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ADDITIONS TO THE SPIDER FAUNA OF PUERTO RICO

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In 1929-30, Dr. Petrunkevitch published an extensive report on the spiders of Puerto Rico based on collections he made there during a five months visit to the island in the fall and winter of 1925-26, with additional material from the American Museum of Natural History and the Cornell University Collection. In all, 174 species were identified of which 72 were described as new. In the introduction, Dr. Petrunkevitch states that our knowledge of the spider fauna of the island is far from complete. Many species, both new and old, still remain known from a single sex. Also, collections have been made from comparatively few localities and not at all seasons of the year.

Two short visits to the island have been made by collectors from the museum. In the spring of 1938, Dr. P. J. Darlington spent a few weeks in some of the places where Petrunkevitch had been, but at a different season of the year, and in February, 1941, C. T. Parsons collected for four days at El Yunque. Recently these collections have been examined and the following eleven species have been recognized as new.

Family OONOPIDAE

Genus OONOPS Templeton 1834

Oonops viridans spec. nov.

Figure 1

Female. Length, 2.0 mm., ceph., 0.9 mm., abd., 1.2 mm.

Cephalothorax straw-color, with a few dark hairs about the eyes and a pair of short recurved bristles below and between a.l.e., narrowed at anterior margin to about one half the greatest width, no thoracic groove, carapace gently rounded; *eyes*, almost covering width of the head, area

between black, a.l.e. largest, transversely oval, separated by less than short diameter, posterior row about as long as anterior, recurved, p.m.e. a broad oval, touching on long diameter, p.l.e. little smaller than p.m.e.; *clypeus* almost lacking below a.l.e., with two pairs of long bristles on margin; *mandibles* long, slender, fang rather long; *labium* fused to sternum, not as long as wide; *maxillae* long and inclined over labium; *sternum* pale, wider than long, convex, heart-shaped, IV coxae separated by more than a diameter, anterior coxae more elongate than posterior; two terminal joints of palpi with long bristles, but not spines as in *Heteroonops spinimanus*; *abdomen* oval, convex, with scattered hairs, a beautiful iridescent green in changing lights, venter with the same iridescent green, a group of three dark dots beneath the skin each side of the spinnerets; epigastric area strongly convex, openings to book lungs and spiracles very distinct; *legs*, left II and IV missing, 4-3-1-2, paler than cephalothorax, anterior tibiae with four pairs of long, colorless, overlapping spines and three pairs on metatarsi.

Holotype ♀ Puerto Rico; El Yunque, 3,000 feet, May 1938, (Darlington).

Petrunkévitch identified *Oonops spinimanus* Simon from San Juan, Puerto Rico. This species differs in several characters from the typical species and in 1916 Dalmas erected a new genus for it, *Heteroonops*, separating it from *Oonops* by the spines on the female palpus and the narrow ventral scutum. Petrunkevitch figures the male for the first time and has a very brief description. *Oonops viridans* is separated from others in the genus found in the West Indies by the color of the abdomen, the eyes and the pair of short recurved bristles below and between the eyes of the first row.

Family THERIDIIDAE

Genus THERIDION Walckenaer 1805

Theridion maricaoensis spec. nov.

Figures 2, 3, 4

Male. Length, 1.6 mm., ceph., 0.7 mm., abd., 0.8 mm.

Cephalothorax pale brown, with a faint gray shading from posterior eye row to groove, sides evenly rounded, about as wide as long, gently convex, ocular area raised, with a groove below anterior row of eyes, thoracic groove transverse and faint; *eyes*, anterior row recurved, a.m.e. largest of the eight, slightly carried forward, separated by less than a

diameter and from a.l.e. by a little more than a line, a.l.e. smallest of the eight, eyes of the posterior row each surrounded by a narrow red ring, row slightly procurved, p.m.e. little larger than p.l.e. and separated by about a diameter and a quarter and from p.l.e. by about a diameter, lateral eyes touching; *quadrangle* little wider in front and longer than wide; *clypeus* higher than *quadrangle*; *mandibles* vertical, long and slender; *labium* fused to the sternum, wider than long; *maxillae* twice as long as *labium*; *sternum* brown, triangular, convex, IV coxae separated by a diameter; *abdomen* oval, with a few scattered long hairs, a median gray stripe, sides covered with white blotches, venter dark brown, shaded with gray, fold is carried almost to spinnerets with a pair of white spots between fold and spinnerets; *legs*, 1-2-4-3, anterior pairs very long, I pair pale brown, others pale with tibiae darker, no spines but rows of long hairs, comb of 6-7 bristles on IV tarsus; *palpus* brown, as long as cephalothorax, terminal joint very large, patella as long as wide, 1 long slender bristle from tip, tibia little longer than patella, tip truncate with 2 very long bristles from dorsal side that follow upper contour of terminal joint and several on opposite side, palpal organ flat, embolus arises from bulb near base, continues to base and on side to near tip of cymbium where it disappears in conductor, a broad, flat, ribbon-like piece at tip, end of embolus is hidden.

Holotype ♂ Puerto Rico; Maricao Forest, 2,500 feet, 2-3 June 1938, (Darlington).

Paratype ♂ Puerto Rico; Maricao Forest, 2,500 feet, 2-3 June 1938, (Darlington).

Theridion maricaoensis belongs to the genus *Theridion* as used by Simon. The very large a.m.e. is not usually found in the genus. The palpus is very similar to the figure of *Theridion ethicum* Keyserling (*Theridiidae*, 1884, 1: 44, pl. 2, fig. 24) from Rio Janeiro, Brazil, but this species is described with sub-equal eyes and the embolus starts from much nearer the tip of the palpus.

Family ARGIOPIDAE

Genus PSEUDOMETA F.O.P. Cambridge 1903

Pseudometa hamata spec. nov.

Figures 6, 8, 9

Female. Length, 5.0 mm., ceph., 2.0 mm. long, 1.6 mm. wide, abd., 3.1 mm. long, 3.0 mm. wide.

Cephalothorax yellowish, area from posterior eyes to end of thoracic depression shaded with gray with color on posterior third much heavier, cephalothorax not high, a median row of slender bristles from eyes to depression and much shorter rows from lateral eyes; *eyes* anterior row slightly recurved, eyes equidistant, a.m.e. largest, convex, separated by a diameter, a.l.e. little more than half the diameter of a.m.e., posterior row straight, eyes surrounded by black, p.m.e. larger than p.l.e., separated by less than a diameter and from p.l.e. by more than a diameter, lateral eyes touching; *quadrangle* longer than wide and wider in front than behind; *clypeus* about a radius of a.m.e.; *mandibles* with no boss, middle area shaded with gray, strongly convex, superior margin with three strong teeth, inferior margin with four teeth, the two middle very small; *labium* wider than long, strongly rebordered; *maxillae* brown, about twice as long as labium, sides parallel; *sternum* pale, triangular, slightly edentate between *coxae*, IV *coxae* separated by about half a diameter; *abdomen* globose, pale, covered with short colorless hairs, no distinct pattern but a narrow median clear area, venter darker than dorsum with converging pale stripes that do not reach the spinnerets; *legs*, 1-2-4-3, pale with vague median and distal rings on tibiae, spines dark, spines, I pair, femur, prolateral, 3, ventral, 0, patella, 1 at tip, tibia, dorsal, 1, prolateral, 4, retrolateral, 4, but lateral spines not opposite, ventral, 0, metatarsus, 0, II pair, femur, dorsal, 1-1, median and basal, patella, 1 at tip, tibia, prolateral, 1 near apex, retrolateral, 4, ventral, 0, metatarsus, 0; *epigynum*, area three times as broad as long, median scape very narrow, starts from posterior margin and extends forward as in *Eustala*, openings can be seen each side when the abdomen is tipped back, area each side convex and brown.

Male. Length, 4.1 mm., ceph., 1.9 mm. long, 1.5 mm. wide, abd., 2.1 mm. long, 1.6 mm. wide.

Cephalothorax and *eyes* same as in female; *mandibles* with a prolateral carina, no boss, basal half swollen, distal half much more slender with transverse ridges, fang groove oblique, superior margin with three teeth, inferior margin with two separated teeth; *labium*, *maxillae* and *sternum* as in female; *abdomen* yellowish with an indistinct pattern in gray, sides with dark lines, venter with a darker stripe from fold to spinnerets with white dots each side on posterior half; *legs*, 1-2-4-3, anterior pairs much the longest, indistinct dark rings on femora, tibiae and metatarsi, spines, I pair, femur, dorsal, 1 near tip, prolateral, 3 very long, retrolateral, 3 not opposite, ventral, 0, patella, 1, at tip, tibia, dorsal, 1-1, basal and median, prolateral, 4, retrolateral, 4, ventral, 0,

metatarsus, prolateral, 1-1, II pair, femur, dorsal, 1-1, basal, prolateral, 1-1, small, distal, retrolateral, 1-1, small, distal, patella, 1 at tip, tibia, dorsal, 1-1, basal very long, prolateral, 1-1, retrolateral, 1-1, ventral, 0, metatarsus, 1 dorsal, basal, 1 prolateral; *palpus* about as long as cephalothorax, pale, patella with 1 dorsal spine, tibia with a very narrow base, suddenly expanding, cymbium small and does not cover entire palpal organ, basal apophyses with the usual modifications, dorsal branch not chitinized and colorless, basal branch much larger, heavily chitinized, paracymbium large, the apical ventral branch colorless and large, upper branch narrow, heavily chitinized, and bent abruptly downward, a small ventral chitinized triangular spur near origin on lower side, embolus and conductor form a complete circle at tip.

Holotype ♂ Puerto Rico; El Yunque, 3,000 feet, May 1938, (Darlington).

Allotype ♀ Puerto Rico; El Yunque, 3,000 feet, May 1938 (Darlington).

Paratypes 2 ♀ Puerto Rico; El Yunque, 3,000 feet, May 1938, (Darlington).

The genus was based by F. O. P. Cambridge on *Meta flava* O. P. Cambr., known only from the male. It is separated from other genera in the subfamily, by the tarsus of the male palpus which is more or less broken up into irregular apophyses and the embolus and conductor that form a flat circle at the apex of the bulb. F. O. P. Cambridge reported six species from Central America. Two more from Cuba have been placed in the genus, *Pseudometa distincta* Bryant and *P. linguiformis* (Frang.). The latter is known only from the female which according to Franganillo is found across the island. *P. hamata* belongs near the latter species. Both have the scape turned back as in *Eustala* but in *P. hamata* it is very slender. The openings can be seen only when the abdomen is tipped back.

GENUS LARINIA Simon 1874

Larinia silvestris spec. nov.

Figures 5, 7, 10, 11

Male. Length, 2.0 mm., ceph., 1.1 mm. long, abd., 0.9 mm.

Cephalothorax pale with a wide lateral dark stripe from first pair of legs, gradually fading before it reaches the IV pair, sides evenly rounded, anterior margin about one half the greatest width, no thoracic

groove, quite convex, posterior fifth falls rapidly; *eyes* on a black spot which is carried to margin of the clypeus, anterior row recurved, a.m.e. largest of the eight, separated by a little more than a diameter, each on a low tubercle and carried forward, posterior row straight, lateral eyes touching, subequal, p.m.e. separated by about a radius, heavily ringed with black, separated by more than a diameter from p.l.e.; *quadrangle* higher than wide and much narrower behind; *clypeus* less than a diameter of a.m.e. and retreating; *mandibles* vertical, no boss, two pairs stout dark spines about as long as diameter of mandible near base and directed obliquely, fang groove oblique, fang short; *labium* wider than long, tip rebordered; *maxillae* shaded with black, more than twice as long as labium, sides parallel; *sternum* triangular, as wide as long, pointed between IV coxae, which are separated by more than a diameter, margins heavily bordered in black; *abdomen* oval, olive-yellow with numerous white spots and conspicuous black marks as follows, a median basal stripe which extends about one fourth the length of the abdomen, a pair of basal lateral stripes which reach middle, a pair of converging stripes from middle which join above spinnerets and a pair of lateral stripes which meet the basal pair near spinnerets, venter olive-yellow, median area shaded with gray and two pairs of widely separated white spots; *legs*, I right missing, (1)-2-4-3, yellowish with dark hairs and very long dark spines, femora with one very long median dorsal spine, patellae with retrolateral spine and tibiae with very long dorsal basal spine, coxae not modified, I pair, tibia, ventral, 2 median, (metatarsus missing), II pair, tibia ventral, 1 small median spine, retrolateral, I-1, very long, metatarsus, ventral, 1 small basal; *palpus* shorter than cephalothorax, patella with one long dorsal spine, tibia with a large ventral lobe, palpal organ very large, tarsus and paracymbium both small, and palpal organ protruding beyond cymbium, embolus a long gently curved black spine that rests against a pointed process in upper part of organ. In profile, three points can be seen.

Holotype ♂ Puerto Rico; Maricao Forest, 2-3 June 1938, (Darlington).

Larinia silvestris and *L. coamensis* Petr. are probably congeneric as both have similar markings, an elongate cephalothorax, no thoracic groove and the same arrangement of eyes but they do not belong to the genus *Larinia* as originally defined by Simon in *Les Arachnides de France*, 1874, 1: 115 or later, in the *Histoire Naturelle des Araignées*, 1895, 1: 795. The two European species originally placed there have a distinct thoracic groove, an elongate abdomen that is pointed at both ends

and the male palpus has two bristles on the patella. The two pairs of stout spines on the mandibles is a character rarely found in the *Argiopidae* but is fairly common in the *Salticidae*.

Family CTENIDAE

Genus CELAETYCHEUS Simon 1897

Celaetycheus modestus spec. nov.

Figure 19

Male. Length, 5.7 mm., cephalic, 4.0 mm. long, 3.1 mm. wide, abd., 2.5 mm.

Cephalothorax rather flat, anterior margin less than half the greatest width, cephalic marks suggestive of *Pirata*, a pair of narrow converging dark stripes from between p.m.e. and p.l.e. that meet before the middle and are separated by a narrow pale stripe and bordered by shorter pale stripes, a median pale stripe from middle to posterior margin, a narrow irregular lateral stripe from above II coxae to posterior margin, thoracic groove long, deep and quite near the posterior margin; *eyes*, a.m.e. separated by a radius, II row of eyes procurved by upper margins, p.m.e. larger than a.m.e., separated by a radius and from a.l.e. by the same space, a.l.e. small, oval and white, p.l.e. on a low tubercle, subequal to p.m.e. and separated from them by a radius; *quadrangle* of median eyes narrower in front and as high as wide; *clypeus* very narrow, less than a radius of a.m.e.; *mandibles* rather small, vertical, with a dark longitudinal stripe, fang groove slightly oblique, superior margin of fang groove with a scopula of long hairs, no teeth, inferior margin with three subequal teeth; *labium* as long as wide, basal half of lateral margins notched; *maxillae* more than twice as long as labium; *sternum* pale, as long as wide, IV coxae not quite touching; *abdomen* much shrunken, a greenish-gray, with many dark hairs; *legs*, III left missing, very long and slender, pale, no dark marks, spines, no spines on anterior patellae, posterior patellae with one prolateral and one retrolateral spine, I pair, tibia, dorsal, 0, ventral, 2-2-2-2, apical pair very short, prolateral, 2, retrolateral, 2, metatarsus, dorsal, 0, ventral, 2-2-2, basal and median pairs very long, prolateral, 2, retrolateral, 2, II pair same as I pair but with 3 prolateral on tibia and 3 prolateral on metatarsus, III and IV tibiae with dorsal, basal spine; *palpus* longer than cephalothorax, tibia and patella of about equal length, tibial apophysis large, cymbium with retrolateral angle, flattened and produced as a lobe, palpal organ with

a central white spoon-shaped process with heavily chitinized margin that protrudes from the cavity.

Holotype ♂ Puerto Rico; El Yunque, 2400-3500 feet, 24-28 February 1941, (Parsons).

Celaetycheus modestus and *C. strenuus* were collected at different seasons of the year and they differ in several characters so they are probably different species. *Celaetycheus modestus* has a very low flat cephalothorax, while *C. strenuus* has a rather high one with a different type of marking. The difference in the number of spines on the anterior tibiae and metatarsi are sexual, not specific.

Celaetycheus strenuus spec. nov.

Figure 12

Female. Length, 10.5 mm., ceph., 6.0 mm., abd., 4.6 mm.

Cephalothorax moderately high, flat, not much narrowed at anterior margin, dark brown with a median pale stripe from p.l.e. that is widest opposite I coxae and narrows at posterior margin to less than half the width between p.l.e., a narrow pale lateral stripe starting at I coxae, thoracic portion very short and falls abruptly to margin, thoracic groove long and very near posterior margin; *eyes*, a.m.e. separated by less than a diameter, a.l.e. much smaller than a.m.e. and oval, p.m.e. and a.l.e. form a procurved row by upper margins, p.m.e. and p.l.e. subequal and equidistant, p.m.e. larger than a.m.e., separated by about a radius, p.l.e. on a low tubercle and directed backward, seen from above a.l.e. an equal distance from p.m.e. and p.l.e.; *quadrangle* of median eyes narrower in front and higher than wide; *clypeus* less than a radius of a.m.e.; *mandibles* geniculate; dark brown, with many long bristles, no boss, superior margin of fang groove with three teeth, middle largest, inferior margin with four subequal and equidistant teeth; *labium* longer than wide, lateral margins on basal half excavate; *maxillae* more than twice as long as labium, only slightly inclined; *sternum* pale, with scattered bristles, as wide as long, pointed above IV coxae, IV coxae almost touching; *abdomen* dark brown, with a narrow median pale stripe at base that fades before middle, covered with long coarse hairs, venter with median area paler than sides; *legs*, 4-1-2-3, rather stout, brown, with scattered hairs, no dark marks, no scopula, spines, no spines on anterior patellae, posterior pairs with one proateral and one retrolateral spine, I tibia, dorsal, 0, ventral 2-2-2-2, apical pair very small, no lateral spines, metatarsus, ventral, 2-2-2, no lateral, II pair, spines same as on I pair,

posterior pairs with dorsal basal spine on tibiae; *epigynum*, spider has oviposited, area wider than long, median lobe as wide at anterior as at posterior end, near margins and widely separated, about midway, a pair of round chitinized pits, near posterior margin a second pair of pits that are directly below anterior pair, median area between pits strongly convex.

Holotype ♀ Puerto Rico; Maricao Forest, 2,500 feet, 2-3 June 1938, (Darlington).

The genus *Celaetycheus* was established by Simon in 1897 for a species based on a female from Rio Salobro, Brazil. Since then, F. O. P. Cambridge has added a species from Panama based on a male and Franganillo a species from Cuba, now known by both male and female. The genus differs from *Oligoctenus* by the lack of scopula on the anterior pairs of legs and the small oval a.l.e. The species from Cuba and Puerto Rico have the p.m.e. and the p.l.e. subequal instead of the p.l.e. smaller and eventually may be placed in another genus. Also, *Celaetycheus strenuus* differs from the description of the genotype, by the fewer teeth on the margin of the fang groove. According to F. O. P. Cambridge in his revision of the Ctenidae of the Lower Amazon, this character is of minor importance.

Family SPARASSIDAE

Sub-fam. MICROMMATINAE

Genus ITATIAYA Mello-Leitão 1915

Itatiaya isolata spec. nov.

Figures 18, 21

Female. Length, 6.5 mm., ceph., 3.0 mm. long, 2.5 mm. wide, abd., 3.5 mm.

Cephalothorax brown with a wide pale median stripe from p.l.e. which narrows at posterior margin to much less than half greatest width, sides veined with a darker brown, anterior margin not much narrowed, thoracic groove very long and near posterior margin, carapace gently convex with a few short hairs, highest midway between eyes and groove; *eyes*, anterior row strongly recurved, posterior margin of a.m.e. and anterior margin of a.l.e. form a straight line, a.m.e. largest of the eight, separated by a scant diameter, a.l.e. round on low tubercles, two thirds diameter of a.m.e. and separated from them by little more than a radius,

posterior row strongly recurved, longer than anterior row, p.m.e. subequal with a.l.e., slightly nearer each other than to p.l.e., p.l.e. on tubercles directed backwards and slightly larger than p.m.e.; a.l.e., p.m.e. and p.l.e. surrounded by black; *quadrangle* higher than wide and as wide behind as in front; *clypeus* narrow, about a radius of a.m.e., margin with a few long hairs; *mandibles* brown, with several long hairs, no boss, fang groove oblique, poorly defined, superior margin with three distinct teeth, inferior margin with two small, widely separated teeth, fang long and evenly curved; *labium* slightly wider than long, lateral margins on basal half slightly excavate; *maxillae* more than twice as long as labium, not inclined, sides parallel; *sternum* pale, convex, slightly wider than long, widely truncate anteriorly, with a small point between IV coxae, IV coxae separated by about half a diameter; *abdomen* oval, dorsum flat, pale, vaguely mottled with dark brown, which on posterior half forms four small chevrons, sides with dark brown stripes, venter pale with a few vague darker spots; *legs*, II left missing, 4-1-3-2, differing little in length, paler than median stripe on cephalothorax, femora with vague darker rings, all trochanters notched, metatarsi I and II with scant iridescent scopula, spines, I pair, femur, dorsal, 1-1-1, prolateral, 1-1, retrolateral, 0, ventral, 0, patella, 0, tibia, dorsal, 0, prolateral, 2, ventral, 2-2-2, none apical, retrolateral, 1, metatarsus, ventral, 2-2, with a thin iridescent scopula, II pair, femur same as I pair, tibia, ventral, 2-2-2, metatarsus, 2-2; *epigynum*, area almost twice as wide as long, divided by a narrow septum, each side a white oval convex area, with an elongate dark mark at anterior end and an oval opening at base, the openings widely separated.

Male. Length, 4.5 mm., ceph., 2.5 mm. long, 2.4 mm. wide, abd., 2.1 long.

Cephalothorax, coloring same as in female, carapace wider in proportion; *eyes*, a.m.e. smaller than in female, seen from above oval, other eyes more closely grouped, so that quadrangle is longer; *mandibles* smaller, fang groove oblique and poorly defined, superior margin with scopula of long hairs, three teeth, median largest as in female, inferior with two small widely separated teeth; *labium* and *maxillae* as in female; *sternum*, pale, wider than long, (1.5:1.2); *abdomen* oval, dorsum flat, anterior medium half pale, posterior half clouded with dark brown, sides dark, venter pale; *legs* very long and slender, right III and IV and left IV missing, anterior metatarsi not scopulate, prolateral spines on anterior metatarsi; *palpus* longer than cephalothorax, patella with one short dorsal spine, tibia longer than cymbium, bent with a slender chit-

inized retrolateral apophysis at tip and a much larger retrolateral apophysis near base with a short ventral apophysis below, best seen in a lateral view, cymbium produced in a flattened triangular lobe at basal retrolateral corner, for palpal organ see figure, prolateral half of organ half covered with thin transparent membrane.

Holotype ♂ Puerto Rico, El Yunque, 3,000 feet, May 1938, (Darlington).

Allotype ♀ Puerto Rico, El Yunque, 3,000 feet, May 1938, (Darlington).

The generic position of this species is uncertain. In recent years Mello-Leitão has erected several genera based on South American species that have a flat cephalothorax. These are separated by the number of teeth on the lower margin of the fang groove and the number of ventral spines on the anterior tibiae and metatarsi. Little is known about the male palpus.

Genus *OLIOS* Walckenaer 1837

Olios darlingtoni spec. nov.

Figures 14, 16

Male. Length, 8.0 mm., ceph., 4.1 mm. long, 3.6 mm. wide, abd., 3.8 mm.

Cephalothorax pale brown, sparsely covered with short hairs and longer bristles, the latter most numerous about the eyes, radial striae indicated by broken lines, thoracic groove short, the usual long bristles about the posterior margin; *eyes*, anterior row straight, a.m.e. largest of the eight, separated by little more than a diameter, a.l.e. on low tubercles, separated from a.m.e. by a diameter of a.l.e., posterior row very slightly procurved, eyes equidistant, p.m.e. separated by fully two diameters, p.l.e. smaller than p.m.e., lateral eyes almost touching, a.l.e. larger than p.l.e.; *quadrangle* as wide in front as behind and as high as long; *clypeus* about equals a radius of a.m.e. with many long bristles on the margin; *mandibles* same color as cephalothorax with rows of bristles, no boss, fang groove oblique, three strong teeth on superior margin and two widely separated small teeth on inferior margin; *labium* pale, as wide as long, tip rebordered; *maxillae* pale, more than twice as long as labium, sides parallel; *sternum* pale, as long as wide, flat; *abdomen* oval, pale yellow, with scattered dark spots, covered with short pale hairs and longer dark bristles, venter same color as dorsum with scattered dark

spots; *legs*, 2-1-4-3, very little difference in length of anterior pairs, same color as cephalothorax, distal joints darker, spines, I pair, tibia, dorsal, 1, prolateral, 3, retrolateral, 3, ventral, 2-2-2, metatarsus, dorsal, 0, prolateral, 2, retrolateral, 2, ventral, 2, all tarsi and metatarsi scopulate; *palpus* about as long as cephalothorax, tibia about as long as patella, with two heavily chitinized apophyses very similar to *Olios bicolor* Banks but palpal organ with many more processes than is shown in either the Banks or the Petrunkevitch drawings; the central pale apophysis is bent at a right angle near the end and continues as a very slender filament, the retrolateral process is small with tip rolled over; best seen from a lateral view is a dark process about the middle beneath the others, the embolus is probably the dark process that is at the prolateral margin and ends near the tip; the posterior retrolateral corner of the cymbium is produced in a chitinized lobe opposite the large tibial apophysis.

Holotype ♂ Puerto Rico; El Yunque, 3,000 feet, May 1938, (Darlington).

Olios darlingtoni differs from *O. bicolor* Banks, also found in Puerto Rico, by the smaller size, color, slight difference in the eyes but mostly in the more complicated palpus.

Family CLUBIONIDAE

Genus *Anyphaena* Sundevall 1833

Anyphaena decora spec. nov.

Figure 15

Female. Length, 4.0 mm., ceph., 1.6 mm., abd., 2.6 mm.

Cephalothorax pale, area from posterior margin to posterior margin faintly shaded with gray, anterior margin only slightly narrowed, thoracic groove faint, a pair of bristles posterior to thoracic groove directed forward; *eyes*, all eyes surrounded by bright red rings, anterior row straight, eyes very unequal in size, a.m.e. very small, separated by more than a diameter, with a long recurved bristle between, a.l.e. separated from a.m.e. by almost a diameter of a.l.e., posterior row longer than anterior row, recurved, eyes subequal and equidistant, lateral eyes separated by radius of a.l.e.; *quadrangle* much narrower in front and higher than wide; *clypeus* less than a diameter of a.l.e. with a long bristle on margin below a.l.e.; *mandibles* same color as cephalothorax, elongate, only slightly convex, fang groove oblique, scopula of long hairs on superior margin; *labium* pale, twice as long as wide; *maxillae* pale, once and a

half as long as labium, slightly emarginate on outer side, apex only slightly widened; *sternum* pale, convex, almost twice as long as wide; *abdomen* whitish, streaked with gray, with a small gray spot above spinnerets, venter pale, no marks, opening of spiracle midway between fold and base of spinnerets; *legs*, II right missing, 1-2-4-3, pale, tarsi darker, spines, I pair, tibia ventral, 2-2, prolateral, 2, retrolateral, 2, metatarsus, ventral, 2, prolateral, 2, retrolateral, 2; *epigynum*, area wider than long, a pair of dark spear-shaped sacs beneath the skin, slightly oblique, do not quite touch on median margin, directly above fold, openings apparently near posterior end, anteriorly two slender oblique dark lines connect with larger sacs at small end.

Holotype ♀ Puerto Rico; El Yunque, 3,000 feet, May 1938, (Darlington).

Paratype ♀ Puerto Rico; El Yunque, 3,000 feet, May 1938, (Darlington).

Petrunkévitch did not find a true *Anyphaena* at Puerto Rico. *Anyphaena decora* is similar to *A. diversa* Bryant from Sierra de Cobre, Cuba. The Puerto Rican species is smaller and more slender, the eyes are surrounded by red instead of black, there are bristles on margin of the clypeus, between a.m.e. and a pair on the posterior slope of the carapace; in the epigynum, the dark sacs are slightly oblique and the openings are apparently above the fold.

Genus WULFILA O. P. Cambridge 1896

Wulfila isolata spec. nov.

Figure 20

Male. Length, 3.3 mm. without mand., ceph., 1.6 mm., abd., 1.6 mm.

Cephalothorax pale brown with a wide median darker stripe from p.l.e. to posterior margin, an indented dark marginal line, anterior margin very little narrowed, thoracic groove lightly impressed; *eyes*, anterior row straight, a.m.e. punctiform, separated by little more than a diameter, with a long bristle between, a.l.e. largest of the eight, convex and on a distinct tubercle, posterior row slightly longer than anterior, straight, eyes subequal and equidistant, p.l.e. on a low tubercle, posterior to p.l.e. is a long bristle; *quadrangle* very narrow in front and longer than wide; *clypeus* about twice as wide as a.m.e.; *mandibles* pale, shaded with a median brown stripe, porrect, long and slender, no boss, fang groove oblique, superior margin with a dark carina and one distinct tooth, in-

ferior margin with a very short carina near base of fang and no teeth, fang long; *labium* pale, more than twice as long as wide, tip slightly notched; *maxillae* fully three times as long as wide, slightly concave on outer margin, not twice as long as labium; *sternum* pale, triangular, flat; *abdomen* pale shaded with gray, with a pair of dark basal spots, a pair of spots anterior to the middle and a dark spot above the spinnerets, venter shaded with gray, opening of spiracle about the middle; *legs*, I pair missing, -2-4-3, pale with distinct rings on all joints, spines, II pair, tibia, ventral, 2-2, prolateral, 3, retrolateral, 3, metatarsus, ventral, 2-2, prolateral, 2, retrolateral, 2; *palpus*, longer than cephalothorax, pale, tibia longer than terminal joint, tibial apophysis seen laterally has a broad truncate tip, palpus long and slender, embolus a slender spine beneath a rather heavy conductor in upper portion of palpus.

Holotype ♂ Puerto Rico; El Yunque, 3,000 feet, May 1938, (Darlington).

Wulfla isolata is smaller than *W. tropica* Petr., also found at El Yunque; it is darker and differs in three rather important characters, a.m.e. are very close together with a long bristle between, no teeth on the inferior margin of the fang groove, (*W. tropica* has three large, widely separated teeth) and by the much larger tibial apophysis, besides the differences in the palpal organ.

Family SALTICIDAE

Genus CORYTHALIA C. Koch, 1850

Corythalia tristriata spec. nov.

Figures 13, 17

Male. Length, 3.7 mm., ceph., 2.1 mm., abd., 1.7 mm.

Cephalothorax dark, with a line of white iridescent scales above anterior eye row, continued as converging lines inside dorsal eyes to near posterior margin and a broader line of white scales from clypeus to posterior of dorsal eyes where it meets the longer line, cephalic portion high, sides vertical, thoracic groove short in a crescent depression, thoracic portion not much lower than cephalic until the posterior third when it slopes rapidly, ocular area almost black with a green iridescence; *eyes*, anterior row strongly recurved, a.m.e. very large, separated by a line and a little more from the a.l.e., a.l.e. little more than radius of a.m.e., small eyes midway between first and third rows, dorsal eyes on extreme margin of carapace, convex and subequal with a.l.e.; *quadrangle* slightly wider

in front than behind; *clypeus* retreating, less than half a radius of a.m.e. with a fringe of long hairs on margin and two long bristles projecting forward, below and between a.m.e.; *mandibles* rather small, brown, vertical, with two parallel rows of white iridescent scales on each, a prolateral and a median which meet at tip, median margin excavate as in *Corythalia glorieae* Petr., fang groove horizontal, very short, superior margin with one tooth with tip bifid, at median margin, inferior margin with a sharp tooth a little nearer the base of the fang, fang rather short; *labium* brown, longer than wide, tip rebordered; *maxillae* brown, about twice as long as labium, sides parallel, tip slightly widened; *sternum*, brown, almost as wide as long (4:5), IV coxae almost touching; *abdomen* a pointed oval, dorsum flat, very dark brown, with a basal band of white iridescent scales which extends on sides more than half way to spinnerets and two narrow parallel stripes of white scales from base to spinnerets, dividing the dark area into three equal portions, venter pale with irregular dark blotches, spinnerets long and slender; *legs*, 1-3-4-2, anterior pairs heavier, with a broad prolateral dark stripe heaviest on tibiae and metatarsi, other parts of the legs brown, posterior pairs brown with femora and tibiae darker, spines, I pair, patella, prolateral, 1 very small, tibia, dorsal, 0, ventral, 2 apical, 1r-1r, prolateral, 1, retrolateral, 0, metatarsus, dorsal, 0, ventral, 2-2, prolateral, 2, retrolateral, 1 (apical), a thick prolateral brush of short hairs on patella and tibia, II pair, spines same as on I pair, III pair, patella prolateral, 1, retrolateral, 1, tibia, dorsal, 0, ventral, 1 near base, prolateral, 2, retrolateral, 2, metatarsus, apical whorl of 6 spines, median whorl of 4 spines, IV pair, patella, prolateral, 1, retrolateral, 1, tibia, dorsal, 0, ventral, 2 apical, prolateral, 2, retrolateral, 2, metatarsus, 3 whorls; *palpus*, short, with scattered white iridescent scales on patella and tibia, patella longer than tibia, tibial apophysis rather short, terminal joint little longer than patella plus tibia, bulb fills cavity, embolus a straight black spine at tip.

Female. Length, 4.6 mm., ceph., 2.1 mm., abd., 2.6 mm.

Cephalothorax same as in male but the stripes of white iridescent scales have been brushed off and few remain; eye area black; *eyes* same as in male; *clypeus* as in male, with three long bristles below a.m.e.; *mandibles* brown, cone-shaped, no lines of white scales as in male, fang groove horizontal, short, teeth same as in male; *abdomen* a broad oval, same stripes as in male, but median dark stripe with posterior margins irregular, venter pale with dark spots, spinnerets, long and pale; *legs*, 3-1-4-2, pale brown, with few dark hairs, so spines are easily seen, spines, I pair, patella, 1 small prolateral, tibia, dorsal, 0, ventral, 2-2-2,

prolateral, 2, small, retrolateral, 0, metatarsus, dorsal, 0, ventral, 2-2, prolateral, 0, retrolateral, 0, II pair, same as I pair but metatarsus with 2 retrolateral, III pair, patella, prolateral, 1, retrolateral, 1, tibia, dorsal, 0, ventral, 2 apical, 1 p, basal, prolateral, 2, retrolateral, 2, metatarsus, 2 whorls, apical of 6 spines, IV pair, patella, prolateral, 1, retrolateral, 1, tibia, dorsal, 0, ventral, 0, prolateral, 2, retrolateral, 2, metatarsus, 3 whorls; *epigynum* with two pairs of sacs beneath the skin, the larger (posterior) separated by a diameter and a half, area between strongly convex, and the smaller (anterior) almost touching and separated by a small dark lobe.

Holotype ♂ Puerto Rico; Maricao Forest, 2,500 feet, June 1938, (Darlington).

Allotype ♀ Puerto Rico; Maricao Forest, 2,500 feet, June 1938, (Darlington).

Corythalia tristriata is separated from *Corythalia gloriae* Petrunkevitch, also found in Puerto Rico, by the lines of white iridescent scales on the cephalothorax and abdomen and in the male by the lines of scales on the mandibles. Each have the median area of the mandibles excavate in the male and the teeth on the very short fang groove are the same. Neither species belongs to the genus *Corythalia* in the strict sense, as the first pair of legs is longer than the third pair, none of the legs have a heavy fringe of hair, and in the palpus the embolus is a short spine at the tip, rather than a long slender piece from the side.

EXPLANATION OF PLATE I

- FIG. 1. *Oonops viridans* spec. nov., cephalothorax.
 FIG. 2. *Theridion maricaoensis* spec. nov., left palpus, ventral view.
 FIG. 3. *Theridion maricaoensis* spec. nov., left palpus, dorsal view.
 FIG. 4. *Theridion maricaoensis* spec. nov., eyes, dorsal view.
 FIG. 5. *Larinia silvestris* spec. nov., dorsal view.
 FIG. 6. *Pseudometa hamata* spec. nov., left palpus, dorsal view.
 FIG. 7. *Larinia silvestris* spec. nov., male, front of head.
 FIG. 8. *Pseudometa hamata* spec. nov., epigynum.
 FIG. 9. *Pseudometa hamata* spec. nov., paracymbium, ventral view.
 FIG. 10. *Larinia silvestris* spec. nov., left palpus, prolateral view.
 FIG. 11. *Larinia silvestris* spec. nov., left palpus, retrolateral view.

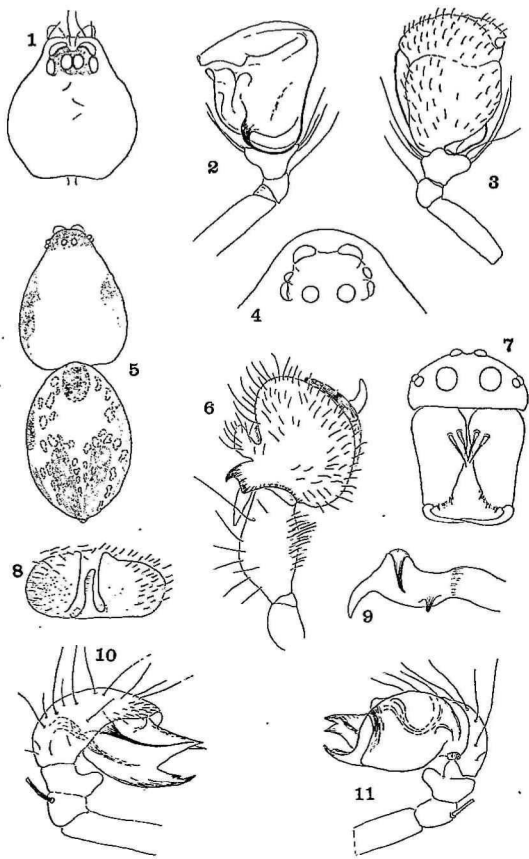
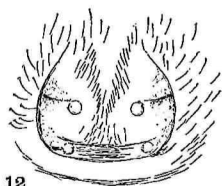


PLATE 1

EXPLANATION OF PLATE 2

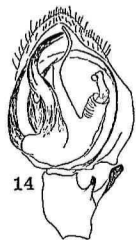
- FIG. 12. *Celaetycheus strenuus* spec. nov., epigynum.
FIG. 13. *Corythalia tristriata* spec. nov., left palpus, ventral view.
FIG. 14. *Olios darlingtoni* spec. nov., left palpus, ventral view.
FIG. 15. *Anyphaena decora* spec. nov., epigynum.
FIG. 16. *Olios darlingtoni* spec. nov., left palpus, dorsal view.
FIG. 17. *Corythalia tristriata* spec. nov., epigynum.
FIG. 18. *Itatiayo isolata* spec. nov., epigynum.
FIG. 19. *Celaetycheus modesta* spec. nov., left palpus, prolateral view.
FIG. 20. *Wulfilia isolata* spec. nov., left palpus, ventral view.
FIG. 21. *Itatiayo isolata* spec. nov., left palpus, ventral view.



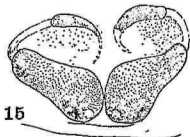
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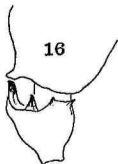
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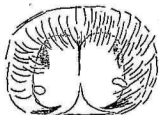
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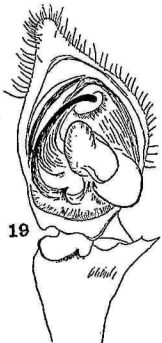
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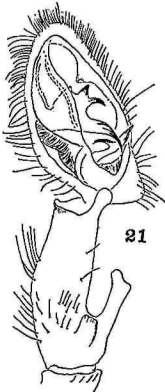
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