THE GOBLIN SPIDER GENUS *SCAPHIELLA*

(*ARANEAE, OONOPIDAE*)

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BULLETIN OF THE AMERICAN MUSEUM OF NATURAL HISTORY
Number 332, 156 pp., 1154 figures, 15 maps
Issued March 15, 2010

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ISSN 0003-0090
Records of 61 *Scaphiella* species, combined.
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INTRODUCTION

The goblin spider genus *Scaphiella* was established by Simon (1891) for the unusual species *Scaphiella cymbalaria* Simon, from the island of St. Vincent in the Lesser Antilles. Simon had both sexes of the type species, which he believed to occur also in his Venezuelan collections. Although the original description was not accompanied by any illustrations, Simon (1893a: figs. 257, 258) soon supplied lateral and dorsal views of the distinctive abdomen of females, making these “taco spiders” instantly recognizable: in females, the ventral scutum extends around the sides of the abdomen, leaving only a small portion of the soft, dorsal surface uncovered (figs. 85, 87). Males have a dorsal scutum not found in females (figs. 1, 30) but have a similar (if less laterally extended) ventral scutum.

Over subsequent decades, Simon and later authors added over 20 additional species to the genus, but many of them were transferred to *Escaphiella*, hypothesized to represent the sister group of *Scaphiella*, by Platnick and Dupérré (2009b). Members of both genera share the presumably synapomorphic ventral scutal arrangement, as well as a characteristic epigynal configuration (figs. 65–67), but differ in many other characters.

Males of the type species, *S. cymbalaria*, have unusual, anteriorly directed projections on the anterior surface of the chelicerae (figs. 1053, 1056); smaller projections also occur in males of *Scaphiella simla* Chickering (figs. 849, 851). Such projections have not been detected in males of any of the other species, suggesting that *S. cymbalaria* and *S. simla* are sister taxa. Simon (1893b: 444) presented the locality data for the Venezuelan specimen he had earlier (1891) assigned to *S. cymbalaria*, but that specimen is a female placed below in *Scaphiella valencia*, new species. At present, *S. cymbalaria* is known from several islands in the Lesser Antilles (Dominica, Martinique, and Montserrat, as well as St. Vincent), but not from Venezuela (where the clade seems to be represented instead by *S. simla*, which occurs also on Trinidad).

These relatively small geographic ranges are typical of the many species recognized below; only five of the other known species are known from more than a single country or island, and in each of those cases the total distribution is still small, encompassing, for example, adjacent parts of Costa Rica and Panama (as in the new species *S. antonio*, *S. altamira*, and *S. hone*), of Panama and Colombia (as in *S. barroana* Gertsch, described from Panama and here newly recorded from Colombia), or of Trinidad and nearby parts of Venezuela (as in *S. guiria*, new species).

In addition to the small average size of their distributional ranges, *Scaphiella* species seem to be confined to the New World tropics, from southern Mexico and Cuba (south of the Tropic of Cancer) south to...
areas of Peru and Brazil that are north of the Tropic of Capricorn (see the Frontispiece). This is in sharp contrast to the much wider distribution of Escaphiella, which extends from central California and Utah as far south as Chile and Argentina. However, there is one exceptional record of true Scaphiella specimens from outside the true tropics; one male and one female were collected on Long Key in the Florida Keys. When we first encountered this pair of specimens, we assumed that they were just introduced from some more tropical locality. However, our intensive efforts to associate these two specimens with any of the tropical species we’ve studied have all been unsuccessful, and we have therefore had to describe these specimens below as S. longkey, new species. The species may eventually be found elsewhere (both Cuba and the Bahama Islands have been insufficiently sampled for oonopids), but there are other oonopid species that seem to be endemic to far southern Florida.

Almost all specimens of Scaphiella can quickly be distinguished from those of Escaphiella by several features that are, so far as we are aware, unique to these animals. In both sexes, the highly elongated chelicerae (figs. 52, 62) bear, along their median surface, peculiarly shaped, black macrosetae (figs. 332, 335). Similarly shaped, black macrosetae occur also near the base of the prolateral surface of the palpal tarsus, again in both sexes (figs. 497, 501, 545, 546). In addition, the palpal tarsus of females is unusually inflated (fig. 547). Here again, however, there is a single specimen that declines to cooperate. This female, from Belize, is placed below as that of S. cayo, new species. In this female, neither the chelicerae (figs. 153–156) nor the palpal tarsus (figs. 157–160) have the characteristic macrosetae, and the palpal tarsus is not nearly as expanded as is typical for the genus. However, the elongated cheliceral shape supports placement of this female in Scaphiella rather than Escaphiella (cf. Platnick and Dupérré, 2009b: figs. 22–24), and we have found no other characters to suggest that this specimen does not match the males of S. cayo, which were taken in the same area of Belize, by the same collectors, on the same expedition.

Males of at least Scaphiella williamsi Gertsch (1941) and S. altamira, new species, have a distinctly enlarged, smooth seta that originates anteriorly of the cheliceral fang base, and extends almost the length of the cheliceral fang (figs. 331, 333, 489, 490). Unfortunately, these peculiar setae do not seem to occur in the females of those species, so their absence in the female of S. cayo is also uninformative. The absence of a groove connecting the posterior spiracles, however, also supports the placement of this female in Scaphiella rather than Escaphiella.

As in Escaphiella, species from nearby geographic localities often differ obviously in somatic characters, particularly the presence/absence or distribution of microsculpture on the carapace and sternum. Similarities in these features often corroborate the matching of males and females that have not yet been collected together, as in almost all cases, the two sexes correspond in these features. The same is true for reductions in eye size, which we have noted in Scaphiella bordoni Dumitrescu and Georgescu (1987) from Venezuela and some new species (S. muralla from Honduras, S. antonio from Costa Rica and Panama, S. incha from Ecuador, S. miranda and S. arima from Trinidad). One notable exception is Scaphiella weberi Chickering (1968) from Trinidad, where the two female paratypes have eye reductions and substantial microsculpture on the carapace that do not also occur on the male holotype. All three specimens were collected by N. Weber, but have no detailed locality data, so we do not know whether they were actually taken at the same place or time. Chickering (1968: 155) had other Weber-collected specimens from Trinidad, with the same lack of detailed data, that he “tentatively assigned to this species but with considerable uncertainty”; those specimens are here placed instead in S. guiria, new species. In the absence of any isolated males from Trinidad or northern Venezuela that provide a better fit, we have elected to retain Chickering’s hypothesized matching of the sexes in S. weberi, and merely caution readers that it may be erroneous.
We have not detected any instances of the marked asymmetry between the right and left male palps that characterizes some species of *Escaphiella* (see Platnick and Dupérré, 2009b). Similarly, we have not detected any examples of the fusion or reduction of the posterior median spinnerets (but we have scanned the spinnerets in detail for only three of the species discussed below). Perhaps the most unusual modification we have detected is the presence in males of the new species *S. etang*, from Guadeloupe, of a series of strong cusps on the dorsal surface of the palpal femur (figs. 1074, 1078–1080).

Like many other hard-bodied oonopids, *Scaphiella* specimens have a pair of oval, differentially sclerotized patches situated near the pedicel, at the anterior end of the sides of the ventral abdominal scutum. These structures have commonly been called booklung covers, as in other spiders, but that terminology may be incorrect, as these structures are actually situated far anterior of both the anterior spiracles and the booklungs themselves (figs. 22, 23, 375). Of course, the booklungs in oonopids are typically reduced, both in size and in the number of leaves comprising each lung, but in other spiders the posterior edge of the booklung covers marks the position of the anterior spiracles. The position of the structures in oonopids suggests that they might be involved in proprioception of the position of the abdomen relative to the basal segments of the fourth pair of legs.

Our survey of this genus is based on study of over 600 specimens from the collections listed below. Our methods follow those of Platnick and Dupérré (2009a, 2009b); the species are treated geographically, by country, proceeding from North and Central American to western South America, followed by eastern South America and then the West Indies. To aid with identifications, four separate keys are provided to species known from different parts of the total range of the genus. Only differences from the males are mentioned in the descriptions of females. All measurements are in mm. All the new specific names are nouns, used in apposition, taken from some part of the type locality. Full color and high-resolution versions of the images will be available on our Goblin Spider Planetary Biodiversity Inventory (PBI) project’s website (http://research.amnh.org/oonopidae).

### Collections Examined

- **AMNH** American Museum of Natural History, New York
- **BMNH** Natural History Museum, London, England
- **CAS** California Academy of Sciences, San Francisco
- **CNC** Canadian National Collection, Ottawa
- **FMNH** Field Museum of Natural History, Chicago
- **FSCA** Florida State Collection of Arthropods, Gainesville
- **IBSP** Instituto Butantan, São Paulo, Brazil
- **INBio** Instituto Nacional de Biodiversidad, Santo Domingo, Costa Rica
- **KBIN** Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels, Belgium
- **MACN** Museo Argentino de Ciencias Naturales, Buenos Aires, Argentina
- **MCZ** Museum of Comparative Zoology, Harvard University
- **MHNG** Muséum d’Histoire Naturelle, Geneva, Switzerland
- **MIUP** Museo de Invertebrados, Universidad de Panamá
- **MNHN** Muséum National d’Histoire Naturelle, Paris, France
- **MPEG** Museu Paraense Emílio Goeldi, Belém, Brazil
- **MUSM** Museo de Historia Natural, Universidad Nacional Mayor de San Marcos, Lima, Peru
- **UAM** University of Alaska Museum, Fairbanks
- **USNM** National Museum of Natural History, Smithsonian Institution
- **ZMUC** Zoological Museum, University of Copenhagen, Denmark
- **ZMUT** Zoological Museum, University of Turku, Finland
**SCAPHIELLA SIMON**

*Scaphiella* Simon, 1891: 561 (type species by monotypy *Scaphiella cymbalaria* Simon).

**Diagnosis:** Members of this genus closely resemble those of *Escaphiella* but can be distinguished by the shape of the chelicerae, which are long and narrow rather than short and wide, and by the absence of an embolar base in males (figs. 8–10). Almost all specimens can also quickly be recognized by the presence of black macrosetae on the chelicerae (figs. 332, 335) and near the base of the prolateral side of the palpal tarsus in both sexes (figs. 497, 501, 533, 545, 546), and by the presence of an expanded palpal tarsus in females (figs. 545, 547), but the macrosetae are not present in the female here assigned to *Scaphiella cayo*, new species, and the palpal tarsus of that female is slightly less expanded than in other species.

**Description:** Total length of males 0.9–1.8, of females 1.0–2.2; cephalothorax, legs, and abdominal scuta yellow to orange-brown, usually pale orange. **Cephalothorax:** Carapace without any pattern, ovoid in dorsal view, pars cephalica slightly to strongly elevated in lateral view, anteriorly narrowed to between 0.5 and 0.75 times its maximum width, with rounded posterolateral corners; posterolateral edge without pits, posterior margin not bulging below posterior rim, anterolateral corners without extension or projections, posterolateral surface without spikes, surface of elevated portion of pars cephalica smooth; thorax without depressions, fovea absent, without radiating rows of pits; lateral margin straight, rebordered, usually with blunt denticles; plumose setae near posterior margin of pars thoracica absent; nonmarginal pars cephalica setae dark, needlelike, scattered; nonmarginal pars thoracica setae usually present, dark, needlelike; marginal setae absent. Clypeus margin unmodified, vertical in lateral view, straight or curved downwards in ventral view, high, ALE separated from edge of carapace by their radius or more, median projection absent, setae dark, needlelike. Chilum absent. Eyes six, usually well developed (exceptions noted in species descriptions), ALE usually largest, circular, PME usually squared, PLE oval; posterior eye row procurved from front, usually procurred from above but sometimes straight; ALE separated by their diameter or less, usually by less than their radius, ALE-PLE separated by less than ALE radius, PME usually touching throughout most of their length (but can be separated by more than their diameter in species with reduced eyes), PLE-PME separated by less than PME radius, sometimes touching. Sternum longer than wide, coloration uniform, fused to carapace, median concavity absent, without hair tufts, with radial furrows between coxae I-II, II-III, III-IV, furrows smooth, radial furrow opposite coxae III absent, sickle-shaped structures absent; anterior margin with narrow transverse groove, often interrupted at middle (figs. 19, 491, 492), posterior margin not extending posteriorly of coxae IV, anterior corners unmodified, lateral margin without deep infracoxal grooves (fig. 19), distance between coxae approximately equal, extensions of precoxal triangles absent, lateral margins unmodified, without posterior hump; setae abundant, dark, needlelike, evenly scattered, originating from surface. Chelicerae straight, anterior face unmodified (exceptions noted in species descriptions; see males of *S. cymbalaria* and *S. simla*); without teeth on promargin or retromargin; without toothlike projections, directed medially; shape normal, without prominent basal process, tip unmodified; setae dark, needlelike, evenly scattered; patagon inner margin with scattered setae, distal region unmodified, posterior surface unmodified, promargin unmodified; inner margin with pair of large, elaborate, black macrosetae (except in female of *S. cayo*); laminate groove absent; males of at least *S. altamira* and *S. williamsi* with long, flat, unbarbed seta near fang base (figs. 331, 333, 489, 490). Labium triangular, fused to sternum, anterior margin indented at middle, same as sternum in sclerotization, subdistal portion with unmodified setae. Endites distally excavated (fig. 492), sometimes with anterior modifications in males; serrula apparently absent in both sexes, posteromedian part unmodified, same as sternum in sclerotization. Female palp without claw or spines; prolateral surface of femur with stridulatory ridges (fig. 545); patella without prolateral row of ridges, tarsus basally...
expanded, with patch of elaborate, black macrosetae prolaterally at base (except in S. cayo), with distal patch of setae. ABDOMEN: ovoid to cylindrical, without long posterior extension, rounded posteriorly, interscutal membrane with setae, without rows of small sclerotized platelets; females with dorsum soft portions white, without color pattern. Supposed book lung covers large, round to ovoid, without setae, anterolateral edge unmodified. Posterior spiracles not connected by groove. Pedicel tube short to medium in length, ribbed, scuto-pedicel 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 in females, that of males covering at least three quarters (usually all) of abdominal length, more than half (usually all) of abdomen width, usually with no soft tissue visible from above, not fused to epigastric scutum, strongly sclerotized, without color pattern (but dark markings sometimes visible under scuta, as noted in species descriptions), anterior half without projecting denticles. Epigastric scutum strongly sclerotized, surrounding pedicel, not protruding, small lateral sclerites absent, without anterolateral joints in females. Postepigastric scutum strongly sclerotized, long, semicircular, covering at least ¼ of abdomen length, usually covering nearly full length of abdomen, fused to epigastric scutum, anterior margin unmodified, males sometimes with short, posteriorly directed apodemes visible. Spinneret scutum present, incomplete ring, with fringe of needlelike setae; supraanal scutum absent. Dorsum setae dark, needlelike; epigastric area setae uniform, dark, needlelike; post-epigastric area setae dark, needlelike; dense patch of setae anterior to spinnerets absent. Interscutal membrane with setae. Colulus represented only by setae. Spinnerets scanned only in male S. altamira, both sexes of S. hone, and female S. williamsi; ALS with three spigots, PMS with single spigot, PLS with two spigots (see figs. 346–349, 379–382, 399–402, 555, 556). LEGS: without color pattern; femur IV not thickened, same size as femora I-III, patella plus tibia I usually shorter than carapace, tibia I unmodified, tibia IV specialized hairs on ventral apex absent, tibia IV ventral scopula absent, metatarsi I, II mesoapical comb absent, metatarsi III, IV weak ventral scopula absent. Leg spines absent. Claws (scanned in detail only in S. williamsi) usually with teeth restricted to median surfaces but those of leg I at least sometimes with teeth on outer surfaces also. Tibiae each with three trichobothria, metatarsi each with one, trichobothrial bases rounded, aperture internal texture not gratelike, hood smooth (figs. 509, 558). Tarsal organ of legs I, II with three sensilla (figs. 510, 511), of legs III, IV, and palp with two sensilla (fig. 512, 513, 560). GENITALIA: Male epigastric region with sperm pore large, circular, situated at level of anterior spiracles, rebordered; furrow without Ω-shaped insertions, without setae. Male palp of normal size, not strongly sclerotized, right and left palps symmetrical, proximal segments yellow; embolus dark, prolateral excavation absent; trochanter of normal size, unmodified; femur 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 three dorsal trichobothria; cymbium yellow, ovoid in dorsal view, completely fused with bulb, no seam visible, extending beyond distal tip of bulb, plumose setae absent, without stout setae, with patch of elaborate, black macrosetae prolaterally at base, with distal patch of setae; bulb yellow, with prolateral stridulatory file (fig. 497), 1 to 1.5 times as long as cymbium, stout, tapering apically.

MISPLACED SPECIES: As detailed by Platnick and Dupérré (2009b), both Scaphiella ula Suman (1965) from Hawaii and Scaphiella maculata Birabén (1955) from Argentina are misplaced in this genus and belong elsewhere.

DISTRIBUTION: Southern Florida and southern Mexico south to Peru and Brazil.

Key to Species

United States to Nicaragua

1. Sternum finely reticulate . . . . . . . . . . . . 2
   – Sternum smooth or pitted . . . . . . . . . . . 3
Scaphiella longkey, new species

Figures 1–29; map 1

Types: Male holotype and female allotype taken by deep soil washing in a hammock forest on sand in Long Key State Recreation Area, Monroe Co., Florida (Dec. 12, 1986; S., J. Peck), deposited in AMNH (PBI_OON 29867).

Diagnosis: Males resemble those of S. tuxtla and S. ceiba in having a basally twisted embolus (figs. 8–10), but the portion of the embolus distal to the twist is more convex than in S. tuxtla and neither the palpal femur nor bulb are as expanded as they are in S. ceiba. Females also resemble those of S. tuxtla in the shape of the anterior epigynal sclerite (fig. 18), but the sclerite is shorter than in that species.


Female (PBI_OON 29867, figs. 11–29). Total length 1.41. Epigynal atrium broadly oval, anterior sclerite surrounding horseshoe-shaped opening, extending about half of epigynal length; apodemes widest at about half their length.

Other Material Examined: None.

Distribution: Known only from the Florida Keys (map 1).

Scaphiella campeche, new species

Figures 30–48; map 2

Type: Male holotype and female allotype taken by deep soil washing in a hammock forest on sand in Long Key State Recreation Area, Monroe Co., Florida (Dec. 12, 1986; S., J. Peck), deposited in AMNH (PBI_OON 29867).

Diagnosis: Males have a subdistally widened embolus (fig. 38); females have a...
distinctively shaped epigynum, with greatly enlarged lateral sclerotizations (fig. 47); in both sexes, the carapace has microsculpture only along the lateral margins of the pars cephalica and on the pars thoracica, and both the sternum and abdominal scuta are smooth.

MALE (PBI_OON 29853, figs. 30–39). Total length 1.37. Carapace with granulations present only along margins and on posterior declivity. Sternum smooth. Endites without anteromedian modifications. Abdomen with scattered dark markings visible under scuta, scuta smooth. Palpal femur slightly expanded; embolus relatively short, subdistally widened.

FEMALE (PBI_OON 29852, figs. 40–48). Total length 1.77. Epigastric scutum with transverse ridge above pedicel; anterior margins of epigastric scutum finely reticulate. Anterior epigynal sclerite surrounding long, horseshoe-shaped opening, occupying most of epigynal length; apodemes long, narrow.


DISTRIBUTION: Campeche and Chiapas, Mexico (map 3).

Scaphiella tuxtla, new species
Figures 49–70; map 3

TYPE: Male holotype and female allotype from plateau 6 miles S of Tuxtla Gutiérrez, 16°42′N, 93°07′W, Chiapas, Mexico (Aug. 21, 1966; J., W. Ivie), deposited in AMNH (PBI_OON 29860).

DIAGNOSIS: This species resembles S. campeche, but males have a basally twisted embolus (fig. 57), and females have a posteriorly forked anterior epigynal sclerite (fig. 65).

MALE (PBI_OON 29860, figs. 49–58). Total length 1.65. Carapace with granulations covering most of pars thoracica. Sternum finely reticulate, microsculpture covering entire surface. Endites without anteromedian modifications. Abdomen unpatterned, scuta smooth. Palpal femur moderately expanded; embolus basally twisted, abruptly narrowed distal of twist.

FEMALE (PBI_OON 29860, figs. 59–70). Total length 1.77. Epigastric scutum with transverse ridge above pedicel; anterior margins of epigastric scutum finely reticulate. Anterior epigynal sclerite surrounding long, horseshoe-shaped opening, occupying most of epigynal length; apodemes long, narrow.


DISTRIBUTION: Chiapas, Mexico (map 3).

Scaphiella palenque, new species
Figures 71–93; map 4

TYPE: Male holotype from Berlese of litter taken along rainforest trail, S Ruinas de...
Palenque, near Templo de León, Chiapas, Mexico (Jan. 24, 1976, C. Alteri), deposited in AMNH (PBI_OON 29859).

**DIAGNOSIS:** This species resembles S. campeche in microsculpture, but males can easily be recognized by the distally modified and darkened endites (figs. 76, 82–84), the greatly thickened palpal femur (fig. 78), and the long, basally widened embolus (fig. 79); females have a much more rounded epigynal atrium (figs. 91–93).

**MALE (PBI_OON 29863, figs. 71–84).** Total length 1.42. Carapace with granulations present only along lateral margins and posterior declivity. Sternum smooth. Endites with strong, toothlike anteromedian projection. Abdomen unpatterned, scuta smooth. Palpal femur greatly expanded; embolus evenly arched, tip directed ventrally.

**FEMALE (PBI_OON 29856, figs. 85–93).** Total length 1.43. Endites unmodified. Epigynal atrium with strong posterolateral margins, anterior sclerite narrow, short; apodemess short, directed dorsolaterally.

**OTHER MATERIAL EXAMINED:** MEXICO: Palenque, Mar. 2–24, 1975, Berlese (C. Alteri, AMNH PBI_OON 29856), 1 ♂; road into Palenque, Jan. 13, 1976, Berlese, dry grass at edge of field, along horse trail (C. Alteri, AMNH PBI_OON 29863), 2 ♂; ca 5 mi NW Palenque, Jan. 31, 1976, Berlese, rotted log in field (C. Alteri, AMNH PBI_OON 29864), 1 ♀.

**DISTRIBUTION:** Chiapas, Mexico (map 4).

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**Scaphiella cocona,** new species

*Figures 94–113; map 5*

**TYPES:** Male holotype and female allotype taken on surface near Grutas de Cocona, Tabasco, Mexico (Aug. 25, 1972; J. Cooke, R. Mitchell, Russell), deposited in AMNH (PBI_OON 29862).

**DIAGNOSIS:** In this species, the carapace has microsculpture extending about halfway up the sides of the pars cephalica, and the sternum and abdominal scuta are reticulate; males have a short, greatly thickened palpal femur (fig. 104) and a long, basally straight embolus (fig. 103); females resemble those of S. tuxtla but have a posteriorly more strongly sclerotized anterior epigynal sclerite (fig. 111).

**MALE (PBI_OON 29862, figs. 94–104).** Total length 1.55. Carapace sides with extensive granulation. Sternum finely reticulate, microsculpture covering entire surface. Endites with small, spiniform anteromedian tip. Abdomen unpatterned, epigastric scutum with small, straight ridge just above pedicel, scuta finely reticulate. Palpal femur greatly expanded; embolus long, basally straight, bulb bulging distally.

**FEMALE (PBI_OON 29862, figs. 105–113).** Total length 1.70. Endites unmodified. Epigynal atrium circular, with large, dark anterior sclerite; apodemess short, posteriorly directed; dorsal extension of anterior sclerite short, thick; apodemess short, apically rounded.

**OTHER MATERIAL EXAMINED:** None.

**DISTRIBUTION:** Tabasco, Mexico (map 5).

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**Scaphiella palmillas,** new species

*Figures 114–132; map 6*

**TYPE:** Male holotype from the Palmillas Mountains, Tabasco, Mexico (Aug. 18, 1945; F. Bonet), deposited in AMNH (PBI_OON 29866).

**DIAGNOSIS:** Males have the distal portion of the endites prolonged as a narrow projection, a slightly thickened palpal femur (fig. 123), and a very long, narrow embolus originating from a ventrally expanded bulb (fig. 122). The female from Chiapas here assigned to the species was not collected together with males, but is a close match in somatic structure and adds only a slight expansion to the relatively extensive distribution shown by the few available males; it
Figs. 59–70. *Scaphiella tuxtla*, new species, female. 59. Habitus, dorsal view. 60. Same, ventral view. 61. Same, lateral view. 62. Same, anterior view. 63. Carapace, dorsal view. 64. Same, lateral view. 65. Epigastric region, ventral view. 66. Epigynum, ventral view. 67. Same, dorsal view. 68. Same, ventral view, SEM. 69. Same, dorsal view, SEM. 70. Same, anterior portion, dorsal view, SEM.
resembles those of *S. campeche* but can be distinguished by the much longer anterior epigynal sclerite (figs. 130–132).

**MALE (PBI_OON 29855, figs. 114–123).** Total length 1.60. Carapace smooth. Sternum smooth. Endites with small, spiniform anteromedian tip. Abdomen unpatterned, scuta smooth. Palpal femur slightly expanded; embolus long, narrow; bulb expanded ventrally, bulging distally.

**FEMALE (PBI_OON 29858, figs. 124–132).** Total length 1.45. Endites unmodified. Epigynal atrium wide triangular; anterior sclerite narrow, with pair of rounded posterior sclerotizations; apodemes very short, posteriorly directed.

**OTHER MATERIAL EXAMINED:** MEXICO: Chiapas: Bonampak Road, 100 km SE Palenque, July 8, 1983, elev. 230 m (S., J. Peck, AMNH PBI_OON 29858), 1♀. Tabasco: Chichicastenango, Aug. 16, 1945, dead leaves, cane plantation (F. Bonet, AMNH, PBI_OON 29855), 1♂; Emiliano Zapata, Aug. 15, 1945, pasture, dead leaves, decaying wood (F. Bonet, AMNH PBI_OON 29865), 1♂. Yucatán: 2 km E Chichén Itzá, July 20, 1983, forest litter, elev. 20 m (S., J. Peck, AMNH PBI_OON 21099), 1♂.

**DISTRIBUTION:** Chiapas, Tabasco, and Yucatán, Mexico (map 6).

*Scaphiella cayo*, new species

Figures 133–160; map 7

**TYPE:** Male holotype from a Berlese sample of limestone forest litter taken 2.5 mi S of Belmopan, Cayo, Belize (Aug. 4, 1972; S., J. Peck), deposited in FMNH (33510, PBI_OON 10017).

**DIAGNOSIS:** Males resemble those of *S. palenque* in having a greatly thickened palpal femur, but have a much shorter embolus (fig. 142) and just a narrow prolongation at the tip of the endites. The female (from a nearby locality) here matched with the males resembles them in size and color, but can easily be distinguished by the chelicerae, which lack macrosetae but are distally elongated and bear greatly elongated fangs (figs. 153–156), and by the palpal femur, which is basally only slightly expanded and lacks prolateral macrosetae (figs. 157–160).


**FEMALE (PBI_OON 294, figs. 144–160).** Total length 1.25. Endites unmodified. Epigynal atrium widely oval, with large, rounded anterior sclerite; apodemes short, posterolaterally directed; dorsal extension of anterior sclerite short, thick; apodemes short, triangular.

**OTHER MATERIAL EXAMINED:** BELIZE: Cayo: 2.5 mi S of Belmopan, Aug. 4, 1972, Berlese, limestone forest litter (S., J. Peck, FMNH 33510, PBI_OON 293), 1♀; Caves Branch, Aug. 4–14, 1972, Berlese, high canopy forest (S., J. Peck, FMNH, PBI_OON 294), 1♀.

**DISTRIBUTION:** Cayo, Belize (map 7).

*Scaphiella mico*, new species

Figures 161–170; map 8

**TYPE:** Male holotype taken from deep rainforest litter at the base of a large tree at an elevation of 400 m in the Montañas del Mico, 3 km W of Las Escobas, 11 km SW of Puerto Barrios, Izabal, Guatemala (Nov. 15, 1986; E. Lindquist), deposited in CNC (PBI_OON 295).

**DIAGNOSIS:** Males can easily be recognized by their patterned and anteriorly narrowed abdomen (figs. 161–164) and their greatly enlarged palpal bulb (figs. 168–170).

FEMALE: Unknown.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Izabal, Guatemala (map 8).

Scaphiella ceiba, new species

Figures 171–181; map 9

TYPE: Male holotype from rotten wood on steep forest slope at an elevation of 130 m 14 km S of La Ceiba, Atlántida, Honduras (Mar. 23, 1979; W. Brown), deposited in MCZ (72949, PBI_OON 29854).

DIAGNOSIS: Males resemble those of S. tuxtla in having well-developed granulation on the sides of the pars cephalica, pitted surfaces on the sternum and abdominal scuta, and a basally twisted embolus (fig. 180), but have a wider dorsal abdominal scutum (fig. 171) and a basally more prolonged palpal bulb (fig. 181).

MALE (PBI_OON 29854, figs. 171–181). Total length 1.49. Carapace with granulations covering most of sides and back. Sternum surface covered with small round pits everywhere except middle. Endites without anteromedian modifications. Abdomen unpatterned; scuta punctate, with shallow pits. Palpal femur moderately expanded; embolus basally twisted, narrow beyond twist.
FEMALE: Unknown.

OTHER MATERIAL EXAMINED: None.

DISTRIBUTION: Atlántida, Honduras (map 9).

*Scaphiella lancetilla*, new species

Figures 182–200; map 10

TYPE: Male holotype taken by Winkler trap from sifted litter taken at an elevation of 190 m in a secondary lowland rainforest on the trail to Represa Vieja, 15.7262°N, 87.4514°W, Oct. 1, 2008, sifted leaf litter, secondary lowland rainforest, elev. 190 m (M. Branstetter, LLAMA MGB1113, MCZ 83215, PBI_OON 297), 1♂.

**Islas de la Bahía:** 1.5 km NNW East Harbor, Isla de Utila, 16°06.5′N, 86°54.1′W, Dec. 28, 2007, elev. 15 m (P. Ward, LLAMA PSW15998, MCZ 81402, PBI_OON 298), 1♀.

**DISTRIBUTION:** Northern Honduras (map 10).

*Scaphiella muralla*, new species

Figures 201–209; map 11

TYPE: Female holotype from a Winkler sample of sifted leaf litter taken at an elevation of 1541 m on the El Pizote trail, 15.10095°N, 86.74104°W, Parque Nacional La Muralla, La Unión, Olancho, Honduras (Oct. 4, 2008; C. Viquez, M. Branstetter), deposited in AMNH (PBI_OON 299).

**DIAGNOSIS:** This female resembles those of *S. lancetilla* in abdominal shape, but has a much shorter anterior epigynal sclerite leading to a wide copulatory opening (fig. 207–209). The highly reduced eyes (figs. 204, 206) and smooth sternum make it unlikely that this could be the female of *S. ceiba*.

**MALE: Unknown.**

**FEMALE** (PBI_OON 299, figs. 201–209). Total length 1.72. Carapace with sides of pars thoracica with obvious granulation reaching apex. Sternum smooth. Endites with short, spiniform anteromedian tip. Abdomen unpatterned, scuta smooth. Epigynal atrium circular, with large, dark anterior sclerite reaching midway, then enlarging; apodemes short, thick.

OTHER MATERIAL EXAMINED: HONDURAS: **Atlántida:** Lancetilla, 5.3 km SSE Telá, 15°43.6′N, 87°27.1′W, Oct. 1, 2008, sifted leaf litter, secondary lowland rainforest, elev. 190 m (M. Branstetter, LLAMA MGB1113, MCZ 83215, PBI_OON 297), 1♀.

**DISTRIBUTION:** Olancho, Honduras (map 11).

*Scaphiella bopal*, new species

Figures 210–218; map 12

TYPE: Female holotype taken at an elevation of 350 m in riparian forest at the...

**Diagnosis:** Females resemble those of *S. lancetilla* and *S. muralla* in abdominal shape but have a shorter anterior epigynal sclerite and a shorter epigynal atrium (figs. 216–218).

**Male:** Unknown.


**Other Material Examined:** None.

**Distribution:** Matagalpa, Nicaragua (map 12).

### Key to Species

#### Costa Rica and Panama

1. Sides of carapace smooth, without obvious granulations
   - Sides of carapace with obvious granulations

2. Pars cephalica strongly elevated in lateral view (fig. 224); epigynal atrium with W-shaped anterior sclerite (fig. 227); males unknown
   - Pars cephalica not strongly elevated in lateral view; epigynal atrium otherwise

3. Anteromedian part of male endites with long, spiniform tip (figs. 266–268); female epigynal atrium with large, rounded anterior sclerite (figs. 276, 277)
   - Anteromedian part of male endites without long tip; female epigynal atrium otherwise

4. Embolus base slightly enlarged (fig. 456); female anterior epigynal sclerite small, semicircular, restricted to apical half of epigynal atrium (fig. 465)
   - Embolus base not enlarged; anterior epigynal sclerite otherwise

5. Embolus relatively narrow at base (fig. 433); anterior epigynal sclerite greatly widened posteriorly (fig. 441)
   - Embolus relatively wide at base (figs. 287, 326); anterior epigynal sclerite not greatly widened posteriorly (figs. 295, 357)

6. Male embolus bent apically, with pointed tip (fig. 287); female epigynal atrium with small, bipartite anterior sclerite (figs. 295, 296)
   - Male embolus curving smoothly, with rounded tip (fig. 326); female with large, horseshoe-shaped anterior sclerite (figs. 357, 358)

7. Eyes reduced (fig. 302); embolus basally twisted (fig. 306); anterior epigynal sclerite bell shaped (fig. 314)
   - Eyes normal; genitalia otherwise

8. Males
   - Females

9. Embolus set basally on palpal bulb (fig. 411)
   - Embolus originating more distally on palpal bulb

10. Palpal bulb with small knob near base of embolus (fig. 498)
    - Palpal bulb without knob near base of embolus

11. Embolus thick, curving smoothly (fig. 373)
    - Embolus thin, bent basally (fig. 237)

12. Epigynal atrium rounded, with large anterior sclerite extending throughout (fig. 532)
    - Epigynal atrium oval, anterior sclerite otherwise

13. Epigynal atrium with large horseshoe-shaped anterior sclerite extending beyond midpoint (fig. 245)
    - Epigynal atrium otherwise

14. Epigynal atrium with small semicircular anterior sclerite extending beyond midpoint (fig. 390)
    - Epigynal atrium with large anterior sclerite situated medially (fig. 420)

Map 5. Records of *S. cocona* (triangle), *S. antonio* (stars), *S. napo* (circle), and *S. guatopo* (squares).

Map 5. Records of *S. cocona* (triangle), *S. antonio* (stars), *S. napo* (circle), and *S. guatopo* (squares).

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Scaphiella vito, new species  
Figures 219–228; map 1  

**TYPE:** Female holotype taken at an elevation of 4000 ft at Las Cruces, near San Vito, Puntarenas, Costa Rica (July 31, 1976; C. Goodnight), deposited in AMNH (PBI_OON 29649).  

**DIAGNOSIS:** Females can easily be recognized by their distinctive, W-shaped anterior epigynal sclerite (figs. 226–228).  

**MALE:** Unknown.  


**OTHER MATERIAL EXAMINED:** One female taken with the holotype (AMNH PBI_OON 29649).  

**DISTRIBUTION:** Puntarenas, Costa Rica (map 1).  

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Scaphiella hitoy, new species  
Figures 229–253; map 2  

**TYPES:** Male holotype and female allotype taken in litter at an elevation of 160 m at the Estación R.B. Hitoy Cerere, Limón, Costa Rica (May 12, 1993; E. Rojas), deposited in INBIO (PBI_OON 29649).  

**DIAGNOSIS:** This species is similar to *S. hone* in having microsculpture on the sides of the pars thoracica, but both sexes have a flatter carapace with smaller eyes (as in figs. 233, 234). Females have a narrower anterior epigynal sclerite (fig. 245); males have the tip of the embolus shorter than in *S. hone* (fig. 237).  

**MALE (PBI_OON 26355, figs. 229–238).** Total length 1.17. Carapace with granulations in triangular patches on sides and back. Sternum smooth. Endites without anteromedian modifications. Abdomen unpatterned, scuta smooth. Palpal femur moderately expanded; embolus narrowed, angled near base, relatively short, tip relatively short.  

**FEMALE (PBI_OON 29646, figs. 239–253).** Total length 1.35. Anterior epigynal sclerite long, anterior and posterior portions subequal in length, posterior portion widened; apodemes narrow, directed dorsolaterally.  


**DISTRIBUTION:** Heredia, Limón, and Puntarenas, Costa Rica (map 2).  

Scaphiella virgen, new species  
Figures 254–278; map 3  

**TYPES:** Male holotype and female allotype taken at an elevation of 1050–1150 m at a site 16 km SSE of La Virgen, 10°16′N, 84°05′W, Heredia, Costa Rica (male, Feb. 20–23, 2001, female Apr. 9, 2001), deposited in INBIO (male, PBI_OON 29428, female PBI_OON 29429).  

**DIAGNOSIS:** Males have a long, ridged anterior spine on the endites (figs. 266–268), deep sternal furrows (fig. 265), a greatly enlarged palpal femur (fig. 264) and a basally wide, distally bent embolus (figs. 262–264); females share the deep sternal furrows and
have a large anterior epigynal sclerite that fills most of the epigynal atrium (fig. 276).

**MALE** (PBI_OON 29579, figs. 254–268). Total length 1.44. Carapace sides with scattered granules on margins of posterior declivity. Sternum finely punctuate, covered with small round pits everywhere except middle. Endites with strong, toothlike anteromedian projection. Abdomen with scattered dark markings visible under scuta; scuta smooth. Palpal femur greatly expanded; embolus long, basally widened; bulb protruding ventrally.

**FEMALE** (PBI_OON 29574, figs. 269–278). Total length 1.61. Endites unmodified. Anterior epigynal sclerite enlarged, round; apodemes short, narrow.


**DIAGNOSIS:** Both sexes resemble those of *S. virgen* in having deep sternal furrows (fig. 280); males also resemble those of *S. virgen* in having a somewhat enlarged palpal femur but lack the anterior spine on the endites and have the embolus originating more distally on the palpal bulb (fig. 287); females have a much smaller anterior epigynal sclerite, with distinct anterior and posterior portions (figs. 295–297).

**Scaphiella osa**, new species

*Figures 279–297; map 4*

**TYPES:** Male holotype and female allotype taken in litter at Estación Agujas, Península de Osa, Puntarenas, Costa Rica (Aug. 4–14, 2000; A. Azofeifa), deposited in INBIO (PBI_OON 26358).

**DIAGNOSIS:** Both sexes resemble those of *S. virgen* in having deep sternal furrows (fig. 280); males also resemble those of *S. virgen* in having a somewhat enlarged palpal femur but lack the anterior spine on the endites and have the embolus originating more distally on the palpal bulb (fig. 287); females have a much smaller anterior epigynal sclerite, with distinct anterior and posterior portions (figs. 295–297).


**FEMALE** (PBI_OON 26358, figs. 289–297). Total length 1.35. Anterior epigynal sclerite greatly widened posteriorly; apodemes anterolaterally directed.
OTHER MATERIAL EXAMINED: COSTA RICA: Puntarenas: Estación La Leonn, Sendero Río Madrigal, Península de Osa, Dec. 12–27, 2001, litter (A. Azofeifa, AMNH PBI_OON 26357), 1♂; Fundacion Neotrópica Rincón Osa, Península de Osa, June 2001 (R. Anderson, C. Víquez, INBIO 78664, PBI_OON 26361), 1♂; Rancho Quemado, Península de Osa, Mar. 1972 (F. Avesa, INBIO 45746, PBO_OON 26363), 1♂, Sept. 1992 (F. Quesada, AMNH PBI_OON 26360), 1♀; 5 km W Rincon de Osa, Península de Osa, 8°42′N, 83°31′W, Mar. 24, 1973, high ridge, Berlese of buttress litter, elev. 50 m (J. Wagner, J. Kethley, FMNH 34963, PBI_OON 10634), 1♂, same, log, bark, root mat (FMNH PBI_OON 37501), 1♀, same, leaf mold and chunks of laminate fungus (FMNH PBI_OON 306), 1♂, same, mixed litter at base of tree in primary forest (FMNH PBI_OON 307), 2♀, Mar. 25, 1973, Berlese, leaf litter (J. Wagner, J. Kethley, FMNH PBI_OON 308), 1♂; Sirena, Península de Osa, May 18–30, 2001 (A. Azofeifa, AMNH PBI_OON 26365), 1♀.

DISTRIBUTION: Known only from the Osa peninsula, Puntarenas, Costa Rica (map 4).

Scaphiella antonio, new species

Figures 298–317; map 5

DIAGNOSIS: Males and females have not been collected together, but are here matched because both have reduced eyes (figs. 302, 312). Males have a basally twisted embolus (fig. 306), and females have a very wide epigynal atrium (figs. 314–317).

MALE (PBI_OON 29648, figs. 298–307). Total length 1.32. Carapace sides with obvious granulations; eyes reduced, tiny (PME oval; posterior eye row straight from above; ALE separated by their radius to diameter, PME touching, PLE-PME touching). Sternum surface finely reticulate. Endites with spiniform anteromedian tip. Abdomen unpatterned, epigastric scutum with small, curved ridge above pedicel, scuta otherwise smooth. Palpal femur slightly enlarged embolus short, basally twisted.

FEMALE (PBI_OON 10161, figs. 308–317). Total length 1.47. Endites unmodified. Epigynal atrium widely oval with large, rounded anterior sclerite; apodemes long, posteriorly directed.


DISTRIBUTION: Southern Costa Rica (where apparently sympatric with S. virgen) and northern Panama (where apparently sympatric with S. almirante) (map 5).

Scaphiella altamira, new species

Figures 318–363; map 6

TYPES: Male holotype and female allotype taken in leaf litter around Altamira, Alrededor Station, Puntarenas, Costa Rica (Aug. 5, 2003; C. Viquez, R. Gutierrez), deposited in INBIO (74344, PBI_OON 26359).

DIAGNOSIS: Both sexes have relatively large and heavily sclerotized booklung covers (figs. 319, 351); males have an enlarged palpal femur and a relatively wide embolus, narrowed at about four-fifths its length and with a rounded apex (figs. 325–327), and females have a relatively wide anterior epigynal sclerite that fills much of the epigynal atrium (figs. 357–359).

MALE (PBI_OON 26359, figs. 318–349). Total length 1.53. Carapace sides mostly smooth, granulations restricted to lateral

**FEMALE (PBI_OON 26359, figs. 350–363).** Total length 1.67. Anterior epigynal sclerite massive, widened throughout its length; apodemes short, curved dorsally.

**OTHER MATERIAL EXAMINED:** COSTA RICA: Heredia: San Pablo, 9°39’34”N, 84°05’25”W, Apr. 8, 2007, dead leaves in coffee plantation (C. Viquez, AMNH PBI_OON 26353), 1♀; Aug. 26, 2007, dead leaves in coffee plantation (C. Viquez, AMNH PBI_OON 26354), 1♂, 1♀. Puntarenas: Altamira, Alrededor Estacion, Aug. 5, 2003, leaf litter (C. Viquez, R. Gutierrez, AMNH PBI_OON 26359), 1♀; Estacion Biologica Monteverde, Monteverde, 10°19’40”N, 84°49’08”W, June 15, 2001, montane forest litter, elev. 1540 m (R. Anderson, AMNH PBI_OON 29650), 1♀; Monteverde, Aug. 24, 1983, roadside scrub, elev. 1500 m (J., F. Murphy, AMNH PBI_OON 37762), 1♂, Aug. 26, 1983, scrub near hotel, elev. 1500 m (J., F. Murphy, AMNH PBI_OON 31059), 1♂; OTS Station, Finca Las Cruces, San Vito, 8°46’N, 82°58’W, Mar. 14, 1973, Berlese, concentrated leaf mold from floor of moderately dense forest, elev. 4000 ft (J. Wagner, J. Kethley, FMNH PBI_OON 36949), 2♂, 1♀, same, Mar. 15, 1973, Berlese, leaf mold on W slope of W ravine (FMNH PBI_OON 36948), 1♂, same, Mar. 18, 1973, Berlese, floor litter from virgin forest (FMNH PBI_OON 36947), 1♀, same, Mar. 19, 1973, Berlese, leaf litter in stream bed in virgin forest (FMNH PBI_OON 36950), 1♂; 13 km SSW Puerto Jimenez, 8.40667°N, 83.32833°W, Mar. 10, 2008, elev. 130 m (J. Longino, LLAMA 6209, MCZ 80074, PBI_OON 304), 3♂. PANAMA: Chiriqui: 4.5 km WSW Hato del Volcan, May 22, 1977, Berlese, frass under bark and fungi, elev. 1300 m (S., J. Peck, FMNH 33641, PBI_OON 10143), 2♂, 1♀; 5 mi W Hato del Volcan, Aug. 10, 1983, rainforest edge, elev. 1000 m (J., F. Murphy, AMNH PBI_OON 31062), 1♂; 12 km W Hato del Volcan, June 27, 1976, Berlese, cloud forest litter, elev. 4500 ft (A. Newton, MCZ 72911, PBI_OON 29639), 1♂; 24 km W Hato del Volcan, June 26, 1976, Berlese, cloud forest litter, elev. 3800 ft (A. Newton, MCZ 72905, PBI_OON 29642), 1♂; Las Lagunas, 4.5 km WSW Hato del Volcan, May 22, 1977, Berlese, litter under dead possum, elev. 1360 m (S. Peck, FMNH 33642, PBI_OON 10144), 1♂, same, Berlese, forest litter (FMNH 33643, PBI_OON 10145), 3♂, 1♀; May 27, 1977, Berlese, litter, inga pods, elev. 1360 m (S. Peck, FMNH 33658, PBI_OON 10160), 2♂, 3♀; Las Lagunas, 5 km SW Hato del Volcan, May 22–26, 1977, dung traps (S. Peck, AMNH PBI_OON 29645), 6♂; Quebrada de Los Caidos, Jan. 6, 1981, Berlese, litter at tree fern near waterfall, elev. 1200 m (W. Suter, FMNH 33691, PBI_OON 10193), 1♂. Colon: Santa Rita Ridge, 10 mi SE Colón, June 10–12, 1977, dung traps (S. Peck, AMNH PBI_OON 29643), 2♂.

**DISTRIBUTION:** Costa Rica and Panama (map 6).

**Scaphiella hone,** new species

Figures 364–402; map 7

Types: Male holotype and female allotype extracted from leaf litter at Hone Creek, Finca Alberto Moore, Limon, Costa Rica (Mar. 12–15, 2004; C. Viquez), deposited in INBIO (PBI_OON 29568).

Diagnosis: This species resembles *S. hitoy* but males have a longer embolus tip (fig. 373) and females have a posteriorly narrower anterior epigynal sclerite (figs. 390–392).

FEMALE (PBI_OON 26838, figs. 378, 383–402). Total length 1.43. Anterior epigynal sclerite narrow anteriorly, posterior portion relatively short; apodemes narrow, directed dorsolaterally.


PAKAMA: Chiriquí: Las Lagunas, 4.5 km WSW Hato del Volcán, May 22, 1977, Berlese, forest litter (FMNH 33643, PBI_OON 309), 3♀; same, Berlese, litter under dead possum, elev. 1360 m (S. Peck, FMNH 33642, PBI_OON 310), 1♀.

DIAGNOSIS: Males can be recognized easily by the basally originating embolus (fig. 411), females by the triangular anterior epigynal sclerite (fig. 420) and opening (fig. 424).

MALE (PBI_OON 29641, figs. 403–412). Total length 1.47. Carapace with granulations on sides opposite intercoxal areas and along lateral margins of posterior declivity. Sternum smooth. Endites without anteromedian modifications. Abdomen unpatterned, scuta smooth. Palpal femur greatly expanded; embolus extremely long, originating near base of bulb, extending past tip of bulb.

FEMALE (PBI_OON 29879, figs. 413–425). Total length 1.62. Anterior epigynal sclerite triangular, surrounding triangular opening; apodemes very long, directed posteriorly.

OTHER MATERIAL EXAMINED: PANAMA: Bocas del Toro: Fortuna-Chiriquí Grande road, 8°47′N, 82°11′W, Bocas Del Toro, Panama (July 16–18, 1987; D. Olson), deposited in MCZ (72899, PBI_OON 29641).

DIAGNOSIS: Males can be recognized easily by the basally originating embolus (fig. 411), females by the triangular anterior epigynal sclerite (fig. 420) and opening (fig. 424).

FEMALE (PBI_OON 29879, figs. 413–425). Total length 1.62. Anterior epigynal sclerite triangular, surrounding triangular opening; apodemes very long, directed posteriorly.

OTHER MATERIAL EXAMINED: PANAMA: Bocas del Toro: Fortuna-Chiriquí Grande road, 8°47′N, 82°11′W, Bocas Del Toro, Panama (July 16–18, 1987; D. Olson), deposited in MCZ (72899, PBI_OON 29641).

DIAGNOSIS: Males can be recognized easily by the basally originating embolus (fig. 411), females by the triangular anterior epigynal sclerite (fig. 420) and opening (fig. 424).

FEMALE (PBI_OON 29879, figs. 413–425). Total length 1.62. Anterior epigynal sclerite triangular, surrounding triangular opening; apodemes very long, directed posteriorly.

Scaphiella almirante, new species

Figures 426–443; map 9

TYPES: Male holotype and female allotype taken in a Berlese sample of floor litter at Almirante, Bocas del Toro, Panama (Mar. 27, 1959; H. Dybas), deposited in FMNH (PBI_OON 314).

DIAGNOSIS: Males have a narrow, basally pale embolus, bent at about two-thirds its
length, with the tip directed almost transversely (fig. 433); females have the posterior portion of the anterior epigynal sclerite forming a broad oval (fig. 441).


**Female** *(PBI_OON 314, figs. 435–443)*. Total length 1.37. Posterior portion of anterior epigynal sclerite broadly oval; apodemes short, narrow.

**Other Material Examined**: **Panama**: Bocas del Toro: Almirante, Mar. 26, 1959, Berlese, decaying palm fruit stalk and sublitter on ground (H. Dybas, FMNH PBI_OON 315), 1♀; Berlese, thatch on ground under ant nest in log (H. Dybas, FMNH 34870, PBI_OON 10587), 1♀.

**Distribution**: Panama (map 9).

*Scaphiella barroana* Gertsch

Figures 444–469; map 10

*Scaphiella barroana* Gertsch, 1941: 10, figs. 20–22 (male holotype and female allotype from Barro Colorado Island, Panamá, Panama, in AMNH; examined). – Chickering, 1951: 234, figs. 22, 23.

**Diagnosis**: Males can be recognized by the slight enlargement at the base of embolus (fig. 456), females by the short anterior epigynal sclerite (fig. 465).


**Female** *(PBI_OON 29875, figs. 458–469)*. Total length 1.17. Anterior epigynal sclerite short, anteriorly very narrow; apodemes long, narrow.

Scaphiella williamsi Gertsch
Figures 470–569; map 11

Scaphiella williamsi Gertsch, 1941: 11, figs. 18, 19 (male holotype from Barro Colorado Island, Panamá, Panama, in AMNH; examined). – Chickering, 1951: 239, fig. 28; 1968: 155, figs. 53, 54. – Heimer, 1990: 6, fig. 16.

Diagnosis: Males can be distinguished from the frequently sympatric S. barroana by the presence of well-developed microsculpture on the sides of the pars thoracica (figs. 483, 484) and the lack of an enlargement at the base of the embolus (fig. 480), females by the much longer anterior epigynal sclerite (fig. 532).

Male (PBI_OON 26804, figs. 470–523). Total length 1.22. Carapace with obvious granulation reaching halfway up sides of pars thoracica. Sternum smooth. Endites anteromedially with small striated plate. Abdomen unpatterned, scuta smooth. Palpal femur moderately expanded; embolus long, thin; bulb with small knob situated just retrolateral to embolar base.

Female (PBI_OON 26804, figs. 524–569). Total length 1.31. Endites unmodified. Epigynal atrium circular, with long, wide anterior sclerite surrounding medially situated, horse-shoe-shaped opening; apodemes long, narrow.


Map 12. Records of S. bopal (triangle), S. capim (square), S. ayacucho (star), and S. septella (circle).

26841), 1♂; W Cañita at river flood plain, Jan. 3, 1981, Berlese, palm buttress with stump (W. Suter, FMNH 33695, PBI_OON 10197), 3♂, 1♀; Summit Gardens, July 24, 1954 (A. Chickering, MCZ 66853, PBI_OON 26874), 1♂, Dec. 20, 1957 (A. Chickering, MCZ PBI_OON 26804), 1♂, 1♀.

DISTRIBUTION: Panama (map 11).
Key to Species

South America (except Venezuela)

1. Sides of carapace smooth, without obvious granulations ........................................ 2
   - Sides of carapace with obvious granulations ......................................................... 19
2. Males (those of *S. chone* unknown) ..................................................... 3
   - Females (those of *S. murici* unknown) ......................................................... 11
3. Anteromedian part of male endites with very long (5× as long as wide) spiniform tip (figs. 779, 780) ....... *S. capim*
   - Anteromedian part of male endites otherwise ................................................. 4
4. Abdomen elongated, cylindrical (fig. 570) ......................................................... *S. bonda*
   - Abdomen broad, ovoid .......................................................... 5
5. Embolus set basally on palpal bulb .............................................................. 6
   - Embolus set medially on palpal bulb .......................................................... 8
6. Palpal femur greatly enlarged, palpal bulb acutely protruding ventrally (fig. 677) ................................. *S. tena*
   - Palpal femur smaller; male palpal bulb not acutely protruding ................................. 7
7. Palpal bulb with large, acute knob, situated medially (fig. 638) ................................ *S. pich*
   - Palpal bulb with small, obtuse knob, situated basally (fig. 806) .......................... *S. penna*
8. Embolar base enlarged .......................................................... 9
   - Embolar base not enlarged .......................................................... 10
9. Embolus thick, with rounded tip (fig. 835) ......................................................... *S. kartabo*
   - Embolus thin, with pointed tip (fig. 456) ......................................................... *S. barroana*
10. Embolus long, with short, bent tip (fig. 825) ......................................................... *S. murici*
   - Embolus short, with long, bent tip (fig. 762) ..................................................... *S. irmaos*
11. Epigynal atrium with paired posterior sclerotizations (fig. 586) .......................... *S. bonda*
   - Epigynal atrium without paired posterior sclerotizations ........................................ 12
12. Epigynal atrium with thick, lateral sclerotizations (fig. 843) ................................ *S. kartabo*


- Epigynal atrium without lateral sclerotizations ........................................ 13
- Epigynal atrium oval, with small, pale anterior sclerite ................................ 14
- Epigynal atrium otherwise ................................................................. 15
- Epigynal atrium widely oval, anterior sclerite oval (fig. 711) ...................... *S. chone*
- Epigynal atrium oval, anterior sclerite semicircular (fig. 465) .................. *S. barroana*
- Epigynal atrium with anteriorly narrow anterior sclerite .......................... 16
- Epigynal atrium with large anterior sclerite ......................................... 16
- Dorsal extension of anterior sclerite long, thin (fig. 648) ......................... *S. pich*
– Dorsal extension of anterior sclerite short, thick (fig. 686) .................................................. *S. tena*
17. Epigynal atrium with inverse T-shaped anterior sclerite (fig. 770) .................................................... *S. irmaos*
– Epigynal atrium with inverse Y-shaped anterior sclerite .......................................................... 18

18. Dorsal extension of anterior sclerite long, narrow (fig. 793) .................................................. *S. capim*
– Dorsal extension of anterior sclerite short, thick (fig. 816) .................................................. *S. penna*
19. Eyes reduced (fig. 690) .................................................. *S. incha*
– Eyes normal .................................................. 20

20. Males ........................................ 21
    – Females ...................................... 25
21. Palpal bulb acutely protruding ventrally (fig. 658). ....................... S. napo
    – Palpal bulb not acutely protruding ventrally .................................. 22
22. Palpal bulb with small prolateral knob near embolar base (fig. 598) .... S. meta
    – Palpal bulb without small prolateral knob near embolar base ............. 23
23. Embolus basally twisted (figs. 617–619) ........................................... S. vicencio

Scaphiella bonda, new species

Figures 570–588; map 1

Types: Male holotype and female allotype taken in pitfall trap in dry zone at Villa Culebra, near Bonda, ca. 10 km east of Santa Marta, Magdalena, Colombia (Nov.–Dec. 1985; H. Müller), deposited in MHNG (PBI_OON 15480).

Diagnosis: The male palp has a slightly enlarged femur (fig. 579) and a long, narrow embolus that is bent laterally much nearer the base than typical, at about one-fourth its length (fig. 578); the female epigynum has a very short anterior sclerite and a distinctive pair of medially directed extensions on the lateral margins (figs. 586–588).


Scaphiella altamira, new species


– Embolus not twisted. ............................. 24
24. Embolus set on distal half of palpal bulb, embolar base not enlarged (fig. 742) ..................... S. manaus
– Embolus set medially on palpal bulb, embolar base slightly enlarged (fig. 722) ................ S. pago
25. Epigynal atrium without lateral sclerotizations (fig. 665) .............................................. S. napo
– Epigynal atrium with lateral sclerotizations. ................................................................. 26
26. Epigynal atrium with large, rounded anterior sclerite (fig. 730) ...................... S. pago
– Epigynal atrium with small, narrow anterior sclerite ..................................................... 27
27. Epigynal atrium triangular, with large slightly curving lateral apodemes (fig. 606). . S. meta
– Epigynal atrium otherwise ...................... 28
28. Epigynal atrium with strongly curved lateral apodemes (fig. 753) ....................... S. manaus
– Epigynal atrium with straight lateral apodemes (fig. 629) ............................... S. vicencio

Scaphiella bonda, new species

Figures 570–588; map 1

Types: Male holotype and female allotype taken in pitfall trap in dry zone at Villa Culebra, near Bonda, ca. 10 km east of Santa Marta, Magdalena, Colombia (Nov.–Dec. 1985; H. Müller), deposited in MHNG (PBI_OON 15480).

Diagnosis: The male palp has a slightly enlarged femur (fig. 579) and a long, narrow embolus that is bent laterally much nearer the base than typical, at about one-fourth its length (fig. 578); the female epigynum has a very short anterior sclerite and a distinctive pair of medially directed extensions on the lateral margins (figs. 586–588).

Palpal femur moderately enlarged; embolus long, gradually narrowing apically.

**Female (PBI_OON 15480, figs. 580–588).** Total length 1.45. Epigynal atrium circular, with small anterior sclerite and paired posterior sclerotizations; apodemes short, posterolaterally directed.

**Other material examined:** One male taken with the types.

**Distribution:** Colombia (map 1).
Scaphiella meta, new species
Figures 589–608; map 2

**Type:** Male holotype from a Berlese sample of forest litter taken at an elevation of 1000 m at Quebrada Susumuco, 23 km NW Villavicencio, Meta, Colombia (Mar. 5, 1972; S., J. Peck), deposited in FMNH (PBI_OON 10111).

**Diagnosis:** The male palp has a small, prolaterally directed protrusion adjacent to the base of the embolus (figs. 598, 599); the
female epigynum has a distinctive pair of lateral sclerotizations (figs. 606–608).

**MALE (PBI_OON 10111, figs. 589–599).** Total length 1.76. Carapace with sides of pars thoracica with obvious granulations reaching apex. Sternum smooth. Endites with spiniform anteromedian tip. Abdomen unpatterned, epigastric scutum with small, curved transverse ridge just above pedicel. Palpal femur greatly enlarged; embolus long, uniform, bulb with small knob near base of embolus.

**FEMALE (PBI_OON 29614, figs. 600–608).** Total length 2.13. Endites unmodified. Anterior margin of postepigastric scutum with obvious granulations. Epigynal atrium triangular, with small anterior sclerite and lateral sclerotizations; apodemes short, curved.

**OTHER MATERIAL EXAMINED:** COLOMBIA: Meta: Quebrada Susumuco, 23 km NW of Villavicencio, Mar. 2, 1972, Berlese, forest litter, elev. 1000 m (S. Peck, AMNH PBI_OON 29614), 1♀, Mar. 5, 1972, same (FMNH PBI_OON 10111), 1♂.

**DIAGNOSIS:** The male palp has a short, basally twisted embolus that is widest at about half its length (figs. 617–619); the female epigynum has distinctively thickened lateral margins (figs. 627–629).

FEMALE (PBI_OON 320, figs. 620–629). Total length 1.56. Endites unmodified. Epigynal atrium oval, with heavily sclerotized anterior and lateral margins; anterior sclerite small, heavily sclerotized only anteriorly; apodemes short.


DISTRIBUTION: Colombia (map 3).

Scaphiella pich, new species

Figures 630–648; map 4

TYPES: Male holotype and female allotype from a Berlese sample of forest litter taken at an elevation of 700 ft at Rio Palenque Station, 47 km S of Santo Domingo, Pichincha, Ecuador (May 18–30, 1975; S., J. Peck), deposited in FMNH (PBI_OON 322).

DIAGNOSIS: Males resemble those of S. bocas in having a basally originating embolus but differ in having a prominent knob on the palpal bulb at about one-quarter of its length (figs. 638, 639); females have a distinctively widened anterior epigynal sclerite that fills most of the width of the epigynal atrium (figs. 646–648).
MALE (PBI_OON 322, figs. 630–639). Total length 1.25. Carapace with granulations restricted to lateral and posterior margins of pars thoracica. Sternum smooth. Endites with strong toothlike projection bearing spiniform anteromedian tip. Abdomen with dark markings visible under scuta, scuta smooth. Palp femur moderately expanded;

bulb with knob at about half its length; embolus long, extending from near base of cymbium to past its tip.

**Female (PBI_OON 323, figs. 640–648).** Total length 1.40. Endites unmodified. Anterior epigynal sclerite widened, filling much of atrium, with invaginated posterior margin; apodemes directed laterally.


**Distribution**: Pichincha, Ecuador (map 4).
Scaphiella napo, new species  
Figures 649–667; map 5

Types: Male holotype and female allotype from a Berlese sample of forest litter taken at an elevation of 250 m at Limoncocha, Napo, Ecuador (June 25, 1976; S. Peck), deposited in FMNH (PBI_OON 324).

Diagnosis: Males resemble those of S. pich but have a larger, more basally situated protrusion on the palpal bulb (figs. 657, 658); females have a shorter, narrower anterior epigynal sclerite (figs. 665–667).

Male (PBI_OON 324, figs. 649–658). Total length 1.47. Carapace with granulation reaching halfway up sides of pars cephalica, reaching apex of pars thoracica. Sternum smooth. Endites with spiniform anteromedian tip. Abdomen unpatterned, scuta smooth. Palpal femur greatly enlarged; bulb with large, basal protrusion; embolus long, thin, set on basal half of bulb.

Female (PBI_OON 324, figs. 659–667). Total length 1.68. Endites unmodified. Epigastric scutum with small, oval ridge just above pedicel. Epigynal atrium oval, with dark, large anterior sclerite; apodemes short.

Other material examined: Ecuador: Napo: Limoncocha, June 18, 1976, Berlese, Ficus litter with fruits, elev. 250 m (S. Peck, FMNH 33718, PBI_OON 10220), 1♂.

Distribution: Napo, Ecuador (map 5).

Scaphiella tena, new species  
Figures 668–687; map 6

Tena, Napo, Ecuador (July 11, 1976; S. Peck), deposited in FMNH (PBI_OON 329).

**DIAGNOSIS:** Males resemble those of *S. napo* in having a basal protrusion on the palpal bulb but have a more sinuous embolus (fig. 676) and a stronger anterior spine on the endites (fig. 669); females have a posteriorly more angular anterior epigynal sclerite (figs. 684–687).

**MALE (PBI_OON 329, figs. 668–677).** Total length 1.35. Carapace smooth. Sternum smooth. Endites with long, spiniform anteromedian tip. Abdomen unpatterned, scuta smooth. Palpal femur greatly enlarged; embolus long, sinuous, set basally on bulb.


**OTHER MATERIAL EXAMINED:** One male taken with the types (FMNH).

**DISTRIBUTION:** Napo, Ecuador (map 6).

*Scaphiella incha*, new species

*Figures 688–704; map 7*

**TYPE:** Male holotype (missing abdomen) taken in a pitfall trap at an elevation of 220 at the Los Ríos Centro Científico, Río Palenque, Pichincha, Ecuador (Mar. 7, 1981; S. Sandoval), deposited in KBIN (PBI_OON 16244).

**DIAGNOSIS:** Males can easily be distinguished from those of the sympatric species *S. pich* (and those of the other Ecuadorian...
males) by the reduced eyes (fig. 688), the shorter, more distally originating embolus (fig. 695), and the small protrusion situated medially of the embolus on the palpal bulb (fig. 694); females share the eye reduction and have a narrower anterior epigynal sclerite that occupies more than one-third of the width of the epigynal atrium (figs. 702–704).

**MALE (PBI_OON 16244, figs. 688–695).** Carapace length 0.62 (abdomen missing). Carapace granulations present only around lateral and posterior margins, heaviest on sides of posterior declivity; eyes reduced, ALE separated by less than their diameter, PME separated by less than their radius. Sternum smooth. Endites unmodified. Abdomen unpatterned, scuta smooth. Palpal

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femur moderately enlarged; embolus originating at about one-fifth of cymbial length, bulb with knob situated near embolar origin.

**FEMALE** (PBI_OON 325, figs. 696–704). Total length 1.47. Anterior sclerite relatively narrow, uniform in width, extending most of atrial length; apodemes strong, directed laterally.

**OTHER MATERIAL EXAMINED:** ECUADOR: Pichincha: Los Ríos Centro Científico, Río Palenque, no date, carrion trap, elev. 220 m (F. Teresa, KBIN PBI_OON 325), 1; ♀ Feb. 21, 1983, same (KBIN PBI_OON 325), 1.

16245), 1 ♀, Feb. 28, 1981, pitfall, elev. 220 m (S. Sandoval, KBIN PBI_OON 16250), 2 ♀.

**DISTRIBUTION:** Pichincha, Ecuador (map 7).

*Scaphiella chone*, new species

*Figures 705–713; map 8*

**TYPE:** Female holotype from a Berlese sample of forest litter taken at an elevation of 300 m at a site 73 km NE of Chone and 85 km W of Santo Domingo, Manabi, Ecuador (June 12, 1976; S., J. Peck), deposited in FMNH (PBI_OON 10103).

**DIAGNOSIS:** Females can easily be recognized by the greatly widened epigynal atrium and greatly reduced anterior epigynal sclerite (figs. 711–713).

**MALE:** Unknown.

**FEMALE (PBI_OON 10103, figs. 705–713).**


**OTHER MATERIAL EXAMINED:** None.

**DISTRIBUTION:** Manabi, Ecuador (map 8).

*Scaphiella pago*, new species

*Figures 714–732; map 9*

**TYPES:** Male holotype and female allotype taken in pitfall traps at an elevation of 465 m at Pagorani, Río Camisea, 11°42′22.5″S, 72°54′10.7″W, Cusco, Peru (May 14–22, 1998; S. Cordova), deposited in MUSM (500075, PBI_OON 29535).

**DIAGNOSIS:** Males have a short embolus originating from a slightly enlarged base

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Scaphiella meta, new species, male.

589. Habitus, dorsal view.
590. Same, ventral view.
591. Same, lateral view.
592. Same, anterior view.
593. Carapace, dorsal view.
594. Same, lateral view.
595. Abdomen, anterior view.
596. Left palp, dorsal view.
597. Same, prolateral view.
598. Same, ventral view.
599. Same, retrolateral view.

(figs. 721–723); females have distinctively thickened epigynal margins (figs. 730–732).

**MALE** (PBI_OON 29538, figs. 714–723). Total length 1.33. Carapace with granulations on sides, heaviest along lateral margins of posterior declivity. Sternum smooth. Endites unmodified. Abdomen unpatterned, scuta smooth. Palpal femur moderately expanded; bulb produced basally; embolus relatively short, narrow throughout its length, evenly arched.

**FEMALE** (PBI_OON 29535, figs. 724–732). Total length 1.47. Epigynal atrium wide, anterior sclerite round; apodemes short, directed dorsally.

**OTHER MATERIAL EXAMINED:** PERU: Cusco: Pagorani, Río Camisea, 11°42′22.5″S, 72°54′10.7″W, May 11, 1998, pitfall trap, elev.

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**Figs. 600–608.** *Scaphiella meta*, new species, female. **600.** Habitus, dorsal view. **601.** Same, ventral view. **602.** Same, lateral view. **603.** Same, anterior view. **604.** Carapace, dorsal view. **605.** Same, lateral view. **606.** Epigastric region, ventral view. **607.** Epigynum, ventral view. **608.** Same, dorsal view.


Madre de Dios: Tambopata, Oct. 24, 1982,

Berlese, rotten palm flowers (L. Watrous, G. Mazurek, FMNH PBI_OON 326), 1♀.

**DISTRIBUTION:** Peru (map 9).

_Scaphiella manaus_, new species

Figures 733–753; map 10


**DIAGNOSIS:** Males have a very short embolus, arising from the distal half of the palpal bulb (fig. 742); females have an extremely narrow, linear anterior epigynal sclerite (figs. 751–753).

**MALE (PBI_OON 29532, figs. 733–743).** Total length 1.20. Carapace with obvious granulations on sides of pars thoracica. Sternum smooth. Endites unmodified. Abdomen unpatterned, epigastric scutum with small, curved ridge just above pedicel. Palpal femur slightly expanded; embolus short, uniform, set on distal half of palpal bulb, curving gradually.

FEMALE (PBI_OON 29529, figs. 744–753). Total length 1.24. Epigynal atrium squared, with anterior sclerite and lateral sclerotizations long, narrow; apodemes acutely curved.

**Other Material Examined:** BRAZIL: Amazonas: Lago Janauari, Manaus, 1995–1996 (J. Adis, IBSP 15059, 15074, 15083, 15090, 15111, 15114, 15122, 15139,

**Figs. 705–713.** *Scaphiella chone*, new species, female. **705.** Habitus, dorsal view. **706.** Same, ventral view. **707.** Same, lateral view. **708.** Same, anterior view. **709.** Carapace, dorsal view. **710.** Same, lateral view. **711.** Epigastric region, ventral view. **712.** Epigynum, ventral view. **713.** Same, dorsal view.
Scaphiella irmaos, new species  
Figures 754–772; map 11

**Type:** Male holotype from Sitio Três Irmãos, Juruti, 02°27′51.4″S, 56°00′08.6″W, Pará, Brazil (N. Lo-Man-Hung and J. Barreiros, Feb. 6–13, 2007), deposited in MPEG (10096, PBI_OON 29479).

**Diagnosis:** This is probably the sister species of *S. manaus*; males have a longer, more angular embolus that originates more basally on the palpal bulb (fig. 762), and females have a transverse bar at the posterior end of the anterior epigynal sclerite (figs. 770–772).

**Male (PBI_OON 29477, figs. 754–763).** Total length 1.45. Carapace smooth. Sternum smooth. Endites unmodified. Abdomen unpatterned, epigastric scutum with small, faint ridge just above pedicel. Palpal femur slightly expanded; embolus short, set on distal half of palpal bulb, curving abruptly distally.

**Female (PBI_OON 29478, figs. 764–772).** Total length 1.54. Epigynal atrium triangular, with inverted T-shaped anterior sclerite; apodemes short, posteriorly directed.

**Other Material Examined:** Brazil: Pará: Sitio Três Irmãos, Juruti, 02°27′51.4″S, 56°00′08.6″W, Aug. 8–15, 2006 (D. Candiani, N. Lo-Man-Hung, MPEG 10791–10796, 10803, PBI_OON 29477, 29480, 29481–29484, 29486), 1♂, 1♀.

**Distribution:** Pará, Brazil (map 11).

Scaphiella capim, new species  
Figures 773–794; map 12

**Type:** Male holotype from Fazenda Rio Capim, Goiânia, 03°18′50″S, 48°28′54″W, June 15–29, 2003 (IPAN expedition, MPEG 10769, 10770, PBI_OON 29499, 29501), 1♂, 1♀.

**Diagnosis:** Males have a much longer embolus than do those of *S. manaus* or *S. irmaos* (fig. 783); females have a distinctively expanded posterior bar on the anterior epigynal sclerite (figs. 791–794).

**Male (PBI_OON 29500, figs. 773–784).** Total length 1.27. Carapace smooth. Sternum smooth. Endites with greatly elongated, spiniform anteromedian tip. Abdomen unpatterned, scuta smooth. Palp femur moderately expanded, embolus long, thin, set on basal half of palpal bulb.

**Female (PBI_OON 29499, figs. 785–794).** Total length 1.06. Endites unmodified. Epigynal atrium circular, with anterior epigynal sclerite inverted Y-shaped; apodemes short, posteriorly directed; dorsal extension of anterior sclerite long, curved (fig. 794).

**Other Material Examined:** Brazil: Pará: Fazenda Rio Capim, Goiânia, 03°18′50″S, 48°28′54″W, June 15–29, 2003 (IPAN expedition, MPEG 11602, PBI_OON 27777).

**Scaphiella penna, new species**  
Figures 795–816; map 13

**Types:** Male holotype and female allotype from the Estação Científica Ferreira Penna, Malgacão, 01°44′15.5″S, 51°26′42.0″W, Pará, Brazil (Oct. 14–Nov. 16, 2003; J. Barreiros), deposited in MPEG (11602, PBI_OON 27777).

**Diagnosis:** Males can be recognized by the anterior spine on the endites (fig. 801) and the small, prolaterally directed projection situated near the embolar base on a pyramidal-shaped palpal bulb (fig. 806); females have an inverted T-shaped anterior epigynal sclerite (figs. 814–816).

**Male (PBI_OON 29957, figs. 795–806).** Total length 0.97. Carapace with granulations restricted to lateral and posterior margins. Sternum smooth. Endites with strong, spiniform anteromedian tip. Abdomen unpatterned, smooth. Palp femur moderately expanded; embolus long, originating at about one-fifth of cymbial length, relatively straight except for tip.

**Female (PBI_OON 29957, figs. 807–816).** Total length 1.14. Endites unmodified. Anterior epigynal sclerite very narrow anteriorly, bell shaped posteriorly; apodemes short, originating from anterior half of atrium.

**Other Material Examined:** Brazil: Pará: Estação Científica Ferreira Penna, Malgacão, 01°44′15.5″S, 51°26′42.0″W, all collected by J. Barreiros et al., no date

(MPEG 10440, PBI_OON 29504), 1♂, July 6–17, 2002 (MPEG 11681–11685, 11686, 11688, PBI_OON 27788, 27790, 29471–29475), 7♂, 1♀, July 8–16, 2002 (MPEG 11689, PBI_OON 27783), 1♀, Nov. 2, 2002 (MPEG 11687, PBI_OON 27789), 1♂, Mar. 21, 2003 (MPEG 10278, PBI_OON 29476), 1♀, Aug. 20, 2003 (MPEG 10277, 10281, PBI_OON 27784, 27786), 1♂, 1♀, Oct. 14-Nov. 16, 2003 (MPEG 11690, 11691, 11693,

Distribution: Alagoas, Brazil (map 10).

Scaphiella murici, new species

Figures 817–826; map 14

Type: Male holotype from Estação Ecológica de Murici, Murici, Alagoas, Brazil (Sept. 13–20, 2003; BIOTA expedition), deposited in IBSP (69287, PBI_OON 29526).

Diagnosis: Males resemble those of S. manaus but have the embolus extending beyond the tip of the palpal cymbium (figs. 823–826).

Male (PBI_OON 29526, figs. 817–826). Total length 1.39. Carapace with few granulations restricted to lateral and posterior margins. Sternum smooth. Endites with strong, spiniform anteromedian tip. Abdomen unpatterned, smooth. Palp femur slightly expanded; embolus originating at about middle of cymbial length, extending far beyond the tip of cymbium.

Female: Unknown.

Other Material Examined: None.

Distribution: Alagoas, Brazil (map 14).

Scaphiella kartabo, new species

Figures 827–845; map 15

Type: Male holotype taken in a Berlese sample of litter from a rotten tree stump at Kartabo, Cuyuni-Mazaruni, Guyana (July 6, 1982; K., R. Schmidt), deposited in AMNH (PBI_OON 29612).

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Map 13. Records of *S. penna* (circles), *S. agocena* (star), *S. cymbalaria* (squares), and *S. buck* (triangle).

**DIAGNOSIS:** Males resemble those of *S. manaus* but lack microsculpture on the carapace and have a slightly expanded embolus base (fig. 835); females have distinctively triangular apodemes extending from the lateral margins of the epigynal atrium (figs. 843–845).


**FEMALE** (PBI_OON 29603, figs. 837–845). Total length 1.37. Endites unmodified. Epigynal atrium with short, narrow anterior sclerite and thick lateral sclerotizations; apodemes short, thick.

**OTHER MATERIAL EXAMINED:** GUYANA: Cuyuni-Mazaruni: Kartabo, July 3–12, 1982, Berlese, litter from leaf pile (K., R. Schmidt, AMNH PBI_OON 29613), 3♀; 0.5 mi up Whyape Creek on Rio Cuyuni, June 19–28, 1986, pitfall trap in lowland riverine forest (K., R. Schmidt, AMNH PBI_OON 29603), 1♀.

**DISTRIBUTION:** Cuyuni-Mazaruni, Guyana (map 15).

**Key to Species**

**Venezuela and West Indies**

(except *S. bryantae*)

1. Males (those of *S. scutiventris, gracia, cata, valencia, agocena, arima, saba, and curlena* unknown) ........................................ 2

- Females (those of *S. icabaru, ayacucho, etang, and buck* unknown) ........................................ 15
- Sides of carapace smooth, without obvious granulations ........................................ 3
- Sides of carapace with obvious granulations ........................................ 8
- Embolus basally twisted (fig. 924) *S. guatopo* .......................... 4
- Embolus not twisted ........................................ 5
- Embolus set basally or medially on palpal bulb ........................................ 6
- Embolus set on apical half of palpal bulb ........................................ 16
- Palpal femur greatly enlarged, palpal bulb with prolateral knob near base of embolus (fig. 1031) ........................................ 6
- Palpal femur not greatly enlarged, palpal bulb without prolateral knob near base of embolus (fig. 1001) ........................................ 6
- Endites with large, triangular anteromedian tip (fig. 1098) ........................................ 5
- Endites otherwise ........................................ 7
- Embolus very short (fig. 1144) ........................................ 6
- Embolus long (fig. 1125) ........................................ 7
- Eyes reduced (as in fig. 901) ........................................ 8
- Eyes normal ........................................ 9
- Palpal bulb protruding ventrally, embolus bent basally (figs. 905, 906) ........................................ 8
- Palpal bulb protruding basally, embolus curving smoothly (figs. 886, 887) ........................................ 9
- Palpal femur with dorsal spikes (fig. 1078) ........................................ 10
- Palpal femur without spikes ........................................ 11
- Chelicerae with anterior projections ........................................ 12
- Chelicerae without anterior projections ........................................ 13
- Anterior projections of chelicerae small (figs. 848–851); abdomen lightly patterned ........................................ 14
- Anterior projections of chelicerae large (fig. 1056); abdomen strongly patterned ........................................ 15
- Epigynal atrium without lateral or paired posterior sclerotizations ........................................ 16
- Epigynal atrium with lateral or paired posterior sclerotizations ........................................ 17
- Epigynal atrium pentagonal, with posteromedian invagination (figs. 961–963) ........................................ 18
- Epigynal atrium oval, without posteromedian invagination ........................................ 19
- Anterior sclerite bipartite, anteriorly situated (fig. 1153) ........................................ 20

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Map 14. Records of *S. murici* (circle), *S. kalunda* (squares), *S. curlena* (triangles), and *S. bryantae* (star).

- Anterior sclerite undivided, medially situated (fig. 875). .......... *S. scutiventris*
- Epigynal atrium with paired posterior sclerotizations. ................. 20
  - Epigynal atrium with lateral sclerotizations. .......................... 21
20. Posterior sclerotizations rounded (fig. 1019). .......... *S. agocena*
  - Posterior sclerotizations hook shaped (fig. 1088). .......... *S. saba*
21. Lateral sclerotizations narrow (fig. 933). .......................... *S. guatopo*
  - Lateral sclerotizations wide. ........................................ 22
22. Epigynal atrium with anterior margin thickened (fig. 1134). .......... *S. septella*
  - Epigynal atrium with anterior margin not thickened (fig. 1115). .......... *S. kalunda*
23. Eyes reduced (as in fig. 892). ........................................ 24
  - Eyes normal. .......................................................... 28
24. Epigynal atrium without pair of posterior sclerotizations. ............ 25
  - Epigynal atrium with pair of posterior sclerotizations. ............. 26
25. Anterior sclerite greatly enlarged, filling epigynal atrium (fig. 952). .......... *S. gracia*
  - Anterior sclerite small, medially situated (fig. 894). .......... *S. bordoni*
26. Posterior sclerotizations touching (fig. 914). .......................... *S. miranda*
  - Posterior sclerotizations not touching. ................................ 27
27. Epigynal atrium with lateral sclerotizations (fig. 1038). .......... *S. weberti*
  - Epigynal atrium without lateral sclerotizations (fig. 1047). .......... *S. arima*
28. Epigynal atrium with posterior, median invagination (fig. 971). .......... *S. valencia*
  - Epigynal atrium without posterior, median invagination. .......... 29
29. Abdomen without pattern, postepigastric scutum short (fig. 984). .......... *S. guiria*
  - Abdomen with pattern, postepigastric scutum long. .................... 30
30. Abdomen lightly patterned; anterior sclerite small, anteriorly situated (fig. 866). .......... *S. simla*
  - Abdomen strongly patterned; anterior sclerite large, medially situated (fig. 1067). .......... *S. cymbalaria*

*Scaphiella simla* Chickering
Figures 846–868; map 1

*Scaphiella simla* Chickering, 1968: 151, figs. 42–47
(male holotype from Arima Valley, Simla, Trinidad, in MCZ; examined).

**DIAGNOSIS:** Males resemble those of *S. cymbalaria* in having conical anterior projections at the base of the chelicerae (figs. 848–851) and a small projection near the base of the embolus (fig. 857), but the cheliceral projections are much smaller in this species than in *S. cymbalaria*; females have elevated anterior margins, accompanied by microsculpture, on the epigastric scutum (fig. 865) and a relatively small anterior epigynal sclerite (fig. 866).

**MALE** (PBI_OON 29848, figs. 846–857).
Total length 1.54. Carapace sides with obvious granulation extending upward in triangular patches from opposite coxae, covering most of posterior declivity; anterior face of chelicerae with swelling. Sternum smooth. Endites unmodified. Abdomen lightly patterned; epigastric scutum with tuberculate setal bases present at sides and front. Palpal femur slightly expanded; bulb produced basally, with distinct knob just proximal and retrolateral to embolus origin, embolus projecting far ventral of bulb surface.

**FEMALE** (PBI_OON 29848, figs. 858–868).
Total length 1.76. Chelicerae without anterior swelling. Epigastric scutum with elevated anteromedian edges at sides above pedicel. Anterior epigynal sclerite with anterior protuberance, widened posteriorly; apodemes long, laterally directed.

**MATERIAL EXAMINED:** VENEZUELA:
*Sucre:* Carúpano, July 23, 1987, thorn-scrub litter, elev. 80 m (S., J. Peck, AMNH PBI_OON 29596), 1♀; 37 km W Carúpano, July 31, 1987, humid ravine litter, thorn-forest, elev. 50 m (S., J. Peck, AMNH
PBI_OON 1231, 29609), 1♂, 2♀; 26 km SE Río Caribe, July 28, 1987, tree base litter, forest over cacao, elev. 50 m (S., J. Peck, AMNH PBI_OON 29601), 1♀. TRINIDAD AND TOBAGO: no specific locality, no date (N. Weber, MCZ 66857, PBI_OON 29548), 1♂, 1♀. Arima: Arima Valley, Simla, April 1964 (A. Chickering, MCZ PBI_OON 29848), 3♂, 2♀ (paratypes), Apr. 19, 1964 (A. Chickering, MCZ PBI_OON 29552), 1♂ (holotype), same (A. Chickering, MCZ 66856, PBI_OON 29547), 1♀ (paratype), Feb. 1972, elev. 1000 ft (J. Cooke, AMNH PBI_OON 95), 1♂.

**DISTRIBUTION:** Sucre, Venezuela, and Trinidad (map 1).

*Scaphiella scutiventris* Simon

Figures 869–877; map 2

*Scaphiella scutiventris* Simon, 1893b: 443 (female holotype from Caracas, Distrito Federal, Venezuela, in MNHN; examined).

**DIAGNOSIS:** Females have a relatively long abdomen and a globular, posteriorly invaginated posterior extension on the anterior epigynal sclerite (figs. 875–877).

**MALE:** Unknown.


**MATERIAL EXAMINED:** VENEZUELA: Aragua: 15 km S Las Tejerías, 12 km N Tiara, Aug. 8, 1987, cloud forest litter, elev. 1300 (S., J. Peck, AMNH PBI_OON 29597), 1♀; Tiara, near Cerro Niguel, Apr. 14, 1995, elev. 1400 m (J. Lattke, CAS 9026678, PBI_OON 2621), 1♀. Distrito Federal: Caracas (E. Simon, MNHN 5688, PBI_OON 28544), 1♀ (holotype).

**DISTRIBUTION:** Aragua and Distrito Federal, Venezuela (map 2).

*Scaphiella bordoni* Dumitrescu and Georgescu

Figures 878–896; map 3

*Scaphiella bordoni* Dumitrescu and Georgescu, 1987: 102, pl. 7, figs. 1–5 (male holotype from Rancho Grande, Aragua, Venezuela, in the Institut de Spéologie „Emile Racovitza,” Bucharest, Romania, not available on loan, not examined).

**DIAGNOSIS:** Males closely resemble those of *S. simla* but lack the anterior projections at the base of the chelicerae; females also resemble those of *S. simla* but lack the elevated anterior margins of the epigastric scutum and the accompanying microsculpture. Both sexes have reduced eyes (figs. 882, 892).

**MALE** (PBI_OON 334, figs. 878–887). Total length 1.50. Carapace sides with extensive granulation in triangular patches opposite coxae and on sides of posterior declivity; eyes reduced, ALE separated by their radius to diameter. Sternum smooth. Endites unmodified. Abdomen unpatterned, scuta smooth. Palpal femur slightly expanded; bulb tapering apically, produced ventrally and proximally, with small knob near embolus base; embolus subdistally widened.

**FEMALE** (PBI_OON 334, figs. 888–896). Total length 1.53. Anterior epigynal sclerite posteriorly widened, invaginated; apodemes wide, directed laterally.

**MATERIAL EXAMINED:** VENEZUELA: Aragua: Parque Nacional Rancho Grande, 1960, epiphytes in cloud forest, elev. 1100 m (J. Ojasti, MCZ PBI_OON 29602), 1♂; Rancho Grande, 15 km N Maracay, Feb. 9–27, 1971, Berlese, forest litter, elev. 1000–
1400 m (FMNH PBI_OON 334), 1♂, 3♀♀, same (AMNH PBI_OON 29611), 3♀.

**Distribution:** Aragua, Venezuela (map 3).

*Scaphiella miranda*, new species

*Figures 897–915; map 4*

**Types:** Male holotype and female allotype taken by forest soil washing at an elevation of 400 m at Agua Blanca, Parque Nacional Guatopo, 35 km N Altagracia, Miranda, Venezuela (June 1, 1987; S., J. Peck), deposited in AMNH (PBI_OON 29592).

**Diagnosis:** Both sexes have the eyes of the posterior row greatly reduced in size (figs. 901, 911) and have extensive microsculpture on the carapace. Males have a strong pair of apodemes extending posterolaterally from the epigastric furrow (fig. 898) and a palpal bulb that is greatly extended ventrally (fig. 906); females have a pair of large sclerotizations situated posteriorly in the epigynal atrium (figs. 914, 915) and numerous thickened setae anterior of the atrium (fig. 913).

**Male** (PBI_OON 29610, figs. 897–906). Total length 1.36. Carapace with granulations occupying most of sides, almost reaching apex; eyes reduced, ALE separated by less than their radius. Sternum smooth. Endites with strong, spiniform anteromedian tip. Abdomen unpatterned, scuta punctate. Palpal femur greatly expanded; bulb tapering apically, with small knob situated prolateral of embolus base; embolus bent sharply just beyond base.

**Female** (PBI_OON 29618, figs. 907–915). Total length 1.61. Endites unmodified. Anterior epigynal sclerite long, narrow, sinuous; apodemes wide, directed posterolaterally.

**Other Material Examined:** VENEZUELA: Miranda: Agua Blanca, Parque Nacional Guatopo, 35 km N Altagracia, Miranda, Venezuela, May 31, 1987, Berlese, ravine litter, elev. 400 m (S., J. Peck, AMNH PBI_OON 29598, 29617), 1♂, 2♀♀, June 1, 1987, forest soil washing, elev. 400 m (S., J. Peck, AMNH PBI_OON 29599), 1♂; El Lucero, Parque Nacional Guatopo, 28 km N Altagracia, June 8, 1987, Berlese, rotted log litter, elev. 700 m (S., J. Peck, AMNH PBI_OON 29604), 1♀.

**Distribution:** Miranda, and Sucre, Venezuela (map 5).

*Scaphiella guatopo*, new species

*Figures 916–935; map 5*

**Type:** Male holotype taken in a flight intercept trap in a ravine at an elevation of 700 m at El Lucerno, 28 km N of Altagracia, Parque Nacional Guatopo, Miranda, Venezuela (June 7–14, 1987; S., J. Peck), deposited in AMNH (PBI_OON 29600).

**Diagnosis:** Males of this dark orange species can easily be recognized by their relatively long and narrow palpal femur (fig. 923) and the “striped” appearance of the embolus (figs. 923–925), females by the narrow anterior epigynal sclerite and rebordered lateral margins of the epigynal atrium (figs. 933–935).

**Male** (PBI_OON 29600, figs. 916–925). Total length 1.50. Carapace sides with few granulations, restricted to margins. Sternum smooth. Endites unmodified. Abdomen unpatterned, scuta smooth. Palpal femur slightly expanded, slightly elongated; embolus short, restricted to distal half of bulb, with twist at about half its length.

**Female** (PBI_OON 29595, figs. 926–935). Total length 1.52. Anterior epigynal sclerite narrow, arrow shaped; apodemes situated anterolaterally, short, wide.

**Other Material Examined:** VENEZUELA: Miranda: Agua Blanca, Parque Nacional Guatopo, 35 km N Altagracia, May 31, 1987, Berlese, ravine litter, elev. 400 m (S., J. Peck, AMNH PBI_OON 29598, 29617), 1♂, 2♀♀, June 7–14, 1987, flight intercept trap, forest streamside, elev. 400 m (S., J. Peck, AMNH PBI_OON 29595), 1♀; El Lucero, Parque Nacional Guatopo, 28 km N Altagracia, June 8, 1987, Berlese, rotted log litter, elev. 700 m (S., J. Peck, AMNH PBI_OON 29604), 1♀.

**Distribution:** Miranda, and Sucre, Venezuela (map 5).

*Scaphiella tigre*, new species

*Figures 936–945; map 6*

**Type:** Male holotype taken in primary forest 1.5 km E Caño Tigre, Puerto Ayacucho, Amazonas, Venezuela (Nov. 27, 1995; I. Netuzhilin), deposited in MACN (PBI_OON 31060).
Scaphiella scutiventris Simon, female.

869. Habitus, dorsal view.
870. Same, ventral view.
871. Same, lateral view.
872. Same, anterior view.
873. Carapace, dorsal view.
874. Same, lateral view.
875. Epigastric region, ventral view.
876. Epigynum, ventral view.
877. Same, dorsal view.
DIAGNOSIS: Males resemble those of *S. guatopo* but have more extensive granulation on the carapace (especially the posterior declivity), and the embolus lacks the distinctive twist found in that species (figs. 943–945).

**MALE (PBI_OON 31060, figs. 936–945).**

Total length 1.73. Carapace sides with obvious granulations, strongest on posterior declivity. Sternum smooth. Endites unmodified. Abdomen unpatterned, scuta smooth. Palpal femur moderately expanded; embolus relatively short, narrow.

**FEMALE: Unknown.**

**OTHER MATERIAL EXAMINED:** None.

**DISTRIBUTION:** Amazonas, Venezuela (map 6).

*Scaphiella gracia*, new species

Figures 946–954; map 7

**TYPE:** Female holotype taken in forest leaf litter at an elevation of 300 m near the S border of Parque Nacional Guatopo, 24 km N Altagracia, Miranda, Venezuela (June 10, 1987; S., J. Peck), deposited in AMNH (PBI_OON 29605).

**DIAGNOSIS:** Females can easily be recognized by the greatly enlarged anterior epigynal sclerite, which fills most of the epigynal atrium (figs. 952–954).

**MALE:** Unknown.

**FEMALE (PBI_OON 330, figs. 946–954).**

Total length 1.57. Carapace with extensive granulations, covering most of sides; eyes reduced, posterior row recurved from front, ALE separated by their radius to diameter, PME separated by more than their diameter. Sternum covered with small round pits everywhere except middle. Endites unmodified. Abdomen unpatterned, scuta pitted. Epigynal atrium pentagonal, with small anterior sclerite bearing median posterior invagination; apodemes long, posterolaterally directed.

**OTHER MATERIAL EXAMINED:** Two females taken with the type (AMNH PBI_OON 29593).

**DISTRIBUTION:** Miranda, Venezuela (map 7).

*Scaphiella cata*, new species

Figures 955–963; map 8

**TYPE:** Female holotype taken by soil washing in coastal thorn scrub at an elevation of 3 m at Cata, Aragua, Venezuela (Aug. 10, 1987; S., J. Peck), deposited in AMNH (PBI_OON 29593).

**DIAGNOSIS:** Females resemble those of *S. guatopo* in having a relatively long epigynal atrium, but differ in having the atrium widened posteriorly (figs. 970–973).

**MALE:** Unknown.

**FEMALE (PBI_OON 29593, figs. 955–963).**


**OTHER MATERIAL EXAMINED:** None.

**DISTRIBUTION:** Carabobo, Venezuela (map 9).

*Scaphiella valencia*, new species

Figures 964–973; map 9


**TYPE:** Female holotype from “La Cumbre de Valencia,” Carabobo, Venezuela (E. Simon), deposited in MNHN (5695, PBI_OON 29542).

**DIAGNOSIS:** Females resemble those of *S. guatopo* in having a relatively long epigynal atrium, but differ in having the atrium widened posteriorly (figs. 970–973).

**MALE:** Unknown.

**FEMALE (PBI_OON 29542, figs. 964–973).**

Total length 1.63. Carapace sides with obvious granulations. Sternum smooth. Endites unmodified. Abdomen unpatterned, epigastric scutum with small, straight ridge just above pedicel. Epigynal atrium trapezoidal, with narrow, elongated anterior sclerite bearing posterior median invagination; apodemae very long, curved.

**OTHER MATERIAL EXAMINED:** None.

**DISTRIBUTION:** Carabobo, Venezuela (map 9).

*Scaphiella guiria*, new species

Figures 974–991; map 10

**TYPE:** Female holotype taken by soil washing in coastal thorn scrub at an
elevation of 2 m at a site 10 km N of Güiria, Sucre, Venezuela (July 23, 1987; S., J. Peck), deposited in AMNH (PBI_OON 29591).

**Diagnosis:** Females can easily be recognized by the posteriorly prolonged epigynal atrium with two, widely separated posterior margins (figs. 989–991); males can easily be
recognized by the ☞-shaped embolus (fig. 981).

**Male** (PBI_OON 331, figs. 974–982). Carapace 0.58 long (abdomen missing), granulations present on sides, heaviest along lateral and posterior margins plus sides of posterior declivity. Sternum smooth. Endites unmodified. Abdomen missing. Palpal femur slightly expanded; embolus distinctive, shaped like question mark.

**Female** (PBI_OON 29591, figs. 983–991). Total length 1.45. Abdomen unpatterned, scuta smooth. Anterior epigynal sclerite restricted to anterior one-fifth of atrial length, atrial margins strongly sclerotized; apodemes wide, sinuous.

**Other Material Examined:** Trinidad and Tobago: no specific locality, no date (N. Weber, MCZ PBI_OON 331), 1♂, 2♀. Saint George: Saint Augustine, Nov. 16, 1943–Feb. 23, 1944 (Strickland, AMNH PBI_OON 29845), 1♀.

**Distribution:** Sucre, Venezuela, plus Trinidad (map 10).

*Scaphiella icabaru*, new species

Figures 992–1001; map 11

**Type:** Male holotype from a Berlese sample of humid forest litter with fungi taken at an elevation of 700 m at a site 10 km E of Icabaru, Bolívar, Venezuela (July 5, 1987; S., J. Peck), deposited in AMNH (PBI_OON 29594).

**Diagnosis:** This male from southeastern Venezuela can be distinguished from geographically adjacent males as follows: from *S. kartabo* by the basally thinner embolus, from *S. manaus* by the much longer embolus, from *S. cymbalaria* by the lack of projections at the base of the chelicerae, from *S. bordoni* and *S. miranda* by the normal, rather than reduced eyes, from *S. guatopo* by the thicker palpal femur and longer embolus, and from *S. guiria* by the longer, straighter embolus (figs. 999–1001). The wide geographic separation makes it unlikely that this could be the male of any of the northern Venezuelan species known only from females (*S. scutiventris*, *S. gracia*, *S. cata*, and *S. valencia*).


**Female:** Unknown.

**Other Material Examined:** None.

**Distribution:** Bolívar, Venezuela (map 11).

*Scaphiella ayacucho*, new species

Figures 1002–1012; map 12

**Type:** Male holotype taken in a primary forest 1.5 km E of Caño Tigre, Puerto Ayacucho, Amazonas, Venezuela (Jan. 7, 1996; I. Netuzhilin), deposited in MACN (PBI_OON 31061).

**Diagnosis:** This male from southwestern Venezuela differs from the other known Venezuelan males, and resembles instead the species from Ecuador, in having an extremely long embolus, originating near the posterior end of the palpal bulb (fig. 1011); it differs from the Ecuadorian species with long emboli (*S. pich*, *S. napo*, and *S. tena*) in lacking a pronounced knob near the base of the embolus. As in *S. icabaru*, the wide geographic separation makes it unlikely that this could be the male of any of the northern Venezuelan species known only from females (*S. scutiventris*, *S. gracia*, *S. cata*, and *S. valencia*).

**Male** (PBI_OON 31061, figs. 1002–1012). Total length 1.29. Carapace with granulations on sides, heaviest at sides of posterior declivity. Sternum smooth. Endites with strong, spiniform anteromedian tip. Abdomen unpatterned, scuta smooth. Palpal femur greatly expanded; bulb without knob: embolus long, originating in basal third of cymbial length, extending most of that length.

**Female:** Unknown.

**Other Material Examined:** None.

**Distribution:** Known only from Amazonas, Venezuela (map 12).

*Scaphiella agocena* Chickering

Figures 1013–1021; map 13

*Scaphiella agocena* Chickering, 1968: 139, figs. 1, 2 (female holotype from 3 km N of Savonet, Curaçao, in MCZ; examined).
DIAGNOSIS: Females resemble those of *S. miranda* in having a pair of sclerotizations situated posteriorly in the epigynal atrium (figs. 1019–1021), but those sclerotizations are smaller and more rounded, and the eyes are not reduced as in that species.

MALE: Unknown.

atrium circular, with long, narrow anterior sclerite and pair of rounded posterior sclerotizations; apodemes short, wide.


DISTRIBUTION: Curacao (map 13).

Scaphiella weberi Chickering
Figures 1022–1040

Scaphiella weberi Chickering, 1968: 153, figs. 48–52 (male holotype from Trinidad, in MCZ; examined).

DIAGNOSIS: Males can be recognized by the sharp, ventrally produced projection
near the base of the palpal embolus (figs. 1030, 1031), females by the reduced eyes (fig. 1036) and rebordered posterolateral margins of the epigynal atrium (figs. 1038–1040).


**Female** (PBI_OON 29847, figs. 1032–1040). Total length 1.79. Carapace with obvious granulations on side, reaching halfway to apex; eyes reduced. Epigastric scutum with small, straight ridge just above pedicel. Epigynal atrium diamond shaped, with small anterior sclerite and paired posterior sclerotizations; apodemes short, posterolaterally directed.

**Material Examined:** TRINIDAD AND TOBAGO: no specific locality, no date (N. Weber, MCZ PBI_OON 29553), 1♀ (holotype), 1♂ (paratype), same (N. Weber, MCZ PBI_OON 29847), 1♀.

**Distribution:** Trinidad.

*Scaphiella arima*, new species

**Type:** Female holotype taken in leaf litter at Spring Hill, Arima, St. Georges Co., Trinidad (mid–late July, 1979; L. Sorkin), deposited in AMNH (PBI_OON 29846).

**Diagnosis:** Females resemble those of *S. agocena* in having a pair of sclerotizations situated posteriorly in the epigynal atrium, but the atrium is shorter and wider than in that species, the sclerotizations are more rounded, and the anterior epigynal sclerite is shorter (figs. 1047–1049).

**Male:** Unknown.

**Female** (PBI_OON 29846, figs. 1041–1049). Total length 1.60. Carapace with obvious granulations reaching halfway to apex of sides; eyes reduced, PME separated by less than their radius. Sternum smooth. Endites unmodified. Abdomen unpatterened, epigastric scutum with small, curved ridge just above pedicel. Epigynal atrium oval, with small anterior sclerite and pair of rounded posterior sclerotizations; apodemes long, posterolaterally directed.

**Other Material Examined:** None.

**Distribution:** Trinidad (map 15).

*Scaphiella cymbalaria* Simon

**Figures 1050–1069; map 13**

*Scaphiella cymballaria* Simon, 1891: 561 (male lectotype, here designated, from St. Vincent, in BMNH; examined).

*Scaphiella cymbalaria:* Simon, 1893a: 300, figs. 257, 258; 1893b: 444. – Chickering, 1968: 143, figs. 5–9.

**Note:** Simon (1893a, 1893b) apparently regarded the original spelling, which appeared in only one place in Simon (1891), as a printer’s error, and the corrected spelling he supplied has been accepted by all subsequent workers.

**Diagnosis:** Males resemble those of *S. simla* in having conical anterior projections at the base of the chelicerae (figs. 1053–1056) and a small projection near the base of the embolus (fig. 1060), but the cheliceral projections are much larger in this species than in *S. simla*; females also resemble those of *S. simla* in having elevated anterior margins, accompanied by microsculpture, on the epigastric scutum but have a smaller anterior epigynal sclerite (figs. 1067–1069).

**Male** (PBI_OON 29851, figs. 1050–1060). Total length 1.60. Carapace with granulations reaching apex of sides; chelicerae with anterior swelling. Sternum smooth. Endites unmodified. Abdomen with scattered dark markings visible under scuta, scuta smooth. Palpal femur moderately expanded; bulb produced ventrally, with knob situated retro-laterally from embolus origin; embolus narrow, evenly arched.

**Female** (PBI_OON 29851, figs. 1061–1069). Total length 1.80. Epigynal atrium oval, with heavily sclerotized lateral margins, anterior sclerite posteriorly widened, invaginated; apodemes long, directed posterolaterally.

Le Diamant, Nov. 29, 1978 (Thibaud, MNHN PBI_OON 29849), 1♀.


St. Vincent: no specific locality (H. Smith, BMNH 1894-10-17-88-90, PBI_OON 327), 1♂ (lectotype), same (PBI_OON 328), 1♀ (paralectotypes), same (MNHN 5686, PBI_OON 29543), 1♀ (paralectotype).

**Distribution:** Lesser Antilles (Montserrat to St. Vincent, map 13); Simon’s record of this species from Venezuela was based on a misidentified female of *S. valencia*.

### *Scaphiella etang*, new species

**Figures 1070–1080; map 15**

**Type:** Male holotype taken near Étang As de Pique, Guadeloupe (Jan. 30, 1980; Thibaud), deposited in MNHN (PBI_OON 29850).

**Diagnosis:** Males are easily recognizable by the incrassate palpal femur, which bears a series of dorsal spikes (figs. 1078–1080).

**Male (PBI_OON 29850, figs. 1070–1080).**

Total length 1.66. Carapace with obvious granulations not reaching apex of sides. Sternum finely reticulate, microsculpture covering entire surface. Endites with spiniform anteromedian tip. Abdomen unpatterned, scuta reticulate. Palpal femur greatly expanded, with dorsal cusps; bulb ventrally produced anteriorly, touching embolus through much of its length; embolus relatively short, heavily sclerotized.

**Female:** Unknown.

**Other Material Examined:** None.

**Distribution:** Guadeloupe (map 15).

### *Scaphiella saba*, new species

**Figures 1081–1090; map 15**

**Type:** Female holotype taken by beating, sweeping, and sifting shrubs at an elevation of 191 m about 2 km along the trail to Spring Bay, 17.633°N, 63.224°W, Saba Island, Lesser Antilles (Mar. 10, 2008; J. Slowik), deposited in UAM (15559, PBI_OON 332).

**Diagnosis:** Females resemble those of *S. agocena* but have a more triangular epigynal atrium (figs. 1088–1091).

**Male:** Unknown.

**Other Material Examined:** None.

**Distribution:** Saba Island (map 15).

### *Scaphiella kalunda* Chickering

**Figures 1091–1116; map 15**

*Scaphiella kalunda* Chickering, 1968: 145, figs. 15–21 (male holotype from St. John, Virgin Islands, in MCZ; examined).

**Diagnosis:** This species is similar to *S. septella*; males have a shorter embolus, originating higher on the palpal bulb, with a larger and more rounded tip (figs. 1103–1105) and distally widened endites (fig. 1098); females have narrower margins on the epigynal atrium (figs. 1114–1116).

**Male (PBI_OON 29839, figs. 1091–1105).**

Total length 1.20. Carapace with few granules, restricted to margins. Sternum smooth. Endites with spiniform anteromedian tip. Abdomen unpatterned, scuta smooth. Palpal femur slightly expanded; bulb projected ventrally at level of embolus origin; embolus originating on distal portion of bulb, tip rounded.

**Female (PBI_OON 29840, figs. 1106–1116).**


**Material Examined:** VIRGIN ISLANDS: St. John: no specific locality, July 23, 1966 (A. Chickering, MCZ PBI_OON 29551), 1♂ (holotype), July 24, 1966 (A. Chickering, MCZ PBI_OON 29839), 1♂, July 25, 1966 (A. Chickering, MCZ PBI_OON 29840), 1♀ (paratype); Base Hill, Oct. 12, 1979, litter (W. Muchmore, FSCA PBI_OON 29657), 1♀; Brown Bay, June 19, 1980, base of tree (W. Muchmore, FSCA PBI_OON 29652), 1♀, base of old stump (W. Muchmore, FSCA PBI_OON 29663), 1♂;
hill above Butlers, June 5, 1974, Berlese, moist litter (W. Muchmore, AMNH PBI_OON 29837), 1♂; Calabash Boom, Oct. 13, 1980, leaf litter on hillside (W. Muchmore, FSCA PBI_OON 29665), 1♂, Oct. 16, 1980, under rock (W. Muchmore, FSCA PBI_OON 29661), 1♂; Catherineberg Estate, July 20, 1975, debris along wall of mill (W. Muchmore, AMNH PBI_OON 29838), 1♂; Cinnamon Bay Nature Trail, June 4–6, 1980, litter, base of trees, logs (W. Muchmore, FSCA PBI_OON 29664), 1♀; Drunk Bay, June 18, 1980, June 18, 1980, litter under bushes, cacti (W. Muchmore,
Scaphiella septella Chickering

Figures 1117–1135; map 12

Scaphiella septella Chickering, 1968: 149, figs. 36–41 (male holotype from Virgin Gorda, Virgin Islands, in MCZ; examined).

Diagnosis: This species is similar to *S. kalunda*, males have a longer embolus, originating more basally on the palpal bulb, with a smaller and sharper tip (figs. 1124–1126) and distally unmodified endites; females have wider margins on the epigynal atrium (figs. 1133–1135).

Male (PBI_OON 29554, figs. 1117–1126). Total length 1.32. Carapace with few granulations restricted to margins. Sternum smooth. Endites unmodified. Abdomen unpatterned, scuta smooth. Palpal femur greatly expanded; bulb projected ventrally at level of embolar origin; embolus originating distally on bulb, tip pointed.

Female (PBI_OON 29842, figs. 1127–1135). Total length 1.46. Epigynal atrium wide, anterolateral margins very heavily sclerotized, anterior sclerite wider anteriorly and posteriorly than in middle; apodemes short, directed posterolaterally.


Distribution: Virgin Islands (Virgin Gorda, map 12).

Scaphiella buck, new species

Figures 1136–1145; map 13

Type: Male holotype taken in a Berlese sample of litter from Buck Island, St. Croix, Virgin Islands (June 12, 1972; W. Muchmore), deposited in FSCA (PBI_OON 26887).

Diagnosis: Males resemble those of *S. kalunda* but have a shorter, thicker embolus (figs. 1143–1145) and unmodified endites.

Male (PBI_OON 26887, figs. 1136–1145). Total length 1.34. Carapace with few granulations restricted to margins. Sternum smooth. Endites unmodified. Abdomen unpatterned, scuta smooth. Palpal femur moderately expanded; bulb produced ventrally at level of embolar origin; embolus originating distally on bulb, very short.

Female: Unknown.

Other Material Examined: One male taken with the type (FSCA PBI_OON 26887).

Distribution: Virgin Islands (St. Croix, map 13).

Scaphiella curlena Chickering

Figures 1146–1154; map 14

Scaphiella curlena Chickering, 1968: 141, figs. 3, 4 (female holotype from Guanaboa Vale, St. Catherine, Jamaica, in MCZ; examined).

Diagnosis: Females can be recognized by the bipartite, posteriorly expanded anterior epigynal sclerite (figs. 1152–1154).

Female: Unknown.

Other Material Examined: One male taken with the type (FSCA PBI_OON 29842).

Distribution: Virgin Islands (St. Croix, map 13).

DISTRIBUTION: Jamaica (map 14).

Scaphiella bryantae Dumitresco and Georgesco

Map 14

Scaphiella bryantae Dumitresco and Georgesco, 1983: 108, pl. 23, figs. 1–7 (female holotype from left bank of Río Baracoa, Oriente, Cuba, should be in Institut de Spéologie “Emile Racovitza,” Bucarest, unavailable; specific name is a patronym for Elizabeth Bryant).

DIAGNOSIS: We have seen no specimens of this species, but Dumitresco and Georgesco’s illustration of the female palp and chelicerae leave no doubt that their specimen belongs to the genus. Judging by their epigynal figure, the species is probably closest to S. curlena, as the two share a bipartite anterior epigynal sclerite; the posterior part of the sclerite is apparently much longer in S. bryantae.

MALE: Unknown.


MATERIAL EXAMINED: None.

DISTRIBUTION: Cuba (map 14).

ACKNOWLEDGMENTS

This project is part of the Planetary Biodiversity Inventory of oonopids supported by the U.S. National Science Foundation (grant DEB-0613754), and the assistance of the many participants in that project, in ways too numerous to mention, is immensely appreciated. We especially thank the curators of the collections that have supplied specimens: Léon Baert (KBIN), Janet Beccaloni (BMNH), Alexandre Bonaldo (MPEG), Antonio Brescovit and Cristina Rheims (IBSP), Jonathan Coddington (USNM), Charles Dondale (CNC), G.B. Edwards (FSCA), Gonzalo Giribet and Laura Leibensperger (MCZ), Charles Griswold and Darrell Ubick (CAS), Seppo Koponen (ZMUT), Gerardo Lamas and Diana Silva (MUSM), John Murphy, Diomedes Quintero (MIUP), Martin Ramirez and Cristian Grisnado (MACN), Christine Rollard (MNHN), Peter Schwendinger (MHNG), material kindly made available by Christian Kropf and Yvonne Kranz, Nikolaj Scharff (ZMUC, material kindly made available by Rudy Jocqué and Wouter Fannes), Petra Sierwald (FMNH), Jozef Slowik (UAM), and Carlos Viquez (INBIO). We thank Barbara Baehr, Cristina Rheims, and Darrell Ubick for their most helpful, detailed comments on a draft of the manuscript, Steve Thurston for composing the plates, and Xinping Wang for providing the maps.

REFERENCES

Chickering, A.M. 1968. The genus Scaphiella (Araneae, Oonopidae) in Central America and the West Indies. Psyche 75: 135–156.

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