

## The Caribbean Goblin Spider Genera *Scaphioides* and *Hortoonops* (Araneae, Oonopidae)

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### ABSTRACT

The genus *Scaphioides* Bryant contains species that resemble those of *Stenoonops* Simon but lack the sternal and palpal synapomorphies of that genus and have a longitudinal ridge on the male endites, a short, wide male embolus, and a more heavily sclerotized epigastric scutum in females. As delimited by those characters, the genus is circum-Caribbean in distribution and contains at least 19 species, including 11 described as new: *S. campeche* from the Yucatan peninsula of Mexico, *S. irazu* from Costa Rica, *S. bimini* and *S. gertschi* from the Bahama Islands, *S. camaguey*, *S. granpiedra*, *S. siboney*, *S. cobre*, and *S. yateras* from Cuba, *S. miches* from Hispaniola, and *S. reductoides* from the Virgin Islands. The male of *S. halatus* (Chickering) is described for the first time. A new genus, *Hortoonops*, is established for three similar Caribbean species that lack the synapomorphies of both *Stenoonops* and *Scaphioides*, but are united by peculiar excavations on the anterior metatarsi that represent an extraordinary convergence with the structures found in the African corinnid genus *Hortipes* Bosselaers and Ledoux. *Stenoonops lucradus* Chickering from the Virgin Islands and *Stenoonops portoricensis* Petrunkevitch from Puerto Rico are transferred to *Hortoonops*, and a new species, *H. excavatus*, is described from Hispaniola.

### INTRODUCTION

The Caribbean goblin spiders treated here have been known since 1929, but have not been extensively studied. Chickering (1969a, 1969b) reviewed the species then known, and described five additional species from the West Indies, as part of his studies of the genus *Stenoonops*

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Simon (1891). As indicated by Brignoli (1978) and Platnick and Dupérré (2010), Chickering's concept of *Stenoonops* seemingly involved no diagnostic characters, and artificially combined members of several different groups. In particular, he treated the genus *Scaphioides* Bryant (1942) as a junior synonym of *Stenoonops*, a view subsequently rejected by Platnick and Dupérré (2010).

The species here assigned to *Scaphioides* lack the distinctive features of *Stenoonops*, especially the elevated and pointed lateral projections of the sternum that extend between the leg coxae (Platnick and Dupérré, 2010: figs. 7, 18) and the thick, dorsal clump of short setae situated near the tip of the palpal tarsi (Platnick and Dupérré, 2010: figs. 28, 61). Instead, the members of *Scaphioides* are united by at least three other features. First, the male embolus has a consistent and distinctive form; it is very short and unusually wide (figs. 25, 26), typically with a larger, distal lobe situated dorsal to a smaller, proximal lobe (figs. 28, 29). In some cases, one or both palps may at first appear to have a longer embolus, because preserved males sometimes have strands of sperm extruding from the embolus (figs. 186, 187). Second, the female epigastric region is more heavily sclerotized than in *Stenoonops* (figs. 109, 134) and the internal female genitalia have a consistent form, with a narrow anterior projection situated on a wider base (figs. 44, 68). In addition, the male endites have a distinctive shape, with a sharp demarcation between their median and lateral portions (figs. 4, 244); under light microscopy, this demarcation appears as a longitudinal ridge, but the ridge just represents the acute angle at which the median and lateral portions of the endite meet (figs. 35, 165).

As delimited by those characters, *Scaphioides* has a Caribbean distribution, extending from the Yucatan peninsula of Mexico to at least as far north as the barrier islands of North Carolina, as far south as Costa Rica, and as far east as the Leeward Islands in the Lesser Antilles. The bulk of the diversity of the group is West Indian, with the most diverse faunas apparently occurring in Cuba (five species), followed by the Virgin Islands (three species), and Bimini, Jamaica, and Puerto Rico (with two species each). Given that all five of the Cuban species are described as new below, we suspect that several additional species remain to be discovered.

Although we are far from having a detailed hypothesis of the phylogenetic relationships among all the species of *Scaphioides*, it does not appear that the faunas of any of the islands housing two or more species represent monophyletic lineages, with the possible exception of Puerto Rico. Distinguishing the species of *Scaphioides* is not easy, because the differences among them are largely beyond the resolution of dissecting microscopes, and scanning electron microscopy is necessary for accurate identifications. The genitalia are relatively uniform throughout the genus, and details of the microsculpture found on the sternum and carapace are often fully as useful as genitalic features.

Sternal microsculpture suggests that the 19 *Scaphioides* species recognized below fall into five species groups. In the *cletus* group, *S. cletus* from Jamaica and *S. halatus* from the Leeward Islands are united by a sternal surface with relatively few, pinpoint-shaped depressions (figs. 169, 315). In the *reducta* group, including *S. granpiedra* from Cuba and *S. reducta* from the Virgin Islands, the sternum has a similar number and arrangement of depressions, but they are deeper and outlined by more distinct edges (figs. 128, 221). In the *miches* group, including *S.*

*miches* from Hispaniola and *S. reductoides* from the Virgin Islands, the sternum is covered with numerous tiny depressions, each of which is much deeper than in the other species (figs. 192, 231). In the *bimini* group, including *S. bimini* from the Bahama Islands and *S. camaguey*, *S. cobre*, and *S. yateras* from Cuba, the sternum has much larger pits, and those pits are distributed widely on the sternum, including along its midline (figs. 76, 115, 148, 161); males of the *bimini* group have pointed, posteriorly directed projections at the tip of the endites (figs. 155, 165; in other species, the endite projections, if detectable, are more rounded, as in figs. 4, 244).

The remaining species, of the *minuta* group, have similar pits on the sternum, but the pits are much more restricted in distribution and are not found along the midline (figs. 62, 66). Within the *minuta* group, three subgroups can be distinguished by the microsculpture of the carapace. In *S. minuta* from the southeastern United States, the carapace has only pits, the edges of which reticulate, forming triangular patches opposite the coxae (figs. 2, 33, 61, 65). In the *phonetus* subgroup, including *S. irazu* from Costa Rica, *S. phonetus* and *S. econotus* from Puerto Rico, and *S. nitens* from the Virgin Islands, the carapace has many tubercles, similarly arrayed (figs. 92, 201, 211, 300), with pits and reticulating ridges restricted to the posterior and lateral margins. In the *hoffi* subgroup, including *S. campeche* from the Yucatan peninsula, *S. gertschi* from the Bahama Islands, *S. siboney* from Cuba, and *S. hoffi* from Jamaica, the carapace has both tubercles and widespread patches of pits with reticulating ridges (figs. 79, 101, 137, 178).

*Scaphioides* species show some other notable morphological modifications, including a subdistal constriction on the dorsal surface of the leg femora that is accompanied by a transverse row of setae (figs. 289, 290); this structure also occurs in *Stenoonops* (see Platnick and Dupérré, 2010: fig. 375). In *Scaphioides*, the palpal femur of both sexes bears a stridulatory file on its retrolateral surface (figs. 249, 251, 279), which has not been detected in *Stenoonops* species. The genitalia of *S. reducta* were studied in detail by Burger (2009: figs. 17–21, 23H, I), who pointed out that the embolus is presumably too short to deposit sperm directly into the membranous receptacula.

These morphological specializations pale in comparison to those found in three other Caribbean species that are placed below in the new genus *Hortoonops*. Most obviously, the metatarsi of legs I and II are widened, and bear on their dorsal surface a deep depression bordered on both sides by a row of setae; within the depression, a long trichobothrium extends back toward the base of the segment (figs. 337–340, 367–370). These metatarsal “baskets” represent an extraordinary convergence with the structures found in the African corinnid genus *Hortipes* Bosselaers and Ledoux (1998; see Bosselaers and Jocqué, 2000: fig. 6). The trichobothrial base is flanked by a pair of short, thick, dark, conspicuous setae that may serve to restrict the path of motion of the long trichobothrial filament.

Many other aspects of the morphology of *Hortoonops* are unusual. The carapace is covered with deep, slit-shaped depressions (figs. 325, 355); similar structures occur on the sternum, but are restricted to marginal, triangular patches opposite the coxae (figs. 327, 357). The chelicerae are greatly narrowed distally, and the fangs are greatly elongated, extending more than half the length of the paturon (figs. 326, 330). The outer face of the tarsal claws is subdistally widened and bent back against the basal portion of the claw, which bears just a few, oddly rounded teeth (figs.

345–348); the inner face is completely occupied by dorsoventrally oriented rows of small teeth, each of which bears a cascading series of smaller teeth (figs. 341, 342). The serrula on the palpal endites appears to have been lost in both sexes (figs. 329, 359), although the more basal portions of the dorsal surface bear a series of tubercles that also occur in *Scaphioides* (figs. 38, 245).

The tarsal organs of *Scaphioides* (figs. 20–24, 56–60, 265–269, 295–298) and *Hortonops* (figs. 349–353, 380–383) resemble those of *Stenoonops* (see Platnick and Dupérré, 2010: figs. 33, 34, 66–70, 379–383, 426–430) in having the distalmost receptor greatly widened. Similarly widened distal receptors also seem to characterize the members of the group of hard-bodied genera including *Pelycinus* Simon (see Platnick et al., 2012: figs. 20–24, 56–60).

Our methods follow those of Platnick and Dupérré (2009a, 2009b); only differences from the males (beyond the obvious lack of male endite modifications) are mentioned in the descriptions of females. The species are treated geographically, beginning in the United States and proceeding southward to Costa Rica, then east from the Bahamas to the Lesser Antilles. Scans were taken from uncoated right male palps (and often from an uncoated cephalothorax as well), and the images were flipped for consistency. All measurements are in mm. High-resolution versions of the images, a sortable version of the geocoded locality data, and a distribution map for each species will be available on the goblin spider Planetary Biodiversity Inventory (PBI) project's website (<http://research.amnh.org/oonopidae>).

#### COLLECTIONS EXAMINED

AMNH	American Museum of Natural History, New York, NY
BSC	Centro Oriental de Ecosistemas y Biodiversidad, Santiago de Cuba
CNC	Canadian National Collection, Ottawa, Ontario, Canada
FMNH	Field Museum of Natural History, Chicago, IL
FSCA	Florida State Collection of Arthropods, Gainesville, FL
MCZ	Museum of Comparative Zoology, Harvard University, Cambridge, MA
MNH	Museo Nacional de Historia Natural, Havana, Cuba
MNSD	Museo Nacional de Historia Natural de Santo Domingo, Dominican Republic
USNM	National Museum of Natural History, Smithsonian Institution, Washington, DC

#### *Scaphioides* Bryant

*Scaphioides* Bryant, 1942: 327 (type species by original designation *Scaphioides reducta* Bryant; gender feminine, per original combination).

*Stenoonops* (in part): Chickering, 1969a: 21.

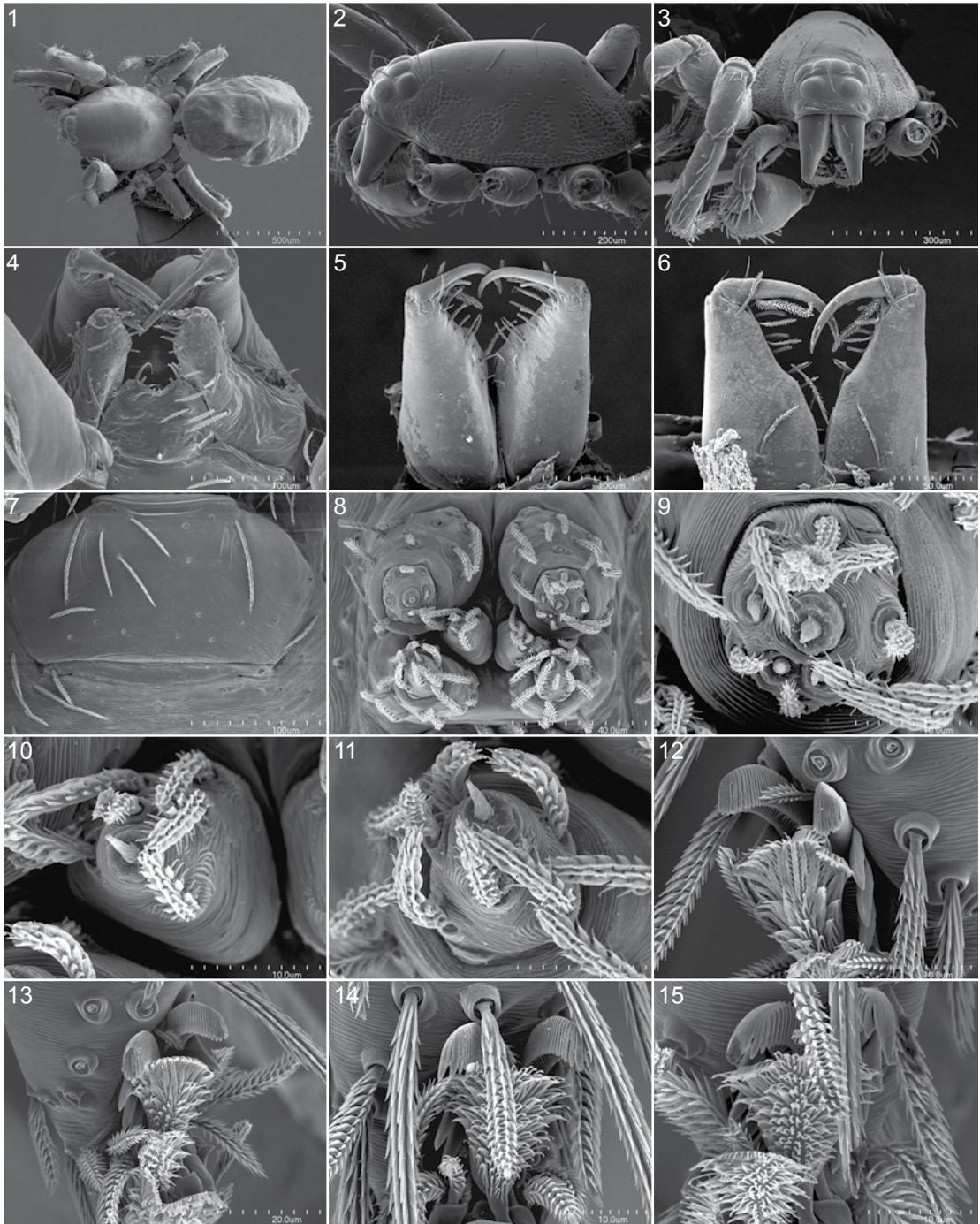
DIAGNOSIS: Specimens of *Scaphioides* resemble those of *Stenoonops* Simon but lack the elevated and pointed lateral projections of the sternum extending between the leg coxae (Platnick and Dupérré, 2010: figs. 7, 18) and the dorsal clump of setae near the tip of the palpal tarsi (Platnick and Dupérré, 2010: figs. 28, 61) typical of that genus. They also differ in having a longitudinal ridge separating the median and lateral portions of the palpal endites in males

(figs. 4, 244), a short, wide embolus in males (figs. 25, 26), a more heavily sclerotized epigastric scutum in females (figs. 109, 134), and internal female genitalia with a narrow anterior projection situated on a wider base (figs. 44, 68).

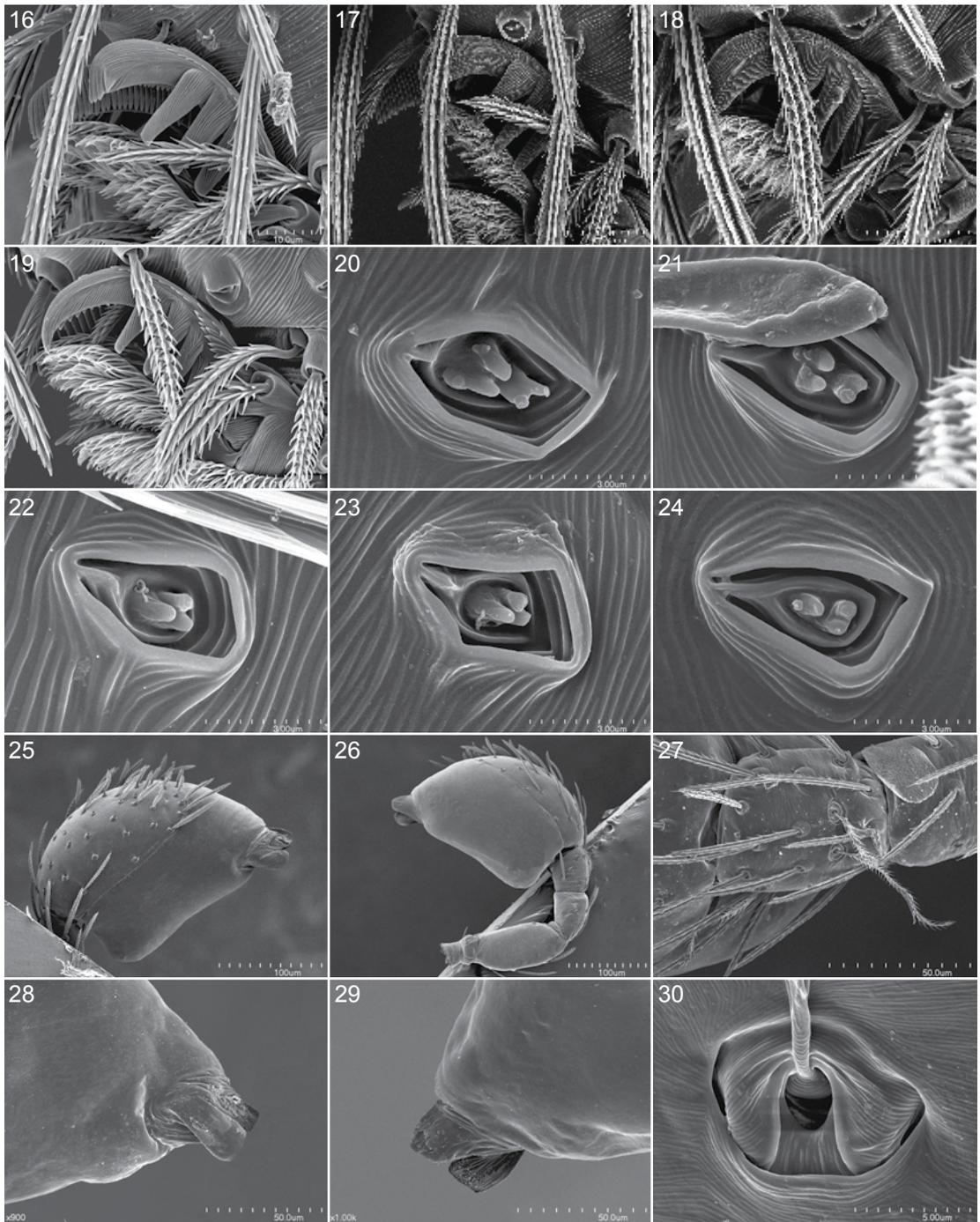
**DESCRIPTION:** Total length of males 1.0–1.5, of females 1.1–1.7. Carapace, sternum pale orange, without pattern; mouthparts, legs, palps yellow, without pattern; abdomen white, without pattern (except in *S. econotus*). **Cephalothorax:** Carapace elongated hexagon in dorsal view, anteriorly narrowed to 0.49 times its maximum width or less (figs. 1, 31, 240, 270, 272), anterolateral corners with slightly sclerotized triangular projections, posterolateral edge without pair of pits, posterior margin not bulging below posterior rim, posterolateral surface without spikes, with rounded posterolateral corners; pars cephalica flat in lateral view (figs. 2, 32, 33, 241, 271), pars thoracica without depressions, fovea, or radiating rows of pits; lateral margin straight, smooth, usually with blunt denticles (figs. 243, 273); plumose setae near posterior margin of pars thoracica absent; nonmarginal pars cephalica setae dark, needlelike, in U-shaped row; nonmarginal pars thoracica setae, marginal setae, clypeal setae dark, needlelike. Clypeus margin strongly rebordered, straight in front view, sloping forward in lateral view, high, ALE separated from edge of carapace by their radius or more, median projection absent (figs. 3, 34, 242, 274). Chilum absent. Eyes six, well developed, all subequal, ALE circular, PME squared, PLE circular; posterior eye row recurved from above, procurved from front; ALE separated by slightly less to slightly more than their radius; ALE-PLE separated by less than ALE radius, PME separated by less than their radius, PLE-PME separated by less than PME radius. Sternum longer than wide, not fused to carapace, median concavity absent, without hair tufts, with radial furrows between coxae I–II, II–III, III–IV, radial furrow opposite coxae III absent, sickle-shaped structures absent, posterior margin extending posteriorly beyond anterior edges of coxae IV as single extension, anterior corner unmodified, lateral margin with infracoxal grooves bearing anterior and posterior openings, distance between coxae approximately equal, extensions of precoxal triangles absent, lateral margins with three pairs of lateral projections, without posterior hump; setae sparse, dark, needlelike, densest laterally, originating from surface. Chelicerae straight, anterior face unmodified; without teeth (figs. 5, 36, 276); fangs without tooth-like projections, directed medially, shape normal, without prominent basal process, tip unmodified (figs. 6, 37, 277); setae dark, needlelike, densest medially; paturon inner margin with short interdigitating setae, distal region, posterior surface unmodified, promargin with row of flattened setae, inner margin unmodified, laminate groove absent. Labium triangular, not fused to sternum, anterior margin indented at middle, same as sternum in sclerotization; with six or more setae on anterior margin, subdistal portion with unmodified setae (figs. 4, 35, 244, 275). Endites distally not excavated, serrula present in single row (figs. 38, 39, 245, 246), anteromedian tip usually thickened, sometimes with posteriorly directed protrusion, postero-medial part unmodified, same as sternum in sclerotization; labrum relatively small, with projection at base (fig. 247). Female palp without spines or claws; trochanter with small, raised ridges (fig. 280); femur with strong stridulatory file on retrolateral surface (fig. 279); patella without prolateral row of ridges; tibia with three trichobothria, proximalmost two situated in nearly transverse row (figs. 42, 281); tarsus unmodified (figs. 40, 41, 278), without distal patch

of short, thickened setae (fig. 282). **Abdomen:** Ovoid, without long posterior extension, rounded posteriorly, rows of small sclerotized platelets absent. Book lung covers large, ovoid, without setae, anterolateral edge unmodified. Posterior spiracles connected by groove (figs. 7, 43, 255, 283). Pedicel tube short, unmodified, scutopedicel region unmodified, scutum not extending far dorsal of pedicel, plumose hairs absent, matted setae on anterior ventral abdomen in pedicel area absent, cuticular outgrowths near pedicel absent. Dorsal scutum absent, epigastric scutum weakly sclerotized, surrounding pedicel, not protruding, small lateral sclerites, lateral joints absent; postepigastric scutum weakly sclerotized, yellow, short, only around epigastric furrow, not fused to epigastric scutum, anterior margin unmodified, with short, posteriorly directed lateral apodemes; spinneret scutum absent; supraanal scutum absent. Dorsal, epigastric, postepigastric setae dark, needlelike; those on epigastric area setae not thickened; dense patch of setae anterior to spinnerets absent. Anterior, posterior lateral spinnerets bisegmented, posterior medians unisegmented (figs. 8, 45, 256, 285). Spigots scanned only in *S. minutus* and *S. nitens*; anterior laterals with single major ampullate gland spigot and three piri-form gland spigots in males (figs. 9, 257) and females (figs. 46, 286); posterior medians with single spigot in males (figs. 10, 258) and females (figs. 47, 287); posterior laterals with single spigot in males (figs. 11, 259) and females (figs. 48, 288). Colulus represented only by setae. **Legs:** Without spines; femora dorsally with subdistal constriction marked by transverse row of setae (figs. 289, 290), femur IV not thickened, same size as femora I–III, patella plus tibia I shorter than carapace, tibia I unmodified, tibia IV ventral scopula, specialized hairs on ventral apex absent, metatarsi I, II mesoapical comb absent, metatarsi III, IV weak ventral scopula absent; tarsi short (fig. 260). Tarsi without inferior claw; lateral surfaces of paired claws with three or four large, basally situated teeth, median surfaces with distally situated, closely packed row of small teeth (figs. 12–19, 49–55, 261–264, 291–294). Tarsal organs of legs I, II with three receptors, of legs III, IV, palps with two receptors, distal receptor greatly widened, often distally bifid (figs. 20–24, 56–60, 265–269, 295–298). Trichobothrial bases with highly arched opening, few large ridges (figs. 30, 299). **Genitalia:** Epigastric region with sperm pore not visible; furrow without  $\Omega$ -shaped insertions, without setae. Male palp normal size, not strongly sclerotized, right, left palps symmetrical; trochanter normal size, with small, raised ridges (fig. 250); femur normal size, two or more times as long as trochanter, without posteriorly rounded lateral dilation, attaching to patella basally, with strong stridulatory file on retrolateral surface (fig. 251); patella shorter than femur, not enlarged, without prolateral row of ridges, setae unmodified; tibia with three trichobothria, proximalmost two situated in transverse row (fig. 27); cymbium ovoid in dorsal view, fused with bulb but with clearly defined seam (figs. 25, 26, 248, 249), not extending beyond distal tip of bulb, plumose, stout, distal setae all absent (figs. 252–254); bulb 1–1.5 times as long as cymbium, stout, spherical; embolus light, prolateral excavation absent, short, wide, usually with distinct proximal and distal lobes (figs. 28, 29; proximal lobe situated below distal lobe in fig. 29). Females with anterior genitalic projection situated on distinct base (figs. 44, 284).

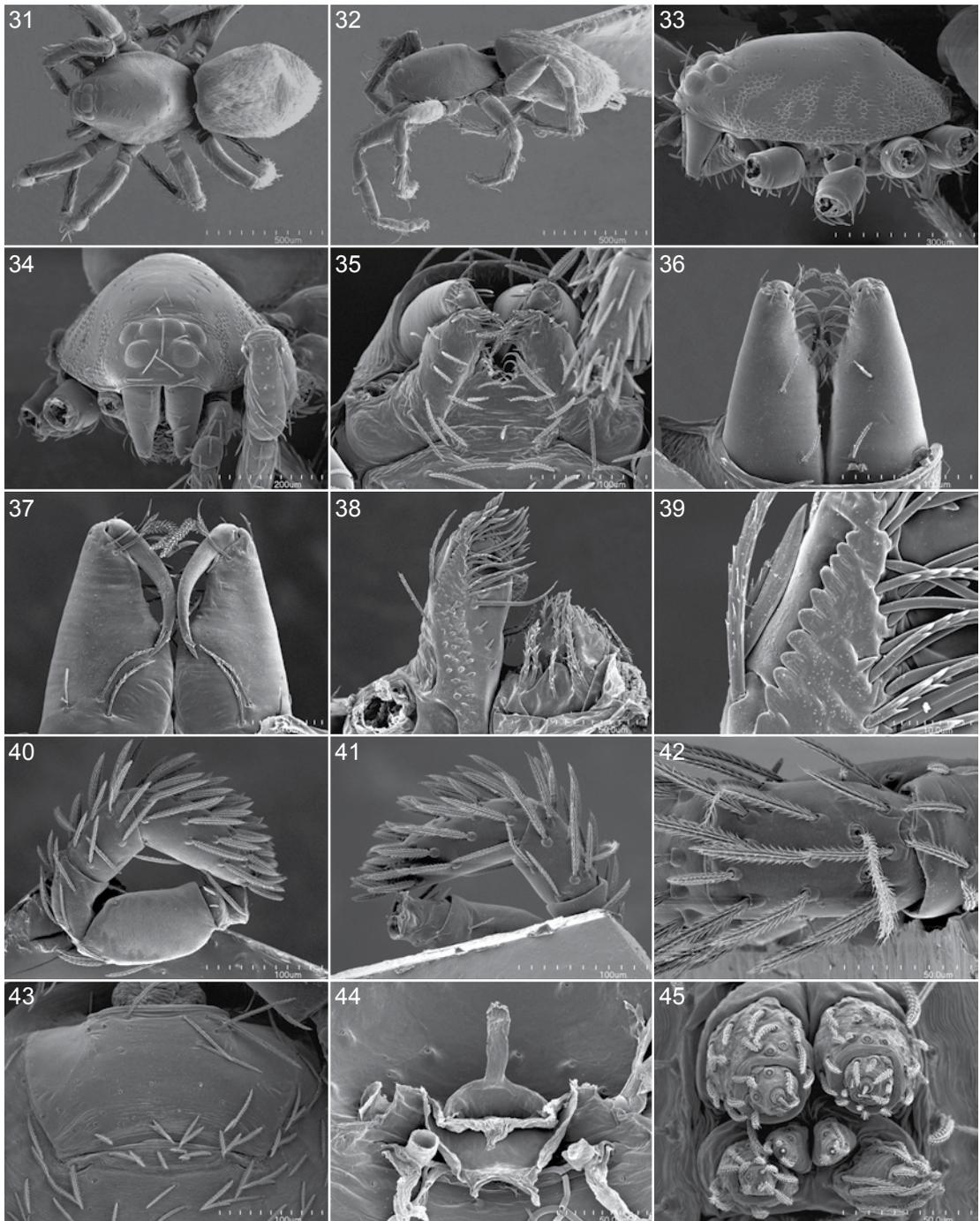
**DISTRIBUTION:** Circum-Caribbean, from the Yucatan peninsula north to North Carolina, south to Costa Rica, and east to the Leeward Islands.



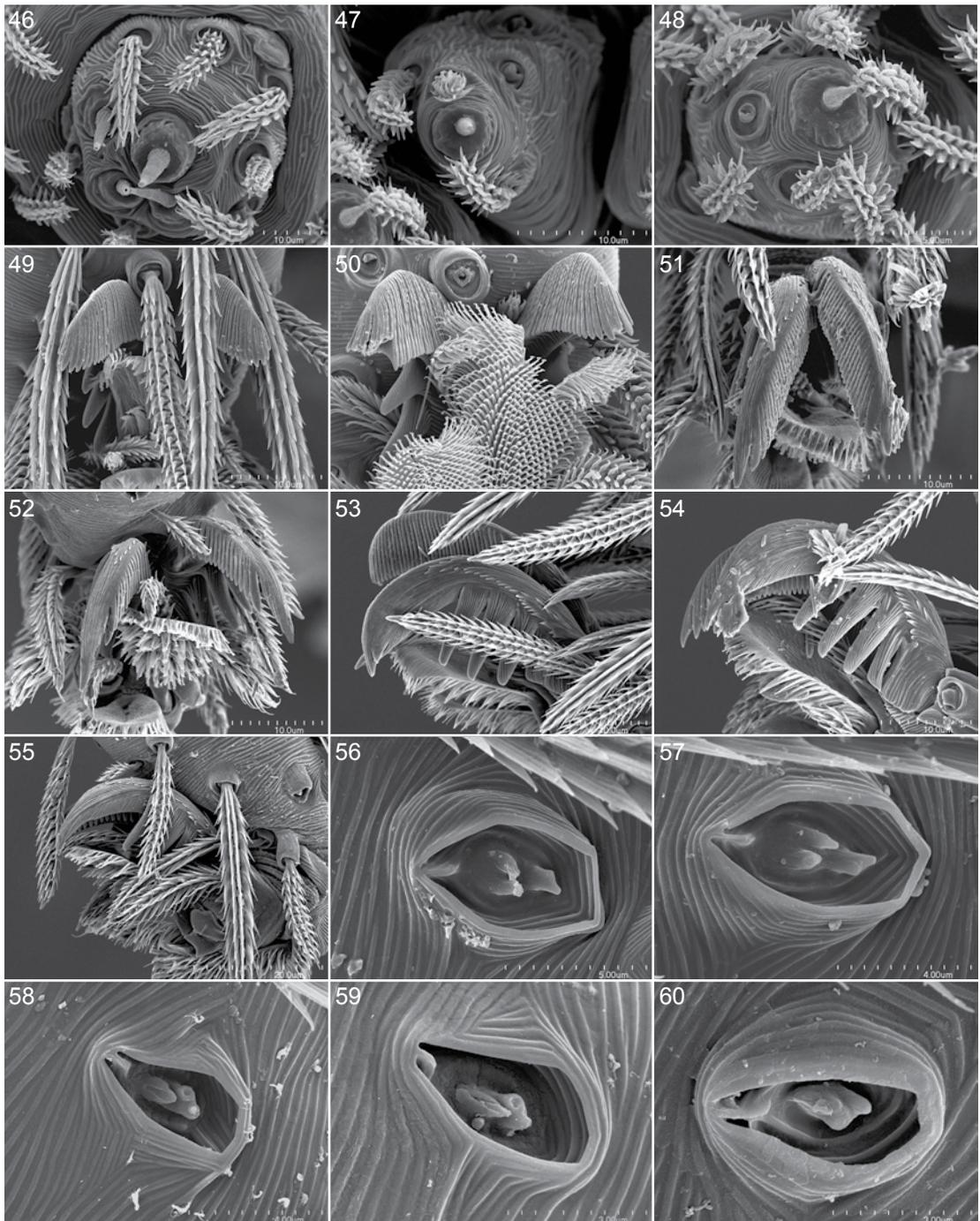
FIGS. 1–15. *Scaphioides minuta* (Chamberlin and Ivie), male. 1. Habitus, dorsal view. 2. Carapace, lateral view. 3. Same, anterior view. 4. Mouthparts, ventral view. 5. Chelicerae, anterior view. 6. Same, posterior view. 7. Epigastric region, ventral view. 8. Spinnerets, distal view. 9. Anterior lateral spinneret, same. 10. Posterior median spinneret, same. 11. Posterior lateral spinneret, same. 12. Claws of leg I, distal view. 13. Same, leg II. 14. Same, leg III. 15. Same, leg IV.



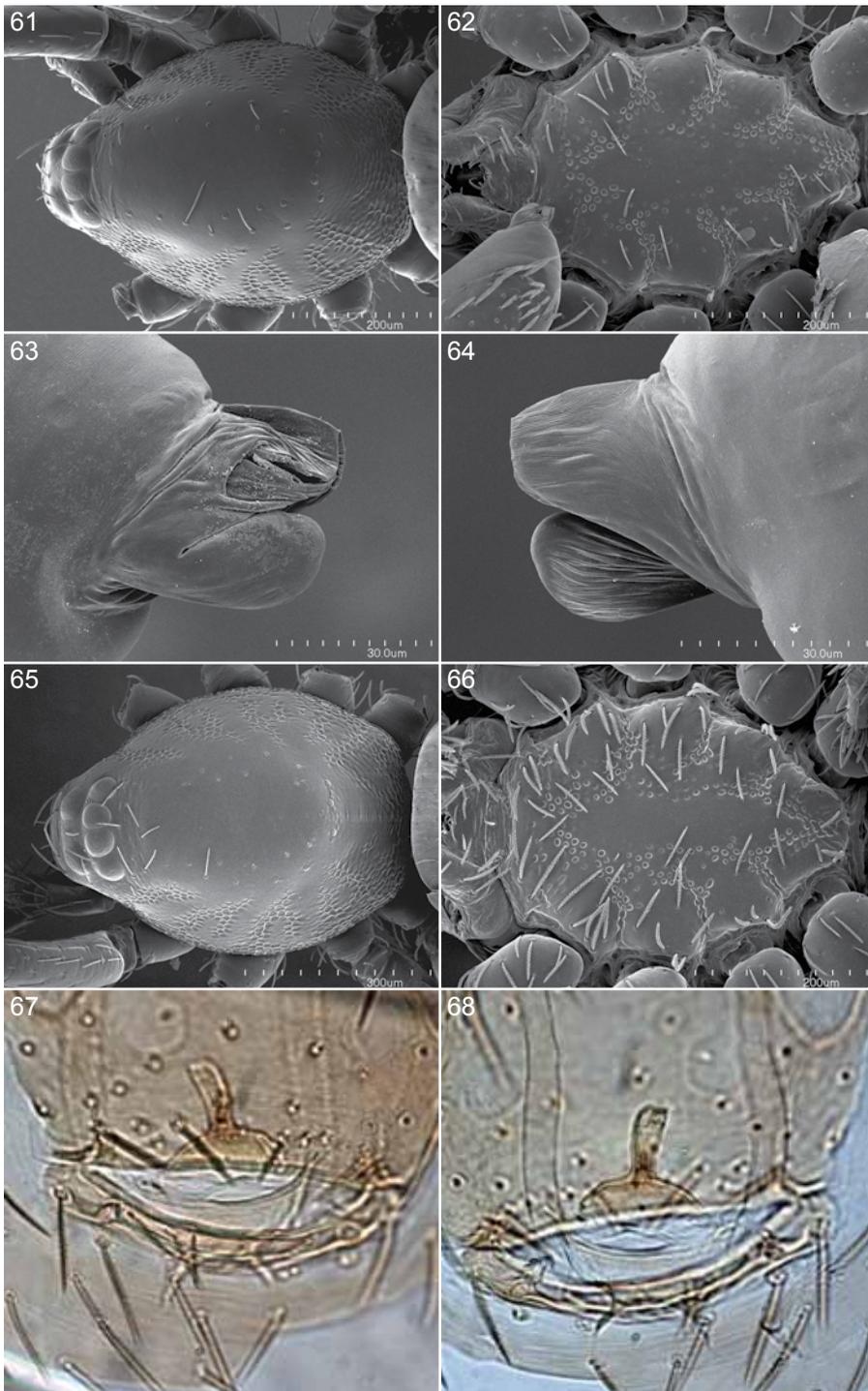
FIGS. 16–30. *Scaphioides minuta* (Chamberlin and Ivie), male (16–29) and female (30). 16. Claws of leg I, lateral view. 17. Same, leg II. 18. Same, leg III. 19. Same, leg IV. 20. Tarsal organ from leg I, dorsal view. 21. Same, leg II. 22. Same, leg III. 23. Same, leg IV. 24. Same, palp. 25. Left palp, prolateral view. 26. Same, retrolateral view. 27. Palpal tibia I, dorsal view. 28. Left embolus, prolateral view. 29. Same, retrolateral view. 30. Trichobothrial base from tibia I, dorsal view.



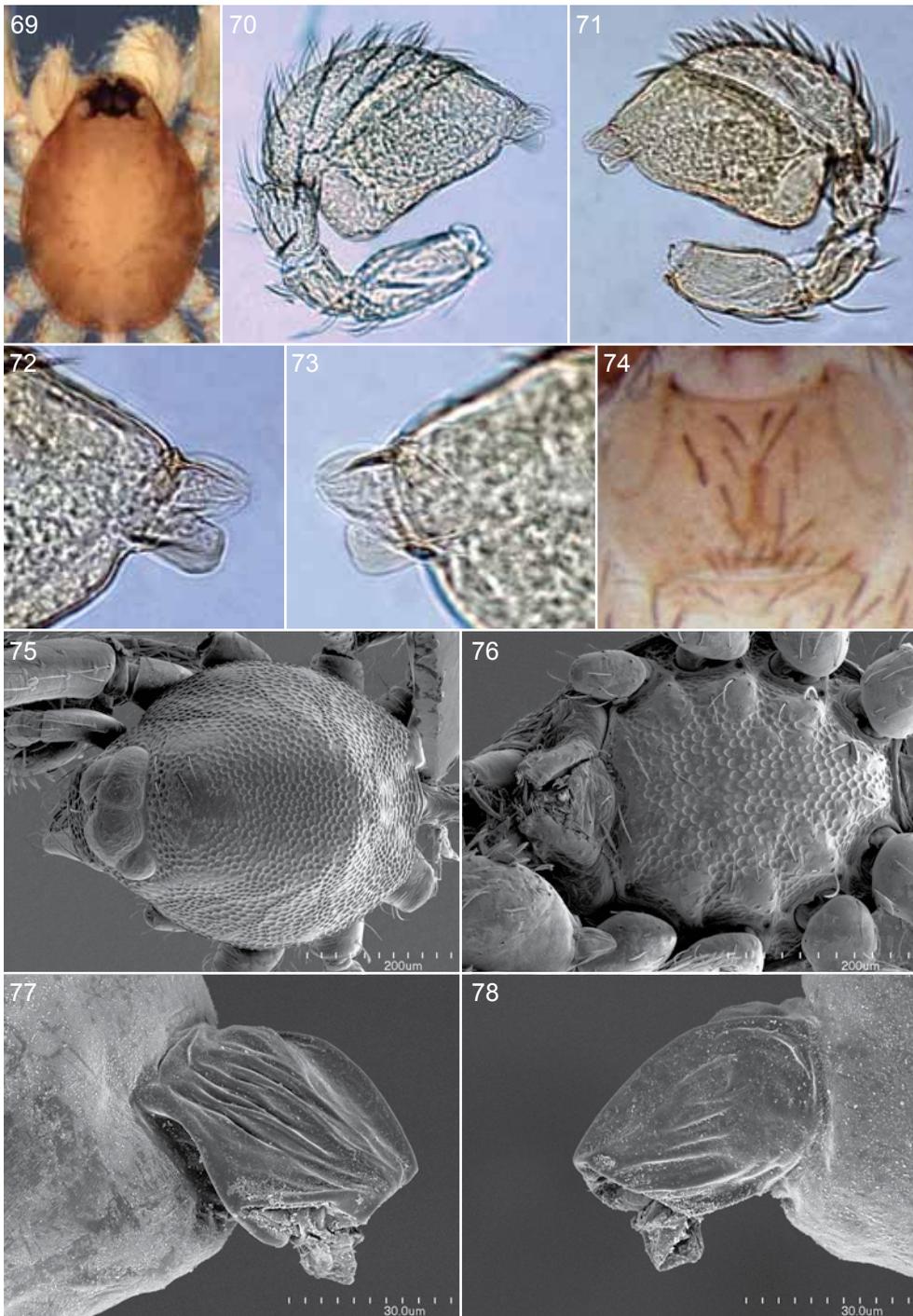
FIGS. 31–45. *Scaphioides minuta* (Chamberlin and Ivie), female. 31. Habitus, dorsal view. 32. Same, lateral view. 33. Carapace, lateral view. 34. Same, anterior view. 35. Mouthparts, ventral view. 36. Chelicerae, anterior view. 37. Same, posterior view. 38. Endite and labrum, dorsal view. 39. Serrula, dorsal view. 40. Palp, prolateral view. 41. Same, retrolateral view. 42. Palpal tibia, dorsal view. 43. Epigastric region, ventral view. 44. Genitalia, dorsal view. 45. Spinnerets, distal view.



FIGS. 46–60. *Scaphioides minuta* (Chamberlin and Ivie), female. **46.** Anterior lateral spinneret, distal view. **47.** Posterior median spinneret, same. **48.** Posterior lateral spinneret, same. **49.** Claws of leg I, distal view. **50.** Same, leg II. **51.** Same, leg III. **52.** Same, leg IV. **53.** Claws of leg I, lateral view. **54.** Same, leg III. **55.** Same, leg IV. **56.** Tarsal organ from leg I, dorsal view. **57.** Same, leg II. **58.** Same, leg III. **59.** Same, leg IV. **60.** Same, leg IV, palp.



FIGS. 61–68. *Scaphioides minuta* (Chamberlin and Ivie), male (61–64) and female (65–68). **61, 65.** Carapace, dorsal view. **62, 66.** Sternum, ventral view. **63.** Left embolus, prolateral view. **64.** Same, retrolateral view. **67.** Genitalia, ventral view. **68.** Same, dorsal view.



FIGS. 69–78. *Scaphioides minuta* (Chamberlin and Ivie), male (69–73) and female (74), *S. bimini*, new species, male (75–78). 69, 75. Carapace, dorsal view. 70. Left palp, prolateral view. 71. Same, retrolateral view. 72, 77. Left embolus, prolateral view. 73, 78. Same, retrolateral view. 74. Epigastric region, ventral view. 76. Sternum, ventral view.

## KEY TO SPECIES

1. Sternum with large, round pits (figs. 62, 76).....2
  - Sternum with much smaller depressions (figs. 128, 169, 192).....18
2. Sternum with pits around midline (figs. 76, 115).....3
  - Sternum with pits at sides only, not around midline (figs. 62, 66).....8
3. Males.....4
  - Females (those of *S. bimini* and *S. yateras* unknown).....7
4. Embolus with elongated distal lobe (figs. 162, 163).....*yateras*
  - Embolus with normal distal lobe (figs. 77, 117, 150).....5
5. Proximal lobe of embolus retrolaterally scooped (figs. 150, 151).....*cobre*
  - Proximal lobe of embolus not scooped (figs. 77, 117).....6
6. Embolus relatively long, narrow (figs. 117, 118); Cuba.....*camaguey*
  - Embolus relatively short, wide (figs. 77, 78); Bimini.....*bimini*
7. Anterior genitalic process long, narrow (figs. 125, 126).....*camaguey*
  - Anterior genitalic process short, wide (figs. 158, 159).....*cobre*
8. Carapace with tubercles (figs. 79, 92).....9
  - Carapace without tubercles, microsculpture consisting only of pits with reticulating ridges (figs. 61, 65).....*minuta*
9. Sides of pars cephalica with pits separated by reticulating ridges (figs. 79, 101, 137, 178)..10
  - Sides of pars cephalica with tubercles only (figs. 92, 201, 211, 300).....13
10. Sides of carapace with rows of tubercles opposite leg coxae (fig. 178); Jamaica.....*hoffi*
  - Sides of carapace otherwise; Mexico, Bahamas, Cuba.....11
11. Posterior margin of pars cephalica with U-shaped band of tubercles (figs. 101, 137); Bahamas, Cuba.....12
  - Posterior margin of pars cephalica without such tubercles (fig. 79); Mexico.....*campeche*
12. Proximal lobe of embolus rounded in prolateral view (fig. 104); anterior genitalic process narrow at tip (figs. 112, 113); Bahamas.....*gertschi*
  - Proximal lobe of embolus squared in prolateral view (fig. 140); anterior genitalic process widened at tip (figs. 145, 146); Cuba.....*siboney*
13. Dorsum of abdomen with distinct pattern (fig. 215).....*econotus*
  - Dorsum of abdomen without pattern.....14
14. Males (those of *S. irazu* unknown).....15
  - Females.....16
15. Embolus relatively short (figs. 204, 205, 206); Puerto Rico.....*phonetus*
  - Embolus relatively long (figs. 303, 304, 306); Virgin Islands.....*nitens*
16. Anterior genitalic process on relatively wide base (figs. 99, 100); Costa Rica.....*irazu*
  - Anterior genitalic process of relatively narrow base (figs. 210, 312); Puerto Rico, Virgin Islands.....17
17. Abdomen iridescent; base of anterior genitalic process longer than process (figs. 209, 210); Puerto Rico.....*phonetus*

- Abdomen not iridescent; base of anterior genitalic process shorter than process (figs. 311, 312); Virgin Islands.....*nitens*
- 18. Sternum with numerous depressions (figs. 192, 231).....19
  - Sternum with fewer depressions (figs. 128, 169).....20
- 19. Proximal lobe of embolus relatively large (figs. 194, 195); anterior genitalic process relatively narrow (figs. 199, 200); Hispaniola.....*miches*
  - Proximal lobe of embolus relatively small (figs. 233, 234); anterior genitalic process relatively wide (figs. 238, 239); Virgin Islands.....*reductoides*
- 20. Sternum with simple, shallow depressions (figs. 169, 315).....21
  - Sternum with deeper, haloed depressions (figs. 128, 221).....22
- 21. Proximal lobe of embolus with long projection (figs. 171, 172); anterior genitalic process widened at tip (figs. 176, 177); Jamaica.....*cletus*
  - Proximal lobe of embolus without long projection (figs. 319, 320); anterior genitalic process not widened at tip (figs. 322, 323); Lesser Antilles.....*halatus*
- 22. Proximal portion of embolus longer than distal portion (figs. 223, 224); base of anterior genitalic process relatively large (figs. 228, 229); Virgin Islands.....*reducta*
  - Proximal portion of embolus not longer than distal portion (figs. 130, 131); base of anterior genitalic process relatively small (figs. 135, 136); Cuba.....*granpiedra*

*Scaphioides minuta* (Chamberlin and Ivie)

Figures 1–74

*Stenoconops minutus* Chamberlin and Ivie, 1935: 8, figs. 1, 2, 14 (male holotype from Tampa, Hillsborough Co., Florida, in AMNH; examined).– Chickering, 1969b: 160, figs. 40, 41 (first description of female).

*Scaphioides minuta*: Platnick and Dupérré, 2010: 9.

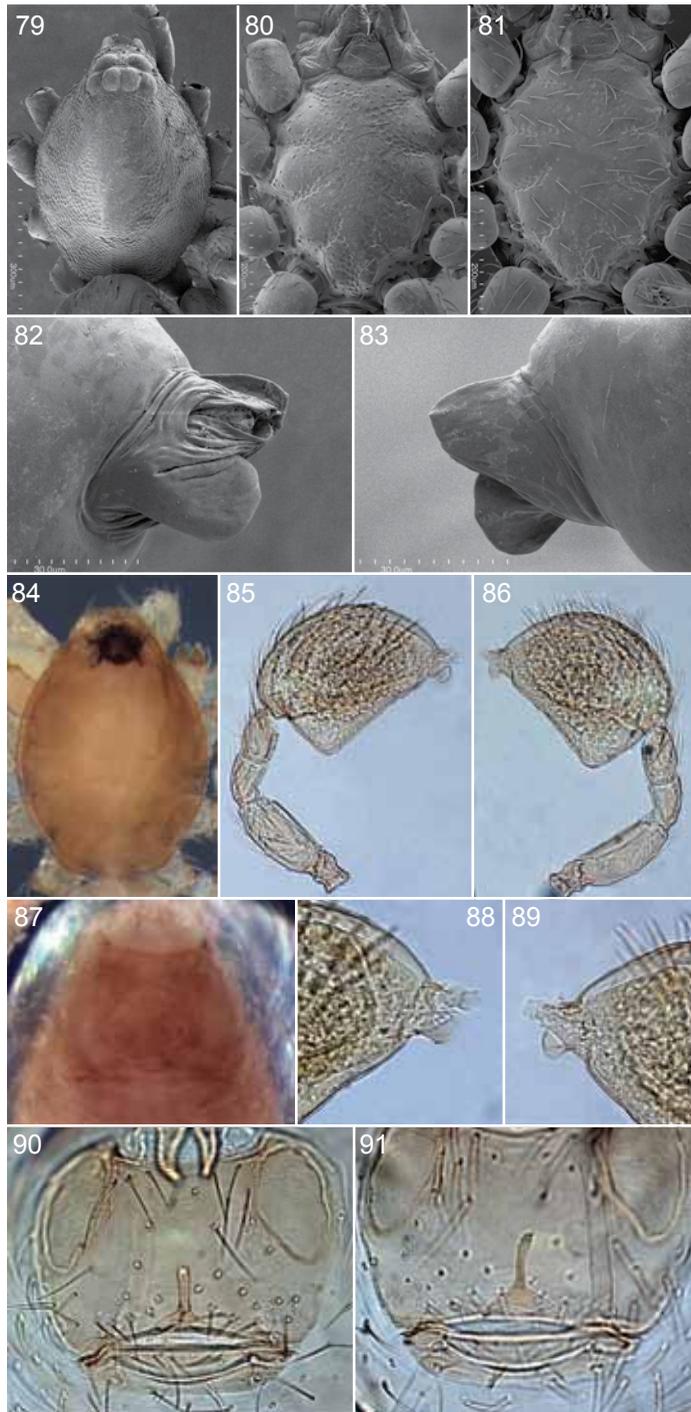
**DIAGNOSIS:** The combined presence of a laterally (but not medially) pitted sternum (figs. 62, 66) and a carapace lacking tubercles but bearing pits with reticulating ridges (fig. 61) is diagnostic.

**MALE** (PBI\_OON 38032, figs. 1–29, 61–64, 69–73): Total length 1.22. Elevated portion of pars cephalica smooth, sides strongly reticulate. ALE separated by their radius to diameter. Sternum surface smooth, covered with large round pits, microsculpture only around furrows, furrows with rows of small pits, anterior margin with continuous transverse groove. Endites with rounded tip bearing short, strong, posterolaterally directed seta. Embolus with proximal portion shorter than distal portion, smooth prolaterally, ridged retrolaterally.

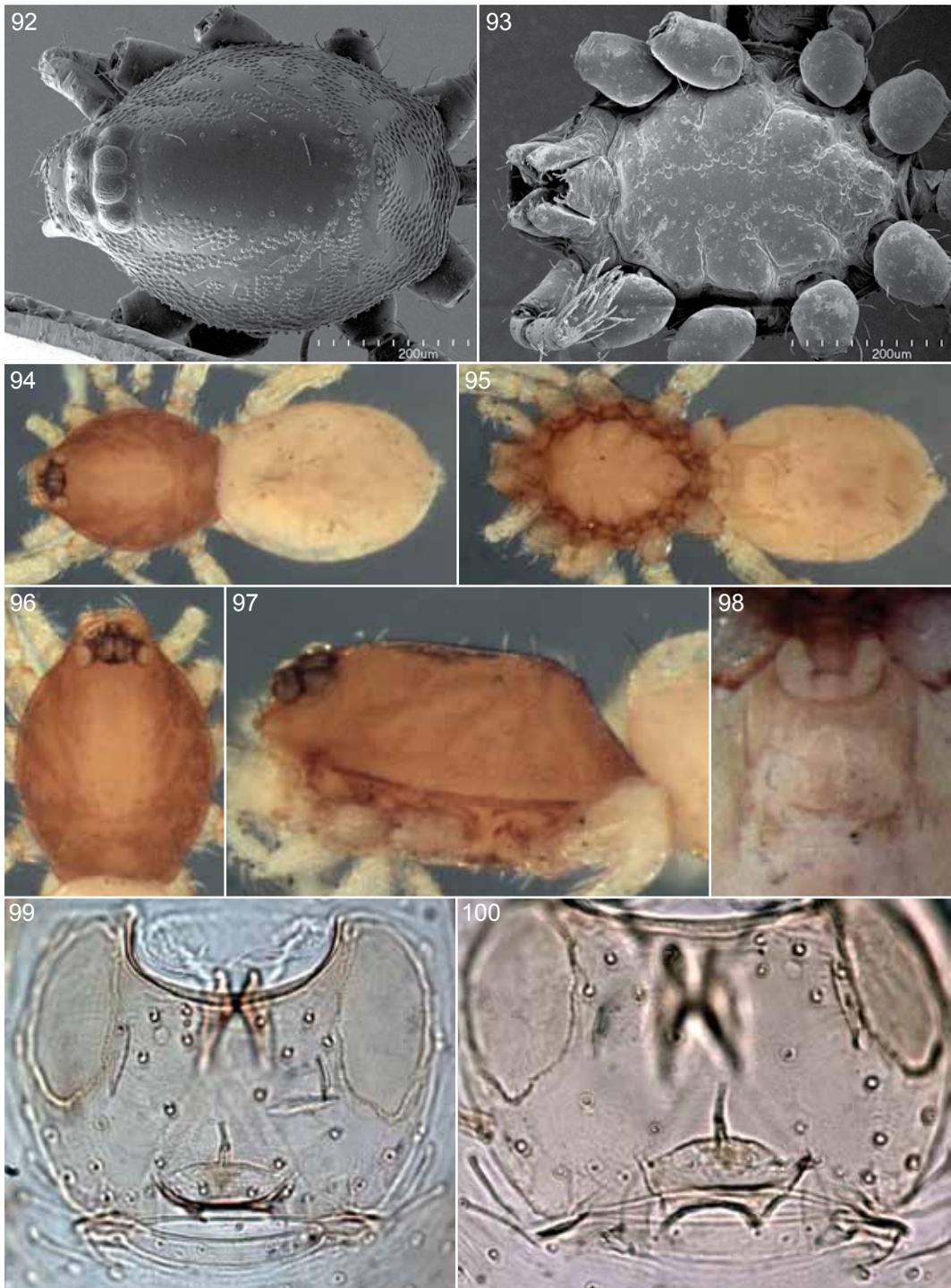
**FEMALE** (PBI\_OON 38932, figs. 30–60, 65–68, 74): Total length 1.34. Anterior genitalic projection relatively short, wide, on smoothly convex base.

**MATERIAL EXAMINED:** UNITED STATES: **Florida:** *Alachua Co.:* Gainesville, Feb. 1–14, 1979, pitfall, oak-pine (E. Becker, CNC PBI\_OON 38175), 1 ♀; Newnan's Lake, 29°39'N, 82°15'W, June 13, 1935 (W. Gertsch, AMNH PBI\_OON 21037), 2 ♂, 1 ♀, same (W. Ivie, AMNH PBI\_OON 21034), 3 ♂, 1 ♀, Mar. 28, 1957 (W. Gertsch, R. Forster, AMNH PBI\_OON 21029, 37318), 2 ♂, 7 ♀, Dec. 21, 1962 (W. Ivie, AMNH PBI\_OON 38031), 1 ♀; W Newnan's Lake, Feb. 12, 1942 (W. Ivie,

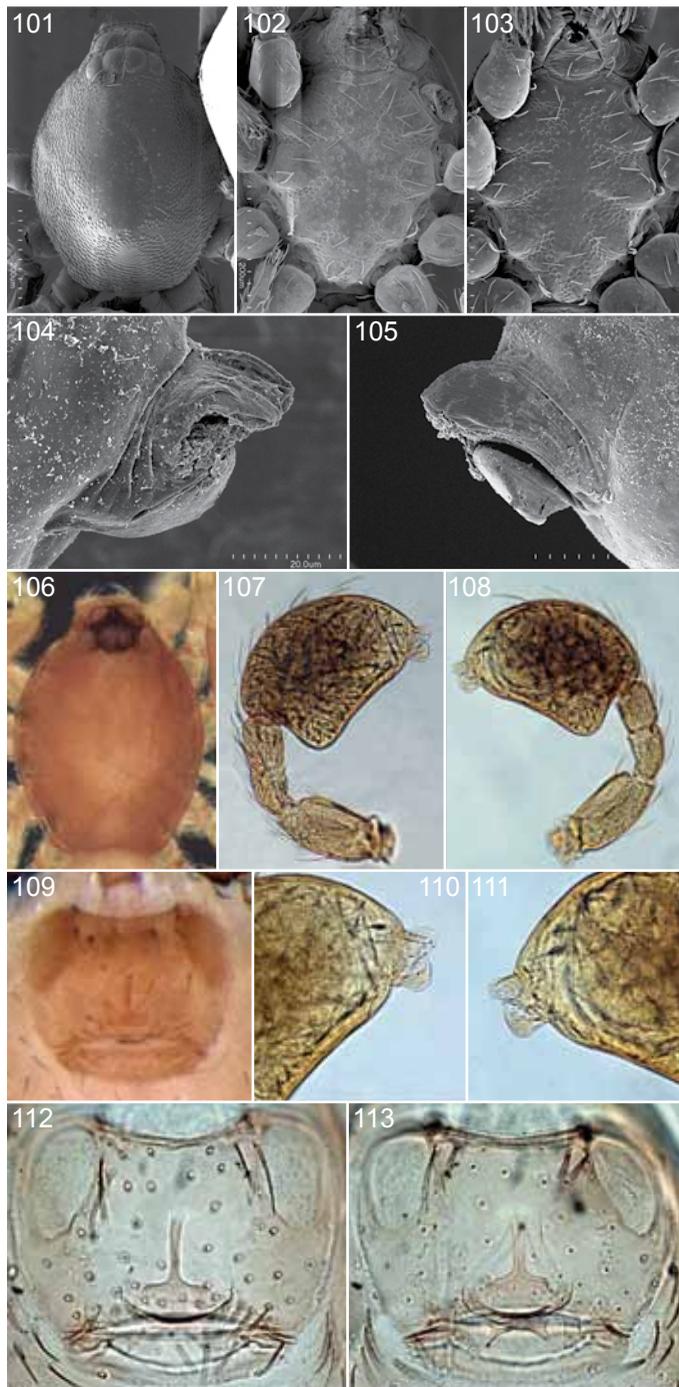
AMNH PBI\_OON 21044), 1 ♂, 1 ♀; San Felasco State Park, Gainesville, May 1, 2008, leaf litter (X. Wang, AMNH PBI\_OON 31066), 2 ♂, 2 ♀. *Collier Co.*: N Naples, 26°14'N, 81°47'W, Dec. 18, 1962 (W. Ivie, AMNH PBI\_OON 1058), 2 ♀. *Columbia Co.*: 12 mi N Lake City, 30°20'N, 82°36'W, Dec. 22, 1962 (W. Ivie, AMNH PBI\_OON 38030), 3 ♂, 1 ♀. *Hernando Co.*: no specific locality, Mar. 23, 1947 (H. Wallace, AMNH PBI\_OON 38033), 1 ♂, 1 ♀. *Highlands Co.*: Archbold Biological Station, 27°11'N, 81°21'W, Apr. 1956, *Quercus chapmani* litter (C. Hoff, AMNH PBI\_OON 38028), 1 ♀, Dec. 19, 1962 (W. Ivie, AMNH PBI\_OON 37333), 1 ♂, 1 ♀, July 3, 1978, litter, elev. 20 m (J., F. Murphy, AMNH PBI\_OON 36820), 1 ♂; Highlands Hammock State Park, Feb. 16, 1970, pitfall, sand pine (M. Muma, H. Greene, FSCA PBI\_OON 21214), 1 ♀; Parker Islands, Apr. 1956, bromeliads on fallen maple tree (C. Hoff, AMNH PBI\_OON 38029), 1 ♂; Sebring Airport, Feb. 19–20, 1982, fossil dune pine litter (G. Edwards, FSCA PBI\_OON 21215), 2 ♀. *Hillsborough Co.*: Tampa, Aug. 26, 1933, among dead leaves on ground (W. Ivie, AMNH PBI\_OON 336), 1 ♂ (holotype). *Lee Co.*: Fort Myers, winter 1934 (W. Barrows, AMNH PBI\_OON 37069), 1 ♂. *Leon Co.*: S Chaires on U.S. 27, July 17, 1965, sawdust pile at edge of cypress swamp (W. Suter, FMNH 71726, PBI\_OON 43494), 1 ♀; 1 mi W Tallahassee on Fla. Rt. 20 just south of intersection with US 90, July 1, 1965, Berlese, litter (W. Suter, FMNH PBI\_OON 10502), 1 ♂; Tall Timbers Research Station, June 21, 1968, pitfall, abandoned field (W. Baker, AMNH PBI\_OON 377), 1 ♀, Aug. 5, 1968, pitfall (W. Baker, AMNH PBI\_OON 375), 3 ♂, same, pitfall under cedar in middle of lawn (W. Baker, AMNH PBI\_OON 376), 2 ♂. *Liberty Co.*: Torreya State Park, 30°33'N, 84°57'W, Apr. 4, 1957 (W. Gertsch, R. Forster, AMNH PBI\_OON 21030), 2 ♂, Dec. 18, 1967 (W. Ivie, AMNH PBI\_OON 21124), 2 ♂, 1 ♀. *Marion Co.*: Ocala National Forest, Nov. 28, 1972 (R. Kaplan, FMNH PBI\_OON 38340), 3 ♂. *Martin Co.*: Jonathan Dickson State Park, 26°59'N, 80°08'W, Dec. 12, 1962 (W. Ivie, AMNH PBI\_OON 1100), 1 ♀; 8 mi NNW Stuart, 27°17'N, 80°17'W, Dec. 12, 1962 (W. Ivie, AMNH PBI\_OON 38032), 2 ♂, 3 ♀. *Monroe Co.*: Big Pine Key, E end, 24°40'N, 81°22'W, Dec. 13, 1962 (W. Ivie, AMNH PBI\_OON 37335), 1 ♂; Big Pine Key, nature trail off Key Deer Blvd., 24°42.558'N, 81°23.181'W, hand sifting (P. Sierwald, FMNH PBI\_OON 38339), 1 ♂; Big Torch Key, June 5–Aug. 28, 1986, hammock forest malaise flight intercept trap (S., J. Peck, AMNH PBI\_OON 43549), 1 ♂; Key Largo Key, 25°10'N, 80°20'W, Dec. 17, 1962 (W. Ivie, AMNH PBI\_OON 37331), 2 ♂, 1 ♀; Key Vaca, Marathon, Aug. 7, 1972, Berlese, palm-hardwood litter (S. Peck, AMNH PBI\_OON 31176, 37521), 1 ♂, 1 ♀; Lignum Vitae Key, July 1981, Malaise trap trough (S. Peck, CNC 38176), 1 ♂, 2 ♀; No Name Key, Aug. 28–Dec. 13, 1986, forest malaise flight intercept trough (S., J. Peck, AMNH PBI\_OON 37325), 1 ♂. *Orange Co.*: 3 mi NW Maitland, 28°38'N, 81°24'W, Dec. 10, 1962 (W. Ivie, AMNH PBI\_OON 37327), 6 ♂, 9 ♀. *Pinellas Co.*: Dunedin, 1927 (W. Blatchley, MCZ 68303, PBI\_OON 27173), 1 ♀. *Polk Co.*: Winter Haven, Mar. 29, 1968, pitfall, sand-pine dune (M. Muma, H. Greene, FSCA PBI\_OON 21213), 1 ♀, Mar. 13, 1969, pitfall, sand-pine dune (K. Stone, FSCA PBI\_OON 21211), 1 ♂, Sept. 30, 1970, pitfall, sand-pine (M. Muma, H. Greene, FSCA PBI\_OON 21212), 1 ♀. *Putnam Co.*: Welaka, May 9, 1949 (A. Van Felt, MCZ 68302, PBI\_OON 27172), 1 ♂ (missing palps). *Sarasota Co.*: Myakka River State Park, 27°14'N, 82°16'W, Dec. 26, 1963 (J., W. Ivie, AMNH PBI\_OON 21035), 1 ♀. *Volusia Co.*: 2 mi S Orange City, 28°53'N, 81°17'W, Dec. 9, 1962 (W. Ivie, AMNH PBI\_OON 37334), 2 ♂, 2 ♀. **Georgia:** *Chatham Co.*: 3 mi SE Savannah, 32°04'N, 81°04'W, Apr. 4–May 3, 1943 (W. Ivie, AMNH PBI\_OON 1141, 1143, 37328, 37336),



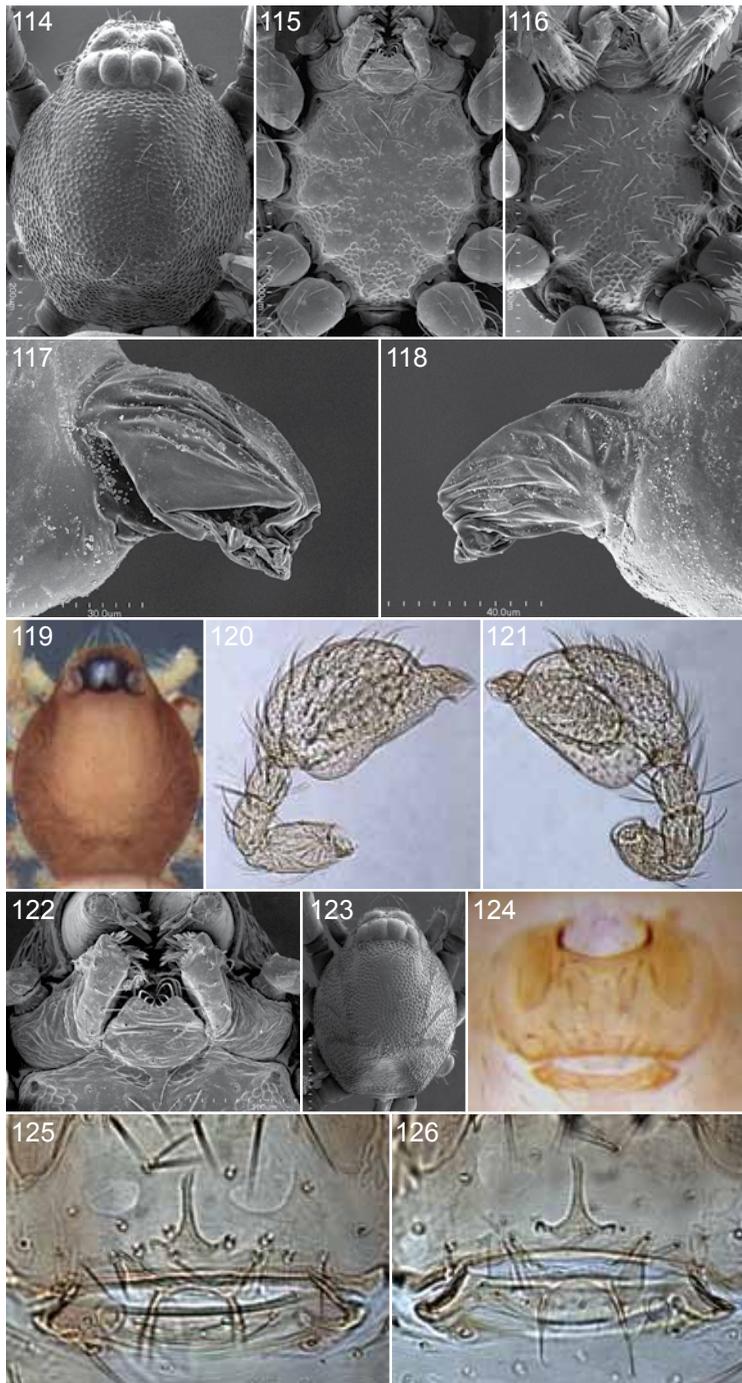
FIGS. 79–91. *Scaphioides campeche*, new species, male (79, 80, 82–86, 88, 89) and female (81, 87, 90, 91). **79, 84.** Carapace, dorsal view. **80, 81.** Sternum, ventral view. **82, 88.** Left embolus, prolateral view. **83, 89.** Same, retrolateral view. **85.** Left palp, prolateral view. **86.** Same, retrolateral view. **87.** Epigastric region, ventral view. **90.** Genitalia, ventral view. **91.** Same, dorsal view.



FIGS. 92–100. *Scaphioides irazu*, new species, female. **92, 96.** Carapace, dorsal view. **93.** Sternum, ventral view. **94.** Habitus, dorsal view. **95.** Same, ventral view. **97.** Carapace, lateral view. **98.** Epigastric region, ventral view. **99.** Genitalia, ventral view. **100.** Same, dorsal view.



FIGS. 101–113. *Scaphioides gertschi*, new species, male (101, 102, 104–108, 110, 111) and female (103, 109, 112, 113). **101, 106.** Carapace, dorsal view. **102, 103.** Sternum, ventral view. **104, 110.** Left embolus, prolateral view. **105, 111.** Same, retrolateral view. **107.** Left palp, prolateral view. **108.** Same, retrolateral view. **109.** Epigastric region, ventral view. **112.** Genitalia, ventral view. **113.** Same, dorsal view.



FIGS. 114–126. *Scaphioides camaguey*, new species, male (114, 115, 117–122) and female (116, 123–126). **114**, **119**, **123**. Carapace, dorsal view. **115**, **116**. Sternum, ventral view. **117**. Left embolus, prolateral view. **118**. Same, retrolateral view. **120**. Left palp, prolateral view. **121**. Same, retrolateral view. **122**. Mouthparts, ventral view. **124**. Epigastric region, ventral view. **125**. Genitalia, ventral view. **126**. Same, dorsal view.

10♂, 9♀; Savannah Beach, 31°60'N, 80°50'W, Dec. 5, 1962 (W. Ivie, AMNH PBI\_OON 1144), 1♀; 3 mi NW Savannah Beach, 32°01'N, 80°53'W, Mar. 14, 1954 (W. Ivie, AMNH PBI\_OON 1146), 10♂, 11♀. *Emanuel Co.*: N Swainsboro, 28°53'N, 81°17'W, Dec. 23, 1962 (W. Ivie, AMNH PBI\_OON 1142), 2♀. *Glynn Co.*: Jekyll Island Park, 31°06'N, 81°25'W, Dec. 6, 1962 (W. Ivie, AMNH PBI\_OON 37330), 1♂. *Randolph Co.*: outside Grier's Cave, 10 mi N Cuthbert, Oct. 22, 1941 (A. Archer, AMNH PBI\_OON 21031, 21039), 2♀. *Thomas Co.*: 8 mi SW Meigs, 30°59'N, 84°11'W, Dec. 18, 1967 (W. Ivie, AMNH PBI\_OON 37332), 1♂. **North Carolina:** *Carteret Co.*: Bogue Banks, Oct. 15, 1951 (R. Barnes, AMNH PBI\_OON 21041), 1♂, June 6, 1952 (R. Barnes, MCZ 68301, PBI\_OON 27174), 2♂.

DISTRIBUTION: Southeastern United States (North Carolina, Georgia, and Florida).

*Scaphioides campeche*, new species

Figures 79–91

TYPES: Male holotype, female allotype, plus one male and one female paratypes from Campeche, Campeche, Mexico (July 5–6, 1951; L. Stannard), deposited in AMNH (PBI\_OON 1380).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Members of this species resemble those of *S. gertschi*, *S. siboney*, and *S. hoffi* in having sternal pits only around the furrows (figs. 80, 81) and both tubercles and pits with reticulating ridges on the carapace (fig. 79), but differ in having the carapace tubercles restricted to the posterior declivity (fig. 79).

MALE (PBI\_OON 1380, figs. 79, 80, 82–86, 88, 89): Total length 1.07. Elevated portion of pars cephalica strongly reticulate, sides strongly reticulate. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture only around furrows, furrows with rows of small pits, anterior margin with continuous transverse groove. Endites with rounded tip bearing two short, strong setae. Embolus resembles that of *S. minuta* but proximal portion shorter, thumblike.

FEMALE (PBI\_OON 1380, figs. 81, 87, 90, 91): Total length 1.16. Anterior genitalic projection relatively long, narrow, curved, on triangular base.

OTHER MATERIAL EXAMINED: MEXICO: **Yucatán:** Chichén Itzá (C. Goodnight, AMNH PBI\_OON 37329), 1♂.

DISTRIBUTION: Mexico (Campeche, Yucatán).

*Scaphioides irazu*, new species

Figures 92–100

TYPE: Female holotype from Volcán Irazu, Cartago, Costa Rica (July 27, 1965; A. Chickering), deposited in MCZ (72091, PBI\_OON 26486).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Members of this species resemble those of *S. phonetus*, *S. econotus*, and *S. nitens* in having many tubercles on the carapace, arrayed in triangular patches opposite the coxae (fig. 92), but have a white, rather than patterned or iridescent abdomen and in having the anterior genitalic process situated on a relatively wide base (figs. 99, 100).

MALE: Unknown.

FEMALE (PBI\_OON 26486, figs. 92–100): Total length 1.37. Elevated portion of pars cephalica smooth, sides granulate. ALE separated by their radius to diameter. Sternum surface smooth, covered with large round pits, microsculpture only around furrows, furrows with rows of small pits, anterior margin with interrupted transverse groove. Anterior genitalic process very narrow, on boat-shaped base.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Costa Rica (Cartago).

*Scaphioides bimini*, new species

Figures 75–78

TYPE: Male holotype from South Bimini, Bahama Islands (May 1951; W. Gertsch, M. Cazier), deposited in AMNH (PBI\_OON 21048).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Members of this species resemble those of *S. camaguey*, *S. cobre*, and *S. yateras* in having large pits widely distributed on the sternum, including along the midline (fig. 76), but differ in having a relatively short, wide embolus (figs. 77, 78).

MALE (PBI\_OON 21048, figs. 75–78): Total length 1.17. Elevated portion of pars cephalica strongly reticulate, sides strongly reticulate. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture covering entire surface, furrows with rows of small pits, anterior margin with interrupted transverse groove. Embolus without clearly distinguishable proximal and distal lobes.

FEMALE: Unknown.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Bahama Islands (South Bimini).

*Scaphioides gertschi*, new species

Figures 101–113

TYPES: Male holotype, female allotype, and two male paratypes from South Bimini, Bahama Islands (May 1951; W. Gertsch, M. Cazier), deposited in AMNH (PBI\_OON 21008).

ETYMOLOGY: The specific name is a patronym in honor of Willis Gertsch, one of the collectors of the type series.

DIAGNOSIS: Members of this species resemble those of *S. campeche*, *S. siboney*, and *S. hoffi* in having sternal pits only around the furrows (figs. 102, 103) and both tubercles and pits with reticulating ridges on the carapace (fig. 101), but have the proximal lobe of the embolus rounded in prolateral view (fig. 104) and a long, narrow tip on the anterior genitalic process (figs. 112, 113).

MALE (PBI\_OON 21042, figs. 101, 102, 104–108, 110, 111): Total length 1.18. Elevated portion of pars cephalica smooth except posterior margin with U-shaped band of tubercles; carapace sides strongly reticulate. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture only around furrows, furrows with rows

of small pits, anterior margin with continuous transverse groove. Endites with rounded tip. Embolus with proximal portion short, narrow, distal portion arched.

FEMALE (PBI\_OON 21042, figs. 103, 109, 112, 113): Total length 1.37. Anterior genitalic projection long, wider distally than proximally, on short base with squared sides.

OTHER MATERIAL EXAMINED: WEST INDIES: **Bahama Islands:** North Bimini, Dec. 4, 1952 (A. Nadler, AMNH PBI\_OON 21032), 2 ♀; Pigeon Cay, Andros Island, May 1–6, 1994, Berlese, coastal coppice litter (R. Anderson, AMNH PBI\_OON 1766), 1 ♀; South Bimini, May 1951 (W. Gertsch, M. Cazier, AMNH PBI\_OON 21042, 21045, 43633), 10 ♂, 1 ♀, June 1951 (M. Cazier, C., P. Vaurie, AMNH PBI\_OON 21036, 21040), 4 ♂, 1 ♀, July 1951 (C., P. Vaurie, AMNH PBI\_OON 21046), 1 ♀, Apr. 10–14, 1952 (E. Mayr, AMNH PBI\_OON 21047), 1 ♂, Dec. 12–18, 1952 (A. Nadler, AMNH PBI\_OON 21038, 21043), 3 ♂, 1 ♀, Mar. 22–28, 1953 (A. Nadler, AMNH PBI\_OON 21033), 1 ♂, May 26–29, 1953 (A. Nadler, AMNH PBI\_OON 21049), 1 ♀.

DISTRIBUTION: Bahama Islands (Andros, North Bimini, South Bimini).

*Scaphioides camaguey*, new species

Figures 114–126

TYPES: Male holotype, female allotype, plus one male and four female paratypes taken during the dry season in a semideciduous forest at Sierra de Cubitas, Limones de Tuabaquey, Camaguey, Cuba (Feb. 2010; Y. Martínez), deposited in MNH (PBI\_OON 968).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Members of this species resemble those of *S. bimini*, *S. cobre*, and *S. yateras* in having large pits widely distributed on the sternum, including along the midline (figs. 115, 116), but have a relatively long, narrow embolus with a greatly reduced proximal lobe (figs. 117, 118) and a relatively long, narrow anterior genitalic process (figs. 125, 126).

MALE (PBI\_OON 968, figs. 114, 115, 117–122): Total length 1.03. Elevated portion of pars cephalica strongly reticulate, sides strongly reticulate, posterior margin of elevated portion with U-shaped band of tubercles. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture only around furrows, furrows with rows of small pits, anterior margin with interrupted transverse groove. Proximal portion of embolus tiny, distal portion strongly arched.

FEMALE (PBI\_OON 968, figs. 116, 123–126): Total length 1.28. Anterior genitalic process much wider posteriorly than anteriorly, on short base with angular edges that extend farther anteriorly than do paramedian portions of base.

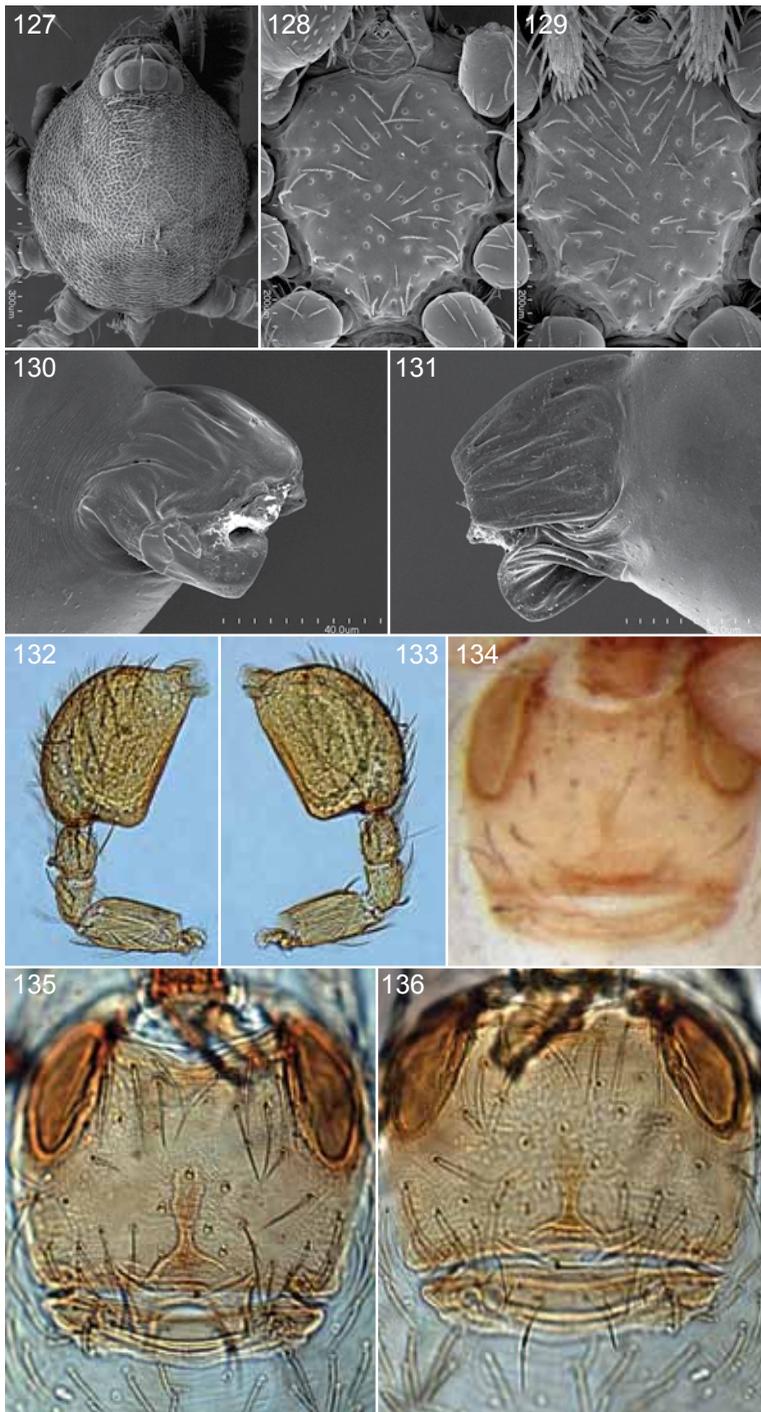
OTHER MATERIAL EXAMINED: WEST INDIES: **Cuba:** *Camaguey:* Sierra de Cubitas, Limones de Tuabaquey, Sept. 2009 (Y. Martínez, AMNH PBI\_OON 969), 2 ♂, 3 ♀.

DISTRIBUTION: Cuba (Camaguey).

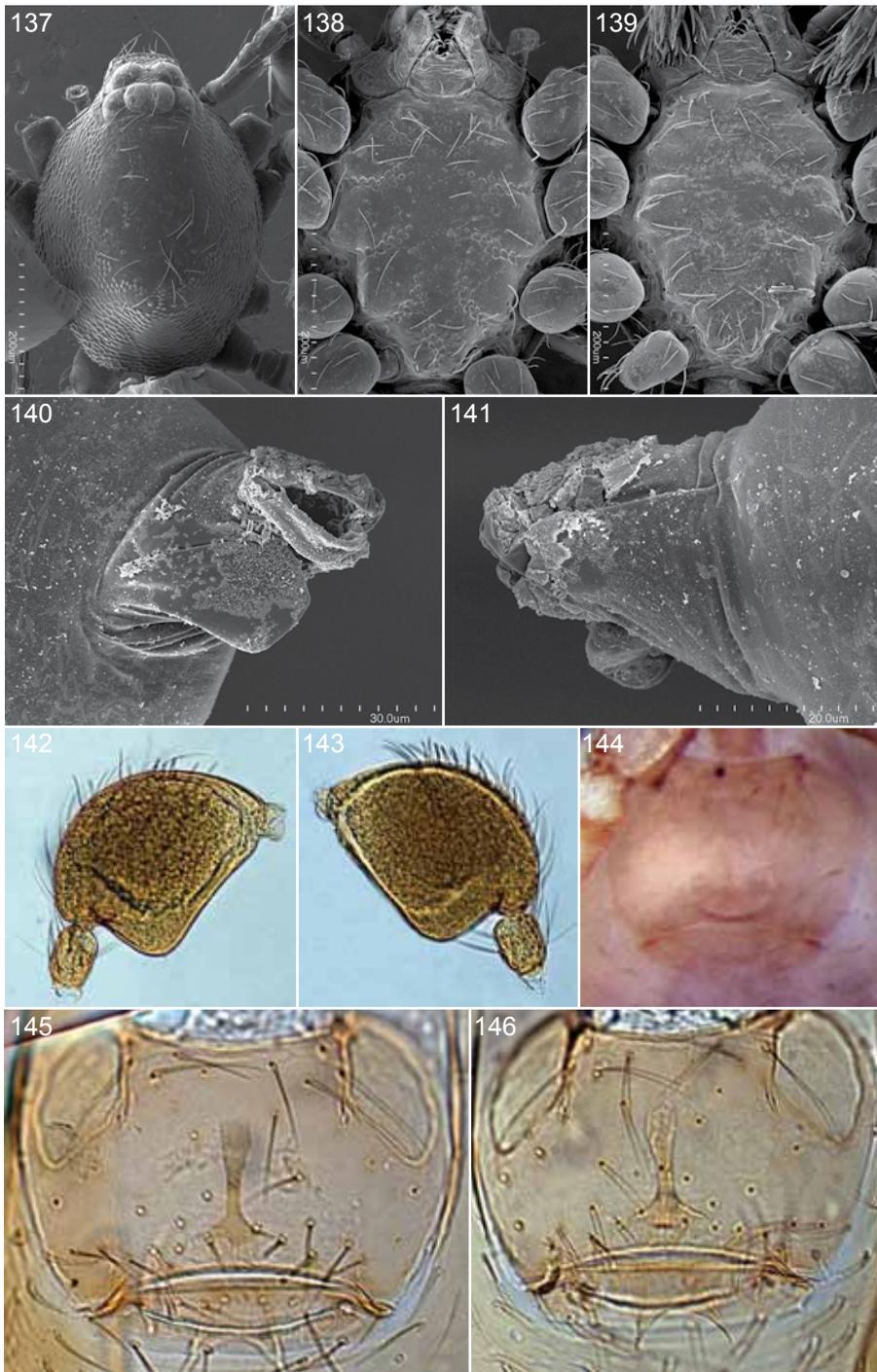
*Scaphioides granpiedra*, new species

Figures 127–136

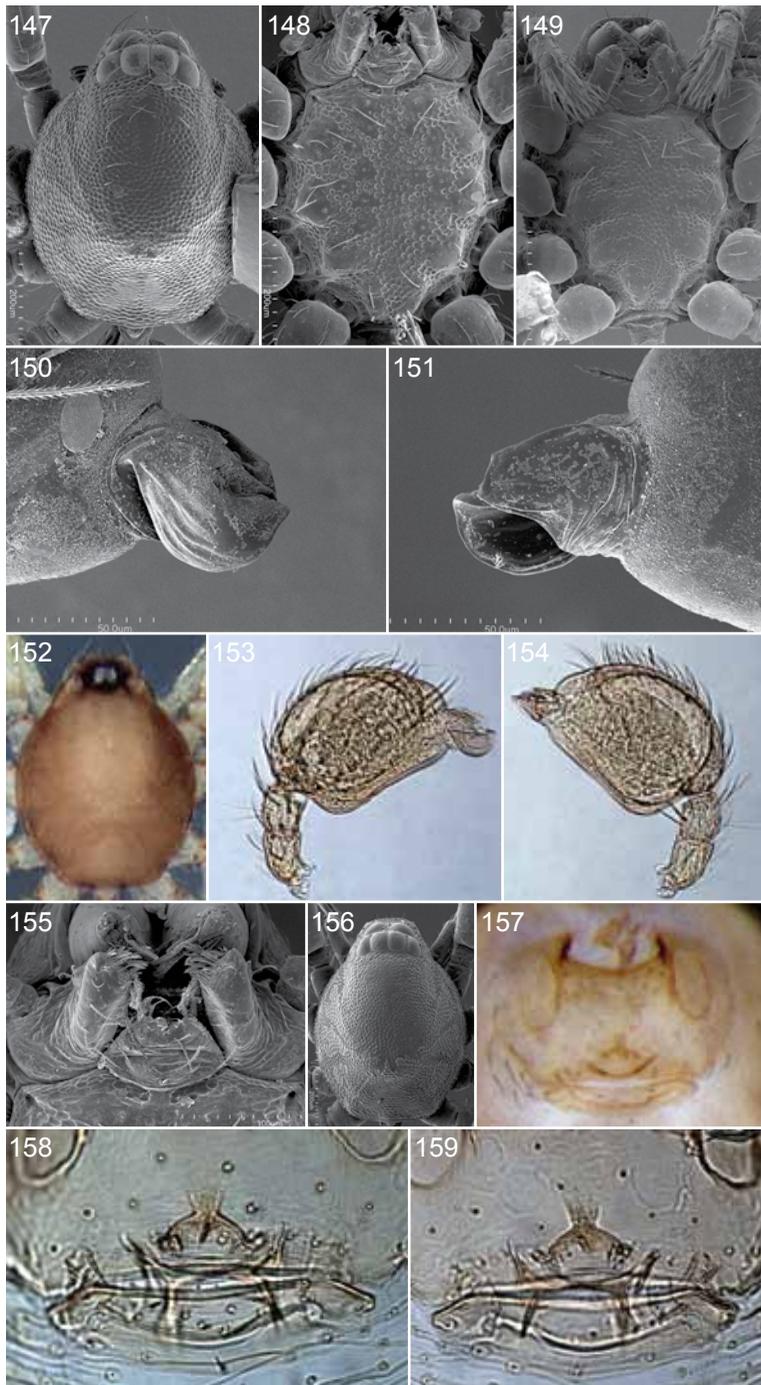
TYPES: Male holotype, female allotype, and female paratype taken in litter at an elevation of 1200 m at a site 7.5 km on the road to La Gran Piedra, 20°00'23"N, 75°40'31"W, Santiago



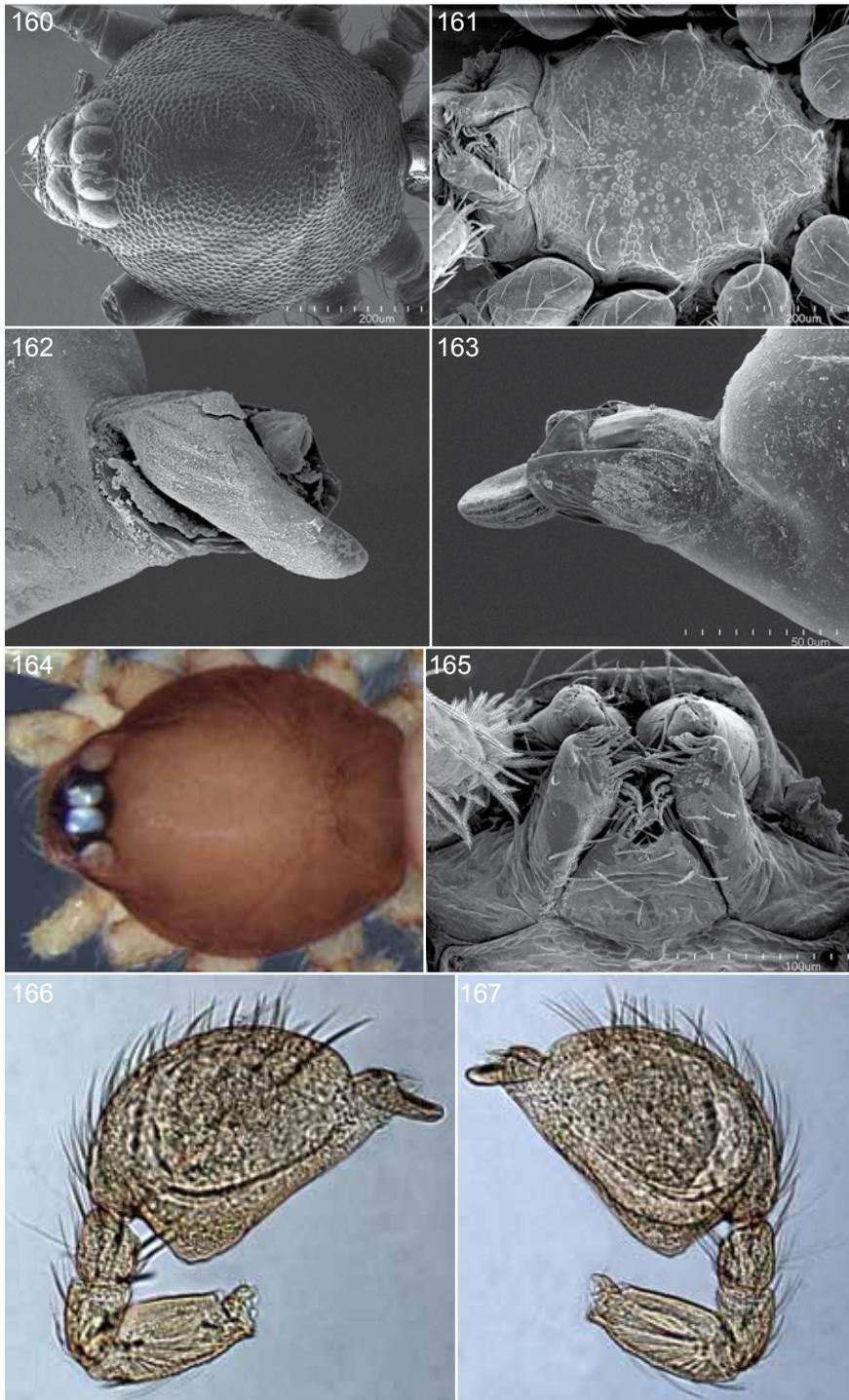
FIGS. 127–136. *Scaphioides granpiedra*, new species, male (127, 128, 130–133) and female (129, 134–136). **127.** Carapace, dorsal view. **128, 129.** Sternum, ventral view. **130.** Left embolus, prolateral view. **131.** Same, retrolateral view. **132.** Left palp, prolateral view. **133.** Same, retrolateral view. **134.** Epigastric region, ventral view. **135.** Genitalia, ventral view. **136.** Same, dorsal view.



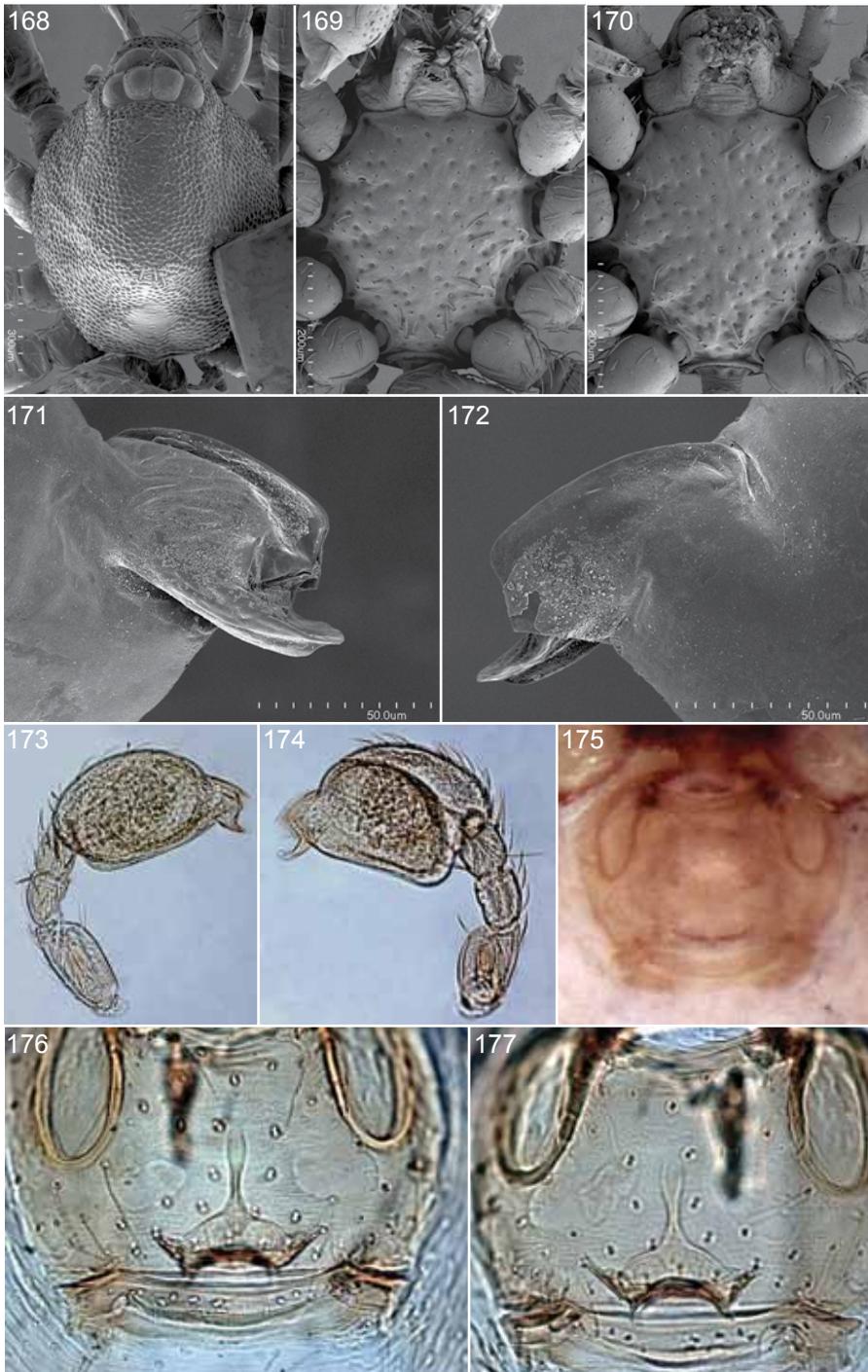
FIGS. 137–146. *Scaphioides siboney*, new species, male (137, 138, 140–143) and female (139, 144–146). **137.** Carapace, dorsal view. **138, 139.** Sternum, ventral view. **140.** Left embolus, prolateral view. **141.** Same, retrolateral view. **142.** Left palp, prolateral view. **143.** Same, retrolateral view. **144.** Epigastric region, ventral view. **145.** Genitalia, ventral view. **146.** Same, dorsal view.



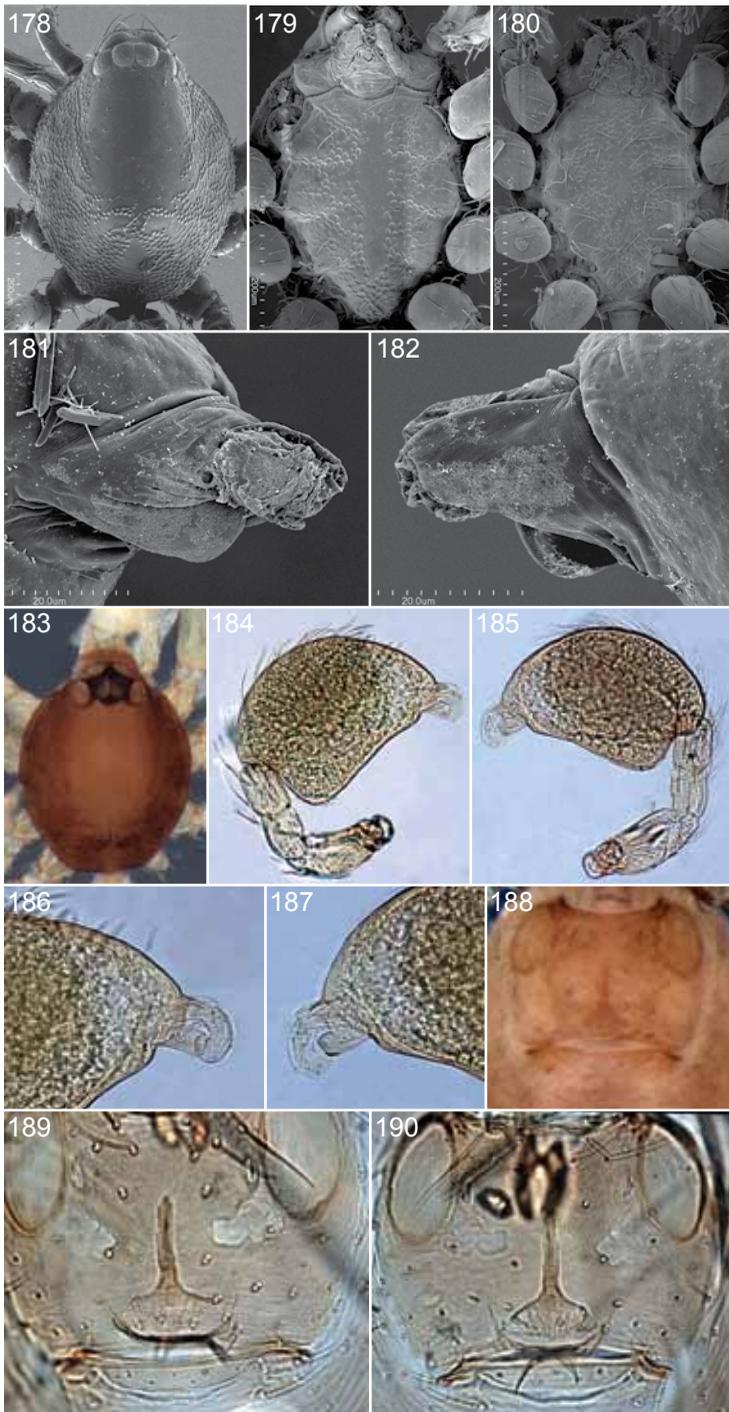
FIGS. 147–159. *Scaphioides cobre*, new species, male (147, 148, 150–155) and female (149, 156–159). **147, 152, 156.** Carapace, dorsal view. **148, 149.** Sternum, ventral view. **150.** Left embolus, prolateral view. **151.** Same, retrolateral view. **153.** Left palp, prolateral view. **154.** Same, retrolateral view. **155.** Mouthparts, ventral view. **157.** Epigastric region, ventral view. **158.** Genitalia, ventral view. **159.** Same, dorsal view.



FIGS. 160–167. *Scaphioides yateras*, new species, male. **160, 164.** Carapace, dorsal view. **161.** Sternum, ventral view. **162.** Left embolus, prolateral view. **163.** Same, retrolateral view. **165.** Mouthparts, ventral view. **166.** Left palp, prolateral view. **167.** Same, retrolateral view.



FIGS. 168–177. *Scaphioides cletus* (Chickering), male (168, 169, 171–174) and female (170, 175–177). **168.** Carapace, dorsal view. **169, 170.** Sternum, ventral view. **171.** Left embolus, prolateral view. **172.** Same, retrolateral view. **173.** Left palp, prolateral view. **174.** Same, retrolateral view. **175.** Epigastric region, ventral view. **176.** Genitalia, ventral view. **177.** Same, dorsal view.



FIGS. 178–190. *Scaphioides hoffi* (Chickering), male (178, 179, 181–187) and female (180, 188–190). **178, 183.** Carapace, dorsal view. **179, 180.** Sternum, ventral view. **181, 186.** Left embolus, prolateral view. **182, 187.** Same, retrolateral view. **184.** Left palp, prolateral view. **185.** Same, retrolateral view. **188.** Epigastric region, ventral view. **189.** Genitalia, ventral view. **190.** Same, dorsal view.

de Cuba, Cuba (May 8, 2010; N. Platnick, A. Sánchez, A. Pérez, G. Alayón), deposited in BSC (PBI\_OON 960).

**ETYMOLOGY:** The specific name is a noun in apposition taken from the type locality.

**DIAGNOSIS:** Members of this species resemble those of *S. reducta* in having relatively few, small sternal depressions that are “haloed” by distinct edges (figs. 128, 129) but have the proximal portion of the embolus no longer than the distal portion (figs. 130, 131) and a smaller base of the anterior genitalic process (figs. 135, 136).

**MALE** (PBI\_OON 961, figs. 127, 128, 130–133): Total length 1.33. Elevated portion of pars cephalica strongly reticulate, sides strongly reticulate. ALE separated by less than their radius. Sternum surface smooth, covered with small round pits, microsculpture everywhere but front, furrows with rows of small pits, anterior margin with continuous transverse groove. Endites with rounded tip. Proximal portion of embolus separated from distal portion, on retrolateral side, by short, round notch.

**FEMALE** (PBI\_OON 361, figs. 129, 134–136): Total length 1.50. Anterior genitalic process hourglass shaped.

**OTHER MATERIAL EXAMINED:** WEST INDIES: **Cuba:** *Santiago de Cuba:* Municipio Santiago de Cuba: Cañón del Río Juticí, Reserva Ecológica Siboney-Juticí, 19°57'44"N, 75°44'48"W, May 4–5, 2010, Berlese, litter, elev. 10 m (N. Platnick, A. Sánchez, A. Pérez, G. Alayón, AMNH PBI\_OON 963), 8♂, 2♀ (including Eva Guablomme DNA sequencing voucher); El Cobre, 20°02'48"N, 75°56'20"W, May 7, 2010, Berlese, litter (N. Platnick, A. Sánchez, A. Pérez, G. Alayón, AMNH PBI\_OON 961), 1♂, 1♀; Mata Yegua, 2 km NE El Escandel, near tributary of Río Escandel, 20°05'34"N, 75°41'49"W, May 10, 2010, litter (N. Platnick, A. Sánchez, A. Pérez, G. Alayón, AMNH PBI\_OON 962), 1♂; Reserva Ecológica Siboney-Juticí, 19°57'39"N, 75°42'52"W, May 5, 2010, dry litter (N. Platnick, A. Sánchez, A. Pérez, G. Alayón, AMNH PBI\_OON 43634), 3♂, 3♀.

**DISTRIBUTION:** Cuba (Santiago de Cuba).

### *Scaphioides siboney*, new species

Figures 137–146

*Stenoconops hoffi* (misidentification): Dumitresco and Georgesco, 1983: 94, pl. 16, figs. 1–5.

**TYPES:** Male holotype, female allotype, plus five male and three female paratypes taken in dry litter at the Reserva Ecológica Siboney-Juticí, 19°57'39"N, 75°42'52"W, Municipio Santiago de Cuba, Santiago de Cuba, Cuba (May 5, 2010; N. Platnick, A. Sánchez, A. Pérez, G. Alayón), deposited in BSC (PBI\_OON 964).

**ETYMOLOGY:** The specific name is a noun in apposition taken from the type locality.

**DIAGNOSIS:** Members of this species resemble those of *S. campeche*, *S. gertschi*, and *S. hoffi* in having sternal pits only around the furrows (figs. 138, 139) and both tubercles and pits with reticulating ridges on the carapace (fig. 137), but have the proximal lobe of the embolus squared in prolateral view (fig. 140) and a widened tip on the anterior genitalic process (figs. 145, 146).

**MALE** (PBI\_OON 964, figs. 137, 138, 140–143): Total length 1.28. Elevated portion of pars cephalica smooth, except posterior margin with short, U-shaped band of tubercles, sides strongly reticulate. ALE separated by less than their radius. Sternum surface smooth, covered

with large round pits, microsculpture only around furrows, furrows with rows of small pits, anterior margin with interrupted transverse groove. Endite tip with rounded edge. Proximal portion of embolus occupying much more of prolateral side than of retrolateral side.

FEMALE (PBI\_OON 964, figs. 139, 144–146): Total length 1.43. Anterior genitalic process very long, greatly expanded anteriorly, base with very short sides.

OTHER MATERIAL EXAMINED: WEST INDIES: **Cuba:** *Santiago de Cuba:* Municipio Santiago de Cuba: Cañón del Río Juticí, Reserva Ecológica Siboney-Juticí, 19°57'44"N, 75°44'48"W, May 4–5, 2010, Berlese, litter, elev. 10 m (N. Platnick, A. Sánchez, A. Pérez, G. Alayón, AMNH PBI\_OON 965), 2♂.

DISTRIBUTION: Cuba (Santiago de Cuba).

### *Scaphioides cobre*, new species

Figures 147–159

TYPES: Male holotype, female allotype, and male paratype taken in Berlese sample of litter from El Cobre, 20°02'48"N, 75°56'20"W, Municipio Santiago de Cuba, Santiago de Cuba, Cuba (May 7, 2010; N. Platnick, A. Sánchez, A. Pérez, G. Alayón), deposited in BSC (PBI\_OON 966).

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Members of this species resemble those of *S. bimini*, *S. camaguey*, and *S. yateras* in having large pits widely distributed on the sternum, including along the midline (figs. 148, 149), but have a scoop-shaped retrolateral margin on the proximal lobe of the embolus (figs. 150, 151) and short, wide anterior genitalic process (figs. 158, 159).

MALE (PBI\_OON 966, figs. 147, 148, 150–155): Total length 1.18. Elevated portion of pars cephalica strongly reticulate, posterior margin with U-shaped band of tubercles, sides strongly reticulate. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture covering entire surface, furrows with rows of small pits, anterior margin with interrupted transverse groove. Proximal portion of embolus largely covering distal portion in prolateral view.

FEMALE (PBI\_OON 966, figs. 149, 156–159): Total length 1.30. Anterior genitalic projection short, wide, expanded anteriorly, situated on semicircular base.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Cuba (Santiago de Cuba).

### *Scaphioides yateras*, new species

Figures 160–167

TYPES: Male holotype and three male paratypes taken 500 m N of the road to Palenque, N of the Río Guayabo, 20°32'37"N, 75°00'41"W, Municipio Yateras, Guantánamo, Cuba (May 13, 2010; A. Pérez), deposited in BSC (PBI\_OON 967),

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Members of this species resemble those of *S. bimini*, *S. camaguey*, and *S. cobre* in having large pits widely distributed on the sternum, including along the midline (fig. 161), but have an elongated distal lobe on the embolus (figs. 162, 163).

MALE (PBI\_OON 967, figs. 160–167): Total length 1.15. Elevated portion of pars cephalica strongly reticulate, posterior margin with U-shaped band of tubercles, sides strongly reticulate. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture covering entire surface, furrows with rows of small pits, anterior margin with interrupted transverse groove. Distal portion of embolus extending across proximal portion in prolateral view.

FEMALE: Unknown.

OTHER MATERIAL EXAMINED: WEST INDIES: **Cuba:** *Guantánamo:* Municipio Baracoa: Río Jaguaní, El Poal, ca. 20°26.050'N, 74°45.775'W, Aug. 11, 1992, elev. 125 m (A. Pérez, M. Estrada, AMNH PBI\_OON 43632), 1 ♂.

DISTRIBUTION: Cuba (Guantánamo).

### *Scaphioides cletus* (Chickering)

Figures 168–177

*Stenoonops cletus* Chickering, 1969a: 3, figs. 1–6 (male holotype from 3 miles east of May Pen, St. Catherine Par., Jamaica, in MCZ; examined).

*Scaphioides cletus*: Platnick and Dupérré, 2010: 9.

DIAGNOSIS: Member of this species resemble those of *S. halatus* in having only a few, pinpoint-shaped depressions on the sternum (figs. 169, 170), but have a long projection on the proximal lobe of the embolus (figs. 171, 172) and a widened tip on the anterior genitalic process (figs. 176, 177).

MALE (PBI\_OON 26440, figs. 168, 169, 171–174): Total length 1.40. Elevated portion of pars cephalica strongly reticulate, posterior margin with U-shaped band of tubercles, sides strongly reticulate. ALE separated by less than their radius. Sternum surface finely punctuate, without pits, microsculpture covering entire surface, furrows smooth, anterior margin with continuous transverse groove. Endite tip with rounded, posteriorly directed projection. Proximal portion of embolus with scoop-shaped tip.

FEMALE (PBI\_OON 21001, figs. 170, 175–177): Total length 1.52. Anterior genitalic process bulbous anteriorly, situated on strongly arched base.

MATERIAL EXAMINED: WEST INDIES: **Jamaica:** *Manchester:* Mandeville, Apr. 14, 1959 (Sanderson, AMNH PBI\_OON 21001), 2 ♀. *St. Andrew:* Hardwar Gap, Dec. 6, 1954 (A. Nadler, MCZ 71993, PBI\_OON 26440), 1 ♂; Hermitage Reservoir, Nov. 26, 1957 (A. Chickering, MCZ 68231, PBI\_OON 349), 1 ♂; Jack's Hill Road, Dec. 6, 1957 (A. Chickering, MCZ 83730, PBI\_OON 356), 1 ♂, 1 ♀; NE edge Kingston, May 8, 1956, small dead limbs on ground (C. Hoff, MCZ 83744, PBI\_OON 348), 1 ♀; 14 mi E Kingston, Nov. 19, 1963 (A. Chickering, MCZ 72088, PBI\_OON 26439), 1 ♂, 2 ♀; NE slope, Long Mountain, May 5, 1956, dry acacia litter (C. Hoff, MCZ 83742), PBI\_OON 350), 1 ♂, 3 ♀; NW part, Long Mountain, May 8, 1956, ground litter under agave (C. Hoff, MCZ 83745, PBI\_OON 355), 1 ♀; 9–10 mi W on Red Hills Road, Oct. 28, 1957 (AMNH PBI\_OON 21002), 1 ♂; Ferry, 1 mi W Red Hills Road, Sept. 27, 1957 (A. Chickering, MCZ 83733, PBI\_OON 347), 1 ♂, 1 ♀; Richards Reservoir, Dec. 3, 1957 (A. Chickering, MCZ 83839, PBI\_OON 353), 1 ♂. *St. Ann:* entrance to Mount Diablo Forest, Nov. 6, 1963 (A. Chickering, MCZ 72089,

PBI\_OON 26491), 1 ♂. *St. Catherine*: Evarton, Nov. 29, 1957 (A. Chickering, MCZ 83738, PBI\_OON 345), 1 ♀; Guanaboa Vale, Nov. 28, 1957 (A. Chickering, MCZ 83731, PBI\_OON 351), 1 ♀; 3 mi E May Pen, Nov. 22, 1957 (A. Chickering, MCZ PBI\_OON 342), 1 ♂, 1 ♀ (holotype, paratype), same (A. Chickering, MCZ 83737, PBI\_OON 352), 3 ♂, 1 ♀; Innswood Estate, Nov. 10, 1963 (A. Chickering, MCZ 83732, PBI\_OON 344), 2 ♂. *St. Thomas*: Actreat, July 13, 1954 (Bellinger, MCZ 83740, PBI\_OON 346), 1 ♀; Lysson, June 28, 1954 (A. Chickering, MCZ 83734, PBI\_OON 354), 1 ♀. *Trelawny*: 7 mi S Falmouth, May 12, 1956 (C. Hoff, MCZ 83741, PBI\_OON 343), 1 ♂, 2 ♀.

DISTRIBUTION: Jamaica.

*Scaphioides hoffi* (Chickering)

Figures 178–190

*Stenoonops hoffi* Chickering, 1969a: 14, figs. 34–42 (male holotype from Morant Point, St. Thomas Par., Jamaica, in MCZ; examined).

*Scaphioides hoffi*: Platnick and Dupérré, 2010: 9.

DIAGNOSIS: Members of this species resemble those of *S. campeche*, *S. gertschi*, and *S. siboney* in having sternal pits only around the furrows (figs. 179, 180) and both tubercles and pits with reticulating ridges on the carapace (fig. 178), but the sides of the carapace have rows of tubercles opposite the leg coxae (fig. 178).

MALE (PBI\_OON 362, figs. 178, 179, 181–187). Total length 1.11. Elevated portion of pars cephalica smooth, with both tubercles and reticulating ridges. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture everywhere but middle, furrows with rows of small pits, anterior margin with continuous transverse groove. Endites with rounded tip. Proximal portion of embolus jaw shaped in prolateral view.

FEMALE (PBI\_OON 364, figs. 180, 188–190): Total length 1.25. Anterior genitalic process relatively wide, with irregular tip, situated on oval base.

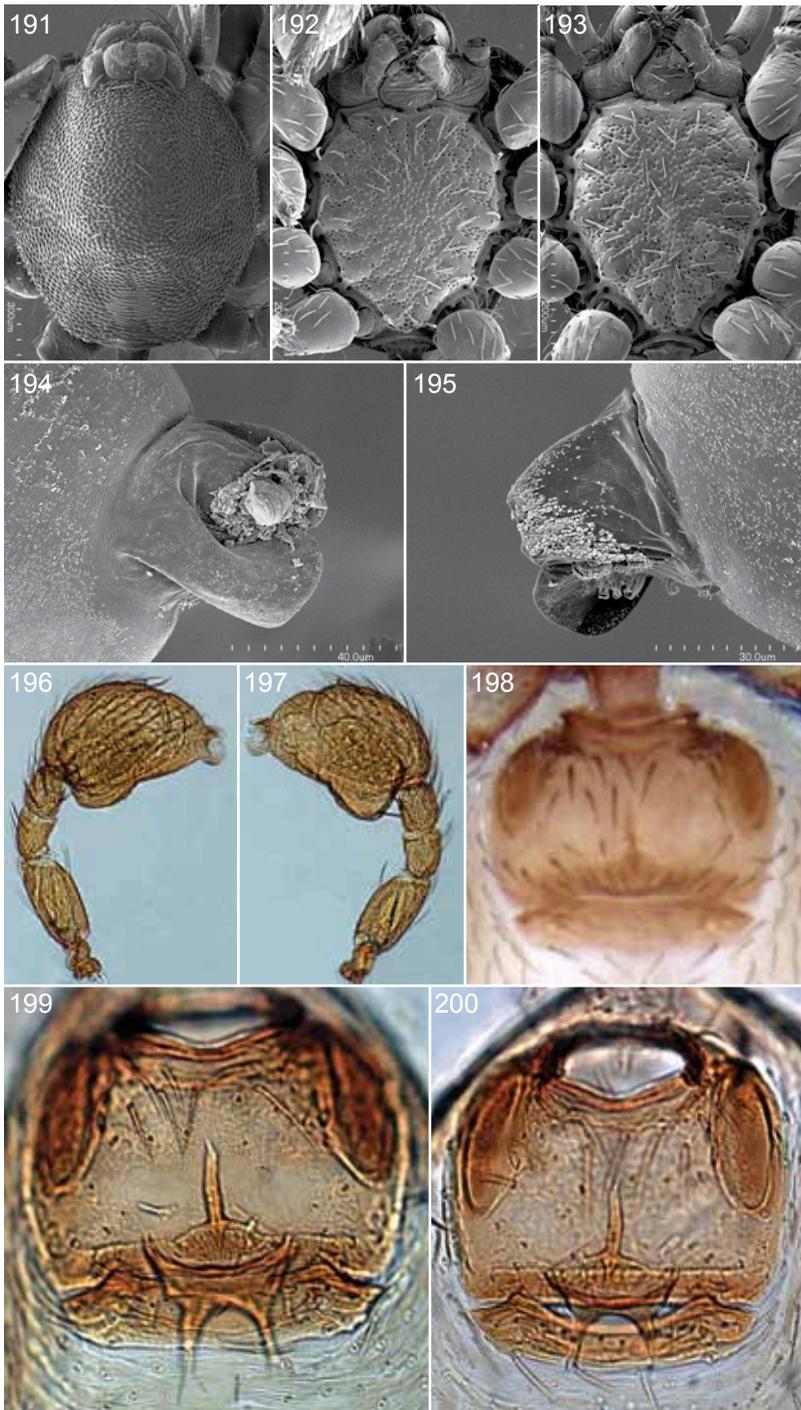
MATERIAL EXAMINED: WEST INDIES: **Jamaica**: *St. Andrew*: NW part, Long Mountain, May 8, 1956, ground litter under agave (C. Hoff, MCZ PBI\_OON 363), 1 ♂. *St. Catherine*: 2 mi NW Ferry, May 17, 1956, moist bark of tree in woods (C. Hoff, MCZ 83747, PBI\_OON 365), 1 ♂; Guanaboa Vale, Dec. 4, 1957 (A. Chickering, MCZ 68233, PBI\_OON 27175), 1 ♀. *St. Thomas*: Lyssons, Mar. 15, 1955 (A. Nadler, AMNH PBI\_OON 366), 1 ♂; Morant Point, May 6, 1956, debris in arils of thatch palm leaves (C. Hoff, MCZ PBI\_OON 360), 1 ♂ (holotype), same (MCZ 68236, PBI\_OON 362), 2 ♂ (paratypes); Morant Point, Maumee Bay, Oct. 14, 1957, palm debris on ground (C. Hoff, MCZ 68235, PBI\_OON 361), 1 ♀ (paratype). *Trelawny*: 14 mi E Falmouth, May 15, 1956 (C. Hoff, MCZ 68234, PBI\_OON 364), 2 ♀.

DISTRIBUTION: Jamaica.

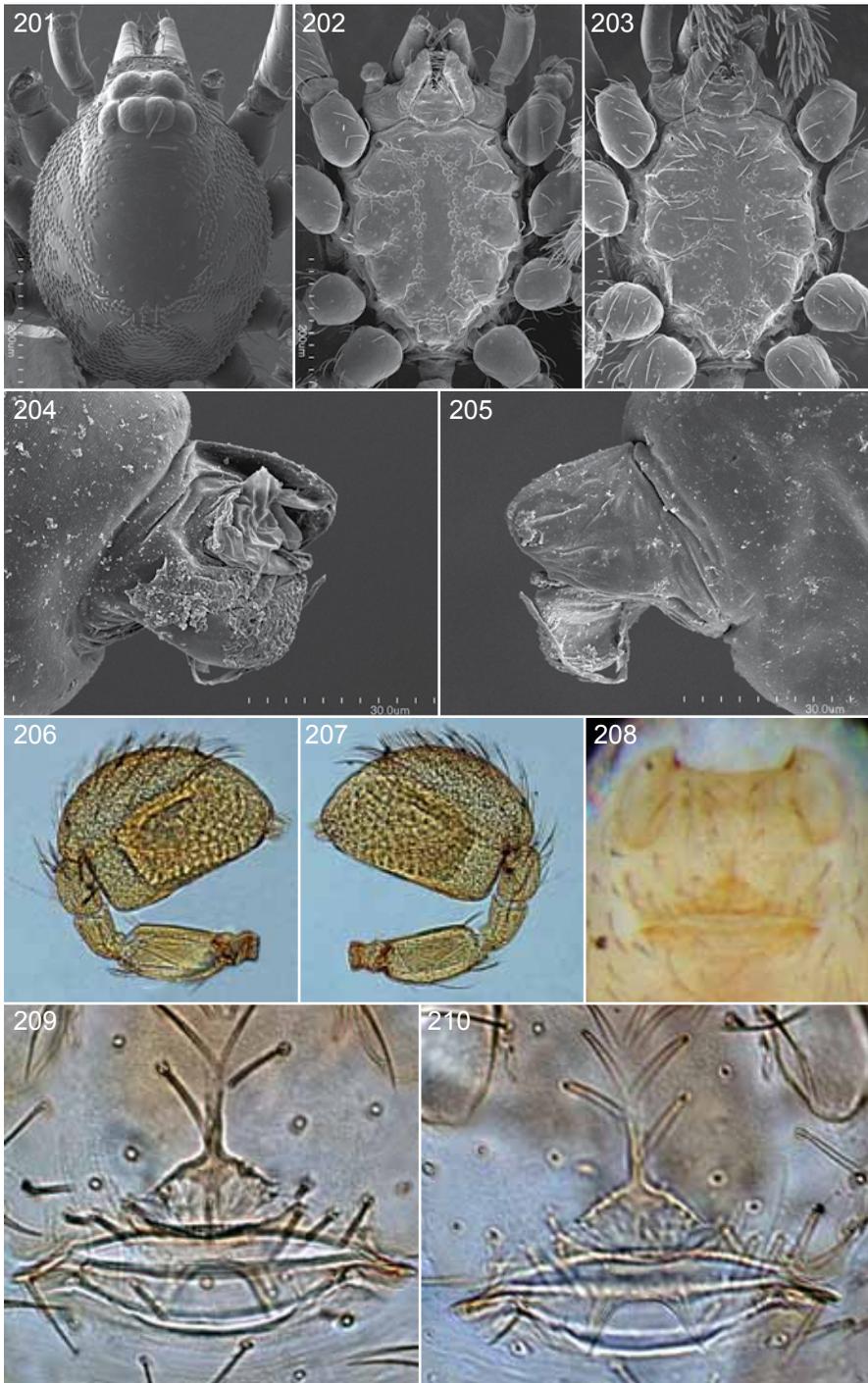
*Scaphioides miches*, new species

Figures 191–200

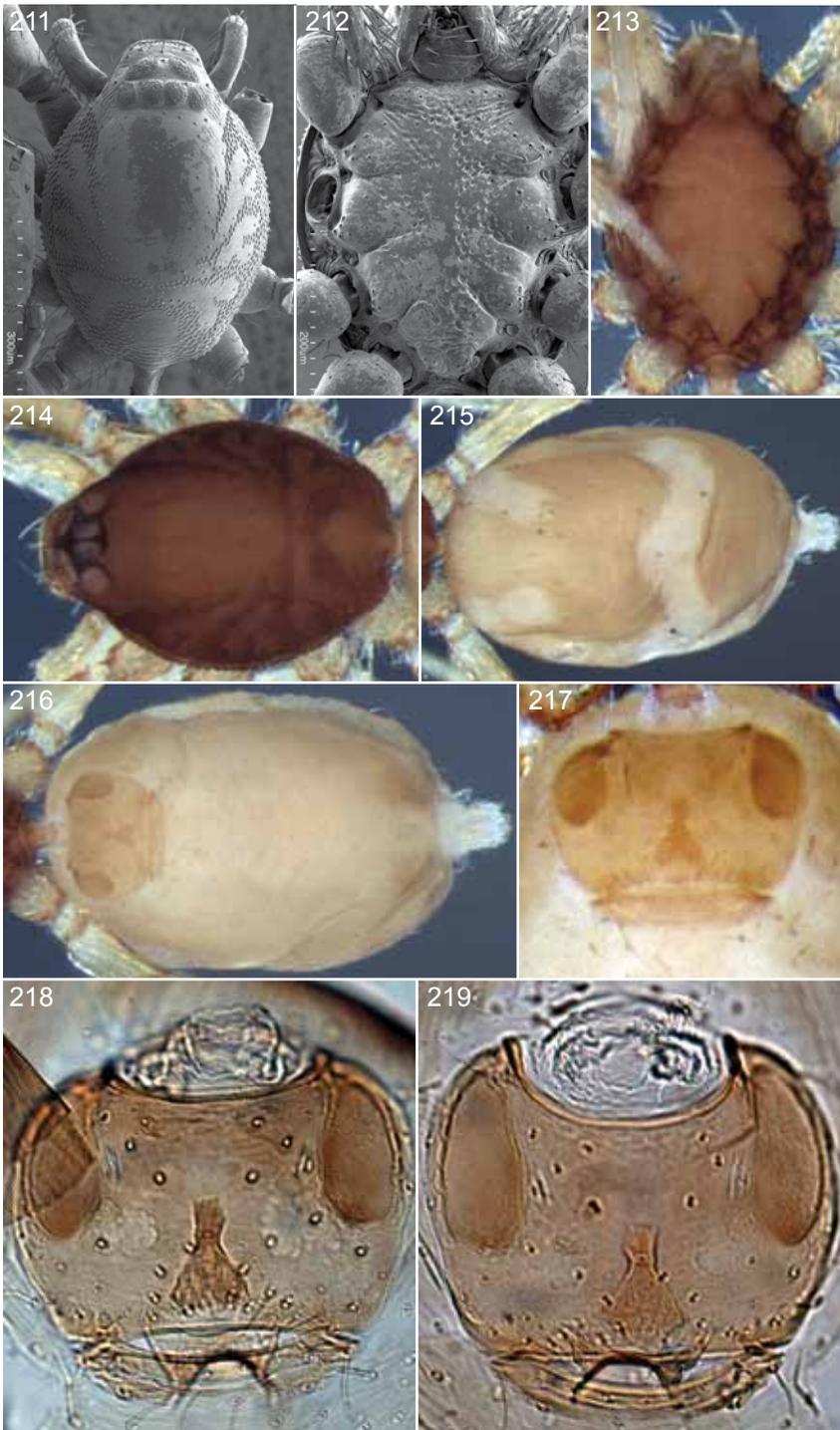
TYPES: Male holotype, female allotype, plus two male and two female paratypes taken at cacao farm near Miches, El Seíbo. Dominican Republic (June 22, 2008; V. Ovtsharenko), deposited in AMNH (PBI\_OON 371).



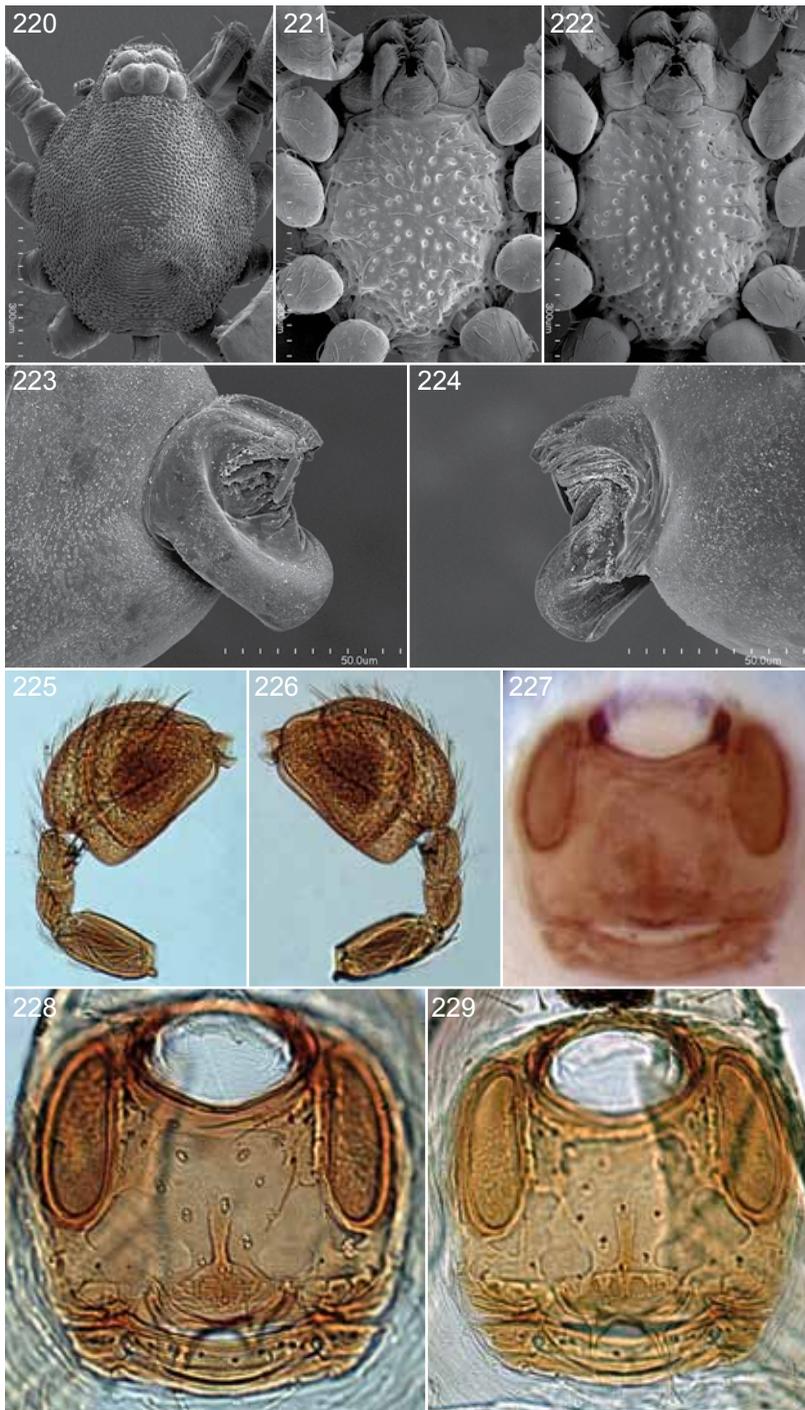
FIGS. 191–200. *Scaphioides miches*, new species, male (191, 192, 194–197) and female (193, 198–200). **191.** Carapace, dorsal view. **192, 193.** Sternum, ventral view. **194.** Left embolus, prolateral view. **195.** Same, retrolateral view. **196.** Left palp, prolateral view. **197.** Same, retrolateral view. **198.** Epigastric region, ventral view. **199.** Genitalia, ventral view. **200.** Same, dorsal view.



FIGS. 201–210. *Scaphioides phonetus* (Chickering), male (201, 202, 204–207) and female (203, 208–210). **201.** Carapace, dorsal view. **202, 203.** Sternum, ventral view. **204.** Left embolus, prolateral view. **205.** Same, retrolateral view. **206.** Left palp, prolateral view. **207.** Same, retrolateral view. **208.** Epigastric region, ventral view. **209.** Genitalia, ventral view. **210.** Same, dorsal view.



FIGS. 211–219. *Scaphioides econotus* (Chickering), female. **211, 214.** Carapace, dorsal view. **212, 213.** Sternum, ventral view. **215.** Abdomen, dorsal view. **216.** Same, ventral view. **217.** Epigastric region, ventral view. **218.** Genitalia, ventral view. **219.** Same, dorsal view.



FIGS. 220–229. *Scaphioides reducta* Bryant, male (220, 221, 223–226) and female (222, 227–229). **220.** Carapace, dorsal view. **221, 222.** Sternum, ventral view. **223.** Left embolus, prolateral view. **224.** Same, retrolateral view. **225.** Left palp, prolateral view. **226.** Same, retrolateral view. **227.** Epigastric region, ventral view. **228.** Genitalia, ventral view. **229.** Same, dorsal view.

ETYMOLOGY: The specific name is a noun in apposition taken from the type locality.

DIAGNOSIS: Members of this species resemble those of *S. reductoides* in having the sternum covered with tiny, deep depressions (figs. 192, 193), but have an iridescent abdomen, a larger proximal lobe on the embolus (figs. 194, 195), and a narrower anterior genitalic process (figs. 199, 200).

MALE (PBI\_OON 371, figs. 191, 192, 194–197): Total length 1.41. Elevated portion of pars cephalica granulate anteriorly, coated with deep slits posteriorly, sides granulate. ALE separated by less than their radius. Sternum surface finely punctuate, without pits, microsculpture covering entire surface, furrows with rows of small pits, anterior margin with interrupted transverse groove. Endite tip rebordered, with rounded, posteriorly directed process. Proximal portion of embolus almost as large as distal portion, in prolateral view.

FEMALE (PBI\_OON 371, figs. 193, 198–200): Total length 1.54. Anterior genitalic process bent at about half its length, situated on widely oval base.

OTHER MATERIAL EXAMINED: WEST INDIES: **Hispaniola**: Dominican Republic: *La Altagracia*: Boca de Yuma, Parque Nacional del Este, 18°21'35"N, 68°37'10"W, Mar. 26, 2002, canopy fogging, elev. 60 m (B. Farrell, K. Guerrero, MNSD PBI\_OON 970), 1 ♂. *La Vega*: Parque Nacional Bermudez, 10 km NE Jarabacoa, Racket Club Road, July 30, 1985, forest litter, elev. 550 m (S., J. Peck, FMNH 61604, PBI\_OON 10890), 1 ♀; Salto Jimenoa, 7 km SE Jarabacoa, July 31, 1995, forest litter, elev. 800 m (S., J. Peck, AMNH PBI\_OON 1429), 2 ♀.

DISTRIBUTION: Hispaniola (Dominican Republic).

### *Scaphioides phonetus* (Chickering)

Figures 201–210

*Stenoconops phonetus* Chickering, 1969a: 16, figs. 43–46 (male holotype from Cidra, Treasure Island, Puerto Rico, in AMNH; examined).

*Scaphioides phonetus*: Platnick and Dupérré, 2010: 9.

DIAGNOSIS: Members of this species resemble those of *S. irazu*, *S. econotus*, and *S. nitens* in having many tubercles on the carapace, arrayed in triangular patches opposite the coxae (fig. 201), but have an iridescent, unpatterned abdomen, a relatively short embolus (figs. 204–207), and a long base of the anterior genitalic process (figs. 209, 210).

MALE (PBI\_OON 21021, figs. 201, 202, 204–207): Total length 1.16. Elevated portion of pars cephalica smooth, sides granulate. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture only around furrows, furrows with rows of small pits, anterior margin with interrupted transverse groove. Endite tip with tiny rounded protrusions. Distal portion of embolus with basal grooves on both prolateral and retrolateral sides.

FEMALE (PBI\_OON 21021, figs. 203, 208–210): Total length 1.35. Anterior genitalic process long, narrow, situated on triangular base.

MATERIAL EXAMINED: WEST INDIES: **Puerto Rico**: Cidra, Treasure Island, Feb. 26–27, 1955 (A. Nadler, AMNH PBI\_OON 373), 1 ♂ (holotype); Maricao State Forest, Sept. 10–11, 1959 (A. Nadler, AMNH PBI\_OON 21028), 1 ♂; Mayagüez, Jan. 19, 1955 (A. Nadler, AMNH PBI\_OON 21021), 1 ♂, 1 ♀; 5 km from Mayagüez on Rt. 106, Jan. 30, 1964 (A. Chickering, MCZ 72086, PBI\_OON 26444), 1 ♀; Ranger Station, Guanica Dry Forest, 17.971472°N,

66.867958°W, July 19–22, 2011 (I. Agnarsson et al., USNM 782032, PBI\_OON 43636, 43637), 2♂; Río Piedras, Humacao Co., Mar. 2, 1955 (A. Nadler, AMNH PBI\_OON 21027), 2♂, Mar. 14, 1959 (A. Nadler, AMNH PBI\_OON 21020), 1♀; University Farm, E of Nuclear Center, Mayagüez, Jan. 18, 1964 (A. Chickering, MCZ 72084, PBI\_OON 26490), 1♀.

DISTRIBUTION: Puerto Rico.

*Scaphioides econotus* (Chickering)

Figures 211–219

*Stenoonops econotus* Chickering, 1969a: 5, figs. 7–9 (female holotype from University Farm, Mayagüez, Puerto Rico, in MCZ; examined).

*Scaphioides econotus*: Platnick and Dupérré, 2010: 9.

DIAGNOSIS: Members of this species resemble those of *S. irazu*, *S. phonetus*, and *S. nitens* in having many tubercles on the carapace, arrayed in triangular patches opposite the coxae (fig. 211), but have a patterned abdomen, with distinct anterior and posterior light brown markings on the dorsum; the dark markings are separated by transverse white ridge, and the anterior one includes a pair of white spots near the anterolateral edges (fig. 215).

MALE: Unknown.

FEMALE (PBI\_OON 374, figs. 211–219): Total length 1.45. Elevated portion of pars cephalica smooth, sides granulate. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture everywhere but middle, furrows smooth, anterior margin with interrupted transverse groove. Anterior genitalic process with short, wide tip on long, triangular base.

MATERIAL EXAMINED: WEST INDIES: **Puerto Rico**: University Farm, N University Campus, Mayagüez, Jan. 31, 1964 (A. Chickering, MCZ PBI\_OON 374), 1♀ (holotype);

DISTRIBUTION: Puerto Rico.

*Scaphioides reducta* Bryant

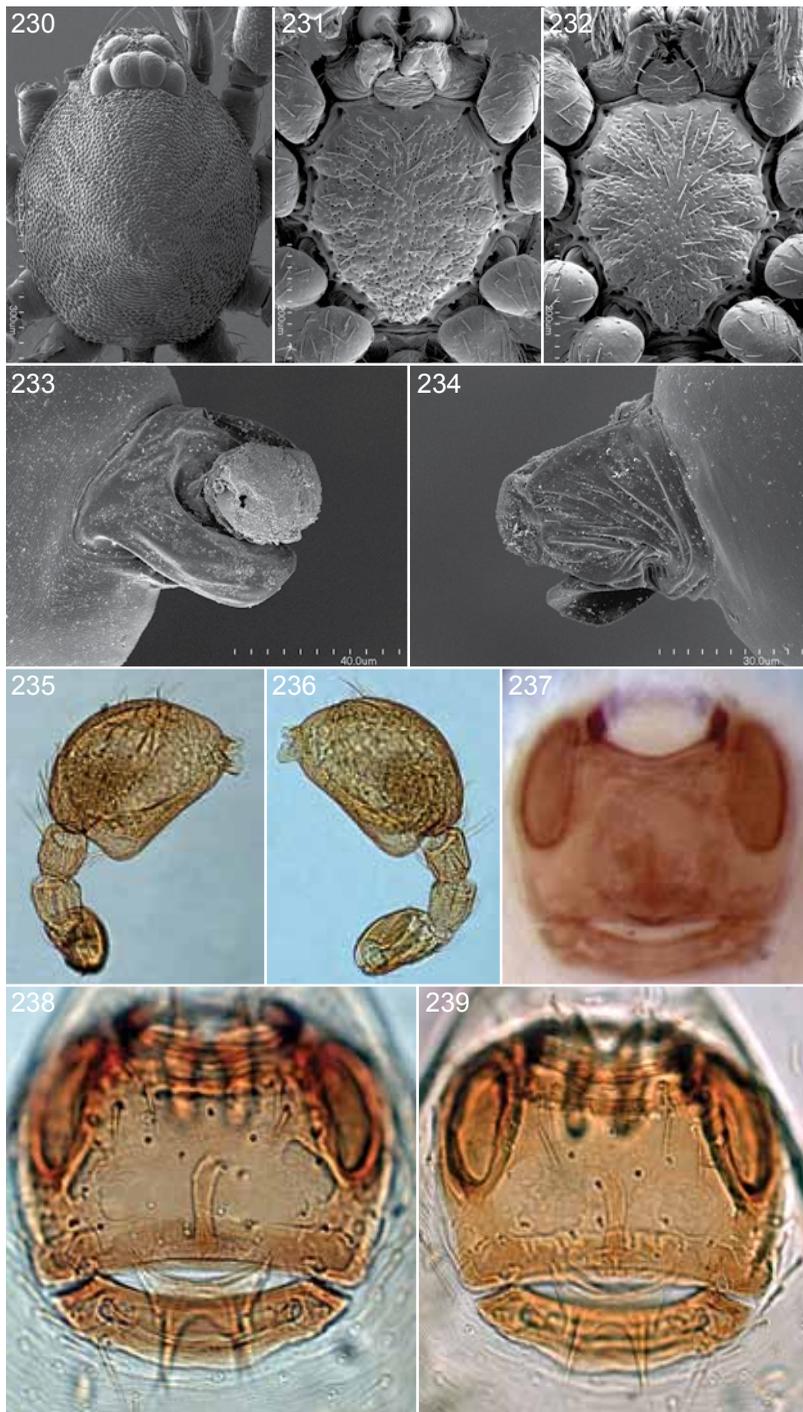
Figures 220–229

*Scaphioides reducta* Bryant, 1942: 327, figs. 6, 8 (female holotype from St. Croix, Virgin Islands, in MCZ; examined).– Platnick and Dupérré, 2010: 9.

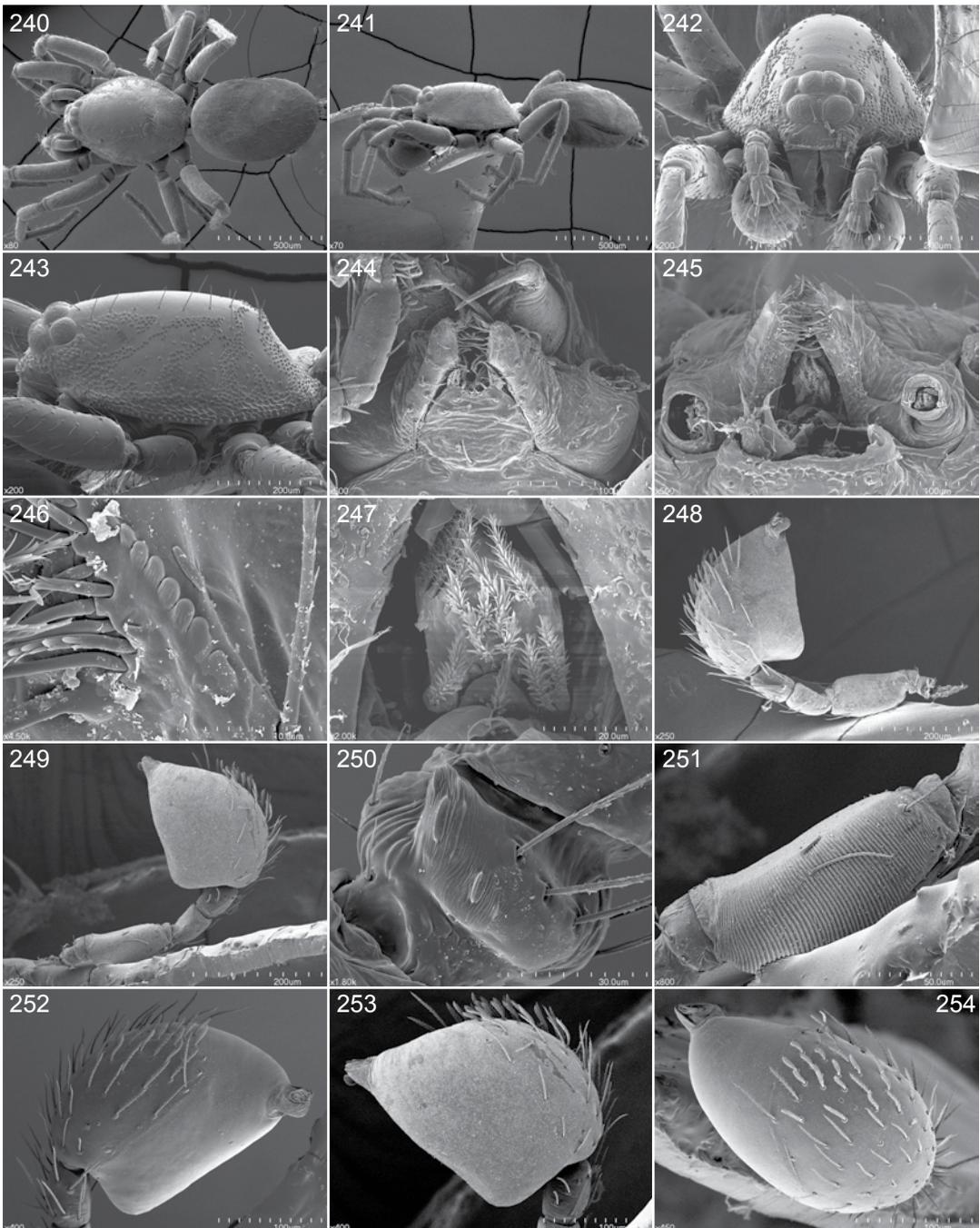
*Stenoonops reductus*: Chickering, 1969a: 21, figs. 53–58 (first description of male).– Burger, 2009: 346, figs. 17–21, 23H, I).

DIAGNOSIS: Members of this species resemble those of *S. granpiedra* in having relatively few, small sternal depressions that are “haloed” by distinct edges (figs. 221, 222), but have the proximal portion of the embolus longer than the distal portion (figs. 223, 224) and a larger base of the anterior genitalic process (figs. 228, 229).

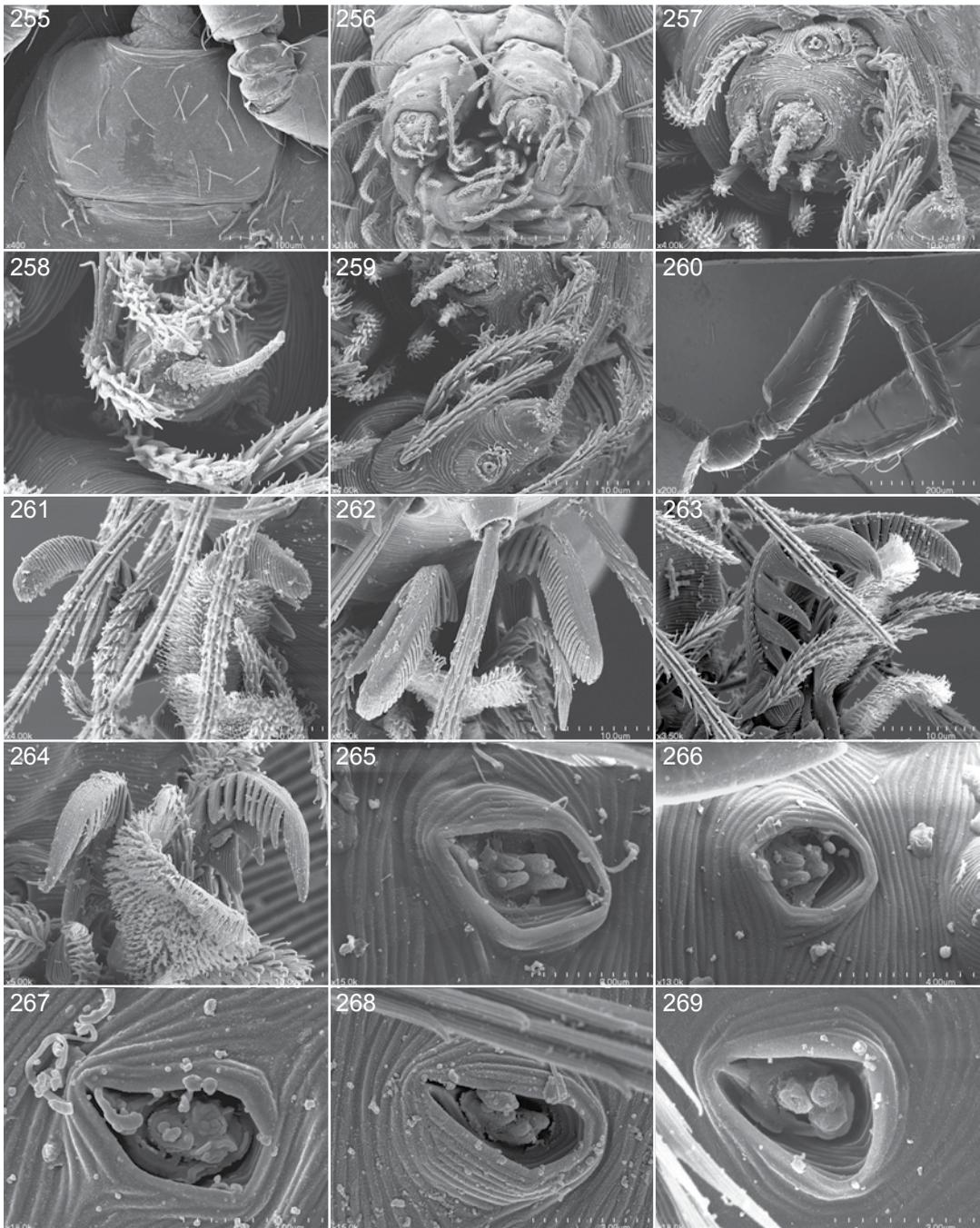
MALE (PBI\_OON 26341, figs. 220, 221, 223–226): Total length 1.47. Elevated portion of pars cephalica strongly reticulate, sides granulate. ALE separated by less than their radius. Sternum surface finely punctuate, without pits, microsculpture everywhere but front, furrows with rows of small pits, anterior margin with interrupted transverse groove. Endites with rebordered, rounded tip. Proximal portion of embolus larger than distal portion.



FIGS. 230–239. *Scaphioides reductoides*, new species, male (230, 231, 233–236) and female (232, 237–239). **230.** Carapace, dorsal view. **231, 232.** Sternum, ventral view. **233.** Left embolus, prolateral view. **234.** Same, retrolateral view. **235.** Left palp, prolateral view. **236.** Same, retrolateral view. **237.** Epigastric region, ventral view. **238.** Genitalia, ventral view. **239.** Same, dorsal view.

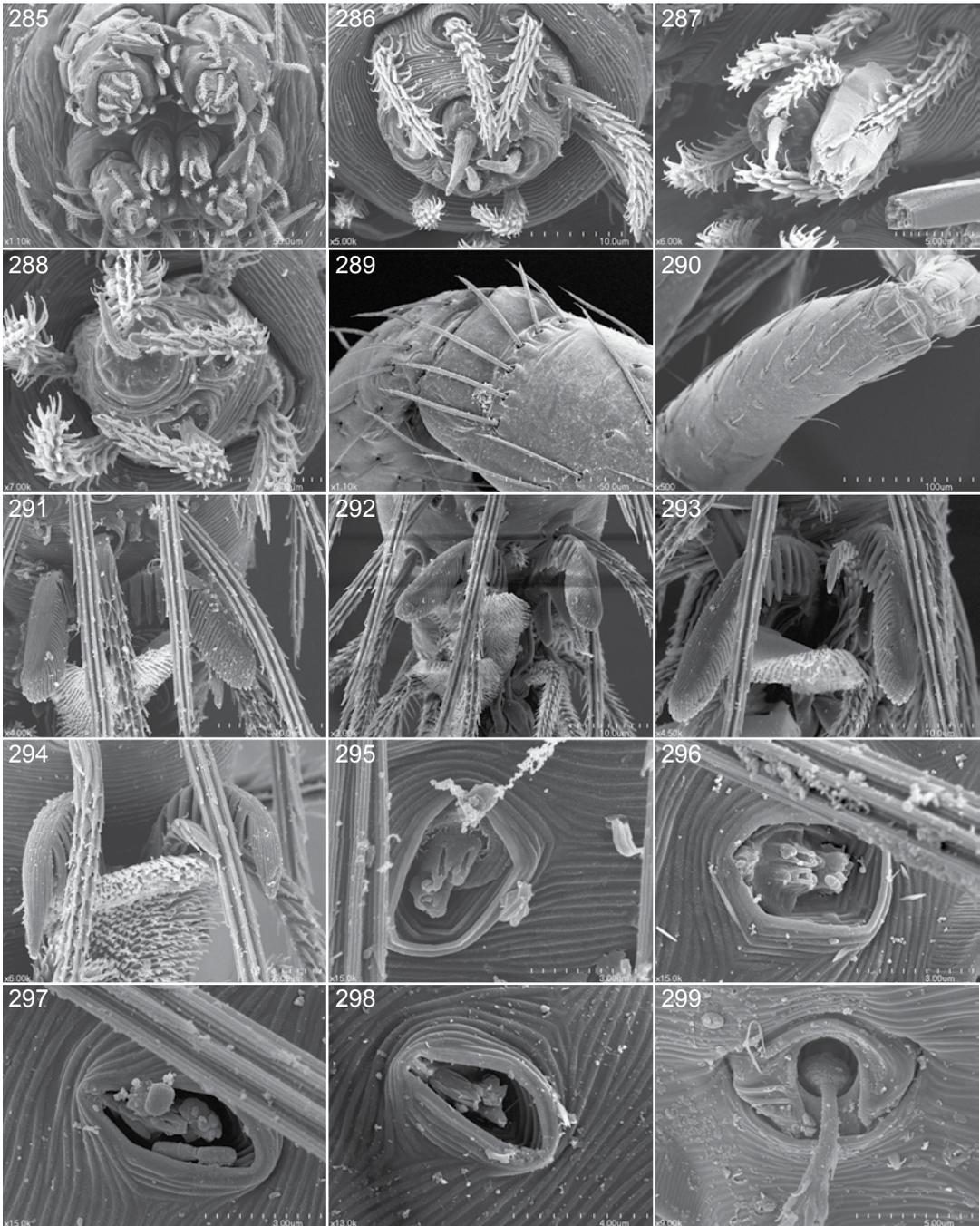


FIGS. 240–254. *Scaphioides nitens* (Bryant), male. 240. Habitus, dorsal view. 241. Same, lateral view. 242. Carapace, anterior view. 243. Same, lateral view. 244. Mouthparts, ventral view. 245. Labrum and endites, dorsal view. 246. Serrula, dorsal view. 247. Labrum, dorsal view. 248. Left palp, prolateral view. 249. Same, retrolateral view. 250. Palpal trochanter, prolateral view. 251. Palpal femur, retrolateral view. 252. Palpal bulb, prolateral view. 253. Same, retrolateral view. 254. Same, dorsal view.

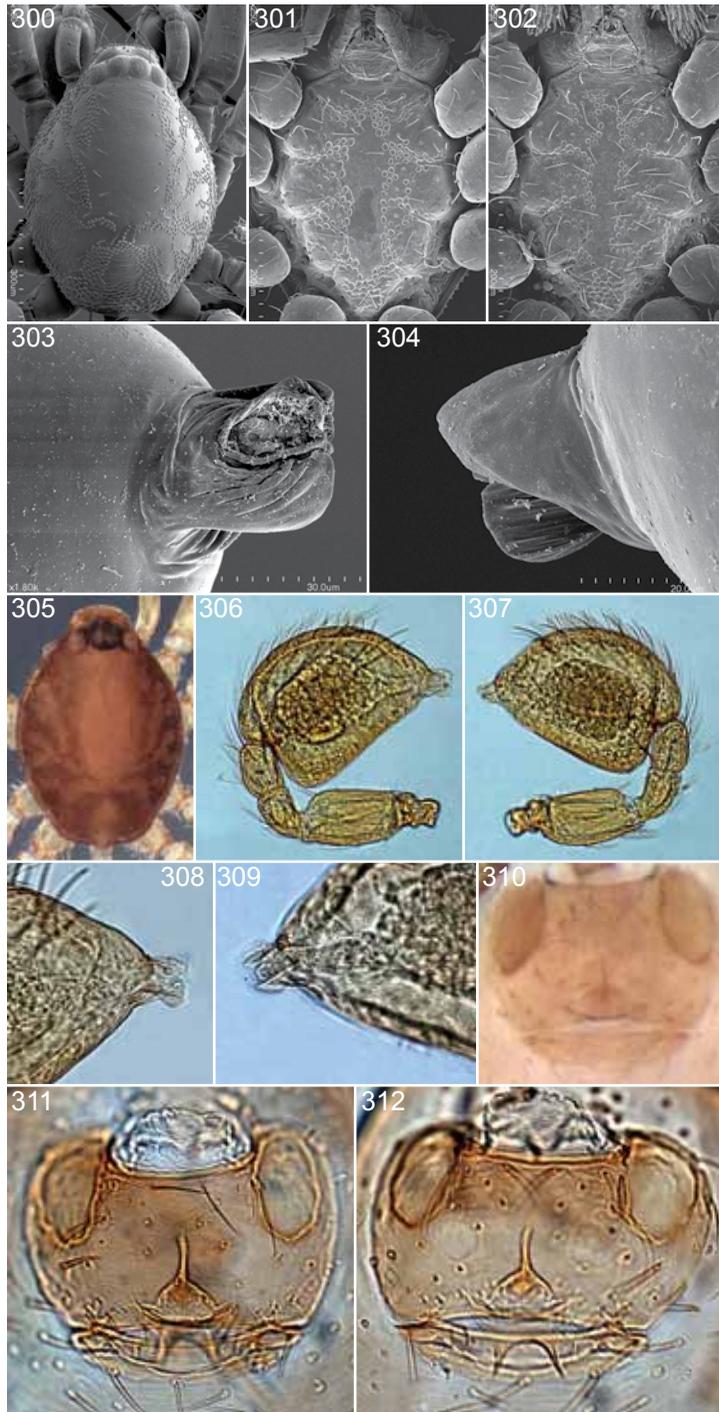


FIGS. 255–269. *Scaphioides nitens* (Bryant), male. 255. Epigastric region, ventral view. 256. Spinnerets, distal view. 257. Anterior lateral spinneret, same. 258. Posterior median spinneret, same. 259. Posterior lateral spinneret, same. 260. Leg I, prolateral view. 261. Claws of leg I, distal view. 262. Same, leg II. 263. Claws of leg III, lateral view. 264. Claws of leg IV, distal view. 265. Tarsal organ from leg I, dorsal view. 266. Same, leg II. 267. Same, leg III. 268. Same, leg IV. 269. Same, leg III.

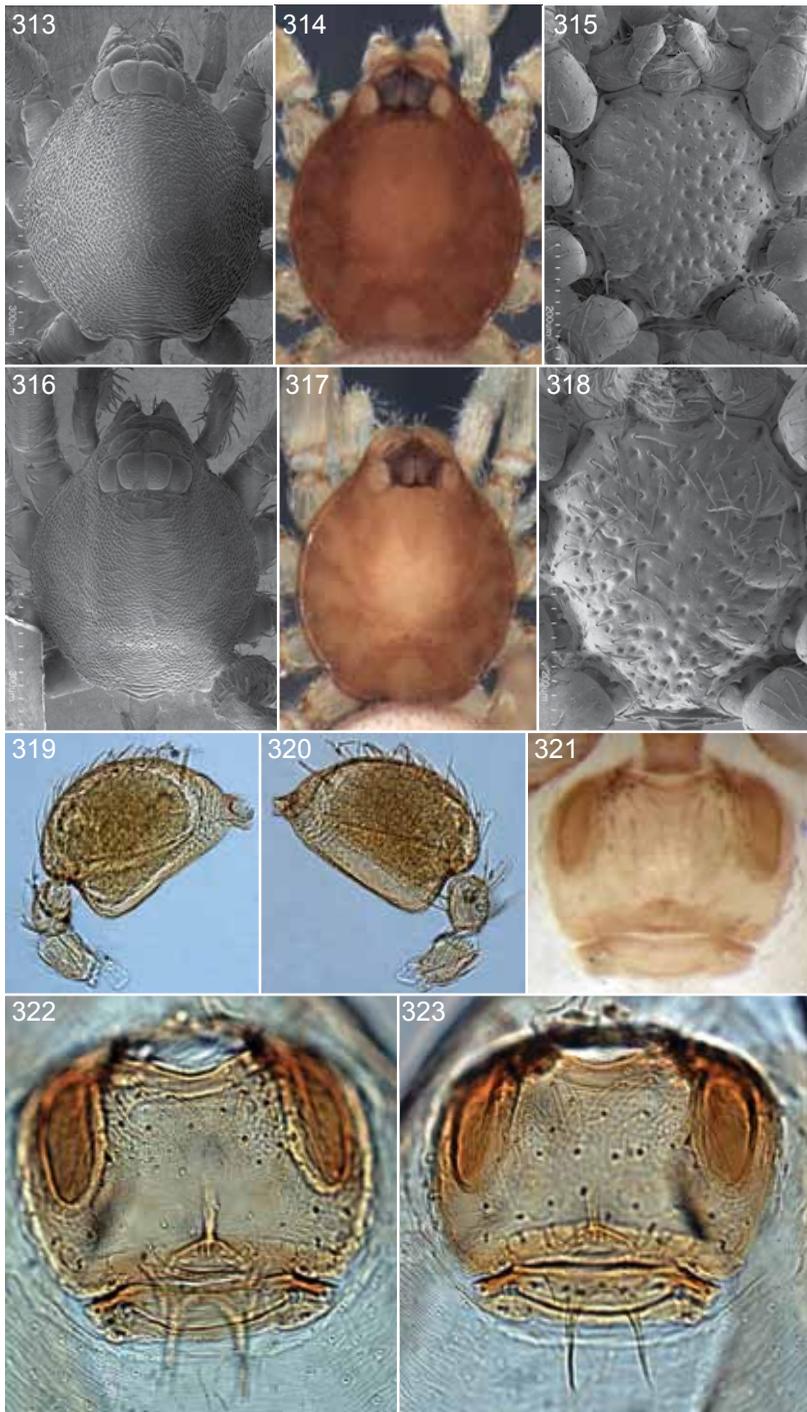




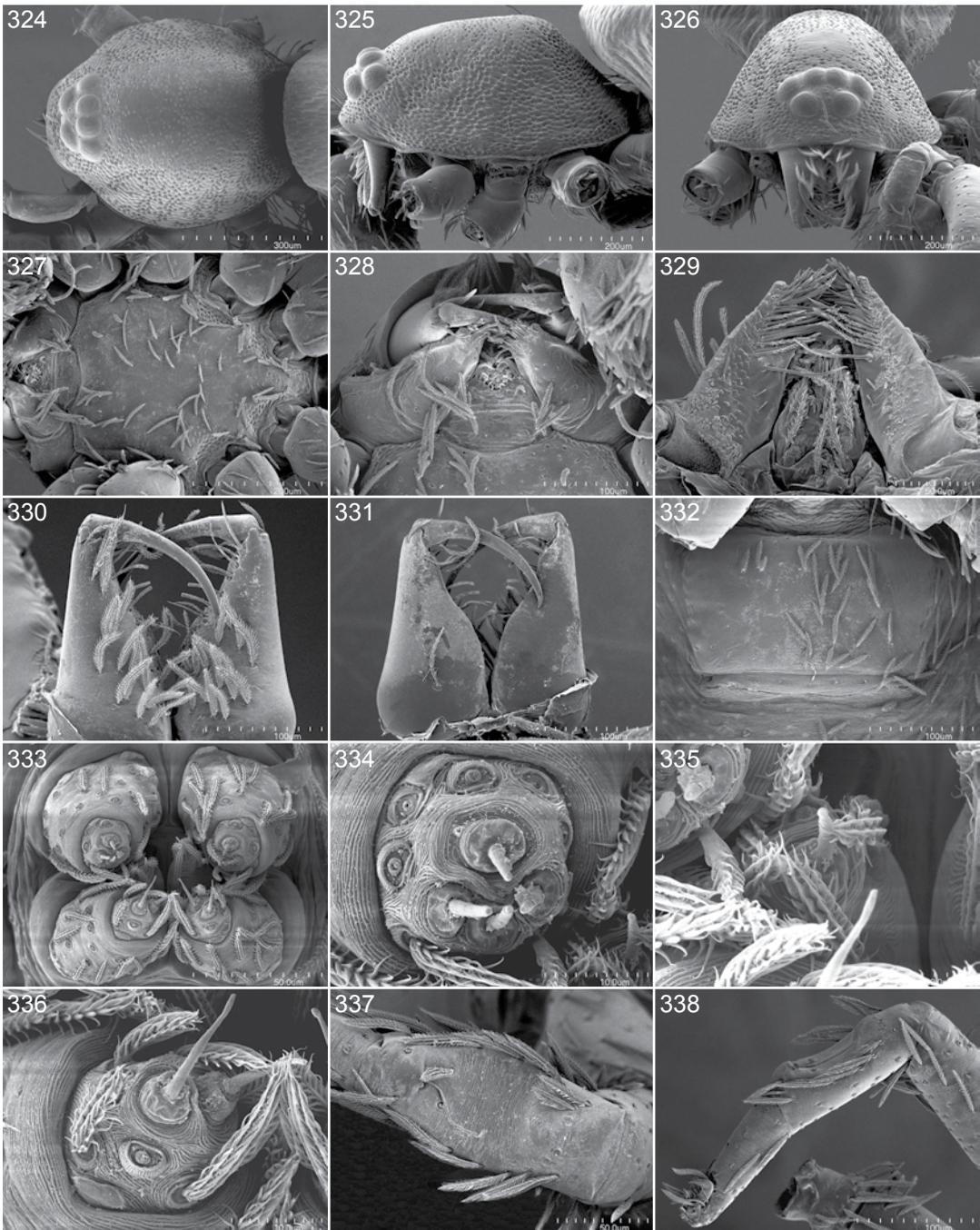
FIGS. 285–299. *Scaphioides nitens* (Bryant), female. 285. Spinnerets, distal view. 286. Anterior lateral spinneret, same. 287. Posterior median spinneret, same. 288. Posterior lateral spinneret, same. 289. Distal tip of femur II, dorsal view. 290. Femur IV, dorsal view. 291. Claws of leg I, distal view. 292. Same, leg II. 293. Same, leg II. 294. Same, leg IV. 295. Tarsal organ from leg I, dorsal view. 296. Same, leg II. 297. Same, leg III. 298. Same, leg IV. 299. Trichobothrium from metatarsus II, dorsal view.



FIGS. 300–312. *Scaphioides nitens* (Bryant), male (300, 301, 303–309) and female (302, 310–312). **300, 305.** Carapace, dorsal view. **301, 302.** Sternum, ventral view. **303, 308.** Left embolus, prolateral view. **304, 309.** Same, retrolateral view. **306.** Left palp, prolateral view. **307.** Same, retrolateral view. **310.** Epigastric region, ventral view. **311.** Genitalia, ventral view. **312.** Same, dorsal view.



FIGS. 313–323. *Scaphioides halatus* (Chickering), male (313–315, 319, 320) and female (316–318, 321–323). **313, 314, 316, 317.** Carapace, dorsal view. **315, 318.** Sternum, dorsal view. **319.** Left palp, prolateral view. **320.** Same, retrolateral view. **321.** Epigastric region, ventral view. **322.** Genitalia, ventral view. **323.** Same, dorsal view.



FIGS. 324–338. *Hortonops lucradus* (Chickering), male. 324. Carapace, dorsal view. 325. Same, lateral view. 326. Same, anterior view. 327. Sternum, ventral view. 328. Mouthparts, ventral view. 329. Labrum and endites, dorsal view. 330. Chelicerae, anterior view. 331. Same, posterior view. 332. Epigastric region, ventral view. 333. Spinnerets, distal view. 334. Anterior lateral spinneret, same. 335. Posterior median spinneret, same. 336. Posterior lateral spinneret, same. 337. Metatarsus I, dorsal view. 338. Same, lateral view.

FEMALE (PBI\_OON 26342, figs. 222, 227–229): Total length 1.67. Anterior genitalic process gradually expanded anteriorly, on wide base including internal structures.

MATERIAL EXAMINED: WEST INDIES: **Virgin Islands:** *St. Croix:* no specific locality, Sept. 1–5, 1966 (A. Chickering, MCZ PBI\_OON 26581), 3 ♂, Sept. 8, 1966 (A. Chickering, MCZ PBI\_OON 391), 5 ♂, 1 ♀, Sept. 9–11, 1966 (A. Chickering, MCZ PBI\_OON 390), 1 ♂, 1 ♀; Buck Island, June 12, 1972, Berlese, litter (W. Muchmore, FSCA PBI\_OON 26342), 1 ♀; Christiansted (Beatty, MCZ PBI\_OON 389), 2 ♀ (holotype, paratype); Frederiksted, Sept. 11, 1966 (A. Chickering, MCZ 71642, PBI\_OON 26585), 2 ♂, 8 ♀; 1 mi N Frederiksted, Mar. 16, 1964 (A. Chickering, MCZ 71641, PBI\_OON 26583), 1 ♂; vicinity of King's Hill, Mar. 20, 1964 (A. Chickering, MCZ 71644, PBI\_OON 26578), 3 ♂, 2 ♀; Lavaetz Gardens, Frederiksted, Mar. 24, 1964 (A. Chickering, MCZ 71643, 71646, PBI\_OON 27516), 23 ♂, 13 ♀; Mahogany Road, Frederiksted, Mar. 21–23 1964 (A. Chickering, MCZ 68340, 71645, PBI\_OON 26584, 26586), 3 ♂, 6 ♀; West Indies Lab, June 7, 1972, ground litter under tree (W. Muchmore, FSCA PBI\_OON 26333, 26341), 2 ♂, 2 ♀.

DISTRIBUTION: Virgin Islands (St. Croix).

### *Scaphioides reductoides*, new species

Figures 230–239

*Stenoonops reductus* (misidentification): Chickering, 1969b: 21 (specimens from St. John only).

TYPES: Male holotype, female allotype, plus two male and one female paratypes from Virgin Gorda, no specific locality, Virgin Islands (Aug. 1966; A. Chickering), deposited in MCZ (71676, PBI\_OON 26566).

ETYMOLOGY: The specific name refers to the previous confusion of this species with *S. reducta*.

DIAGNOSIS: Members of this species resemble those of *S. miches* in having the sternum covered with tiny, deep depressions (figs. 231, 232), but have a white abdomen that is not iridescent, a smaller proximal lobe on the embolus (figs. 233, 234), and a wider anterior genitalic process (figs. 238, 239).

MALE (PBI\_OON 21011, figs. 230, 231, 233–236): Total length 1.47. Elevated portion of pars cephalica granulate anteriorly, reticulate posteriorly, sides granulate. ALE separated by less than their radius. Sternum surface finely punctuate, without pits, microsculpture everywhere but front, furrows with rows of small pits, anterior margin with interrupted transverse groove. Endite tip with thickened, rounded, posteriorly directed protuberance. Proximal portion of embolus straight, scarcely widened distally.

FEMALE (PBI\_OON 1771, figs. 232, 237–239): Total length 1.61. Anterior genitalic process long, wide, distally curved, situated on very short base.

OTHER MATERIAL EXAMINED: WEST INDIES: **Virgin Islands:** *St. John:* no specific locality, July 25, 1966 (A. Chickering, MCZ 71662, PBI\_OON 26563), 1 ♂; Annaberg Ruins, June 14, 1980, along old walls (W. Muchmore, FSCA 21336), 1 ♂; Brown Bay, June 19, 1980, in agave (W. Muchmore, FSCA PBI\_OON 21332), 1 ♀; near Butler's, June 6, 1974, base of turpentine trees (W. Muchmore, AMNH PBI\_OON 1773), 1 ♂; hillside near Butler's, June 15, 1974, Berlese, base of large turpentine tree (W. Muchmore, AMNH PBI\_OON 1771), 1 ♂,

1 ♀; Catherineberg Estate, July 20, 1975, debris along wall of mill (W. Muchmore, AMNH PBI\_OON 1770), 1 ♂; Centerline Road, 4 mi from Cruz Bay, Mar. 4, 1964 (A. Chickering, MCZ 71648, PBI\_OON 26582), 1 ♂; Coral Bay, gut near Butler's house, July 19, 1975, beneath overhang of large rocks (W. Muchmore, AMNH PBI\_OON 1950), 1 ♂; Cruz Bay, Mar. 7, 1964 (A. Chickering, MCZ 71647, PBI\_OON 26588), 1 ♂, 1 ♀; Denis Bay, June 16, 1980, base of old mill (W. Muchmore, FSCA PBI\_OON 21333), 1 ♂; Great Lameshur Bay, May 21, 1979, litter under cactus (W. Muchmore, FSCA PBI\_OON 21334), 1 ♀, June 10, 1980, under mangrove bark (FSCA PBI\_OON 21329), 1 ♂; Lameshur Bay, Gray Gut, June 12, 1980, among rocks and pieces of fallen termite nest (W. Muchmore, FSCA PBI\_OON 21335), 1 ♀, same, crotches and treehole in large, old tamarind (W. Muchmore, FSCA PBI\_OON 21331), 1 ♀; Lameshur Bay, Viers, June 3, 1980, under large tamarind tree (W. Muchmore, FSCA PBI\_OON 21330), 1 ♀; Windberg Ruins, May 31, 1979, litter along wall (W. Muchmore, FSCA PBI\_OON 21337), 1 ♂. *Tortola*: Greater Camanoe Island, July 1, 1965 (Island Project staff, AMNH PBI\_OON 21011), 1 ♂.

DISTRIBUTION: Virgin Islands (St. John, Tortola, Virgin Gorda).

*Scaphioides nitens* (Bryant)

Figures 240–312

*Stenoconops nitens* Bryant, 1942: 321, figs. 5, 10 (male holotype and female allotype from St. Croix, Virgin Islands, in MCZ; examined)– Chickering, 1969a: 6, figs. 10–13.

*Scaphioides nitens*: Platnick and Dupérré, 2010: 9.

DIAGNOSIS: Members of this species resemble those of *S. irazu*, *S. phonetus*, and *S. econotus* in having many tubercles on the carapace, arrayed in triangular patches opposite the coxae (fig. 300), but have a white abdomen, without patterning or iridescence, a relatively long embolus (figs. 303, 304), and a relatively short, narrow base of the anterior genitalic process (figs. 311, 312).

MALE (PBI\_OON 26564, figs. 240–269, 300, 301, 303–309): Total length 1.31. Elevated portion of pars cephalica smooth, sides granulate. ALE separated by less than their radius. Sternum surface smooth, covered with large round pits, microsculpture only around furrows, furrows with rows of small pits, anterior margin with interrupted transverse groove. Endite tip rebordered, rounded. Both proximal and distal portions of embolus deeply ridged prolaterally, distal portion finely ridged retrolaterally.

FEMALE (PBI\_OON 26564, figs. 270–299, 302, 310–312): Total length 1.31. Anterior genitalic process narrow, distally curved, situated on long, narrow base.

MATERIAL EXAMINED: WEST INDIES: **Virgin Islands**: *St. Croix*: no specific locality, Sept. 1–3, 1966 (A. Chickering, MCZ 71651, 71654, 71660, PBI\_OON 26558, 26574, 26578), 12 ♂, 15 ♀, Sept. 8, 1966 (A. Chickering, MCZ 71653, PBI\_OON 26577), 4 ♂, 3 ♀, Sept. 9–11, 1966 (A. Chickering, MCZ 71652, PBI\_OON 26567), 7 ♂, 12 ♀; Buck Island, June 12, 1972, Berlese, litter (W. Muchmore, FSCA PBI\_OON 21210), 1 ♂, 3 ♀; Christiansted (Beatty, MCZ PBI\_OON 388), 4 ♂, 2 ♀ (including holotype, allotype); Frederiksted, Mar. 14, 19, 1964 (A. Chickering, MCZ 71650, PBI\_OON 26569), 3 ♂, 3 ♀; Frederiksted, Lavaetz Gardens, Mar. 24, 1964 (A. Chickering, MCZ 71659, PBI\_OON 26559), 6 ♂, 5 ♀; 1 mi N Frederiksted, Mar. 16, 1964 (A. Chickering,

MCZ 71658, PBI\_OON 26568), 1 ♂, 1 ♀, Mar. 23, 1964 (A. Chickering, MCZ 71655, PBI\_OON 26554), 2 ♂; King's Hill, Mar. 18, 1964 (A. Chickering, MCZ 71661, PBI\_OON 26553), 6 ♂, 10 ♀; near King's Hill, Mar. 17, 20, 1964 (A. Chickering, MCZ 71656, 71657, PBI\_OON 26561, 26573), 9 ♂, 14 ♀; West Indies Lab, June 7, 1972, ground litter under tree (W. Muchmore, FSCA PBI\_OON 21209), 1 ♀. *St. John*: Brown Bay, June 19, 1980, in agave (W. Muchmore, FSCA PBI\_OON 21207), 1 ♂; Cruz Bay, Mar. 1, 1964 (A. Chickering, MCZ 71649, PBI\_OON 26576), 4 ♀; Lameshur Bay, May 26, 1979, under bark (W. Muchmore, FSCA PBI\_OON 21208), 1 ♂. *St. Thomas*: no specific locality, July 14–17, 1966 (A. Chickering, MCZ 71673, PBI\_OON 26580), 15 ♂, 13 ♀, July 18, 1966 (A. Chickering, MCZ 71672, PBI\_OON 26555), 18 ♂, 17 ♀, July 27–28, 1966 (A. Chickering, MCZ 71675, PBI\_OON 26579), 20 ♂, 20 ♀, Aug. 7, 1966 (A. Chickering, MCZ 71664, PBI\_OON 26572), 23 ♂, 30 ♀, Aug. 9–10, 1966 (A. Chickering, MCZ 71671, PBI\_OON 26557), 12 ♂, 16 ♀, Aug. 12–13, 1966 (A. Chickering, MCZ 71674, PBI\_OON 26570), 20 ♂, 19 ♀, Aug. 15, 1966 (A. Chickering, MCZ 71670, PBI\_OON 26565), 3 ♂, 2 ♀, Aug. 25, 29, 1966 (A. Chickering, MCZ 71668, PBI\_OON 26575), 15 ♂, 28 ♀; Charlotte Amalie, Feb. 9–10, 1964 (A. Chickering, MCZ 71665, PBI\_OON 26562), 8 ♂, 12 ♀, Feb. 18, 1964 (A. Chickering, MCZ 71667, PBI\_OON 26571), 1 ♂, 1 ♀; Charlotte Amalie, grounds of Blue Beard's Castle, Feb. 18, 1964 (A. Chickering, MCZ 71666, PBI\_OON 26564), 4 ♂, 5 ♀; campus, College of the Virgin Islands, July 1966 (A. Chickering, MCZ 71669, PBI\_OON 26556), 2 ♀; E side, Charlotte Amalie, Feb. 16, 1964, vacant lots (A. Chickering, MCZ 71663, PBI\_OON 26560), 2 ♂.

DISTRIBUTION: Virgin Islands (St. Croix, St. John, St. Thomas).

*Scaphioides halatus* (Chickering)

Figures 313–323

*Stenoonops halatus* Chickering, 1969a: 19, figs. 49–52 (female holotype from Fig Tree Hill, Antigua, in MCZ; examined).

*Scaphioides halatus*: Platnick and Dupérré, 2010: 9.

DIAGNOSIS: Member of this species resemble those of *S. cletus* in having only a few, pinpoint-shaped depressions on the sternum (figs. 315, 318), but have a shorter proximal lobe of the embolus (figs. 319, 320) and a narrow tip on the anterior genitalic process (figs. 322, 323).

MALE (PBI\_OON 21016, figs. 313–315, 319, 320): Total length 1.39. Elevated portion of pars cephalica granulate anteriorly, posterior portion covered with deep slits, sides granulate. ALE separated by less than their radius. Sternum surface finely punctuate, without pits, microsculpture covering entire surface, furrows with rows of small pits, anterior margin with interrupted transverse groove. Endite tip with beaklike, posteriorly directed protrusion. Proximal portion of embolus with narrow ledge on prolateral side.

FEMALE (PBI\_OON 392, figs. 316–318, 321–323): Total length 1.63. Anterior genitalic process long, slightly expanded distally, on short, triangular base.

MATERIAL EXAMINED: WEST INDIES: **Leeward Islands**: *Antigua*: Fig Tree Hill, near Old Road, Aug. 17–27, 1967 (E. Sabath, MCZ PBI\_OON 392), 1 ♀ (holotype). *St. Eustatius*: The Quill, Jan. 18–19, 1968, beaten from dry banana leaves (B. Malkin, AMNH PBI\_OON 21016), 1 ♂.

DISTRIBUTION: Leeward Islands (Antigua, St. Eustatius).

*Hortoonops*, new genus

TYPE SPECIES: *Stenoonops lucradus* Chickering.

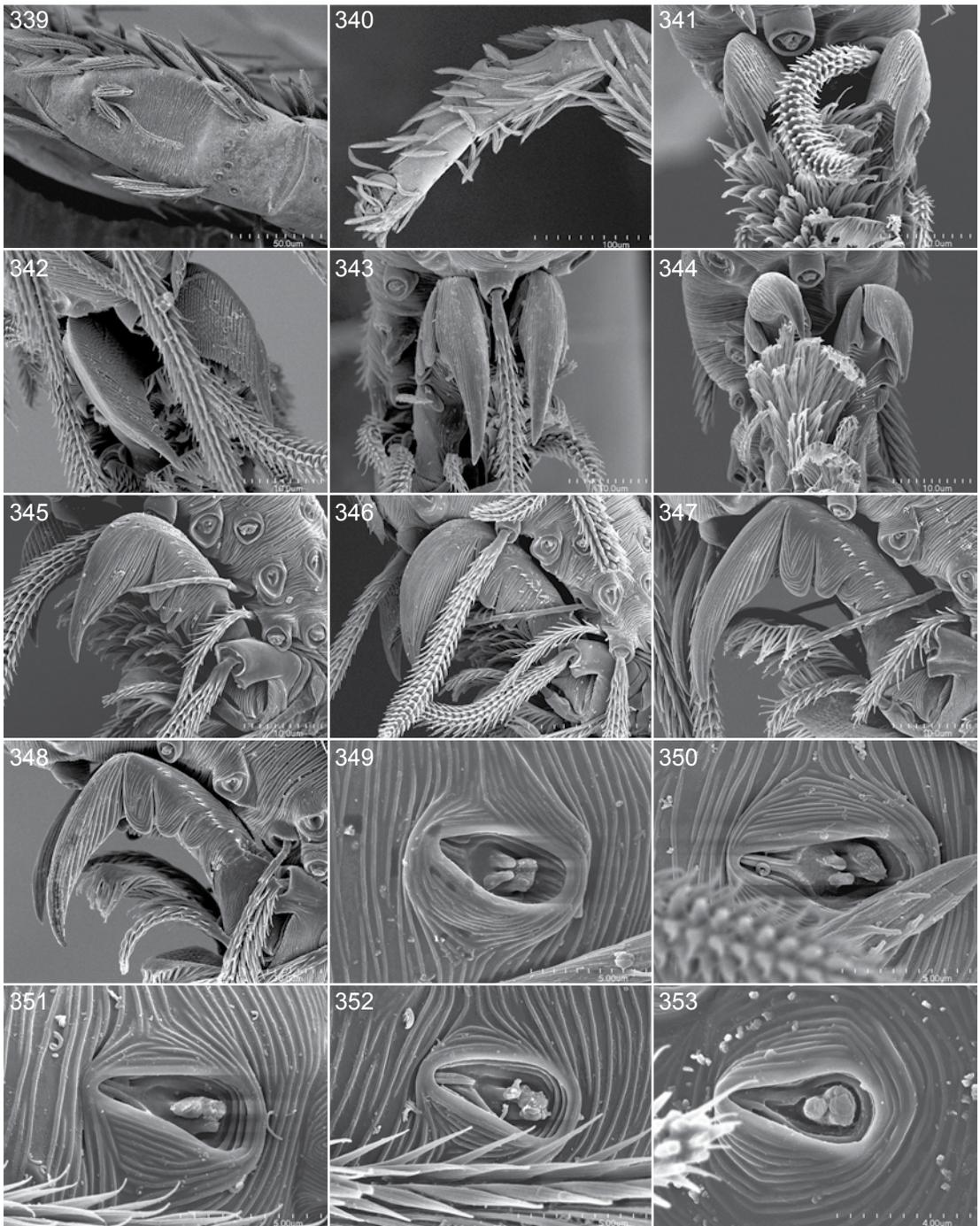
ETYMOLOGY: The generic name is a contraction of “*Hortipes*-like *Oonops*,” referring to the extraordinary convergent “baskets” on the anterior metatarsi, and is masculine in gender.

DIAGNOSIS: Members of this genus resemble those of *Stenoonops* and *Scaphioides* but lack the synapomorphies of those groups and have distinctive depressions on the anterior metatarsi (figs. 337–340, 367–370).

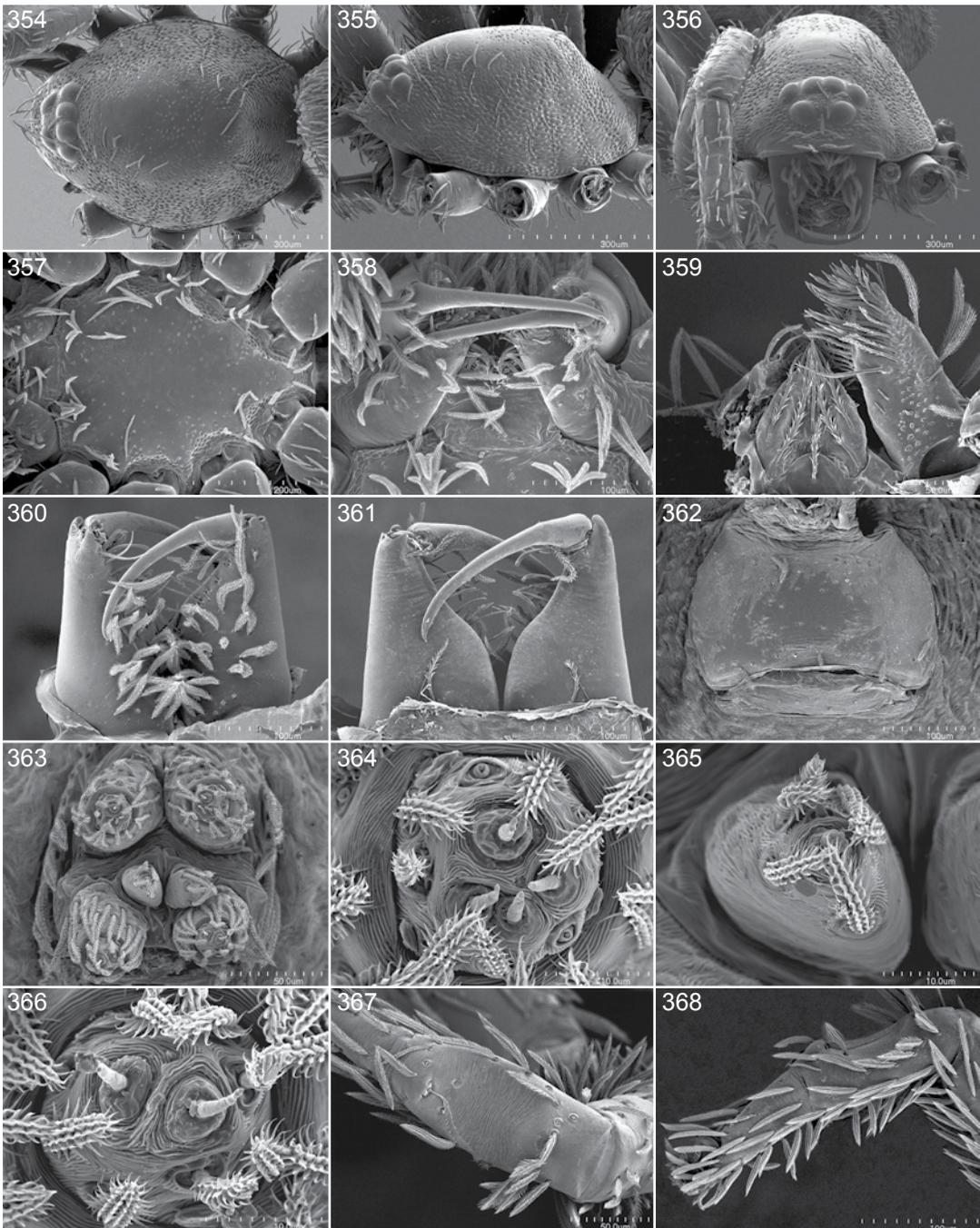
DESCRIPTION: Total length of males 1.3–1.6, of females 1.5–1.8. Carapace, sternum, mouthparts pale orange, without pattern; legs, palps yellow, without pattern; abdomen white, with or without pattern. **Cephalothorax:** Carapace broadly oval in dorsal view, anteriorly narrowed to 0.49 times its maximum width or less (figs. 324, 354), anterolateral corners with slightly sclerotized triangular projections, posterolateral edge without pair of pits, posterior margin not bulging below posterior rim, posterolateral surface without spikes, with rounded posterolateral corners; pars cephalica slightly elevated in lateral view (figs. 325, 355), pars thoracica without depressions, fovea, or radiating rows of pits; lateral margin straight, rebordered, without denticles; plumose setae near posterior margin of pars thoracica absent; non-marginal pars cephalica setae dark, needlelike, in U-shaped row; nonmarginal pars thoracica setae, marginal setae, clypeal setae dark, needlelike. Clypeus margin strongly rebordered, curved downwards in front view (figs. 326, 356), vertical in lateral view, high, ALE separated from edge of carapace by their radius or more, median projection absent. Chilum absent. Eyes six, well developed, all subequal, ALE circular, PME squared, PLE circular; posterior eye row recurved from above, procurved from front; ALE separated by less than their radius, ALE-PLE separated by less than ALE radius, PME separated by less than their radius, PLE-PME separated by less than PME radius. Sternum longer than wide, not fused to carapace, median concavity absent, without hair tufts or radial furrows between coxae I–II, II–III, III–IV, radial furrow opposite coxae III absent, surface smooth, microsculpture only at sides, sickle-shaped structures absent, anterior margin unmodified, posterior margin extending posteriorly beyond anterior edges of coxae IV as single extension, anterior corner unmodified, lateral margin without infracoxal grooves, distance between coxae approximately equal, extensions of precoxal triangles present, lateral margins with rounded extensions between coxae, without posterior hump; setae sparse, dark, needlelike, densest laterally, originating from surface (figs. 327, 357). Chelicerae straight, anterior face unmodified; without teeth (figs. 330, 360); fangs elongated, extending more than half of paturon length (figs. 331, 358, 361), without toothlike projections, directed medially, without prominent basal process, tip unmodified; setae dark, needlelike, densest medially; paturon inner margin with short interdigitating setae, distal region abruptly narrowed, posterior surface unmodified, promargin with row of flattened setae, inner margin unmodified, laminate groove absent. Labium triangular, not fused to sternum, anterior margin indented at middle, same as sternum in sclerotization; with six or more setae on anterior margin, subdistal portion with unmodified setae (figs. 328, 358). Endites distally not excavated, serrula absent (figs. 329, 359), postero-median part unmodified, same as sternum in sclerotization. Female palp without spines or

claw; patella without prolateral row of ridges; tibia with at least two trichobothria (fig. 394); tarsus unmodified (figs. 392, 393). **Abdomen:** Ovoid, without long posterior extension, rounded posteriorly, interscutal membrane without rows of small sclerotized platelets posteriorly. Book lung covers large, ovoid, without setae, anterolateral edge unmodified. Posterior spiracles connected by groove (figs. 332, 362). Pedicel tube short, unmodified, scutopedicel region unmodified, scutum not extending far dorsal of pedicel, plumose hairs, matted setae on anterior ventral abdomen in pedicel area, cuticular outgrowths near pedicel all absent. Dorsal scutum absent, epigastric scutum weakly sclerotized, not surrounding pedicel, not protruding, small lateral sclerites, lateral joints absent; postepigastric scutum weakly sclerotized, yellow, short, only around epigastric furrow, not fused to epigastric scutum, anterior margin unmodified, without posteriorly directed lateral apodemes; spinneret scutum absent; supraanal scutum absent. Dorsal, epigastric, postepigastric setae dark, needle-like, those on epigastric area not thickened; dense patch of setae anterior to spinnerets absent. Anterior, posterior lateral spinnerets bisegmented, posterior medians unisegmented (figs. 333, 363). Spigots scanned only in *H. lucradus*; anterior laterals with single major ampullate gland spigot and three piriform gland spigots in males (fig. 334) and females (fig. 364); posterior medians with single spigot in males (fig. 335) and females (fig. 365); posterior laterals with two spigots in males (fig. 336) and females (fig. 366). Colulus represented only by setae. **Legs:** Without spines; femur IV not thickened, same size as femora I–III, patella plus tibia I shorter than carapace, tibia I unmodified, tibia IV ventral scopula, specialized hairs on ventral apex absent; metatarsi I, II with dorsal excavation occupying most of segment length (figs. 337, 338, 367, 368), excavation with trichobothrium near distal edge, filament directed proximally, flanked by two large, dark setae (figs. 339, 340, 369, 370); metatarsi I, II mesoapical comb absent, metatarsi III, IV weak ventral scopula absent. Tarsi without inferior claw; lateral surfaces of paired claws with three or four large, basally situated teeth, distal portion of claw abruptly bent downward, median surfaces with distally situated, closely packed rows of teeth with cascading series of small teeth (figs. 341–348, 372–379). Tarsal organs of legs I, II with three receptors, of legs III, IV, palps with two receptors, distal receptor greatly widened, often distally bifid (figs. 349–353, 380–383, 395). Trichobothria with highly arched base (figs. 371, 396). **Genitalia:** Male epigastric region with sperm pore not visible; furrow without  $\Omega$ -shaped insertions, without setae. Male palp normal size, not strongly sclerotized, right, left palps symmetrical; trochanter normal size, unmodified; femur normal size, two or more times as long as trochanter, without posteriorly rounded lateral dilation, attaching to patella basally; patella shorter than femur, not enlarged, without prolateral row of ridges, setae unmodified; tibia with at least two trichobothria (fig. 387); cymbium ovoid in dorsal view, completely fused with bulb, no seam visible (figs. 384, 386, not extending beyond distal tip of bulb, plumose setae, stout setae, distal patch of setae all absent; bulb 1 to 1.5 times as long as cymbium, stout, spherical; embolus light, prolateral excavation absent, narrow extending ventrally from bulb (fig. 385). Females with anterior genitalic process set on wide base (fig. 391), posterior elements reduced to short triangles.

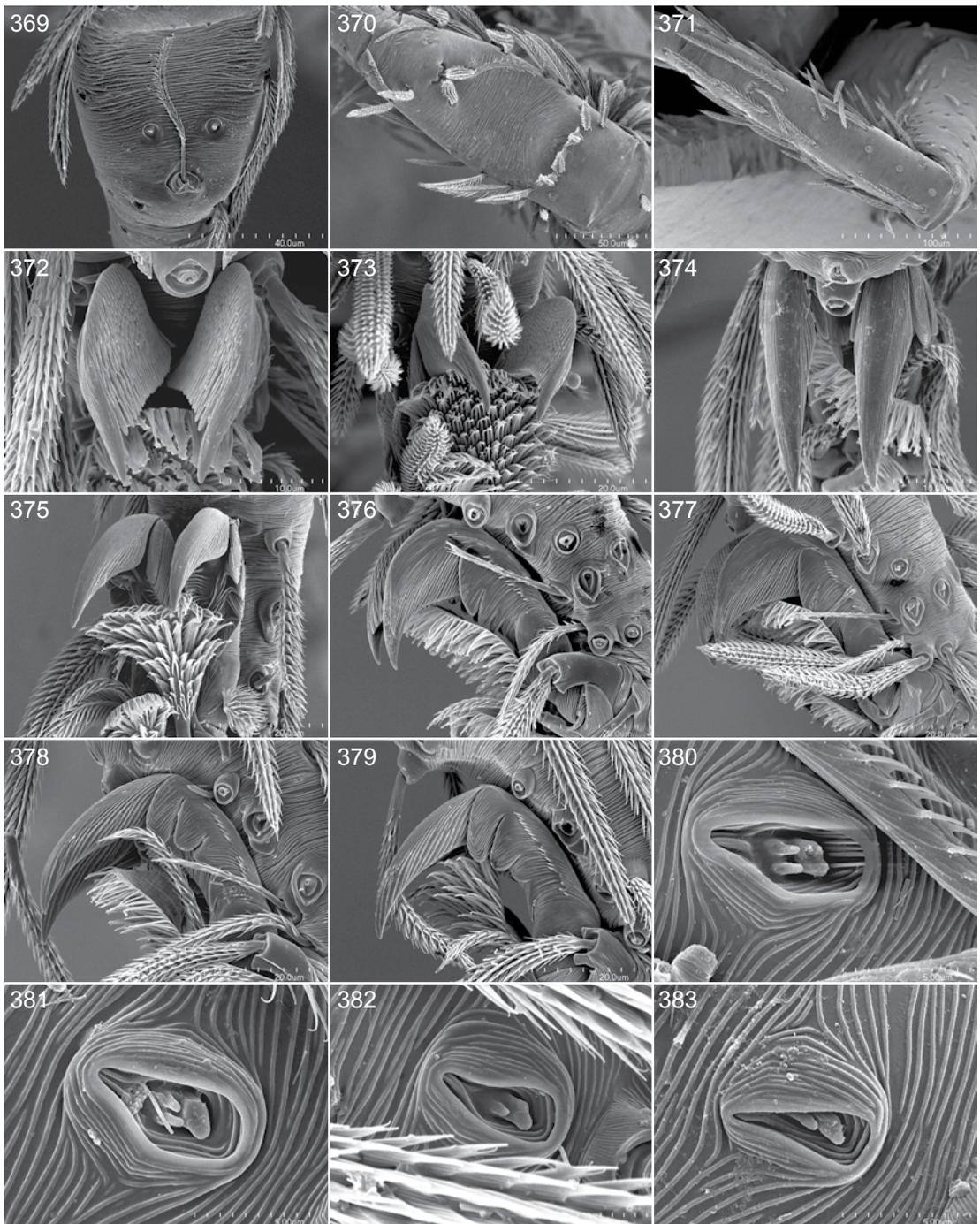
**DISTRIBUTION:** Known only from Hispaniola, Puerto Rico, and the Virgin Islands.



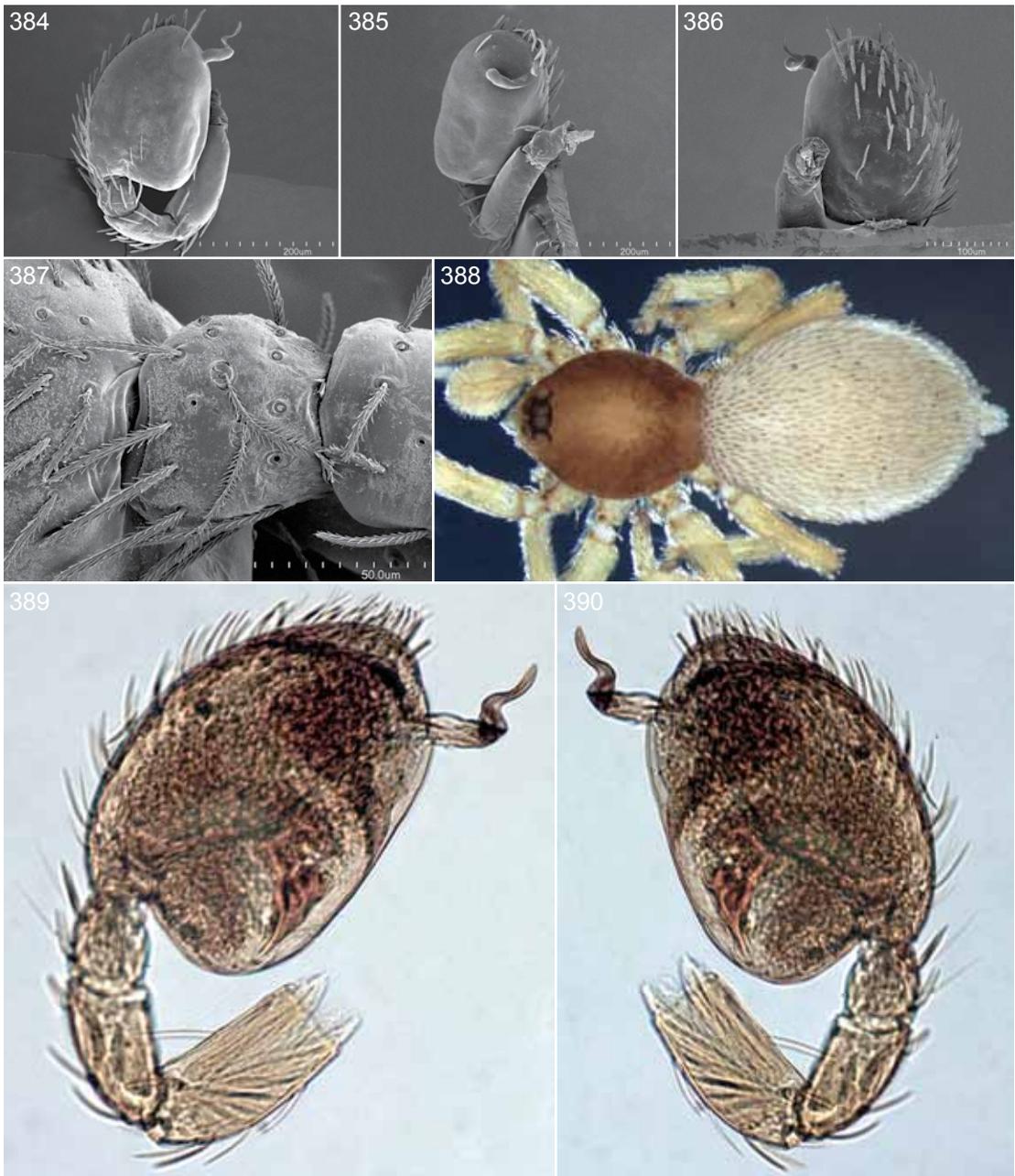
FIGS. 339–353. *Hortoonops lucradus* (Chickering), male. 339. Metatarsus II, dorsal view. 340. Same, lateral view. 341. Claws of leg I, distal view. 342. Same, leg II. 343. Same, leg III. 344. Same, leg IV. 345. Claws of leg I, lateral view. 346. Same, leg II. 347. Same, leg III. 348. Same, leg IV. 349. Tarsal organ from leg I, dorsal view. 350. Same, leg II. 351. Same, leg III. 352. Same, leg IV. 353. Same, palp.



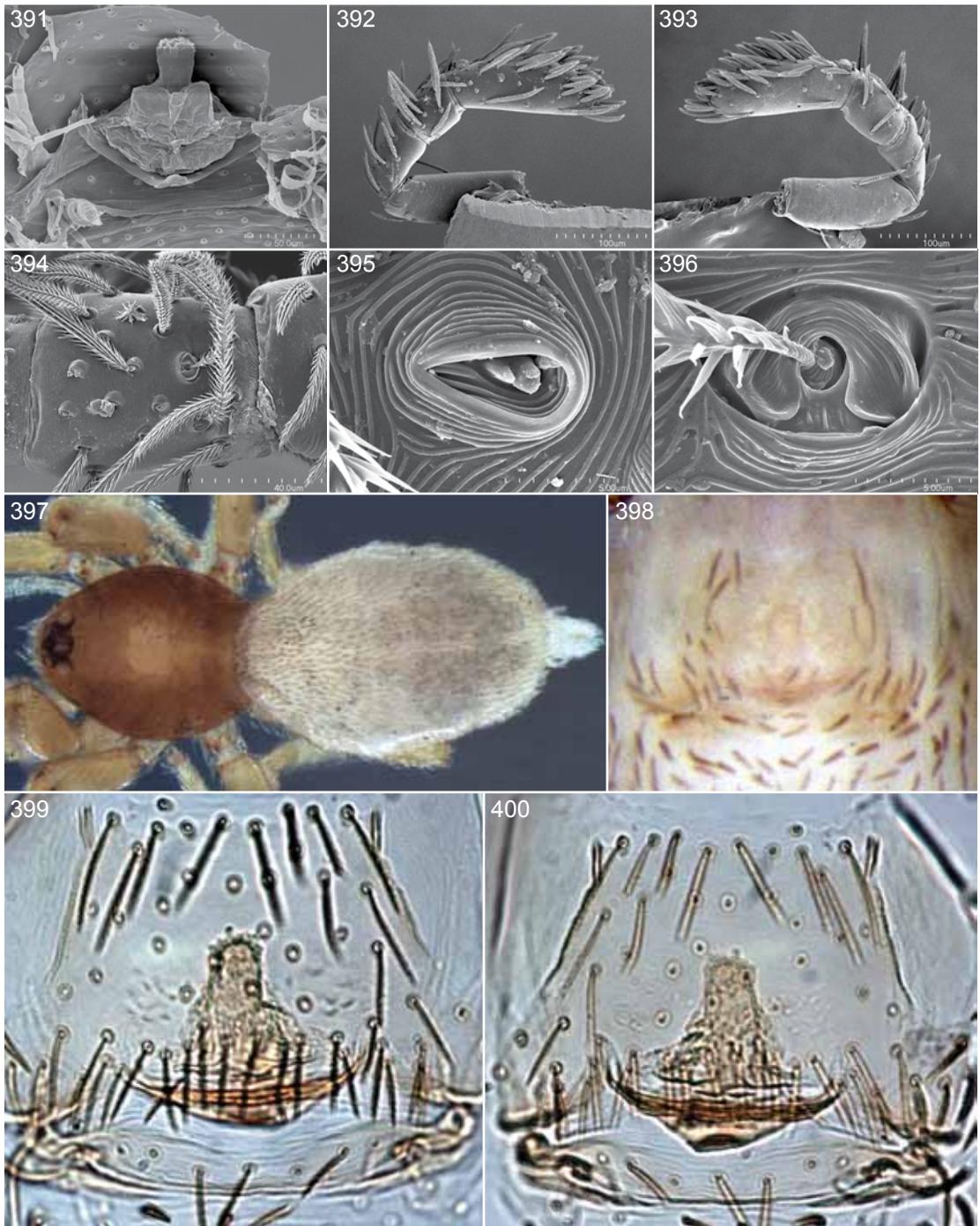
FIGS. 354–368. *Hortoonops lucradus* (Chickering), female. 354. Carapace, dorsal view. 355. Same, lateral view. 356. Same, anterior view. 357. Sternum, ventral view. 358. Mouthparts, ventral view. 359. Labrum and endite, dorsal view. 360. Chelicerae, anterior view. 361. Same, posterior view. 362. Epigastric region, ventral view. 363. Spinnerets, distal view. 364. Anterior lateral spinneret, same. 365. Posterior median spinneret, same. 366. Posterior lateral spinneret, same. 367. Metatarsus I, dorsal view. 368. Same, lateral view.



FIGS. 369–383. *Hortonops lucradus* (Chickering), female. **369.** Metatarsus I, distal view. **370.** Metatarsus II, dorsal view. **371.** Metatarsus IV, dorsal view. **372.** Claws of leg I, distal view. **373.** Same, leg II. **374.** Same, leg III. **375.** Same, leg IV. **376.** Claws of leg I, lateral view. **377.** Same, leg II. **378.** Same, leg III. **379.** Same, leg IV. **380.** Tarsal organ from leg I, dorsal view. **381.** Same, leg II. **382.** Same, leg III. **383.** Same, leg IV.



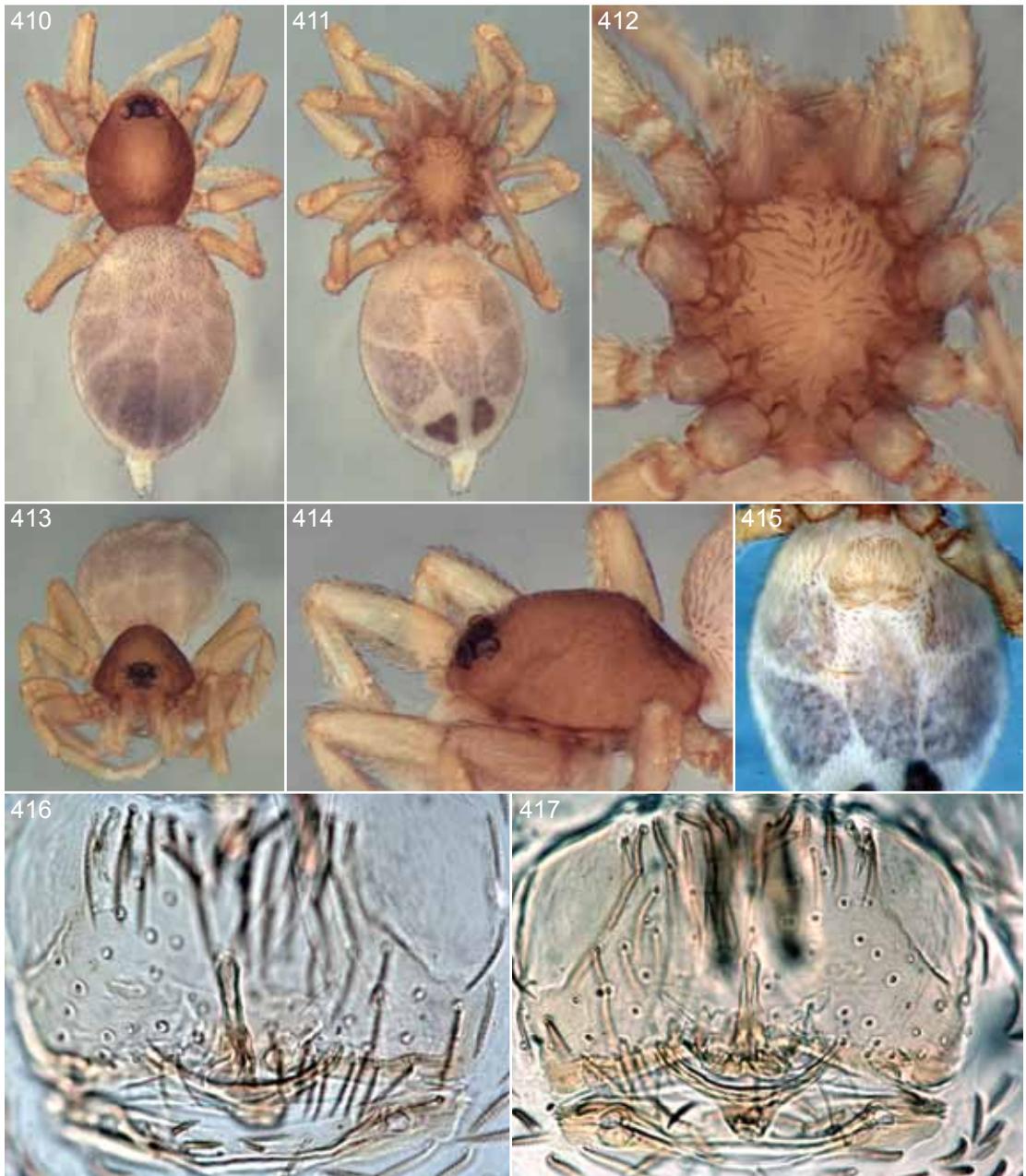
FIGS. 384–390. *Hortonops lucradus* (Chickering), male. **384, 389.** Left palp, prolateral view. **385.** Same, ventral view. **386, 390.** Same, retrolateral view. **387.** Palpal tibia, dorsal view. **388.** Habitus, dorsal view.



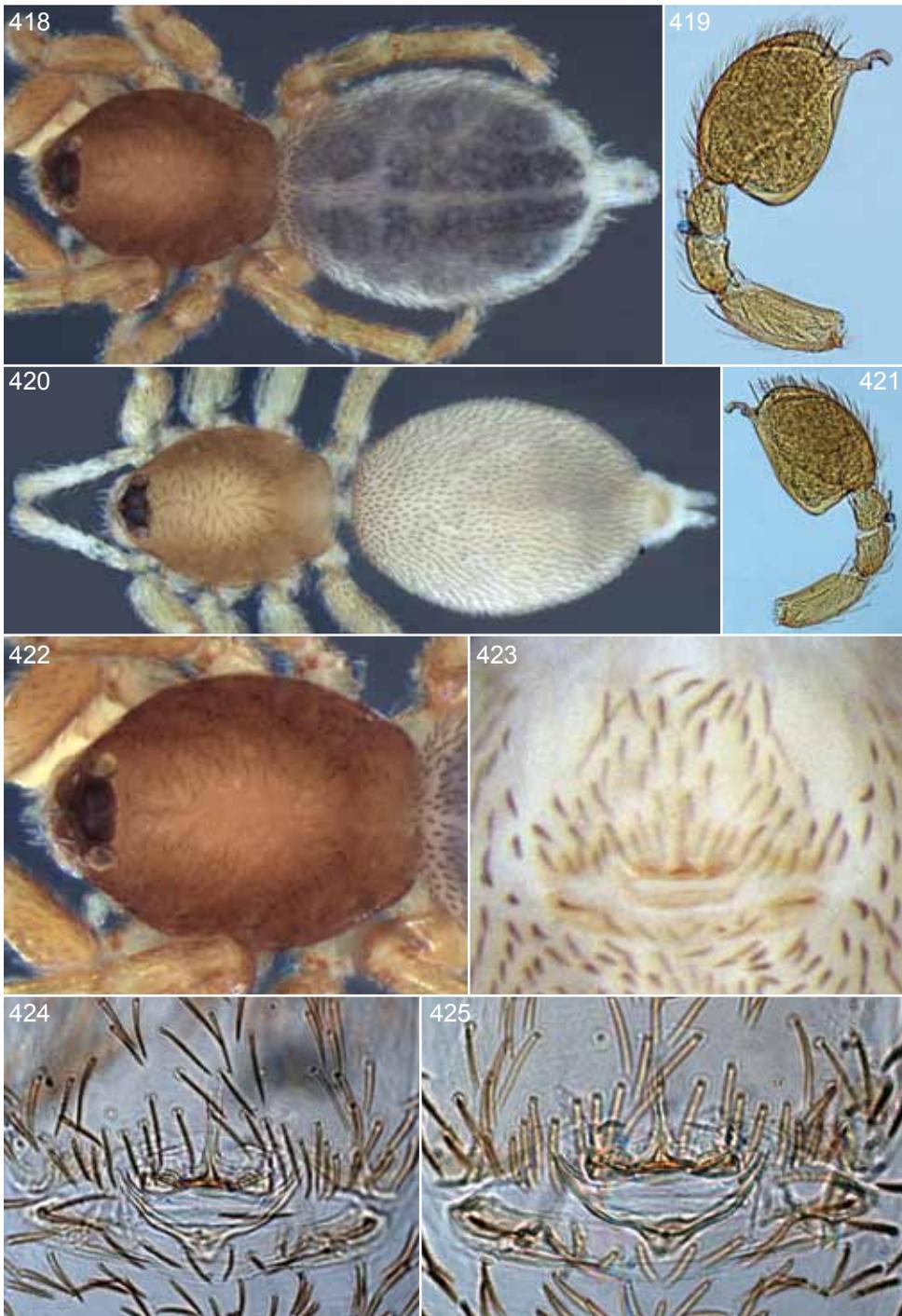
FIGS. 391–400. *Hootoonops lucradus* (Chickering), female. 391. Genitalia, dorsal view. 392. Palp, prolateral view. 393. Same, retrolateral view. 394. Palpal tibia, dorsal view. 395. Tarsal organ from palp, dorsal view. 396. Trichobothrial base from tibia II, dorsal view. 397. Habitus, dorsal view. 398. Epigastric region, ventral view. 399. Genitalia, ventral view. 400. Same, dorsal view.



FIGS. 401–409. *Hortoonops portoricensis* (Petrunkevitch), male. **401.** Habitus, dorsal view. **402.** Same, ventral view. **403.** Sternum, ventral view. **404.** Carapace, lateral view. **405.** Left palp, prolateral view. **406.** Same, retrolateral view. **407.** Carapace, anterior view. **408.** Left palpal bulb, prolateral view. **409.** Same, retrolateral view.



FIGS. 410–417. *Hootonops portoricensis* (Petrunkevitch), female. **410.** Habitus, dorsal view. **411.** Same, ventral view. **412.** Sternum, ventral view. **413.** Habitus, anterior view. **414.** Carapace, lateral view. **415.** Epigastric region, ventral view. **416.** Genitalia, ventral view. **417.** Same, dorsal view.



FIGS. 418–425. *Hortoonops excavatus*, new species, male (418, 419, 421, 422) and female (420, 423–425). 418, 420. Habitus, dorsal view. 419. Left palp, prolateral view. 421. Same, retrolateral view. 422. Carapace, dorsal view. 423. Epigastric region, ventral view. 424. Genitalia, ventral view. 425. Same, dorsal view.

## KEY TO SPECIES

1. Embolus sinuous (figs. 389, 390); anterior genitalic process wide at base (figs. 399, 400); Virgin Islands.....*lucradus*
  - Embolus not sinuous (figs. 408, 419); anterior genitalic process narrow at tip (figs. 417, 425).....2
2. Embolus invaginated just behind tip (figs. 408, 409); anterior genitalic process widened at base (figs. 416, 417); Puerto Rico.....*portoricensis*
  - Embolus invaginated more proximally (figs. 419, 421); anterior genitalic process not widened at base (figs. 424, 425); Hispaniola.....*excavatus*

*Hortoonops lucradus* (Chickering), new combination

Figures 324–400

*Stenoonops lucradus* Chickering, 1969a: 11, figs. 27, 28 (male holotype supposedly from Charlotte Amalie, St. Thomas, Virgin Islands, in MCZ; examined).

DIAGNOSIS: Males can be recognized by the long, sinuous embolus (figs. 389, 390), females by the very wide anterior genitalic process (figs. 399, 400).

MALE (PBI\_OON 381, figs. 324–353, 384–390): Total length 1.52. Surface of carapace with numerous deep slits. Sternum surface with patches of deep slits opposite each coxa. Endites with thickened tip bearing rounded protrusion. Abdomen without pigment patches. Embolus long, sinuous, with recurved tip.

FEMALE (PBI\_OON 382, figs. 354–383, 391–400): Total length 1.51. Dorsum of abdomen with traces of dark pigment patches visible through cuticle. Anterior genitalic process very wide, situated on oval base followed posterior by strongly sclerotized, procurved ridge.

MATERIAL EXAMINED: WEST INDIES: **Virgin Islands:** *St. John:* no specific locality, July 23, 1966 (A. Chickering, MCZ PBI\_OON 382), 1 ♂, 1 ♀ (paratypes); Calabash Boom, Oct. 16, 1980, under rocks (W. Muchmore, FSCA PBI\_OON 21202), 1 ♂; Catherineberg, Oct. 15, 1980, under large tamarind (W. Muchmore, FSCA PBI\_OON 21203), 1 ♀; Catherineberg Estate, July 26, 1975, debris along wall of mill (W. Muchmore, AMNH 1772), 1 ♀; Coral Bay, above Butler's house, July 17, 1975, ground litter (W. Muchmore, AMNH PBI\_OON 1809), 1 ♀; Drunk Bay, June 18, 1980, litter under bushes, cacti (W. Muchmore, FSCA PBI\_OON 21206), 1 ♂; Hermitage Ruins, June 20, 1980, base of giant dildo cactus (W. Muchmore, FSCA PBI\_OON 21204), 1 ♀; Little Lameshur Bay, May 17, 1979, litter under old century plant (W. Muchmore, FSCA PBI\_OON 21200), 1 ♀; Trunk Bay, June 9, 1980, base of anthuriums (W. Muchmore, FSCA PBI\_OON 21205), 1 ♀. *St. Thomas:* no specific locality, Aug. 10, 1966 (A. Chickering, MCZ 72303, PBI\_OON 26676), 1 ♀; "vicinity of Charlotte Amalie" (according to publication), Aug. 25, 1966 (A. Chickering, MCZ PBI\_OON 381), 1 ♂ (holotype; N.B.: locality label with specimen reads only "St. John, U.S.V.I." but has same collection date). *Virgin Gorda:* Virgin Gorda Mountain, June 21, 1966, Berlese (Island Project staff, AMNH PBI\_OON 1804), 1 ♂.

DISTRIBUTION: Virgin Islands (St. John, St. Thomas, Virgin Gorda).

*Hortoonops portoricensis* (Petrunkevitch), new combination

Figures 401–417

*Stenoonops portoricensis* Petrunkevitch, 1929: 72, figs. 61–63 (male holotype from Toa Alta, Puerto Rico, in AMNH; examined).– Chickering, 1969a: 7, figs. 14–18 (first description of female).

DIAGNOSIS: Males can be recognized by the prolateral spur near the tip of the embolus (figs. 408, 409), females by the basally widened anterior genitalic projection (figs. 416, 417).

MALE (PBI\_OON 372, figs. 401–409): Total length 1.48. Carapace and sternum not scanned. Dorsum of abdomen with patches of dark pigment visible through cuticle. Embolus with short, spiniform prolateral process situated near tip of longer, distally curled retrolateral process.

FEMALE (PBI\_OON 379, figs. 410–417): Total length 1.80. Anterior genitalic projection long, narrow, posterior portion with triangular median receptaculum extending posterior of procurved rim.

MATERIAL EXAMINED: WEST INDIES: **Puerto Rico**: Private Reserve Natural El Tallonal, Dominguito Ward, Arecibo Mun., Aug. 2008, leaf litter (S. Castillo, AMNH PBI\_OON 379), 1 ♀; Ranger Station, Guanica Dry Forest, 17.971472°N, 66.867958°W, July 19–22, 2011 (I. Agnarsson et al., USNM 392858, PBI\_OON 43635), 1 ♀; Toa Alta, sifting (AMNH PBI\_OON 372), 1 ♂ (holotype); University Farm, N of campus, Mayagüez, Jan. 25, 1964 (A. Chickering, MCZ 68342, PBI\_OON 27171), 1 ♀.

DISTRIBUTION: Puerto Rico.

*Hortoonops excavatus*, new species

Figures 418–425

TYPES: Male holotype and female allotype from forest litter taken at an elevation of 800 m at the Salto Jimenoa, 7 km SE of Jarabacoa, La Vega, Dominican Republic, Hispaniola (July 31, 1995; S., J. Peck), deposited in AMNH (PBI\_OON 21094).

ETYMOLOGY: The specific name refers to the excavations on the anterior metatarsi.

DIAGNOSIS: Males can be recognized by the C-shaped tip of the embolus (figs. 419, 421), females by the basally narrow anterior genitalic projection (figs. 424, 425). The distinct abdominal pattern found in the male (fig. 418) is not detectable in the female taken with it (fig. 420).

MALE (PBI\_OON 21094, figs. 418, 419, 421, 422): Total length 1.38. Carapace and sternum not scanned. Abdomen with strong dark pigment patches visible through cuticle on dorsum, sides, venter. Embolus with distal portion C-shaped.

FEMALE (PBI\_OON 21094, figs. 420, 423–425): Total length 1.51. Abdomen with no pigment patches visible through cuticle. Dorsal view: anterior genitalic projection very long, narrow, situated on very short base.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Hispaniola (Dominican Republic).

## ACKNOWLEDGMENTS

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