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NEW SPIDERS FROM TEXAS

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The types of the following new species are deposited in the collection of the American Museum of Natural History. Most of the specimens were collected by the Junior author in southern Texas. A new name is proposed for *Theridion inornatum* Banks for that specific name was used in the genus by Cambridge in 1861.

Micryphantidae

Eulaira suspecta, new species

Figures 1, 2, and 3

Male.—Total length, 1.00 mm. Carapace, 0.45 mm. long, 0.37 mm. wide. Carapace pale yellow, shining, very sparsely clothed with inconspicuous hairs, the eyes enclosing a black area. Sternum, labium and endites dull yellow, with short black hairs. Legs dull to bright yellow, clothed with rows of black hairs. Abdomen gray, shining, sparsely covered with short pale hairs. Spinnerets paler.

Carapace longer than broad, the front rounded, three-fourths as broad at the eyes as the greatest width of the carapace. Pars cephalica elevated, highest behind the ocular area, convex, the sutures obsolete. Eyes of the first row procurved, subcontiguous, the medians half as large as the laterals, the upper margins of the eyes forming a straight line. Eyes of the second row very weakly procurved, the medians separated by two-thirds their long diameter, half as far from the subequal laterals. Median ocular quadrangle broader than long, about half as wide in front as behind, the anterior eyes much smaller. Clypeus about twice as high as the diameter of an anterior lateral eye. Chelicera with three teeth on the lower margin. Sternum as broad as long, truncated in front, pointed behind, the posterior coxae separated by their width. Labium three-fifths as long as broad, half as high as the convergent endites. Tibia and patella I scarcely as long as the carapace (0.40 mm.). Palpus as figured.

Female.—Total length, 1.10 mm. Carapace, 0.46 mm. long, 0.35 mm. wide. Color and structure as in the male but the pars cephalica slightly less elevated. Eyes arranged as in the male but one of the female paratypes is abnormal in having the anterior medians widely separated. Epigynum as figured.

Type Locality.—Male holotype, female allotype and two female paratypes from seven miles east of Edinburg, Texas, February 17, 1935 (S. Mulaik).

Grammonota nigrifrons, new species

Figures 8 and 9

Male.—Total length, 1.35 mm. Carapace, 0.70 mm. long, 0.57 mm. wide.

Carapace pale yellow in the thoracic portion, the whole pars cephalica strongly infuscated, enclosing a few darker lines and streaks, the eyes narrowly ringed in black and enclosing a darker area. Sternum and labium dusky, the endites and coxae pale yellow, all clothed with scattered black hairs. Legs pale yellow, immaculate, sparsely clothed with rows of black hairs. Abdomen yellow to gray, the dorsum with a median longitudinal narrow dark marking for two-thirds the length, the sides darkened, the venter unmarked gray, the whole abdomen sparsely covered with black hairs.

Carapace longer than broad, convex, the width of the front at the eyes half the greatest width, the pars cephalica somewhat elevated, highest at the second eye row, evenly declining caudally to the median suture, the sides of the head moderately steep. Eyes of the first row very weakly recurved, the medians separated by their radius, a little farther from the larger lateral eyes. Eyes of the second row procurved, the medians separated by scarcely a diameter, about a radius from the subequal laterals. Median ocular quadrangle slightly longer than broad (16/15), narrowed in front (16/11), the anterior eyes smaller. Clypeus twice as high as the diameter of an anterior lateral eye. Sternum broader than long (40/38), truncated in front, bluntly pointed behind, the posterior coxae separated by their width. Labium broader than long, half as high as the endites. Tibia and patella of the first leg shorter than the carapace (0.63 mm.). Legs without spines. Palpus as figured.

Type Locality.—Male holotype from Cameron County, Texas, December, 1934 (L. Irby Davis). Male paratype from San Antonio, Texas, December, 1934 (L. Irby Davis).

Grammonota suspiciosa, new species

Figures 6 and 7

Male.—Total length, 1.70 mm. Carapace, 0.70 mm. long, 0.56 mm. wide.

Carapace armed with a few weak spines on the midline and in the ocular region. Carapace bright yellow to orange, the margins narrowly infuscated, the midline with an irregular indistinct black marking just in front of the median groove from which a few dark streaks go forward to the ocular area. Sides of the head and the clypeus dusky, the eyes narrowly ringed in black and enclosing a dusky area. Sternum and labium brown, the endites and coxae yellow, with dusky markings, the whole underside provided with inconspicuous black hairs. Legs concolorous with the carapace, with rows of black hairs. Abdomen gray, somewhat shining, the dorsum with a few very narrow transverse white bands and pale spots.

Carapace longer than broad, the front rounded and broad, the width at the second eye row nearly four-fifths the greatest width, convex. Pars cephalica highest at the second eye row, the sides steep, caudally declining moderately to the cervical groove. Clypeus slightly protruding, two and one-half times as high as the diameter of an anterior lateral eye. Eyes of the first row straight, the medians separated by a radius, two-thirds their diameter from the larger laterals. Eyes of the second

row weakly procurved, the medians separated by a diameter, as far from the subequal laterals which are contiguous with the slightly larger anterior laterals. Median ocular quadrangle slightly broader than long, the posterior eyes slightly larger. Sternum longer than broad (43/40), truncated in front, truncated between the posterior coxae which are separated by their width. Labium broader than long, half as high as the endites. Chelicera with two small teeth on the lower margin, three larger ones on the upper. Tibia and patella of the first leg shorter than the carapace (0.60 mm.). Palpus as figured.

Type Locality.—Male holotype from Sanderson, Texas, July 4, 1934 (S. Mulaik).

Grammonota confusa, new species

Figures 4 and 5

MALE.—Total length, 1.60 mm. Carapace, 0.65 mm. long, 0.50 mm. wide.

Carapace dull orange in color, the margins with a narrow black line, the pars thoracica with dusky streaks at the position of the striae, the pars cephalica dusky, enclosing an irregular darker marking just in front of the median groove from which dark streaks go forward to the ocular area. Sternum and labium brown, the endites dusky, the coxae mainly dull yellow, the whole underside with scattered black hairs. Legs yellow, sparsely set with rows of black hairs. Palpus dusky to dark brown. Abdomen pale purplish gray, the dorsum with a sclerotized orange plate at the base which goes back half the length and which is clothed with procumbent hairs; venter of abdomen darker gray.

Carapace longer than broad, the front rounded, broad, about two-thirds as wide as the second eye row at the greatest width. Pars cephalica normal, highest just behind the second eye row, the sides moderately steep, flat behind the eyes for a short distance and then gradually declining to the cervical groove. Eyes of the first row straight, the medians separated by a radius, a little farther from the larger lateral eyes. Clypeus two and one-half times as high as the diameter of an anterior lateral. Eyes of the second row straight, the medians separated by two-thirds their diameter, a full diameter from the subequal laterals. Median ocular quadrangle as long as broad, slightly narrower in front, the anterior median eyes slightly smaller. Lateral eyes of each side contiguous, the posterior eyes slightly smaller. Sternum longer than broad (38/36), truncated between the posterior coxae which are separated by their width. Labium broader than long. Chelicera with three small teeth on the lower margin. Palpus as figured.

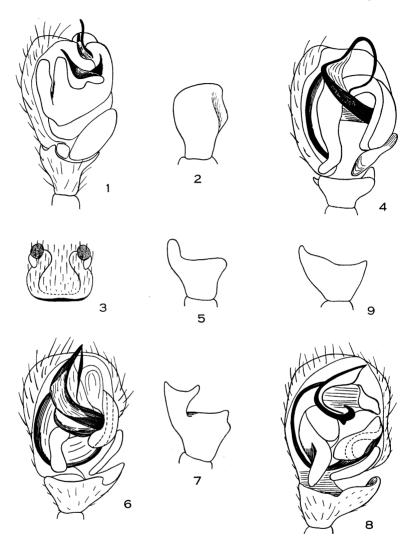
Type Locality.—Male holotype from Rio Grande City, Texas, July, 1934 (S. Mulaik).

Theridiidae

Paidisca illudens, new species

Figures 20 and 21

Male.—Total length, 1.45 mm. Carapace, 0.70 mm. long, 0.60 mm. wide. Carapace orange, the midline with a few slender inconspicuous hairs, the pars thoracica evenly and finely roughened, lightly infuscated, the head smoother, the



- Fig. 1. Eulaira suspecta, new species, male palpus, ventral view.
- Fig. 2. Idem, tibia of male palpus, dorsal view.
- Fig. 3. Idem, epigynum of female.
- Fig. 4. Grammonota confusa, new species, male palpus, ventral view.
- Fig. 5. Idem, tibia of male palpus, dorsal view.
- Fig. 6. Grammonota suspiciosa, new species, male palpus, ventral view.
- Fig. 7. Idem, tibia of male palpus, dorsal view.
- Fig. 8. Grammonota nigrifrons, news species, male palpus, ventral view.
- Fig. 9. Idem, tibia of male palpus, dorsal view.

eyes narrowly ringed in black. Labium dusky, the endites and sternum orange, provided with scattered black hairs. Legs yellow to orange in color, the femora infuscated above, the tibiae dark below and on the sides but pale above. Abdomen gray, with a central black maculation on the dorsum, the epigastric region dusky brown, the spinnerets incompletely ringed in black.

Carapace longer than broad, the pars thoracica suborbicular in outline as seen from above, moderately convex, the pars cephalica considerably elevated, highest between the median eyes, the width at that point being a little more than half the greatest width of the carapace. Clypeus subvertical, slightly protruding above, with a deep transverse groove just below the eves of the first row. First row of eyes procurved from in front, strongly recurved as seen from above, the dark medians separated by scarcely a diameter, a little more than a diameter from the subequal Eves of the second row very weakly recurved, nearly straight, the medians separated by a diameter, a little farther from the subequal laterals. Anterior median eyes on a slight projection, on the same plane as the posterior medians and forming with them a quadrangle which is slightly longer than broad, equally wide in front as behind, the eyes subequal. Lateral eyes of each side contiguous, subequal. Sternum broader than long (40/37), broadly pointed between the posterior coxae which are separated by twice their width. Tibia and patella of the first leg as long as the carapace (0.70 mm.), the first femur longer (0.85 mm.). First femur armed beneath with three rows of short stout spines, about ten spines in each row. First tibia with a series of ten pairs of spines beneath, those on the prolateral side much more robust.

Female.—Total length, 1.45 mm. Carapace, 0.68 mm. long, 0.58 mm. wide.

Color essentially as in the male but the carapace with distinct black markings on the sides and the femora unmarked. Structure essentially as in the male but the head portion less elevated, the clypeal groove less evident, a deep, broadly concave depression. Eyes as in the male but the median ocular quadrangle broader than long, the posterior eyes larger. Epigynum as figured.

Type Locality.—Male holotype from Brownsville, Texas, January 5, 1928 (F. E. Lutz). Female allotype from Brownsville, Texas, November 30, 1934 (S. Mulaik).

This interesting species is almost certainly congeneric with *Paidisca* marxi (Crosby) but it presents several differences of considerable importance. The abdomen completely lacks a sclerotized dorsal plate as in marxi, the first femora have a quite different spinal formula and the first tibia, which lacks conspicuous spines in marxi, is armed with a series of ten pairs of spines. In other respects, particularly in the eye arrangement, the species are quite similar.

Paidisca marxi (Crosby)

 $Histagonia\ marxi$ Crosby, 1906, Canadian Entomologist, XXXVIII, p. 309, Figs. 35 and 36.

Ulesanis serrata Emerton, 1913, Trans. Connecticut Acad. Arts and Sci., XVIII, p. 213, Pl. I, fig. 5.

Paidisca marxi Bishop and Crosby, 1926, Jour. Elisha Mitchell Sci. Soc., XLI, pp. 178–180, Figs. 23–27.

Records.—Sides of Mount Leconte, Great Smoky Mountains, Tennessee, September 10, 1929, male (Dr. W. M. Barrows). Thirty miles west of Edinburg, Texas, July 4, 1935, males and females (S. Mulaik). Thirty-two miles east of Laredo, Texas, February 9, 1935, female (S. Mulaik). Edinburg, Texas, November 7, 1934, male (C. Rutherford).

Dipoena abdita, new species

Figure 28

Female.—Total length, 2.25 mm. Carapace, 0.75 mm. long, 0.63 mm. wide. Carapace reddish brown, faintly streaked with darker chromatism at the position of the striae, the eyes narrowly ringed with black, clothed with a few slender black hairs on the midline and in the ocular region. Sternum and mouth parts dark reddish brown, sparsely clothed with black hairs. Legs a little paler than the carapace, covered with rows of black hairs. Abdomen dark reddish brown, the venter paler, the spinnerets yellow.

Carapace longer than broad, oval in outline as viewed from above, moderately high, convex, the pars cephalica highest at the second eye row, the head protruding, the clypeus moderately inclined. Eyes of the first row procurved, strongly recurved as seen from above, the large medians separated by a diameter, one-fourth their diameter from the much smaller laterals. Eyes of the second row straight, the medians separated by their short diameter, two-thirds as far from the somewhat smaller laterals. Median ocular quadrangle broader than long (22/20), much broader in front than behind (22/16), the anterior medians larger. Lateral eyes of each side contiguous, subequal in size. Clypeus about three times as high as the diameter of an anterior median eye. Sternum longer than broad (50/42), truncated behind, the posterior coxae separated by their width. Legs without spines, the first patella and tibia about as long as the carapace (0.80 mm.), the fourth patella and tibia longer (0.93 mm.). Abdomen three-fourths as broad as long, oval in outline. Epigynum as figured.

Type Locality.—Female holotype from Edinburg, Texas, December 7, 1935 (S. Mulaik).

Euryopis dentatus, new species

Figures 10 and 11

MALE.—Total length, 1.90 mm. Carapace, 0.80 mm. long, 0.75 mm. wide.

Carapace black, a little paler above, with long spines in the ocular region and on the midline. Sternum dusky yellow, the margins infuscated, the mouth parts and coxae dusky, the whole underside sparsely clothed with black hairs. Legs pale yellow, annulate in black as follows: femora with a broad distal, patellae with a medial, and the tibiae and metatarsi with narrow basal, medial and distal black rings, most of the rings incomplete above. Dorsum of abdomen with an inverted V-shaped silvery marking at the base and a large upright V-shaped silvery maculation that covers the dorsum in the caudal half, the intervals between these light markings black. Venter of abdomen black, with a narrow silvery band on each

side and a small round spot between them. Tarsus of the palpus brown, the basal joints pale yellow.

Carapace nearly as broad as long, very much elevated, strongly convex, the sutures obsolete, the pars cephalica slightly protruding over the clypeus. Clypeus three times as high as the diameter of an anterior median eye. First row of eyes straight, the large medians separated by fully their diameter, a third as far from the much smaller laterals. Second row of eyes recurved, the medians separated by two diameters, one and one-half diameters from the slightly larger lateral eyes. Median ocular quadrangle broader than long (30/22), broader in front (30/26), the anterior median eyes much larger. Lateral eyes of each side contiguous, subequal in size. Sternum longer than broad (50/46), truncated between the posterior coxae which are separated by their width. Labium half as high as broad, about half as high as the strongly convergent endites. Tibia and patella of the first leg about as long as the carapace (0.85 mm.). Palpus as figured.

Female.—Total length, 2.30 mm. Carapace, 0.87 mm. long, 0.92 mm. wide. Color and structure essentially as in the male but the dark pattern on the abdomen less distinct. Anterior median eyes a little smaller than in the male, separated by a little more than the diameter. Epigynum as figured.

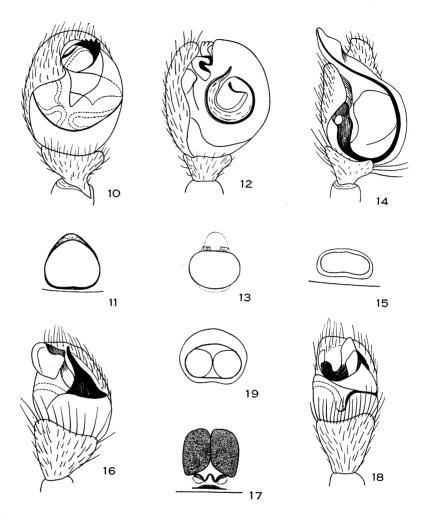
Type Locality.—Male holotype and female allotype from Monte Cristo, Texas, September 10, 1935 (C. Rutherford).

Euryopis deridens, new species

Figure 13

Female.—Total length, 1.35 mm. Carapace, 0.58 mm. long, 0.54 mm. wide. Carapace orange brown, shining, the margins slightly darkened, the eyes broadly ringed with black, armed with four weak spines just in front of the obsolete median groove, one on the midline and several in the ocular region. Sternum, mouth parts and coxae shining yellow, with scattered black hairs. Femora yellow, the terminal joints darker, orange, the tarsi orange brown, all the joints clothed with rows of black hairs. Abdomen dusky gray, with four small round sclerotized disks at the middle (the points of muscle attachment), clothed evenly but sparsely with fine long hairs which originate from slight tubercular bases.

Carapace about as broad as long, narrowed somewhat in front, the pars cephalica elevated, protruding slightly over the clypeus, highest behind the eyes, the sides steep. Median suture and cephalic striae obsolete. Eyes of the first row procurved, the medians separated by a diameter, one-fifth as far from the subequal laterals. Clypeus twice as high as the diameter of an anterior median eye. Eyes of the second row recurved, a line through the centers of the laterals touching the posterior edges of the medians, the median eyes separated by scarcely a diameter, half as far from the subequal laterals. Median ocular quadrangle broader than long (18/13), as wide behind as in front, the eyes subequal. Sternum broader than long (38/37), bluntly pointed between the posterior coxae which are separated by scarcely their width. Tibia and patella of the first leg shorter than the carapace (0.52 mm.); tibia and patella of the fourth leg longer (0.70 mm.). Epigynum as figured. This species is practically identical in structure with the female of Euryopis spinigera Cambridge but differs conspicuously in color.



- Fig. 10. Euryopis dentatus, new species, male palpus, ventral view.
- Fig. 11. Idem, epigynum of female.
- Fig. 12. Theridion cynicum, new species, male palpus, subventral view.
- Fig. 13. Euryopis deridens, new species, epigynum of female.
- Fig. 14. Theridion redemptum, new species, male palpus, ventral view.
- Fig. 15. Idem, epigynum of female.
- Fig. 16. Theridion expulsum, new species, male palpus, subventral view.
- Fig. 17. Idem, epigynum of female.
- Fig. 18. Theridion edinburgensis, new species, male palpus, subventral view.
- Fig. 19. Idem, epigynum of female.

Type Locality.—Female holotype and paratype from Edinburg, Texas, February 6, 1934 (S. Mulaik).

Theridion edinburgensis, new species

Figures 18 and 19

Male.—Total length, 1.55 mm. Carapace, 0.67 mm. long, 0.63 mm. wide.

Carapace pale yellow, with a few spines on the midline and in the ocular region, the eyes enclosing a black field. Sternum pale yellow, the margins infuscated, the mouth parts and coxae pale yellow, the underside with a few scattered black hairs. Legs concolorous with the carapace, immaculate, clothed with rows of inconspicuous hairs. Abdomen gray, the dorsum with five small round black spots, one at the middle and two on each side, sparsely clothed with long pale hairs. Venter of abdomen with a dusky median band, the spinnerets paler.

Carapace slightly longer than broad, convex, about half as broad at the second eye row as the greatest width. Pars cephalica highest just behind the eyes, slightly protruding over the clypeus, the eyes as seen from above submarginal. First row of eyes procurved, the large medians separated by a diameter, half a radius from the smaller laterals. Second row of eyes recurved, the medians separated by a diameter, scarcely as far from the subequal laterals. Clypeus twice as high as the diameter of an anterior median eye. Median ocular quadrangle broader than long (22/18), narrowed behind in the same ratio, the anterior eyes larger. Sternum broader than long (40/36), truncated behind, the posterior coxae separated by their length. Labium twice as broad as long, gently rounded at the distal end, half as high as the convergent endites. Tibia and patella of the first leg as long as the femur (0.80 mm.), longer than the carapace. Fourth femur about as long as the carapace. Abdomen globose. Palpus as figured.

Type Locality.—Male holotype from Edinburg, Texas, March, 1934 (S. Mulaik).

Theridion expulsum, new species

Figures 16 and 17

MALE.—Total length, 1.55 mm. Carapace, 0.63 mm. long, 0.63 mm. wide.

Carapace pale yellow, the midline with three rows of spines and several in the ocular region, the eyes enclosing a black field. Sternum pale yellow, margined with dusky brown, the mouth parts and coxae pale yellow, the underside sparsely clothed with black hairs. Legs pale yellow, immaculate, clothed with rows of black hairs. abdomen gray to dull yellow, sparsely covered with long black hairs, the venter infuscated at the base, the spinnerets incompletely ringed with black.

Carapace as broad as long, moderately convex, highest at the second eye row, moderately declining caudally, the pars cephalica slightly protruding over the clypeus. Eyes of the first row procurved, the medians separated by nearly two diameters, a radius from the larger lateral eyes. Second row of eyes straight, the medians separated by a diameter, as far from the subequal laterals. Median ocular quadrangle as broad as long, as wide behind as in front, the anterior eyes smaller. Clypeus three times as high as the diameter of an anterior median eye. Lateral eyes of each side contiguous, subequal in size. Sternum as broad as long, truncated

behind, the posterior coxae separated by their length. Labium much broader than long (15/8), half as high as the convergent endites. First femur as long as the tibia and patella (0.85 mm.), longer than the carapace. Fourth femur about as long as the carapace. Abdomen globose. Palpus as figured.

FEMALE.—Total length, 1.70 mm. Color and structure in complete agreement with the male but the legs proportionately a little shorter. This species is closely related to *Theridion edinburgensis* but is quite distinct in the eye relations and lacks the dark markings on the dorsum. It is also closely allied to *Theridion unimaculatum* Emerton and *Theridion inornatum* Banks, agreeing with this last species in lacking dorsal markings on the abdomen.

Type Locality.—Male holotype, female allotype and paratypes from Edinburg, Texas, March and April, 1934 (S. Mulaik). Paratypes from Edinburg, Texas, October 12, 1935 (S. Mulaik). Paratypes from Piper's Lake, Texas, August 25, 1935 (S. Mulaik).

Theridion conjunctum, new name

Theridion inornatum Banks, 1899, Proc. Ent. Soc., Washington, IV, p. 192. (Not Theridion (Dipoena) inornatum Cambridge, 1861.)

Theridion cynicum, new species Figure 12

Male.—Total length, 2.30 mm. Carapace, 1.00 mm. long, 0.90 mm. wide.

Carapace bright yellowish orange, the midline dusky, the eyes narrowly ringed with black, with a few weak spines on the midline and in the ocular region. Sternum, mouth parts and legs concolorous, pale yellow, clothed sparsely with black hairs. Abdomen gray, with a faint broad median longitudinal maculation much as in *Theridion studiosum* Hentz. Epigastric region sclerotized, yellow, the spinnerets yellow.

Carapace slightly longer than broad, the pars thoracica suborbicular as seen from above, moderately convex, the cervical groove a shallow depression, the clypeus rounded at the margin. Pars cephalica moderately elevated, highest at the second eye row, the sides steep, caudally gradually declining to the cervical groove. Clypeus sloping, the head placed well back, two and one-half times as high as the diameter of an anterior median eye. Eyes of the first row weakly procurved, the medians separated by two-thirds their diameter, one-half their radius from the slightly smaller laterals. Eyes of the second row straight, the medians separated by two-thirds their diameter, a diameter from the subequal laterals. Median ocular quadrangle broader than long (25/20), narrower behind (25/22), the eyes subequal. Sternum as broad as long, truncated in front and between the posterior coxae which are separated by their width. Labium broader than long (16/10), two-fifths as high as the endites. First tibia and patella longer than the first femur (2.50/2.25 mm.), which is about twice as long as the carapace. Abdomen five-sevenths as broad as long, oval in outline. Palpus as figured.

Type Locality.—Male holotype from Edinburg, Texas, May 27, 1935 (S. Mulaik). Male paratype from Monte Cristo, Texas, Septem-

ber 10, 1935 (S. Mulaik). Immature male from Kingsville, Texas, October, 1934 (S. Mulaik).

This fine species belongs in the same group with *Theridion studiosum* Hentz but is easily separated by the enormous development of the bulb of the palpus.

Theridion insulsum, new species

Figures 25 and 26

Female.—Total length, 1.80 mm. Carapace, 0.70 mm. long, 0.55 mm. wide. Carapace, sternum, and mouth parts uniform dark brown in color. Coxae reddish. Integument of the legs pale yellow, the femora with a broad distal dusky brown ring, the patellae reddish brown, the distal joints with broad reddish brown distal annulae. Abdomen gray to dusky, with two transverse white bars on each side in the basal half, otherwise flecked with white.

Carapace longer than broad, moderately convex, the pars cephalica very little elevated, armed on the midline with several long spines. Clypeus equal in height to one and one-half times the diameter of an anterior median eye. Eyes of the first row procurved, the medians separated by two-thirds their diameter, one-half their radius from the slightly smaller laterals. Eyes of the second row straight, the medians separated by scarcely a diameter, two-thirds as far from the subequal laterals. Median ocular quadrangle broader than long (20/16), narrowed behind in the same ratio, the eyes subequal. Sternum longer than broad (46/40), broadly truncated in front, narrowly truncated between the posterior coxae which are separated by their width. Legs relatively short, the first femur slightly longer than the carapace (0.80 mm.), about as long as the first patella and tibia. All patellae with a small conical enlargement on the retrolateral side. Abdomen globose, as broad as long, with a weak caudal tubercle. Epigynum. This species is much like Theridion rupicola Emerton and agrees in having the abdomen provided with a slight caudal tubercle. The epigynum, however, differs from this species and from others described by Cambridge from Mexico which seem to be closely related.

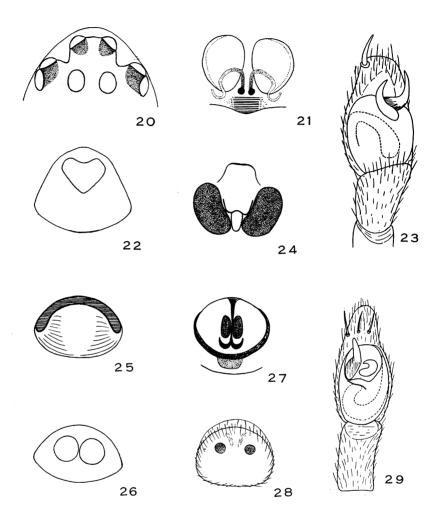
Type Locality.—Female holotype from Brownsville, Texas, November 30, 1934 (S. Mulaik). An abdomen of a second female is from Edinburg, Texas, May 27, 1935, collected by S. Mulaik.

Theridion realisticum, new species

Figures 23 and 24

MALE.—Total length, 1.36 mm. Carapace, 0.66 mm. long, 0.50 mm. wide.

Carapace dull yellow on the sides and the posterior declivity, smooth, the pars cephalica dusky to black, finely roughened, the clypeus and the eye region black, armed with weak spines on the midline and on the clypeal margin. Sternum and coxae pale yellow, the mouth parts dusky, clothed with a few scattered black hairs. Legs pale yellow, the femora with a subapical, the tibiae of the first two pairs of legs with basal, subbasal, submedian and apical annulae, all the metatarsi with a basal, medial and apical black ring. Annulae on all the joints incomplete above. Dorsum of abdomen white, with a triangular basal dark maculation, the apex pointed forward, which is armed with long black spines. Remainder of the dorsum with



- Fig. 20. Paidisca illudens, new species, eyes of male.
- Fig. 21. Idem, epigynum of female.
- Fig. 22. Theridion schullei, new species, epigynum of female.
- Fig. 23. Theridion realisticum, new species, male palpus, ventral view.
- Fig. 24. Idem, epigynum of female.
- Fig. 25. Theridion insulsum, new species, epigynum of female, ventral view.
- Fig. 26. Idem, epigynum of female, anterior view.
- Fig. 27. Theridion detractum, new species, epigynum of female.
- Fig. 28. Dipoena abdita, new species, epigynum of female.
- Fig. 29. Micaria swansoni, new species, palpus of male, ventral view.

smaller spines. Venter and sides of the abdomen black, the venter with a median white area, clothed with fine black hairs.

Carapace longer than broad, convex, the pars cephalica not much elevated, highest at the second eye row, at that point about two-thirds as broad as the greatest width (0.35 mm.). Clypeus shallowly grooved just below the first eye row, the front margin weakly emarginated, the height equal to twice the diameter of an anterior median eye. Eyes of the first row very weakly procurved, the medians separated by their diameter, half a radius from the slightly smaller laterals. Eyes of the second row very weakly procurved, the medians separated by two-thirds their diameter, a full diameter from the subequal laterals. Median ocular quadrangle broader than long (20/15), much broader in front than behind (20/14), the posterior medians smaller. Sternum broader than long (38/36), truncated in front, bluntly rounded between the posterior coxae which are separated by their length. Labium broadly rounded apically, two-thirds as high as broad (10/15), half as high as the strongly convergent endites. First femur as long as the first patella and tibia (0.90 mm.), longer than the carapace. Palpus as figured. Abdomen broader than long (72/65), suboval, the base armed with a semilunar, sclerotized ridge which is armed with small teeth.

Female.—Total length, 1.40 mm. Color and structure in almost complete agreement with the male, the abdomen lacking the sclerotized ridge at the base. Epigynum as figured.

Type Locality.—Male holotype and female allotype from Kingsville, Texas, October, 1934 (S. Mulaik). Female paratype from north Hidalgo County, Texas, October, 1934 (S. Mulaik). Male paratype from Monte Cristo, Texas, September 10, 1935 (S. Mulaik).

Theridion redemptum, new species

Figures 14 and 15

Male.—Total length, 2.40 mm. Carapace, 1.05 mm. long, 0.95 mm. wide.

Carapace dusky brown, variegated with narrow black streaks, the pars cephalica darker, the eyes enclosing a black field. Sternum and mouth parts very dark brown, the coxae pale yellow, the underside clothed with scattered black hairs. Legs pale yellow to orange, becoming brighter distally, the femora infuscated in the distal half and with an apical darker ring, the patellae brown, the tibiae with subproximal and apical broad brown annulae, the metatarsi with a subapical narrower dark ring, the appendages clothed with rows of black hairs. Palpi brown. Abdomen without definite pattern in the male, brown, variegated with lighter markings.

Carapace slightly longer than broad, the pars thoracica convex, the cervical groove a shallow round depression, the cephalic striae indistinct, the pars cephalica only a little elevated, highest at the second eye row, the width of the head at that point three-fifths the greatest width of the carapace. Clypeus nearly vertical, weakly rounded on the margin, three times as high as the diameter of an anterior median eye. Eyes of the first row straight, the medians separated by three-fifths the diameter, half a radius from the slightly smaller laterals. Posterior eye row straight, the medians separated by two-thirds their diameter, as far from the subequal laterals. Median ocular quadrangle broader than long (25/24), narrowed behind (25/22), the anterior medians a little larger in size. Sternum longer than

broad (62/60), truncated in front, bluntly rounded between the posterior coxae which are separated by two-thirds their width. Labium two-thirds as long as broad, two-fifths as high as the convergent endites. Femur of the first leg as long as the first patella and tibia (2.00 mm.), much longer than the carapace. Palpus as figured, closely allied to that of *Theridion tepidariorum* Koch but distinct in the details of the apical portion of the bulb.

Female.—Total length, 3.20 mm. Coloration essentially as in the male, the abdomen, however, with a definite pattern, dark in the basal half, the distal part much lighter in color. Epigynum as figured. Structure as in the male. This species is very closely related in both sexes to *Theridion tepidariorum* Koch in the general structure, color markings and the genital organs, but is a smaller form and differs in the finer details of the palpus and epigynum.

Type Locality.—Male holotype and female allotype from thirty miles south of San Antonio, Texas, August 20, 1935 (S. Mulaik). Two male paratypes from Austin, Texas, August, 1935 (L. Irby Davis).

Theridion detractum, new species

Figure 27

Female.—Total length, 1.30 mm. Carapace, 0.70 mm. long, 0.63 mm. wide. Carapace pale yellow, margined in black, the pars cephalica with a median longitudinal dark band from the eyes to the cervical groove which is one-third as wide as the carapace, the caudal half of the stripe black in color, the area finely roughened, the ocular portion mainly dusky brown, with lighter markings. Sternum pale yellow, broadly margined with black, the mouth parts dusky, the coxae pale yellow, the whole underside with scattered black hairs. Legs pale yellow, the femora with large black flecks beneath, the tibiae with large black flecks that form four incomplete annulae, the metatarsi with an incomplete narrow median and an apical ring. Dorsum of the abdomen irregularly variegated with black, white, and yellow, with an indistinct folium. Venter of abdomen white to gray, with a black band on each side, the spinnerets broadly ringed in black.

Carapace slightly longer than broad, convex, about equal in height from the eyes to the indistinct tervical groove, the sutures obsolete. Median dark band supplied with three rows of weak spines, others in the ocular region and on the clypeal margin. Eyes of the first row weakly procurved, the medians separated by a radius, subcontiguous with the subequal laterals. Second eye row very weakly procurved, nearly straight, the medians separated by two-thirds their diameter, as far from the subequal laterals. Median ocular quadrangle broader than long (18/16), narrowed behind in the same ratio, the eyes subequal. Clypeus sloping, shallowly excavated below the first eye row, about twice as high as the diameter of an anterior median eye. Sternum as broad as long, broadly truncated in front, narrowly truncated between the posterior coxae which are separated by their width. Labium twice as broad as long (17/8), two-fifths as high as the slightly convergent endites. Femur of the first leg as long as the first patella and tibia (1.00 mm.), longer than the carapace. Epigynum as figured. Abdomen as broad as long, moderately high.

Type Locality.—Female holotype from west of Arroyo el Tigre, Zapato County, Texas, November 11, 1934 (S. Mulaik). Female

paratype from Kingsville, Texas, October, 1934 (S. Mulaik). Female paratype from Edinburg, Texas, October 2, 1935 (S. Mulaik).

Theridion schullei, new species Figure 22

Female.—Total length, 2.20 mm. Carapace, 0.75 mm. long, 0.65 mm. wide. Carapace dark brown, irregularly streaked and lined with black, the eyes narrowly ringed in black and enclosing a black field. Sternum dark brown, the mouth parts paler brown, the coxae dull yellow, all sparsely clothed with scattered black hairs. Integument of the legs dull yellow, the first femur infuscated below and apically, the tibia with an indistinct orange subbasal and a distal annulus, the terminal joints paler. Other legs as the first but the femora with two annulae. Abdomen gray above, with indistinct narrow white transverse bands, the venter darker, with two white spots on each side.

Structure as usual in females of the genus, the carapace longer than broad, moderately convex, the pars cephalica slightly elevated, the highest point being near the cervical groove. Clypeus nearly vertical, equal in height to one and one-fourth times the diameter of an anterior median eye, the eye group slightly protruding over it, a distinct shallow groove below the first eye row. Eyes of the first row weakly procurved, the medians separated by their radius, as far from the smaller laterals. Second row of eyes weakly procurved, the medians separated by their short diameter, half as far from the subequal laterals. Eyes of the median quadrangle forming a square. Sternum longer than broad (45/40), narrowly truncated between the posterior coxae which are separated by the width. Femur of the first leg longer than the patella and tibia (1.10 mm./1.00 mm.), much longer than the carapace. Abdomen globose, as broad as long, higher than long (8/7). Epigynum as figured.

Type Locality.—Female holotype from Edinburg, Texas, October 15, 1935 (Schulle).

Argiopidae

Tetragnatha laudativa, new species

Figures 33, 34, and 35

Male.—Total length, 10.00 mm., exclusive of the chelicerae. Carapace, 3.50 mm. long, 2.10 mm. wide.

Carapace light reddish brown, the sides with an irregular marginal dark band, the striae infuscated, the eyes ringed in black. Sternum and mouth parts dusky brown, the sternum with a narrow dark seam. Coxae and legs pale to dark reddish brown, the distal end of the joints darkened but not distinctly annulate. Chelicerae dark reddish brown, the claw black. Carapace and appendages sparsely clothed with fine black hairs. Abdomen silvery above, variegated with red and black, reticulated in gray, the sides and venter darker.

Structure of the carapace essentially as in other species of the genus. Eyes of the first row very weakly recurved as seen from the front, the medians separated by two-thirds their diameter, two diameters from the much smaller laterals. Eyes of the second row recurved, the medians separated by less than two diameters

(15/25), two diameters from the subequal laterals (15/30). Lateral eyes of each side separated by scarcely a diameter of the small anterior laterals, the tubercles of these eyes touching at their bases. Median ocular quadrangle broader than long (57/52), narrowed in front (57/44), the anterior medians larger, separated from the posterior medians by their diameter. Clypeus as high as the diameter of an anterior median eye. Chelicera scarcely as long as the carapace (34/35), the upper margin with a stout distal spur which has a weak spine beneath the apex, a stout spur on the inner side in the distal third which is followed by seven teeth after an interval. Lower margin of the chelicera with thirteen teeth in the distal two-thirds of the joint, which are quite regularly spaced and become progressively smaller caudally. Cymbium of palpus normal, the paracymbium with a pointed projection from the distal end. Tibia of palpus longer than the patella (90/65).

FEMALE.—Total length, 10.00 mm., exclusive of the chelicerae.

Structure essentially as in the male. Carapace yellowish brown, with a marginal black seam and a median longitudinal black band that begins at and is as wide as the posterior eye row and narrows caudally to the caudal margin, the front part of the band enclosing a median pale streak. Legs yellowish brown, infuscated, especially at the distal ends of the joints which are annulate. Dorsum of abdomen silvery, with gray reticulations, medially with a longitudinal darker band, the sides of which are indicated by a black line. Sides of the abdomen gray to dull black, the venter silvery, with a median longitudinal dull black band. Chelicera as figured.

Type Locality.—Male holotype, female allotype and paratypes from Kingsville, Texas, November 3–4, 1934 (S. Mulaik). Male and female paratypes from Edinburg, Texas, September to December, 1933 (S. Mulaik). Idem, September 17, 1935 (S. Mulaik). Female paratype from two miles south of McCook, Texas, June 28, 1935 (S. Mulaik).

This species is related to *T. limnocharis* Seeley but is distinct in the details of the chelicerae of both sexes which are figured.

Neosconella devia, new species Figure 38

Female.—Total length, 3.50 mm Carapace, 1.50 mm. long, 1.10 mm. wide.

Carapace pale yellow, the eyes narrowly ringed with black, the cephalic sutures darkened. Sternum pale yellow, margined with seven black spots, three on each side at their respective coxae and one between the coxae of the last legs. Labium and endites black, distally pale yellow. Legs concolorous with the carapace but strongly annulate near the bases and at the distal ends of the joints, the first femur with the rings confluent. Abdomen mainly gray above, with inconspicuous pink spots, with a distinct folium, the margins of which are two sinuate narrow white stripes. Base of dorsum with two small white spots. Venter paler, with a central black maculation and four white bars.

Carapace longer than broad, rather high, strongly convex, the cephalic sutures feebly distinct, the median suture a longitudinal groove on the posterior declivity, not easily visible from above. Pars cephalica higher than the thoracic portion, the

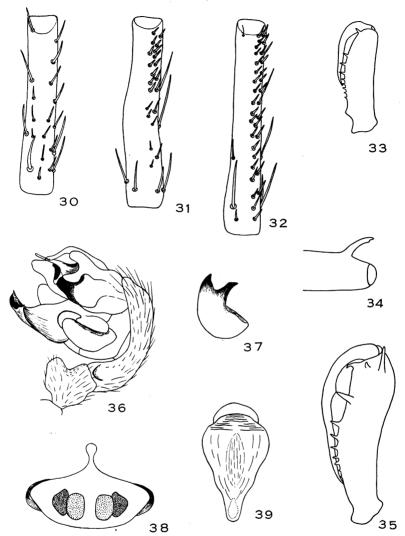


Fig. 30. $Neoscona\ minima\ {\rm F.}\ {\rm Cambridge},\ {\rm second\ tibia\ of\ leg\ of\ male},\ {\rm ventral\ view}.$

- Fig. 31. $Neoscona\ neotheis$ (Petrunkevitch), second tibia of leg of male, ventral view.
 - Fig. 32. Neoscona eximia, new species, second tibia of leg of male, ventral view.
 - Fig. 33. Tetragnatha laudativa, new species, chelicera of female, dorsal view.
 - Fig. 34. Idem, distal end of chelicera of male, lateral view.
 - Fig. 35. Idem, chelicera of male, dorsal view.
 - Fig. 36. Aranea illaudata, new species, male palpus, lateral view.
 - Fig. 37. Idem, median apophysis of male palpus.
 - Fig. 38. Neosconella devia, new species, epigynum of female.
 - Fig. 39. Aranea redempta, new species, epigynum of female.

clypeus equal to two-thirds of the diameter of an anterior median eye. First row of eyes weakly recurved as seen from in front, more strongly so from above, the medians separated by a little more than a diameter, as far from the much smaller lateral eyes. Eyes of the second row straight, the medians separated by their diameter, about two and one-half diameters from the much smaller laterals. Median ocular quadrangle as broad as long, much wider in front than behind (34/26), the anterior eyes much larger. Lateral eyes of each side subequal, subcontiguous. Sternum broader than long (63/60), emarginated in front, the anterior coxae separated by their length, weakly rounded on the sides, bluntly pointed behind, the posterior coxae subcontiguous. Labium much broader than long (33/20), broadly rounded at the end, half as high as the rounded endites. First leg: femur, 2.10 mm., patella, 0.55 mm., tibia, 1.70 mm., metatarsus, 1.50 mm., and tarsus, 0.55 mm. long. Abdomen as broad as long, subtriangular, the anterior margin weakly rounded. Epigynum as figured.

Type Locality.—Female holotype from Edinburg, Texas, August 25, 1935 (S. Mulaik).

Aranea redempta, new species

Figure 39

Female.—Total length, 5.20 mm. Carapace, 2.00 mm. long, 2.00 mm. wide. Carapace light brown, the sides much darker, medially with a longitudinal pale band which is constricted in front of the median groove, clothed evenly with short white scaly hairs. Sternum pale yellow, the margins narrowly infuscated, the labium and endites dark brown but paler at the distal ends, the coxae yellow, somewhat infuscated, the whole underside clothed with fine black hairs. Chelicerae dark brown. Bases of femora yellow, the distal portions black, the patellae dusky, the tibiae and metatarsi pale yellow, with basal and distal rings and the tarsi with a broad distal ring. Legs clothed sparsely with black hairs and longer spines. Abdomen mainly gray, with a dorsal folium suggestive of that of Eustala anastera, the venter dusky, with two white spots in front of the spinnerets.

Carapace as broad as long, robust, the front nearly three-fourths as wide as the greatest width. Eyes of the first row procurved, the medians separated by scarcely their diameter, about four diameters from the smaller laterals. Eyes of the second row straight, the medians on low tubercles, separated by about two diameters, four diameters from the smaller laterals. Median ocular quadrangle broader than long (50/44), narrowed in front in the same ratio, the eyes subequal. Lateral eyes subequal, on slight tubercles, separated by their radius. Clypeus below the anterior median eyes as high as the diameter of one of them. Sternum as broad as long, the posterior coxae subcontiguous. Labium nearly twice as broad as long. Lower margin of the furrow of the chelicera with three subequal teeth, the upper margin with three, the median larger. Tibia and patella I, 2.70 mm., IV, 2.25 mm. Abdomen with small shoulder humps. Epigynum with a heavy triangular scape, as figured.

Type Locality.—Female holotype from Edinburg, Texas, October 10, 1935 (Clyde Rutherford).

Aranea illaudata, new species

Figures 36 and 37

Male.—Total length, 4.00 mm. Carapace, 2.00 mm. long, 1.30 mm. wide.

Carapace pale dusky yellow, infuscated at the sides and in the median groove, the eyes narrowly ringed with black. Sternum, mouth parts and coxae pale dusky yellow. Legs concolorous with the carapace, darkened at the ends of the femora and tibiae but not distinctly annulate. Abdomen reddish brown, with a small white maculation at the base of the dorsum, with small side humps and an indistinct folium.

Structure as in Aranea gemma (McCook) and other species of the group, the carapace longer than broad, convex, the median suture a shallow groove, the cephalic sutures shallow. Eyes of the first row straight from in front, strongly recurved as seen from above, the medians separated by a full diameter, a little farther from the much smaller laterals. Eyes of the second row strongly recurved, the medians separated by three-fourths their diameter, twice as far from the smaller laterals. Median ocular quadrangle as broad as long, very slightly narrower behind, the posterior eyes larger. Clypeus about as high as the diameter of an anterior median eye. Sternum longer than broad (90/76), the posterior coxae subcontiguous. Labium broader than long (38/25). First two tibiae with five pairs of ventral spines and three single dorsals, prolaterals and retrolaterals. First leg: femur, 2.50 mm., patella, 1.00 mm., tibia, 1.75 mm., metatarsus, 1.75 mm., and tarsus, 0.75 mm. long. Palpus as figured.

An immature female, 6.00 mm. long agrees in color and structure with the male.

Type Locality.—Male holotype and immature female allotype from Edinburg, Texas, September to December, 1933 (S. Mulaik).

This species is closely related to Aranea gemma (McCook) but differs in the male sex in the much smaller size, in lacking the double row of long spines beneath the first femora and in the details of the palpus which is figured.

Neoscona eximia, new species Figure 32

Female.—Total length, 10.50 mm. Carapace, 4.30 mm. long, 3.10 mm. wide. Carapace dull yellow, the margins irregularly infuscated to form a narrow band, the midline with a longitudinal dark band which begins behind the eyes, narrows at the cervical groove and continues caudally to the margin, the intervals between these bands two large pale spots. Eyes narrowly ringed with black. Carapace clothed evenly with white hairs. Sternum brown, with a central pale stripe, the mouth parts brown, distally pale, the coxae pale yellow, with brown markings, the whole underside clothed with scattered pale hairs. Integument of the legs dull yellow, the femora speckled with black and with an apical ring, the patellae brown, the tibiae with broad apical and basal rings which are usually confluent in the first legs, the distal joints dull yellow. Dorsum of the abdomen gray to brown, with irregular darker markings and spots and usually with a distinct dark triangular folium in the caudal half, which is margined with a sinuate white line. Venter of the abdomen with a broad dark median band which encloses two white spots in front of the spinnerets.

Structure essentially as in *Neoscona benjamina* (Walckenaer), the carapace longer than broad, moderately convex, the median suture longitudinal. Pars cephalica half as broad as the greatest width, the sutures well marked. Eyes of the first row straight, the medians separated by a diameter, two diameters from the smaller laterals. Eyes of the second row recurved, the medians separated by a radius, four diameters from the subequal laterals. Median ocular quadrangle as broad as long, narrowed behind. Clypeus as high as the diameter of an anterior median eye. Sternum longer than broad (40/35), the posterior coxae subcontiguous. First tibiae with 2-2-1-1-1-2 ventral spines, the patella and tibia longer than the carapace (6.50 mm.). Epigynum strongly geniculate as in *Neoscona oaxacensis* (Keyserling). Abdomen nearly as broad as long.

Male.—Total length, 6.00 mm. Carapace, 3.50 mm. long, 2.80 mm. wide.

Color pattern much as in the female, but the carapace usually pale to bright yellow, the sutures infuscated. Second tibia as figured, armed with a double series of spines as in *N. oaxacensis* (Keyserling). Patella and tibia of the first leg, 5.30 mm. long. First coxa with a ventral apophysis, the fourth coxa without such a spur. Palpus as in *Neoscona benjamina* (Walckenaer).

Type Locality.—Male holotype, female allotype and paratypes from Edinburg, Texas, September to December, 1933 (S. Mulaik). Female paratypes from Edinburg, Texas, June 6, 1935 (S. Mulaik); January to May, 1934 (S. Mulaik); February 10, 1935 (Waite); November 11, 1934 (Welch). Female paratypes from Winfield, Kansas.

This species is closely related to the other members of the genus and structurally is nearest *Neoscona benjamina* (Walckenaer) which it closely resembles in form and color. The very distinct folium on the dorsum is distinctive for *N. eximia*.

Neoscona minima F. Cambridge

Figure 30

Neoscona minima F. Cambridge, 1904, 'Biologia Centrali-Americana,' Araneidea, II, p. 471, Pl. XLIV, figs. 11 and 12.

RECORDS.—Edinburg, Texas, October 27, 1934, males and females (S. Mulaik). Idem, October 7, 1934, males and females (S. Mulaik). Seven miles east of Edinburg, October 14, 1934, males and females (S. Mulaik). Brownsville, Texas, December 1, 1934, females (S. Mulaik). Idem, May 25, 1934, male, females (J. N. Knull).

This species, described by Cambridge from Mexico, is the common *Neoscona* in southern Texas and is also widely distributed along the coast to Florida. The straight second tibia of the male will distinguish it from *Neoscona arabesca* (Walckenaer) to which it is very closely allied in other respects. *N. arabesca* is essentially a northern species and occurs less commonly in the southern states.

Neoscona neotheis (Petrunkevitch)

Figure 31

Epeira theisii Keyserling, 1892, 'Spinnen Amerikas,' Epeiridae, p. 246, Pl. XII, fig. 184 (not E. theis Walck).

Araneus neotheis Petrunkevitch, 1911, Bull. American Museum Nat. Hist., XXIX, p. 305 (new name for theisii Keyserling).

Records.—Mississippi, two females. Corpus Christi, Texas, July 1–20, 1935, a female probably this species (H. C. Sibley, Jr.).

All the specimens in the collection of the American Museum of Natural History which were referred to Neoscona oaxacensis by Drs. A. Petrunkevitch and N. Banks belong in Neoscona neotheis Petrunkevitch, a new name proposed in 1911 for Epeira theisi of Keyserling and McCook. Neoscona oaxacensis (Keyserling), originally described from specimens taken in Mexico, probably occurs in the West Indies but I have not seen a single example from that locality. This species or a closely related form, N. vertebrata (McCook), is found in the southwestern United States from Kansas to California. Neoscona saleria Chamberlin, N. utahana Chamberlin and N. naiba Chamberlin and Gertsch are almost certainly synonymous with N. oaxacensis (Keyserling) but it may be necessary to retain one or two of these names for use in a varietal sense for the size and color markings of these forms are quite radically different from Keyserling's species. The second tibia of N. neotheis has a distinct spinal formula from that of the other species.

Clubionidae

Micaria swansoni, new species

Figure 29

MALE.—Total length, 2.00 mm. Carapace, 1.00 mm. long, 0.65 mm. wide.

Carapace clothed with pale procumbent hairs and a few spines in the ocular area, the clypeus margin with five long ones. Carapace light brown, the margins darker, the dorsum with a broad but faint darker maculation at the middle and a few dark streaks forward to the eyes which are narrowly ringed with black. Sternum light yellowish brown, the mouth parts and first coxae darker brown, the three posterior coxae white, the whole underside sparsely clothed with scattered black hairs. Chelicerae dark brown, with numerous long black hairs. First femur dark brown, the other joints of that leg white. Second leg colored as the first but the chromatism on the femur arranged in irregular lateral bands. Third and fourth pairs of legs yellow, with lateral longitudinal brown bands on the joints. All the legs sparsely covered with rows of black hairs, the last pair with a few weak spines. Abdomen unconstricted, clothed with golden hairs, the caudal end darker, the venter pale yellow.

Structure as usual in the genus, the front three-fourths as broad as the greatest width of the carapace. Eyes of the first row weakly procurved, the medians sepa-

rated by a radius, a little nearer the slightly larger laterals. Clypeus as high as the diameter of an anterior median eye. Eyes of the second row straight, the medians separated by their diameter, scarcely as far from the subequal laterals. Median ocular quadrangle broader than long, narrowed in front, the anterior medians smaller. Palpus as figured, the tibial apophysis a short weak spur.

Type Locality.—Male holotype from Houston, Texas, November, 1935 (John Swanson).