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REPORT ON A COLLECTION OF SPIDERS FROM MEXICO. V

BY W. J. GERTSCH AND L. IRBY DAVIS

This is the fifth in the series of papers under the above title and is concerned with the larger members of the sheet-web weavers of the family Linyphiidae. Most of the species have proved to be undescribed, and relatively few are identical with those delineated by the Cambridges in the "Biologia Centrali-Americana." Representatives of two new genera are in the material. One of them, *Selenyphantes*, is based on a previously described species from Guatemala, placed by O. P.-Cambridge in *Lepthyphantes*. In the second genus, *Jalapyphantes*, are placed three well-marked but closely allied species.

Our sincere thanks are due to the individuals who have contributed material to this collection. Proper credit is given to each collector responsible for securing the specimens noted in the various records. At this time the authors wish to acknowledge the receipt of some very important collections from many parts of Mexico, placed in our custody, from Drs. Frederico Bonet and C. Bolivar Pieltain of Mexico City. An increasing number of records from this material will be published in this series and in other papers dealing with the Mexican fauna.

The types of the new species are deposited in the collection of the American Museum of Natural History. Paratypes and duplicates of known species will be placed in the personal collections of Drs. Bonet and Bolivar.

GENUS FRONTINELLA F. CAMBRIDGE

Frontinella F. CAMBRIDGE, 1902, *Biologia Centrali-Americana*, Arachnida, vol. 2, p. 420. (Genotype, *Frontinella laeta* Cambridge.)

Several fine species of this interesting genus are represented in the collection, but only one of them is identical with those named by F. O. P.-Cambridge. It is no-

table that the males of the three new species herein described all have the patella of the palpus set with a long dorsal spine. In all the other known species this spine is modified into a short spur.

Frontinella pyramitela Walckenaer

Linyphia pyramitela WALCKENAER, 1841, *Histoire naturelle des insectes. Aptères*, vol. 2, p. 261.

Linyphia communis HENTZ, 1850, *Jour. Boston Soc. Nat. Hist.*, p. 28, pl. 4, fig. 4.

Frontinella communis F. CAMBRIDGE, 1902, *Biologia Centrali-Americana*, Arachnida, vol. 2, p. 422; BLAUVELT, 1936, *Festschrift Embrik Strand, Riga*, vol. 2, pp. 145-149, pl. 13, figs. 90-94, pl. 14, fig. 95.

It seems quite probable that *Frontinella rustica* F. Cambridge, based on a female from Orizaba, Mexico, represents this abundant, widespread species.

RECORDS: Tamaulipas: Hacienda San Rafael, 6 miles east of Villa Juarez, July 7, 1941, three females (L. I. Davis); 14 miles south of Villa Juarez, April 12, 1941, two females (A. M. Davis); 8 miles north of Victoria, April 13, 1941, two females (A. M. Davis); Rio Guayalejo, near Forlon, April 16, 1938, one female (L. I. Davis and Bryce Brown); 2 miles east of Nuevo Morelos, December 2, 1939, two females (A. M. Davis); Rio Frio at Limon, April 18, 1938, two females (L. I. Davis); 7 miles south of Hidalgo, July 3, 1936, one female (L. I. Davis); Sierra de Tamaulipas, 2700 feet, August 4-7, 1945, two females (H. Wagner). Nuevo Leon: Linares, July 8, 1941, two females (L. I. Davis); Monterrey, June 10, 1936, one female (L. I. Davis); 10 miles west of Cadereyta, July 6, 1936, one female (L. I. Davis). San Luis Potosi: Arroyo Calabaza, 21 miles south of Valles, November 30, 1940, one female (A. M. Davis); 24 miles south of Valles, April 12, 1941, three females (A. M.

Davis); 4 miles south of Valles, March 23, 1940, females (M. B. Bishop); Tamazunchale, July 6-7, 1941, one male, two females (L. I. Davis); 20 miles east of Ciudad del Mais, March 23, 1940, three females (A. M. and L. I. Davis); Xilitla, December 2, 1939, female (L. I. Davis). Distrito Federal: Pedregales, August, 1909, one male, one female (A. Petrunkevitch). Sonora: 27 miles south of Nogales, June 15, 1939, two females (A. M. and L. I. Davis). Puebla: 7 miles south of Tlacotepec, June 24, 1936, one female (A. M. and L. I. Davis); Riofrio, 3000 meters, April 26, 1942, one male (C. Bolivar, B. Osorio, D. Peláez); Tehuacan, October 17-24, 1944, males and females (H. Wagner). Vera Cruz: Cordoba, 1909, one female (A. Petrunkevitch). Morelos: Tequesquitengo, July 4-11, 1944, female (H. Wagner).

Frontinella huachuca, new species

Figures 4 and 5

FEMALE: Total length, 4.75 mm. Carapace, 2.00 mm. long; 1.40 mm. wide. Abdomen, 2.70 mm. long; 1.75 mm. wide.

Carapace pale yellowish brown, the pars thoracica faintly marked with dusky radiating lines, the clothing a very sparse covering of inconspicuous short hairs. Eye tubercles black. Sternum and venter of the abdomen brown. Coxae and legs pale yellowish brown without markings. Dorsum of abdomen creamy white, medially marked with a narrow longitudinal darker streak from which radiate small darker lines. Sides of the abdomen creamy white but with five darker bands or streaks on each side. Spinnerets and area above anal tubercle brown.

Structure typical, in very close agreement with *pyramitela* and related species. Eye group occupying three-fifths of the width of the carapace. First row of eyes essentially straight as seen from in front but strongly recurved as seen from above, the median separated by less than their radius, a little more than a full diameter from the slightly larger lateral eyes. Posterior eye row moderately recurved, the median separated by two-thirds their diameter, nearly one and one-half diameters from the subequal lateral eyes. Lateral

eyes of each side contiguous, median ocular quadrangle longer than broad (30/25), narrowed in front (25/22), the front eyes a little smaller. Clypeus equal in height to two full diameters of the anterior median eyes. Chelicerae normal, the upper margin armed with six teeth, the lower with five. Sternum, 1.20 mm. long, 0.95 mm. wide, bluntly pointed between the posterior coxae which are separated by about one-half their width.

Legs of about normal length for the genus. First leg: femur, 3.00 mm.; patella, 0.70 mm.; tibia, 2.60 mm.; metatarsus, 3.00 mm.; tarsus, 1.50 mm. Tibia and patella of fourth leg, 2.35 mm.

Abdomen as high as wide, oval as seen from above, as high immediately above the spinnerets as at center, without pronounced caudal tubercle. Epigynum as shown in figure 5.

MALE: Total length, 4.10 mm. Carapace, 2.10 mm. long, 1.35 mm. wide. Abdomen, 2.20 mm. long, 1.00 mm. wide.

Coloration and general appearance essentially as in the female. Legs and carapace concolorous, light yellowish brown. Sternum and venter of the abdomen dark brown. Dorsum and sides of the abdomen grayish brown but with numerous white flecks.

Structure essentially as in the female. Eyes of the first row moderately recurved as seen from in front, the median separated by less than the radius, about a diameter and a half from the larger lateral eyes. Posterior row of eyes as in the female. Clypeus higher, equal in height to fully three diameters of the median eye. Median ocular quadrangle longer than broad as in the female and narrowed in front at about the same ratio. Chelicerae essentially as in the female, the lower margin with five teeth, the upper margin somewhat produced at tip of fangs into a low process which bears two moderately robust teeth, two smaller ones, and a small but robust tooth set above the other larger ones. Fang moderately incassated at the middle. Chelicerae evenly covered with small pits from which originate short black hairs. Sternum, 1.10 mm. long, 0.80 mm. wide.

Legs as usual, longer than in the female,

set with a few stout hairs and very weak spines. First leg: femur, 2.75 mm.; patella, 0.60 mm.; tibia, 2.30 mm.; metatarsus, 3.00 mm.; tarsus, 1.40 mm. Tibia and patella of the fourth leg, 2.20 mm. long.

Palpus relatively short, set with short stiff hairs, the patella with a long, unmodified dorsal spine. Details of the lamella of palpus as illustrated in figure 4.

TYPE LOCALITY: Male holotype and female allotype from Bear Wallow, Santa Catalina Mountains, Arizona, July 12-15, 1940 (Gertsch and Hook).

RECORDS: Arizona: Madera Canyon, Santa Rita Mountains, June 24, 1939, two male and two female paratypes (A. M. and L. I. Davis); Huachuca Mountains, July 21, 1936, two female paratypes (Knull); Chiricahua Mountains, August 29, 1938, female paratype (R. H. Crandall).

Frontinella huachuca benevola,

new subspecies

Figures 1, 2, and 3

The Mexican specimens considered here, which seem undoubtedly to belong to the species defined above, agree completely or nearly so in coloration and general structure with examples of *huachuca*. However, certain constant differences in the details of parts of the palpus, which is shown in figure 1, seem significant. In both forms the patella is provided with a long, fine spine which replaces the spur of all previously described species. The ventral aspect of the palpus presents a large lateral apophysis (lamella of the embolic division) which gives rise to a rather slender caudal spur and a long, slender, laterally directed element which curves across the tegulum and sweeps far beyond. Both of these spurs are somewhat differently formed, the caudal one especially being more slender than in *huachuca*, as can be seen by comparison with figure 4. The epigyna of the females also show some differences. In *benevola* the openings are somewhat nearer together and the caudal projection is not so prominent.

TYPE LOCALITY: Male holotype, female allotype, and paratypes from Horsetail Falls, Nuevo Leon, November 27, 1937 (L. I. Davis and Bryce Brown). Male

and female paratypes from same station, June 11, 1936 (A. M. and L. I. Davis). Male and female paratypes from Chimpingue, Monterrey, Nuevo Leon, July 15, 1942 (F. Bonet, B. Osorio, D. Peláez).

Frontinella tibialis F. Cambridge

Frontinella tibialis F. CAMBRIDGE, 1902, *Biologia Centrali-Americana*, Arachnida, vol. 2, p. 422, pl. 40, figs. 7-76.

RECORDS: Vera Cruz: Potrero, June 24, 1936, one male (L. I. Davis).

Frontinella potosia, new species

Figures 7, 8, and 9

FEMALE: Total length, 5.00 mm. Carapace, 1.80 mm. long, 1.20 mm. wide. Abdomen, 3.00 mm. long, 2.00 mm. wide.

Carapace yellowish brown, the pars thoracica lightly infuscated, the eye tubercles black. Chelicerae brown; sternum dusky brown. Legs dull yellowish brown, unmarked except for very narrow black rings at ends of all the joints, incomplete above. Abdomen mostly black as seen from above, margined with white flecks and with three white bands in the caudal half. The venter black, the sides black but with white bands in spots.

Structure typical, in close agreement with *pyramitela*. First row of eyes slightly recurved, the median separated by less than a radius, scarcely a full diameter from the larger lateral eyes. Posterior eye row moderately recurved, the median separated by two-thirds of the diameter, a full diameter from the equal lateral eyes. Median ocular quadrangle longer than broad (35/30), narrowed in front (30/25), the anterior eyes smaller. Clypeus equal in height to twice the diameter of the anterior median eyes. Chelicerae normal, the upper margin with six teeth, the lower with five. Sternum, 1.00 mm. long, 0.85 mm. wide, narrowed and rounded between the posterior coxae which are separated by one-half their width.

Legs of normal length, clothed thinly with fine hairs and a few very weak spines. First leg: femur, 2.75 mm.; patella, 1.15 mm.; tibia, 2.30 mm.; metatarsus, 2.60 mm.; tarsus, 1.35 mm. Tibia and patella of the fourth leg, 2.25 mm. long.

Abdomen oval as seen from above, nearly as high as broad, broadly truncate behind but without caudal tubercle. Epigynum as illustrated in figure 9.

MALE: Total length, 3.00 mm. Carapace, 1.40 mm. long, 0.97 mm. wide. Abdomen, 1.65 mm. long, 0.90 mm. wide.

Coloration essentially as in the female. Legs more brightly colored, especially the femora which are bright orange. Abdomen mostly dusky, the lighter silvery markings of the female inconspicuous.

Structure essentially as in the female. Eyes more closely grouped, first row moderately recurved, the median scarcely separated and only two-thirds their diameter from the larger lateral eyes. Posterior row of eyes moderately recurved, the median separated by two-thirds the diameter, almost a full diameter from the equal lateral eyes. Median ocular quadrangle longer than broad (30/26), narrowed in front (26/23), the eyes subequal in size, equal in height to two diameters of the anterior median eyes. Sternum, 0.80 mm. long, 0.65 mm. wide.

Legs of moderate length. First leg: femur, 2.10 mm.; patella, 0.40 mm.; tibia, 1.80 mm.; metatarsus, 2.00 mm.; tarsus, 1.10 mm. Tibia and patella of the fourth leg, 1.50 mm. long. Palpus as illustrated in figures 7 and 8.

TYPE LOCALITY: Male holotype, female allotype, and paratypes from 5 miles north of Tamazunchale, San Luis Potosi, Mexico, July 2, 1939 (A. M. and L. I. Davis).

RECORDS: San Luis Potosi: Male and female paratypes from Tamazunchale, Mexico, July 6-7, 1941 (L. I. Davis); female paratype, July 8, 1944 (L. I. Davis). Vera Cruz: Potrero, June 24, 1936, female paratype (L. I. Davis).

Frontinella caudata, new species

Figure 6

FEMALE: Total length, 6.50 mm. Carapace, 2.20 mm. long, 1.30 mm. wide. Abdomen, 4.00 mm. long, 2.30 mm. wide.

Carapace yellowish brown, lightly infuscated, the pars thoracica with the usual dusky radiating lines. Sternum and labium dark brown. Legs yellowish brown, somewhat dusky, the posterior femora and all

the coxae bright yellow. Abdomen black as seen from above, margined with a creamy white band which is complete around to the sides of the caudal tubercle; the venter black, the sides black but marked with creamy white spots and bars.

Structure in close agreement with *pyramitela* and *potosia*. First row of eyes moderately recurved, the median separated by their radius, about one and one-half diameters from the somewhat larger lateral eyes. Posterior row of eyes moderately recurved, the median separated by three-fourths their diameter, scarcely one and one-half diameters from the equal lateral eyes. Median ocular quadrangle longer than broad (35/30), narrowed in front (30/24). Clypeus equal in height to two and one-half diameters of an anterior median eye. Chelicerae normal. Sternum, 1.20 mm. long, 0.90 mm. wide.

Legs of average length for the genus. First leg: femur, 3.25 mm.; patella, 0.70 mm.; tibia, 3.00 mm.; metatarsus, 3.60 mm.; tarsus, 1.70 mm. Tibia and patella of the fourth leg, 2.70 mm.

Abdomen oval as seen from above, about as high as broad, caudally elevated into a pronounced tubercle. Epigynum as illustrated in figure 6.

TYPE LOCALITY: Female holotype and female paratype from 39 miles south of Chilpancingo, Guerrero, Mexico, June 30, 1941 (L. I. Davis).

RECORDS: Chiapas: Mapastepec, March, 1941, female paratypes (H. Wagner); Tapachula, August, 1909, two female paratypes (A. Petrunkevitch).

Frontinella lepidula, new species

Figures 10 and 11

MALE: Total length, 3.40 mm. Carapace, 1.60 mm. long, 1.05 mm. wide. Abdomen, 1.70 mm. long, 0.90 mm. wide.

Coloration in close agreement with *huachuca*. Carapace and femora of legs bright orange brown, the distal joints of the legs dusky yellowish brown. Sternum and labium dark brown. Abdomen mostly gray above, the venter dusky.

Structure typical, essentially as in *huachuca*. First eye row moderately recurved, the median separated by about

their radius, slightly more than a diameter from the larger lateral eyes. Second row of eyes moderately recurved, the median separated by a full diameter, and more than a full diameter from the equal lateral eyes. Median ocular quadrangle slightly longer than broad (26/25), narrowed in front (25/20), the front eyes smaller. Clypeus equal in height to three diameters of an anterior median eye.

Legs of normal length for the genus. First leg: femur, 2.70 mm.; patella, 0.50 mm.; tibia, 2.10 mm.; metatarsus, 2.30 mm.; tarsus, 1.35 mm. long. Tibia and patella of the fourth leg, 2.20 mm. long.

Abdomen without caudal tubercle. Palpus as illustrated in figures 10 and 11.

TYPE LOCALITY: Male holotype from Tonala, Chiapas, Mexico, August, 1909 (A. Petrunkevitch).

This is a smaller species than *tibialis* Cambridge. The embolus of the male palpus is shorter and less strongly curved at the apex, and the patella of the palpus is armed with a long curved spine instead of a short spur.

GENUS FLORINDA O. P.-CAMBRIDGE

Florinda O. P.-CAMBRIDGE, 1895, *Biologia Centrali-Americana*, Arachnida, vol. 1, pp. 164, 224. (Type, *Florinda mirifica* O. P.-Cambridge.)

Linyphiella BANKS, 1905, *Amer. Nat.*, vol. 39, p. 311. (Type, *Linyphiella coccinea* Hentz.)

Frontinella BLAUVELT (part), 1936, *Festschrift Embrik Strand*, Riga, vol. 2, p. 144.

The generic name *Florinda* antedates *Linyphiella* Banks and should be used for the well-known *Linyphia coccinea* of Hentz. Blauvelt placed the species in the genus *Frontinella*, but it is probable that *coccinea* is more closely related to, and perhaps should be kept in, the genus *Linyphia*.

Florinda coccinea Hentz

Linyphia coccinea HENTZ, 1850, *Jour. Boston Soc. Nat. Hist.*, vol. 6, p. 30, pl. 4, fig. 8.

Florinda mirifica O. P.-CAMBRIDGE, 1895, *Biologia Centrali-Americana*, Arachnida, vol. 1, pp. 164, 224, pl. 21, fig. 11.

Linyphiella coccinea BANKS, 1905, *Amer. Nat.*, vol. 39, p. 311; CHAMBERLIN AND IVIE, 1944, *Bull. Univ. Utah*, vol. 35, no. 9, p. 83.

RECORDS: Tamaulipas: Riofrio, at Limon, April 18, 1938, one female (L. I. Davis). Nuevo Leon: Linares, July 8,

1941, three males, two females (L. I. Davis). San Luis Potosi: 24 miles south of Valles, April 12, 1941, two females (A. M. Davis). Morelos: Cuernavaca, October 5, 1940, one male (J. Honey); Cuernavaca, male type of *mirifica* (H. H. Smith, Godman and Salvin collection). Guatemala: Gualan, January 5, 1905, one male.

GENUS LINYPHIA LATREILLE

Linyphia LATREILLE, 1804, *Nouv. Dict. d'Hist. Nat.*, vol. 24, p. 134. (Type, *Araneus triangularis* Clerck.)

Linyphia limbata F. Cambridge

Neriene limbata F. CAMBRIDGE, 1902, *Biologia Centrali-Americana*, Arachnida, vol. 2, p. 420, pl. 39, fig. 23.

RECORDS: Morelos: 7 miles north of Cuernavaca, July 3, 1941, one female (A. M. and L. I. Davis). Vera Cruz: Jalapa, to 10 miles west, June 23, 1936, one female (L. I. Davis).

Linyphia duplicata Cambridge

Neriene duplicata F. CAMBRIDGE, 1902, *Biologia Centrali-Americana*, Arachnida, vol. 2, p. 418, pl. 39, fig. 11.

RECORDS: Mexico: Mountain Pass east of Mexico City, June 20, 1936, eight females (A. M. and L. I. Davis); San Rafael, 2700 to 3000 meters, February 1, 1942, two females (C. Bolivar). Puebla: Riofrio, 3000 meters, April 26, 1942, two males (C. Bolivar, B. Osorio, D. Peláez). Distrito Federal: National Park, near Las Cruces, June 11, 1941, one female (A. M. and L. I. Davis).

The females assigned to the present species, which was based solely on the male, are very closely allied to *limbata* F. Cambridge. However, they are somewhat larger in size, are seemingly more slender, and have the inverted, T-shaped septum of the epigynum proportionately longer. It should be noted, however, that in none of the records are males and females associated in the same collection. There is also considerable variation in the epigynum.

Linyphia nigrita F. Cambridge

Neriene nigrita F. CAMBRIDGE, 1902, *Biologia Centrali-Americana*, Arachnida, vol. 2, p. 419, pl. 39, figs. 19, 19a.

RECORD: Hidalgo: Jacala, June 13, 1936 one female probably this species (A. M. and L. I. Davis).

Linyphia chiapasica, new species

Figure 14

FEMALE: Total length, 2.75 mm. Carapace, 1.07 mm. long, 0.80 mm. wide. Abdomen, 1.70 mm. long, 1.15 mm. wide.

Carapace bright yellow, the pars cephalica with a dusky marginal band and faint dusky radiating lines. The eye tubercles black. Chelicerae and maxillae bright yellow. Sternum and labium dusky brown. Legs dusky yellowish brown. Abdomen mostly white above, with a pair of small black spots on each side at front of caudal half, and a large black spot at apex above the spinnerets. Venter white but with a dusky band from epigynum nearly to apex. Sides white but with a black spot at the base and a wide black band which continues back and joins the black spot visible from above.

Carapace longer than broad, broadly rounded in front, the eye group occupying nearly the full width of the head. First row of eyes essentially straight as seen from in front, the median separated by scarcely the radius, their diameter from the larger lateral eyes. Second row of eyes moderately recurved, the large median on conspicuous black tubercles, separated by about their diameter, very near the smaller lateral eyes which are only two-thirds the diameter of the median. Median ocular quadrangle broader than long (32/26), narrowed in front (32/16), the front eyes very much smaller, about half the diameter of the posterior median eyes. Clypeus equal in height to about two diameters of an anterior median eye. Chelicerae normal, the upper margin with five teeth, of which the median three are considerably larger, the lower margin with five subequal, small teeth. Sternum, 0.60 mm. long, 0.54 mm. wide.

Legs of normal length for the genus, armed with fine hairs and a few weak spines, the first tibia with two pairs of ventral spines. First leg: femur, 1.65 mm.; patella, 0.35 mm.; tibia, 1.55 mm.; metatarsus, 1.58 mm.; tarsus, 0.97 mm.

Abdomen suboval as seen from above, produced slightly forward over the pedicel, in front about as high as broad, rounded at distal end without conspicuous anal tubercle. Epigynum as illustrated in figure 14.

TYPE LOCALITY: Female holotype from Catharinas, Chiapas, Mexico, 1400 meters, May 4-22, 1942 (H. Wagner).

This pretty species is easily separated from known forms by the bright color pattern and especially by the epigynum which is illustrated. The median septum is a very narrow, linear ridge.

Linyphia xilitla, new species

Figure 13

FEMALE: Total length, 3.70 mm. Carapace, 1.30 mm. long, 0.80 mm. wide. Abdomen, 2.50 mm. long, 1.30 mm. wide.

Carapace dark brown with darker radiating streaks on the pars thoracica, the eye tubercles black. Sternum and mouth parts dark brown. Legs dusky yellowish brown. Abdomen black, except for a few small paler flecks on the dorsum and four larger white spots on each side.

Structure essentially as in *chiapasica*. First row of eyes essentially straight as seen from in front, the median separated by their radius, a full diameter from the larger lateral eyes. Second row of eyes moderately recurved, the large median eyes or conspicuous tubercles on a median elevation, separated by their diameter, only a fourth as far from the smaller lateral eyes. Median ocular quadrangle broader than long (30/26), narrowed in front (30/20), the front eyes very much smaller. Clypeus equal in height to two and one-half diameters of an anterior median eye. Chelicera normal, the upper margin with five large unequal teeth, the lower with five smaller ones. Sternum, 0.80 mm. long, 0.56 mm. wide.

Legs weakly spined, the first tibia with two ventral pairs but without apical spines. First leg: femur, 1.85 mm.; patella, 0.45 mm.; tibia, 1.60 mm.; metatarsus, 1.75 mm.; tarsus, 0.95 mm. Tibia and patella of the fourth leg, 1.65 mm. long.

Abdomen as seen from above, a long oval, rather pointed behind, nearly as high as long, distally produced above the spinner-

ets into a pointed tubercle. Epigynum as illustrated in figure 13.

TYPE LOCALITY: Female holotype from Cordoba, Vera Cruz, Mexico (A. Petrunkevitch).

RECORDS: San Luis Potosi: Xilitla, December 2, 1939, female paratype (A. M. and L. I. Davis); Tamazunchale, July 10, 1939, female paratype (A. M. and L. I. Davis).

This pretty species seems to be closely allied to *pallida* Cambridge described from Guatemala, if one may judge from the similarity of the epigynum. However, the great differences in coloration and pattern would seem to preclude the possibility that the strongly marked Mexican specimens are the same.

SELENYPHANTES, NEW GENUS

A genus of the subfamily Linyphiinae. Carapace much longer than broad (100/72), broadly rounded in front, the head at the second eye row three-fifths as wide as the carapace. Clypeus sloping forward, equal in height to two diameters of an anterior median eye. First row of eyes straight as seen from in front, the median separated by about their radius, two full diameters from the slightly larger lateral eyes. Second eye row gently recurved, the median separated by slightly more than the diameter, a little farther from the subequal lateral eyes. Lateral eyes of each side subequal, contiguous on a low, connate tubercle. Median ocular quadrangle slightly longer than broad, much narrower in front, the posterior eyes larger. Pedipalp of female with claw. Legs long and slender, the first femur twice as long as the carapace, the fourth tibia with two dorsal spines. Embolus of male palpus a long, fine spine.

GENOTYPE: *Leptyphantes longispinosa* O. P.-Cambridge.

Selenyphantes is related to *Linyphia*, *Helophora*, and allied genera, but differs in having longer legs, in the details of the eye relations, and especially in the genitalia. The epigynum of the female lacks a prominent scape. The male palpus is very similar to that of *Jalapyphantes cuernavaca*, a

species which is otherwise very different in appearance.

Selenyphantes longispinosa

O. P.-Cambridge

Figure 12

Leptyphantes longispinosa O. P.-CAMBRIDGE, 1902, *Biologia Centrali-Americana, Arachnida*, vol. 1, p. 188, pl. 23, figs. 8-8f.

RECORD: Vera Cruz: Jalapa to 10 miles west, June 23, 1936, male and two females (A. M. and L. I. Davis).

The female of this species is very similar in appearance to the male but has the unmarked, pale abdomen proportionately stouter. The epigynum (fig. 12) is on a moderately elevated prominence and shows a broad median piece which is shallowly excavated on each side in front.

JALAPYPHANTES, NEW GENUS

A genus of the subfamily Linyphiinae. Carapace somewhat longer than broad, broadly rounded in front, the pars cephalica quite broad, equal in the female to about three-fifths the greatest width of the carapace. Clypeus sloping gently forward, equal in height to about three diameters of an anterior median eye. Maxillae longer than wide. Eyes of first row straight, subequidistantly spaced, the median smaller. Lateral eyes subequal, contiguous on connate tubercles. Posterior eye row gently recurved, subequally spaced and subequal in size. Median ocular quadrangle as long as or slightly longer than broad. Upper margin of the chelicera with three large teeth, the lower margin with six small teeth. Pedipalp of female with claw. Legs quite stout, rather sparsely set with spines, many of which are lateral in position. Fourth tibia with two dorsal spines. Abdomen subglobose, elevated in front. Embolus of male palpus a long fine spine.

GENOTYPE: *Jalapyphantes cuernavaca*, new species.

The members of this genus resemble in a general way the species of *Labulla*, *Pimosa*, and *Tapinopa*, but they are considerably smaller in size. The differences in the eye relations will serve to distinguish them. The epigyna of the three known species of *Jalapyphantes* are very similar and present

two prominent, sclerotized elevations between which lies a narrow finger or scape.

***Jalapyphantes puebla*, new species**

Figure 16

FEMALE: Total length, 3.70 mm. Carapace, 1.50 mm. long, 1.30 mm. wide. Abdomen, 2.40 mm. long, 1.80 mm. wide.

Carapace light yellowish brown, the sides of the pars cephalica with a dark brown marginal band, the midline with a dark brown band as wide as the eye group and which is slightly narrowed as it goes back to the caudal margin. Clypeus with a dusky spot immediately below the eyes, otherwise pale. Chelicerae yellowish brown, somewhat dusky in front. Sternum yellowish brown, rather broadly margined with black. Labium black except for white tip; maxillae dusky yellowish brown. Legs yellowish brown, dusky, the femora, tibiae, and metatarsi with median and apical black rings, the tarsi only with a median dark ring. Palpus also ringed with black. Abdomen mostly gray above, with an indistinct pattern of darker chevrons on the distal half and presenting numerous small white flecks; sides mottled with black; the venter with a paler area enclosing small white spots.

Carapace longer than broad, the pars cephalica broadly rounded in front, the head at the second eye row equal to three-fifths the greatest width of the carapace. Pars cephalica as seen in side view highest at the second eye row, the eye group projecting somewhat over the gently sloping clypeus. Eye group five-sevenths the width of the head at the second row, the eyes closely set. First row of eyes as seen from in front straight, as seen from above strongly recurved, the median nearly contiguous at the base, separated from the larger laterals by their radius. Lateral eyes of each side subequal, contiguous on connate tubercles. Posterior eye row gently recurved, a line along the upper edges of the lateral cutting through about one-fifth of the medians, the median separated by their radius, only slightly more distant from the equal lateral eyes. Median ocular quadrangle longer than broad (32/29), the front eyes much smaller in the

ratio of 10:14. Clypeus equal in height to three diameters of an anterior median eye. Chelicera with a few long hairs on the frontal surface, the upper margin with three long pointed teeth and a weak denticle at side of one nearest the base of claw, the lower margin with six small teeth. Sternum, 0.80 mm. long, 0.80 mm. wide.

Legs moderately stout, armed with weak spines. First leg: femur, 1.90 mm.; patella, 0.55 mm.; tibia, 1.80 mm.; metatarsus, 1.73 mm.; tarsus, 1.14 mm. Tibia and patella of the fourth leg, 1.80 mm.

Abdomen suboval as seen from above, elevated in front, broadly rounded and declining behind, oval as seen from the side. Epigynum as illustrated in figure 16.

TYPE LOCALITY: Female holotype from Riofrio, Puebla, Mexico, 3000 meters, April 26, 1942 (C. Bolivar, B. Osorio, D. Peláez).

RECORDS: Distrito Federal: Desierto de los Leones, March 22, 1941, female and immature male paratypes (M. Correa, M. Cardenas).

***Jalapyphantes minorata*, new species**

Figure 15

FEMALE: Total length, 2.00 mm. Carapace, 0.92 mm. long, 0.74 mm. wide. Abdomen, 1.15 mm. long, 1.05 mm. wide.

Coloration in rather close agreement with *puebla*. Brown median stripe of carapace as wide as the eyes in front, gradually narrowed and ended behind the end of the inconspicuous median groove. Brown bands of the pars thoracica much broader than in *puebla*, leaving only a narrow V-shaped paler maculation on the carapace. Clypeus dusky. Sternum light brown, rather narrowly ringed with black. Legs strongly ringed with black, essentially as in *puebla*, but the rings more extensive. Abdomen dusky, the dorsum with a series of creamy white, irregular spots in the middle; sides black with small creamy white flecks and spots; the venter with the broad paler stripe flanked by large creamy white maculations.

Structure essentially as in *puebla*. Eyes proportionately a little larger and closer together. First row of eyes as seen from in front gently recurved but essentially

straight, the median scarcely separated at their base and as far from the larger lateral eyes. Eyes of the posterior row gently recurved, the median separated by one-third the diameter, as far from the equal lateral eyes. Median ocular quadrangle as broad as long, narrowed in front (31/24). Clypeus equal in height to two diameters of an anterior median eye. Chelicerae armed as in *puebla*.

Legs of moderate stoutness with a few weak spines, and seemingly without paired ventral spines. First leg: femur, 1.00 mm.; patella, 0.30 mm.; tibia, 0.90 mm.; metatarsus, 0.93 mm.; tarsus, 0.63 mm. Tibia and patella of the fourth leg, 1.00 mm. long. Epigynum as illustrated in figure 15.

TYPE LOCALITY: Female holotype from Mountain Pass east of Mexico City in the state of Mexico, June 20, 1936 (A. M. and L. I. Davis).

***Jalapyphantes cuernavaca*, new species**

Figures 17 and 18

FEMALE: Total length, 3.20 mm. Carapace, 1.10 mm. long, 0.90 mm. wide. Abdomen, 2.10 mm. long, 1.70 mm. wide.

Coloration essentially as in the previously described species except as follows: carapace dusky brown with a few darker radiating lines but without lighter markings or pattern. Legs very broadly ringed with black.

Structure essentially as in the other species. First row of eyes straight as seen from in front, the median separated by a third the diameter, about the same distance from the larger lateral eyes. Posterior eye row gently recurved, the median separated by scarcely their radius, a radius from the equal lateral eyes. Median ocular quadrangle as broad as long, narrowed in front (34/27), the front eyes smaller. Clypeus equal in height to three diameters of an anterior median eye. Sternum, 0.66 mm. long, 0.64 mm. wide. Chelicera with three large teeth on the upper margin and six small ones on the lower.

Legs clothed with fine hairs and a few dorsal, lateral, and ventral spines on the femora and tibia. First leg: femur, 1.35

mm.; patella, 0.40 mm.; tibia, 1.25 mm.; metatarsus, 0.27 mm.; tarsus, 0.78 mm. Tibia and patella of the fourth leg, 1.30 mm.

Epigynum as illustrated in figure 18.

MALE: Total length, 2.70 mm. Carapace, 1.33 mm. long, 1.14 mm. wide. Abdomen, 1.50 mm. long, 1.10 mm. wide.

Coloration in rather close agreement with the female. Carapace all dark brown but marked with radiating black streaks. Sternum light brown, irregularly margined with black. Legs ringed in black. Abdomen essentially as in the female.

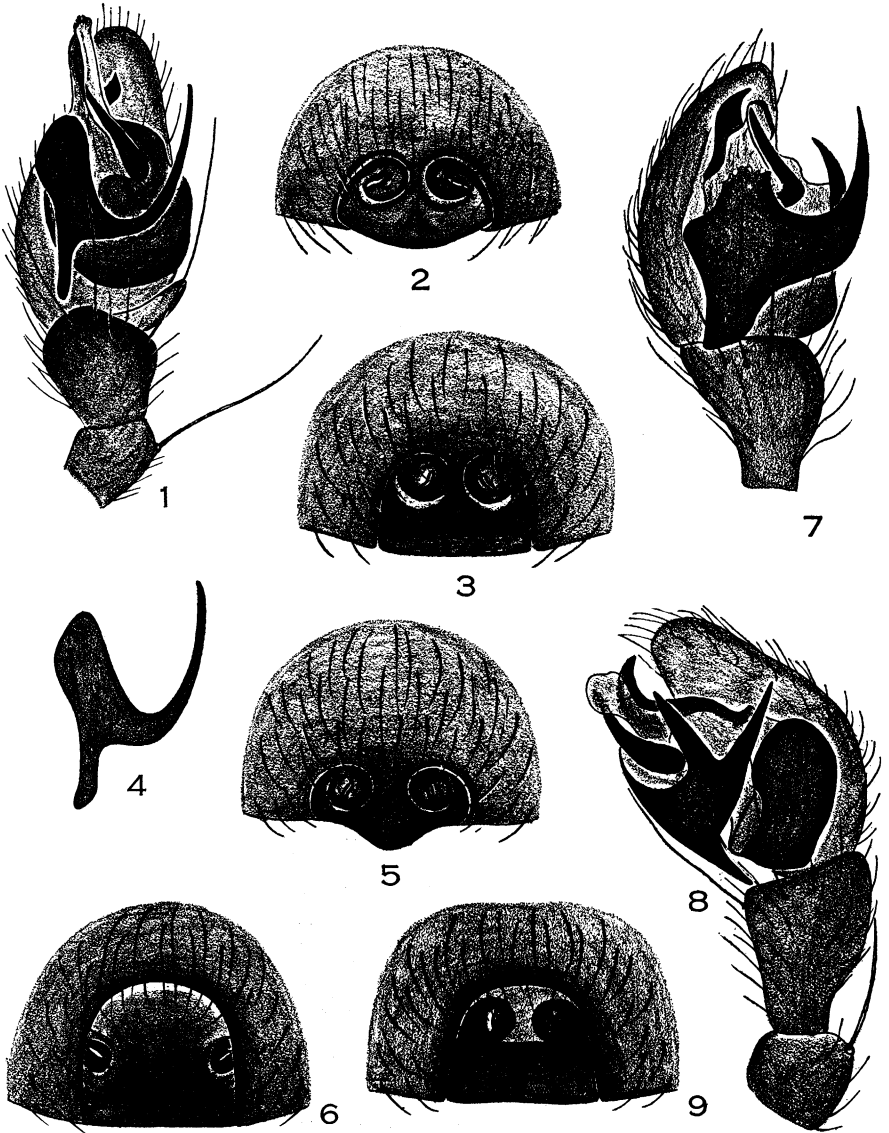
Structure essentially as in the female. Carapace a little longer than broad, broadly rounded behind and on the sides, only slightly narrowed in front. Eye group set on a lobe which projects over the gently sloping clypeus. Eye relations essentially as in the female. First row of eyes straight, median separated by less than a radius, about twice as far from the lateral. Posterior eye row gently recurved, the median separated by a radius two-thirds their diameter from the equal lateral eyes. Median ocular quadrangle as broad as long, narrowed in front (34/24), the front eyes smaller. Clypeus equal in height to four diameters of an anterior median eye. Chelicera essentially as in the female but the upper margin with two large teeth toward the end of the claw and a smaller tooth near the base of the claw, leaving a space between equal to the width of the two larger teeth. Lower margin with five small teeth. Sternum, 0.70 mm. long, 0.75 mm. wide.

Legs proportionately longer than in the female, the spines seemingly the same. First leg: femur, 1.50 mm.; patella, 0.40 mm.; tibia, 1.47 mm.; metatarsus, 1.47 mm.; tarsus, 0.90 mm. Tibia and patella of the fourth leg, 1.40 mm.

Palpus as illustrated in figure 17.

TYPE LOCALITY: Male holotype from Horsetail Falls, Nuevo Leon, June 11, 1936 (A. M. and L. I. Davis).

RECORDS: Morelos: 7 miles north of Cuernavaca, July 3, 1941, female allotype and two female paratypes (A. M. and L. I. Davis).



- Fig. 1. *Frontinella huachuca benevola*, new subspecies, left male palpus, ventral view.
 Fig. 2. *Idem*, epigynum, ventral view.
 Fig. 3. *Idem*, epigynum, caudal view.
 Fig. 4. *Frontinella huachuca*, new species, lamella of left male palpus, ventral view.
 Fig. 5. *Idem*, epigynum, ventral view.
 Fig. 6. *Frontinella caudata*, new species, epigynum, ventral view.
 Fig. 7. *Frontinella potosia*, new species, left male palpus, subventral view.
 Fig. 8. *Idem*, left male palpus, retrolateral view.
 Fig. 9. *Idem*, epigynum, ventral view.

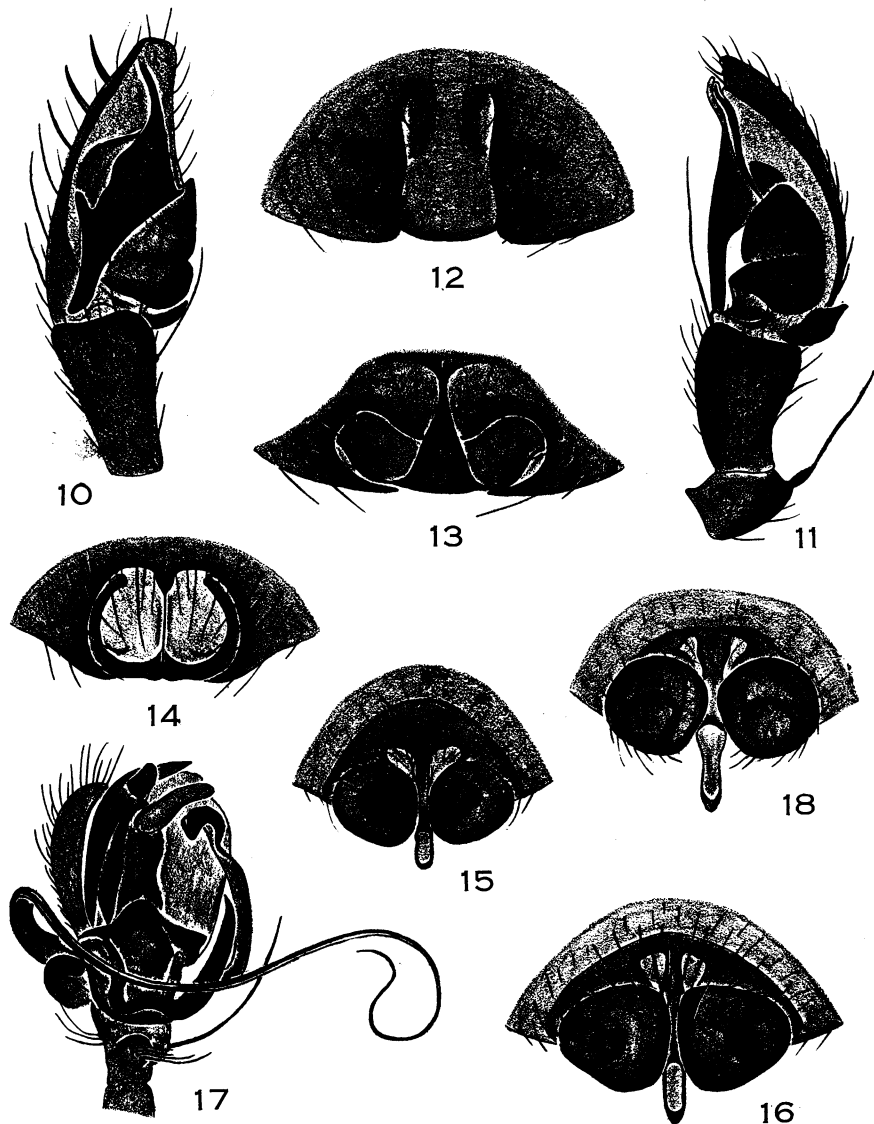


Fig. 10. *Frontinella lepidula*, new species, left male palp, subventral view.
 Fig. 11. Idem, left male palp, retrolateral view.
 Fig. 12. *Selenyphantes longispinosa* O. P.-Cambridge, epigynum, ventral view.
 Fig. 13. *Linyphia xililla*, new species, epigynum, ventral view.
 Fig. 14. *Linyphia chiapasia*, new species, epigynum, ventral view.
 Fig. 15. *Jalapyphantes minorata*, new species, epigynum, ventral view.
 Fig. 16. *Jalapyphantes puebla*, new species, epigynum, ventral view.
 Fig. 17. *Jalapyphantes cuernavaca*, new species, left male palp, ventral view.
 Fig. 18. Idem, epigynum, ventral view.

