AN ILLUSTRATED AND ANNOTATED KEY TO THE COTTON SPIDERS OF ARKANSAS

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ABSTRACT

A key to genera of spiders found in Arkansas cotton fields is provided, together with a list of species, relevant citations for species keys and descriptions, and information on habitat of the genera. All parts of the cotton plant and ground beneath were examined in making collections. Fourteen new records are included, bringing the total known spider fauna in Arkansas cotton to 189 species in 102 genera and 19 families.

Key Words: Spiders, cotton, Arkansas, generic key, species list.

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INTRODUCTION

Spiders are abundant predators in cotton but their value as regulators of insect populations remains poorly understood. The spider fauna associated with cotton is comparatively well-known, with checklists from Alabama and Mississippi (Skinner 1974), California (Leigh and Hunter 1969), and Texas (Kagan 1943, Pamanes-Guerrero 1975, Dean et al. 1982). Arkansas is fortunate in having the most thoroughly investigated fauna. Whitcomb and associates (Whitcomb et al. 1963a, 1963b; Whitcomb and Bell 1964; Whitcomb 1967) have identified more than 160 species from cotton. This paper includes 14 new records for Arkansas cotton, so that the total known spider fauna includes 19 families, 102 genera and 189 species.

Due to the difficulty in identifying them, spiders are largely neglected in ecological investigations of arthropod populations in cotton and other agroecosystems or are simply listed as spiders. This paper includes an illustrated and annotated key to families and genera with the aim of providing an identification system for investigators working in cotton, especially those with little or no background in spider taxonomy.

METHODOLOGY

The key is based on material collected by Whitcomb and associates as identified by the late Harriet Exline Frizzell and deposited in the Peck-Exline Collection in Warrensburg, Missouri. Collecting methods were summarized by Whitcomb et al. (1963b). Additional records were obtained during the summer of 1982 by whole plant and ground examination in several cotton fields near Pickens,

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Arkansas. This material was deposited in the University of Arkansas spider collection. Identifications and illustrations were made by the senior author. The key is modified mainly from Kaston (1978) Dondale and Redner (1978a) and Heiss and Allen (1986), although portions are wholly or partly new. The salticid key is adapted from Richman (1978). A recent very useful key to families and genera is Roth (1985).

Use of the key requires a basic knowledge of spider anatomy. Important anatomic structures are presented in Figs. 1-3, or illustrated as they appear in the key. The following is a short selected glossary of terms encountered in the key:

GLOSSARY

Calamistrum — a single or double row of curved bristles on the dorsal surface of metatarsus IV (Fig. 5); present in spiders bearing a cribellum.

Clypeus — area between anterior row of eyes and front edge of carapace.

Cribellum — a platelike spinning organ situated in some spiders on the venter of the abdomen just anterior to the spinnerets (Fig. 4); present in spiders bearing a calamistrum.

Face — the cephalothorax of the spider in full frontal view (Fig. 16).

Heterogeneous eyes — eye group composed of eyes that are both light and dark.

Homogeneous eyes — eye group composed of eyes that are of one color only.

Laterigrade — orientation of legs such that the prolateral surfaces become dorsal giving a crab-like appearance (Fig. 51).

Macroseta (pl. macrosetae) — an erectile seta arising from a membranous area on the appendages (Fig. 3); termed "spines" in most literature.

Median ocular area — rectangular area bordered by the anterior and posterior median eyes.

Ocular quadrangle — rectangular area bordered by the anterior and posterior lateral eyes.

Palpal coxal lobes — the lobes of the palpal coxae forming the sides of the preoral cavity (Fig. 2); "endites" in most literature.

Palpus (pl. palpi) — the leg-like appendages between the chelicerae and the first pair of legs (Figs. 1, 2); modified as copulatory organs in adult male spiders.

Paracymbium — a flange arising from the base of the cymbium (tarsus) of the adult male palpus (Fig. 39).

Procurved — curvature of eye row(s) such that the lateral eyes are farther forward than the median eyes (Figs. 19, 26).

Prolateral surface — the anterior surface of an appendage.

Promargin — the cheliceral margin anterior to the fang.

Recurved — curvature of eye row(s) such that the lateral eyes are farther back than the median eyes (Fig. 27).

Retromargin — the cheliceral margin posterior to the fang.

Trichobothrium (pl. trichobothria) — a very fine seta arising vertically from a socket (Fig. 18).

Following the key is a list of the 102 genera and 189 species of spiders recorded from cotton in Arkansas. Genera are arranged mainly after Kaston (1978). Species are listed alphabetically and records from early checklists have been updated to reflect current nomenclature.

Included with each genus is the habitat within the cotton field, the relative abundance of each genus, the species recorded from cotton, and citations for keys and descriptions. The habitat information indicates whether the group has been collected primarily on the ground or on the plant, and where on the plant the group has usually been collected. Abundance is a largely subjective estimate based on published data and recent investigations by the authors. Groups listed as "very common" or "common" are routinely encountered in sampling through the season. Genera listed as "occasional" are less routinely encountered but may be abundant at various times of the season. Genera listed as "rare" are seldom encountered in sampling. The literature cited for each genus lists those works where the most recent or useful keys and descriptions may be found, for those who wish to attempt identification to species.

We advise users of the key to exercise caution in attempting to identify spider genera in some of the poorly worked groups, especially small spiders. In some genera, the species are diverse and the generic limits poorly defined. This is particularly true of the erigonine linyphiids, where the key presented is to males only. In this group females are best determined by comparison with descriptions (see citations) and their association with males in the field.

Also, we emphasize that **the generic key is prepared from specimens found in Arkansas.** In some cases it is based on just the one species found in Arkansas and will not work well for other species in the genus. Although the key may work well in other mid-south and southeastern states for the more well-studied families, specimens from distant states should be sent to specialized taxonomic authorities, as should all specimens where identification to species is required. Caution should be especially exercised with the small spiders dwelling in litter on the ground beneath the plant or at the mainstem base. Sixty-four percent of the species representing new records for Arkansas cotton were found on the ground. Also, of those cases where only one species was found in a genus, half were ground-dwellers.

KEY TO FAMILIES AND GENERA

1	Cribellum and calamistrum present (Figs. 4, 5), reduced in male *Filistata*	2
	Cribellum and calamistrum absent	5
2(1)	Eyes grouped closely on carapace (Fig. 6) ... FILISTATIDAE, *Filistata* p.	25
	Eyes not grouped closely together on carapace	3
3(2)	Eyes all dark ... ULOBORIDAE	4
	Eyes all light, or only anterior median eyes dark ... DICTYNIDAE, *Dictyna* p.	25
4(3)	Carapace longer than wide; ocular quadrangle as wide anteriorly as posteriorly ... *Uloborus* p.	25
	Carapace as wide as it is long; ocular quadrangle much wider posteriorly ... *Hyptiotes* p.	25
5(1)	Tarsi with three claws	6

	Tarsi with two claws	63
6(5)	Tarsus IV with a ventral comb (Fig. 7)	7
	Tarsus IV without a ventral comb	13
7(6)	Bristles of tarsal comb longer than other tarsal bristles (Fig. 7); cheliceral teeth usually absent ..... THERIDIIDAE	8
	Bristles of tarsal comb not longer than other bristles; cheliceral teeth usually present ..... NESTICIDAE, *Eidmanella* p.	25
8(7)	Abdomen angular, widest at middle of its length (Fig. 8) ..... *Theridula* p.	25
	Abdomen rounded	9
9(8)	Lateral eyes on each side at least one diameter apart ..... *Latrodectus* p.	25
	Lateral eyes on each side a radius or less apart	10
10(9)	Abdomen elongate and pointed behind (Fig. 9) .... *Euryopis* p.	25
	Abdomen not elongate and pointed behind	11
11(10)	Abdomen globose very high and rounded, usually higher than ... long (Fig. 10) ..... *Achaearanea* p.	25
	Abdomen not globose	12
12(11)	Eye region usually projecting forward over clypeus (Fig. 11) ..... *Dipoena* p.	25
	Eye region not projecting forward ..... *Theridion* p.	25
13(6)	Tibiae and metatarsi I and II with a prolateral row of long and short macrosetae (Fig. 12) ..... MIMETIDAE, *Mimetus* p.	27
	Tibiae and metatarsi I and II without such spines	14
14(13)	Trochanters with a ventral distal notch (Fig. 13)	15
	Trochanters without a ventral distal notch	22
15(14)	Eyes in two rows ..... PISAURIDAE	16
	Eyes in three rows (posterior eye row greatly recurved so that posterior lateral eyes form third row) ..... LYCOSIDAE	17
16(15)	Cheliceral retromargin with three teeth ..... *Pisaurina* p.	27
	Cheliceral retromargin with four teeth ..... *Dolomedes* p.	27
17(15)	Carapace dark, with no markings	18
	Carapace lighter, usually with markings	19
18(17)	Ocular quadrangle wider behind ..... *Arctosa* p.	28
	Ocular quadrangle wider anteriorly ..... *Allocosa* p.	28
19(17)	Median longitudinal stripe on carapace with tuning-fork pattern (Fig. 14) ..... *Pirata* p.	27
	Median longitudinal stripe without tuning-fork pattern	20
20(19)	Median stripe with a pair of darker elongate dashes (Fig 15) ..... *Trochosa* p.	28
	Median stripe without darker dashes	21
21(20)	Sides of face vertical, or nearly so (Fig. 16); legs thin ..... *Pardosa* p.	28
	Sides of face slanting; legs thicker ..... *Schizocosa* and *Lycosa* p.	28
22(14)	Spinnerets in a more or less transverse row (Fig. 17) ..... HAHNIIDAE, *Neoantistea* p.	27
	Spinnerets not in a transverse row	23

23(22)	Tarsal trichobothria in a row (Fig. 18) ..... AGELENIDAE	24
	Tarsal trichobothria scattered or absent	25
24(23)	Eye rows straight or nearly so ..... *Cicurina* p.	27
	Eye rows strongly procurved (Fig. 19) ..... *Agelenopsis* p.	27
25(23)	Eye group hexagonal, with anterior median eyes not forming part of hexagon (Fig. 20) ..... OXYOPIDAE	26
	Eye group not hexagonal	27
26(25)	Cheliceral retromargin without teeth; body color green ..... *Peucetia* p.	28
	Cheliceral retromargin with teeth; body color not green ..... *Oxyopes* p.	28
27(25)	Eyes homogeneous ..... ARANEIDAE	28
	Eyes heterogeneous ..... LINYPHIIDAE	46
28(25)	Chelicerae diverging laterally from base, usually robust and produced in males (Fig. 21)	29
	Chelicerae not diverging from base	30
29(28)	Abdomen less than one and one half as long as wide; legs without macrosetae ..... *Pachygnatha* p.	27
	Abdomen two or three times as long as wide; legs with macrosetae ..... *Tetragnatha* p.	27
30(29)	Abdomen somewhat flattened and extending anteriorly over the posterior portion of the carapace (Fig. 22) ..... *Wixia* p.	26
	Abdomen not exactly as above	31
31(30)	Tracheal spiracle advanced toward epigastric furrow (Fig. 23); abdomen almost spherical ..... *Glenognatha* p.	27
	Tracheal spiracle near spinnerets, abdomen variable	32
32(31)	Spinnerets surrounded by a sclerotized ring (Fig. 24); abdomen with pointed protuberances ..... *Micrathena* p.	26
	Spinnerets not surrounded by sclerotized ring; abdomen variable	33
33(32)	Femur IV with a double fringe of prolateral hairs (Fig. 25) ..... *Leucauge* p.	26
	Femur IV without such hairs	34
34(33)	Posterior eyes strongly procurved (Fig. 26)	35
	Posterior eyes straight or recurved (Fig. 27)	36
35(34)	Dorsum of abdomen with two small rounded humps placed laterally at the "shoulders"; dark, triangular-shaped marking on posterior third of dorsum of abdomen (Fig. 26) .... *Gea* p.	26
	Dorsum of abdomen without humps as described above; when humps present, they are larger and close together on anterior margin of abdomen; abdominal pattern not as above ... *Argiope* p.	26
36(34)	Tibia III with a double series of long, feathery prolateral hairs (Fig. 28) ..... *Mangora* p.	26
	Tibia III without such hairs	37
37(36)	Lateral eye tubercle spine-shaped, pointing anteriorly; abdomen hard, with many cone-shaped protuberances (Fig. 29) ..... *Acanthepeira* p.	26
	Lateral eye tubercle not spine-like	38

38(37) Short tubercles present posteriorly on abdomen (Fig. 30) ..... *Verrucosa* p. 26
Short tubercles not present 39
39(38) Dorsum of abdomen with markings as in Fig. 31 ..... *Acacesia* p. 26
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40(39) Abdomen as viewed laterally truncate and elevated above spinnerets (Fig. 32) ..... *Eustala* p. 26
Abdomen not as above 41
41(40) Abdomen with caudal tubercle (Fig. 33); eyes on prominent tubercles ..... *Cyclosa* p. 27
Abdomen without a caudal tubercle 42
42(41) Tarsus plus metatarsus longer than patella plus tibia on each leg 43
Tarsus plus metatarsus not longer than tibia plus patella (some males excepted) 44
43(42) Abdomen ovate ..... *Metepeira* p. 26
Abdomen elongate ..... *Mecynogea* p. 27
44(42) Dorsal groove longitudinal ..... *Neoscona* p. 27
Dorsal groove transverse or a pit 45
45(44) Median ocular area as wide posteriorly as anteriorly; posterior median eyes slightly larger than anterior median eyes ..... *Araniella* p. 27
Median ocular area wider anteriorly than posteriorly; posterior median eyes not larger than anterior median eyes ... *Araneus* p. 27
46(27) Tibia IV with one dorsal macroseta and all metatarsi without macrosetae ..... Erigoninae (males) 47
Tibia IV with two dorsal macrosetae, or if only one, then with one short macroseta on metatarsi I and II ..... Linyphiinae 56
47(46) Clypeus with a horn (Fig. 34) ..... *Floricomus* p. 25
Clypeus without a horn 48
48(47) Palpal patella with a ventral distal process (Fig. 35) ... *Erigone* p. 25
Palpal patella without such a process 49
49(48) Cephalic lobes present (Figs. 36, 37) 50
Cephalic lobes absent 51
50(49) Cephalic lobe in the shape of a horn, tapering distally (Fig. 36) ..... *Grammonota* (in part) p. 26
Cephalic lobe nearly as wide distally as at base (Fig. 37) ..... *Ceraticelus* p. 25
51(49) Promargin of chelicerae with a vertical row of teeth along lateral margin ..... *Eperigone* (in part) p. 25
Promargin of chelicerae not as above 52
52(51) Carapace dark brown to nearly black .... *Grammonota* (in part) p. 26
Carapace yellow, orange, amber, brown, or red-brown 53
53(52) Palpal femur expanded distally into a dorsal process bearing many small black teeth (Fig. 38); carapace bright orange with black in eye region ..... *Gonatium* p. 26
Palpal femur not as above 54

54(53) Palpal tibia expanded distally forming an almost complete circle around base of tarsus; paracymbium with long setae (Fig. 39) ..... *Islandiana* p. 26
Palpal tibia not as greatly expanded distally; paracymbium without setae 55
55(54) Abdomen dark gray to black; carapace red-brown .... *Walckenaera* p. 26
Abdomen yellow to gray; carapace yellow to brown ..... *Eperigone* (in part) p. 25
56(46) Abdomen as in Fig. 40 ..... *Centromerus* p. 26
Abdomen not as in Fig. 40 57
57(56) Spiracular opening very wide and advanced one third of the distance forward to epigastric furrow (Fig. 41) ..... *Tennesseellum* p. 26
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58(57) Median ocular area with sides nearly parallel and anterior median eyes about equal in size to posterior median eyes 59
Median ocular area much wider posteriorly, anterior median eyes smaller than posterior median eyes 60
59(58) Pattern on dorsum of abdomen as in Fig. 42 .... *Frontinella* p. 26
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60(58) Stridulatory file on chelicerae inconspicuous; posterior median eyes usually separated by at least one and one-half their diameter 61
Stridulatory file on chelicerae conspicuous (Fig. 43); posterior median eyes usually separated by not more than one diameter 62
61(60) Posterior median eyes closer to each other than to posterior lateral eyes ..... *Prolinyphia* p. 26
Posterior median eyes closer to posterior lateral eyes than to each other, each with a thick ring of pigment around it ..... *Neriene* p. 26
62(60) Abdomen with caudal tubercle (Fig. 44) ..... *Florinda* p. 26
Abdomen without caudal tubercle ..... *Lepthyphantes* p. 26
63(5) Eyes in three rows (Fig. 45) ..... SALTICIDAE 64
Eyes in two rows 74
64(63) Body ant-like (Fig. 46) 65
Body not ant-like 66
65(64) Tibia I almost as wide as long; posterior portion of carapace narrowed (Fig. 46) ..... *Synemosyna* p. 30
Tibia I much longer than wide; carapace not as above *Peckhamia* p. 30
66(64) Tibia I with four bulbous hairs on venter (Fig. 47) .... *Thiodina* p. 30
Tibia I without such hairs 67
67(66) Cheliceral retromargin without teeth ..... *Sitticus* p. 30
Cheliceral retromargin with teeth 68
68(67) Patella plus tibia III as long as or longer than patella plus tibia IV ..... *Habronattus* p. 30
Patella plus tibia III shorter than patella plus tibia IV 69
69(68) Ocular quadrangle occupying at least one-half of carapace .... *Zygoballus* p. 30
Ocular quadrangle occupying less than one-half of carapace ... 70

70(69) Posterior median eyes closer to anterior lateral eyes than to posterior lateral eyes 71
Posterior median eyes equidistant from anterior lateral eyes and posterior lateral eyes, or closer to posterior lateral eyes than to anterior lateral eyes 72
71(70) Carapace from above with sides strongly curved; often with hair tufts in eye region (Fig. 45) .....*Phidippus* p. 30
Carapace with sides not so strongly curved; hair tufts absent .....*Eris* p. 30
72(70) Front of sternum as wide as or wider than base of labium .....*Metaphidippus* p. 31
Front of sternum narrower than basis of labium 73
73(72) Legs II through IV white.....*Hentzia* p. 30
Legs II through IV pigmented .....*Metacyrba* p. 30
74(63) Spiracular opening at least midway between spinnerets and epigastric furrow or nearer epigastric furrow (Fig. 48); lamelliform hairs on each tarsus (Fig. 49).....ANYPHAENIDAE 75
Spiracular opening near spinnerets; lamelliform hairs absent..... 77
75(74) Spiracular opening closer to epigastric furrow than to spinnerets .....*Aysha* p. 29
Spiracular opening midway between epigastric furrow and spinnerets 76
76(75) Carapace with two dark median longitudinal bands; chelicerae in males not produced.....*Anyphaena* p. 29
Carapace without dark bands; chelicerae in males usually produced (Fig. 50) .....*Teudis* p. 29
77(74) Legs laterigrade (Fig. 51) 78
Legs not laterigrade..... 86
78(77) Legs I and II much longer and thicker than legs III and IV; scopulae and claw tufts absent; body setae stiff, erect .....THOMISIDAE 79
Legs I and II little if at all longer than legs III and IV; scopulae and claw tufts present (Fig. 52); body setae soft ....PHILODROMIDAE 84
79(78) Anterior lateral eyes equal in size to anterior median eyes.....*Misumenoides* p. 29
Anterior lateral eyes larger than anterior median eyes 80
80(79) Carapace from front very flat, hardly higher than posterior median eyes (Fig. 53), anterior eye row nearly straight ....*Coriarachne* p. 30
Carapace much higher; anterior eye row straight or moderately recurved..... 81
81(80) Anterior eye row straight .....*Synema* p. 29
Anterior eye row moderately recurved 82
82(81) Tubercles of lateral eyes confluent.....*Misumenops* p. 29
Tubercles of lateral eyes discrete 83
83(82) Tibia I with two pairs of ventral macrosetae; femur I swollen in middle .....*Ozyptila* p. 29

Tibia I with three pairs of ventral macrosetae; femur I not swollen ..... *Xysticus* p. 30

84(78) Posterior median eyes closer to posterior lateral eyes than to each other ..... *Philodromus* p. 30

Posterior median eyes not as above 85

85(84) Posterior median eyes closer to each other than to posterior lateral eyes ..... *Tibellus* p. 30

Posterior median eyes about equally spaced ..... *Thanatus* p. 30

86(77) Anterior spinnerets cylindrical, usually well-separated (Fig. 54) ..... GNAPHOSIDAE 87

Anterior spinnerets conical, contiguous at bases (Fig. 55) ..... CLUBIONIDAE 98

87(86) Dorsal groove absent or indistinct; anterior spinnerets separated by less than their diameter ..... *Micaria* p. 29

Dorsal groove present, usually distinct; anterior spinnerets separated by their diameter or more 88

88(87) Trochanters on all legs deeply notched (Fig. 56) .... *Drassodes* p. 28

Trochanters not deeply notched or without notches 89

89(88) Cheliceral retromargin with a lamina (Fig. 57) .... *Callilepis* p. 28

Cheliceral retromargin without a lamina 90

90(89) Cheliceral retromargin with a serrated keel (Fig. 58) ..... *Gnaphosa* p. 28

Cheliceral retromargin without a serrated keel 91

91(90) Cheliceral promargin with a carina (Fig. 59)..... 92

Cheliceral promargin without a carina 94

92(91) Retromarginal cheliceral tooth present (Fig. 60) ..... *Litopyllus* p. 29

Retromarginal cheliceral tooth absent..... 93

93(92) Body brightly colored: dorsum of abdomen with spots, transverse bands, or both ..... *Sergiolus* p. 28

Body not brightly colored or banded ..... *Nodocion* p. 28

94(91) Preening comb present on metatarsi III and IV (Fig. 61) 95

Preening comb absent, but a dense brush of hairs (Fig. 63) may be present distally on metatarsus III 96

95(94) Body light in color ..... *Drassyllus* p. 28

Body dark brown to black in color ..... *Zelotes* p. 28

96(94) Claw tufts absent ..... *Rachodrassus* p. 29

Claw tufts usually present (Fig. 62) 97

97(96) Dense brush of hairs present distally on at least metatarus III (Fig. 63)..... *Synaphosus* p. 29

Dense brush of hairs absent..... *Herpyllus* p. 28

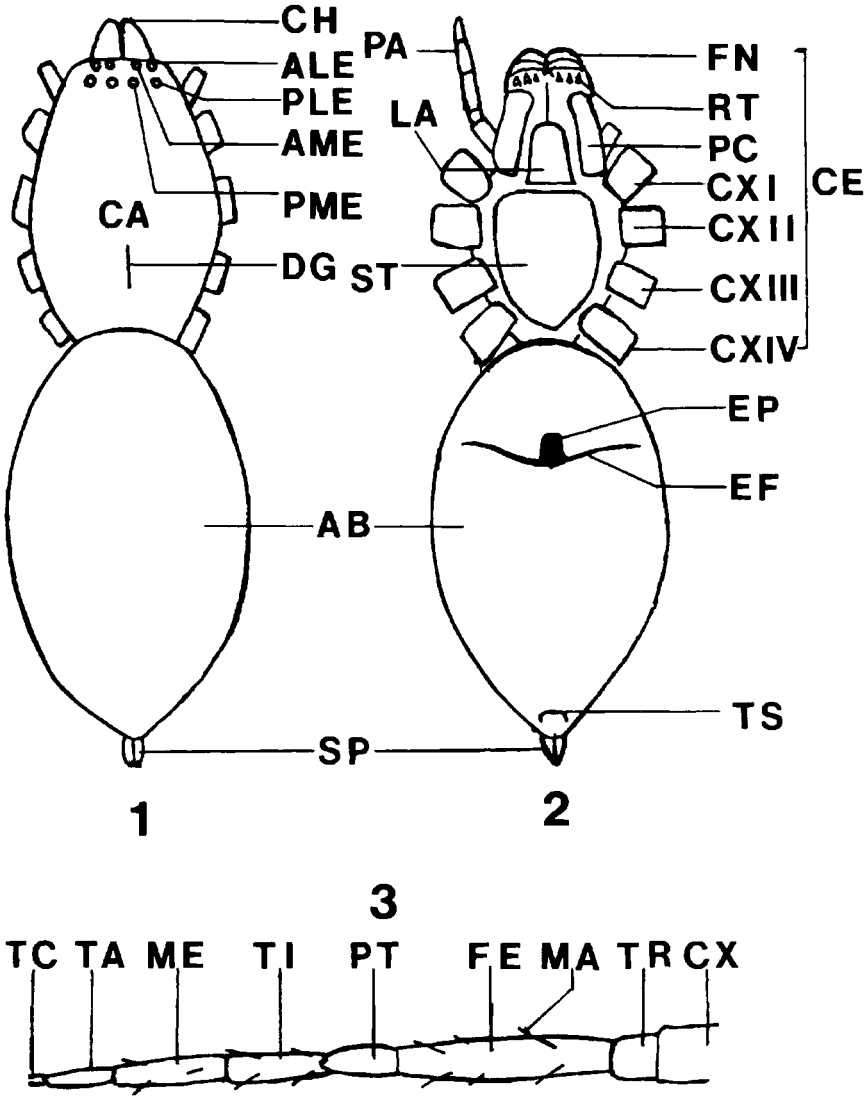
98(86) Palp-coxal lobes constricted at middle along lateral margins (Fig. 64)..... 99

Palp-coxal lobes with lateral margins straight 100

99(98) Dorsal groove indistinct; cheliceral promargin with two teeth ..... *Chiracanthium* p. 29

Dorsal groove distinct, cheliceral promargin with more than two teeth ..... *Clubiona* p. 29

100(98)	Posterior eye row procurved from above .....*Castianeira* p.	29
	Posterior eye row straight or recurved from above	101
101(100)	Macrosetae absent on legs; posterior eye row recurved from front.....*Trachelas* p.	29
	Macrosetae present; posterior eye row straight from front	102
102(101)	Femur I with dorsal macrosetae .....*Phrurotimpus* p.	29
	Femur I without dorsal macrosetae.....*Scotinella* p.	29



Figs. 1-3. Generalized spider anatomy. 1) Spider body, dorsal view. 2) Spider body, ventral view. 3) Leg, dorsal view. AB, abdomen; ALE, anterior lateral eye; AME, anterior median eye; CA, carapace; CE, cephalothorax; CH, chelicerae; CX I-IV, leg coxae; DG, dorsal groove; EF, epigastric furrow; EP, epigynum; FE, femur; FN, fang; LA, labium; MA, macroseta; ME, metatarsus; PA, palpus; PC, palpal precoxal lobe; PLE, posterior lateral eye; PME, posterior median eye; PT, patella; RT, retromarginal teeth; SP, spinnerets; ST, sternum; TA, tarsus; TC, tarsal claws; TI, tibia; TR, trochanter; TS, tracheal spiracle.

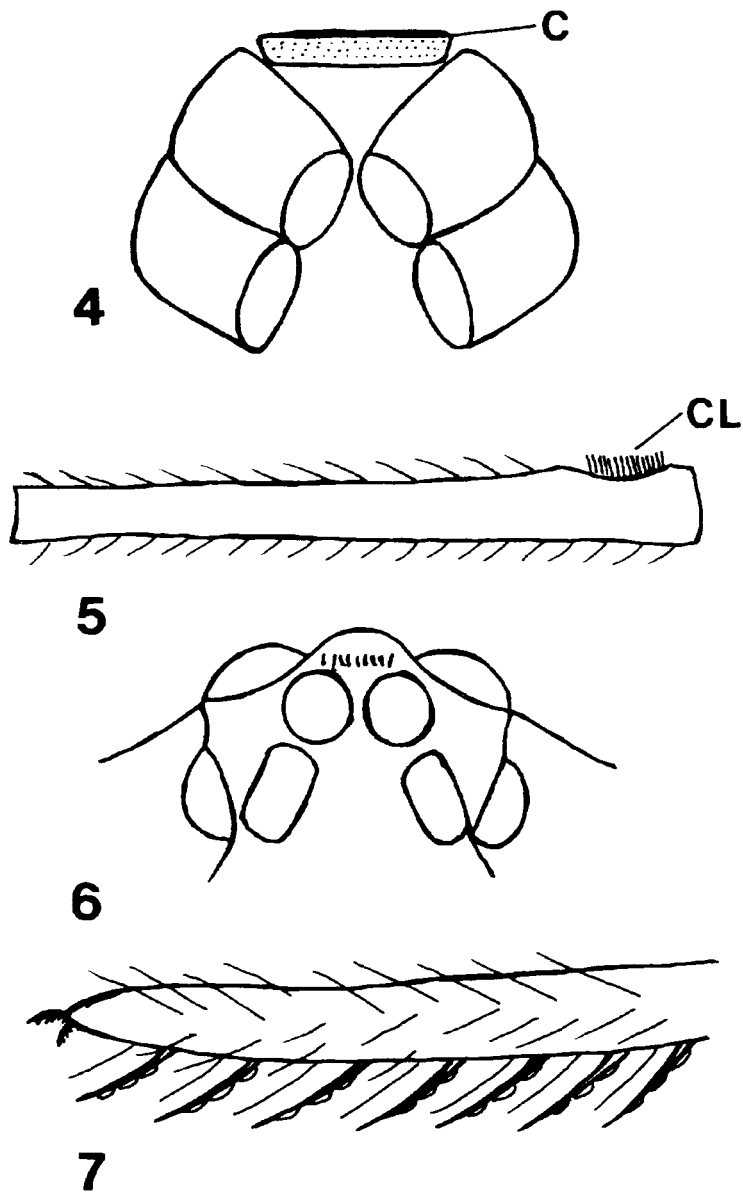


Fig. 4. Spinnerets of a cribellate spider, ventral view. C, cribellum.
Fig. 5. Metatarsus of *Filistata hibernalis*, lateral view. CL, calamistrum.
Fig. 6. Front of carapace of *Filistata hibernalis*, dorsal view.
Fig. 7. Tarsal comb of *Achaearanea*, lateral view.

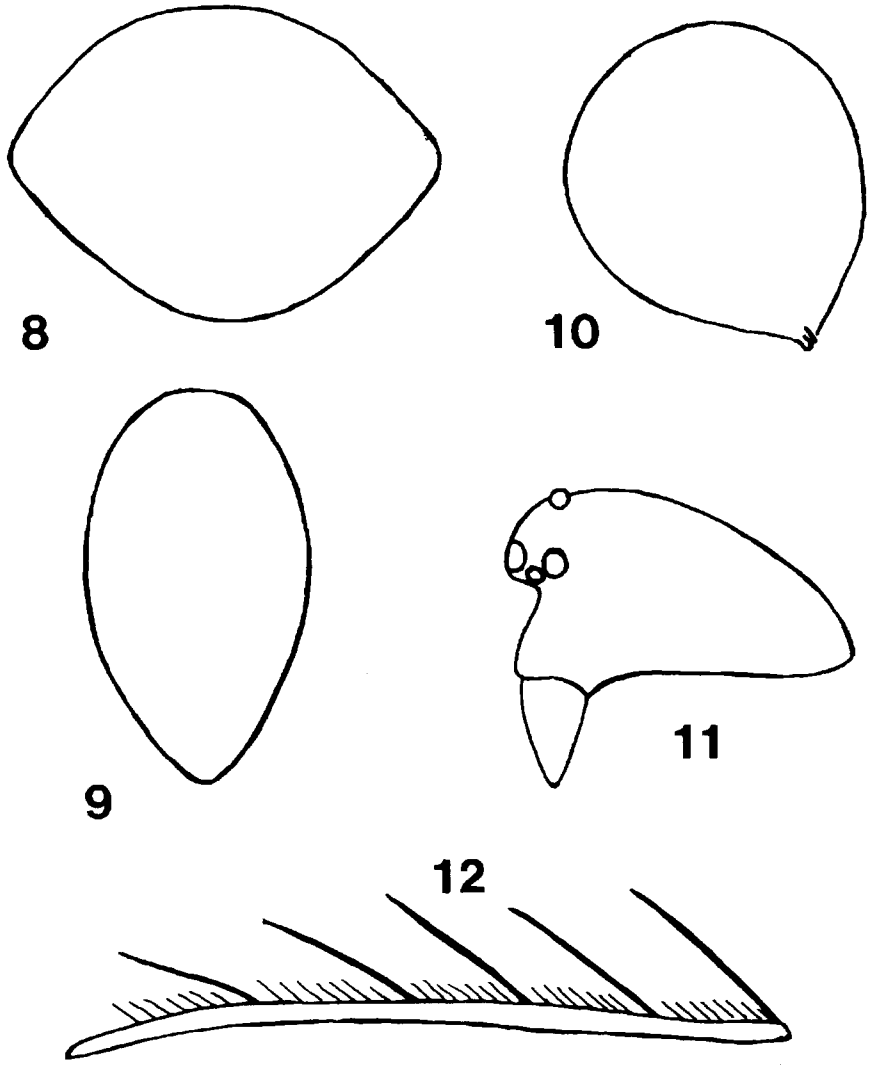


Fig. 8. Abdomen of *Theridula opulenta*, dorsal view.
Fig. 9. Abdomen of *Euryopis limbata*, dorsal view.
Fig. 10. Abdomen of *Achaearanea globosus*, lateral view.
Fig. 11. Cephalothorax of *Dipoena nigra*, lateral view.
Fig. 12. Tarsus of *Mimetus epeiroides*, lateral view.

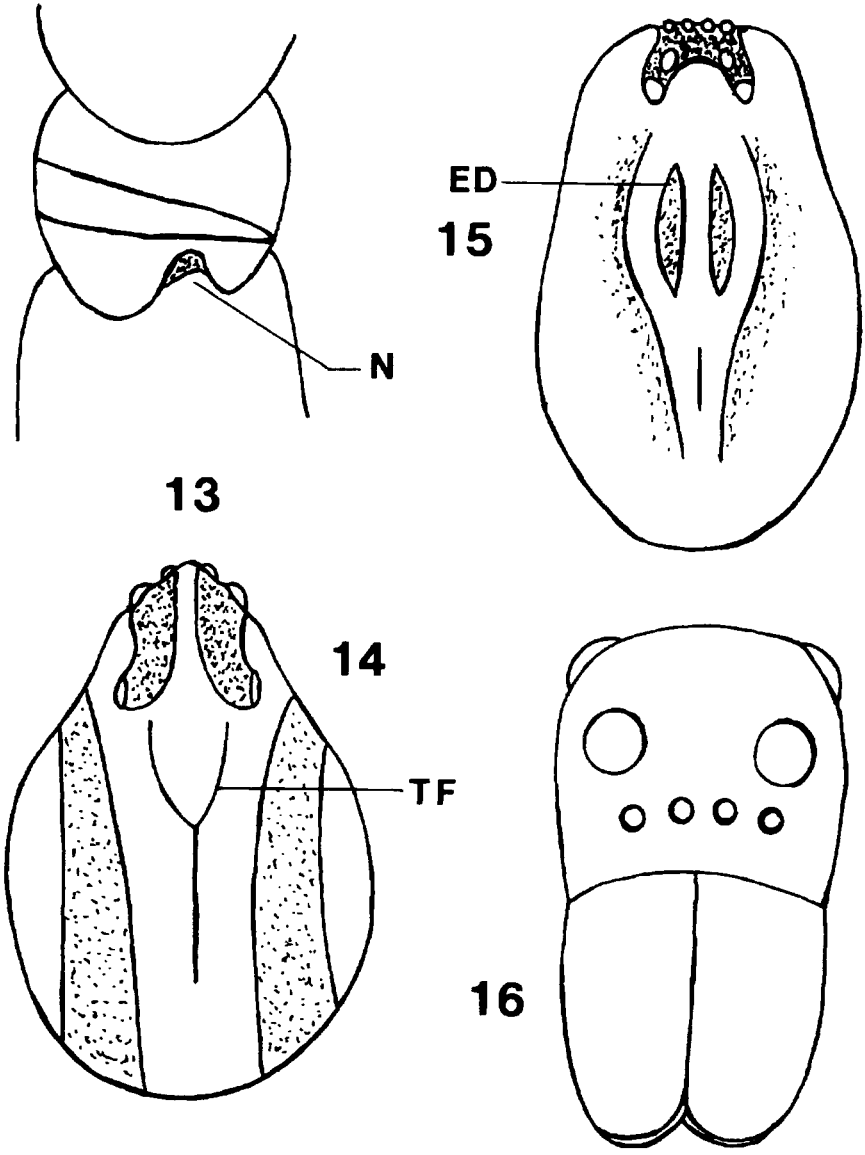


Fig. 13. Trochanter, ventral view. N, ventral notch.
Fig. 14. Carapace of *Pirata*, dorsal view. TF, tuning fork pattern.
Fig. 15. Carapace of *Trochosa avara*, dorsal view. ED, elongate dash pattern.
Fig. 16. Carapace of *Pardosa*, anterior view.

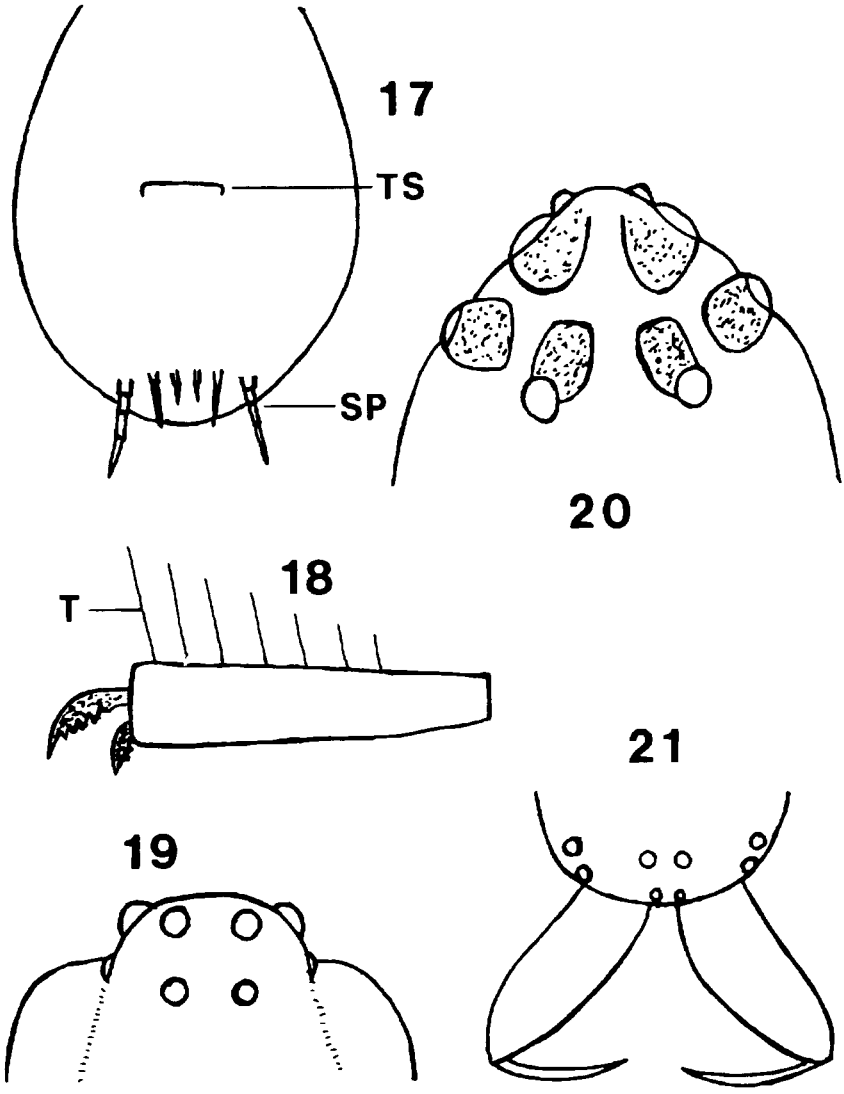


Fig. 17. Abdomen of *Neoantistea*, ventral view. SP, spinnerets; TS, tracheal spiracle.
Fig. 18. Tarsus of agelenid, lateral view. T, trichobothrium.
Fig. 19. Anterior of carapace of *Agelenopsis*, dorsal view.
Fig. 20. Anterior of carapace of *Oxyopes*, dorsal view.
Fig. 21. Anterior of carapace of *Pachygnatha tristriata*, dorsal view.

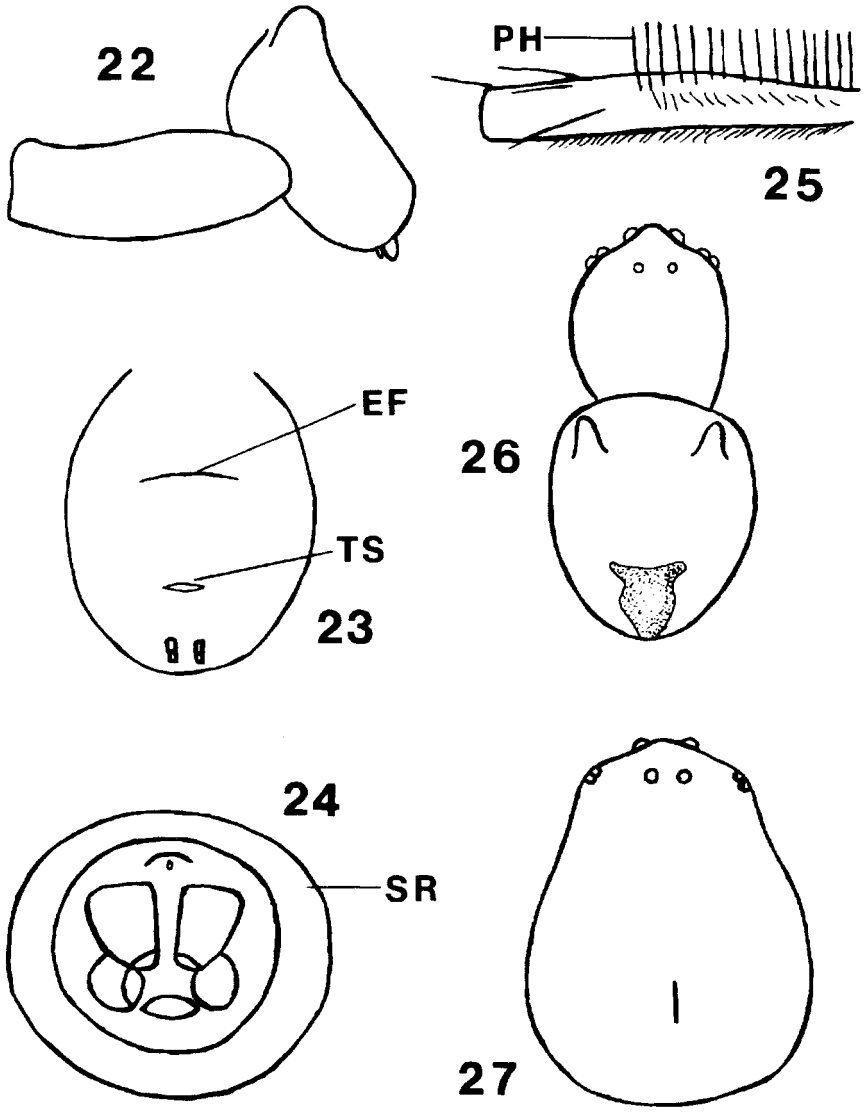
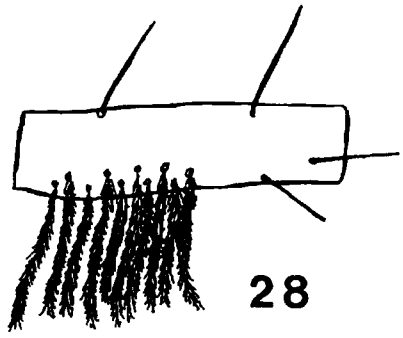
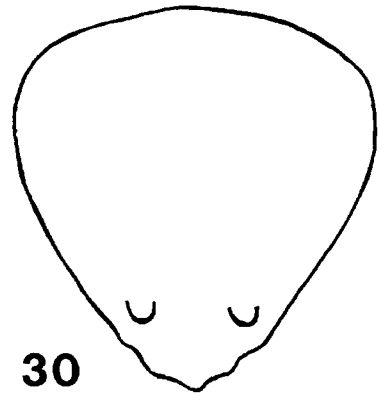
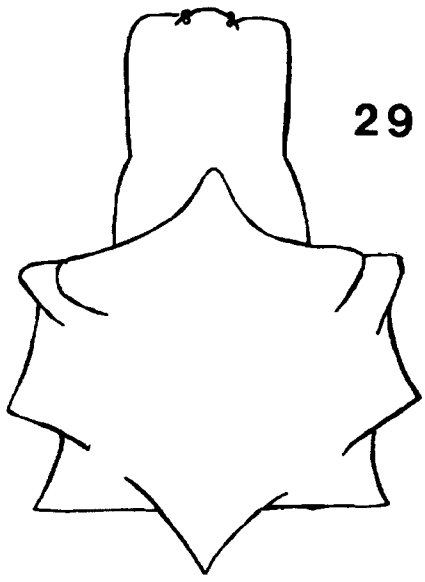


Fig. 22. Body of *Wixia ectypa*, lateral view.
Fig. 23. Abdomen of *Glenognatha foxi*, ventral view. TS, tracheal spiracle; EF, epigastric furrow.
Fig. 24. Spinnerets of *Micrathena*, ventral view. SR, sclerotized ring.
Fig. 25. Femur IV of *Leucauge venusta*, dorsal view. PH, prolateral hairs.
Fig. 26. Body of *Gea heptagon*, dorsal view.
Fig. 27. Carapace of *Mangora*, dorsal view.







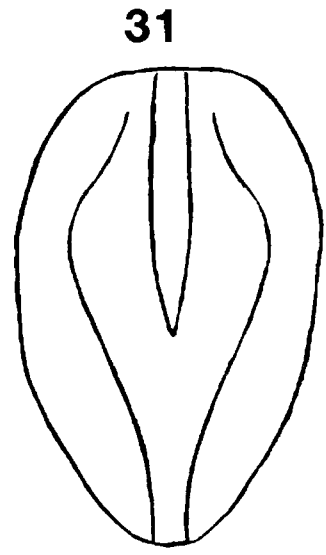


Fig. 28. Tibia III of *Mangora*, dorsal view.
Fig. 29. Body of *Acanthepeira*, dorsal view.
Fig. 30. Abdomen of *Verrucosa arenata*, dorsal view.
Fig. 31. Abdomen of *Acacesia hamata*, dorsal view.

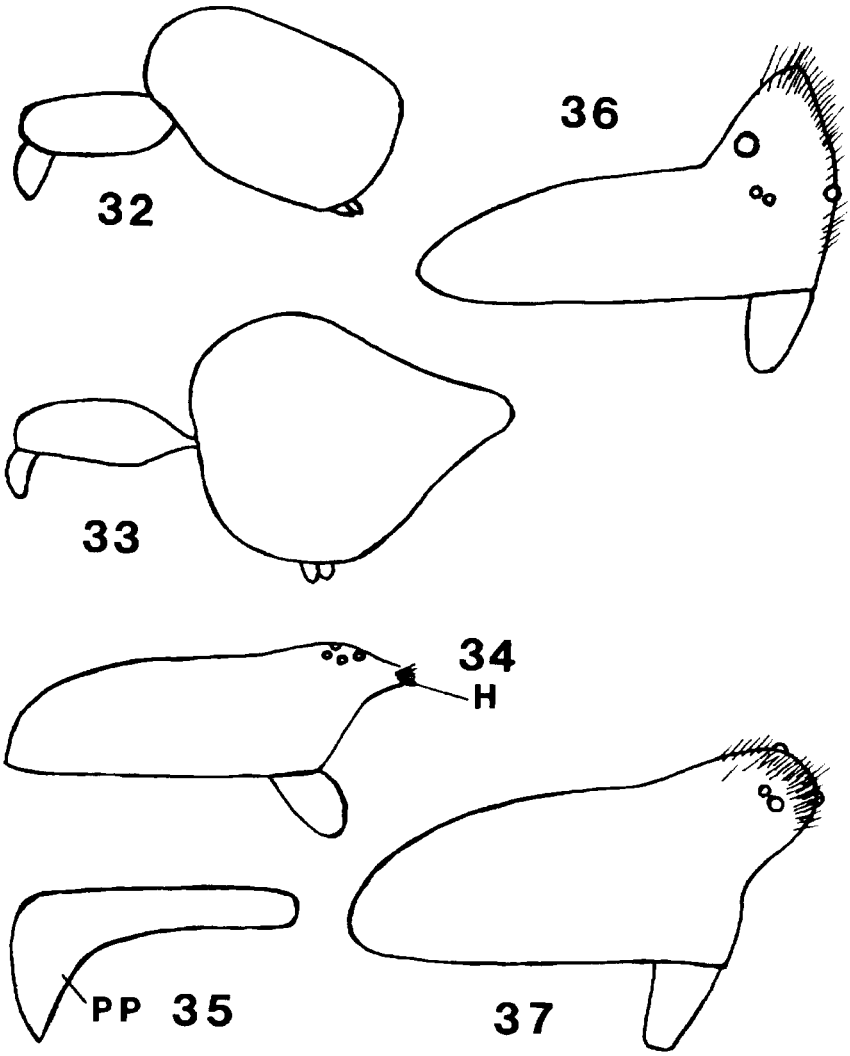


Fig. 32. Body of *Eustala anastera*, lateral view.
Fig. 33. Body of *Cyclosa*, lateral view.
Fig. 34. Cephalothorax of male *Floricomus*, lateral view. H, horn.
Fig. 35. Palpus of male *Erigone*, lateral view. PP, ventral palpal process.
Fig. 36. Cephalothorax of *Grammonota*, lateral view.
Fig. 37. Cephalothorax of *Ceraticelus*, lateral view.

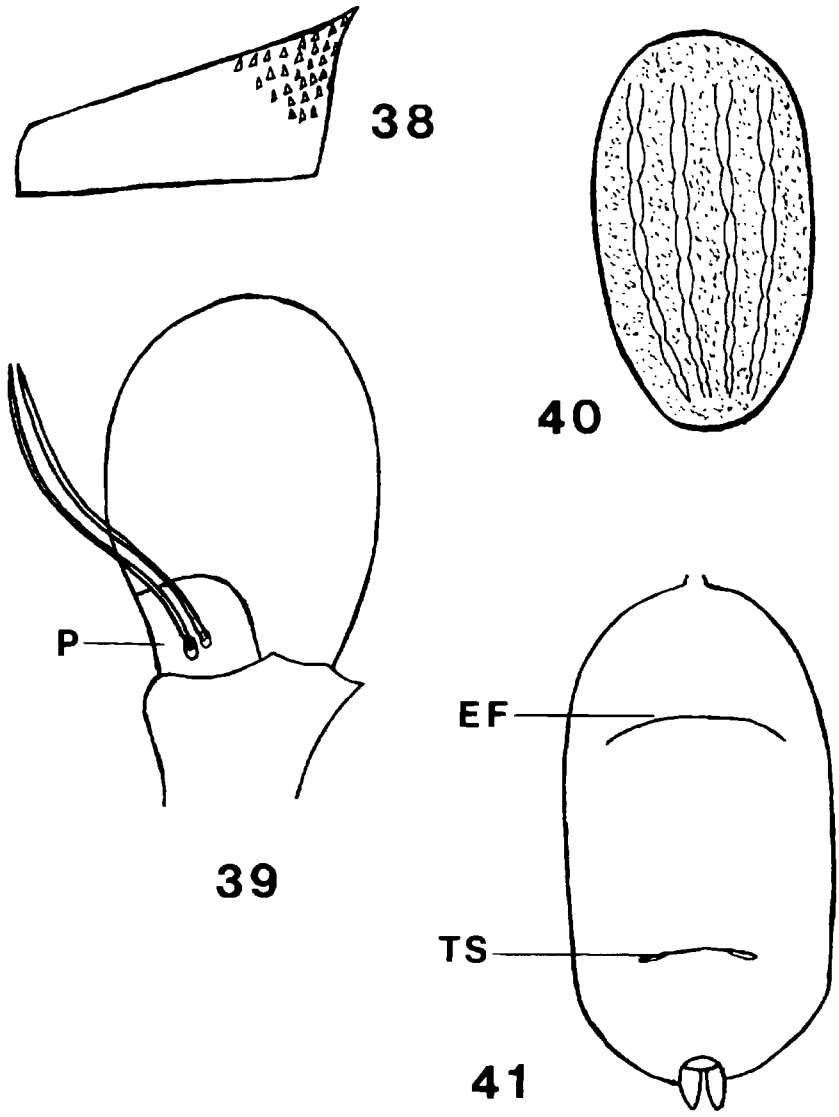


Fig. 38. Palpal femur of *Gonatium rubens*, lateral view.
Fig. 39. Palpus of *Islandiana flaveola*, ventral view. P paracymbium.
Fig. 40. Abdomen of *Centromerus latidens*, dorsal view.
Fig. 41. Abdomen of *Tennesseellum formicum*, ventral view. TS, tracheal spiracle opening; EF, epigastric furrow.

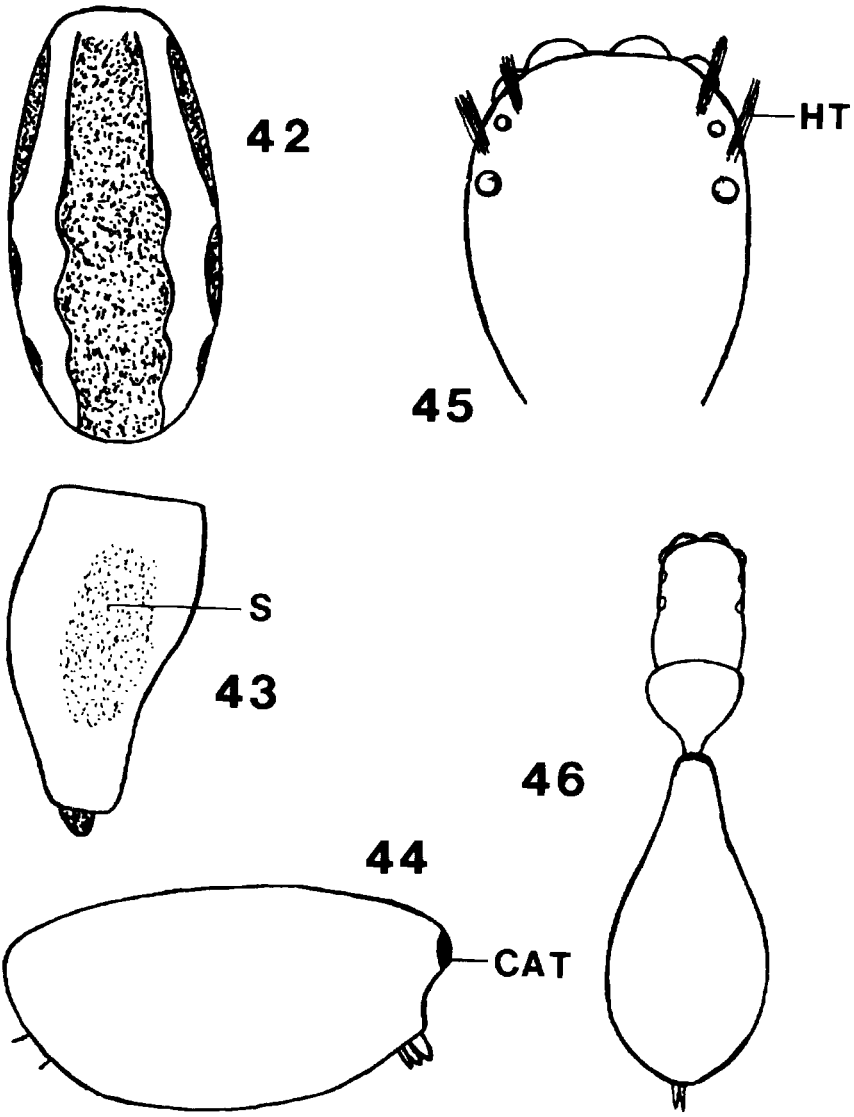


Fig. 42. Abdomen of *Frontinella pyramitela*, dorsal view.
Fig. 43. Chelicera of *Neriene maculata*, lateral view. S, stridulatory file.
Fig. 44. Abdomen of *Florinda coccinea*, lateral view. CAT, caudal tubercle.
Fig. 45. Carapace of *Phidippus*, dorsal view. HT, hair tufts.
Fig. 46. Body of *Synemosyna formica*, dorsal view.

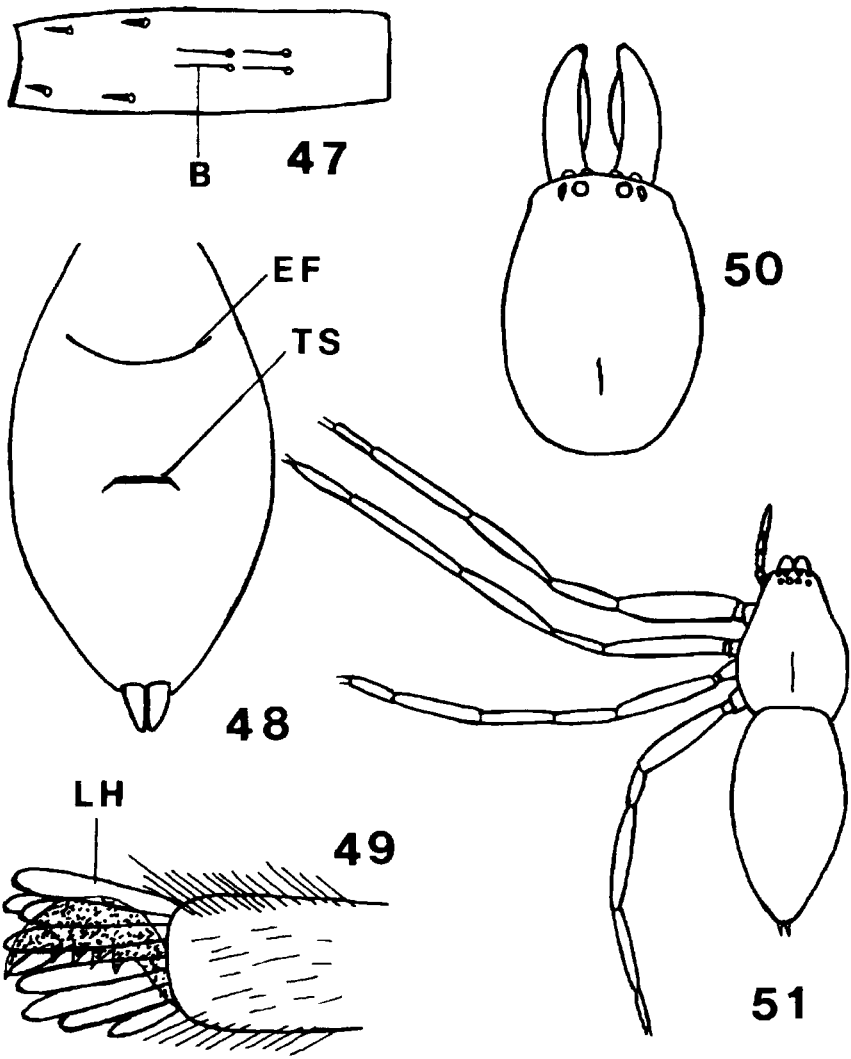


Fig. 47. Tibia of *Thiodina*, ventral view. B, bulbous hairs.
Fig. 48. Abdomen of *Aysha gracilis*, ventral view. TS, tracheal spiracle opening; EF, epigastric furrow.
Fig. 49. Tarsus of *Anyphaena maculata*, lateral view. LH, lamelliform hairs.
Fig. 50. Carapace of male *Teudis mordax*, dorsal view.
Fig. 51. Body of *Philodromus*, dorsal view, showing laterigrade legs.

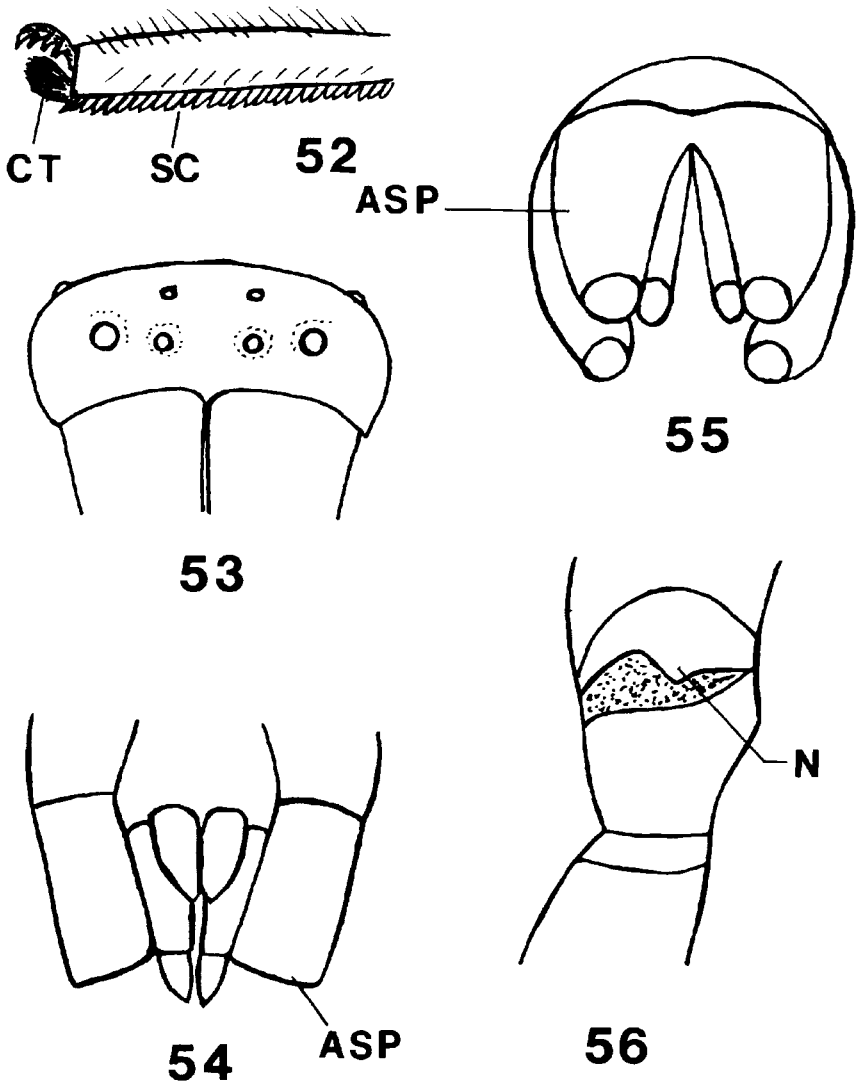


Fig. 52. Tarsus of *Philodromus*, lateral view. CT, claw tufts; SC, scopulae.
Fig. 53. Carapace of *Coriarachne versicolor*, anterior view.
Fig. 54. Spinnerets of gnaphosid, ventral view. ASP, anterior spinnerets.
Fig. 55. Spinnerets of clubionid, ventral view. ASP, anterior spinnerets.
Fig. 56. Trochanter of *Drassodes gosiutus*, ventral view. N, ventral notch.

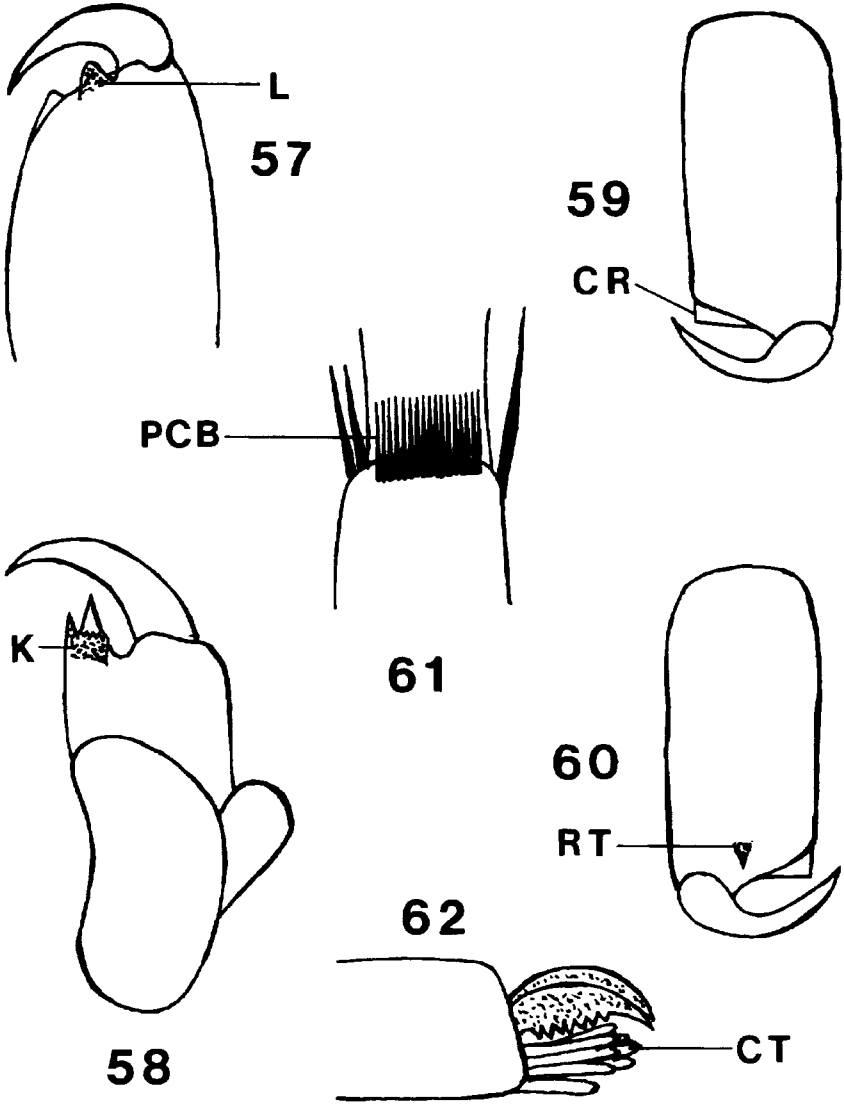
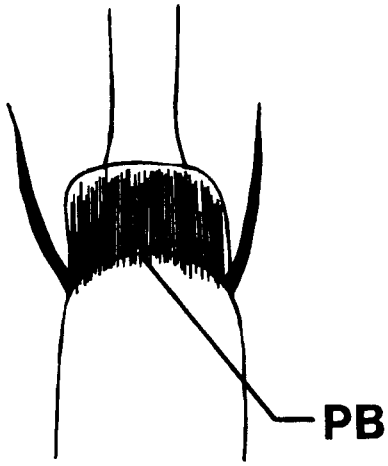


Fig. 57. Chelicera of *Callilepis imbecilla*, ventral view. L, lamina.
Fig. 58. Chelicera of *Gnaphosa*, ventral view. K, keel.
Fig. 59. Chelicera of *Litopyllus temporarius*, dorsal view. CR, carina.
Fig. 60. Chelicera of *Litopyllus temporarius*, ventral view. RT, retromarginal tooth.
Fig. 61. Metatarsus of *Drassyllus*, ventral view. PCB, preening comb.
Fig. 62. Tarsus of *Synaphosus paludis*, lateral view. CT, claw tufts.



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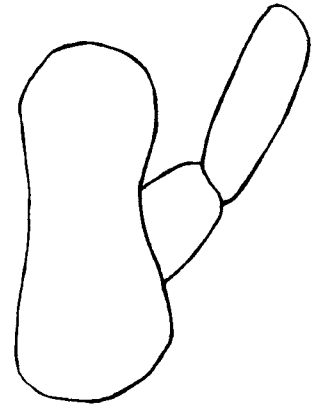

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Fig. 63. Metatarus III of *Synaphosus paludis*, ventral view. BH, a brush of hairs.
Fig. 64. Palpal coxal lobe of *Chiracanthium inclusum*, ventral view.

LIST OF GENERA AND SPECIES

NOTE: Species not previously recorded from cotton in Arkansas are denoted by an asterisk.

Family FILISTATIDAE: KEYS AND DESCRIPTIONS - Kaston (1978).

Genus *Filistata*: HABITAT - ground, under stones; SPECIES - *hibernalis* Hentz; ABUNDANCE - rare; KEYS AND DESCRIPTIONS - Kaston (1978).

Family ULOBORIDAE: KEYS AND DESCRIPTIONS - Muma and Gertsch (1964)

Genus *Uloborus*: HABITAT - lower and middle branches; ABUNDANCE - common; SPECIES - *glomosus* (Walckenaer); KEYS AND DESCRIPTIONS - Muma and Gertsch (1964)

Genus *Hyptiotes*: HABITAT - plant, among leaves; ABUNDANCE - occasional; SPECIES - *cavatus* (Hentz); KEYS AND DESCRIPTIONS - Muma and Gertsch (1964).

Family DICTYNIDAE: KEYS AND DESCRIPTIONS - Chamberlin and Gertsch (1958).

Genus *Dictyna*: HABITAT - ground, mainstem; ABUNDANCE - common; SPECIES - *hentzi* Kaston, *segregata* Gertsch and Mulaik, *sublata* (Hentz)*, *volucripes* Keyserling; KEYS AND DESCRIPTIONS - Chamberlin and Gertsch (1958).

Family THERIDIIDAE: KEYS AND DESCRIPTIONS - Levi and Levi (1972)

Genus *Latrodectus*: HABITAT - ground or lower plant near stem; ABUNDANCE - occasional; SPECIES - *mactans* (Fabricius); KEYS AND DESCRIPTIONS - Levi (1959b), Kaston (1978).

Genus *Euryopis*: HABITAT - ground, lower plant; ABUNDANCE - occasional; SPECIES - *limbata* (Walckenaer); KEYS AND DESCRIPTIONS - Levi (1954a, 1963a).

Genus *Theridula*: HABITAT - among foliage; ABUNDANCE - occasional; SPECIES - *opulenta* (Walckenaer); KEYS AND DESCRIPTIONS - Levi (1954b, 1966).

Genus *Achaearanea* (some species listed under *Theridion*): HABITAT - ground and lower plant among foliage; ABUNDANCE - occasional; SPECIES - *globosus* (Hentz); KEYS AND DESCRIPTIONS - Levi (1955, 1959a, 1963b, 1980b).

Genus *Theridion*: HABITAT - among foliage, midway; ABUNDANCE - common; SPECIES - *albidum* Banks*, *australe* (Banks), *crispulum* Simon, *differens* Emerton, *frondeum* Hentz, *neshamini* Levi, *pictipes* Keyserling, *rabuni* Chamberlin and Ivie; KEYS AND DESCRIPTIONS - Levi (1957, 1959a, 1963c, 1980b).

Genus *Dipoena*: HABITAT - among foliage; ABUNDANCE - occasional; SPECIES - *nigra* (Emerton); KEYS AND DESCRIPTIONS - Levi (1953, 1963a).

Family NESTICIDAE: KEYS AND DESCRIPTIONS - Kaston (1948).

Genus *Eidmanella*: HABITAT - ground; ABUNDANCE - occasional; SPECIES - *pallida* (Emerton); KEYS AND DESCRIPTIONS - Kaston (1948).

Family LINYPHIIDAE: KEYS AND DESCRIPTIONS - Kaston (1948, 1978).

Subfamily ERIGONINAE

Genus *Ceraticelus*: HABITAT - ground, in litter; ABUNDANCE - occasional; SPECIES - *creolus* Chamberlin, *similis* (Banks)*; KEYS AND DESCRIPTIONS - Crosby and Bishop (1925), Kaston (1948).

Genus *Eperigone*: HABITAT - ground, in litter; ABUNDANCE - common; SPECIES - *maculata* (Banks), *tridentata* (Emerton), *trilobata* (Emerton); KEYS AND DESCRIPTIONS - Crosby and Bishop (1928, 1933), Kaston (1948).

Genus *Erigone*: HABITAT - ground, in litter, foliage near top; ABUNDANCE - common; SPECIES - *autumnalis* Emerton, *dentigera* O.P.-Cambridge*; KEYS AND DESCRIPTIONS - Crosby and Bishop, (1928), Kaston (1948).

Genus *Floricomus*: HABITAT - ground, in litter; ABUNDANCE - rare; SPECIES - unidentified; KEYS AND DESCRIPTIONS - Bishop and Crosby (1935a), Kaston (1948).

Genus *Gonatium: HABITAT - ground, in litter; ABUNDANCE - occasional; SPECIES - rubens* (Blackwell); KEYS AND DESCRIPTIONS - Bishop and Crosby (1935b), Kaston (1948).

Genus *Grammonota*: HABITAT - ground, in litter, ABUNDANCE - occasional; SPECIES - *inornata* Emerton, *texana* Banks; KEYS AND DESCRIPTIONS - Bishop and Crosby (1932), Kaston (1948).

Genus *Islandiana*: HABITAT - ground, in litter; ABUNDANCE - rare; SPECIES - *flaveola* (Banks); KEYS AND DESCRIPTIONS - Ivie (1965).

Genus *Walckenaera*: HABITAT - ground, in litter; ABUNDANCE - occasional; SPECIES - *spiralis* (Emerton); KEYS AND DESCRIPTIONS - Millidge (1983).

Subfamily LINYPHIINAE

Genus *Frontinella*: HABITAT - among branches; ABUNDANCE - common; SPECIES - *pyramitela* (Walckenaer); KEYS AND DESCRIPTIONS - Kaston (1948, 1978).

Genus *Meioneta*: HABITAT - ground, among foliage; ABUNDANCE - common; SPECIES *fabra* (Keyserling)*, *meridionalis* Crosby and Bishop, *micaria* (Emerton); KEYS AND DESCRIPTIONS - Kaston (1948).

Genus *Prolinyphia*: HABITAT - among foliage; ABUNDANCE - common; SPECIES - *marginata* (C. L. Koch); KEYS AND DESCRIPTIONS - Kaston (1948).

Genus *Neriene*: HABITAT - ground, among foliage; ABUNDANCE - common; SPECIES - *maculata* (Emerton); KEYS AND DESCRIPTIONS - Kaston (1948 - see *Linyphia*, 1978).

Genus *Florinda*: HABITAT - among foliage; ABUNDANCE - common; SPECIES - *coccinea* (Hentz); KEYS AND DESCRIPTIONS - Kaston (1978).

Genus *Centromerus*: HABITAT - ground; ABUNDANCE - occasional; SPECIES - *latidens* (Emerton)*; KEYS AND DESCRIPTIONS - Kaston (1978).

Genus *Lepthyphantes*: HABITAT - main stem; ABUNDANCE - occasional; SPECIES - *sabulosus* (Keyserling); KEYS AND DESCRIPTIONS - Zorsch (1937).

Genus *Tennesseellum*: HABITAT - ground, in litter; ABUNDANCE - common; SPECIES - *formicum* (Emerton); KEYS AND DESCRIPTIONS - Kaston (1948).

Family ARANEIDAE: KEYS AND DESCRIPTIONS - Kaston (1978).

Genus *Micrathena*: HABITAT - webs between plants; ABUNDANCE - occasional; SPECIES - *gracilis* (Walckenaer), *sagittata* (Walckenaer); KEYS AND DESCRIPTIONS - Levi (1978).

Genus *Leucauge*: HABITAT - among branches near stem; ABUNDANCE - occasional; SPECIES - *venusta* (Walckenaer); KEYS AND DESCRIPTIONS - Levi (1980a).

Genus *Gea*: HABITAT - among foliage; ABUNDANCE - common; SPECIES - *heptagon* (Hentz); KEYS AND DESCRIPTIONS - Levi (1968)

Genus *Argiope*: HABITAT - webs between plants; ABUNDANCE - occasional; SPECIES - *aurantia* Lucas, *trifasciata* (Forskal); KEYS AND DESCRIPTIONS - Levi (1968).

Genus *Mangora*: HABITAT - among foliage; ABUNDANCE - common; SPECIES - *gibberosa* (Hentz), *placida* (Hentz); KEYS AND DESCRIPTIONS - Levi (1975a).

Genus *Acanthepeira*: HABITAT - webs among foliage and between plants; ABUNDANCE - common; SPECIES - *stellata* (Marx), *venusta* (Banks); KEYS AND DESCRIPTIONS - Levi (1976).

Genus *Eustala*: HABITAT - webs among foliage and between plants; ABUNDANCE - occasional; SPECIES - *anastera* (Walckenaer); KEYS AND DESCRIPTIONS - Levi (1977a).

Genus *Verrucosa*: HABITAT - webs between plants; ABUNDANCE - occasional; SPECIES - *arenata* (Walckenaer); KEYS AND DESCRIPTIONS - Levi (1976).

Genus *Acacesia*: HABITAT - among foliage; ABUNDANCE - occasional; SPECIES - *hamata* (Hentz); KEYS AND DESCRIPTIONS - Levi (1976).

Genus *Metepeira*: HABITAT - webs high up or between plants; ABUNDANCE - occasional; SPECIES - *labyrinthea* (Hentz); KEYS AND DESCRIPTIONS - Levi (1977b).

Genus *Wixia*: HABITAT - webs among foliage and between plants; ABUNDANCE - occasional; SPECIES - *ectypa* (Walckenaer)*; KEYS AND DESCRIPTIONS - Levi (1976).

Genus *Mecynogea*: HABITAT - webs among foliage and between plants; ABUNDANCE - occasional; SPECIES - *lemniscata* (Walckenaer); KEYS AND DESCRIPTIONS - Levi (1980a).

Genus *Cyclosa*: HABITAT - midway among foliage; ABUNDANCE - common; SPECIES - *conica* (Pallas), *turbinata* (Walckenaer); KEYS AND DESCRIPTIONS - Levi (1977a).

Genus *Neoscona*: HABITAT - webs among foliage and between plants; ABUNDANCE - common; SPECIES - *arabesca* (Walckenaer), *hentzi* (Keyserling); KEYS AND DESCRIPTIONS - Berman and Levi (1971).

Genus *Araniella*: HABITAT - webs among foliage and between plants; ABUNDANCE - occasional; SPECIES - *displicata* (Hentz); KEYS AND DESCRIPTIONS - Levi (1974).

Genus *Araneus*: HABITAT - webs among foliage and between plants; ABUNDANCE - common; SPECIES - unidentified; KEYS AND DESCRIPTIONS - Levi (1971, 1973, 1975b, 1981b).

Genus *Pachygnatha*: HABITAT - webs of immatures among foliage and between plants (adults are wanderers); ABUNDANCE - occasional; SPECIES - *tristriata* C. L. Koch; KEYS AND DESCRIPTIONS - Levi (1980a).

Genus *Glenognatha*: HABITAT - ground, among foliage; ABUNDANCE - very common; SPECIES - *foxi* (McCook); KEYS AND DESCRIPTIONS - Levi (1980a).

Genus *Tetragnatha*: HABITAT - webs between plants; ABUNDANCE - common; SPECIES - *elongata* Walckenaer, *laboriosa* Hentz; KEYS AND DESCRIPTIONS - Levi (1981a).

Family AGELENIDAE: KEYS AND DESCRIPTIONS - Roth and Brame (1972).

Genus *Cicurina*: HABITAT - ground, in litter; ABUNDANCE - occasional; SPECIES - *arcuata* Keyserling; KEYS AND DESCRIPTIONS - Chamberlin and Ivie (1940).

Genus *Agelenopsis*: HABITAT - ground, base of plant; ABUNDANCE - occasional; SPECIES - *emertoni* Chamberlin and Ivie, *pennsylvanica* (C. L. Koch); KEYS AND DESCRIPTIONS - Chamberlin and Ivie (1941).

Family HAHNIIDAE: KEYS AND DESCRIPTIONS - Opell and Beatty (1976).

Genus *Neoantistea*: HABITAT - ground, ABUNDANCE - occasional; SPECIES - *agilis* (Keyserling), *riparia* (Keyserling)*; KEYS AND DESCRIPTIONS - Opell and Beatty (1976).

Family MIMETIDAE: KEYS AND DESCRIPTIONS - Kaston (1948), Archer (1950).

Genus *Mimetus*: HABITAT - plants (feed largely or exclusively on other spiders); ABUNDANCE - rare; SPECIES - *epeiroides* Emerton; KEYS AND DESCRIPTIONS - Kaston (1948), Archer (1950).

Family PISAURIDAE: KEYS AND DESCRIPTIONS - Kaston (1978).

Genus *Dolomedes*: HABITAT - ground, in squares; ABUNDANCE - occasional; SPECIES - *triton* (Walckenaer); KEYS AND DESCRIPTIONS - Carico (1973).

Genus *Pisaurina*: HABITAT - among foliage; ABUNDANCE - occasional; SPECIES - *mira* (Walckenaer); KEYS AND DESCRIPTIONS - Carico (1972).

Family LYCOSIDAE: KEYS AND DESCRIPTIONS - Kaston (1978).

Genus *Pirata*: HABITAT - ground; ABUNDANCE - common; SPECIES - *alachua* Gertsch and Wallace, *insularis* Emerton, *minutus* Emerton, *sedentarius* Montgomery, *suwaneus* Gertsch, *sylvanus* Chamberlin and Ivie; KEYS AND DESCRIPTIONS - Wallace and Exline (1978), Dondale and Redner (1981).

Genus *Trochosa*: HABITAT - ground; ABUNDANCE - occasional; SPECIES - *avara* (Keyserling); KEYS AND DESCRIPTIONS - Brady (1979).

Genus *Arctosa*: HABITAT - ground; ABUNDANCE - occasional; SPECIES - *virgo* (Chamberlin)*; KEYS AND DESCRIPTIONS - Dondale and Redner (1983a).

Genus *Allocosa*: HABITAT - ground; ABUNDANCE - occasional; SPECIES - *funerea* (Hentz), *sublata* (Montgomery); KEYS AND DESCRIPTIONS - Dondale and Redner (1983b).

Genus *Pardosa*: HABITAT - ground, among foliage; ABUNDANCE - very common; SPECIES - *atlantica* Emerton, *milvina* (Hentz), *pauxilla* Montgomery, *saxatilis* (Hentz); KEYS AND DESCRIPTIONS - Kaston (1948), Vogel (1964, 1970), Lowrie and Dondale (1981).

Genus *Schizocosa*: HABITAT - ground; ABUNDANCE - common; SPECIES - *avida* (Walckenaer), *ocreata* (Hentz), *retrorsa* (Banks); KEYS AND DESCRIPTIONS - Dondale and Redner (1978b).

Genus *Lycosa*: HABITAT - ground, among foliage; ABUNDANCE - very common; SPECIES - *annexa* Chamberlin and Ivie, *antelucana* Montgomery, *carolinensis* Walckenaer, *gulosa* Walckenaer, *helluo* Walckenaer, *punctulata* Hentz, *rabida* Walckenaer; KEYS AND DESCRIPTIONS - Kaston (1948).

Family OXYOPIDAE: KEYS AND DESCRIPTIONS - Brady (1964).

Genus *Peucetia*: HABITAT - among foliage and in terminals; ABUNDANCE - common; SPECIES - *viridans* (Hentz); KEYS AND DESCRIPTIONS - Brady (1964).

Genus *Oxyopes*: HABITAT - among foliage; ABUNDANCE - very common; SPECIES - *aglossus* Chamberlin, *apollo* Brady, *salticus* Hentz; KEYS AND DESCRIPTIONS - Brady (1964, 1969).

Family GNAPHOSIDAE: KEYS AND DESCRIPTIONS - Roth and Brown (1973), Kaston (1978).

Genus *Gnaphosa* (=*Cylphosa*): HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *fontinalis* Keyserling, *sericata* (L. Koch); KEYS AND DESCRIPTIONS - Platnick and Shadab (1975), Heiss and Allen (1986).

Genus *Callilepis*: HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *imbecilla* (Keyserling); KEYS AND DESCRIPTIONS - Platnick (1975), Heiss and Allen (1986).

Genus *Drassodes*: HABITAT - ground, in the litter, ABUNDANCE - occasional; SPECIES - *gosiutus* Chamberlin; KEYS AND DESCRIPTIONS - Platnick and Shadab (1976a), Heiss and Allen (1986).

Genus *Herpyllus:* HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *ecclesiasticus* Hentz; KEYS AND DESCRIPTIONS - Platnick and Shadab (1977), Heiss and Allen (1986).

Genus *Drassyllus*: HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *aprilinus* (Banks), *creolus* Chamberlin and Gertsch, *ellipes* Chamberlin and Gertsch, *gynosaphes* Chamberlin, *lepidus* (Banks), *notonus* Chamberlin, *texamans* Chamberlin; KEYS AND DESCRIPTIONS - Platnick and Shadab (1982), Heiss and Allen (1986).

Genus *Zelotes*: HABITAT - ground, in the litter; ABUNDANCE - common; SPECIES *aiken* Platnick and Shadab, *duplex* Chamberlin, *hentzi* Barrows, *laccus* (Barrows); KEYS AND DESCRIPTIONS - Platnick and Shadab (1983), Heiss and Allen (1986).

Genus *Sergiolus* (=*Poecilochroa*): HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *capulatus* (Walckenaer), *ocellatus* (Walckenaer); KEYS AND DESCRIPTIONS - Platnick and Shadab (1981), Heiss and Allen (1986).

Genus *Nodocion*: HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *floridanus* (Banks); KEYS AND DESCRIPTIONS - Platnick and Shadab (1980), Heiss and Allen (1986).

Genus *Litopyllus*: HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *temporarius* Chamberlin; KEYS AND DESCRIPTIONS - Platnick and Shadab (1980), Heiss and Allen (1986).

Genus *Synaphosus*: HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *paludis* (Chamberlin and Gertsch); KEYS AND DESCRIPTIONS - Platnick and Shadab (1980), Heiss and Allen (1986).

Genus *Rachodrassus*: HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *echinus* Chamberlin, *exlineae* Platnick and Shadab; KEYS AND DESCRIPTIONS - Platnick and Shadab (1976b).

Genus *Micaria*: HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *vinnula* Gertsch and Davis; KEYS AND DESCRIPTIONS - Gertsch and Davis (1936), Kaston (1948).

Family CLUBIONIDAE: KEYS AND DESCRIPTIONS - Edwards (1958 - Clubioninae), Kaston (1978), Dondale and Redner (1982).

Genus *Trachelas* (some species listed under *Meriola*): HABITAT - ground, in litter; ABUNDANCE - occasional; SPECIES - *deceptus* (Banks), *tranquillus* (Hentz); KEYS AND DESCRIPTIONS - Platnick and Shadab (1974a, 1974b).

Genus *Chiracanthium*: HABITAT - among foliage and in squares and terminals; ABUNDANCE - common; SPECIES - *inclusum* (Hentz); KEYS AND DESCRIPTIONS - Edwards (1958), Dondale and Redner (1982).

Genus *Clubiona*: HABITAT - among foliage, in the squares; ABUNDANCE - common; SPECIES - *abboti* L. Koch, *catawba* Gertsch, *pygmaea* Banks*, *saltitans* Emerton; KEYS AND DESCRIPTIONS - Edwards (1958), Dondale and Redner (1967c, 1982).

Genus *Castianeira*: HABITAT - ground, in litter; ABUNDANCE - occasional; SPECIES - *descripta* (Hentz), *longipalpus* (Hentz), *vulnerea* Gertsch; KEYS AND DESCRIPTIONS - Reiskind (1969).

Genus *Phrurotimpus*: HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES *alarius* (Hentz), *illudens* (Gertsch)*; KEYS AND DESCRIPTIONS - Kaston (1948), Dondale and Redner (1982).

Genus *Scotinella* (=*Phrurolithus*): HABITAT - ground, in the litter; ABUNDANCE - occasional; SPECIES - *fratella* (Gertsch), *formica* (Banks)*, *pallida* Banks; KEYS AND DESCRIPTIONS - Banks (1911), Kaston (1948), Dondale and Redner (1982).

Family ANYPHAENIDAE: KEYS AND DESCRIPTIONS - Platnick (1974).

Genus *Aysha*: HABITAT - among foliage; ABUNDANCE - common; SPECIES - *gracilis* (Hentz); KEYS AND DESCRIPTIONS - Platnick (1974).

Genus *Anyphaena*: HABITAT - among foliage; ABUNDANCE - occasional; SPECIES - *maculata* (Banks); KEYS AND DESCRIPTIONS - Platnick (1974).

Genus *Teudis*: HABITAT - among foliage; ABUNDANCE - occasional; SPECIES - *mordax* (O.P.-Cambridge)*; KEYS AND DESCRIPTIONS - Platnick (1974).

Family THOMISIDAE: KEYS AND DESCRIPTIONS - Gertsch (1939 - Misumeninae), Kaston (1978), Dondale and Redner (1978a).

Genus *Misumenops*: HABITAT - among foliage, branches, squares and terminals; ABUNDANCE - very common; SPECIES - *asperatus* (Hentz), *celer* (Hentz), *oblongus* (Keyserling); KEYS AND DESCRIPTIONS - Gertsch (1939), Dondale and Redner (1976b, 1978a).

Genus *Misumenoides*: HABITAT - among leaves and branches; ABUNDANCE - occasional; SPECIES - *formocipes* (Walckenaer) [=*aleatorius* (Hentz)]; KEYS AND DESCRIPTIONS -Gertsch (1939), Dondale and Redner (1978a).

Genus *Ozyptila*: HABITAT - stem, branches; ABUNDANCE - occasional; SPECIES - *americana* Banks, *monroensis* Keyserling; KEYS AND DESCRIPTIONS - Dondale and Redner (1975a).

Genus *Synema*: HABITAT - among foliage and on stem; ABUNDANCE - occasional; SPECIES - *parvula* (Hentz); KEYS AND DESCRIPTIONS - Gertsch (1939).

Genus *Coriarachne*: HABITAT - ground, in litter; ABUNDANCE - occasional; SPECIES - *versicolor* Keyserling; KEYS AND DESCRIPTIONS - Bowling and Sauer (1975).

Genus *Xysticus*: HABITAT - ground, in litter; ABUNDANCE - common; SPECIES - *auctificus* Keyserling, *funestus* Keyserling, *texanus* Banks; KEYS AND DESCRIPTIONS - Gertsch (1939, 1953), Turnbull, Dondale and Redner (1965).

Family PHILODROMIDAE (genera once listed in THOMISIDAE): KEYS AND DESCRIPTIONS - Kaston (1978), Dondale and Redner (1978a).

Genus *Philodromus*: HABITAT - among foliage and on stem; ABUNDANCE - occasional; SPECIES - *minutus* Banks, *vulgaris* (Hentz); KEYS AND DESCRIPTIONS - Dondale (1961), Dondale and Redner (1968, 1969, 1975b, 1976a).

Genus *Thanatus*: HABITAT - among foliage and on stem; ABUNDANCE - occasional; SPECIES - *formicinus* (Olivier), *rubicellus* Mello-Leitao; KEYS AND DESCRIPTIONS - Dondale, Turnbull and Redner (1964).

Genus *Tibellus*: HABITAT - among foliage and on stem; ABUNDANCE - rare; SPECIES - *duttoni* (Hentz); KEYS AND DESCRIPTIONS - Gertsch (1933), Kaston (1948).

Family SALTICIDAE (=ATTIDAE): KEYS AND DESCRIPTIONS - Kaston (1978), Richman (1978), Roth (1985).

Genus *Habronattus* (=*Pellenes* in part): HABITAT - among foliage; ABUNDANCE - common; SPECIES - *coecatus* (Hentz) [=*coronatus* (Hentz)]; KEYS AND DESCRIPTIONS - Peckham and Peckham (1909), Kaston (1948).

Genus *Synemosyna*: HABITAT - ground, among foliage; ABUNDANCE, - occasional; SPECIES - *formica* Hentz; KEYS AND DESCRIPTIONS - Peckham and Peckham (1909), Kaston (1948).

Genus *Peckhamia* (some species listed under *Synageles* or *Synemosyna*): HABITAT - ground, among foliage; ABUNDANCE - occasional; SPECIES - *picata* (Hentz); KEYS AND DESCRIPTIONS - Peckham and Peckham (1909), Kaston (1948).

Genus *Sitticus*: HABITAT - among foliage; ABUNDANCE - occasional; SPECIES - *cursor* (Barrows) (=*floridanus* Gertsch and Mulaik); KEYS AND DESCRIPTIONS - Gertsch and Mulaik (1936), Kaston (1948).

Genus *Hentzia* (=*Wala*): HABITAT - ground, branches and foliage midway; ABUNDANCE - common; SPECIES *mitrata* (Hentz), *palmarum* (Hentz); KEYS AND DESCRIPTIONS - Peckham and Peckham (1909), Kaston (1948).

Genus *Metacyrba* (some species listed under *Marpissa*): HABITAT - among branches and foliage; ABUNDANCE - occasional; SPECIES - *taeniola* (Hentz), *undata* (DeGeer); KEYS AND DESCRIPTIONS - Barnes (1958).

Genus *Zygoballus* (some species listed under *Eris*): HABITAT - among foliage, in terminals near top; ABUNDANCE - very common; SPECIES - *nervosus* (Peckham and Peckham), *rufipes* Peckham and Peckham (=*bettini* Peckham and Peckham), *sexpunctatus* (Hentz)*; KEYS AND DESCRIPTIONS - Peckham and Peckham (1909), Kaston (1948).

Genus *Thiodina*: HABITAT - ground, branches and foliage midway; ABUNDANCE - common; SPECIES - *puerpera* Hentz, *sylvana* (Hentz); KEYS AND DESCRIPTIONS - Peckham and Peckham (1909).

Genus *Phidippus*: HABITAT - stem, branches, foliage, squares and terminals midway to top; ABUNDANCE - very common; SPECIES - *audax* (Hentz), *carolinensis* Peckham and Peckham, *clarus* Keyserling, *cardinalis* (Hentz) [=*mccooki* (Peckham and Peckham)], *mystaceus* (Hentz), *purpuratus* Keyserling; KEYS AND DESCRIPTIONS - Peckham and Peckham (1909), Kaston (1948).

Genus *Eris* (=*Paraphidippus*, some species listed under *Dendryphantes*): HABITAT - ground, stem, branches, foliage, terminals, squares, especially on upper half; ABUNDANCE - common; SPECIES - *aurantia* (Lucas) (=*Parnaeus chrysis* Walckenaer), *marginata* (Walckenaer); KEYS AND DESCRIPTIONS - Peckham and Peckham (1909), Kaston (1948, 1973).

Genus *Metaphidippus* (some species listed under *Dendryphantes* and *Icius*): HABITAT - ground, stem, branches, foliage, squares, usually midway; ABUNDANCE - very common; SPECIES - *galathea* (Walckenaer) (=*capitatus* Peckham and Peckham Fig. 5, not 5a) *insignis* (Banks), *protervus* (Walckenaer) (=*capitatus* Peckham and Peckham Fig. 5a, not 5), *vitis* (Cockerell); KEYS AND DESCRIPTIONS - Peckham and Peckham (1909), Kaston (1948, 1973).

LITERATURE CITED

Archer, A. F. 1950. A study of theridiid and mimetid spiders with descriptions of new genera and species. Mus. Pap. Alabama Nat. Hist. 30: 1-40.

Banks, N. 1911. Some Arachnida from North Carolina. Proc. Acad. Nat. Sci. Philadelphia 63: 440-56.

Barnes, R. D. 1958. North American jumping spiders of the subfamily Marpissinae (Araneae, Salticidae). Amer. Mus. Novitates No. 1867: 1-50.

Berman, J. D. and H. W. Levi. 1971. The orb weaver genus *Neoscona* in North America Araneae: Araneidae). Bull. Mus. Comp. Zool. 141: 465-500.

Bishop, S. C. and C. R. Crosby. 1932. Studies in American spiders: the genus *Grammonota*. J. New York Entomol. Soc. 50: 393-421.

Bishop, S. C. and C. R. Crosby. 1935a. American Erigoneae: the spider genera *Pelecopsidis* and *Floricomus*. J. New York Entomol. Soc. 43: 31-45.

Bishop, S. C. and C. R. Crosby. 1935b. Studies in American spiders: miscellaneous genera of Erigoneae. J. New York Entomol. Soc. 43: 217-41 and 255-81.

Bowling, T. A. and R. J. Sauer. 1975. A taxonomic revision of the crab spider genus *Coriarachne* (Araneida, Thomisidae) for North America north of Mexico. J. Arachnol. 2: 183-193.

Brady, A. R. 1964. The lynx spiders of North America north of Mexico (Araneae: Oxyopidae). Bull. Mus. Comp. Zool. 131: 429-518.

Brady, A. R. 1969. A reconsideration of the *Oxyopes apollo* species group with the description of two new species (Araneae: Oxyopidae). Psyche 79: 426-38.

Brady, A. R. 1979. Nearctic species of the wolf spider genus *Trochosa* (Araneae: Lycosidae). Psyche 86: 167-212.

Carico, J. E. 1972. The nearctic spider genus *Pisaurina* (Pisauridae). Psyche 79: 295-310.

Carico, J. E. 1973. The nearctic species of the genus *Dolomedes* (Araneae: Pisauridae). Bull. Mus. Comp. Zool. 144: 435-88.

Chamberlin, R. V. and W. J. Gertsch. 1958. The spider family Dictynidae in America north of Mexico. Bull. Amer. Mus. Nat. Hist. 116: 1-152.

Chamberlin, R V. and W. Ivie. 1940. Agelenid spiders of the genus *Circurina*. Bull. Mus. Univ. Utah 30, Bul. Ser. 5: 1-108.

Chamberlin, R. V. and W. Ivie. 1941. North American Agelenidae of the genera *Agelenopsis*, *Calilena*, *Ritalena* and *Tortolena*. Ann. Entomol. Soc. Amer. 34: 585-628.

Crosby, C. R. and S. C. Bishop. 1925. Studies in New York spiders, genera: *Ceratinella* and *Ceraticelus*. New York State Mus. Bull. 264: 3-70.

Crosby, C. R. and S. C. Bishop. 1928. Revision of the spider genera *Erigone*, *Eperigone* and *Catabrithorax* (Erigoneae). New York State Mus. Bull. 278: 3-96.

Crosby, C. R. and S. C. Bishop. 1933. Two new species of *Eperigone* (Araneae). Entomol. News 44: 227-29.

Dean, D. A., W. L. Sterling and N. V. Horner. 1982. Spiders in eastern Texas cotton fields. J. Arachnol. 10: 251-60.

Dondale, C. D. 1961. Revision of the *aureolus* group of the genus *Philodromus* (Araneae: Thomisidae) in North America. Can. Entomol. 93: 199-222.

Dondale, C. D. and J. H. Redner. 1968. The *imbecillus* and *rufus* groups of the spider genus *Philodromus* in North America (Araneida: Thomisidae). Mem. Entomol. Soc. Can. 55:3-78.

Dondale, C. D. and J. H. Redner. 1969. The *infuscatus* and *dispar* groups of the spider genus *Philodromus* in North and Central America and the West Indies (Araneida: Thomisidae). Can. Entomol. 101: 921-54.

Dondale, C. D. and J. H. Redner. 1975a. The genus *Ozyptila* in North America (Araneae, Thomisidae). J. Arachnol. 2: 129-81.

Dondale, C. D. and J. H. Redner. 1975b. The *fuscomarginatus* and *histrio* groups of the spider genus *Philodromus* in North America (Araneida: Thomisidae). Can. Entomol. 107: 369-84.

Dondale, C. D. and J. H. Redner. 1976a. A review of the spider genus *Philodromus* in the Americas (Araneida: Philodromidae). Can. Entomol. 108: 127-57.

Dondale, C. D. and J. H. Redner. 1976b. A new nearctic species of *Misumenops* (Araneida: Thomisidae). Can Entomol. 108: 1007-8.

Dondale, C. D. and J. H. Redner. 1976c. A rearrangement of the North American species of *Clubiona*, with descriptions of two new species (Araneida: Clubionidae). Can. Entomol. 108: 1155-65.

Dondale, C. D. and J. H. Redner. 1978a. The insects and arachnids of Canada, part 5: the crab spiders of Canada and Alaska, Araneae: Philodromidae and Thomisidae. Agric. Canada Public. 1663:1-225.

Dondale, C. D. and J. H. Redner. 1978b. Revision of the nearctic wolf spider genus *Schizocosa* (Araneida: Lycosidae). Can. Entomol. 110: 143-81.

Dondale, C. D. and J. H. Redner. 1981. Classification of two North American species of *Pirata*, with a description of a new genus (Araneae, Lycosidae). Bull. Amer. Mus. Nat. Hist. 170: 106-10.

Dondale, C. D., and J. H. Redner. 1982. The insects and arachnids of Canada, part 9: the sac spiders of Canada and Alaska, Araneae: Clubionidae and Anyphaenidae. Agric. Can. Public. 1724: 1-194.

Dondale, C. D. and J. H. Redner. 1983a. Revision of the wolf spiders of the genus *Arctosa* C. L. Koch in North and Central America (Araneae: Lycosidae). J. Arachnol. 11: 1-30.

Dondale, C. D. and J. H. Redner. 1983b. The wolf spider genus *Allocosa* in North and Central America (Araneae: Lycosidae). Can. Entomol. 115: 933-64.

Dondale, C. D., A. L. Turnbull and J. H. Redner. 1964. Revision of the nearctic species of *Thanatus* C. L. Koch (Araneae: Thomisidae). Can. Entomol. 96: 636-56.

Edwards, R. J. 1958. The spider subfamily Clubioninae of the United States, Canada and Alaska (Araneae: Clubionidae). Bull. Mus. Comp. Zool. 118: 363-461.

Gertsch, W. J. 1933. Notes on American spiders of the family Thomisidae. Amer. Mus. Novitates No. 593: 1-22.

Gertsch, W. J. 1939. A revision of the typical crab spiders (Misumeninae) of America north of Mexico. Bull. Amer. Mus. Nat. Hist. 76: 277-442.

Gertsch, W. J. 1953. The spider genera *Xysticus*, *Coriarachne*, and *Oxyptila* (Thomisidae, Misumeninae) in North America. Bull. Amer. Mus. Nat. Hist. 102: 413-82.

Gertsch, W. J. and L. I. Davis. 1936. New spiders from Texas. Amer. Mus. Novitates No. 881: 1-21.

Gertsch, W. J. and S. Mulaik. 1936. Diagnosis of new southern spiders. Amer. Mus. Novitates No. 851: 1-21.

Heiss, J. S. and R. T. Allen. 1986. The Gnaphosidae of Arkansas. Arkansas Agri. Exp. Sta. Bull. No. 885: 1-67.

Ivie, W. 1965. The spiders of the genus *Islandiana* (Linyphiidae, Erigoninae). Amer. Mus. Novitates No. 2221:1-25.

Kagan, M. 1943. The Araneida found on cotton in central Texas. Ann. Entomol. Soc. Amer. 36: 257-58.

Kaston, B. J. 1948. Spiders of Connecticut. Connecticut Geol. Nat. Hist. Surv. Bull. 70: 1-874.

Kaston, B. J. 1973. Four new species of *Metaphidippus* with notes on related jumping spiders (Araneae: Salticidae) from the eastern and central United States. Trans. Amer. Microsc. Soc. 92: 106-122.

Kaston, B. J. 1978. How to Know the Spiders, 3rd ed. Wm. C. Brown, Dubuque, Iowa. 272 pp.

Leigh, T. F. and R. C. Hunter. 1969. Predaceous spiders in California cotton. California Agric. 23: 4-5.

Levi, H. W. 1953. Spiders of the genus *Dipoena* from America north of Mexico (Araneae: Theridiidae). Amer. Mus. Novitates No. 647: 1-39.

Levi, H. W. 1954a. Spiders of the genus *Euryopis* from North and Central America (Araneae, Theridiidae). Amer. Mus. Novitates No. 1666: 1-48.

Levi, H. W. 1954b. The spider genus *Theridula* in North and Central America and the West Indies (Araneae: Theridiidae). Trans. Amer. Microsc. Soc. 73: 331-43.

Levi, H. W. 1955. The spider genera *Coressa* and *Achaearanea* in America north of Mexico (Araneae, Theridiidae). Amer. Mus. Novitates No. 1718: 1-33.

Levi, H. W. 1957. The spider genera *Enoplognatha*, *Theridion*, and *Paidisca* in America north of Mexico (Araneae, Theridiidae). Bull. Amer. Mus. Nat. Hist. 112: 1-124.
Levi, H. W. 1959a. The spider genera *Achaeranea*, *Theridion* and *Sphyrotinus* from Mexico, Central America and the West Indies (Araneae, Theridiidae). Bull. Mus. Comp. Zool. 121: 57-163.
Levi, H. W. 1959b. The spider genus *Latrodectus* (Araneae: Theridiidae). Trans. Amer. Microsc. Soc. 78:7-43.
Levi, H. W. 1963a. American spiders of the genera *Audifia*, *Euryopis* and *Dipoena* (Araneae, Theridiidae). Bull. Mus. Comp. Zool. 129: 122-83.
Levi, H. W. 1963b. American spiders of the genus *Achaearanea* and the new genus *Echinotheridion* (Araneae, Theridiidae). Bull. Mus. Comp. Zool. 129: 187-240.
Levi, H. W. 1963c. American spiders of the genus *Theridion* (Araneae, Theridiidae). Bull. Mus. Comp. Zool. 129: 481-589.
Levi, H. W. 1966. American spiders of the genera *Theridula* and *Paratheridula* (Araneae, Theridiidae). Psyche 73: 123-30.
Levi, H. W. 1968. The spider genera *Gea* and *Argiope* in America (Araneae: Araneidae). Bull. Mus. Comp. Zool. 136: 319-52.
Levi, H. W. 1971. The *diadematus* group of the orb-weaver genus *Araneus* north of Mexico (Araneae: Araneidae). Bull. Mus. Comp. Zool. 141: 131-79.
Levi, H. W. 1973. Small orb-weavers of the genus *Araneus* north of Mexico (Araneae: Araneidae). Bull. Mus. Comp. Zool. 145: 473-552.
Levi, H. W. 1974. The orb-weaver genera *Araniella* and *Nuctenea* (Araneae: Araneidae). Bull. Mus. Comp. Zool. 146: 291-316.
Levi, H. W. 1975a. The American orb-weaver genera *Larinia*, *Cercidia* and *Mangora* north of Mexico (Araneae, Araneidae). Bull. Mus. Comp. Zool. 147: 101-135.
Levi, H. W. 1975b. Additional notes on the orb-weaver genera *Araneus*, *Hyposinga* and *Singa* north of Mexico (Araneae, Araneidae). Psyche 82: 265-74.
Levi, H. W. 1976. The orb-weaver genera *Verrucosa*, *Acanthepeira*, *Wagneriana*, *Acacesia*, *Wixia*, *Scoloderus* and *Alpaida* north of Mexico (Araneae: Araneidae). Bull. Mus. Comp. Zool. 147: 351-91.
Levi, H. W. 1977a. The American orb-weaver genera *Cyclosa*, *Metazygia* and *Eustala* north of Mexico (Araneae: Araneida). Bull. Mus. Comp. Zool. 148: 61-127.
Levi, H. W. 1977b. The orb-weaver genera *Metepeira*, *Kaira* and *Aculepeira* in America north of Mexico (Araneae: Araneidae). Bull. Mus. Comp. Zool. 148: 185-238.
Levi, H. W. 1978. The American orb-weaver genera *Colphepeira*, *Micrathena* and *Gasteracantha* (Araneae: Araneidae). Bull. Mus. Comp. Zool. 148: 417-42.
Levi, H. W. 1980a. The orb-weaver genus *Mecynogea*, the subfamily Metinae and the genera *Pachygnatha*, *Glenognatha* and *Azilia* of the subfamily Tetragnathinae north of Mexico (Araneae: Araneidae). Bull. Mus. Comp. Zool. 149: 1-74.
Levi, H. W. 1980b. Two new spiders of the genera *Theridion* and *Achaearanea* from North America (Araneae, Theridiidae). Trans. Amer. Microsc. Soc. 99: 334-37.
Levi, H. W. 1981a. The American orb-weaver genera *Dolichognatha* and *Tetragnatha* north of Mexico (Araneae, Araneidae). Bull. Mus. Comp. Zool. 149: 271-318.
Levi, H. W. 1981b. More on the genus *Araneus* from North America. Bull. Amer. Mus. Nat. Hist. 170: 254-56.
Levi, H. W. and L. R. Levi. 1972. The genera of the spider family Theridiidae. Bull. Mus. Comp. Zool. 127: 4-71.
Lowrie, D. C. and C. D. Dondale. 1981. A revision of the *nigra* group of the genus *Pardosa* in North America (Araneae, Lycosidae). Bull. Amer. Mus. Nat. Hist. 170: 125-39.
Millidge, A. F. 1983. The erigonine spiders of North America, part 6. The genus *Walckenaera* Blackwall (Araneae, Linyphiidae). J. Arachnol. 11: 105-200.
Muma, M. H. and W. J. Gertsch. 1964. The spider family Uloboridae in North America north of Mexico. Amer. Mus. Novitates No. 2196: 1-43.
Opell, B. D. and J. A. Beatty. 1976. The nearctic Hahniidae (Arachnida: Araneae). Bull. Mus. Comp. Zool. 147: 393-433.

Pamanes-Guerrero, A. 1975. Spider populations in cotton. Ph.D. Dissert. Texas A and M University, 95 pp.

Peckham, G. W. and E. G. Peckham. 1909. Revision of the Attidae of North America. Trans. Wisconsin Acad. Sci. 16: 355-646.

Platnick, N. I. 1974. The spider family Anyphaenidae in America north of Mexico. Bull. Mus. Comp. Zool. 146: 205-66.

Platnick, N. I. 1975. A revision of the holarctic spider genus *Callilepis* (Araneae, Gnaphosidae). Amer. Mus. Novitates No. 2573: 1-32.

Platnick, N. I. and M. U. Shadab. 1974a. A revision of the *tranquillus* and *speciosus* groups of the spider genus *Trachelas* (Araneae, Clubionidae) in North and Central America. Amer. Mus. Novitates No. 2553: 1-34.

Platnick, N. I. and M. U. Shadab. 1974b. A revision of the *bispinosus* and *bicolor* groups of the spider genus *Trachelas* (Araneae, Clubionidae) in North and Central America and the West Indies. Amer. Mus. Novitates No. 2560: 1-34.

Platnick, N. I. and M. U. Shadab. 1975. A revision of the spider genus *Gnaphosa* (Araneae, Gnaphosidae) in America. Bull. Amer. Mus. Nat. Hist. 155: 1-66.

Platnick, N. I. and M. U. Shadab. 1976a. A revision of the spider genera *Drassodes* and *Tivodrassus* (Araneae, Gnaphosidae) in North America. Amer. Mus. Novitates No. 2593: 1-29.

Platnick, N. I. and M. U. Shadab. 1976b. A revision of the spider genera *Rachodrassus*, *Sosticus*, and *Scopodes* (Araneae, Gnaphosidae) in North America. Amer. Mus. Novitates No. 2594: 1-33.

Platnick, N. I. and M. U. Shadab. 1977. A revision of the spider genera *Herpyllus* and *Scotophaeus* (Araneae, Gnaphosidae) in North America. Bull. Amer. Mus. Nat. Hist. 159: 1-44.

Platnick, N. I. and M. U. Shadab. 1980. A revision of the North American spider genera *Nodocion*, *Litopyllus*, and *Synaphosus* (Araneae, Gnaphosidae). Amer. Mus. Novitates No. 2691: 1-26.

Platnick, N. I. and M. U. Shadab. 1981. A revision of the spider genus *Sergiolus* (Araneae, Gnaposidae). Amer. Mus. Novitates No. 2717: 1-41.

Platnick, N. I. and M. U. Shadab. 1982. A revision of the American spiders of the genus *Drassyllus* (Araneae, Gnaphosidae). Bull. Amer. Mus. Nat. Hist. 173: 1-97.

Platnick, N. I. and M. U. Shadab. 1983. A revision of the American spiders of the genus *Zelotes* (Araneae, Gnaphosidae). Bull. Amer. Mus. Nat. Hist. 174: 97-192.

Reiskind, J. 1969. The spider subfamily Castianeirinae of North and Central America (Araneae, Clubionidae). Bull. Mus. Comp. Zool. 138:163-325.

Richman, D. B. 1978. Key to the jumping spiders (salticid) genera of North America. Peckhamia 1: 77-82.

Roth, V. D. 1985. Spider genera of North America. Published by author; available American Arach. Soc., c/o Dr. J. Reiskind, Dept. Zool., Univ. Florida, Gainesville, FL 32611.

Roth, V. D. and P. L. Brame. 1972. Nearctic genera of the spider family Agelenidae (Arachnida, Araneida). Amer. Mus. Novitates No. 2505: 1-52.

Roth, V. D. and W. Brown. 1973. Illustrated key to nearctic Gnaphosidae. Amer. Arachnol., .No. 9., Suppl. 1: 1-5.

Skinner, R. B. 1974. The relative and seasonal abundance of spiders from the herb-shrub stratum of cotton fields and the influence of peripheral habitat on spider populations. M.S. Thesis, Auburn University. 107 pp.

Turnbull, A. L., C. D. Dondale and J. H. Redner. 1965. The spider genus *Xysticus* C. L. Koch (Araneae, Thomisidae) in Canada. Can. Entomol. 97: 1233-280.

Vogel, B. 1964. A taxonomic revision of the "distincta" group of the wolf-spider genus *Pardosa* in America north of Mexico. Postilla 82: 1-30.

Vogel, B. 1970. Taxonomy and morphology of the *sternalis* and *falcifera* species groups of *Pardosa* (Araneida: Lycosidae). Armadillo Pap. 3: 1-31.

Whitcomb, W. H. 1967. Field studies on predators of the second-instar bollworm, *Heliothis zea* (Boddie) (Lepidoptera: Noctuidae). J. Georgia Entomol. Soc. 2: 113-18.

Whitcomb, W. H. and K. Bell. 1964. Predaceous insects, spiders and mites of Arkansas cotton fields. Arkansas Agric. Exp. Sta. Bull. 690, p. 2-84.

Whitcomb, W. H., H. Exline and M. Hite. 1963a. Comparison of spider populations of ground stratum in Arkansas pasture and adjacent cultivated field. Proc. Arkansas Acad. Sci. 17: 34-9.

Whitcomb, W. H., H. Exline and R. C. Hunter. 1963b. Spiders of the Arkansas cotton field. Ann. Entomol. Soc. Amer. 56: 653-60.

Zorsch, H. M. 1937. The spider genus *Lepthyphantes* in the United States. Amer. Midl. Natur. 18: 857-98.

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