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North American Spiders  
of the Genera *Cybaeus*  
and *Cybaeina*

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# A Review of the North American Spider of the Genera *Cybaeus* and *Cybaeina*

By RALPH V. CHAMBERLIN AND WILTON IVIE

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The frequency with which members of the Agelenid genus *Cybaeus* appeared in collections made by the authors in the mountainous and timbered sections of the Pacific coast region and the representations therein of various apparently undescribed species led to the preparation of this review of the known North American forms. One species heretofore placed in *Cybaeus* is made the type of a new genus *Cybaeina*. Most of our species occur in the western states; and it is probable that further collecting in this region will bring to light a considerable number of additional forms.

The drawings accompanying the paper were made from specimens direct excepting in a few cases where material was not available. In these cases the drawings were copied from the figures published by the authors of the species concerned, as indicated hereafter in each such case, but these drawings were somewhat revised to conform with the general scheme of the other figures in order to facilitate comparison.

## GENERAL ACCOUNT OF CYBAEUS

The species now placed in the genus *Cybaeus* were included by C. Koch under *Amaurobius* in his "Die Arachniden" in 1839, the year during which Blackwall announced his discovery of the cribellum and calamistrum. Later, in 1868, L. Koch grouped them apart as a distinct genus which he designated as *Cybaeus* in his paper on "Die Arachniden Gattungen *Amaurobius*, *Coelotes* and *Cybaeus*." With the subsequent attribution of more than generic significance to the presence or absence of cribellum and calamistrum, the genus *Amaurobius* was removed from the Agelenidae, the genus *Dictyna* from the Theridiidae, etc., and the family Dictynidae was established for these and related genera, or these by some were regarded as constituting at least two families, the Amaurobiidae and the Dictynidae. These genera, as a matter of fact, excepting for the presence of cribellum, agree rather closely in appearance, habits and structure with spiders of the families with which they were previously connected.

The fact is that the colulus present in *Cybaeus* and other related genera of the Agelenidae is, according to embryological evidence, clearly homologous with the cribellum of the Dictynidae, etc., as was shown by Jaworowski (1895), Montgomery (1909) and others whose observations confirm the view long before put forward by Blackwall (1839) and Bertkau (1882) that the cribellum represents a fused pair of spinnerets, the original number of spinnerets having been four pairs.

Menge (1843) compared the colulus to a degenerate cribellum and the subsequent critical evidence has confirmed his view, the stages of degeneration being as follows: reduced spinnerets (homodynamous with the persisting median spinnerets), divided cribellum, undivided cribellum, colulus distinct, colulus abortive, and colulus absent. The occurrence of several independent or parallel series of spiders showing this degeneration partly accounts for the difficulties encountered in arranging satisfactorily according to supposed natural affinities some of the more closely related genera and families involved.

In *Cybaeus* the colulus is small and often abortive. The spinnerets are closely grouped and are subapical in position, being ordinarily barely visible from above. Those of the anterior pair are always contiguous with each other and are the longest and thickest. They taper from base to apex where they present a very short apical segment. The posterior pair, lying immediately above the anterior ones, are somewhat more slender and wholly lack a second or apical segment, though of a similar general shape. The median spinnerets are smaller than the others and are connate. The abdomen as a whole, only a little overlapping the cephalothorax, is of average size and subovate in outline. It is usually highest near the base though also rather high and rounded behind and is slightly widest just back of the middle. Spiracles opening just in front of colulus, small.

The cephalothorax is somewhat elongate, with the pars cephalica usually long and rather large in the females, but relatively smaller in the males. The head region is convex above and inclines forward, the highest part being usually midway between the posterior eye row and the thoracic furrow in the females and highest at the anterior end of the furrow in the males. Pars thoracica low and sloping, with short thoracic furrow and the usual fine radiating striae. The clypeus is ordinarily a little wider than the diameter of an anterior lateral eye, but in the known species varies from slightly less than this diameter to two and a half times the diameter.

Ocular group much narrower than the frons, being somewhat wider than half the width of the head. The anterior median eyes are much smaller than the others (excepting in *C. signifer* Simon in which nearly as large); the other eyes not much differing in size among themselves, the order of size, from largest to smallest, being usually as follows: anterior lateral, posterior lateral, posterior median. Anterior row mostly straight or nearly so, being often very slightly recurved; eyes equidistant, separated by about the diameter of a median eye. Posterior row slightly recurved, longer than the anterior row; eyes nearly equidistant, separated by a little more than the diameter of a posterior median eye, or the posterior median eyes may be nearer to the respective lateral eyes than to each other. Lateral eyes on each side separated usually by about the radius of one of them. Area of median eyes much wider behind than in front.

The chelicerae are very robust, and strongly convex or geniculate at base, only rarely being more nearly straight (e.g. *C. signifer* Simon); protruding less in the males than in the females. Furrow distinct, its upper margin with three teeth, of which the median one is longest; the lower margin with teeth variable in number and size, but ordinarily with three or four larger ones followed proximad by from four to six progressively smaller denticles, and a denticle may also lie distad of the larger teeth toward base of the fang. The teeth of the lower margin seem to vary considerably in number and size even between individuals of the same species. A fringe of long hairs overlapping fang from above. Lateral condyle distinct and usually pale in color.

The sternum is broadly subcordate and is widely truncate or slightly concave in front; margins undulate; a short nipple-like or subacute process between the subcontiguous posterior coxae.

The labium in most species is about as long as wide, and narrows slightly distad to the broad, more or less concave, anterior margin. In some species, however, it is slightly longer than wide (*C. reticulatus* Simon, *C. shoshoneus* Chamb. and Ivie), while in others it is slightly wider than long. Not extending beyond middle of endites.

The endites are usually broad and short, but they vary from one to two times as long as broad, with ectal margin convex and inner one truncate and bearing a dense scopula distally; slightly converging distad and moderately embracing the labium.

The legs are of moderate length and stoutness, the order of length being usually 4, 1, 2, 3, but leg 1 is occasionally slightly longer than leg 4. Legs longer in the males than in the females as usual. Legs conspicuously spined, the number and arrangement and relative size of spines varying from species to species. The general distribution is as follows: several spines scattered on dorsal part of femur; often a small apical spine on upper part of patella, though this is usually much reduced or absent; two or three pairs on ventral side of tibiae I and II, while on tibiae III and IV the number is usually reduced and the arrangement less regular; there are also dorsal and lateral spines on the tibiae; the metatarsi have many spines, five on the distal end (one median ventral, two ventro-lateral, and two dorso-lateral), a median ventral pair, and another ventral pair near base, also other dorsal and lateral spines; tarsi without spines. The tarsi bear three claws; the paired claws have a series of long teeth below, these numbering from five to six or twelve in number; the median claw has a single ventral tooth.

In the female the palpus reaches beyond the distal end of the femur of the first leg; the tarsus usually with many stout spines, bearing a claw at the end; tibia usually with one or more spines.

The palpus of the male has the basal segments moderately stout, and the tarsus moderately enlarged, the proportions varying from species to species. Femur not specially modified. Patella stout, with a

more or less stout ectal process on or near the distal end, this process bearing several to many short, sharp black teeth, the form varying from species to species. The tibia is usually only slightly longer than wide (excepting *C. silicis* Barrows); it presents an ecto-ventral, usually cariniform or leaf-like process or fold. Cymbium wide near base, becoming bluntly acuminate apically or more or less elongate in some species; with several stout spines on the outer surface. Palpal organ nearly round in outline. The structures are quite similar to those of *Dictyna*. The embolus arises near the mesal margin and circles around distally and ectally, where it is received on the ectal side by a stout conductor which carries it to the caudal end of the palpal organ, where there is a caudal process which is curved or twisted in various ways. The figures show the details of the palpal organ in the species of which the males are known.

The prevalent color pattern is as follows: Carapace yellowish-brown to reddish-brown, with reticulate markings on the sides of the head, and radial bands or streaks on the thorax; these radial marks are narrow mesally, become broader ectally, and are suddenly truncated some distance from the margin. The line along the margin is usually darker. The markings on the cephalothorax in many of the species are either much reduced or absent altogether. Sternum yellowish- or reddish-brown with margins darkened. Chelicerae light reddish-brown to dark chestnut. Labium and endites light reddish-brown to light chestnut, with whitish tips. Legs yellowish to reddish-brown, often marked with dark annulations which are distributed as follows: three on femur, one on patella, two on tibia, and two on metatarsus; tarsus not banded. These annuli are wide and more distinct below than above; they are often reduced in intensity, and in some species are not present at all. Abdomen gray to blackish above with light markings, usually consisting of a median lanceolate to linear mark on basal half of light gray or light brownish, and a series of paired submedian spots of light gray, there being two on each side of the median basal mark, behind which they are oblique and often united across the middle, sometimes thus forming distinct chevrons. These spots are sometimes very irregular in outline and in a few species (e.g. *C. reticulatus* Simon) may be more or less run together longitudinally. The sides of the abdomen are often streaked and specked with irregular light marks. Venter usually pale gray and unmarked, though the dark color of the dorsum may extend far down on the sides. Spinnerets and epigastric plates pale reddish-brown to yellowish. Epigynum usually dark reddish-brown.

*Cybaeus* occurs most abundantly in mountainous and wooded areas of the Pacific Coast states. Several species are found across the eastern United States. Fewer are known from Europe, where the genus

was originally described. A species has been described from North Africa and one from Japan. The several South American species referred to this genus are likely to be found to belong elsewhere.

These spiders are relatively inactive, living under logs, rocks, dead leaves and other objects on the ground in localities which are not too dry. They spin small, irregular webs which remind one much of those made by *Amaurobius* and *Dictynoides*.

The type of *Cybaeus* is *C. tetricus* C. Koch of Europe and with this species our North American forms seem to be fully congeneric. A description of the genotype, with figures, is included in this paper. The genus *Parauwimus* Chamberlin, with *P. tardatus* Chamberlin as genotype, is regarded as synonymous with *Cybaeus*, although *P. austinensis* Chamberlin, described from Texas and based upon a female is apparently not a *Cybaeus*.

*Cybaeus montavenensis* Bishop and Crosby (1926) is evidently not a *Cybaeus*.

#### LIST OF THE DESCRIBED NORTH AMERICAN SPECIES OF CYBAEUS

**adenes** Chamberlin and Ivie, new  
**aspenicolens** Chamberlin and Ivie, new  
**amicus** Chamberlin and Ivie, new  
**blasbes** Chamberlin and Ivie, new  
**conservans** Chamberlin and Ivie, new  
**consocius** Chamberlin and Ivie, new  
**cribelloides** Chamberlin and Ivie, new  
**eutypus** Chamberlin and Ivie, new  
**giganteus** Banks  
**hesper** Chamberlin and Ivie, new  
**marinensis** Chamberlin and Ivie, new  
**minor** Banks  
**morosus** Simon  
**patritus** Bishop and Crosby  
**perditus** Chamberlin and Ivie, new  
**reducens** Chamberlin and Ivie, new  
**reticulatus** Simon  
**reticulatus tius** Chamberlin and Ivie, new var.  
**signifer** Simon  
**silicis** Barrows  
**shoshoneus** Chamberlin and Ivie, new  
**tardatus** (Chamberlin)

## KEY TO NORTH AMERICAN SPECIES OF CYBAEUS

- a. Chelicerae only slightly geniculate, nearly vertical.  
Tibia with 3 pairs of spines beneath. *C. signifer* Simon
- a'. Chelicerae more or less strongly geniculate.
- b. Spines beneath tibia I less than 3 pairs (sometimes 2-2-1-1).
- c. Females.
- d. Opening of spermathecae separate and not contained in a depression or furrow; spines of tibia I, 2-2, weak.  
*C. perditus* Chamb. and Ivie, sp. nov.
- d'. Openings of spermathecae in a depression or furrow; proximal spines of tibia I long and overlapping.
- c. Epigynum with a narrow septal piece developed over its entire length . . . . . *C. minor* Banks
- e'. Epigynum with the anterior part, at least, a shallow depression.
- f. Epigynum with a septal piece developed posteriorly; epigynal depression wide.  
*C. cribelloides* Chamb. and Ivie, sp. n.
- f'. Epigynum without a distinct septal piece.
- g. Depression of epigynum wider anteriorly than posteriorly.
- h. Under side of femora with distinct dusky bands.  
*C. adenes* Chamb. and Ivie, sp. n.
- h'. Under side of femora without distinct dusky bands.
- i. Anterior rim of epigynum only slightly convexly curved anteriorly.  
*C. reducens* Chamb. and Ivie, sp. n.
- i'. Anterior rim of epigynum strongly convexly curved anteriorly.  
*C. amicus* Chamb. and Ivie, sp. n.
- g'. Depression of epigynum not wider anteriorly than posteriorly.
- h. Anterior lateral dark marks extending for more than half the length of the epigynum.  
*C. marinensis* Chamb. and Ivie, sp. n.
- h'. Anterior lateral dark marks extending for less than half the length of the epigynum.  
*C. consocius* Chamb. and Ivie, sp. n.

c'. Males (only two species in this group with males known).

d. Process of patella of palpus longer than width of the patella.  
*C. hesper* Chamb. and Ivic, sp. n.

d'. Process of patella not longer than width of patella.  
*C. minor* Banks

b'. Spines beneath tibia I three pairs.

c. Females.

d. Opening of epigynum small, near epigastric furrow, no septum present.

e. Length of cephalothorax over 3.5 mm.

f. Legs not annulate.

g. Legs dark brown; cephalothorax over 5 mm. long.  
*C. giganteus* Banks

g'. Legs light brown; cephalothorax not over 5 mm. in length.

h. Four dark sacs showing through integument of epigynum in a transverse row.

*C. silicis* Barrows

h'. Dark sacs showing through integument of epigynum not in transverse row.

*C. patritus* Bishop and Crosby

f'. Legs annulate.

g. Opening of epigynum sharply defined laterally.

*C. reticulatus* Simon

g'. Opening of epigynum not sharply defined laterally.  
*C. shoshoneus* Chamb. and Ivie, sp. n.

e'. Length of cephalothorax under 3.5 mm.

*C. reticulatus tius* Chamb. and Ivie, var. n.

d'. Openings of epigynum otherwise.

e. Epigynum bordered anteriorly and laterally by a wide, subcircular rim.

f. Legs only faintly banded at the most.

*C. aspenicolens* Chamb. and Ivie, sp. n.

f'. Legs distinctly banded, at least ventrally.

*C. blasbes* Chamb. and Ivie, sp. n.

e'. Epigynum not thus bordered.

f. Epigynum with a pair of lateral openings separated by a median septum.

g. Openings of epigynum large and transversely elongate. *C. eutypus* Chamb. and Ivie, sp. n.

g'. Openings of epigynum smaller and nearly round. *C. morosus* Simon

f'. Openings of epigynum concealed under an anterior fold. *C. conservans* Chamb. and Ivie, sp. n.

c'. Males.

d. Patella of palpus more than twice as long as wide. *C. shoshoneus* Chamb. and Ivie, sp. n.

d'. Patella of palpus not twice as long as wide.

e. Tibia of palpus more than twice as long as wide. *C. silicis* Barrows

e'. Tibia of palpus not twice as long as wide.

f. Process on patella of palpus nearly as long as the width of latter.

g. Process of patella geniculate, the distal portion being bent distad. *C. tardatus* (Chamberlin)

g'. Process of patella not geniculate, the distal portion not distinctly bent.

*C. aspenicolens* Chamb. and Ivie, sp. n.

f'. Process on patella of palpus much shorter than width of patella.

g. Process on patella scarcely developed.

h. Patella of palpus longer than wide.

*C. patritus* Bishop and Crosby.

h'. Patella of palpus not longer than wide.

*C. eutypus* Chamb. and Ivie, sp. n.

g'. Process on patella of palpus well developed.

h. Process on patella of palpus extending slightly beyond distal end of patella.

*C. morosus* Simon

h'. Process on patella of palpus not extending beyond end of patella.

i. Length of cephalothorax over 3.5 mm.

*C. reticulatus* Simon

i'. Length of cephalothorax less than 3.5 mm.

*C. reticulatus tius* Chamb. and Ivie, var. n.

## DESCRIPTION OF SPECIES OF CYBAEUS

*Cybaeus tetricus* C. Koch

(Pl. 3, figs. 22, 23)

*Male*: Shape essentially typical. Clypeus about two and one-half times the diameter of the anterior lateral eyes. Eyes typical, except that the posterior median eyes are considerably nearer the laterals than to each other, being about one and one-half diameters apart. Chelicerae only slightly geniculate in front as is often the case in the male. (An immature specimen shows strong geniculation). Lower margin of furrow with seven teeth, which become progressively smaller away from the base of the fang. Labium slightly wider than long. Sternum slightly wider than long. Tibiae I and II with three pairs of spines below; spines rather small. Palpus of the same general type as that of the American species, differing only in detail. The other features of the spider correspond to the typical structure as described in the generic characterizations.

The color is of the usual pattern. The markings on the carapace are very faint. The legs are a light yellowish-brown without markings. Chelicerae, labium, and endites somewhat lighter than usual, the chelicerae being reddish-brown, the labium and endites being an orange-brown. Abdomen dark gray above with a faint median line on the basal half of a lighter gray and the usual pattern of whitish spots, those of the posterior half being more transverse than usual and joined along the mid-line. Venter pale gray.

*Measurements*:

## MALE

Length: 5.8. mm.

Cephalothorax: Length 3.0, width 2.1, head 1.2 mm.

Abdomen: Length 3.0, width 2.1 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.3	1.3	1.2	1.3
Femur .....	2.5	2.3	2.1	2.5
Tibia-Patella .....	3.3	2.9	2.4	3.0
Metatarsus .....	2.3	1.9	1.8	2.4
Tarsus .....	1.4	1.3	1.2	1.4
TOTAL .....	10.8	9.7	8.7	10.6

The specimen from which the above description was taken is from France.

**Cybaeus perditus** Chamberlin and Ivie, sp. n.

(Pl. 4, fig. 31)

Essentially typical in structure. Spines on tibiae I and II, 2-2-0, much reduced in size and length, especially the anterior spine of each pair.

Color nearly typical; legs without marks, and those of the cephalothorax obsolete. Abdomen with markings very irregular and much run together, much resembling *C. reticulatus*.

*Measurements:*

## FEMALE

Length: 4.5 mm.

Cephalothorax: Length 2.1, width 1.5, head 1.0 mm.

Abdomen: Length 2.5, width 1.7 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.0	0.9	0.8	1.0
Femur .....	1.8	1.7	1.5	1.8
Tibia-Patella .....	2.1	1.9	1.7	2.1
Metatarsus .....	1.5	1.1	1.2	1.6
Tarsus .....	0.9	0.8	0.8	0.9
TOTAL .....	7.3	6.4	6.0	7.4

Type locality.—Sol Duc Hot Springs, Washington.

2 ♀s, R. V. Chamberlin, collector.

Known only from the type locality.

This species shows no close affinity with any of our other species, being especially divergent in the form of the epigynum and the spination of the legs.

**Cybaeus signifer** Simon

(Pl. 3, figs. 24, 25; pl. 4, fig. 32)

*Cybaeus signifer* Simon, Ann. Soc. Ent. Belgique, 1886, XXX, p. lvi.

*Cybaeus signifer* Emerton, Cant. Ent., 1923, LV, 240, f. 5 (♀), nec. f. 5c, f (♂).

*Cybaeus morosus* Emerton, ibid., f. 5a, b (♂).

Cephalothorax less highly arched than is usual in the genus. Eyes small, anterior medians only slightly smaller than the others, or in some specimens of about equal size. Eye rows straight. Anterior eyes slightly less than diameter apart, posterior eyes more than diameter apart. Width of clypeus more than twice the diameter of an anterior lateral eye. Chelicerae of the males not at all or only very slightly geniculate in front; they are slightly more convex in the female. Lateral condyle small and often hidden. Upper margin of the furrow of chelicera with the usual three teeth; the lower margin typically with

six smaller teeth, of which the three proximal ones are more minute. Legs 1 2 4 3 in male, 4 1 2 3 in female. Tibiae I and II with the usual three pairs of ventral spines, the pairs widely separated; the proximal pair not strictly basal; the apical pair smaller than the others; two spines in a series on the anterior face of the joint. Sternum about as wide as long; point behind very small; hind coxae contiguous.

Carapace with usual color markings, but these are broader and dusky, and without definitely defined margins. Head region dusky. Chelicerae, labium, endites and sternum of typical color. Legs typically marked, tho the markings are wider than usual, and except on the under side of the femur, they are usually faded, often scarcely discernible. Markings vary in intensity in different individuals. Median line of the abdomen usually wide, darker than the spots, margin poorly defined. Basal pair of spots more or less longitudinal, second pair more transverse; distinct chevrons on posterior half, these marks becoming very narrow and line-like apically. Sides somewhat spotted and streaked; venter pale.

*Measurements:*

FEMALE					MALE			
Length:	10.0 mm.				Length:	7.7 mm.		
Cephalothorax:	Length 5.6, width 3.9, head 2.5 mm.				Cephalothorax:	Length 4.5, width 3.0, head 2.0 mm.		
Abdomen:	Length 5.0, width 3.5 mm.				Abdomen:	Length 4.0, width 3.0 mm.		
Legs	I	II	III	IV	I	II	III	IV
Coxa-Troch. ....	2.4	2.3	2.2	2.4	2.0	2.0	1.8	2.0
Femur .....	4.1	4.0	3.4	4.1	3.9	3.9	3.4	3.9
Tibia-Patella .....	5.7	5.4	4.4	5.4	6.0	5.4	4.2	5.0
Metatarsus .....	3.5	3.4	3.4	4.4	4.4	4.1	3.2	4.4
Tarsus .....	1.9	1.9	1.8	2.0	2.0	2.0	1.9	2.0
TOTAL .....	17.6	17.0	15.2	18.3	18.3	17.4	14.5	17.3

Type locality.—“Washington Territory.”

Distribution.—Pacific coast region.

Known localities.—Canada: British Columbia. Washington: Tacoma; Ranier National Park (R. V. Chamberlin). Oregon: Forest Grove (R. V. Chamberlin); Grants Pass (W. Ivie). California: Berkely; San Mateo Co. (J. C. Chamberlin); Pacific Grove; Petrified Forest (W. Ivie).

The male of this species is the same as that figured by Emerton (Can. Ent., 1923, p. 241, fig. 5 a and b) as *Cybaeus morosus* Simon. Simon himself apparently had no male when he set up *morosus*, as he describes only the female of the latter. The male described by Emer-

ton as that of *Cybaeus signifer* Simon is regarded as properly the male of *Cybaeus morosus* Simon.

This species is clearly distinct from all other species. The features of special peculiarity are the eyes, in which the anterior medians are nearly as large as the others, and the chelicerae, these being only slightly convex and not geniculate as is typical.

### *Cybaeus giganteus* Banks

(Pl. 4, fig. 33)

*Cybaeus giganteus* Banks, Proc. Acad. Philadelphia, 1892, p. 23, pl. i, f. 71; pl. v, f. 71a.

*Female*: Structure essentially typical. Posterior median eyes slightly nearer the posterior laterals than to each other. Anterior median eyes proportionately larger than usual, yet still decidedly smaller than the others. Tibiae I and II with three pairs of spines on under side, with other latero-ventral spines which may appear ventral.

Cephalothorax dark brown; typical markings present but somewhat obscured by the darkness of the background. Chelicerae dark chestnut. Labium and endites somewhat lighter with whitish tips. Sternum yellowish-brown in center with margins broadly darkened. Legs dark brown, except coxae which are light on the under side; without markings. Abdomen dark grayish-black, with a median basal line, which is rather obscure in the specimen at hand. (The type specimen is described as having two small, oblique spots of light gray on each side of the median line, but these are absent in the specimen described here). Venter paler; two rows of light dots extend from the book-lungs to the spinnerets. Epigastric region and spinnerets light brownish.

#### *Measurements:*

#### FEMALE

Length: 12.0 mm.

Cephalothorax: Length 5.7, width 4.0, head 2.9 mm.

Abdomen: Length 6.7, width 5.0 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	2.5	2.4	2.2	2.5
Femur .....	4.2	4.2	3.5	4.2
Tibia-Patella .....	5.3	5.0	4.3	5.1
Metatarsus .....	3.1	3.1	3.1	3.6
Tarsus .....	2.0	1.9	1.7	2.0
<b>TOTAL</b> .....	<b>17.1</b>	<b>16.6</b>	<b>14.8</b>	<b>17.4</b>

This is the largest of the American spiders of this genus. It is darker than the western forms, and has the markings much restricted. The male apparently is not known; at least, there has been no description published.

**Type locality.**—New York.

**Distribution.**—New York; North Carolina.

The female described here was collected by W. S. Creighton at Little Switzerland, North Carolina, August, 1930.

***Cybaeus patritus* Bishop and Crosby**

(Pl. 4, figs. 34, 35)

*Cybaeus patritus* Bishop and Crosby, J. Elisha Mitchel Soc., 1926, p. 201, ff. 54-55.

The following characterization is taken from the description by Bishop and Crosby, no specimens of this species being available for examination.

Structure apparently typical, the principal difference being in the palpus and epigynum as indicated in the key and figures. Pl. 4, ff. 34, 35.

“Thorax grayish-yellow, with distinct radiating lines; head brownish with darker reticulations. . . Sternum, labium and endites yellowish-brown, sparsely clothed with black hairs. Coxae lighter than sternum. Chelicerae dark reddish-brown; lower margin of the furrow armed with 7 or 8 small blunt teeth. Legs grayish-yellow with a tinge of green, terminal segments reddish. Palpi lighter. Abdomen (in the male) dark gray, nearly black with a median basal lanceolate light mark and three pairs of indistinct light bars. Underside of abdomen pale yellowish in front of epigastric furrow; back of the furrow dark gray. . . Abdomen (in female) dark gray sprinkled with numerous fine light spots and marked down the back with a series of divergent short light lines. Underside of body colored as in male.”

**Type locality.**—Grandfather Mt., North Carolina.

**Other locality.**—Mt. Pisgah, North Carolina.

This species is apparently most closely related to *C. silicis* Barrows and *C. giganteus* Banks.

***Cybaeus silicis* Barrows**

(Pl. 4, figs. 26, 27, 36)

*Cybaeus silicis* Barrows, Ohio Nat., 1919, p. 356, ff.

*Cybaeus silicis* Bishop and Crosby, J. Elisha Mitchell So., 1926, p. 203.

Structure essentially typical. Anterior median eyes less than a diameter apart, and about the same distance from the anterior lateral. Posterior median eyes farther from each other than they are from the laterals. Both eye rows faintly recurved. Chelicerae strongly geniculate. Usual teeth on upper margin of furrow of chelicerae; lower margin with four teeth and three denticles. Sternum slightly broader and

shorter than usual. Tibiae I and II with three pairs of spines below. Palpus of male slender; tibia very long; cymbium with a long slender extension at apex; patella with a very long spine near dorsal apex.

Color typical in most respects. Carapace brown, with usual markings faintly developed. Chelicerae light chestnut. Legs light brown, unmarked. Abdomen dark gray; median line very faint or absent; lateral spots typical, but much reduced in size; venter pale.

*Measurements:*

FEMALE					MALE			
Length:	7.0 mm.				Length:	8.0 mm.		
Cephalothorax:	Length 3.8, width 2.4, head 1.6 mm.				Cephalothorax:	Length 4.8, width 2.8, head 1.5 mm.		
Abdomen:	Length 3.9, width 2.9 mm.				Abdomen:	Length 3.6, width 2.9 mm.		
Legs	I	II	III	IV	I	II	III	IV
Coxa-Troch. ....	1.7	1.6	1.5	1.6	1.8	1.7	1.5	1.7
Femur .....	2.5	2.5	2.3	3.0	3.2	3.1	2.9	3.3
Tibia-Patella .....	3.3	3.3	3.0	3.5	4.6	4.2	3.7	4.2
Metatarsus .....	2.0	2.0	2.0	2.9	3.5	3.2	3.0	3.8
Tarsus .....	1.5	1.5	1.3	1.5	2.8	2.2	2.0	2.2
TOTAL .....	11.0	10.9	10.1	12.1	15.9	14.4	13.1	15.2

**Type locality.**—Rockbridge, Ohio.

**Distribution.**—Eastern U. S.

**Known localities.**—Ohio: Rockbridge. North Carolina: Montreal. The description above is from the type specimens.

*Cybaeus shoshoneus* Chamberlin and Ivie, sp. n.

(Pl. 4, figs. 37-39)

Shape essentially typical. Width of clypeus twice the diameter of an anterior lateral eye. Four teeth and five denticles on lower margin of the furrow of the chelicerae. Labium longer than wide. Sides of sternum less rounded, and margins more undulate than usual. Hind coxae contiguous. Palpus of male elongate; patella very long, with a long ectal process on distal end; palpal organ small. Leg I longer than leg IV in the male, just opposite in the female.

Color typical. Markings on cephalothorax very reduced; annulations of legs faded, except on the under side of the femur, where they are quite distinct. Markings of dorsum quite irregular in outline; basal markings usually joined longitudinally, and more or less connected with the median band; posterior marks often joined transversely into crude chevrons; sides usually spotted and speckled with light gray; venter light, immaculate.

*Measurements:*

FEMALE					MALE			
Length: 9.8 mm.					Length: 7.7 mm.			
Cephalothorax: Length 4.8, width 3.2, head 2.2 mm.					Cephalothorax: Length 4.2, width 3.0, head 1.7 mm.			
Abdomen: Length 5.4, width 3.3 mm.					Abdomen: Length 3.5, width 2.5 mm.			
Legs	I	II	III	IV	I	II	III	IV
Coxa-Troch. ....	2.0	1.9	1.8	2.0	1.9	1.8	1.7	1.9
Femur .....	3.5	3.5	3.1	3.7	3.6	3.5	3.1	3.7
Tibia-Patella .....	4.5	4.0	3.6	4.3	4.9	4.3	3.8	4.3
Metatarsus .....	3.0	2.8	2.7	3.7	3.5	3.5	3.1	4.1
Tarsus .....	1.8	1.8	1.7	2.0	2.8	2.2	1.9	2.1
TOTAL .....	14.8	14.0	12.9	15.7	16.7	15.3	13.6	16.1

**Type locality.**—Blue Creek, Cour d'Alene, Idaho.

**Distribution.**—Northern Idaho.

**Known localities.**—Idaho: Blue Creek, Coeur d'Alene; Rose Lake (R. V. Chamberlin).

*Cybaeus reticulatus* Simon

(Pl. 5, figs. 40-42)

*Cybaeus reticulatus* Simon, Ann. Soc. Ent. Belgique, 1886, XXX, p. lvi.

*Cybaeus reticulatus* Banks, Proc. Wash. Acad. Sci., 1900, II, 478.

*Cybaeus reticulatus* Emerton, Can. Ent., 1923, LV, 240, f. 4.

**Female:** Carapace much longer than wide; head arched and elevated above thorax; highest at about middle of cephalic part. Clypeus more than one and one-half diameters of anterior lateral eyes. Eyes typical; except, lateral eyes slightly more than the radius of one of them apart. Chelicerae very strongly geniculate at base in front, protruding far in front of clypeus; lateral condyle distinct, white, lower margin of furrow with three or four larger teeth toward base of fang, followed by five small denticles toward tip. Labium slightly longer than wide in most specimens. Legs of moderate size, 4 1 2 3. Under side of all tibiae with spines 2-2-2; spines of moderate size. Abdomen typical, perhaps a little wider than usual. Epigynum with a small opening; this opening may be of two types as shown in pl. 5, fig. 42.

Carapace reddish-brown with reticulate markings on sides of head, enclosing posteriorly a dark mark on each side of head region; these marks are widest in front and are narrowed to a point behind, and

point convergently toward the median furrow. Radial bands of thorax typical, distinct. Chelicerae dark chestnut. Endites and labium reddish-brown with white tips. Sternum paler with margins darkened. Legs light yellowish-brown with broad rings of dark gray, distinct below, more or less faded above. Abdomen dark gray above, with a narrow median line of pale buff on basal two-fifths, and a series of paired submedian spots of light gray extending nearly the full length; these spots are very irregular in outline and often run together longitudinally. Sides mottled with dark and light gray. Venter paler gray, usually with two darker bands from book-lungs to sides of spinnerets, or sometimes the enclosed area also dark. Epigynum dark reddish-brown. Spinnerets and epigastric plates light yellowish-brown.

*Male:* Similar to female, but cephalothorax proportionately shorter, with thorax wider and head narrower as is usual; abdomen slightly smaller. Legs 1 4 2 3. Palpus large, for details see pl. 5, figs. 40 and 41. Color the same as female.

*Measurements:*

FEMALE					MALE			
Length: 9.2 mm.					Length: 8.0 mm.			
Cephalothorax: Length 4.4, width 2.9, head 1.9 mm.					Cephalothorax: Length 4.1, width 3.1, head 1.7.			
Abdomen: Length, 5.0, width 3.5 mm.					Abdomen: Length 4.0, width 2.8 mm.			
Legs	I	II	III	IV	I	II	III	IV
Coxa-Troch. ....	2.0	1.9	1.7	2.0	1.9	1.8	1.7	1.9
Femur .....	3.0	2.9	2.7	3.1	3.0	2.8	2.7	3.1
Tibia-Patella .....	3.8	3.7	3.1	3.8	4.0	3.7	3.3	3.8
Metatarsus .....	2.2	2.0	2.0	3.0	2.9	2.3	2.2	2.9
Tarsus .....	1.5	1.5	1.4	1.5	2.3	2.2	2.1	2.2
TOTAL .....	12.5	12.0	10.9	13.4	12.2	11.0	10.3	12.0

**Type locality.**—"Washington Territory."

**Distribution.**—Pacific Coast from Alaska to California.

**Known localities.**—Alaska. British Columbia. Washington: Easton; Snoqualmie Pass (R. V. Chamberlin). Oregon: Perham Creek; Clear Creek near Forest Grove; Hood River (R. V. Chamberlin). California.

This species may be distinguished by its larger size, abdominal markings, annulated legs, and the structure of palpus and epigynum.

*Cybaeus reticulatus* Chamberlin and Ivie, var. n.

The specimens of this variety are not definitely distinguishable from certain specimens of *Cybaeus reticulatus* Simon in regards to structure and color. The principle difference is one of size. In the specimens on hand, the male palpi of *C. reticulatus* Sim. all have the base of the bulb expanded, while in the variety, the palpal organs lie close against the cymbium.

*Measurements:*

FEMALE					MALE			
Length:	6.1 mm.				Length:	6.0 mm.		
Cephalothorax:	Length 3.0, width 2.1, head 1.4 mm.				Cephalothorax:	Length 3.1, width 2.3, head 1.1 mm.		
Abdomen:	Length 3.2, width 2.2 mm.				Abdomen:	Length 3.1, width 2.6 mm.		
Legs	I	II	III	IV	I	II	III	IV
Coxa-Troch. ....	1.3	1.3	1.2	1.3	1.3	1.3	1.2	1.3
Femur .....	2.1	2.0	1.9	2.2	2.3	2.2	2.1	2.4
Tibia-Patella .....	2.7	2.6	2.2	2.8	3.9	2.8	2.3	2.9
Metatarsus .....	1.7	1.7	1.7	2.0	2.1	2.0	1.8	2.5
Tarsus .....	1.2	1.2	1.0	1.1	1.8	1.6	1.3	1.7
TOTAL .....	9.0	8.8	8.0	9.4	10.5	9.9	8.7	10.8

**Type locality.**—Longmire, Wisconsin (R. V. Chamberlin).

**Other locality.**—Sol Duc Hot Springs, Washington (R. V. Chamberlin).

*Cybaeus eutypus* Chamberlin and Ivie, sp. n.

(Pl. 5, figs. 43-45)

Carapace typical, highest at anterior end of median furrow. Width of clypeus nearly twice the diameter of an anterior lateral eye. Eyes typical, except rows slightly farther apart in the female. Chelicerae very strongly geniculate; lower margin of furrow with four larger teeth and four very small ones. Legs and abdomen typical.

Markings on cephalothorax and legs very reduced, annulations practically absent on legs, except on under side of femur, where they are fairly distinct. Median basal band on abdomen narrow lanceolate; paired spots relatively small, usually not touching across middle.

*Measurements:*

FEMALE		MALE	
Length:	9.0 mm.	Length:	8.0 mm.
Cephalothorax:	Length 4.5, width 3.0, head 2.1 mm.	Cephalothorax:	Length 4.3, width 3.0, head 1.6 mm.
Abdomen:	Length 5.0, width 4.5 mm.	Abdomen:	Length 4.5, width 3.5 mm.

Legs	I	II	III	IV	I	II	III	IV
Coxa-Troch. ....	1.9	1.9	1.8	2.0	1.9	1.8	1.7	1.9
Femur .....	3.1	3.0	2.9	3.2	3.1	3.1	2.8	3.2
Tibia-Patella .....	4.1	3.9	3.2	4.0	4.1	3.9	3.5	3.9
Metatarsus .....	2.6	2.5	2.5	3.0	2.8	2.6	2.4	3.1
Tarsus .....	1.6	1.6	1.5	1.7	2.0	1.9	1.7	2.1
<b>TOTAL</b> .....	<b>13.3</b>	<b>12.9</b>	<b>11.9</b>	<b>13.9</b>	<b>13.9</b>	<b>13.3</b>	<b>12.1</b>	<b>14.2</b>

Type locality.—Bay City, Oregon.

Distribution.—Washington and Oregon.

Known localities.—Oregon: Bay City; Yamhill River Valley (R. V. Chamberlin). Washington: Easton; Marysville; near Seattle (R. V. Chamberlin).

The female of this species is readily distinguishable by the form of the epigynum, which has two large transverse openings separated by a septum as shown in the figure.

### *Cybaeus morosus* Simon

(Pl. 1, figs. 1-4; pl. 3, figs. 15-21)

*Cybaeus morosus* Simon, Ann. Soc. Ent. Belgique, 1886, XXX, p. lvii.

*Cybaeus morosus* Emerton, Can. Ent., 1923, LV, 240, f. 5c (nec. ff. 5a, b).

*Cybaeus signifer* Emerton, ibid., ff. 5c, f. (Nec *C. signifer* Simon).

Shape typical. Lower margin of the furrow of the chelicerae with three larger teeth and two or three minute denticles. Anterior tibiae with three pairs of spines below.

Color typical. Markings on legs and thorax moderately distinct; spots on abdomen separated along mid-line.

#### Measurements:

	FEMALE				MALE			
Length:	8 mm.				7 mm.			
Cephalothorax:	Length 4.4, width 3.1, head 2.1 mm.				Length 3.5, width 2.4, head 1.3 mm.			
Abdomen:	Length 4.6, width 3.2 mm.				Length 3.7, width 2.7 mm.			
Legs	I	II	III	IV	I	II	III	IV
Coxa-Troch. ....	2.0	1.9	1.8	2.0	1.5	1.5	1.4	1.6
Femur .....	3.1	3.0	2.7	3.4	2.7	2.5	2.1	2.7
Tibia-Patella .....	4.1	3.8	3.1	4.0	3.2	3.0	2.5	3.2
Metatarsus .....	2.5	2.4	2.4	3.0	2.1	2.0	2.0	2.8
Tarsus .....	1.6	1.6	1.5	1.6	1.6	1.5	1.2	1.5
<b>TOTAL</b> .....	<b>13.3</b>	<b>12.7</b>	<b>11.5</b>	<b>14.0</b>	<b>11.1</b>	<b>10.5</b>	<b>9.2</b>	<b>11.8</b>

Type locality.—“Washington Territory.”

Distribution.—Pacific northwest.

Known localities.—British Columbia. Washington: Maeler State Park (R. V. Chamberlin). Oregon: Roseburg (W. Ivie).

The above specimens were compared with a specimen of *C. morosus* identified by Simon and now in the Museum of Comparative Zoology.

*Cybaeus conservans* Chamberlin and Ivie, sp. n.

(Pl. 5, figs. 50, 51)

Shape typical. Very close to *C. morosus* Simon. Four teeth and five small denticles on lower margin of the furrow of the chelicerae.

Color much the same as *C. morosus* Simon.

Measurements:

FEMALE

Length: 8 mm.

Cephalothorax: Length 3.3, width 2.4, head 1.5 mm.

Abdomen: Length 4.6, width 3.0 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.2	1.2	1.1	1.3
Femur .....	2.2	2.2	1.9	2.4
Tibia-Patella .....	2.9	2.9	2.4	2.9
Metatarsus .....	1.8	1.8	1.7	2.4
Tarsus .....	1.2	1.2	1.1	1.3
TOTAL .....	9.3	9.3	8.2	10.3

Type locality.—Ashland, Oregon.

Distribution.—Western Oregon.

Known localities.—Oregon: Ashland; Roseburg (W. Ivie), females only.

*Cybaeus aspenicolens* Chamberlin and Ivie, sp. n.

(Pl. 6, figs. 52-54)

Structure typical. Posterior margin of the furrow of the chelicerae with three teeth near base of claw, followed by five very small sharp denticles near tip. Lateral condyle distinct, white. Labium about as long as wide. Legs 4 1 2 3; three pairs of spines under tibiae I and II, spines of moderate size.

Color essentially typical. Chelicerae not as dark as usual. Spots on abdomen joined behind into chevron-like marks.

*Measurements:*

FEMALE					MALE			
Length: 7.0 mm.					Length: 6.7 mm.			
Cephalothorax: Length 3.0, width 2.0, head 1.4. mm.					Cephalothorax: Length 3.0, width 2.1, head 1.2 mm.			
Abdomen: Length 3.4, width 2.4 mm.					Abdomen: Length 3.0, width 2.1 mm.			
Legs	I	II	III	IV	I	II	III	IV
Coxa-Troch. ....	1.3	1.2	1.0	1.2	1.2	1.2	1.1	1.2
Femur .....	2.4	2.2	1.9	2.5	2.6	2.4	2.1	2.7
Tibia-Patella .....	2.9	2.7	2.2	2.9	3.1	2.9	2.4	3.0
Metatarsus .....	1.9	1.8	1.6	2.2	2.0	2.0	1.9	2.2
Tarsus .....	1.0	1.0	0.9	1.0	1.3	1.2	1.1	1.3
TOTAL .....	9.5	8.9	7.6	9.8	10.2	9.7	8.6	10.4

Type locality.—Aspen Valley, Yosemite National Park, California.

Males and females, collected by W. Ivie, Aug., 1931.

This species was common under logs and other objects on the ground. The webs were scant and irregular.

*Cybaeus blasbes* Chamberlin and Ivie, sp. n.

(Pl. 6, fig. 55)

This species is close to *C. aspenicolens* sp. nov., but may be distinguished by its larger size, banded legs, and details of the epigynum.

*Measurements:*

FEMALE				
Length: 7.7 mm.				
Cephalothorax: Length 3.1, width 2.2, head 1.5 mm.				
Abdomen: Length 5.0, width 3.4 mm.				
Legs	I	II	III	IV
Coxa-Trochanter .....	1.6	1.5	1.4	1.5
Femur .....	2.5	2.4	2.0	2.7
Tibia-Patella .....	2.9	....	2.4	3.2
Metatarsus .....	....	....	1.9	2.7
Tarsus .....	....	....	1.0	1.2
TOTAL .....	....	....	8.7	11.3

Type locality.—Northfolk, California.

Known from one damaged female, collected by R. V. Chamberlin.

**Cybaeus tardatus** (Chamberlin)

(Pl. 6, fig. 56)

*Parauzimus tardatus* Chamberlin, Pomona Coll. Journ. Ent. Zool., 1920, XII, 3, pl. i, f. 2.*Cybaeus tardatus* Chamberlin, Calif. Acad. Sci., 1924, XII, 669.

Structure and color typical. Legs obscurely annulated. Tibiae I and II with three pairs of spines beneath. Apparently closely related to *C. aspenicolens* sp. nov. May be distinguished by palpus.

**Type locality.**—Claremont, California.

**Distribution.**—Southwest coast region.

**Known localities.**—California: Claremont. Lower California: Ensenada.

Known only from males.

**Cybaeus reducens** Chamberlin and Ivie, sp. n.

(Pl. 6, fig. 57)

Color and shape typical. Marks on cephalothorax and legs faint; median basal band on abdomen narrow; spots of abdomen not quite joined along center.

*Measurements:*

## FEMALE

Length: 6 mm.

Cephalothorax: Length 3.0, width 2.0, head 1.5 mm.

Abdomen: Length 3.2, width 2.1 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.2	1.1	1.0	1.2
Femur .....	2.0	1.9	1.8	2.0
Tibia-Patella .....	2.7	2.4	2.0	2.6
Metatarsus .....	1.6	1.5	1.5	2.1
Tarsus .....	1.0	0.9	0.9	1.0
TOTAL .....	8.5	7.8	7.2	8.9

**Type locality.**—Pacific Grove, California.

Several females, collected by W. Ivie and R. V. Chamberlin.

**Cybaeus amicus** Chamberlin and Ivie, sp. n.

(Pl. 6, fig. 58)

Shape typical. Lower margin of the furrow of the chelicerae with three larger teeth and five small denticles. Under side of tibia I with spines 2-2-1; tibia II with spines 2-2.

Color typical. Cephalothorax light reddish-brown; chelicerae medium chestnut; markings on carapace present, but not distinct. Legs with faint cross bands on under side of femora. Abdomen with median basal line obscure; markings chevron-like beyond middle.

*Measurements:*

## FEMALE

Length: 5.7 mm.

Cephalothorax: Length 2.7, width 1.9, head 1.2 mm.

Abdomen: Length 3.5, width 2.5 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.2	1.1	1.0	1.2
Femur .....	2.0	2.0	1.8	2.1
Tibia-Patella .....	2.6	2.3	2.0	2.6
Metatarsus .....	1.5	1.5	1.3	1.7
Tarsus .....	0.9	0.9	0.9	1.0
<i>TOTAL</i> .....	8.2	7.8	7.0	8.6

**Type locality.**—Brookdale, California.

Two females, collected by R. V. Chamberlin.

**Cybaeus adenes** Chamberlin and Ivie, sp. n.

(Pl. 6, fig. 59)

Structure typical, except eye rows slightly closer together than usual. Tibia I with spines beneath 2-2-1; tibia II with spines 2-2; spines long and overlapping. Apparently close to *C. amicus* sp. nov.

Carapace and legs unmarked.

*Measurements:*

## FEMALE

Length: 4 mm.

Cephalothorax: Length 2.2, width 1.6, head 1.0 mm.

Abdomen: Length 2.3, width 1.7 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.0	1.0	0.9	1.0
Femur .....	1.9	1.8	1.5	1.9
Tibia Patella .....	2.1	....	1.8	2.1
Metatarsus .....	1.3	....	1.1	1.7
Tarsus .....	0.9	....	0.8	1.0
<i>TOTAL</i> .....	7.2	....	6.1	7.7

**Type locality.**—Marin Co., California.

One damaged female, collected by R. V. Chamberlin.

Two females from Berkeley, California, appear to belong to this species also.

**Cybaeus consocius** Chamberlin and Ivie, sp. n.

(Pl. 6, fig. 61)

Shape essentially typical. Thorax narrower than usual; as high at median furrow as on head. Eye rows slightly closer together than typical. Spines on tibia I 2-2-1, on tibia II 2-2.

Markings on carapace very faint.

*Measurements:*

FEMALE

Length: 4.8 mm.

Cephalothorax: Length 2.5, width 1.8, head 1.2 mm.

Abdomen: Length 3.2, width 2.2 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.1	1.0	1.0	1.1
Femur .....	2.0	2.0	1.7	2.0
Tibia-Patella .....	2.5	2.2	2.0	2.4
Metatarsus .....	1.6	1.4	1.5	1.9
Tarsus .....	0.9	0.9	0.7	1.0
<b>TOTAL</b> .....	8.1	7.5	6.9	8.4

**Type locality.**—Marin Co., California.

One damaged female, collected by R. V. Chamberlin.

**Cybaeus marinensis** Chamberlin and Ivie, sp. n.

(Pl. 6, fig. 60)

Shape typical, except: Sternum broad and short, being as wide as long; projection behind rudimentary; hind coxae contiguous. Chelicerae only moderately geniculate in front. Tibiae I and II with two pairs of long spines beneath, these are on the basal half. Endites and labium short, the latter being wider than long.

Carapace and legs light brown, without markings; sternum similar; labium and endites similar, but with a reddish tinge and white tips; chelicerae only slightly darker. Dorsum typical with median basal band narrow and obscure. Spots on apical half narrowly joined along mid-line in chevron-like marks. Venter pale, immaculate.

*Measurements:*

## FEMALE

Length: 4.4 mm.

Cephalothorax: Length 2.4, width 1.6, head 1.2 mm.

Abdomen: Length 2.3, width 1.8 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.0	0.9	0.8	1.0
Femur .....	2.0	1.9	1.6	2.0
Tibia-Patella .....	2.3	2.0	1.8	1.0
Metatarsus .....	1.5	1.5	1.3	1.9
Tarsus .....	1.0	0.9	0.8	1.0
TOTAL .....	7.8	7.2	6.3	8.1

**Type locality.**—Marin Co., California.

One female, collected by R. V. Chamberlin.

***Cybaeus cribelloides* Chamberlin and Ivie, sp. n.**

(Pl. 6, fig. 62)

Shape typical, except: Sternum broad and short, being wider than long; projection behind obsolete. Labium and endites shortened. Chelicera only moderately geniculate in front. Colulus short and broad, somewhat suggesting a small cribellum. Tibia I with spines 2-2-1 below, these long and widely overlapping; tibia II with spines 2-2.

Color typical in general. The markings of the carapace and legs reduced in intensity, except on the under sides of the femora. Median basal band on abdomen light brown, margins not sharply defined. Spots on dorsum whitish, the oblique spots on apical half short and narrowly joined along center to form chevron-like marks.

*Measurements:*

## FEMALE

Length: 5.5 mm.

Cephalothorax: Length 2.7, width 1.8, head 1.2 mm.

Abdomen: Length 3.0, width 2.0 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.2	1.1	1.0	1.2
Femur .....	2.0	1.9	1.8	2.1
Tibia-Patella .....	2.7	2.4	2.0	2.6
Metatarsus .....	1.7	1.6	1.5	2.0
Tarsus .....	1.0	0.9	0.8	1.1
TOTAL .....	8.6	7.9	7.1	9.0

**Type locality.**—Marin Co., California.

Two females, collected by R. V. Chamberlin.

**Cybaeus minor** Banks

(Pl. 6, figs. 63, 64)

*Cybaeus minor* Banks, Proc. Cal. Acad. Sci., 1904, III, 341, pl. xxxviii, f. 4; pl. xl, f. 44.

Shape essentially typical. Tibia I with spines 2-2-1 below; tibia II with spines 2-2. Sternum as wide as long; labium slightly wider than long. Eye arrangement typical; posterior median eyes slightly farther from each other than the posterior lateral eyes. Clypeus slightly wider than the diameter of an anterior lateral eye.

Color typical. Markings on carapace present but not distinct. Legs darker between joints, but not annulated. Paired spots on posterior half of abdomen separated along center; median basal mark faint.

*Measurements:*

## FEMALE

Length: 5.0 mm.

Cephalothorax: Length 2.1, width 1.5, head 1.0 mm.

Abdomen: Length 3.0, width 1.9 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.0	0.9	0.9	1.0
Femur .....	1.6	1.5	1.4	1.7
Tibia-Patella .....	2.0	1.8	1.6	2.0
Metatarsus .....	1.3	1.2	1.1	1.4
Tarsus .....	0.9	0.9	0.8	1.0
<b>TOTAL</b> .....	<b>6.8</b>	<b>6.3</b>	<b>5.8</b>	<b>7.1</b>

**Type locality.**—Claremont, California.**Distribution.**—California.**Known localities.**—Claremont (Banks); Stanford (R. V. Chamberlin).

No authentic specimens of *C. minor* were examined, but the female from Stanford, from which the above description was made, is apparently that species, as near as can be determined from Banks' description.

**Cybaeus hesper** Chamberlin and Ivic, sp. n.

(Pl. 6, figs. 65, 66)

Shape typical, except: Eye rows slightly closer together than usual, the lateral eyes on each side being separated by less than the radius of one of them, and the median eyes of the two rows being separated by only the diameter of an anterior median eye. Chelicerae less geniculate than usual. Tibia I with spines 2-2-1, and tibia II with spines 2-2 below; the spines being shorter than those of most of the species of this group.

Color typical. Spots on abdomen well-separated along midline. Legs and carapace without markings, or else they are very faint.

*Measurements:*

MALE

Length: 4.0 mm.

Cephalothorax: Length 2.0, width 1.6, head 1.0 mm.

Abdomen: Length 2.2, width 1.5 mm.

Legs	I	II	III	IV
Coxa-Trochanter .....	1.1	1.0	0.9	1.0
Femur .....	1.9	1.7	1.6	2.1
Tibia-Patella .....	2.3	2.0	1.9	2.1
Metatarsus .....	1.5	1.3	1.2	1.8
Tarsus .....	1.0	1.0	0.8	1.0
TOTAL .....	7.8	7.0	6.4	7.7

Type locality.—Stanford University, California.

Other locality.—San Mateo Co., California.

A male from each locality, both collected by J. C. Chamberlin. This species may prove to be the same as one of the others for which only the female is known. However, these males can not be successfully matched with any of the females at this time. This species is close to *C. minor* Banks.

THE GENUS *CYBAEINA* CHAMBERLIN AND IVIE, NEW

A genus agreeing in more general structural characteristics with *Cybaeus*. Differing conspicuously in general appearance in being of a uniform light, typically yellow, color entirely without markings and in having relatively longer legs. Legs with more numerous spines of which there are 5 pairs under tibia I in the genotype as against 3 pairs or less in *Cybaeus*. Chelicerae not geniculate, being vertical and straight or nearly so. Palpal organ in the male similar to that of *Cybaeus* but with the embolus arising at base of bulb instead of toward apex, long, loosely coiled about bulb; ectal apophysis or hook large; patellar apophysis small.

*Genotype.* *Cybaeus minutus* Banks.

The genotype is the only species at present known to belong to the genus.

*Cybaeina minuta* (Banks)

(Pl. 2, figs. 5-8; pl. 3, figs. 9-14; pl. 4, figs. 28-30)

*Cybaeus minutus* Banks, Proc. Ent. Soc. Wash., 1906, VII, 95.

*Female:* Head quite narrow and not as heavy as in *Cybaeus*; cephalothorax highest at median furrow. Both rows of eyes slightly recurved; posterior eyes about equal and equidistant, being about one and one-

half diameters apart; anterior lateral eyes equal to posterior eyes; anterior median eyes much smaller, less than a diameter apart and fully a diameter from the lateral eyes. Otherwise the eyes are similar to those of *Cybaeus*. Width of the clypeus one and one-half diameters of anterior lateral eyes. Chelicerae vertical, not geniculate, stout at the base, but more slender apically; teeth on upper margin of furrow as in *Cybaeus*; four teeth and six very small denticles on lower margin. Labium wider than long. Sternum as in *Cybaeus*, but separating hind coxae more. Legs as in *Cybaeus*; except, hind legs longer in proportion, and tibia I and II with five pairs of long spines below, of which the apical pair may be much reduced in size. Abdomen small, shape essentially as in *Cybaeus*. Front spinnerets separated.

Cephalothorax, legs and mouth parts entirely light amber-yellow; abdomen paler yellow. Spines light brown; hairs much lighter in color.

*Male*: Similar to female but larger. (Perhaps the available specimens do not represent the typical proportions of the sexes). Thorax wider and head narrower than in female. Palpus larger than usual.

*Measurements*:

FEMALE					MALE			
Length: 3.6 mm.					Length: 4.5 mm.			
Cephalothorax: Length 1.9, width 1.5, head 0.9 mm.					Cephalothorax: Length 2.2, width 1.8, head 1.0 mm.			
Abdomen: Length 2.0, width 1.2 mm.					Abdomen: Length 2.5, width 1.6 mm.			
Legs	I	II	III	IV	I	II	III	IV
Coxa-Troch. ....	0.9	0.9	0.9	1.0	1.1	1.1	1.1	1.1
Femur .....	1.7	1.7	1.5	2.0	2.2	2.2	2.0	2.5
Tibia-Patella .....	2.1	2.0	1.8	2.2	3.0	2.7	2.3	3.0
Metatarsus .....	1.2	1.1	1.2	1.8	2.0	1.9	1.9	2.5
Tarsus .....	0.9	0.9	0.9	1.0	1.3	1.2	1.0	1.4
TOTAL .....	6.8	6.7	6.3	8.0	9.6	9.1	8.3	10.5

Type locality.—Olympia, Washington. (Female.)

Distribution.—Pacific northwest.

Known localities.—Washington: Olympia. ♀ Oregon: Bay City. ♂, ♀ R. V. Chamberlin, August, 1929.

Differs from the known species of *Cybaeus*, both in color and in structure. The head is proportionately smaller; the chelicerae are not geniculate; the legs are of different relative lengths, the fourth leg being longer in proportion; and the legs have more spines than is usual. The plain yellow color is very distinctive. The epigynum and palpus are decidedly different from those species of *Cybaeus*; the palpus is also relatively larger.

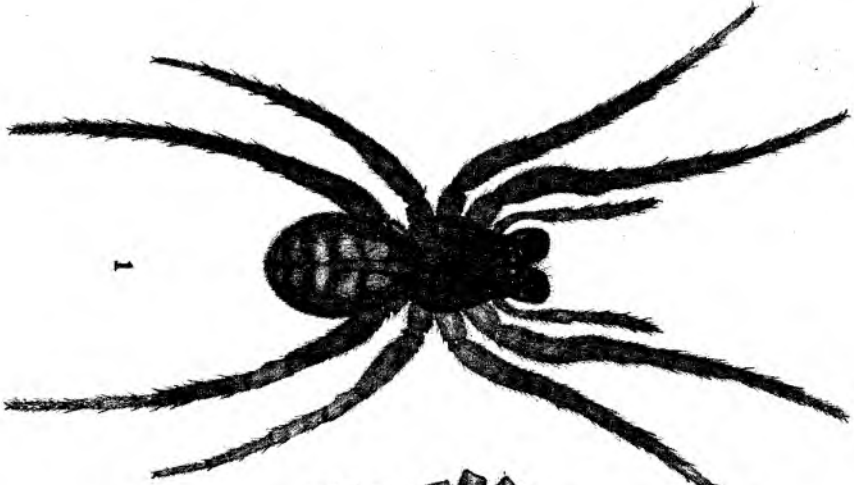
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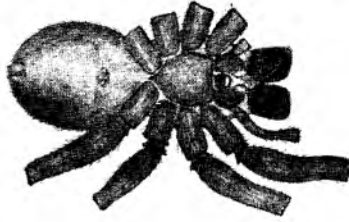
## Explanation of Figures

## Plate 1

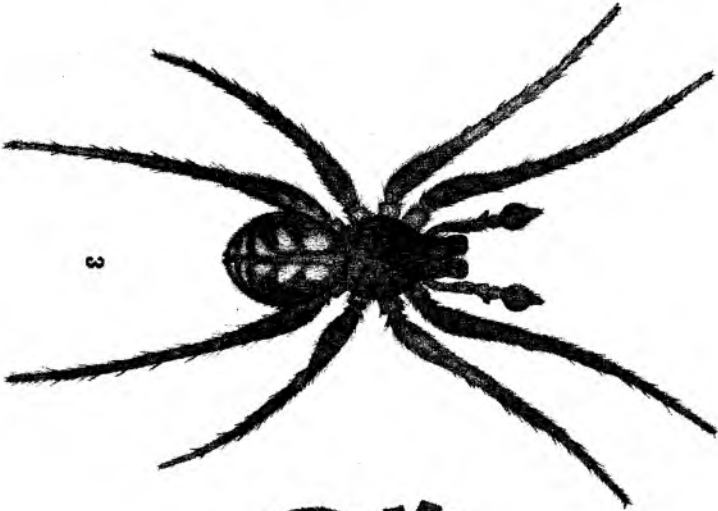
- Fig. 1. *Cybaeus morosus* Simon, female, dorsal view.  
Fig. 2. The same, female, ventral view.  
Fig. 3. The same, male, dorsal view.  
Fig. 4. The same, male, ventral view.



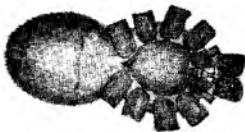
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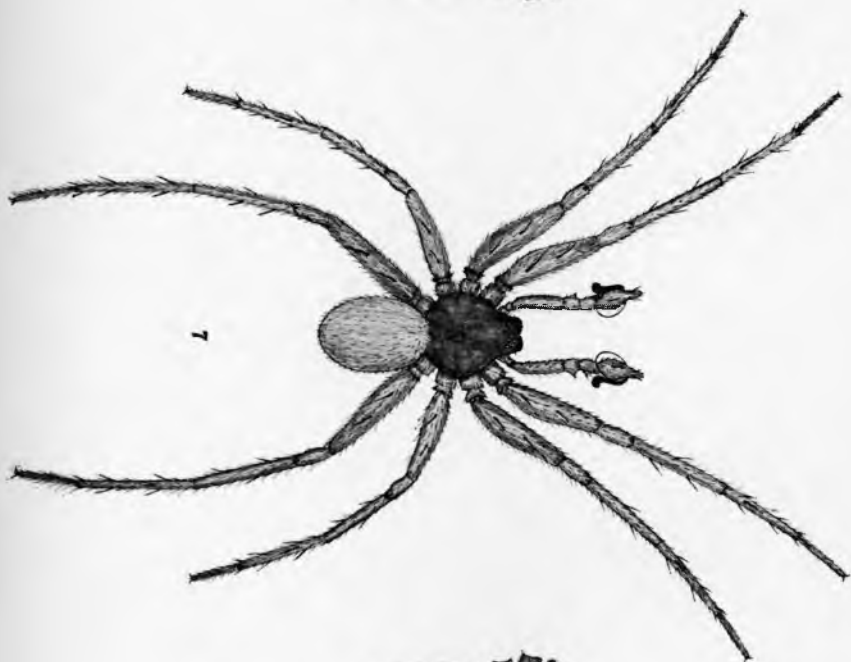
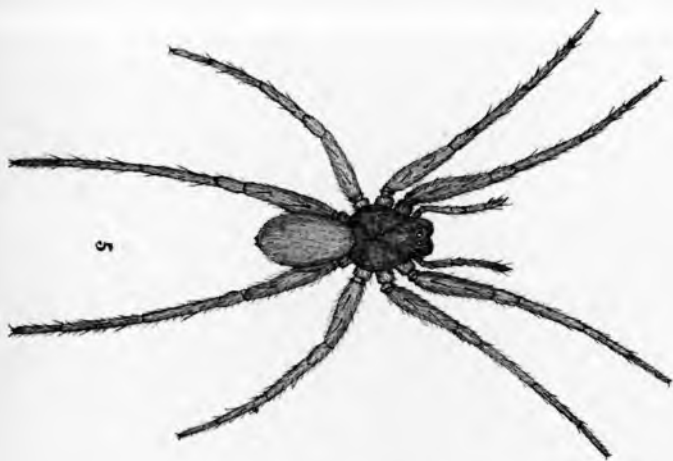
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## Plate 2

- Fig. 5. *Cybaeina minuta* (Banks), female, dorsal view.  
Fig. 6. The same, female, ventral view.  
Fig. 7. The same, male, dorsal view.  
Fig. 8. The same, male, ventral view.



## Plate 3

- Fig. 9. *Cybaeina minuta* (Banks), female, lateral view in outline.  
Fig. 10. The same, male, lateral view in outline.  
Fig. 11. The same, male, front view of cephalothorax.  
Fig. 12. The same, female, front view of cephalothorax.  
Fig. 13. The same, eyes, dorsal view.  
Fig. 14. The same, leg I, ventral view.  
Fig. 15. *Cybaeus morosus* Simon, female, lateral view in outline.  
Fig. 16. The same, male, lateral view in outline.  
Fig. 17. The same, female, front view of cephalothorax.  
Fig. 18. The same, male, front view of cephalothorax.  
Fig. 19. The same, chelicera, ventro-caudal view.  
Fig. 20. The same, eyes, dorsal view.  
Fig. 21. The same, tibia I, ventral view.  
Fig. 22. *Cybaeus tetricus* Koch, left palpus of male, ventral view.  
Fig. 23. The same, left palpus of male, ectal view.  
Fig. 24. *Cybaeus signifer* Simon, male palpus, ectal view.  
Fig. 25. The same, male palpus, ventral view.

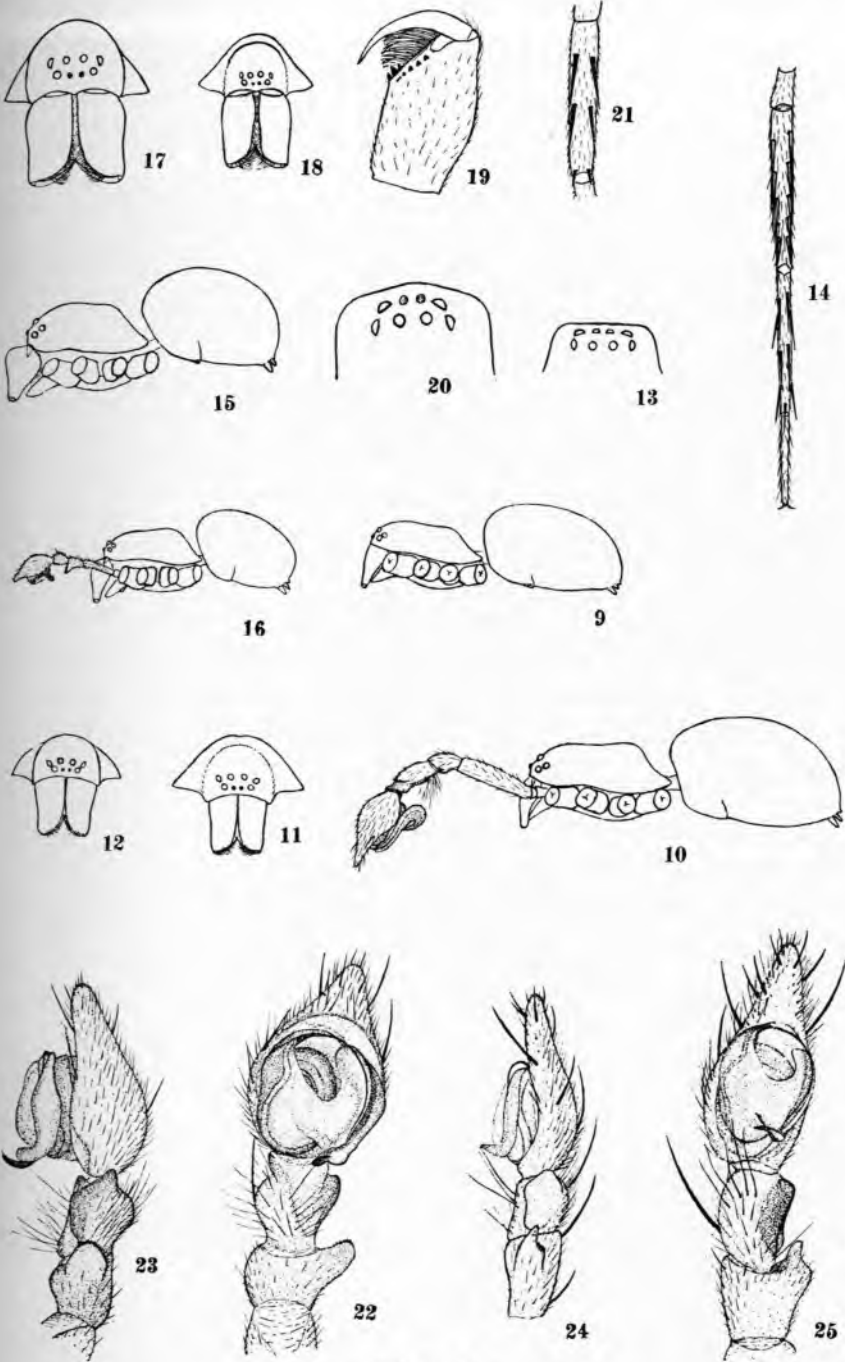


Plate 3

## Plate 4

- Fig. 26. *Cybaeus silicis* Barrows, left palpus of male, ventral view.
- Fig. 27. The same, left palpus, ectal view.
- Fig. 28. *Cybaeina minuta* (Banks), male palpus, ventral view.
- Fig. 29. The same, male palpus, ectal view.
- Fig. 30. The same, epigynum of female.
- Fig. 31. *Cybaeus perditus* Chamberlin and Ivie, new species, epigynum.
- Fig. 32. *Cybaeus signifer* Simon, epigynum.
- Fig. 33. *Cybaeus giganteus* Banks, epigynum.
- Fig. 34. *Cybaeus patritus* Bishop and Crosby, left palpus, ventral view (after Bishop and Crosby).
- Fig. 35. The same, epigynum (after Bishop and Crosby).
- Fig. 36. *Cybaeus silicis* Barrows, epigynum.
- Fig. 37. *Cybaeus shoshoneus* Chamberlin and Ivie, new species, left palpus of male, ventral view.
- Fig. 38. The same, left palpus of male, ectal view.
- Fig. 39. The same, epigynum.

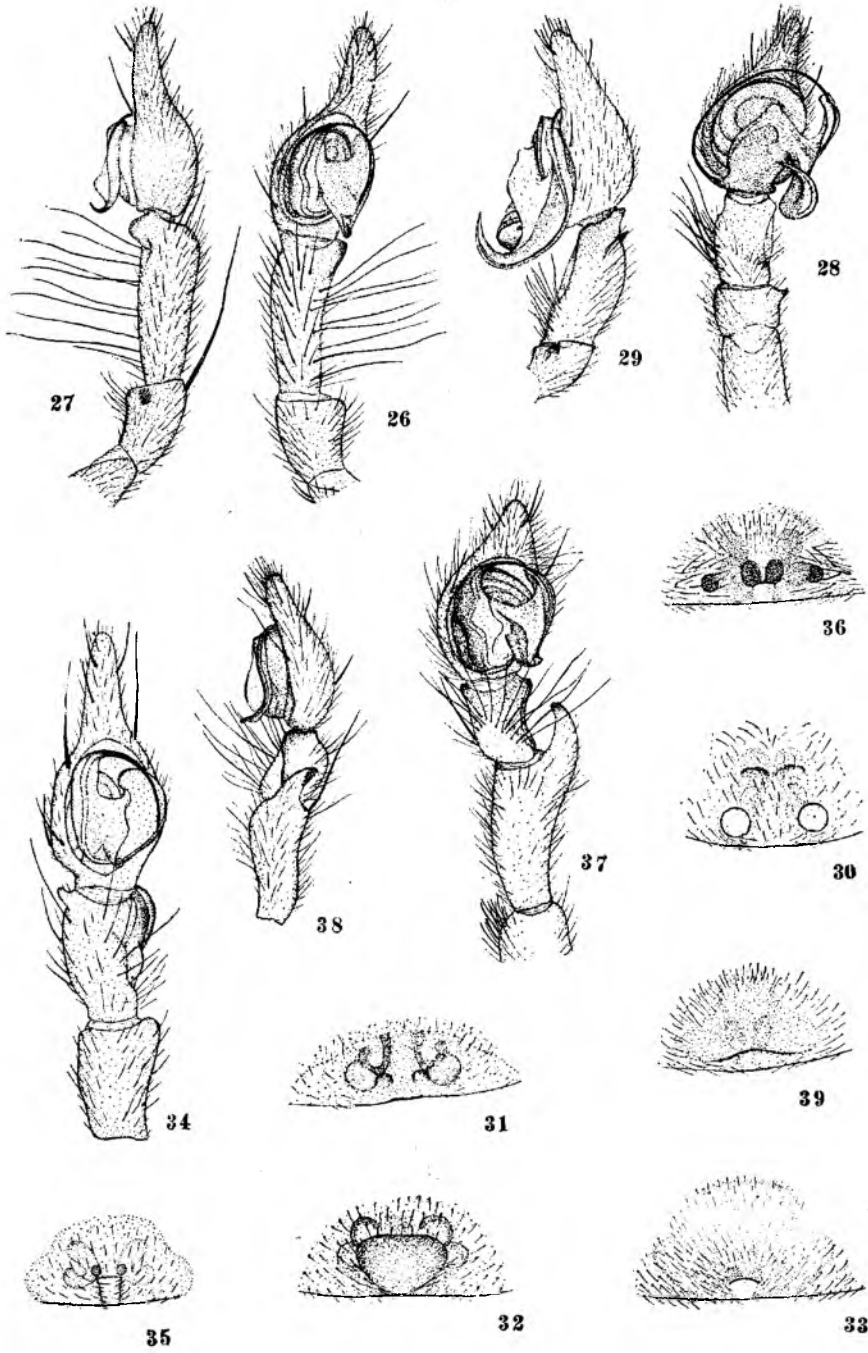
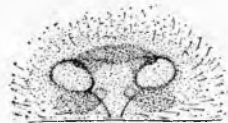
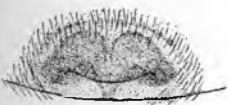
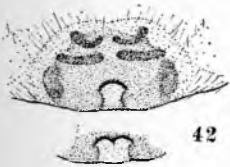
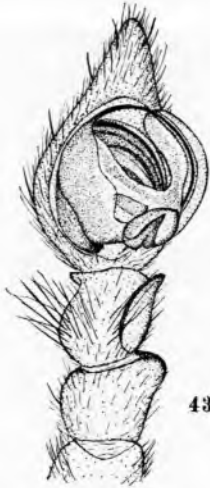
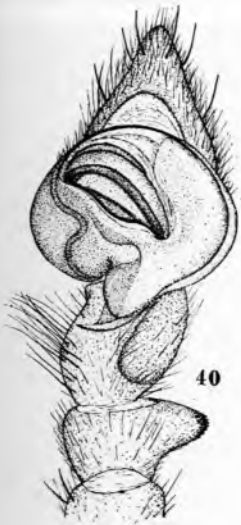


Plate 4

## Plate 5

- Fig. 40. *Cybaeus reticulatus* Simon, left palpus of male, ventral view.
- Fig. 41. The same, left palpus of male, ectal view.
- Fig. 42. The same, epigynum, showing two forms of opening.
- Fig. 43. *Cybaeus eutypus* Chamberlin and Ivie, new species, left palpus of male, ventral view.
- Fig. 44. The same, left palpus of male, ectal view.
- Fig. 45. The same, epigynum.
- Fig. 46. *Cybaeus morosus* Simon, left palpus of male, ventral view.
- Fig. 47. The same, left palpus of male, ectal view.
- Fig. 48. The same, epigynum.
- Fig. 49. The same, epigynum of another specimen.
- Fig. 50. *Cybaeus conservans* Chamberlin and Ivie, new species, epigynum.
- Fig. 51. The same, epigynum of a second female.



## Plate 6

- Fig. 52. *Cybaeus aspenicolens* Chamberlin and Ivie, new species, left palpus of male, ventral view.
- Fig. 53. The same, left palpus of male, ectal view.
- Fig. 54. The same, epigynum.
- Fig. 55. *Cybaeus blasbes* Chamberlin and Ivie, new species, epigynum.
- Fig. 56. *Cybaeus tardatus* (Chamberlin) left palpus of male, ectal view (after Chamberlin).
- Fig. 57. *Cybaeus reducens* Chamberlin and Ivie, new species, epigynum.
- Fig. 58. *Cybaeus amicus* Chamberlin and Ivie, new species, epigynum.
- Fig. 59. *Cybaeus adenes* Chamberlin and Ivie, new species, epigynum.
- Fig. 60. *Cybaeus marinensis* Chamberlin and Ivie, new species, epigynum.
- Fig. 61. *Cybaeus consocius* Chamberlin and Ivie, new species, epigynum.
- Fig. 62. *Cybaeus cribelloides* Chamberlin and Ivie, new species, epigynum.
- Fig. 63. *Cybaeus minor* Banks, left palpus of male, ectoventral view (imperfect, after Banks).
- Fig. 64. The same, epigynum.
- Fig. 65. *Cybaeus hesper* Chamberlin and Ivie, new species, left palpus, ventral view.
- Fig. 66. The same, left palpus of male, ectal view.

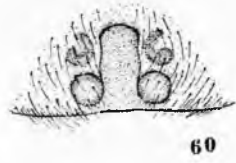
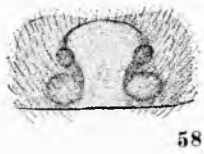
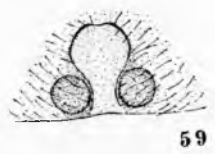
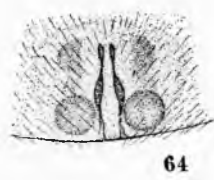
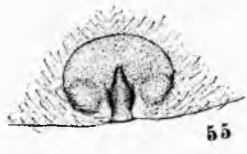
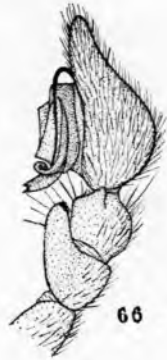
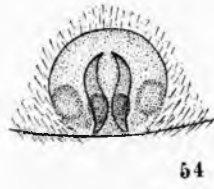
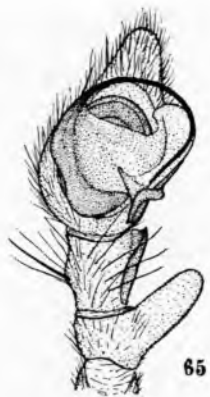
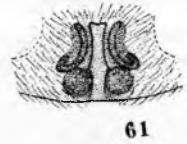
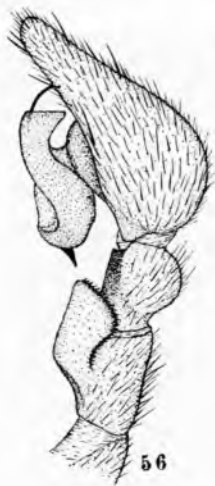


Plate 6