A new species of *Neonella* (Araneae: Salticidae) from southeast Florida

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Abstract. A new species of *Neonella* is described that has a distribution apparently restricted to the southeast coast of Florida. So far, it has only been found in Brevard and Monroe counties. It is closely related to *N. mayaguez* Galiano from Puerto Rico.

Key words. Araneae, Salticidae, *Neonella*, Florida

Introduction

Gertsch (1936) described the genus *Neonella* and its type species, *N. vinnula*. No other species from continental North America has been subsequently described. Galiano (1965, 1988, 1998) described a total of eight other species in the genus, mostly from Argentina and Paraguay. Two of the species, *N. antillana* Galiano 1988 from Jamaica and *N. mayaguez* Galiano 1998 from Puerto Rico, are native to the Caribbean region.

Species of *Neonella* are among the smallest known species of jumping spiders, with adults generally less than 2 mm in body length. They are typically found by sifting through leaf litter. Although not particularly ant-like in their general morphology, the presence of a shiny integument (especially a dorsal abdominal scutum in males), along with their small size and waving of the front legs when alive, does impart a generalized ant-like appearance. The phylogenetic placement of this genus is uncertain, but the genital structure appears to most resemble genera in the subfamily Synagelinae, which, perhaps not coincidentally, consists of genera (such as *Peckhamia* and *Synageles*) that are reasonably good morphological ant-mimics. On the other hand, the presence of an embolar disk is suggestive of a relationship to the Euophryinae.

Methods

The following abbreviations are used in the description: AME (diameter of anterior median eye), AERW (anterior eye row width), PERW (posterior eye row width), OQL (ocular quadrangle length, i.e., an area defined by the anterior lateral and posterior lateral eyes), PMEP (posterior median eye position as ratio to OQL, anterior to posterior), CL (carapace length), CW (carapace width), CH (carapace height at PER), BL (total body length), F (femur), P (patella), T (tibia), M (metatarsus), v (ventral), p (prolateral), r (retrolateral), unpaired ventral macrosetae indicated as p or r, I-IV (legs I through IV, anterior to posterior). Leg macrosetae are recorded by their relative position along a leg segment from proximal to distal. Complete measurements for the holotype are given. Range of variation in CL, CW, and BL is also given (4 males, 4 females). All measurements are in mm.

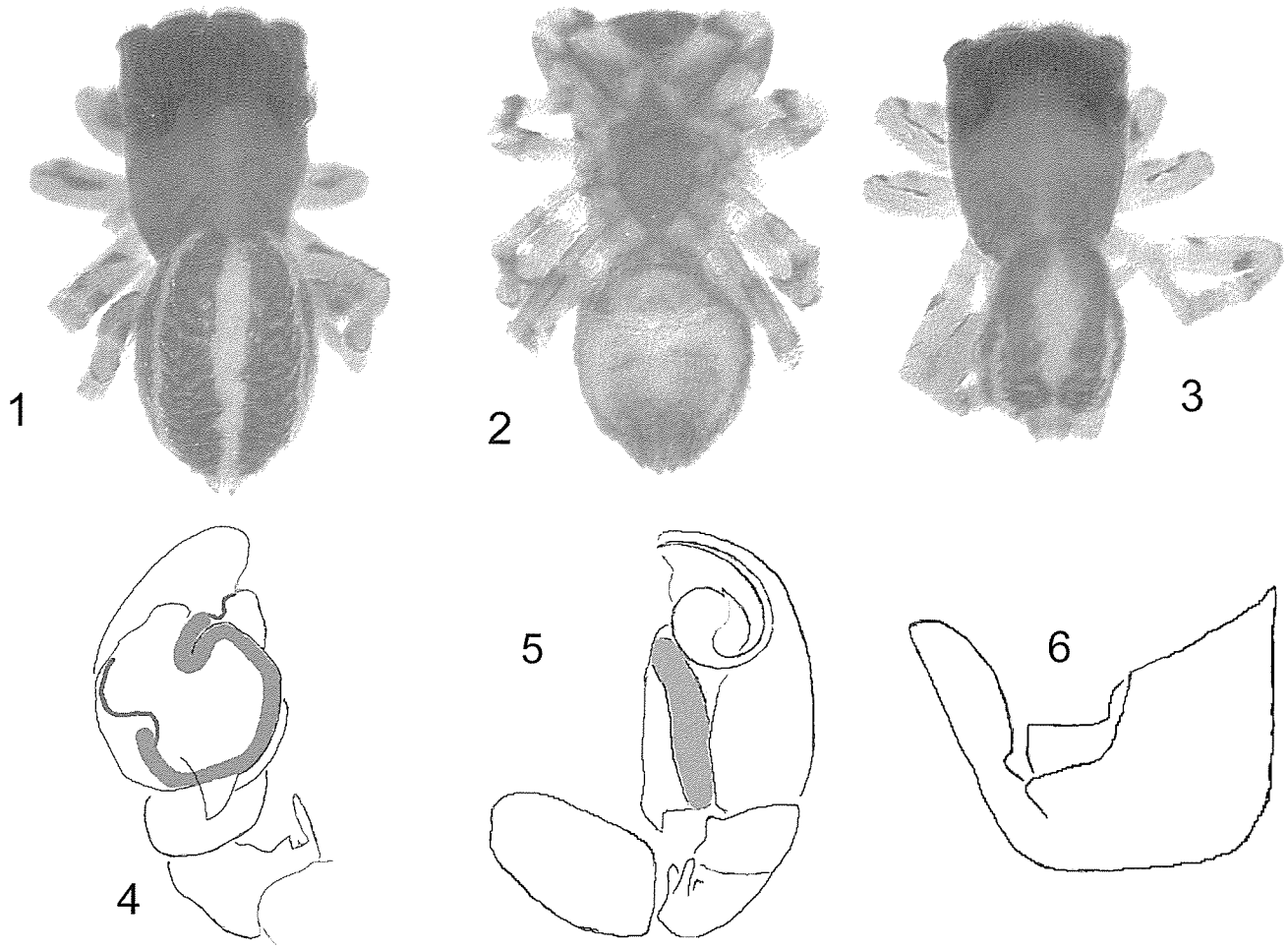
Neonella camillae Edwards, new species

Figs. 1-6

Type data: FLORIDA: Monroe Co., Fleming Key, 28 March 1980, 3f paratypes; 30 March 1980, male holotype, 1m paratype (palps only, body lost), 3f paratypes, 1juv; 31 March 1980, 1m paratype, 5f paratypes, 5juv (all G. B. Edwards, FSCA). **Other record**: FLORIDA: Brevard Co., Canaveral National Seashore, Playa Linda, 12 June 2001, 1m (J. Brambila, FSCA). Only specimens known.

Etymology: Named for Camilla B. Weems, wife of Dr. Howard V. Weems, Jr. (head curator emeritus, FSCA), both of whom are longtime friends. They, along with Nell Backus and myself, made up a team conducting an arthropod survey of Fleming Key during late March, 1980, for the Harry S. Truman Quarantine Facility on the island.

Diagnosis: *N. camillae* is closely related to *N. mayaguez* Galiano 1998 (the male of the latter species is unknown). The epigynum closely resembles Galiano's figures 2 and 3, except the spermathecae are more elongate, the spermathecal ducts not contiguous with the spermathecae (i.e., they are more laterally placed), the part of the duct connecting to the copulatory pore



Figs. 1-6. *Neonella camillae* Edwards, n. sp. 1-2. Female. 1.dorsal habitus. 2. ventral habitus. 3-7. Male. 3. dorsal habitus. 4. Left palp, ventral view. 5. Left palp, prolateral view. 6. Left palp patella, dorsoretrolateral view. Figs. 1-3 to same scale (see text), figs. 4-5 to same scale (~0.25 mm), fig. 6 visible from different views and scale on figs. 4-5.

is bent inward rather than bent anteriorly, and the anterior edge of the spiral atria is much more heavily sclerotized. *Neonella camillae* is also smaller than *N. mayaguez*. It is possible that *N. camillae* is a geographic race of *N. mayaguez*, but it should be shown that *N. mayaguez* is more widespread in the West Indies and not restricted to Puerto Rico before this conclusion can reasonably be considered.

Description: Male: Holotype: CL 0.62, CH 0.29, CW 0.48, OQL 0.31, AME 0.16, AERW 0.50, PERW 0.49, PMEP 56% (closer to PLE), BL 1.07. Ranges: CL 0.60-0.66, CW 0.45-0.49, BL 1.05-1.15. Cephalothorax (Prosoma): Black pigment rings around eyes, OQ dark brown fading to orange brown posterior to eyes, remainder of carapace orange brown with paler faint narrow median thoracic stripe, white scale-like setae ("scales") around eyes, sparse white setae on front of OQ and clypeus; clypeus about 1/5 diameter of AME, with three long central setae, the longest (which curves upward) above a shorter pair that project nearly horizontally; chelicerae and sternum dusky, endites, labium, and tips of chelicerae pale; chelicerae tiny (length slightly more than half diameter of AME), two close-set promarginal teeth near fang tip, one retromarginal tooth closer to middle of fang, teeth very tiny and hard to see; palpi pale translucent, with brown maculations on femur, patella, and tibia, cymbium with white scales, tibial apophysis a short lobe, patella with long spatulate retrolateroventral apophysis and two short, triangular apophyses just distal and on either side of longer apophysis, and a row

of a few long white setae just dorsad of long apophysis; embolus a retrolateral spiral with a proximal embolar disk, tegulum pointed proximally, sperm duct convoluted; legs yellow, femora I & II with a brown prolateral maculation, femora III & IV with two brown prolateral maculations, patellae with partial distal brown annulae, metatarsi similar to patellae but annulae faint; leg macrosetae: Leg I T v1r-0; M v2-2; II T v1r-0; M v1r-1r; III F v0-1r-1r; T v1r-0, p0-1, r0-1; M v1p-2, p0-2, r0-2; IV F v0-1r-1r; T v1r-0; M v1p-2, p0-2, r0-2; ventral metatarsal macrosetae about as long as metatarsus. Leg formula IV, III, I, II.

Abdomen (Opisthosoma): Dorsally a median yellow stripe between two broad brown stripes which darken posteriorly, outside of which are a narrow white stripe each side covered with white iridescent scales, and outside that is a narrow brown band. No scutum. Venter yellow. Anterior spinnerets dusky with yellow tips; posterior spinnerets in horizontal line, medians yellow, laterals dusky.

Variation: The Brevard County male has the carapace completely dark brown, is darker overall, has the broad abdominal stripes nearly obscuring the median stripe, and has some varicolored iridescence on the dark abdominal areas.

Females: Ranges: CL 0.64-0.69, CW 0.48-0.51, BL 1.22-1.29. Similar to male, thoracic area of carapace red brown, brown maculations on legs larger and tending to coalesce, abdominal dorsum with varicolored iridescence, venter of abdomen with gray U-shaped mark. Epigynum wider than long.

Biology: Fleming Key is an artificial limestone island adjacent to Key West. At the time of our survey, the dominant vegetation was mangrove and Australian pine (*Casuarina* sp.). The *Neonella* specimens were found in an open area within a ring of Australian pine trees. This area primarily consisted of a layer of Australian pine litter no more than one cm in depth on the limestone. Several other species of spiders were also found in the litter, including an assortment of oonopids and theridiids. In general, the spiders were found on the limestone and decaying litter underneath the litter layer.

The single specimen from Brevard County was found along the edge of a beach parking lot. It was underneath native ground cover vegetation that had grown over the edge of the parking lot.

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