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Miscellaneous
New American Spiders

BY

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Miscellaneous New American Spiders

By RALPH V. CHAMBERLIN AND WILTON IVIE

A number of new species of spiders have been accumulating in the collection of the University of Utah for several years. The naming and characterizing of a part of these species is the purpose of this paper. Those considered here are all from the United States, except one from Canada. The types are in the collection of the University of Utah.

CTENIZIDAE

Aptostichus zebrus Chamberlin and Ivie, new species.

(Pl. I. ff. 3-5)

Color.— Entire cephalothorax, legs, and palpi light amber brown. Abdomen light gray, with a series of large dark gray chevron-like marks along the back. These marks are narrowly connected along the mid-line, and merge into a more or less diffused blotch at the base. Venter pale gray. Spinnerets pale brownish yellow.

The structure is similar in general to that of other members of the genus. The distinguishing features (outside of the color of the abdomen) are the palpus and metatarsus I of the male. The latter bears a short rounded spur on the ectal side at about midway of the length.

Measurements:

	MALE
Length	11.0 mm.
Cephalothorax:	
Length	6.0
Width	5.0
Tibia-Patella:	
I	7.1
IV	8.0

Type locality.—Palo Alto, California. Male holotype. (J. C. Chamberlin collector).

Other locality.—Mountains near Santa Rosa, California. (W. Ivie collector, August 22, 1931, immature).

Brachybothrium montanum Chamberlin and Ivie, new species.

(Pl. V, f. 31)

Brachybothrium hageni Chamberlin and Ivie, 1933 Bull. Univ. Utah, Biol. ser., II(2):4.

Color.—Cephalothorax, mouth parts, sternum, legs, and palpi light yellowish; spines and hairs black; area between the eyes black. Abdomen light yellowish gray. (The adult female tends to be darker in some cases,—the chelicerae, legs, and under parts of the cephalothorax becoming reddish brown, and the abdomen dark gray.) The male has a median series of three or four large brown transverse spots on the upper side of the abdomen, which appear like sclerites.

The size and general structure closely resembles *B. pacificum* Simon and *B. hageni* Chamberlin. The palpus is similar to that of *hageni*, but the embolus and conductor are not so sharply bent. Tibia I in the male is straight, somewhat swollen, and bears a dense patch of coarse black spines on each side near the distal end. The metatarsus is slender being scarcely greater in diameter than the tarsus; nearly straight and without modifications.

Type locality.—Raft River Mts., Utah. Male holotype, female allotype.

Other localities.—Utah: Salt Lake City and vicinity; North Fork of Provo River in Uintah Mts. Idaho: Notus (Canyon Co.)

This spider is usually found under rocks or other objects on the ground; or the male may be found roving in the autumn. They ordinarily do not have burrows, apparently, tho one female was taken from a burrow beneath a rock. This burrow extended straight down into the ground for about eight inches; it was not lined with silk for any part of its length.

FILISTATIDAE

Filistata arizonica Chamberlin and Ivie, new species

(Pl. IV, ff. 24-25)

Color.—*Male*: General color pale yellowish brown. Carapace pale yellowish with a dusky streak thru the median furrow and which broadens anteriorly to include the eye tubercle. The other parts of the cephalothorax, legs, and palpi yellowish, with the legs becoming darker and more brownish distally.

Abdomen light grayish brown.

Female: Black thruout, with the carapace, femora of palpi, and tarsi of legs tending to a dark brown.

Immature specimens light brownish to black.

Structure.—Similar to *F. hibernalis* Hentz, but slightly smaller. The male palpus is of the general type of *hibernalis*, but the embolus is more slender.

<i>Measurements</i> :	MALE	FEMALE
Length	7.0 mm.	15.0 mm.
Cephalothorax:		
Length	3.0	4.5
Width	2.7	3.8
Tibia-Patella:		
I	8.0	8.0
IV	7.0	6.2

Type locality.— 8 miles north of Roosevelt Dam, Arizona. Male holotype, female allotype. (W. Ivie collector).

This spider was fairly common under rocks, old logs, and other objects on the ground. Its web is similar to that of *hibernalis*. The male can be distinguished by the palpus; the female is darker than *hibernalis*, but cannot at this time be distinguished from *F. utahana* Chamb. and Ivie, n. sp.

Filistata utahana Chamberlin and Ivie, new species.

(Pl. IV, ff. 26-27)

This species is similar in size and general structure to *F. hibernalis* Hentz. The color, however, is darker,—the female is black thruout, the male is more dusky than in *hibernalis* and *arizonica*. The palpus is distinct in the shape of the embolus.

<i>Measurements</i> :	MALE	FEMALE
Length	9.6 mm.	13.0 mm.
Cephalothorax:		
Length	4.0	6.4
Width	3.7	4.5
Tibia-Patella:		
I	10.0	8.3
IV	9.2	7.1

Type locality.—North of Marysvale, Utah. Male holotype.

Other locality.—St. George, Utah. Female allotype.

Filistata geophila Chamberlin and Ivie, new species.

(Pl. IV, ff. 22-23)

This species is much smaller than the other species of this genus in the United States; the structure, however, is much the same. The general color is brown; the male is only slightly lighter than the female. The carapace, legs, palpi, chelicerae, and other parts of the cephalothorax are yellowish brown; the eye region darker, with a reticulate formation on the clypeus and on the head region back of the eye area; the sternum has a dusky border. The abdomen darker, grayish brown.

Measurements:

	MALE	FEMALE
Length	5.5 mm.	5.8 mm.
Cephalothorax:		
Length	2.4	2.7
Width	2.0	2.0
Tibia-Patella:		
I	5.0	3.3
IV	4.8	2.9

Type locality.—Menlo Park, near Palo Alto, California. Male holotype, female allotype. (J. C. Chamberlin collector).

Other localities.—California: Santa Cruz Island (R. V. Chamberlin); Orange Co.; Los Angeles Co.; Mt. Whitney (east side); Clear Lake; Fresno.

This species is apparently common thruout most of California and probably extends southward into Mexico. It is found on the ground under rocks, leaves, etc. Females with egg-sacs were found in August 1931, and July 1934. They guard over their eggs in the manner of the Gnaphosids. The webs are scanty.

The male resembles the female in size and color more closely in this species than in any of the others.

SEGESTRIIDAE

Segestria bella Chamberlin and Ivie, new species.

(Pl. V, f. 34)

A much smaller species than *S. pacifica* Banks. Also differs in color and in the male palpus.

Color.—Carapace reddish brown. Chelicerae chestnut. Sternum, labium, and endites brown. Legs and palpi light straw yellow,—legs I and II becoming reddish brown beyond the femur, leg I being darker than leg II. Abdomen whitish, with black markings, consisting of: a series of large connecting black spots along the dorsum,—these spots being triangular at base, but becoming shorter and more transverse distally; a black feather-like design along each side; a wide median area along venter from epigastric furrow in front to and surrounding spinnerets behind,—this area usually split lengthwise by a whitish strip. Spinnerets yellowish white.

The structure is very similar to that of *pacifica*, except the male palpus, which is proportionately much larger in this species.

Measurements:

	MALE
Length	5.3 mm.
Cephalothorax:	
Length	2.5
Width	1.5
Tibia-Patella:	
I	2.5
IV	2.2

Type locality.—Mayfield, California. Male holotype, immature paratypes. (J.C. Chamberlin, collector.)

Other locality.—Laguna Beach, California (immature).

This species is easily distinguished from *S. pacifica* Banks by its much smaller size and different color markings.

Segestria cruzana Chamberlin and Ivie, new species.

Similar to *S. bella* n. sp., but differing especially in the color of the abdomen. The ground color is pale gray, heavily marked with dark blackish gray. A series of transverse bars mark the posterior two-thirds on top,—this marking becoming more broken and diffused anteriorly. Venter and sides speckled; also a feather-like design on each side.

Probably a small species like *bella*.

Type locality.—Santa Cruz Island, California. Immature holotype (R. V. Chamberlin collector).

Citharoceps californica Chamberlin and Ivie, new species.

(Pl. V, ff. 32-33)

A larger and darker species than *C. fidicina* Chamberlin, which it otherwise resembles very closely. Known only from immature specimens, which range up to 9 mm. in length.

Color.—Carapace and chelicerae chestnut brown. Sternum, endites, labium, legs, and palpi orange brown,—the palpi and leg I beyond femur darker and more reddish; legs III and IV lighter and more yellowish beyond femur; endites with white tip. Abdomen purplish gray above, there appearing to be a series of sclerites along the mid-line on posterior two-thirds, which are some times darker. Venter pale grayish, more or less covered over with purple, especially in front of spinnerets and forward along each side of mid-line. Spinnerets light yellowish brown.

Type locality.—Laguna Beach, California. Immature holotype, immature paratypes. (W. Ivie collector, December 28, 1932).

Other localities.—California: Santa Ana Canyon; Pacific Grove (S. D. Durrant).

Lives under loose bark on Eucalyptus and other trees.

OONOPIDAE

Stenoonops minutus Chamberlin and Ivie, new species.

(Pl. I, ff. 1-2; Pl. II, f. 14)

Color.—Carapace, sternum, labium, endites, and chelicerae reddish amber. Legs and palpi pale yellowish. Abdomen pale grayish yellow.

The general structure, eye arrangement, and palpus are shown by the figures.

<i>Measurements:</i>	MALE
Length	1.16 mm.
Cephalothorax:	
Length .....	.56
Width .....	.41
Tibia-Patella:	
I .....	.38
IV .....	.45

Type locality.—Tampa, Florida. Male holotype. (W. Ivie collector, August 26, 1933). Collected by sifting leaves.

Ischnothyreus barrowsi Chamberlin and Ivie, new species.

(Pl. II, f. 7)

Color.—Carapace light reddish amber. Sternum, mouth parts, legs, and palpi bright straw yellow. Abdomen grayish white, except for dorsal shield, which is light reddish brown.

Structure.—Similar to that of *I. peltifer* (Simon) as described by Petrunkevitch (Trans. Connecticut Acad. Sci., 1929, 30:66), except for the dorsal shield of the abdomen which is longer in this species.

<i>Measurements:</i>	FEMALE
Length	1.8 mm.
Cephalothorax	
Length .....	.77
Width .....	.64

Type locality.—Marco Island, Florida. Female holotype. (W. M. Barrows collector, January 9, 1930).

Oonopinus floridanus Chamberlin and Ivie, new species.

(Pl. II, ff. 8-9)

Color.—Entire cephalothorax and legs clear yellow. Abdomen pale whitish gray.

Structure similar to that of *Oonops*, except that the carapace is less elevated and narrower; the abdomen more slender, and the legs without spines.

This species is smaller than an *Oonops* (unidentified as yet) which also occurs in Florida.

The male and female are very close in size, color, and structure.

<i>Measurements:</i>	MALE	FEMALE
Length	1.45 mm.	1.50 mm.
Cephalothorax:		
Length .....	.66	.66
Width .....	.45	.47
Tibia-Patella:		
I .....	.58	.55
IV .....	.67	.66

Type locality.—Gainesville, Florida. Male holotype, female allotype. (W. M. Barrows collector).

Orchestina moaba Chamberlin and Ivie, new species

(Pl. II, ff. 10-13; Pl. III, ff. 15-18)

Color.—Cephalothorax, mouthparts, legs, and palpi pale straw yellow. Palpal organ of male whitish, with tip of embolus black. Abdomen pale grayish yellow to light gray. Spinnerets pale yellow.

Structure.—*Female*: Cephalothorax longer than wide; median depression lacking; clypeus sloping forward, about one long diameter of a median eye in width. Eyes six; all light; the median eyes larger than the others. Legs rather slender and of moderate size; without spines; the hind femur swollen, as is characteristic for the genus. Abdomen oval.

Male: Similar to female. Abdomen is shorter and more rounded. The carapace is also shorter and more rounded in outline. The cephalic part of the carapace is elevated, with a distinct hump rising back of the eyes, the front part of the head appearing excavated. There is a thick tuft of short hairs in the depressed area.

Measurements:

	MALE	FEMALE
Length	1.3 mm.	1.7 mm.
Cephalothorax:		
Length .....	.6	.64
Width .....	.5	.51
Tibia-Patella:		
I .....	.6	.64
IV .....	.6	.60

Type locality.—Moab, Utah. Male holotype, female allotype.

Other localities.—Bluff, Utah; Santa Monica, California; Laguna Beach, California; Payson, Arizona.

This small species of spider resembles *O. saltitans* Banks in general appearance and actions, but is much lighter in color. It is found on the ground under leaves, etc. It is especially abundant around Santa Monica and Laguna Beach, California, in the winter.

Orchestina utahana Chamberlin and Ivie, new species.

Similar in color, size, general structure, and shape of the palpus to *O. moaba* n. sp., but differs in that the carapace of the male is of normal shape,—the anterior excavation and tuft of hair is lacking.

Type locality.—West shore Utah Lake, Utah. Male holotype, female allotype. (W. Ivie collector, April, 1934). Found in sifting cottonwood leaves.

SCYTODIDAE

Kibramoa hermani Chamberlin and Ivie, new species.

Known only from a female, which apparently is not quite mature. In general structure this species is similar to *K. suprenans* (Chamberlin). The size, however, is larger, and the legs longer. The color is not as brilliant as in *suprenans*, and the white median stripe on the base of the abdomen is absent.

Color.—Carapace, sternum, endites, chelicerae, palpi, and legs yellowish brown. Chelicerae chestnut. Abdomen entirely light grayish.

Measurements:

	FEMALE
Length	9.0 mm.
Cephalothorax:	
Length	5.0
Width	2.9
Tibia-Patella:	
I	8.5
IV	7.9

Type locality.—Narrows of Virgin River near Littlefield, Arizona. Female (immature?) holotype. (W. Ivie collector, June, 1934). Found under a board in an old tunnel.

Named in honor of Herman Rasmussen, who was a member of the collecting party.

PRODIDOMIDAE

Pericuris pallida Chamberlin and Ivie, new species.

(Pl. V, f. 35)

Agrees rather closely with *P. insularis* Chamberlin from Lower California in size, color, and general structure. It is to be distinguished by the front spinnerets, the tubules are not as long as the basal segment in this species, while they are longer in *insularis*. The eye arrangement is the same.

Type locality.—Junction of Mesa and Salt Rivers near Mesa, Arizona. Immature holotype. (W. Ivie collector, April, 1935). Under rocks on dry hillside.

Other locality.—Palm Springs, California. (J. C. Chamberlin collector, immature).

ULOBORIDAE

Hyptiotes gertschi Chamberlin and Ivie, new species.

(Pl. VI, ff. 38-39)

Similar in size, color, general structure, and habits to *H. cavatus* (Hentz). The structure of the male palpus differs in details. The abdomen does not show the four pairs of humps characteristic of *cavatus*, but has one prominent hump, and often very small tufts of hairs in the region of the other humps.

Type locality.—Salt Lake City, Utah. Female holotype.

Other localities.—California: Mt. Palomar; Santa Cruz; Santa Rosa; Pacific Grove. Oregon: Forest Grove (male allotype, R. V. Chamberlin collector). Washington: Tacoma. Utah: Henry Mts., Cedar Canyon near Cedar City (R. V. Chamberlin collector). Wisconsin: Longmire.

This is apparently the only species of *Hyptiotes* that occurs in the western states, *H. cavatus* being restricted to the eastern states.

PHOLCIDAE

Pholcophora obscura Chamberlin and Ivie, new species.

(Pl. VI, f. 45)

Female.—Similar in size and structure to *P. americana* Banks. The color, however, is darker. The carapace, chelicerae, sternum, and coxae and femora of the legs dusky brown; the palpi and legs beyond the femora brownish yellow. Abdomen dark gray. The opening to the epigynum is considerably larger than in *americana*.

Type locality.—Aspen Valley, Yosemite Park, California. Female holotype. (W. Ivie collector, August 11, 1931).

THERIDIIDAE

Steatoda zionis Chamberlin and Ivie, new species.

(Pl. V, f. 36; Pl. VI, f. 42)

This species most closely resembles *S. grandis* Banks. It ranges larger in size than *grandis*, being the largest of the Nearctic species. It is also lighter in color than the other species. In structure, it may be readily distinguished by the shape of the epigynum and palpus.

Color.—Carapace brown; sternum, endites, labium, and chelicerae a slightly lighter brown. Legs and palpi light brownish yellow, some-

times with faint suggestions of darker annuli. Abdomen on dark specimens blackish above, with the typical white band around the base, and the white median band on the basal half; venter light pinkish yellow, with the median area more or less black. Lighter specimens, which are as a whole the more common form, lack the black marking on the venter, and often the whole top of the dorsum is faded to a pinkish color.

Measurements:

	MALE	FEMALE
Length	6.4 mm.	7.8 mm.
Cephalothorax:		
Length	2.7	2.9
Width	2.3	2.4
Tibia-Patella:		
I	4.8	4.8
IV	4.1	4.0

Type locality.—Zion Park, Utah. Male holotype, female allotype.

Other localities.—Utah: Cedar Canyon below Cedar Breaks; Ferron (Emery Co.); Levan (Juab Co.); Henry Mts.; Salt Lake City.

Steatoda palomara Chamberlin and Ivie, new species.

(Pl. VI, f. 43)

This species, known from only a single female, is similar in size, color, and general structure to *S. borealis* (Hentz) and *S. hespera* Chamberlin and Ivie. The shape of the epigynum is distinct. (See figure).

Type locality.—Mt. Palomar, California.

MICRYPHANTIDAE

Erigone canthognatha Chamberlin and Ivie, new species.

(Pl. VII, ff. 54-56)

Color.—Carapace, chelicerae, and endites light reddish brown. Sternum and labium dusky. Legs and palpi light straw yellow,—the palpal organs darker. Abdomen dark gray.

Structure.—*Male*: Cephalic part of carapace elevated in typical fashion. Spines along the margin of the carapace very small. Chelicerae armed with large sharp curved spines. These form a row along the antero-ectal corner, and a number are arranged on the

front and mesally on the basal half. Endites much swollen, tuberculate. Femora of legs I, II, and III with a row of setigerous spines along the ventro-posterior corner, these being most prominent on leg I.

The palpus is distinct, notably in the apical process on the ventral side of the patella. The femur is straight, with the setigerous spines small.

Measurements:

	MALE
Length	2.5 mm.
Cephalothorax:	
Length	1.28
Width .....	.87
Tibia-Patella:	
I	1.17
IV	1.08

Type locality.—Moab, Utah, (5 miles up Colorado River). Male holotype. (W. Ivie collector, June, 1934).

Erigone uintana Chamberlin and Ivie, new species.

(Pl. VIII, f. 57)

Color.—Carapace dark brown. Chelicerae and endites reddish brown. Sternum and labium dusky black. Legs and palpi light brown, the legs paler on the tarsus. Abdomen black.

Structure.—*Male*: Typical in form. The spines on the edge of carapace and on front of the chelicerae only moderately developed. The most distinctive feature is the long ventral spur on the tibia of the male palpus.

Measurements:

	MALE
Length	2.2 mm.
Cephalothorax:	
Length	1.0
Width .....	.75
Tibia-Patella:	
I .....	.80
IV .....	.83

Type locality.—Mirror Lake, Uintah Mts., Utah. Male holotype. (W. Ivie collector, September 22, 1932).

***Erigone whitneyana* Chamberlin and Ivie, new species.**

(Pl. VII, f. 58)

Color.—Carapace, chelicerae, and endites dusky brown. Sternum and labium more dusky. Legs and palpi yellow covered with dusky, giving them a brown appearance. Abdomen black.

Closely related to *E. ephala* Crosby and Bishop. The spines on the carapace, chelicerae, and palpus are much reduced.

Measurements:

	MALE
Length	2.2 mm.
Cephalothorax:	
Length	1.0
Width .....	.75
Tibia-Patella:	
I .....	.80
IV .....	.80

Type locality.—Mt. Whitney, California. Male holotype. (W. Ivie collector). Elevation 12,500 ft. Found in same situation with *E. dentosa* Cambridge.

***Eulaira tigana* Chamberlin and Ivie, new species.**

(Pl. I, f. 6; Pl. X, f. 85)

Color.—Carapace, legs, palpi, and endites dark yellow,—palpal organs of male darker; the chelicerae slightly darker. Sternum and labium with background of same color, but heavily shaded with dusky. Adomen gray, varying from light to dark gray with different specimens.

Structure.—Similar to that of *E. dela* Chamberlin and Ivie. The palpus and epigynum, however, are distinct. (See figures).

Measurements:

	MALE	FEMALE
Length	1.90 mm.	1.95 mm.
Cephalothorax:		
Length .....	.90	.82
Width .....	.73	.62
Tibia-Patella:		
I .....	.80	.78
IV .....	.90	.88

Type locality.—Smith and Morehouse Canyon, Uintah Mts., Utah. Male holotype, female allotype. (W. Ivie collector, October 10, 1932). Sifted from leaves from under willow bushes. Common.

Other locality: Marquette, Michigan. Female paratype. (A. M. Chickering collector).

Eulaira mana Chamberlin and Ivie, new species.

(Pl. X. f. 84)

Color.—Cephalothorax and legs yellow; chelicerae slightly darker. Abdomen pale grayish yellow.

The structure is similar to that of other species of the genus. The epigynum is distinct, and the size is smaller than usual.

Measurements:

	FEMALE
Length	1.5 mm.
Cephalothorax:	
Length .....	.57
Width .....	.48
Tibia-Patella:	
I .....	.47
IV .....	.48

Type locality.—Mill Creek Canyon near Salt Lake City, Utah. Female holotype. (W. Ivie collector, April, 1935.)

Floricomus littoralis Chamberlin and Ivie, new species.

(Pl. VIII, ff. 59-62)

Similar in general to *F. floricomus* Crosby and Bishop.

Color.—Carapace, sternum, labium, and endites dusky brown; chelicerae less dusky. Legs and palpi light yellowish brown. Abdomen reddish above, blackish on sides and venter.

The male bears a frontal horn with capitate hairs as in *floricomus*. Abdomen of both sexes bears a large chitinous shield over the dorsum. Legs IV slightly longer than leg I in the male, but decidedly longer in the female.

Measurements:

	MALE	FEMALE
Length	1.40 mm. (without	1.75 mm.
	horn)	
Cephalothorax:		
Length .....	.64	.67
Width .....	.57	.60
Tibia-Patella:		
I .....	.64	.56
IV .....	.67	.70

Type locality.—West shore of Utah Lake, Utah. Male holotype, female allotype. (W. Ivie collector, March 1934). Under rocks on wet ground near water.

Hypselistes reducens Chamberlin and Ivie, new species

(Pl. VII, ff. 52-53)

Closely related to *H. florens* (Cambridge). The color is the same. The size is somewhat smaller in this species. The palpus of the male differs in a number of details, the most prominent of which is the absence of the dorsal process on the end of the tibia. The cephalic lobe is less prominent in this species. The epigynum of the female shows very little difference.

Measurements:

	MALE	FEMALE
Length	2.1 mm.	2.6 mm.
Cephalothorax:		
Length	1.0	1.10
Width .....	.8	.85
Tibia-Patella:		
I .....	.95	1.00
IV .....	.89	1.03

Type locality.—Mirror Lake, Uintah Mts., Utah. Male holotype, female allotype. (W. Ivie collector, September 22, 1932.)

Hypselistes florens bulbiceps Chamberlin and Ivie, new variety

(Pl. VII, f. 50)

Closely resembles *H. florens* (Cambridge). The color is the same. The size is slightly larger in this variety. The palpus and epigynum are the same, except for a difference in size. The bulb-like enlargement on the head of the male is conspicuously larger.

Measurements:

	MALE	FEMALE
Length	2.6 mm.	3.0 mm.
Cephalothorax:		
Length	1.5	1.5
Width	1.1	1.1
Tibia-Patella:		
I	1.26	1.30
IV	1.20	1.30

Type locality.—Smith and Morehouse Canyon, Uintah Mts., Utah. Male holotype, female allotype. (W. Ivie collector, May 30, 1934).

***Oedothorax lasalanus* Chamberlin and Ivie, new species**

(Pl. VII, ff. 46-49)

Color.—Carapace, legs, and endites dark yellow. Chelicerae slightly darker and more reddish. Sternum and labium covered with dusky. Abdomen gray to black.

Structure typical without special modifications other than the palpus and epigynum. See figures.

Measurements:

	MALE	FEMALE
Length	1.63 mm.	1.80 mm.
Cephalothorax		
Length .....	.80	.82
Width .....	.66	.58
Tibia-Patella:		
I .....	.75	.79
IV .....	.80	.85

Type locality.—Lasal Mts., Utah. Male holotype, female allotype. (W. Ivie collector, October 30, 1931.)

***Spirembolus pachygnathus* Chamberlin and Ivie, new species.**

(Pl. IX, ff. 71-73)

Color.—Carapace, endites, and chelicerae brown; sternum and labium dusky brown. Legs and palpi dull straw yellow. Abdomen dark gray to black.

Structure.—Similar to *S. monticolens* Chamberlin, except that the chelicerae are more swollen; and the distal spirals of the embolus in the palpus are much smaller. Like *monticolens*, the back of the cymbium is rounded instead of coming to a conical point.

Measurements:

	MALE	FEMALE
Length	1.9 mm.	2.2 mm.
Cephalothorax:		
Length .....	.87	.85
Width .....	.67	.67
Tibia-Patella:		
I .....	.74	.80
IV .....	.86	.87

Type locality.—Fish Lake, Utah. Male holotype, female allotype. (R. V. Chamberlin collector, September 5, 1929.)

Spirembolus pallidus Chamberlin and Ivie, new species.

(Pl. IX, ff. 74-75)

Color.—Carapace, chelicerae, endites, sternum, and labium light brownish orange; legs more yellowish. Abdomen whitish to light gray, —the venter and a ring around the spinnerets usually a darker gray.

Structure.—Belongs to the *vallicolens* group, but more generalized. The head is not so elevated. The conical process on the back of the cymbium not so well developed. The embolus is similar to that of *S. phylax* n. sp. The epigynum is of the usual type. Smaller in size than most of the other species.

Measurements:

	MALE	FEMALE
Length	1.50 mm.	1.70 mm.
Cephalothorax:		
Length .....	.62	.70
Width .....	.52	.53
Tibia-Patella:		
I .....	.58	.58
IV .....	.65	.67

Type locality.—Henry Mts., Utah (Mt. Ellen). Male holotype, female allotype. (R. V. Chamberlin collector, September 11, 1929).

Spirembolus phylax Chamberlin and Ivie, new species.

(Pl. IX, ff. 67-70)

Color.—Carapace, chelicerae, and endites dusky brown; sternum and labium more dusky. Legs and palpi light straw yellow. Abdomen dark gray.

Structure.—Head elevated. Palpus of the usual type in general. The palpus differs from that of *vallicolens* in that the long tibial ap-resembling that of *S. vallicolens* Chamberlin. Other structures typical ophysis does not bear a spur near the base.

Measurements:

	MALE
Length	1.55 mm.
Cephalothorax:	
Length .....	.79
Width .....	.60
Tibia-Patella:	
I .....	.73
IV .....	.90

Type locality.—Laguna Beach, California. Male holotype. (W. Ivie collector). In grass of lawn.

Spirembolus whitneyanus Chamberlin and Ivie, new species.

(Pl. VIII, ff. 63-65; Pl. IX, f. 66)

Color.—Carapace, chelicerae, and endites brown. Sternum and labium dark dusky brown. Legs and palpi straw yellow. Abdomen dark gray.

Structure.—The head is only moderately elevated as compared with certain other species of the genus. The palpus is typical in general, except that the embolus is much reduced.

Measurements:

	MALE
Length	1.5 mm.
Cephalothorax:	
Length .....	.69
Width .....	.54
Tibia-Patella:	
I .....	.60
IV .....	.67

Type locality.—Mt. Whitney, California (east base). Male holotype. (W. Ivie collector, August 8, 1931).

ARGIOPIDAE

Metepeira gosoga Chamberlin and Ivie, new species.

(Pl. X, ff. 82-83)

Color.—Carapace yellowish brown, darker on middle of head region. Chelicerae, bases of endites and labium, and sides of sternum dark blackish brown; the tips of the labium and endites, and the median longitudinal area of the sternum white. Legs light yellowish with three black annuli,—one at each end of the tibia (the basal one including the distal end of the patella), and one on the distal end of the femur. Abdomen whitish with a faint outline of a folium, especially on the distal part. Sides of venter pale yellowish gray; the median area white, enclosing a dusky spot or streak on each side of the middle. Epigastric plates and spinnerets dark dusky brown. Carapace thickly covered with soft white hairs.

Measurements:

	FEMALE
Length	8.0 mm.
Cephalothorax:	
Length	3.8
Width	3.1
Tibia-Patella:	
I	4.7
IV	3.8

Type locality.—Pilot Knob Valley, Mojave Desert, California. Female holotype. (E. C. Jaeger collector).

Other locality.—East base of Mt. Whitney, California. (W. Ivie collector, August 8, 1931).

This is a large light colored species, and is easily distinguished from the other species in this country.

Araneus gemmus (McCook).

(Pl. X, f. 79)

Epeira gemma McCook, Proc. Acad. Philadelphia, 1888, p. 193, ff. 1-2.

Epeira gemma McCook, American Spiders, 1893, III:182, pl. IX, ff. 1-2.

From an examination of many specimens of, supposedly, *Araneus gemmus* (McCook), it was discovered that three distinct species were represented. It is evident that McCook himself regarded all three forms as belonging to the same species. The original description was made apparently from specimens from San Diego, California. The epigynum figured is clearly of the species that occurs in that region.

Thus the true *gemma* is a species which is restricted in its distribution to southern California and probably adjacent regions.

The other two species evidently have not been named, altho they have been described under the name of *gemma*.

***Araneus gemmoides* Chamberlin and Ivie, new species.**

(Pl. X, f. 80)

Epeira gemma Keyserling Spinnen Amerikas, Epeiridae, 1892, p. 115, pl. vi, f. 25.

Epeira gemma Keyserling, Spinnen Amerikas, Epeiridae, 1892, p. 115, pl. vi, f. 85.

Epeira gemma McCook, American Spiders, 1893, 111:182 (in part); pl. X, ff. 6, 11,—probably this species).

Aranea gemma Comstock, Spider Book, fig. 490.

This species is very similar in size and color to *A. gemmus* (McCook), the chief difference being in the form of the epigynum. The male is very small as compared to the female.

Type locality.—Salt Lake City, Utah. Female holotype. Male allotype from Ferron, Utah (H. A. Rasmussen collector).

Other localities.—Northern California; Oregon; Washington; Idaho; Montana; Dakota (Keyserling); Minnesota; British Columbia.

***Araneus pirus* Chamberlin and Ivie, new species.**

(Pl. X, f. 81)

Epeira gemma McCook, American Spiders, 1893, 111:192 (in part), Pl. XI, ff. 12-14.

(Pl. XI, ff. 12-14)

Similar in size and structure to the two foregoing species, but somewhat different in the color markings of the abdomen. The median stripe is more distinct, often extending the full length of the abdomen as a distinct white stripe, other times broken up into small spots; the white marks at the side of the median stripe at the base usually less extensive. The epigynum is distinct, the depression being longitudinally transversed along the midline by a raised ridge.

Type locality.—Filmore, California. Female holotype.

Other localities:—California: Santa Barbara; Laguna Beach; San Pedro; Santa Ana; Berkeley.

***Eustala rosae* Chamberlin and Ivie, new species.**

(Pl. XV, f. 124)

Similar in many respects to *Eustala conchlea* (McCook), but decidedly larger and with three large tubercles on the posterior hump of the abdomen instead of only one. The epigynum is similar to that of *conchlea* and *anastera*.

Color.—Carapace light yellowish with narrow dark margins at the sides; the front of the head coarsely mottled with black; dusky spots and shadings on the thoracic part. Chelicerae pale yellowish in front; sides and tips blackish. Sternum, endites, and labium pale yellowish, shaded with dusky. Legs pale yellowish, much spotted and shaded with black. Abdomen pale gray, with incomplete blackish folium above; the median area from spinnerets to dorsal tubercle light, bordered at the sides with black, which diffuses laterally. Venter pale with a black line extending back from each lung opening to the spinnerets.

When other specimens are known, it is probable that this species will show wide color variations as in the case of the other species of this genus.

Measurements:

	FEMALE
Length	9.5 mm.
Cephalothorax:	
Length	3.5
Width	3.3
Tibia-Patella:	
I	6.0
IV	4.5

Type locality.—8 miles north of Roosevelt Dam, Arizona. Female holotype (W. Ivie collector, April 1935).

Named in honor of Mrs. Rose Berlin of Salt Lake City who was a member of the collecting party.

MIMETIDAE

Ero canionis Chamberlin and Ivie, new species.

(Pl. X, f. 78)

Similar in size, color, and general structure to *E. furcata* (Villers) of the eastern United States, but differs in details of the male palpus. (See figure). The habits are apparently the same as those of *furcata*.

Type locality.—City Creek Canyon, near Salt Lake City, Utah. Male holotype, female allotype. (W. Ivie collector, September 1932).

Mimetus aktius Chamberlin and Ivie, new species.

(Pl. X, f. 77)

Very close to *M. hesperus* Chamberlin. The size is somewhat smaller; the color usually more faded, but in the same pattern; the general structure similar. The epigynum is similar to that of *hesperus*. The

palpus is proportionately smaller and differs in the spine on the dorsal edge of the cymbium, but otherwise almost identical. In *hesperus*, there are three distinct spines on the dorsal edge of the cymbium; in *aktius*, the middle spine is absent altogether, the proximal spine is replaced by a small rough tubercle, while the distal spine is similar to that of *hesperus*. Also the spine on the back of the cymbium near the middle of the distal end is much smaller in *aktius*.

Measurements:

	MALE	FEMALE
Length	4.2 mm.	5.6 mm
Cephalothorax:		
Length	2.2	2.3
Width	1.8	1.6
Tibia-Patella:		
I	4.3	4.6
IV	2.5	2.8

Type locality.—West side of Utah Lake, Utah. Male holotype, female allotype. (W. Ivie collector, May 1934).

This species was common under the weeds lodged along the shoreline of Utah Lake. It apparently prefers a damper habitat than *M. hesperus*.

***Mimetus eutypus* Chamberlin and Ivie, new species.**

(Pl. XI, ff. 89-91)

Color.—Carapace, sternum, endites, labium, legs, and palpi pale yellowish white, marked with black. Area on top of head, including eyes and extending back to a point at posterior end of median furrow, densely mottled with blackish gray. The dark markings are more or less arranged into four longitudinal lines; two or three short transverse dashes on each side of median furrow. Legs specked and spotted with black, with more or less of a distinct annulus toward the distal end of the femur I. Sternum with two black specks near border on each side. Labium dusky. Endites shaded, with a black speck or dash on ectal side. Chelicerae pale yellowish on basal half, brownish gray on distal half; a black spot at the base and another near the middle in front. Abdomen pale grayish white, with a large light irregular folium above, outlined with irregular blackish lines, reticulations, and mottlings. Venter with a number of irregularly arranged broken patches of blackish.

The structure is typical, except the male palpus, which is decidedly distinct. The size is smaller than that of *M. hesperus* Chamberlin, which is the more common species in the same region.

Measurements:

	MALE	FEMALE
Length	3.6 mm.	5.0 mm.
Cephalothorax:		
Length	1.7	2.0
Width	1.5	1.4
Tibia-Patella:		
I	4.8	4.8
IV	2.5	2.5

Type locality.—Irvine Park, near Santa Ana, California. Male holotype (W. Ivie collector), female allotype (R. V. Chamberlin collector).

DICTYNIDAE

Argenna aktia Chamberlin and Ivie, new species.

(Pl. XII, ff. 97-98)

Color.—Carapace brown with indistinct dusky markings. Chelicerae reddish brown. Sternum and labium dark dusky brown. Endites light reddish brown. Legs yellowish brown, with dusky shadings, but no distinct annuli. Abdomen dark gray with light gray markings above, consisting of: a faint median basal streak with two light spots on each side, followed behind by four more or less distinct chevron-like marks.

Structure.—Essentially typical for the genus. Carapace rather low, head part only slightly elevated. Width of clypeus about one diameter of anterior lateral eye. Eye rows approximately straight. Posterior eyes equidistant, about one diameter apart. Anterior median eyes smaller than the others, less than a diameter apart, and the same distance from the side eyes. Epigynum simple. Palpus of the usual type. (See figures).

Measurements:

	MALE	FEMALE
Length	2.15 mm.	2.60 mm.
Cephalothorax:		
Length	1.15	1.1
Width .....	.85	.85
Tibia-Patella:		
I	1.07	.9
IV .....	.95	1.0

Type locality.—West shore of Utah Lake, Utah. Male holotype, female allotype (W. Ivie collector, April 1934). Under rocks and debris on wet ground along shoreline.

***Argenna ohioensis* Chamberlin and Ivie, new species.**

(Pl. XII, ff. 92-94)

Color.—Carapace light brown with darker reticulate markings on the head; the margins of the sides narrowly shaded with dusky, and darker radial streaks present. Chelicerae, endites, and labium light brown, the labium shaded with dusky. Sternum dusky brown. Coxae of the legs light yellowish; the legs from there on more dusky and brownish. Abdomen blackish-gray.

The structure is similar to other members of the genus, except the male palpus, which has a greatly over-developed embolus and conductor that extends far beyond the end of the cymbium. Posterior eye row straight, eyes nearly a diameter apart. Anterior row slightly procurved, the eyes much closer. The anterior median eyes smaller than the others. Clypeus decidedly less than an eye diameter in width.

Measurements:

	MALE
Length	1.9 mm.
Cephalothorax:	
Length .....	.94
Width .....	.75
Tibia-Patella:	
I .....	.90
IV .....	.90

Type locality.—Columbus, Ohio. Male holotype (W. M. Barrows collector).

TRICHOLATHYS Chamberlin and Ivie, new genus.

Carapace longer than wide, slightly emarginate behind, sides only slightly convex, narrowing gradually to front of head; head wide, convex across front. Median depression very small and shallow,—nearly absent. Separation between cephalic part and thoracic part poorly defined. Carapace smoothly convex above; elevation rather low, highest near middle of head region. Width of clypeus less than one eye diameter. Anterior median eyes slightly the smallest, and dark; the others sub-equal, and light. Anterior row slightly procurved; posterior row about straight. Anterior median eyes about a diameter apart, a little nearer the side eyes. Posterior eyes about equidistant, a little more

than a diameter apart. Lateral eyes about a radius apart; median eyes nearly a diameter apart. Median ocular area wider than long, slightly wider behind than in front.

Chelicerae thick and stout; rather short; geniculate at base in front; contiguous along mesal sides at base, slightly divergent apically. In general nearly vertical; front profile nearly straight beyond basal geniculation; lateral sides nearly parallel as seen from in front. Boss distinct, smoothly convex. Fang simple, stout, rather short. Scopula present, consisting of a row of long curved hairs anterior to fang groove. Groove with four small teeth in front, about equal and closely spaced; three teeth behind, of which the mesal one is much the largest.

Sternum shield-shaped, slightly longer than wide; straight across front; widest between second and third coxae; posterior point separating hind coxae by less than one diameter; inter-coxal points small. Labium lingulate, longer than wide, basal corners notched, tip rounded; more than half the length of the endites. Endites with well developed lobes, slightly convergent distally around labium, but not touching; scopulate at tips.

Palpus of female of moderate size; a number of spine-like setae on distal segments; claw distinct, tho rather small. Palpus of male: femur and patella not especially modified; tibia with a broad flat process on distal end of ectal side; cymbium normal; palpal organs ventral. The palpal organs similar in general to those of *Dictyna*,—embolus similar; conductor in general similar, with caudal process variously curved or looped.

Legs moderately stout. First and fourth about equal. With a row of trichobothria along dorsal side of tarsus, metatarsus, and tibia. With a growth of long seta, which stand at right angles to the surface; the setae underlaid with a growth of shorter and more appressed hairs. A number of weak spines arranged thus (in the genotype at least): none on femur nor patella. Tibia I with one weak spine on anterior face near base; tibia II without spines; tibiae III and IV with one antero-ventral spine at apical end, and one on posterior side near end of IV. Metatarsi III and IV with five spines around distal end,—in addition, IV has two antero-ventral spines below, and III has a pair of ventral spines; metatarsi II and I with a single ventral spine at distal end, and a pair of ventral spines near middle (these latter usually absent on leg I, and sometimes on leg II). There are sometimes two or three weak spines along dorsal side of femur, one at each end of patella above, and one on top of tibia near base;—these, however, are scarcely more than enlarged setae. Calamistrum single; about two-fifths or half the length of the metatarsus; more on basal part.

Abdomen oval; much longer than wide. Evenly rounded. Top and bottom nearly straight in profile. Only slightly wider than high. Cri-

bellum not divided. Spinnerets short; front pair largest, widely separated basally, convergent apically. Epigynum with two small openings to outside.

This genus is closely related to *Argenna*, which it resembles more closely than any of the other American genera. It has affinities to both the *Dictyna* and *Amaurobius* groups.

Genotype: *Tricholathys spiralis* Chamberlin and Ivie, new species.

Tricholathys spiralis Chamberlin and Ivie, new species.

(Pl. III, f. 21; Pl. XII, f. 99; Pl. XIII, ff. 100-105)

Color.—Carapace light yellowish brown, with margins on sides blackish, and thoracic part shaded with dusky. Chelicerae chestnut. Sternum and labium dusky brown. Endites, palpi, and legs light brownish yellow,—the legs sometimes with faint dusky shading, but no distinct annuli. Abdomen dark gray above, with lighter markings consisting of: A light stripe along each side of mid-line on basal half, the two stripes separated by a blackish median streak; the posterior half marked with a series of three longitudinal rows of indistinct spots, more or less connected transversely to form chevron-like marks.

Structure as given for the genus. The palpus of the male has the caudal process of the conductor long, slender, and coiled.

Measurements:

	MALE	FEMALE
Length	3.34 mm.	3.60 mm.
Cephalothorax:		
Length	1.57	1.63
Width	1.17	1.24
Tibia-Patella:		
I	1.30	1.20
IV	1.40	1.34

Type locality.—West side of Utah Lake, Utah. Male holotype, female allotype. (W. Ivie collector, April 1934). Under debris on damp ground.

Other locality.—Salt Lake City (west side), Utah.

Dictyna apachea Chamberlin and Ivie, new species.

(Pl. XII, ff. 95-96)

Color.—Carapace light brown to light chestnut; the cephalic part set off from the thoracic part by darker markings; radial lines on thorax darker. Sternum and endites light brownish, the former with diffuse dusky margins. Labium dusky. Chelicerae chestnut. Legs light brownish yellow with dusky annuli, which are often faint, or even lack-

ing at times. Abdomen pale grayish, marked with irregular blackish markings, which consist essentially of a median mark on the basal half, followed behind by two rows of very irregular and more or less connected spots; sides profusely dashed with blackish. Venter pale.

Structure.—Typical *Dictyna* shape. Male with head of average elevation; chelicerae long, concave in front, and with median opening, as is typical for the genus; with a small basal spur on each chelicera. Palpus large and broad.

Measurements:

	MALE	FEMALE
Length	1.5 mm.	1.5 mm.
Cephalothorax:		
Length .....	.68	.66
Width .....	.55	.53
Tibia-Patella:		
I .....	.68	.60
IV .....	.48	.60

Type locality.—Oak Creek, 20 miles south of Flagstaff, Arizona. Male holotype, female allotype. (W. Ivie collector, April 1935). Common on ground under dead oak leaves, etc.

Other localities.—20 miles south of Prescott, Arizona; Mill Creek Canyon, near Salt Lake City, Utah.

This is a very small species and in general appearance resembles *Dictyna terrestris* Emerton. The palpus, however, is extremely different.

***Dictyna suprenans* Chamberlin and Ivie, new species.**

(Pl. XII, f. 92)

This large species of *Dictyna* is closely related to *D. maxima* Banks, agreeing closely with that species in size, structure, and color. The difference is in details of the palpus, noticeably in that the open space between the ventral edge of the cymbium and conductor is nearly closed in this species, while it is wide in *maxima*.

Color.—Entire cephalothorax and legs brownish orange: the thoracic part is marked with dusky; the labium, and edges of the sternum, shaded with dusky; the legs lightly shaded with dusky, especially at

joints, tho distinct annuli are not present. Abdomen dark greenish-gray above, with a lighter folium near the center; venter pale yellowish gray.

Measurements:

	MALE
Length	3.2 mm.
Cephalothorax:	
Length	1.6
Width	1.1
Tibia-Patella:	
I	1.8
IV	1.2

Type locality.—Gainesville, Florida. Male holotype. (W. M. Barrows collector).

Dictyna littoricolens Chamberlin and Ivie, new species.

(Pl. III, ff. 19-20)

A large light colored species, which lives mainly on the ground near the water.

Color.—Carapace light yellowish, with four brown streaks on top of head; sides of head brownish, and radial streaks on thorax brown. Chelicerae dark chestnut. Sternum dark yellow, with a faint brownish streak along center. Legs pale yellowish, with faint shadings above at joints, but no distinct annuli. Abdomen light yellowish gray, with the usual dark markings above,—a median basal mark, and transverse marks on posterior half. Sides speckled; venter light dusky.

Structure.—*Male:* Carapace low. Clypeus about one and one-half diameters of anterior median eyes in width. Chelicerae strongly modified in the usual fashion,—opening in front large and wide, sides widely bulged, boss normal, a large tooth on meso-anterior margin at end of median opening. Legs with front pairs more robust than usual.

Female: Width of clypeus equal to one diameter of an anterior median eye. Chelicerae somewhat male-like,—large, sides bulging, shallowly concave in front, narrowly separated along middle.

Length 3 to 4 mm.

Type locality.—West side of Utah Lake, Utah. Male holotype, female allotype. (W. Ivie collector, April 1934).

AGELENIDAE

Tegenaria gigantea Chamberlin and Ivie, new species.

(Pl. XIII, f. 106)

This species is closely related to *T. domestica* (Clerck), which it resembles rather closely in structure and color. The palpi also agree, except in minor details. The size, however, is very much larger than in *domestica*.

Measurements:

	MALE
Length	15.0 mm.
Cephalothorax:	
Length	7.5
Width	5.2
Tibia-Patella:	
I	15.0
IV	12.0

Type locality.—Vancouver Island, British Columbia. Male holotype. (M. Kermode collector, 1929). Female allotype and male and female paratypes coll. by Chamberlin and Ivie at Sidney, 1935.

AGELENOPSIS Giebel, 1869.

Giebel erected the genus *Agelenopsis* in 1869, based on *A. albipilis* Giebel. This species, with a number of others, has been consistently synonymized with *Agelena naevie* Walck. by later authors. *Agelenopsis albipilis* is evidently a synonym of *Agelena potteri* Blackwall, which is the most common species in the northeastern and north central United States.

A comparison of various American "Agelenas" with *Agelena labyrinthea* (Clerck), the genotype of *Agelena*, shows that apparently there are no true Agelenas in the United States. *Agelena naevia*, with a number of related species, falls in *Agelenopsis*. The species from the west, with the short spinnerets, belong in *Hololena* Chamberlin and Gertsch, which was erected as a subgenus of *Agelena*, with *Agelena mimoides* Chamberlin as the type species.

The four following new species belong in *Agelenopsis*.

Agelenopsis oregonensis Chamberlin and Ivie, new species.

(Pl. XIV, f. 108)

This species is closely related to *Agelenopsis utahana* (Chamberlin and Ivie), agreeing with that species in size, color, and general structure. The main difference is in the palpus of the male, the coil of the embolus being much larger.

Measurements:

	MALE
Length	9.5 mm.
Cephalothorax:	
Length	4.5
Width	3.1
Tibia-Patella	
I	6.3
IV	6.1

Type locality.—Latourell Falls, Oregon. Male holotype. (R. V. Chamberlin collector, August 4, 1929).

Agelenopsis spatula Chamberlin and Ivie, new species.

(Pl. XIV, f. 109)

Similar in color to *Agelenopsis aperta* (Gertsch), but differs in that the venter has two dark lines extending the full length (sometimes with the area between the lines shaded darker), while *aperta* has no such markings on the venter. The size is slightly smaller. The male palpus has the end of the embolus broad and spoon-shaped, and differs in a number of other details. The female is colored like the male, only slightly darker on the abdomen. The epigynum resembles that of *aperta* most closely.

Measurements:

	MALE	FEMALE
Length	13.0 mm.	13.5 mm.
Cephalothorax:		
Length	6.2	5.7
Width	4.0	3.9
Tibia-Patella:		
I	7.3	6.8
IV	8.0	7.1

Type Locality.—Wichita Falls, Texas. Male holotype, female allotype. (W. Ivie collector, September 3, 1933).

Agelenopsis emertoni Chamberlin and Ivie, new species.

(Pl. XIV, f. 110)

Color.—Similar to that of *A. spatula* n. sp. Size slightly smaller. The palpus resembles that of *spatula*, but differs greatly in the shape of the terminal end of the embolus .

Measurements:

	MALE
Length	10.7
Cephalothorax:	
Length	5.1
Width	3.6
Tibia-Patella:	
I	6.4
IV	7.0

Type locality.—Belton, Texas. Male holotype. (W. Ivie collector, September 1, 1933).

This appears to be the same species as the "variation" of *Agelena naevia* from Providence, Rhode Island, which Emerton figured, *Trans. Connecticut Acad. Sci.*, 1888, Vol. VIII, pl. viii, ff. le, li.

Agelenopsis aleenae Chamberlin and Ivie, new species.

(Pl. XIV, f. 111)

The color and general structure differs but little from that of other members of the genus. The size is below average. The palpus is distinct,—the end of the embolus is enlarged and spatulate, somewhat as in *A spatula* n. sp., altho the spoonlike depression is not so deep.

Measurements:

	MALE
Length	9.5
Cephalothorax:	
Length	3.8
Width	2.7
Tibia-Patella:	
I	5.2
IV	4.5

Type locality.—Suwanee, New Mexico. Male holotype. (Mrs. Wilton Ivie collector, September 6, 1933).

Named in honor of Aleen Ivie, who collected the specimen.

CLUBIONIDAE

PHRUROTIMPUS Chamberlin and Ivie, new genus.

Phrurotimpus is proposed as a new generic name for a group of species previously considered as belonging to *Phrurolithus*. *Phruronellus* Chamberlin (Canadian Ent., 1921, 53:70) was created for a number of distinct species grouped around *Phrurolithus formica* Banks as the genotype, while *Phrurolithus alarius* (Hentz) and related species were regarded as belonging to the true *Phrurolithus*. According to Dr. Willis J. Gertsch of the American Museum, *Phrurolithus formica* is congeneric with *Phrurolithus festivus* C. Koch, the genotype of *Phrurolithus*. Thus *Phruronellus* becomes a synonym of *Phrurolithus*, and the group represented by *alarius* is in need of a new name.

Genotype.—*Phrurotimpus alarius* Hentz

Phrurotimpus alarius (Hentz).

Herpyllus alarius Hentz, Journ. Boston Soc. Nat. Hist., 1847, V: 461, pl. 24, f. 20.

Phrurolithus alarius Emerton, Trans. Connecticut Acad. Sci., 1889, VIII: 189, pl. vi, f. 5 (in part).

Phrurolithus utus Chamberlin and Ivie, Bull. Univ. Utah, 1922, Biol. ser. II (2): 40, pl. xii, ff. 124-126.

Phrurotimpus alarius tejanus (Chamberlin and Gertsch).

(Pl. XV, f. 120)

Phrurolithus tejanus Chamberlin and Gertsch, Proc. Biol. Soc. Washington, 1930, 43:142, pl. v, f. 26.

Phrurolithus tejanus is essentially identical with *Ph. alarius* in size and structure, but is much lighter in color. It deserves no more than varietal rank.

Phrurotimpus woodburyi utanus Chamberlin and Ivie, new var.

(Pl. XV, f. 119)

Similar in size, color and structure to *Phrurotimpus woodburyi* (Chamberlin and Gertsch), except for variations in the tibial apophysis of the male palpus, as shown in fig. 119. The female is not distinct enough to separate. This species is decidedly smaller than *alarius*.

Type locality.—Salt Lake City (Dry Canyon), Utah. Male holotype, female allotype.

Other locality.—Smith and Morehouse Canyon, Uintah Mts., Utah.

***Phrurotimpus mormon xanthus* Chamberlin and Ivie, new var.**

Similar in structure and size to *Phrurotimpus mormon* (Chamberlin and Gertsch), but differing remarkably in color. While *mormon* is dark with abdomen above black, this variety is a pale yellow throughout.

Type locality.—Ferron (Emery Co.), Utah. Male holotype, female allotype. (W. Ivie collector, April 14, 1933). Found under shale rocks on dry barren hillside.

***Phrurotimpus truncatus* Chamberlin and Ivie, new species.**

(Pl. XV, f. 116)

Similar to *Phrurotimpus mateonus* (Chamberlin and Gertsch), from which it differs mainly in the shape of the tibial apophysis of the palpus. See figure.

Type locality.—Aspen Valley, Yosemite Park, California. Male holotype. (W. Ivie collector, August 11, 1931).

Phrurotimpus mateonus (Chamberlin and Gertsch) is probably a synonym of *Phrurotimpus parallelus* (Chamberlin).

***Phrurolithus dolius* Chamberlin and Ivie, new species.**

(Pl. XVI, ff. 131-132; Pl. XVII, f. 141)

Size and shape typical for the genus; the color, however, is aberrant. The carapace, under parts of the cephalothorax, palpi, and legs dark yellow,—the carapace usually covered with faint dusky reticulations. Abdomen of female pale yellowish gray, more or less shaded with darker gray above, this darker gray being arranged into a series of chevron-like marks on the posterior half. The dorsal sclerite on the abdomen of the male yellow like the carapace, and shaded over with darker gray as in the female.

Measurements:

	MALE	FEMALE
Length	1.83 mm.	1.96 mm.
Cephalothorax:		
Length .....	.83	.89
Width .....	.66	.72
Tibia-Patella:		
I .....	.89	.94
IV .....	.92	.93

Type locality.—Flagstaff, Arizona. Male holotype, female allotype. (W. Ivie collector, June 1934).

This species is found under rocks on dry ground. The movements are very rapid as is characteristic for this group. The color, habits, and size resemble a *Piabuna*, and the spiders were mistaken for such in the field. However, the palpus is distinctly of the *Phrurolithus* type.

***Phrurolithus oabus* Chamberlin and Ivie, new species.**

(Pl. XVII, f. 142)

Known from only a single female. Closely related to *P. dolius* n. sp., as regards color and structure, but somewhat larger in size, and with a distinct epigynum.

Measurements:

	FEMALE
Length	2.66 mm.
Cephalothorax:	
Length	1.00
Width .....	.85
Tibia-Patella:	
I	1.25
IV	1.20

Type locality.—10 miles south of Santa Fe, New Mexico. Female holotype. (W. Ivie collector, September 5, 1933).

PIABUNA Chamberlin and Ivie, 1933.

The genus *Piabuna* was established on the female of *Piabuna nanna* Chamberlin and Ivie. Since then, a number of other species have been discovered, including males of some of them. These further confirm the authenticity of *Piabuna* as a distinct genus. The genus is closely related to *Phrurolithus*. The palpus ordinarily has two processes on the cetal side, but does not have the process on the ventral side of the femur as does *Phrurolithus*.

***Piabuna brevispina* Chamberlin and Ivie, new species.**

(Pl. XV, f. 114; Pl. XVI, ff. 129-130)

Structure in general similar to that of *Phrurolithus*. The male has a thin chitinous shield on the top of the abdomen, which is lacking in the female. Five pairs of spines under anterior tibia. Anterior median eyes black, and placed so as to look upward instead of forward. In this species, the anterior median eyes are no larger than the posterior median eyes. The processes on the tibia of the male palpus vestigial.

Measurements:

	MALE	FEMALE
Length	1.60 mm.	1.95 mm.
Cephalothorax:		
Length .....	.80	.75
Width .....	.66	.64
Tibia-Patella:		
I .....	.86	.82
IV .....	.90	.84

Type locality.—Suwanee, New Mexico. Male holotype, female allotype. (W. Ivie collector, September 6, 1933). Under lava rocks on a hot dry hillside. Without webs. Movements very rapid.

Piabuna longispina Chamberlin and Ivie, new species.

(Pl. XV, f. 112; Pl. XVI, ff. 127-128)

Very similar in size, color, and shape to *P. brevispina* n. sp., but decidedly different in the structure of the palpus and epigynum. The processes on the tibia of the palpus are well developed, the apical process being extremely long.

Measurements:

	MALE	FEMALE
Length	1.53 mm.	1.80 mm.
Cephalothorax:		
Length .....	.70	.75
Width .....	.57	.60
Tibia-Patella:		
I .....	.75	.83
IV .....	.77	.86

Type locality.— Suwanee, New Mexico. Male holotype, female allotype. (W. Ivie collector, September 6, 1933).

Under lava rocks on dry hillside. Found in same locality and in association with *P. brevispina* n. sp. The two species are not distinguishable in the field.

Piabuna pallida Chamberlin and Ivie, new species.

(Pl. XVI, ff. 125-126)

Similar to the two preceding species in general size, shape, and color. In the single male specimen known, the color is somewhat lighter than for the other species. The palpus is distinct.

Measurements:

	MALE
Length	1.53 mm.
Cephalothorax:	
Length .....	.70
Width .....	.60
Tibia-Patella:	
I .....	.78
IV .....	.80

Type locality.—Mountains near Romeroville, New Mexico. Male holotype. (W. Ivie collector, September 5, 1933).

Piabuna xerophila Chamberlin and Ivie, new species.

(Pl. XV, f. 113)

Similar in size, color, and structure to *P. longispina* n. sp. The shape of the epigynum will distinguish the females.

Measurements:

	FEMALE
Length	1.80 mm.
Cephalothorax:	
Length .....	.80
Width .....	.68
Tibia-Patella:	
I	1.09
IV	1.00

Type locality.—Moab, Utah. Female holotype. (W. Ivie collector, October 25, 1931). Under rock on dry hillside.

GOSIPHRURUS Chamberlin and Ivie, new genus.

Spiders moderately small, between 3 and 4 mm. in length.

Carapace broad, thoracic part nearly circular, head stout and short. Cervical groove distinct at margin, but indistinct behind. Median furrow lacking.

Eyes close together, subequal; anterior median eyes dark and slightly smaller than the others, which are light. Anterior row shorter than posterior, slightly procurved; posterior row slightly recurved. Anterior median eyes scarcely a radius apart, subcontiguous with lateral eyes. Posterior median eyes oval and oblique, less than a short diameter apart, and about a radius from the lateral eyes. Lateral eyes

on each side about a radius apart; median eyes of the two rows a little less than the diameter of an anterior median eye apart. Median ocular area slightly wider than long; wider behind than in front.

Chelicerae stout; furrow with two small teeth on each margin. Sternum nearly as wide as long; nearly round, except for posterior extension, which broadly separates hind coxae. Endites stout. Labium slightly wider than long. Palpi simple (see figures); three mesal and one dorsal spine on tibia, one mesal spine on patella, and two dorsal spines on distal half of femur.

Legs moderately stout, with a number of spines, especially on under side of tibia and metatarsus: Tibiae.—I with six pairs of spines on basal two-thirds of ventral side, the basal pair much closer together and smaller than the others; II with spines same as I, except only five pairs present; III and IV with three pairs,—apical, post median, and sub-basal.

Abdomen of normal shape. Longer than wide; slightly wider than high; rounded. A large, thin dorsal sclerite on abdomen of male at least.

This genus is in the vicinity of *Phrurolithus*, though probably not belonging to that immediate group.

Genotype.—*Gosiphururus scleratus*, new species.

***Gosiphururus scleratus* Chamberlin and Ivie, new species.**

(Pl. XV, f. 123)

Color.—*Male*: Carapace and chelicerae reddish brown. Under parts of cephalothorax, legs, and palpi the same color, only lighter. Abdomen with dorsal sclerite dusky brown; sides dark gray; apex and venter pale gray, with a dark gray patch around the spinnerets on each side, and a median gray area along the middle of the venter for about two-thirds of the distance to the spinnerets. Epigastric region light reddish brown. Spinnerets light orange brown.

The sclerite on the abdomen well developed. The epigastric region entirely covered by a single sclerite. Structures otherwise as given for the genus.

Measurements:

	MALE
Length	3.2 mm.
Cephalothorax:	
Length	1.35
Width	1.20
Tibia-Patella:	
I	1.53
IV	1.53

Type locality.—Mouth of San Diego River, California. Male holotype. (W. Ivie collector, July 12, 1931).

Gosiphururus unicolor Chamberlin and Ivie, new species.

(Pl. XV, ff. 121-122)

Color dull yellow thruout; except that the abdomen beyond the borders of the dorsal sclerite, and including the venter, is light yellowish gray.

Structure and size similar to *G. scleratus* n. sp., except the dorsal sclerite of the abdomen is thin and less conspicuous; the sclerite over the epigastric region is lacking; the embolus of the palpus is straighter.

Measurements:

	MALE
Length	3.2 mm.
Cephalothorax:	
Length	1.5
Width	1.3
Tibia-Patella:	
I	1.9
IV	1.8

Type locality.—Ferron (Emery Co.), Utah. Male holotype. (W. Ivie collector, June 23, 1934). Under rock on dry hillside.

Meriola decepta floridana Chamberlin and Ivie, new variety.

(Pl. XIII, f. 107)

Similar in color and shape to *M. decepta* Banks, but is slightly smaller in size,—the palpus being noticeably smaller and more slender, but agreeing otherwise.

Type locality.—Dunedin, Florida. Male holotype.

Meriola inornata Banks, which is common throughout the southwestern United States, is probably a synonym of *decepta*, or at least not more than a variety. *Trachelas californicus* Banks, which occurs along the Pacific coast from Seattle to San Diego, belongs in *Meriola*.

TRACHELAS L. Koch

Previously there has been recognized but one species of this genus in the United States, though the species of *Meriola* were commonly placed in this genus. *Trachelas ruber* Keyserling has been placed as a synonym of *T. tranquillus* (Hentz). Examination of specimens from many parts of the United States indicates that there are at least five

species in this country. *T. tranquillus* (Hentz) is common in the southeastern states; *T. ruber* Keyserling is the common form in the northeastern states; two species in the western United States appear to be new. *T. volutus* Gertsch occurs in southern Texas.

All five species agree closely in size and color. They can be easily distinguished by the shape of the embolus of the male palpus. The females exhibit but slight differences in the epigynum, which is of a generalized type, and it is doubtful whether the species can be distinguished from that sex alone.

***Trachelas volutus* Gertsch**

(Pl. XVII, ff. 139-140)

Locality.—Brownsville, Texas. One male.

***Trachelas pacificus* Chamberlin and Ivie, new species.**

(Pl. XVII, ff. 136-138)

Type locality.—Santa Monica, California. Male holotype, female allotype.

Other localities.—California: San Diego; San Pedro; Palo Alto.

***Trachelas utahanus* Chamberlin and Ivie, new species.**

(Pl. XVII, ff. 133-135)

Type locality.—St. George, Utah. Male holotype, female allotype.

Other localities.—Zion Park, Utah; 20 miles south of Prescott, Arizona.

SALTICIDAE

***Phidippus nikites* Chamberlin and Ivie, new species.**

(Pl. XI, ff. 86-88)

Color.—*Male*: Carapace black with whole cephalic region covered with rufous hairs. Chelicerae black with bluish green iridescence in front. Sternum blackish brown. Labium and endites black with narrow white tips. Legs blackish, except metatarsus and tarsus,—the metatarsus dark brown, the tarsus yellowish brown. Abdomen bright reddish orange above, black below.

Female: Carapace blackish brown with top of head rufous as in male. Sternum brownish yellow. Labium and endites dark brown with narrow white tips. Palpi pale yellow. Legs light brown, shaded with

dusky, especially on femur, patella, and tibia. Abdomen bright reddish orange above, except for a broad median black band on distal half; sides blackish; venter gray.

Covered with long slender setae, which are black in color, except on the abdomen, where they are white in the male, and some white and some black in the female. Beneath the setae is the shorter hair, which forms a dense appressed mat on the top of the carapace and upper sides of abdomen, but is much scarcer elsewhere.

This spider is closely related to *P. apacheanus* Chamberlin and Gertsch, but is brighter in color, the depression of the epigynum is not so deep, and the palpus varies in minor details.

Measurements:

	MALE	FEMALE
Length	9.3 mm.	9.6 mm.
Cephalothorax:		
Length	5.0	5.0
Width	4.0	4.0
Tibia-Patella:		
I	4.6	3.9
IV	4.0	4.0

Type locality.—Twelve miles east of Victorville, California. Male holotype, female allotype. (E. C. Jaeger collector, August 28, 1932.) "Found in webs on creosote bushes."

Figures and Explanations

PLATE I

1. *Stenoonops minutus* n. sp. Male, dorsal view.
2. Same. Carapace.
3. *Aptostichus zebrus* n. sp. Immature, abdomen.
4. Same. Male. Ventral view of left metatarsus I.
5. Same. Palpus, cetal view.
6. *Eulaira tigana* n. sp. Epigynum.

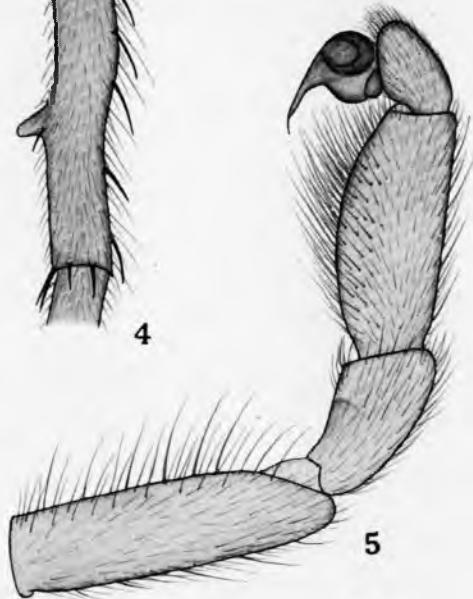
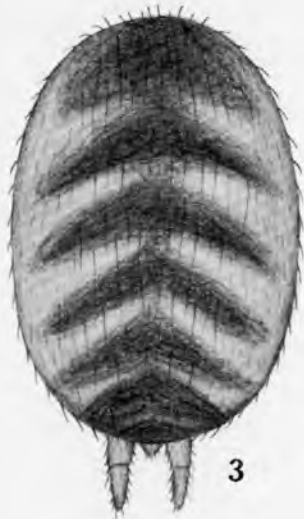
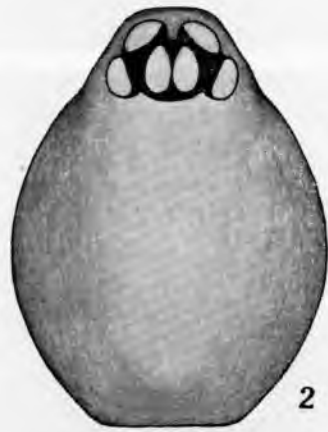
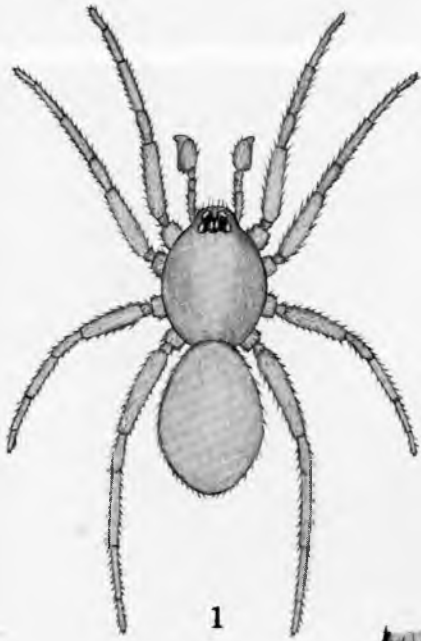
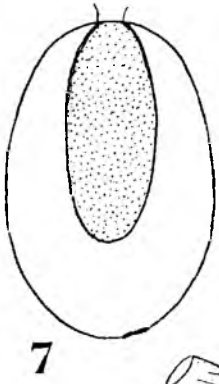
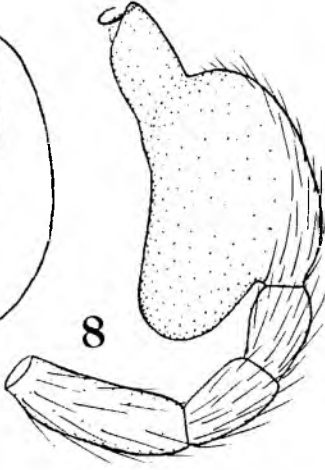


PLATE II

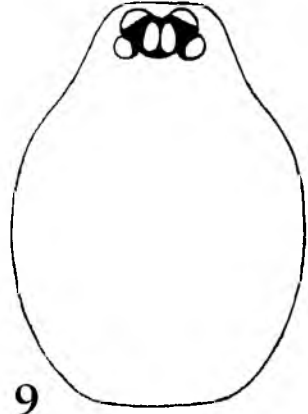
7. *Ischnothyrcus barrowesi* n. sp. Female. Abdomen, dorsal view.
8. *Oonopinus floridanus* n. sp. Left palpus, ectal view.
9. Same. Female. Carapace.
10. *Orchestina moaba* n. sp. Female. Front.
11. Same. Male. Side view.
12. Same. Foot.
13. Same. Claw of foot, mesal view.
14. *Stenoconoops minutus*. Left palpus of male, ectal view.



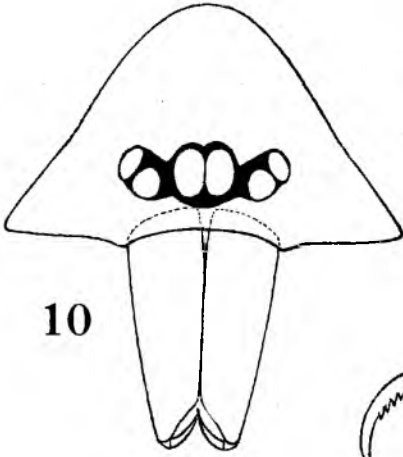
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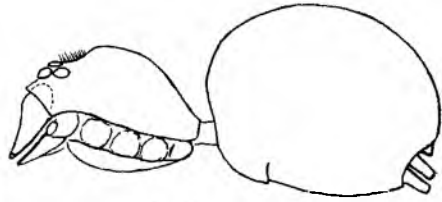
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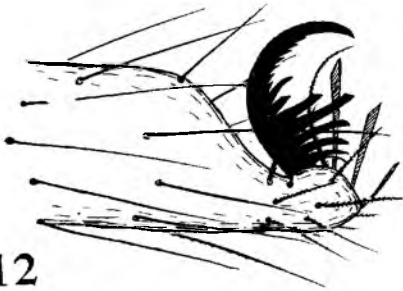
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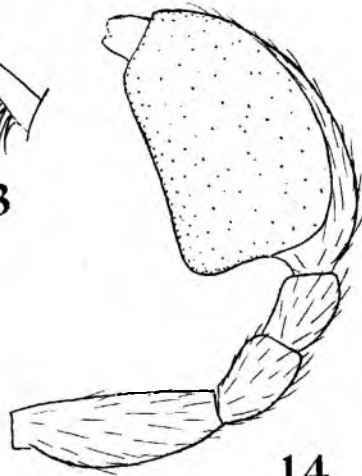
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PLATE III

15. *Orchestina moaba* n. sp. Male, dorsal view.
16. Same. Left palpus, ectal view.
17. Same. Left palpus, anterior view.
18. Same. Epigynum.
19. *Dictyna littoricolens* n. sp. Left palpus of male, ectal view.
20. Same. Epigynum.
21. *Tricholathys spiralis* n. sp. Epigynum.

PLATE IV

22. *Filistata geophila* n. sp. Left palpus, mesal view.
23. Same. Left palpus, ectal view.
24. *Filistata arizonica* n. sp. Left palpus, ectal view.
25. Same. Left palpus, mesal view.
26. *Filistata utahana* n. sp. Left palpus, mesal view.
27. Same. Left palpus, ectal view.
28. *Filistata hibernalis* Hentz. Left palpus, ectal view.
29. Same. Left palpus, ectal view, showing a variation.
30. Same. Left palpus (Same as fig. 28), mesal view.

(Figs. 22-23 are twice the magnification of the other figures on this plate).

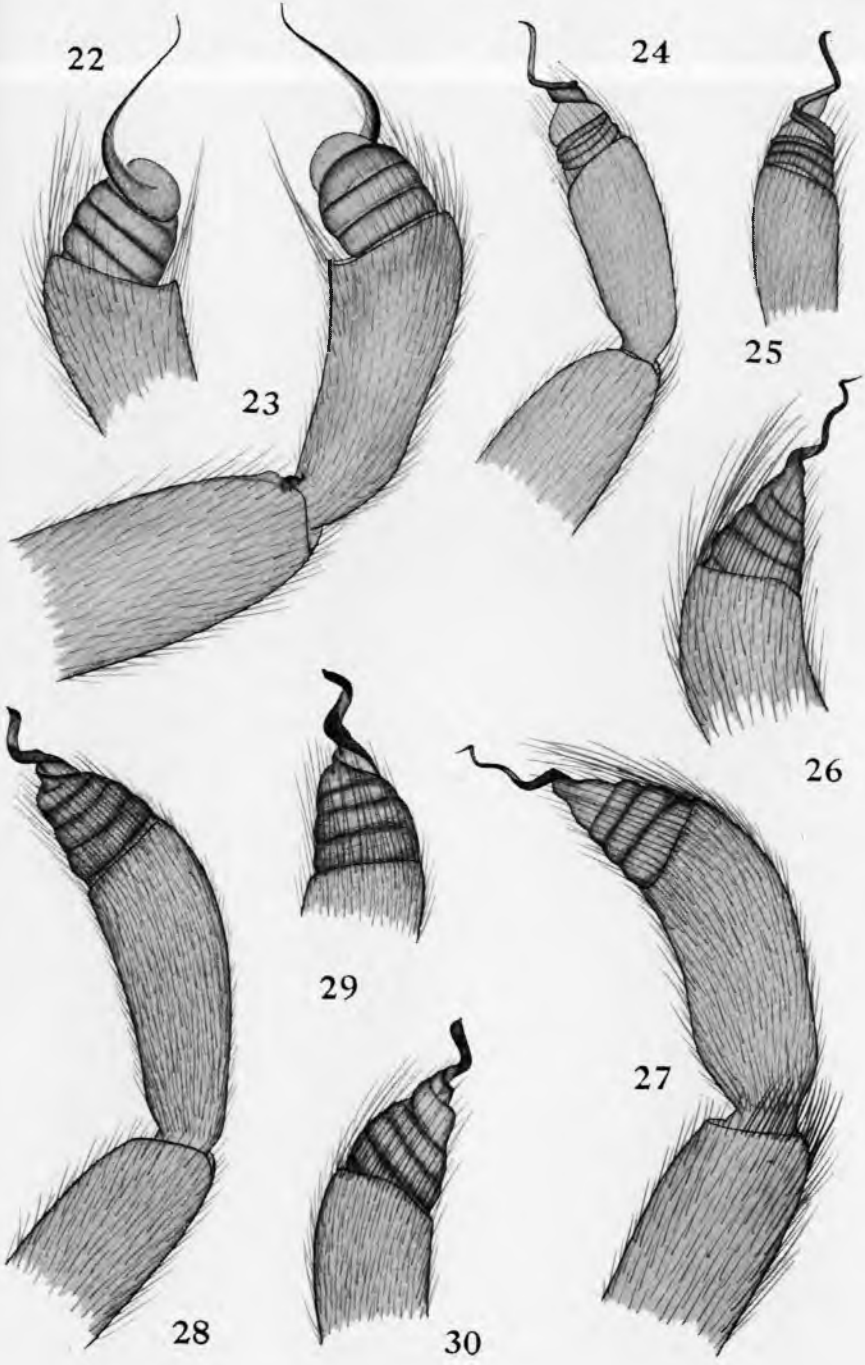


PLATE V

31. *Brachybothrium montanum* n. sp. Left palpus, ectal view.
32. *Citharoceps californica* n. sp. Femur I, anterior view.
33. Same. Carapace.
34. *Segestria bella* n. sp. Left palpus, ectal view.
35. *Pericuris pallida* n. sp. Spinnerets.
36. *Steatoda zionis* n. sp. Left palpus, ventral view.
37. *Steatoda grandis* Banks. Left palpus, ventral view.

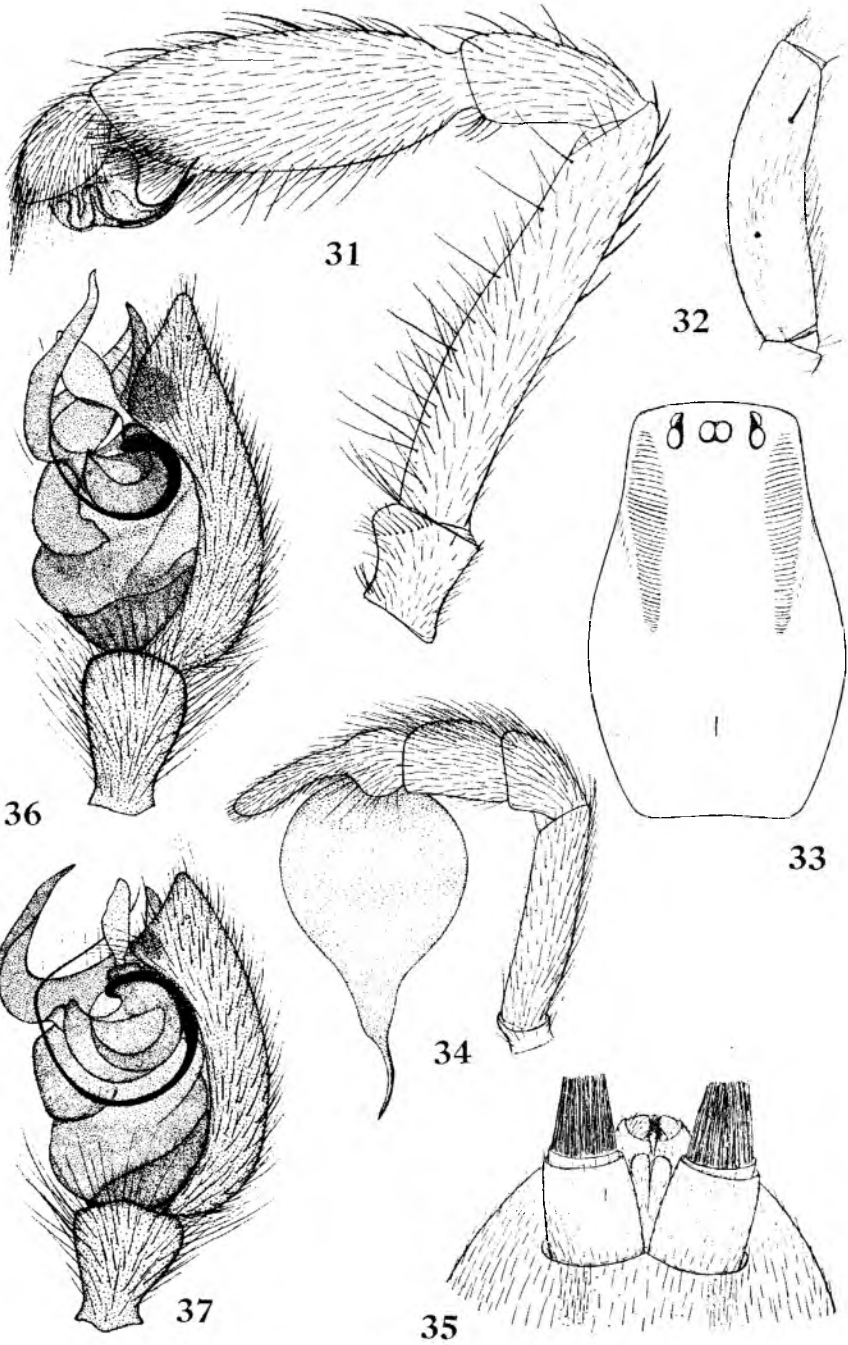
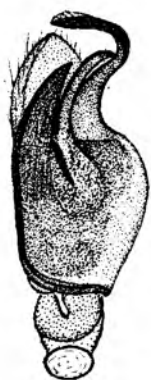


PLATE VI

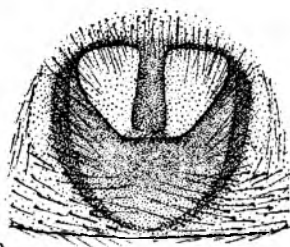
38. *Hyptiotes gertschi* n. sp. Left palpus, ventral view.
39. Same. Left palpus, ectal view.
40. *Steatoda grandis* banks. Epigynum.
41. Same. Epigynum of another form.
42. *Steatoda zionis* n. sp. Epigynum.
43. *Steatoda palomara* n. sp. Epigynum.
44. *Pholcophora americana* Banks. Epigynum.
45. *Pholcophora obscura* n. sp. Epigynum.
46. *Oedothorax lasalanus* n. sp. Left palpus, meso-ventral view.
47. Same. Left palpus, ecto-ventral view.
48. Same. Tibia of left palpus, ectal view.
49. Same. Epigynum.



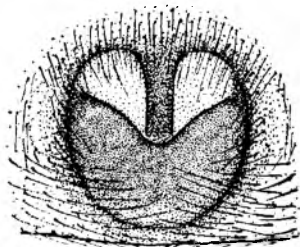
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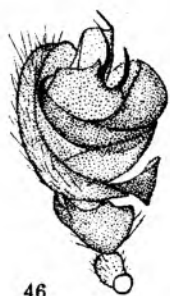
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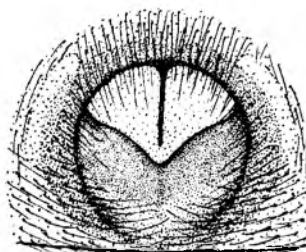
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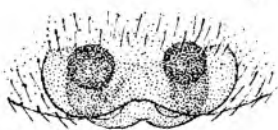
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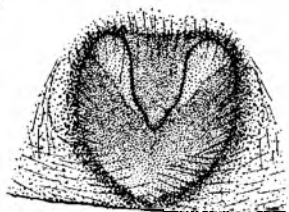
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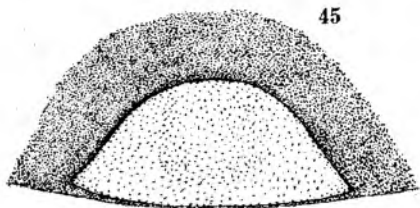
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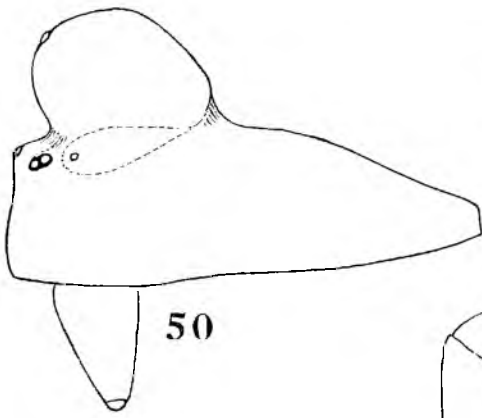
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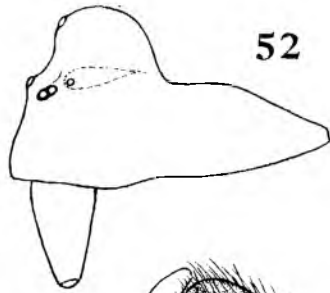
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PLATE VII

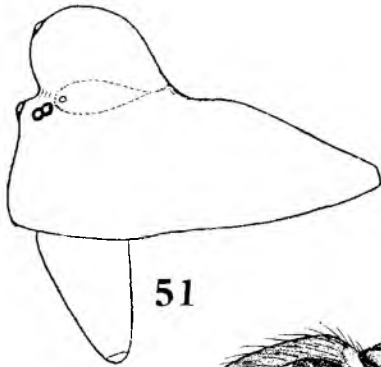
50. *Hypselistes florens bulbiceps*, n. var. Male, side of cephalothorax.
51. *Hypselistes florens* (Cambridge). Side of cephalothorax.
52. *Hypselistes reducens* n. sp. Side of cephalothorax.
53. Same. Left palpus, ectal view.
54. *Erigone canthognatha* n. sp. Femur I, anterior view.
55. Same. Chelicerae, ectal view.
56. Same. Left palpus, ectal view.
57. *Erigone uintana* n. sp. Left palpus, ectal view.
58. *Erigone whitneyana* n. sp. Left palpus, ectal view.



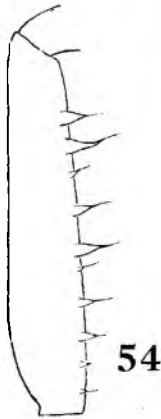
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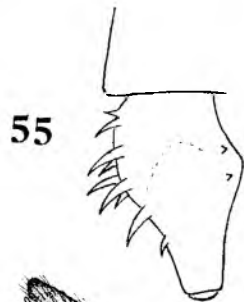
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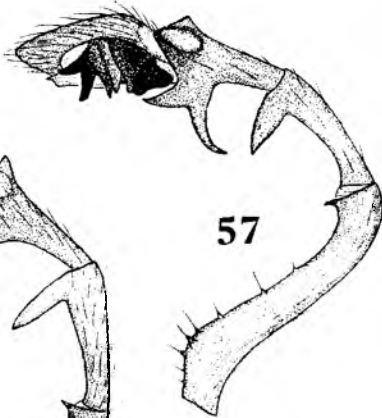
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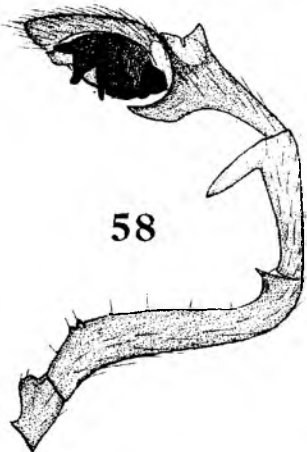
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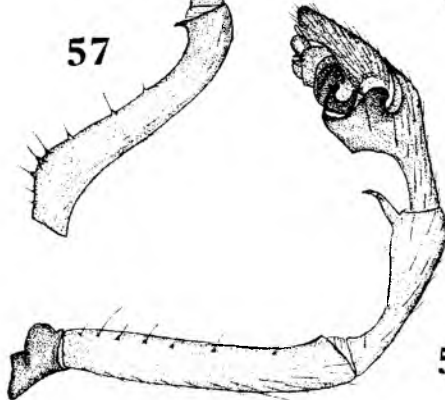
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PLATE VIII

59. *Floricomus littoralis* n. sp. Male, side view.
60. Same. Left palpus, ventral view.
61. Same. Left palpus, ectal view.
62. Same. Epigynum.
63. *Spirembolus whitneyanus* n. sp. Left palpus, ectal view.
64. Same. Left palpus, ventral view.
65. Same. Tibia of left palpus, dorsal view.

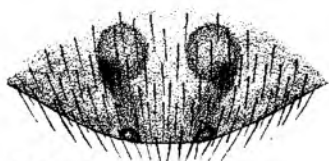
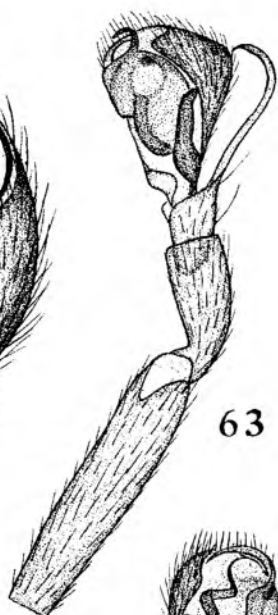
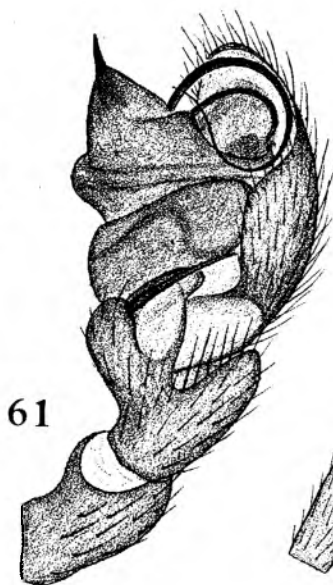
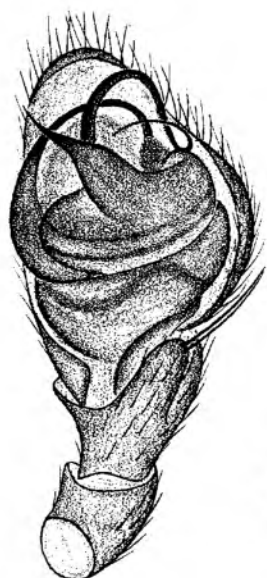
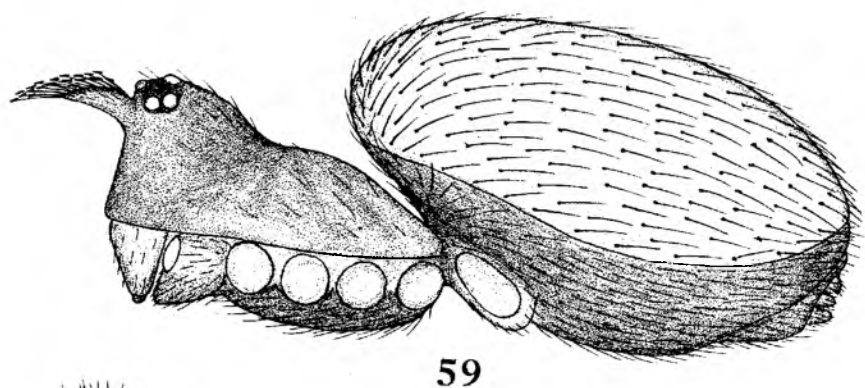


PLATE IX

66. *Spirembolus whitneyanus* n. sp. Male, side view.
67. *Spirembolus phylax* n. sp. Male, side view.
68. Same. Left palpus, ectal view.
69. Same. Left palpus, ventral view.
70. Same. Left palpus, mesal view.
71. *Spirembolus pachygnathus* n. sp. Left palpus, mesal view.
72. Same. Left palpus, ectal view.
73. Same. Male, side view.
74. *Spirembolus pallidus* n. sp. Male, side view.
75. Same. Left palpus, mesal view.

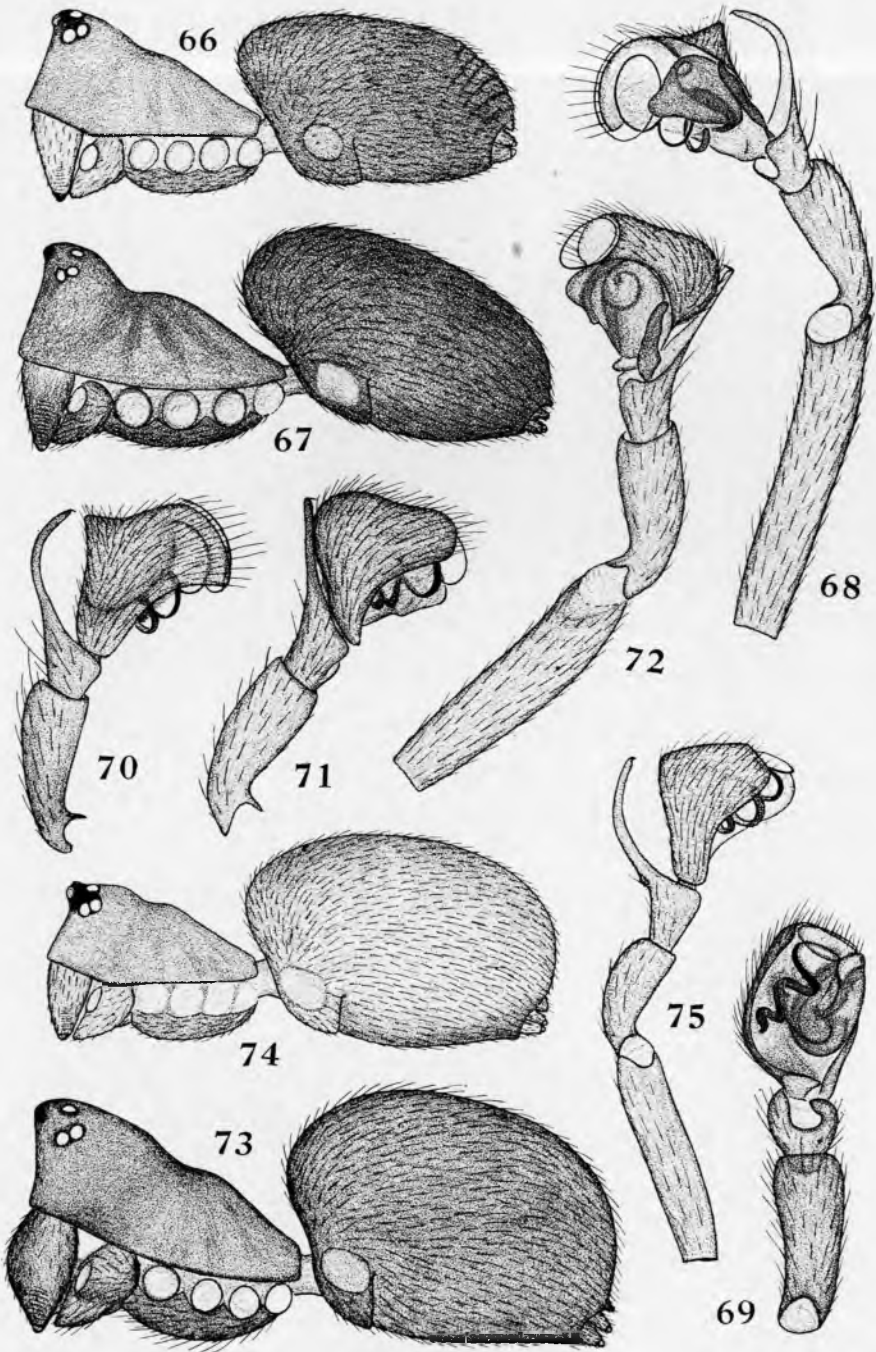
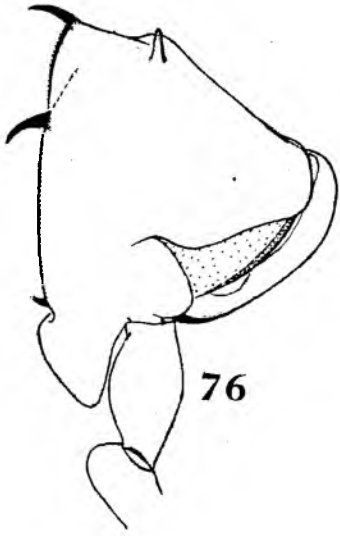
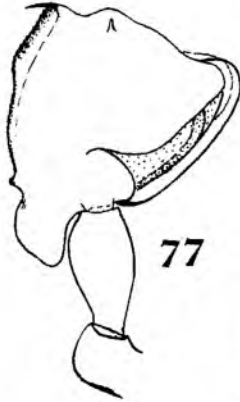


PLATE X

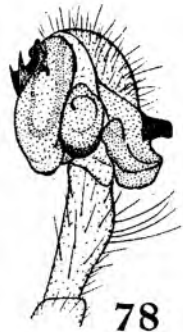
76. *Mimetus hesperus* Chamberlin. Left palpus, mesal view.
77. *Mimetus aktius* n. sp. Left palpus, mesal view.
78. *Ero canionis* n. sp. Left palpus, ectal view.
79. *Araneus gemmus* (McCook). Epigynum.
80. *Araneus gemmoides* n. sp. Epigynum.
81. *Araneus pirus* n. sp. Epigynum.
82. *Metepeira gosoga* n. sp. Epigynum, side view.
83. Same. Epigynum, ventral view.
84. *Eulaira mana* n. sp. Epigynum.
85. *Eulaira tigana* n. sp. Left palpus, ventral view.



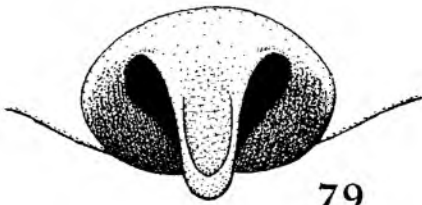
76



77



78



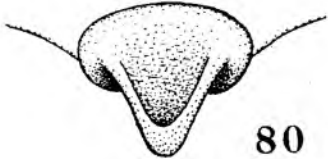
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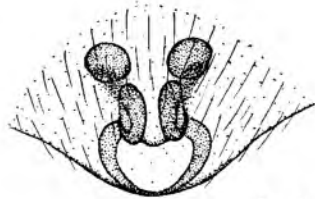
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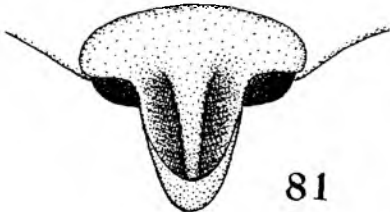
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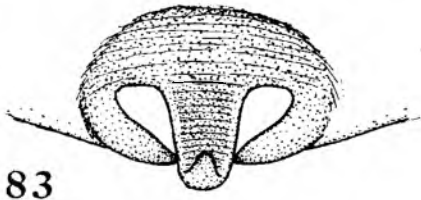
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84



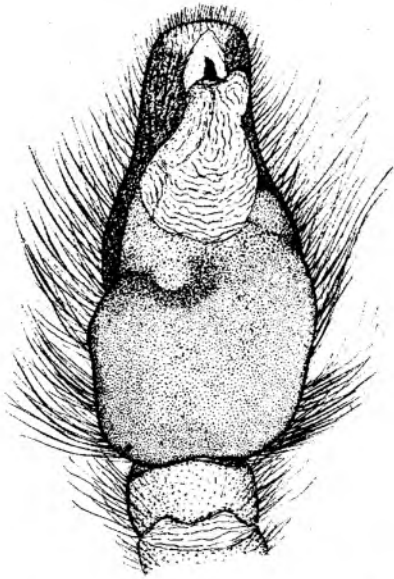
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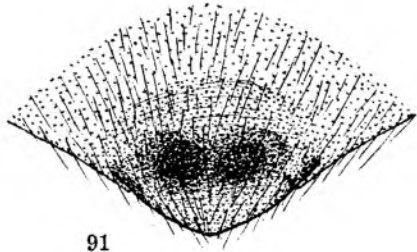
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PLATE XI

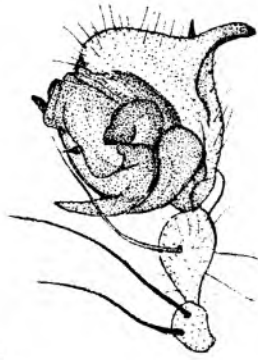
86. *Phidippus nikites* n. sp. Left palpus, ventral view.
87. Same. Left palpus, ectal view.
88. Same. Epigynum.
89. *Mimetus cutypus* n. sp. Left palpus, sub-ventral view.
90. Same. Left palpus, sub-dorsal view.
91. Same. Epigynum.



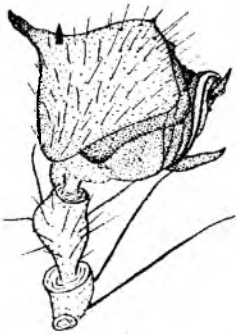
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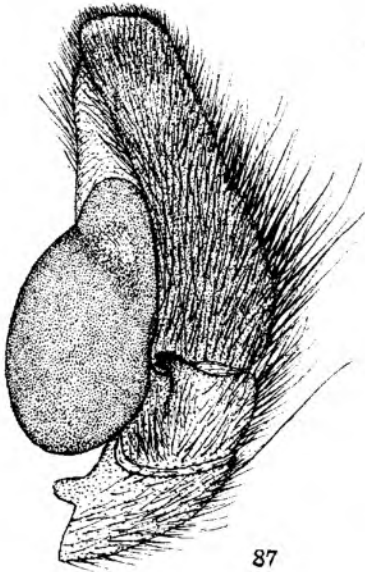
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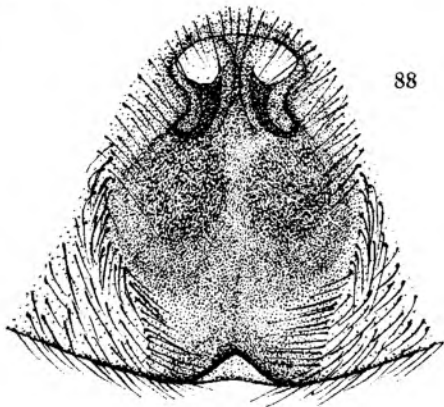
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PLATE XII

92. *Dictyna suprenans* n. sp. Left palpus, sub-mesal view.
93. *Argenna ohioensis* n. sp. Left palpus, ventral view.
94. Same. Left palpus, ectal view.
95. *Dictyna apachea* n. sp. Left palpus, mesal view.
96. Same. Epigynum.
97. *Argenna aktia* n. sp. Left palpus, ventral view.
98. Same. Epigynum.
99. *Tricholathys spiralis* n. sp. Left palpus, ventral view.

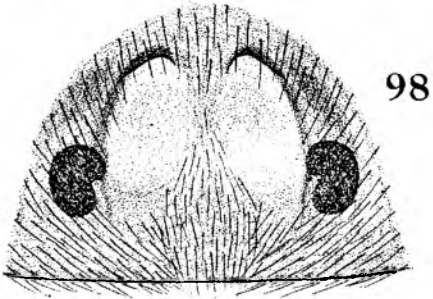
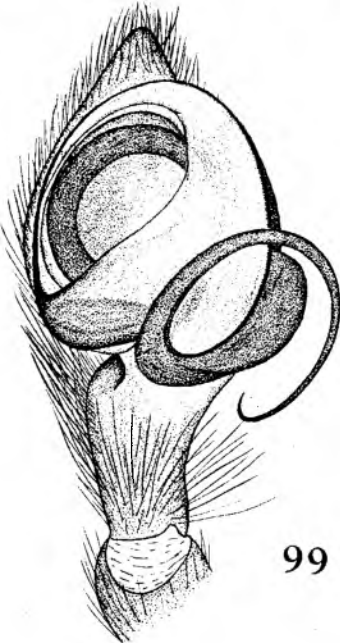
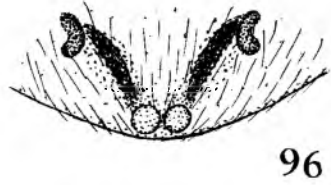
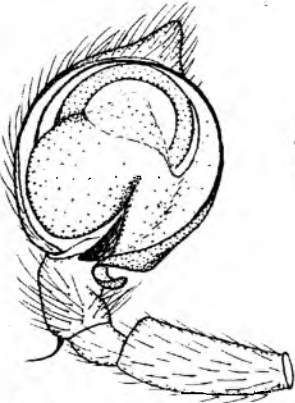
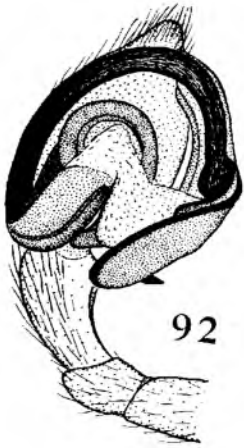
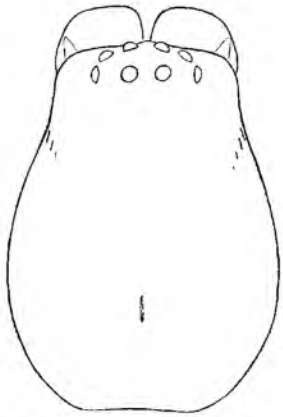
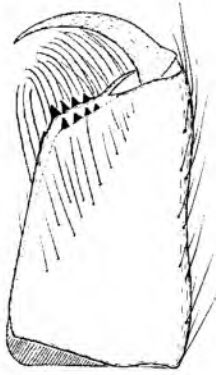


PLATE XIII

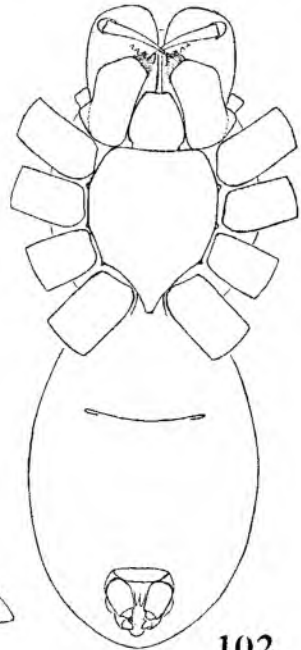
100. *Tricholathys spiralis* n. sp. Carapace.
101. Same. Chelicera, posterior view.
102. Same. Ventral side.
103. Same. Front.
104. Same. Foot.
105. Same. Side view.
106. *Tegenaria gigantea* n. sp. Left palpus, ventral view.
107. *Meriola decepta floridana* n. var. Left palpus, ventral view.



100



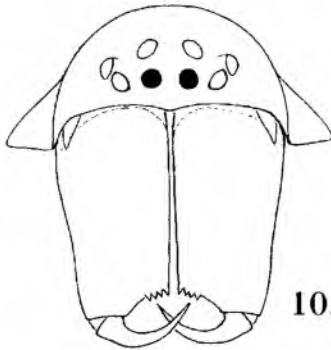
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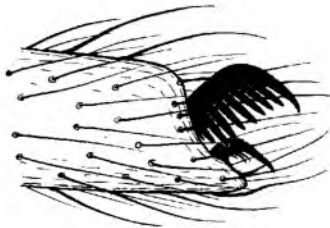
102



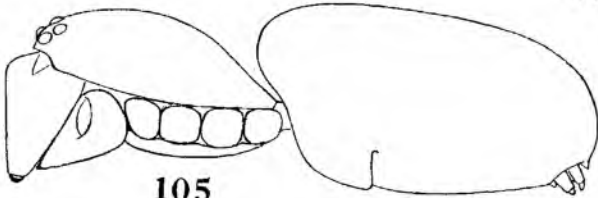
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103



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105



107

PLATE XIV

108. *Agelenopsis oregonensis* n. sp. Left palpus, ventral view.
109. *Agelenopsis spatula* n. s. Left palpus, ventral view.
110. *Agelenopsis emertoni* n. sp. Left palpus, ventral view.
111. *Agelenopsis aleenae* n. sp. Left palpus, ventral view.

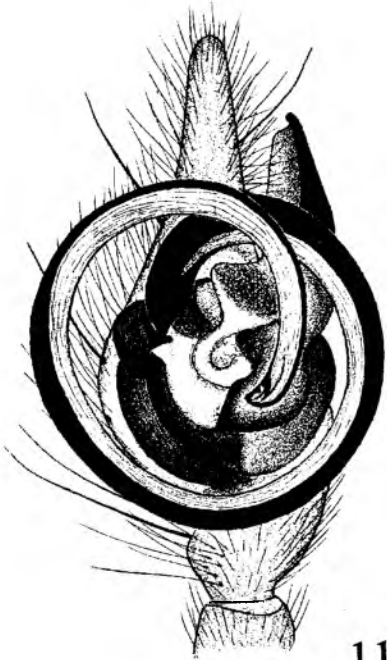
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109



110

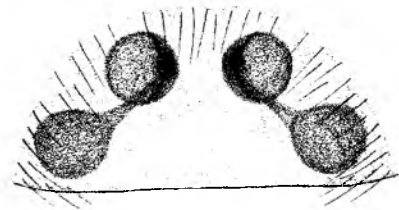
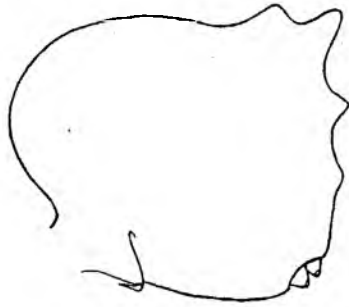
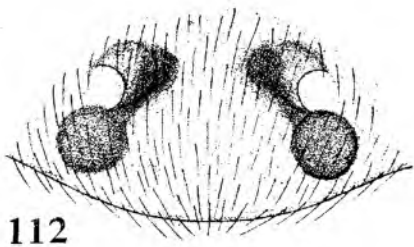


111



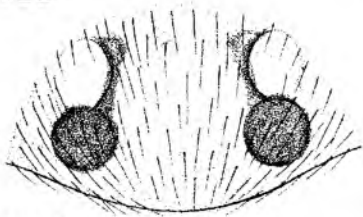
PLATE XV

112. *Piabuna longispina* n. sp. Epigynum.
113. *Piabuna xerophila* n. sp. Epigynum.
114. *Piabuna brevispina* n. sp. Epigynum.
115. *Piabuna nanna* Chamberlin and Ivie. Epigynum. (The upper circular structures sometimes absent or not showing).
116. *Phrurotimpus truncatus* n. sp. Tibial apophysis of left palpus.
117. *Phrurotimpus mateonus* (Chamberlin and Gertsch). Tibial apophysis of left palpus.
118. *Phrurotimpus woodburyi* (Chamberlin and Gertsch). Tibial apophysis of left palpus.
119. *Phrurotimpus woodburyi utanus* n. var. Tibial apophysis of left palpus.
120. *Phrurotimpus alarius tejanus* (Chamberlin and Gertsch). Tibial apophysis of left palpus.
121. *Gosiphrrurus unicolor* n. sp. Cephalothorax, dorsal view.
122. Same. Left palpus, ventral view.
123. *Gosiphrrurus scleratus* n. sp. Left palpus, ventral view.
124. *Eustala rosae* n. sp. Abdomen, side view.

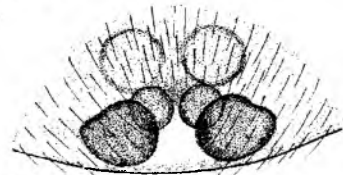


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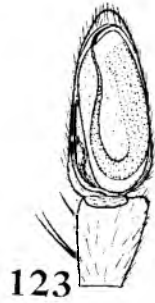
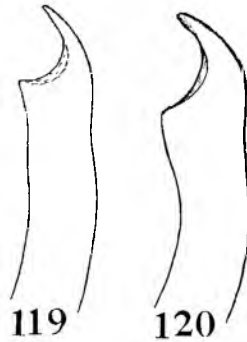
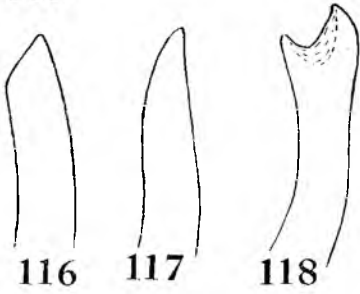
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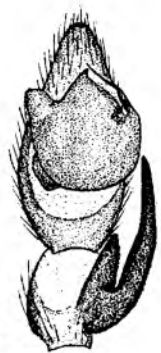
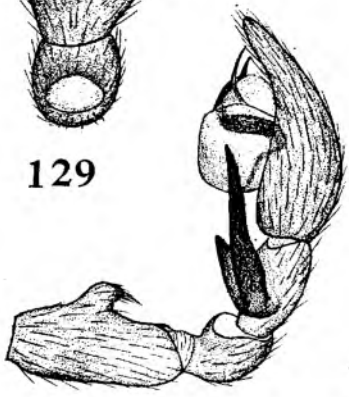
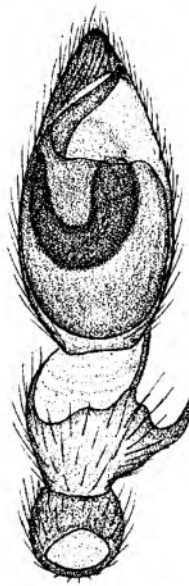
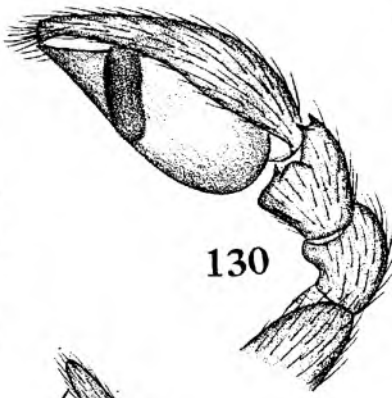
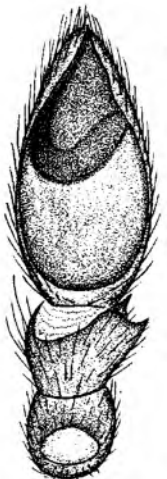
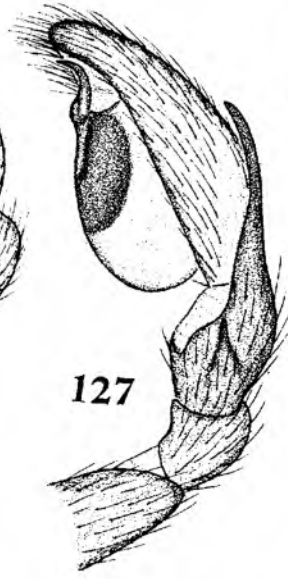
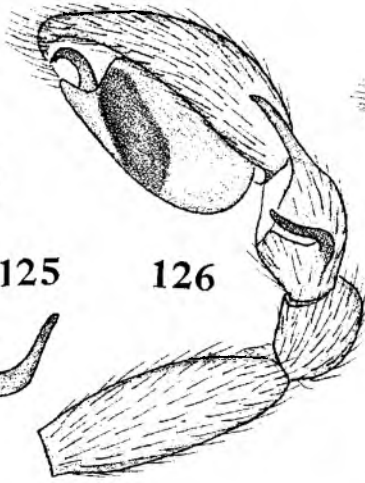
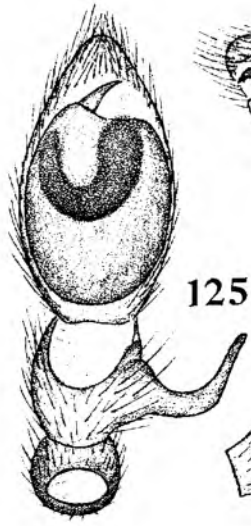
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PLATE XVI

125. *Piabuna pallida* n. sp. Left palpus, ventral view.
126. Same. Left palpus, ectal view.
127. *Piabuna longispina* n. sp. Left palpus, ectal view. Also tip of long apophysis from dorsal view.
128. Same. Left palpus, fentral view.
129. *Piabuna brevispina* n. sp. Left palpus, ventral view.
130. Same. Left palpus, ectal view.
131. *Phrurolithus dolius* n. sp. Left palpus, ectal view.
132. Same. Left palpus, ventral view.



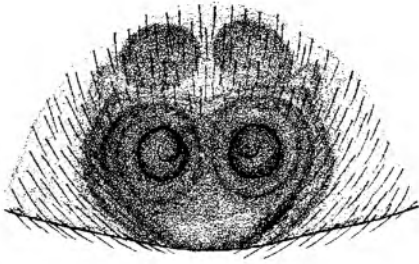
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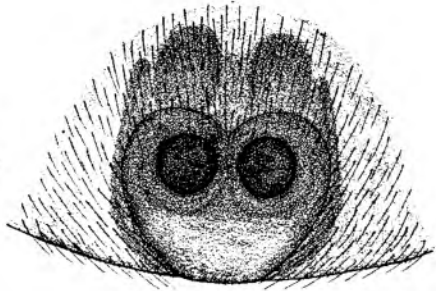
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PLATE XVII

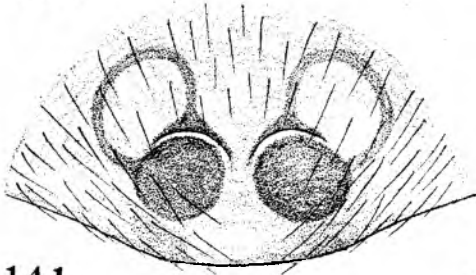
133. *Trachelas utahanus* n. sp. Epigynum.
134. Same. Embolic division of left palpus, ventral view.
135. Same. Embolic division of left palpus. ectal view.
136. *Trachelas pacificus* n. sp. Epigynum. (The differences in the epigynum in this figure and the one in figure 133 are not always so distinct for the two species.)
137. Same. Embolic division of left palpus, ectal view.
138. Same. Embolic division of left palpus, ventral view.
139. *Trachelas volutus* Gertsch. Embolic division of left palpus, ventral view.
140. Same. Embolic division of left palpus, ectal view.
141. *Phrurolithus dolius* n. sp. Epigynum.
142. *Phrurolithus oabus* n. sp. Epigynum.



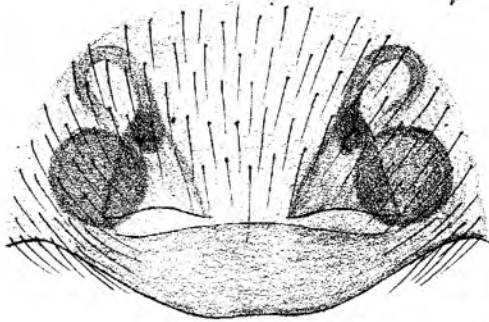
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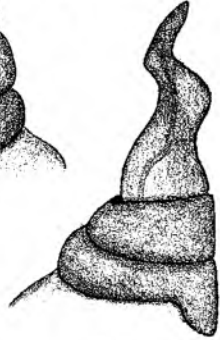
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