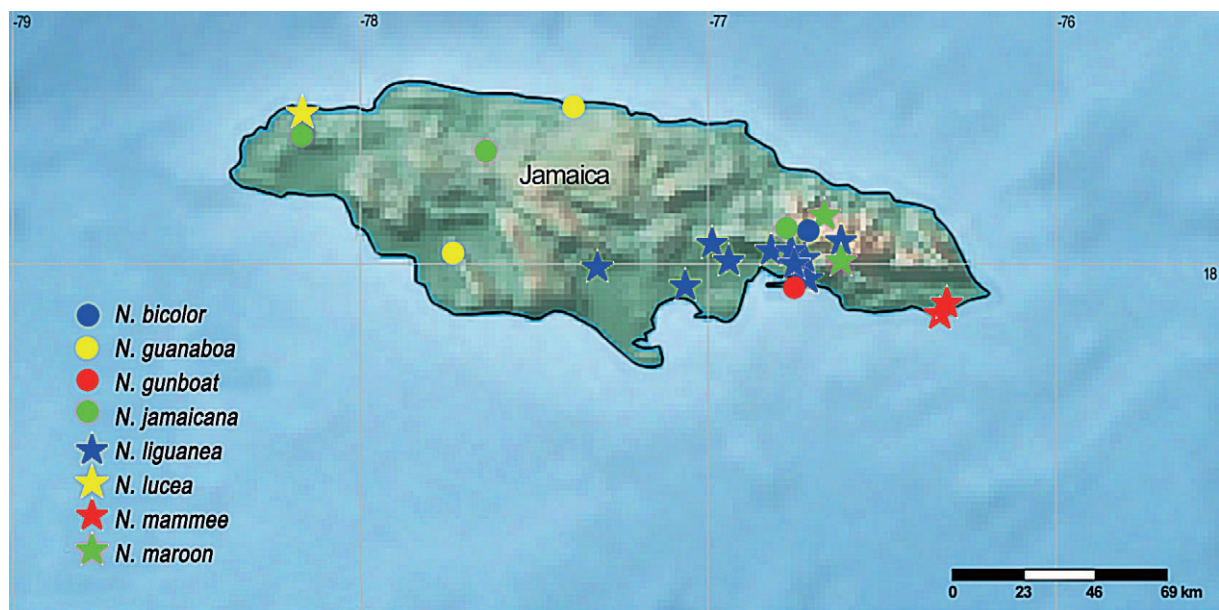
*Neostasina saetosa* (Bryant, 1948)

**Material examined**

DOMINICAN REPUBLIC • 1 ♀; La Vega Province; 10 km NE of Jarabacoa; [19.1833, 70.5833]; 14 Nov. 1990; S. Larcher leg.; USNM.



**Fig. 19.** Distribution map for the genus *Neostasina* Rheims & Alayón, 2016 (Dominican Republic and Haiti).

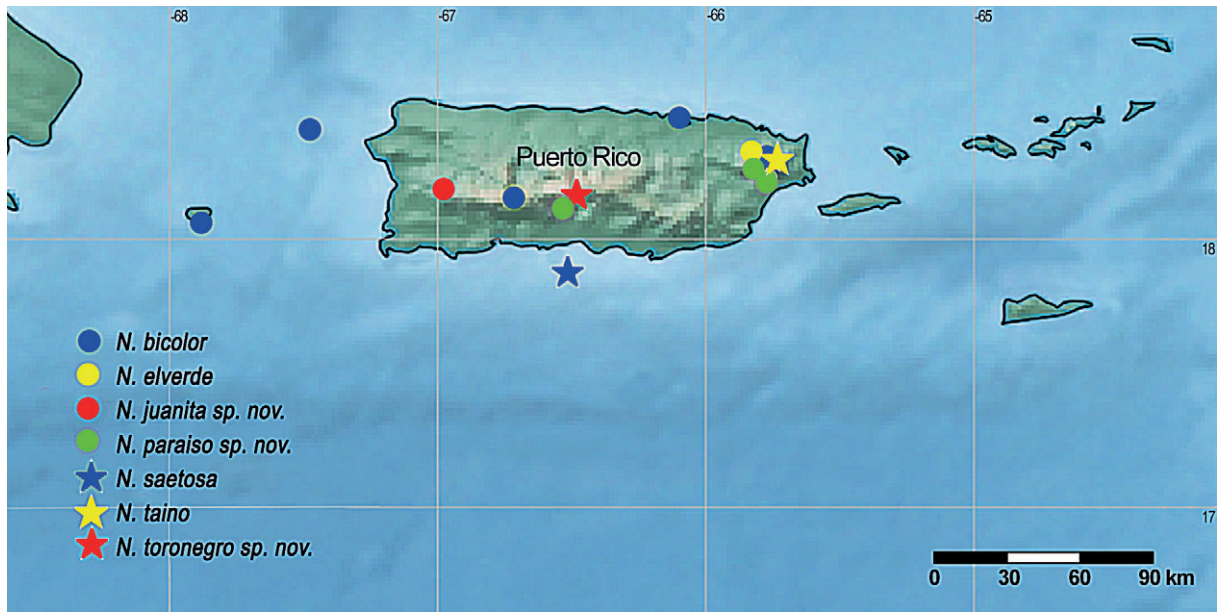


**Fig. 20.** Distribution map for the genus *Neostasina* Rheims & Alayón, 2016 (Jamaica).

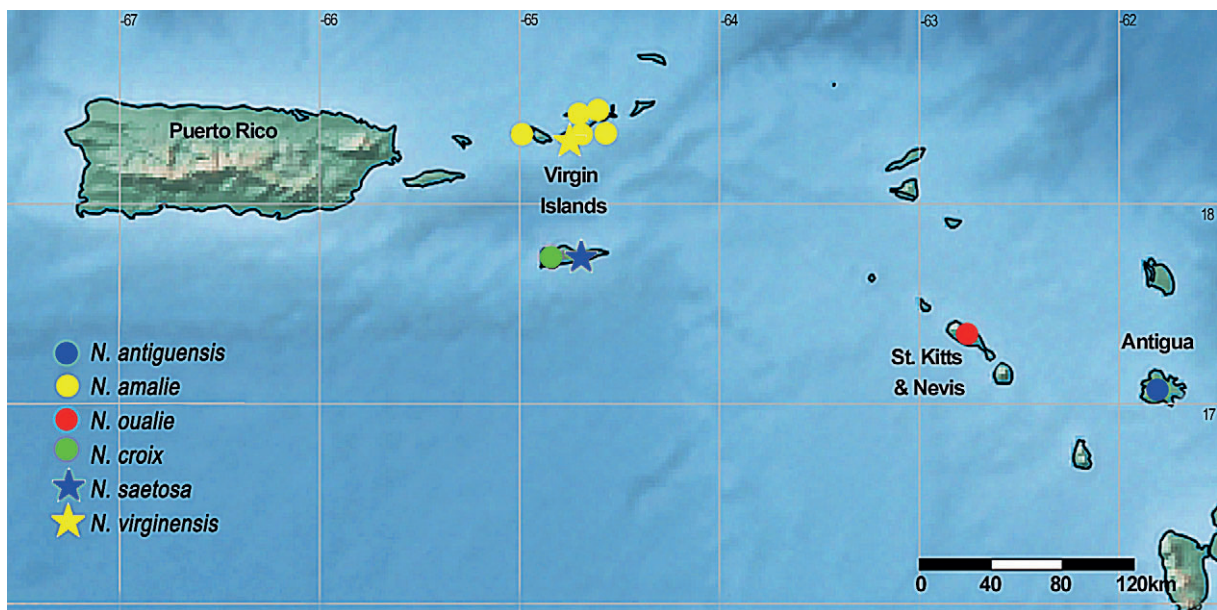
*Neostasina siempreverde* Rheims & Alayón, 2016

**Material examined**

CUBA • 1 ♂; Santiago de Cuba Province; Gran Piedra; [19.9667, 75.6333]; El Olimpo; 6 Feb. 2000; A. Sanchez leg.; MNHNCu.



**Fig. 21.** Distribution map for the genus *Neostasina* Rheims & Alayón, 2016 (Puerto Rico).



**Fig. 22.** Distribution map for the genus *Neostasina* Rheims & Alayón, 2016 (Antilles).



*Neostasina turquino* Rheims & Alayón, 2016

### Material examined

CUBA • 1 ♀; Guantanamo Province; Baracoa; El Yunque; road near campsite; [20.3317, 74.5692]; Apr. 2012; CarBio Team leg.; USNM • 1 ♀; Baracoa; [20.2667, 74.5333]; Monte Ibéria; 660–700 m a.s.l.; no date; R. Teruel leg.; MNHNCu • 1 ♀; Santiago de Cuba; Santiago de Cuba; [20.0333, 76.0167]; La Tabla; 12 Apr. 2000; A. Sanchez leg.; MNHNCu.

### Discussion

The monophyly of *Neostasina* is well substantiated. The combination of eye arrangement (two straight or slightly procurved rows), cheliceral dentition (three promarginal and two retromarginal teeth) and spination pattern of legs I–II (three pairs of ventral tibial spines and one pair of ventral metatarsal spines) clearly separates it from all other genera of Sparianthinae (Rheims & Alayón 2016). The genus was also recovered as monophyletic in a molecular analysis of the Caribbean lineages of the family carried out by Tong *et al.* (2019).

On the other hand, not much can be said about the relationships between *Neostasina* and the remaining sparassid genera. The genus is clearly a member of Sparianthinae since it shows all features considered diagnostic for the subfamily, such as small retromarginal teeth on the chelicerae, trilobate membrane with reduced or inconspicuous median lobe and male palps bearing a median apophysis (Jäger 1998; Ramírez 2014). In a biogeographic study of the Caribbean Sparassidae, Tong *et al.* (2019) carried out a molecular phylogenetic analysis of the genus. However, the taxon sampling did not include other members of Sparianthinae and thus, the only conclusion that could be reached was that it is sister to all other Caribbean lineages of Sparassidae. This is consistent with previous studies (e.g., Rheims 2007; Ramírez 2014; Moradmand *et al.* 2014) showing that Sparianthinae is sister to all other Sparassidae.

Morphologically, the genus seems to be more closely related to the Neotropical *Diminutella* and *Sparianthis*. All three genera share the presence of three promarginal and two retromarginal teeth on the chelicerae, three pairs of ventral spines on tibiae I–II and a hyaline conductor on the male palp. It shares with *Diminutella* the presence of a single pair of ventral spines on metatarsi I–II (two in *Sparianthis*), a single prolateral spine on the male palpal tibia (three in *Sparianthis*) and internal ducts running anteriorly as a double helix in the female vulva (not running as a double helix in *Sparianthis*) and with *Sparianthis*, eyes arranged in two straight or slightly procurved rows (anterior row strongly recurved in *Diminutella*), a strongly bulged retromargin on the cymbium of the male palp (not bulged in *Diminutella*). Nevertheless, further phylogenetic studies will be needed to clarify the position of the genus within the subfamily and corroborate these suggestions.

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