

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Papers from the University Studies series (The University of Nebraska)

University Studies of the University of Nebraska

10-1927

The spiders of Nebraska

Leonard G. Worley

Gayle B. Pickwell

Follow this and additional works at: <https://digitalcommons.unl.edu/univstudiespapers>



Part of the [Arts and Humanities Commons](#)

This Article is brought to you for free and open access by the University Studies of the University of Nebraska at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Papers from the University Studies series (The University of Nebraska) by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

VOL. XXVII JANUARY-OCTOBER, 1927 Nos. 1-4

UNIVERSITY STUDIES

PUBLISHED BY THE UNIVERSITY OF NEBRASKA

COMMITTEE ON PUBLICATION

F. M. FLING	L. A. SHERMAN
LOUISE POUND	HUTTON WEBSTER
R. J. POOL	H. H. MARVIN
GILBERT H. DOANE	

THE SPIDERS OF NEBRASKA

LEONARD G. WORLEY AND GAYLE B. PICKWELL

LINCOLN, NEBRASKA

THE
UNIVERSITY STUDIES
OF THE
UNIVERSITY OF NEBRASKA

VOLUME XXVII

LINCOLN
PUBLISHED BY THE UNIVERSITY
1927

UNIVERSITY STUDIES

VOL. XXVII

JANUARY-OCTOBER, 1927

Nos. 1-4

THE SPIDERS OF NEBRASKA

LEONARD G. WORLEY AND GAYLE B. PICKWELL

THE SPIDERS OF NEBRASKA

CONTENTS

INTRODUCTION	3
LIST OF SPECIES.....	6
KEY TO FAMILIES.....	6
Suborder Mybalomorphae	8
Family Treraphosidae	8
Suborder Arachnomorphae	8
Family Uloboridae	9
Family Dictynidae.....	9
Family Dysderidae	13
Family Gnaphosidae.....	14
Family Pholcidae.....	22
Family Theridiidae.....	23
Family Linyphiidae	32
Subfamily Linyphiinae.....	32
Subfamily Erigoninae.....	37
Family Argiopidae	41
Subfamily Tetragnathinae.....	41
Subfamily Metinae	44
Subfamily Gasteracanthinae	45
Subfamily Argiopidae	46
Subfamily Araneinae	47
Family Mimetidae.....	58
Family Thomisidae.....	59
Subfamily Misumeninae.....	59
Subfamily Philodrominae.....	69
Family Clubionidae.....	75
Family Agelenidae	82
Family Pisauridae.....	84
Family Lycosidae	88
Family Oxyopidae.....	104
Family Salticidae	104
SUMMARY	125
BIBIOGRAPHY	126

THE SPIDERS OF NEBRASKA *

LEONARD G. WORLEY AND GAYLE B. PICKWELL

I. INTRODUCTION

Lawrence Bruner, in the early days of his work in Nebraska, made a collection of the spiders that he came upon during his collecting trips in various parts of the state and these specimens were later identified by George Marx, one of the older arachnologists. Marx's list of identifications was sent to Professor Bruner in a letter dated July 26, 1893, but in the years that have passed since that time the specimens themselves have been lost and all that remains is the list as it appears in the letter. This list includes 107 species, of which 8 cannot now be located in catalogues, while of the remaining 99 species several must be considered doubtful as Nebraska species. These spiders are included in the present list for the sake of completeness, but in the case of species concerning which there is any doubt the facts are clearly stated.

Collections of spiders were made by Pickwell in 1921 and 1922, and upon them was based a master's thesis presented to the University of Nebraska in June, 1922. He collected at several localities in southeastern Nebraska, but received material also from Danbury, in the southwest, and from Ainsworth, in the north central part of the state. A collecting trip was made in August and September, 1922, through central Nebraska to the western boundary. Collecting was continued in southeastern Nebraska in August and September, 1923, and also in the same months in 1924. The number of species collected by Pickwell numbered 109, which did not include 43 of those listed by Marx in the Bruner collection. He prepared a paper which was accepted for publication by the University Studies; however, its appearance was delayed by lack of funds. In this paper were included observations on hibernation, period of maturity, habitats, and distribution.

Worley began his work in the spring of 1923, and it was continued until the fall of 1927. His collections were made at Plattsmouth and Fremont in the deciduous forest faunal

* Studies from the Zoological Laboratory, The University of Nebraska, No. 135.

region, at various places near Lincoln in the prairie region, at Halsey in the sandhills, and in the high plains region near Mitchell and Scottsbluff. The total number of species definitely known to occur in the state was increased to 221, representing 109 genera, and the distribution was much more accurately determined. In a master's thesis submitted to the University in June, 1928, Worley presented keys for identification and included in a systematic treatment of the spiders of Nebraska all those collected by Bruner and listed by Pickwell, as well the species added by himself.

The delay in the publication of Pickwell's thesis until Worley's studies were far advanced made evident the desirability of incorporating both in one published paper, and since Worley's work was the more complete it has formed the basis of the present contribution.

From the statements which precede it is apparent that Nebraska has been quite thoroughly covered with the exception of the northern portion and the Pine Ridge in the extreme northwest.

In the list which follows, and also in the keys, species are included which have not actually been found in the state but the occurrence of which seems likely. This was done with the expectation of making this treatment of the group adequate as a basis for study to any future collector. However, economy of space precludes a discussion of the structure; it is suggested, therefore, that the student should carefully acquaint himself with the nomenclature of the external anatomy of a spider before attempting to use the keys which follow. As references, the excellent works of Comstock (1912) or of Emerton (1902) are advised. When only one sex is referred to in the keys which are given in this paper it may be inferred that specimens of the other sex are unknown or practically unidentifiable.

The families of spiders are listed in the same sequence as is followed in the most recent catalogue of North American spiders, that of Petrunkevitch (1911), but the nomenclature of that catalogue, particularly with regard to genera, is not

followed strictly. Instead the more recent revisions of various families have been used. The sources of the nomenclature within the several spider families included in the list are as follows:

Theraphosidae	Petrunkévitch, 1911
Uloboridae	Petrunkévitch, 1911
Dictynidae	Petrunkévitch, 1911
Dysderidae	Petrunkévitch, 1911
Gnaphosidae	Chamberlin, 1922
Pholcidae	Petrunkévitch, 1911
Theridiidae	Petrunkévitch, 1911
Linyphiidae	Petrunkévitch, 1911
Argiopidae	Banks, 1910
Mimetidae	Petrunkévitch, 1911
Thomisidae	Petrunkévitch, 1911
Clubionidae	Banks, 1910
Agelenidae	Banks, 1910
Pisauridae	Bishop, 1924
Lycosidae	Petrunkévitch, 1911
Oxyopidae	Petrunkévitch, 1911
Salticidae	Peckham, 1909

Following the name of the species listed and the reference to its original description, is a statement of the number of Nebraska specimens of that species studied by the authors, and their sex. When the sex could not be determined because of the immaturity of the individuals they are simply called "immature." A brief paragraph is given outlining the range of each species in North America and this is followed by a statement of the distribution of the species in Nebraska as indicated by the collections. Remarks on each species include the data regarding the time of its appearance in the spring and disappearance in the fall, a word regarding the time of maturation and hibernation, and a list of the various habitats where the species has been found.

The authors are very grateful to Dr. Robert H. Wolcott of the Department of Zoology of the University of Nebraska, under whose direction the research was done, for suggestions made during the progress of the work and for aid in the preparation of the manuscript. They are indebted to the following for literature and for assistance in the identification of specimens: James H. Emerton, Boston, Mass.;

Nathan Banks and Elizabeth B. Bryant, Museum of Comparative Zoology, Cambridge, Mass.; C. R. Crosby, Cornell University, Ithaca, New York; Ralph V. Chamberlain, University of Utah, Salt Lake City, Utah; William M. Barrows, Ohio State University, Columbus, Ohio; and R. M. Seeley, Cornell University, Ithaca, New York. John S. Burley, Earl T. Engle and Alfred Palmer have contributed collections from various parts of the state.

Thanks are also due to Nathan Banks, Ralph V. Chamberlin, and C. R. Crosby for the use of keys. Keys from Comstock, Keyserling and Cambridge have also been used. In connection with each key its source is given, the name of the author being followed by the date, both in parenthesis. In the keys alternative characters are identified by the same figure, or figure and letter.

II. LIST OF SPECIES

KEY TO FAMILIES

The following key to the families of spiders is taken largely from a work by Banks (1905):

1. Two pairs of lung slits on venter of abdomen; fangs of mandibles moving vertically, parallel to each other (Mygalomorphae)
 - Theraphosidae
1. But one pair of lung slits on venter of abdomen; fangs of mandibles moving horizontally, opposing each other..... (Arachnomorphae)
 2. With only six eyes; third pair of legs directed forward
 - Dysderidae
 2. With eight eyes; third pair of legs directed outward or backward
 3. With a cribellum and calamistrum in the female
 3. Without cribellum and calamistrum
 4. Lateral eyes as far apart as median eyes; making silk-lined burrowsUloboridae
 4. Lateral eyes closer together than median eyes; making irregular websDictynidae
 5. Eyes always in three transverse rows; eyes of second row extremely small, and middle eyes of first row very much larger than other eyes; clypeus always vertical; legs rather short; jumping spiders.....Salticidae
 5. Eyes in two or three transverse rows; when in three rows, then middle eyes of first row are not much larger than other eyes, and those of second row not much smaller than other eyes
 6. Each tarsus with three claws; spiders spinning webs

- 7a. Eyes in two transverse rows, more or less curved; tarsi without scopuli; posterior lateral eyes never much larger than eyes of front row
 - 8a. The posterior lateral eyes touching the posterior median eyes, resulting in a group of three on each sidePholcidae
 - 8a. The posterior lateral and median eyes not touching; only two eyes in side group
 - 9a. Legs I and II long, with rows of two kinds of spines, one long, the other in between, very short and curved.....Mimetidae
 - 9a. No such spine arrangement on legs
 - 10a. Upper spinnerets long and two-jointed; the anterior median eyes only dark-colored
Agelenidae
 - 10a. Upper spinnerets not long and two-jointed; often other eyes than anterior median dark-colored; lateral eyes often contiguous
 - 11a. A comb on hind tarsus; legs usually without spines; abdomen often globose; maxillae inclined over labium; clypeus as high as eye area.....Theridiidae
 - 11a. No such comb on hind tarsus; maxillae usually less inclined over lip; legs often spined
 - 12a. At base of mandibles on the outer side is a striate or roughened area; no accessory claws to tarsi; male palpal organ with a tarsal hook; making irregular webs
Linyphiidae
 - 12a. At base of mandibles on outer side there is no such roughened area, but usually a condyle; clypeus not as high as eye area; accessory claws at tip of tarsi; orb weaversArgiopidae
- 7a. Eyes usually in three rows; when in two rows the posterior median eyes are much larger than the eyes of the front row, or tarsi are scopulate
 - 8b. But two eyes in anterior row, or, if four, then median eyes are very small and fully three times their diameter from the lateral eyes.....Oxyopidae
 - 8b. Four eyes in anterior row, middle eyes never so very much smaller nor so far from the lateral eyes
 - 9b. Eyes in three rows, those of the anterior row very much smaller than the others; clypeus nearly vertical; no spur at tip of tibia of male palpusLycosidae

Nebraska Spiders

- 9b. Eyes in two curved rows; those of the anterior row not so much smaller than the others; clypeus sloping; a spur at tip of the tibia of male palpus Pisauridae
6. Each tarsus with but two claws; never spinning webs; lateral eyes rarely contiguous
- 7b. Posterior median eyes black; anterior surface of first and second pair of legs directed upward; second pair of legs nearly always as long as the fourth pair; cephalothorax broad, and rather flattened.... Thomisidae
- 7b. Posterior median eyes pale, only the anterior median eyes dark-colored; legs I and II not with anterior surface directed upward; leg II often shorter than leg IV
- 8c. Lower spinnerets distinctly separated, rather long and prominent; maxillae with an obliquely transverse furrow or groove; abdomen often depressed Gnaphosidae
- 8c. Lower spinnerets contiguous, maxillae usually without furrow, its outer side convex; abdomen more often cylindrical..... Clubionidae

SUBORDER MYGALOMORPHAE

FAMILY THERAPHOSIDAE

Two pairs of book lungs; fangs of mandibles moving vertically, parallel to each other. A single species, representing the genus *Brachybothrium* Simon, is found in Nebraska. This genus includes those four-lunged spiders which possess but four spinnerets.

Brachybothrium lincolnianum Worley, Ann. Ent. Soc. Amer., 1928, v. 21, p. 619.

Specimens: 4 males.

Distribution: Known only from Lincoln, the type locality, where specimens have been collected under logs in woods between March 18 and April 19. This species is very similar in habits to *B. pacificum* Simon of the Pacific Coast, constructing burrows in the ground six to ten inches deep and lining them with sil'. The openings are at the surface under stones and logs.

SUBORDER ARACHNOMORPHAE

A single pair of book lungs; fangs of mandibles moving horizontally, opposing each other.

FAMILY ULOBORIDAE

Genera (Comstock, 1912):

1. Cephalothorax ovate; rounded behind.....*Uloborus* Latr.
1. Cephalothorax wide in the middle, narrowed in front and cut off
squarely behind; the sides concave in front, nearly parallel behind
Hyptiotes Walck.

Hyptiotes cavatus (Hentz) is found from New England southward along the Atlantic Coast and west through New York, Pennsylvania, Ohio and Wisconsin; along the Pacific Coast from British Columbia to California; it will probably be found throughout the United States and it is so listed by Petrunkevitch (1911). We have no records of its occurrence in Nebraska, however.

Uloborus americanus Walckenaer, Ins. Apt., 1842, v. 2, p. 229.

Specimens: 10, immature.

Distribution: United States from the Great Lakes to the Gulf and west throughout the country.

Occurrence in Nebraska: Deciduous and coniferous forests in eastern Nebraska; not collected west of the 96th meridian. Fremont, Plattsmouth and Wabash; September 2 to October 17. At Fremont webs were found in cedars; at Plattsmouth it was abundant on lindens and elms. No mature individuals have been collected, although they are said to mature early in summer.

FAMILY DICTYNIDAE

Genera (Comstock, 1912):

1. Larger spiders; cribellum divided into two parts by a vertical line; clypeus low; sternum limited by posterior coxae behind; legs with spines*Amaurobius* C. Koch
1. Smaller spiders; cribellum not divided into two parts by a vertical line; sternum extending behind between the posterior coxae; legs usually without spines
 2. Clypeus decidedly wider than anterior eyes; maxillae only slightly longer than labium.....*Dictyna* Sund.
 2. Clypeus not or only slightly wider than anterior eyes; maxillae a third longer than labium.....*Lathys* Simon

Genus *Amaurobius* C. Koch, 1837:

1. Body dark-colored or black except cephalothorax which may also be dark, but more often brown or orange.....*americanus* (Emerton)
1. Body lighter; abdomen brown or lighter with darker markings
 2. Lateral lobes of epigynum of females meeting behind the central lobe; male with tibial apophysis 3 or 4 times as long as wide and sharply pointed*bennetti* (Black.)
 2. Lateral lobes of epigynum of female not meeting behind the central lobe; male with all tibial apophyses short and usually rather blunt*ferox* (Walck.)

Amaurobius americanus (Emerton). *Titanoeca americana* Emerton, Trans. Conn. Acad., 1888, v. 7, p. 453.

Specimens: 2 females; 6 immature males; 5, immature.

Distribution: New England and New York, west to New Mexico, and north and west through the Rockies to Washington and British Columbia.

Occurrence in Nebraska: Probably the entire state. Collected at Plattsmouth, Weeping Water, Elmwood, Ashland, Lincoln, Fairbury, and west to Halsey in the sandhills. Found from March 30 to November 29. Mature females were collected at Fairbury on May 12, 1923, and at Elmwood on November 29, 1923. It is found under logs, boards and bark in pastures and forests. The sandhill specimens were collected under logs in the Forest Reserve of planted pine at Halsey in July.

Amaurobius bennetti (Blackwall). *Ciniflo bennetti* Blackwall, Ann. Mag. Nat. Hist., 1846, v. 17, p. 41.

Specimen: 1 female.

Distribution: Found throughout the United States and southern Canada.

Occurrence in Nebraska: The single specimen was found by Worley on a tombstone in a cemetery at Lincoln, September 29, 1923. It was a mature female.

Amaurobius ferox (Walckenaer). *Clubiona ferox* Walckenaer, Ins. Apt., 1837, v. 1, p. 606.

Amaurobius ferox is included in our list of Nebraska spiders on the strength of a single specimen collected by Bruner. Recent collectors have not found it.

Genus *Dictyna* Sundevall, 1833:

1. Abdomen with central portion the lightest; darker at edges of dorsum
 - 2a. Abdomen dark brown or reddish at sides; sternum light-colored *foliacea* (Hentz)
 - 2a. Abdomen brown and darker at sides; sternum same color as abdomen..... *frondea* Emerton
1. Abdomen with a dark central band; lighter at sides of dorsum
 - 2b. Domestic species..... *sublata* (Hentz)
 - 2b. Field species
3. Females:
 - 4a. Epigynum with angular openings, or with rounded angular openings..... *volucripes* Keys.
 - 4a. Openings of epigynum evenly oval or round, not angular or even with rounded angles
 5. Diameter of a single circular opening of epigynum only about one-half as great as the length of one of the lateral folds and the latter not continuous with the circular openings..... *coloradensis* Chamb.
 5. Diameter of a single circular opening of epigynum two-thirds as great as the length of one of the lateral folds and the latter are continuous with the circular openings
arundinaceoides Keys.
3. Males:
 - 4b. Gray and rather light-colored; network of abdomen very distinct *coloradensis* Chamb.
 - 4b. Dark gray or brown; network of abdomen faint and not clearly indicated..... *volucripes* Keys.

Dictyna arundinaceoides Keyserling, Verh. zool.-bot. Ges. Wien, 1883, v. 33, p. 665.

Specimens: 6 females; 15, immature.

Distribution: Plains region of Colorado, New Mexico, western Nebraska, and probably Utah and Wyoming.

Occurrence in Nebraska: Known from Scottsbluff and Mitchell in Scottsbluff county and from southern Sioux county, and probably distributed throughout western Nebraska. Taken from June 24 to August 5. Mature females were collected in August.

Chamberlin (1918) has suggested that this form may be a synonym of *Dictyna sublata* (Hentz), but our collections would tend to disprove this, for the latter is a domestic species, while we have not collected *D. arundinaceoides* in houses but on plants in fields, on milkweed and in marsh grass. Our specimens agree with Keyserling's original description. Bruner had previously collected this *Dictyna* in Nebraska.

Dictyna coloradensis Chamberlin, Ann. Ent. Soc. Amer. 1918, v. 12, p. 241.

Specimens: 3 females.

Distribution: Plains of Colorado, New Mexico and Nebraska.

Occurrence in Nebraska: Plains of western Nebraska. Collected at Scottsbluff and Haigler, from June 4 to July 16, in marsh grass and on milkweed blossoms. All of our specimens are mature.

Dictyna foliacea (Hentz). *Theridion foliaceum* Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 27.

Specimens: 4 males; 6 females; 38, immature.

Distribution: Eastern states, west to Utah and Washington; south to Florida; north to Ottawa, Ontario.

Occurrence in Nebraska: Entire eastern Nebraska. Recorded from Plattsmouth, Weeping Water, Havelock, Lincoln and Sprague, and west as far as Danbury, Red Willow county.

Dictyna foliacea matures in the spring, probably in late April. We have found it under logs in winter, but it appears on shrubbery in April and remains there until frost in the fall. Our mature specimens were all collected in May on gooseberry, coralberry and other types of shrubbery, linden trees, and grass. Bruner collected this species in this state.

Dictyna frondea Emerton, Trans. Conn. Acad. Sci., 1888, v. 6, p. 276.

Specimen: 1 female.

Distribution: New England, west to Indiana and possibly Nebraska; south to the District of Columbia.

Occurrence in Nebraska: A female *Dictyna*, collected by Pickwell at Murdock, July 4, 1922, was identified by Emerton as "probably" this species. This individual was taken from a small web on the tip of an apple tree twig.

Dictyna sublata (Hentz). *Theridion sublatum* Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 276.

Specimens: 2 males; 6 females; 1, immature.

Distribution: A cosmopolitan domestic species found throughout the United States and probably southern Canada.

Occurrence in Nebraska: Probably the entire state. We have specimens from Lincoln and Mitchell; and from March to September. The spring specimens are mature; the fall specimens, immature.

Dictyna volucripes Keyserling, Verh. zool.-bot. Ges. Wien, 1881, v. 31, p. 286.

Specimens: 8 females; 6 immature males; 3, immature.

Distribution: Atlantic Coast, from Massachusetts to North Carolina, west to Colorado and Utah.

Occurrence in Nebraska: Eastern half of state, west to Halsey. Replaced in western Nebraska by *D. arundinaceoides* and *D. coloradensis*. Collected at Plattsmouth, Lincoln and Halsey. Dates from May 27 to October 17. Like other members of the genus, *D. volucripes* matures in the spring. We have collected it on clover, on goldenrod blossoms, in sandhill grass, in low prairie grassland, and in webs on milkweeds. Bruner had previously collected it in Nebraska and Scheffer (1904) had found it in Kansas.

Lathys sp?

Specimen: 1 female.

A mature female specimen was collected by Worley under a board near a lake in the high plains region of Nebraska, in southern Sioux county, July 6, 1923. The specimen appears to represent a new species, but is poorly preserved.

FAMILY DYSDERIDAE

Dysdera crocata C. Koch, Die Arach., 1839, v. 5, p. 81.

Specimen: 1 male.

Distribution: Said to be found throughout the United States (Petrunkevitch, 1911).

Occurrence in Nebraska: Worley has a single specimen from Lincoln, collected September 16, 1923, under a piece of tin on the salt flats.

FAMILY GNAPHOSIDAE

Genera (Chamberlin, 1922):

1. Lower margin of the cheliceral furrow keeled or lobed
 - 2a. Posterior row of eyes much longer than anterior; strongly recurved, with median eyes usually obviously nearer each other than laterals; lobe of lower margin of chelicerae concave and with several teeth or serrations; cephalothorax usually showing a dark line or stripe on the border between the cephalic and thoracic parts *Gnaphosa* Latr.
 - 2a. Posterior eye-row but little longer than anterior, the eyes either equidistant or the median eyes farther from each other than from the laterals; keel on lower margin of cheliceral furrow convex and very smooth and sharp like a knife-blade; cephalothorax approximately uniform in color throughout..... *Callilepis* West.
1. Lower margin of the cheliceral furrow unarmed or with one to three ordinary teeth
 - 2b. Tibia IV with two, three or five median dorsal spines; tibia III with one or two
 - 3a. Lower margin of the cheliceral furrow with two or three teeth
 - 4a. Eye-rows close together, the laterals on each side separated by a distance decidedly less than their diameter, usually only equaling or less than their radius; posterior median eyes well separated, being only a bit farther from laterals than from each other; lower margin of cheliceral furrow with three teeth, upper with five..... *Sosticus* Chamb.
 - 4a. Eye-rows widely separated, the laterals on each side separated by a distance about equaling or else exceeding their diameter; posterior median eyes much nearer each other than to laterals; tibia of male palpus longer than tarsus; bulb with a single small apophysis outside of base of embolus
Drassodes West.
 - 3a. Lower margin of cheliceral furrow with only one tooth
Geodrassus Chamb.
 - 2b. Tibia IV with no median dorsal spines or with one
 - 3b. Upper margin of cheliceral furrow unarmed, or with keel, or with three serrations or teeth, rarely more; the lower margin unarmed or with a single tooth or nodule; bulb of male palpus with no apophyses, at most with one or several small teeth at base of the embolus
 - 4b. Posterior eye-row more or less recurved; tibia III with median dorsal spine; carapace without distinct median furrow..... *Sergiolus* Simon
 - 4b. Posterior eye-row more or less procurved or sometimes straight
 - 5a. Lower margin of the cheliceral furrow with one tooth or nodule; anterior median eyes usually as large or larger than laterals

- 6. Clypeus equal to or more than twice as high as the diameter of an anterior eye; post-median eyes much farther from each other than from laterals; body with two black longitudinal stripes over both carapace and abdomen *Cesonia* Simon
- 6. Clypeus obviously lower; posterior median eyes not at all or only little farther from each other than from laterals; body with no such black stripes. *Herpyllus* Hentz
- 5a. Lower margin smooth, wholly unarmed; anterior median eyes usually obviously smaller than laterals
..... *Nodocion* Chamb.
- 3b. Upper margin of cheliceral furrow with three to six distinct teeth, the lower with two or three or rarely with only one; bulb of male palpus with one or more apophyses
- 4c. Upper margin of cheliceral furrow with three teeth, the lower with two, all well developed
- 5b. Posterior median eyes large and oblique, typically close together but well removed from lateral eyes; epigynum of female with a prominent chitinous ridge on each side, this with anterior end free and often cornuate; tibia of male palpus with an apophysis at distal end that is long and laminate, and unbranched..... *Haplodrassus* Chamb.
- 5b. Posterior median eyes circular, their diameter or more apart; epigynum of female with no such freely anteriorly ending rims or ridges; hind spinnerets not longer than anterior, the second joint very short and obscure; tibia of male palpus with apophysis on outer side, this short and bicornuate..... *Orodassus* Chamb.
- 4c. Upper margin of cheliceral furrow with four to six teeth, the lower with two or three small teeth or nodules, or rarely upper margin with only three weak teeth and the lower with but one
- 5c. Posterior eye-row straight or but little procurved with eyes typically equidistant, the median eyes small or at most but little larger than lateral eyes; bulb of male palpus with no median ventral and no ectal apophysis, but with one or two distinct chitinous ridges or apophyses
..... *Zelotes* Gist.
- 5c. Posterior eye-row procurved, median eyes close together or contiguous, larger than lateral eyes, usually much so, oblique; bulb of male palpus with a conspicuous median ventral apophysis and with an ectal one and also a distal one..... *Drassyllus* Chamb.

Callilepis imbecilla (Keyserling). *Pythonissa imbecilla*
Keyserling, Verh. zool.-bot. Ges. Wien, 1887, v. 37, p. 427.

Specimens: 1 male; 10 females; 4 immature males.

Distribution: Eastern United States from New England to Florida and west to Ohio and Nebraska. Also recorded

from Washington (*Callilepis pluto* Banks) and undoubtedly extends north into British Columbia.

Occurrence in Nebraska: The entire state, but most abundant on sandstone outcrops. Recorded from Lincoln, Fairbury and Mitchell; dates from May 12 to June 28. Individuals mature about June 1, for our June specimens are mostly mature while our May specimens are not. The Fairbury specimen was collected in a deciduous forest under a dry log; the others were collected on hot dry hills, some near Lincoln on sandstone, and others under stones in Scottsbluff county.

Cesonia bilineata (Hentz). *Herpyllus bilineatus* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 456.

Specimen: 1, immature.

Distribution: Eastern United States from New England southward and west to Ohio, Indiana and Nebraska.

Occurrence in Nebraska: Pickwell collected a single female specimen at Lincoln, under the bark of an old log, February 28, 1922. It must be considered of rare occurrence in Nebraska.

Genus *Drassodes* Westring, 1861:

1. Epigynum with two pairs of anteriorly extending lobes
1. Epigynum with a broad, plate-like septum extending posteriorly

neglectus (Keys.)

robinsoni Chamb.

The male of *Drassodes robinsoni* has not to our knowledge been described. The females are very easily separated by the structure of the epigynum.

Drassodes neglectus (Keyserling). *Drassus neglectus* Keyserling, Verh. zool.-bot. Ges. Wien, 1887, v. 37, p. 434.

Specimens: 10 males; 2 immature males; 1 immature female; 6, immature.

Distribution: New England and north central states west to Colorado and Utah and north to Washington and British Columbia; also found in eastern Canada.

Occurrence in Nebraska: Eastern Nebraska, common; but we have collected it only at Lincoln and Plattsmouth. This

Drassodes hibernates in the immature condition and matures about the last of April, although immature specimens have been collected at Lincoln as late as May 29. Dates, February 2 to November 30. Our collections of this species have been made on the salt flats, in low prairie grass, under logs in pastures, under rocks and under sandstone.

Drassodes robinsoni Chamberlin, Ann. Ent. Soc. Amer., 1919, v. 12, p. 245.

Specimens: 16 females.

Distribution: Probably ranges throughout the Great Plains region, but as far as we know it has only been collected in Utah, the type locality, and in Nebraska.

Occurrence in Nebraska: On sandstone outcrops throughout the state. Recorded from Lincoln, Scottsbluff and Mitchell; dates, May 30 to July 1. All our specimens that we were able to identify as this species were mature females, but some of the immature specimens placed under *Drassodes neglectus* undoubtedly belong here. Individuals probably reach maturity about the same time as *D. neglectus*. At Mitchell, females were collected with egg sacs June 28, 1923. We have one specimen collected by sweeping high prairie grass; the others were found under sandstone rocks and dung.

Genus *Drassyllus* Chamberlin, 1922:

1. Female epigynum one and one-half times as long as wide
frigidus (Banks)
1. Female epigynum about as long as wide.....*rufulus* (Banks)

? *Drassyllus frigidus* (Banks). *Prothesima frigida* Banks, Proc. Acad. Nat. Sci. Phila., 1892, p. 17.

Distribution: Recorded from New York, Pennsylvania and Virginia.

Occurrence in Nebraska: Marx identified a gnaphosid in Bruner's collection of Nebraska spiders as this species, but because of the improbability of the record we prefer to include it on our list only with doubt.

Drassyllus rufulus (Banks). *Prothesima rufula* Banks, Proc. Acad. Nat. Sci. Phila., 1892, p. 17.

Specimen: 1, immature.

Distribution: Northern United States from New England, through New York and Ohio west to Nebraska.

Occurrence in Nebraska: Eastern portion of the state in deciduous forests. A single specimen was collected by Worley under a log at Lincoln, October 15, 1925.

Geodrassus sp.

Specimen: 1, immature.

Distribution: There are three species of the genus *Geodrassus* in the United States, according to Chamberlin's recent revision of the family Gnaphosidae. One of these was described from Ohio and has also been found in Michigan and New York; a second was described from New York, and another from Utah.

Occurrence in Nebraska: A single immature specimen was found by Worley on sand in a blowout at Halsey, August 16, 1925. This could not be satisfactorily identified because of its immature condition.

Genus *Gnaphosa* Latreille, 1804:

1. Cephalothorax dark brown or black in color
 - 2a. Anterior median appendage of female epigynum with edges wrinkled and longer than wide; tibial apophysis of male palpus as long as rest of tibia or longer.....*brumalis* Thor.
 - 2a. Anterior median appendage of female epigynum smooth and rounded at edges and wider, or at least no narrower, than long; tibial apophysis of male palpus shorter than length of remainder of tibia.....*gigantea* Keys.
1. Cephalothorax red-brown in color
 - 2b. Anterior median appendage of epigynum of female as broad as long*fontinalis* Keys.
 - 2b. Anterior median appendage of female epigynum twice or more as long as broad.....*sericata* (L. Koch)

Gnaphosa brumalis Thorell, Proc. Bost. Soc. Nat. Hist., 1875, v. 17, p. 497.

Distribution: Canada and south into Northern United States, particularly along mountain ranges.

Occurrence in Nebraska: Included in this list because of the collection by Bruner of a Nebraska specimen.

Gnaphosa fontinalis Keyserling, Verh. zool.-bot. Ges. Wien, 1887, v. 37, p. 426.

Specimens: 2 males; 4 females.

Distribution: Mostly southern United States, north to New York and Nebraska and west to Texas. Described originally from Kentucky.

Occurrence in Nebraska: Arid regions of western Nebraska. Collected at Scottsbluff and Mitchell, June 24 to July 1, 1923. We have collected it only under stones and dung.

Gnaphosa gigantea Keyserling, Verh. zool.-bot. Ges. Wien, 1887, v. 37, p. 424.

Specimens: 5 females; 25, immature.

Distribution: Entire northern United States and southern Canada from New England to British Columbia, south to New York, Nebraska, Colorado, Utah, New Mexico and along the Pacific Coast through Washington and Oregon to California.

Occurrence in Nebraska: Entire state, common. We have specimens from Plattsmouth, Waverly, Lincoln, Scottsbluff and Mitchell, taken from March 15 to October. *Gnaphosa gigantea* hibernates in the immature condition and matures in May in eastern Nebraska. At Scottsbluff we found nearly mature individuals in July and mature specimens after July 17. We have collected this rusty-colored spider on mud flats, under bark, on clay and under logs, but it is most common under stones among leaves in woods. In Washington it is found commonly under stones, in moss in coniferous forests.

Gnaphosa sericata (L. Koch). *Pythonissa sericata* L. Koch, Arach. Fam. Drassiden, 1866, p. 31.

Specimens: 1 male; 17 females; 9, immature.

Distribution: Southeastern United States north to New York and Ohio and west to Nebraska, Colorado and Texas.

Occurrence in Nebraska: Entire southern part of the state from Lincoln to Scottsbluff and Mitchell. Individuals were collected from April 3 to July 1, in dry places under dung and stones. This species matures in May.

Haplodrassus signifer (C. Koch). *Drassus signifer* C. Koch, Die Arach., 1839, p. 31.

Specimens: 11 males; 6 females; 15 immature males; 3 immature females; 11, immature.

Distribution: Entire United States and Canada (Chamberlin, 1922).

Occurrence in Nebraska: Entire state from the Missouri River west to the western border. Localities, Plattsmouth, Roca, Lincoln, Fairbury, Scottsbluff and Mitchell. Collected from January 9 to October. This species, which is more widely known under the name *Drassodes robustus*, hibernates in both the adult and immature stages, but usually the latter. Individuals mature in early May, for we have immature specimens collected May 12 and mature specimens collected May 16. They are usually found under logs in forests and in pastures, or under stones in fields and woods. We have also found them by sweeping cattails and weed belts around marshes and in elm shrubbery. It is one of our most abundant spiders.

Herpyllus vasifer (Walckenaer). *Drassus vasifer* Walckenaer, Tab. Aran., 1805, p. 46.

Specimens: over 80, including males, females, and immature specimens.

Distribution: Entire eastern United States and Canada, west to Colorado.

Occurrence in Nebraska: Eastern Nebraska, from Murdock, Plattsmouth, Lincoln, Saltillo, Hanlon and Fairbury, west to Ainsworth, Valentine, Halsey and Danbury. Found throughout the year, hibernating both as immature and mature individuals in thin silken hibernating sacs, under bark, stones, logs and boards in deciduous forest, prairie and pasture. This is the most abundant member of the family in eastern Nebraska. Maturation usually occurs in early summer.

Genus *Nodocion* Chamberlin, 1922:

1. Carapace reddish brown or orange.....*rufithoracica* Worley
1. Carapace black or fulvous.....*zelotoides* Worley

Nodocion rufithoracica Worley, Ann. Ent. Soc. Amer., 1928, v. 21, p. 620.

Specimens: 3 females.

Distribution: Described from Scottsbluff and Mitchell, the type localities, from specimens collected June 21 and July 1, 1923, under dried dung on the high plains. There are no other records.

Nodocion zelotoides Worley, Ann. Ent. Soc. Amer., 1928, v. 21, p. 621.

Specimens: 2 females.

Distribution: Described from Mitchell. Specimens were collected there August 5 and 11, 1923, under dung and in alfalfa.

Genus *Orodrassus* Chamberlin, 1922:

Two species, *Orodrassus assimilis* (Banks) and *O. coloradensis* (Emerton), have been described from Colorado, but they have never been collected in this state to our knowledge.

Sergiolus variegatus (Hentz). *Herpyllus variegatus* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 456.

Specimens: 2 females; 1, immature.

Distribution: Eastern Canada, south through New England and New York; west to Ohio, Indiana, Illinois and Nebraska.

Occurrence in Nebraska: Eastern part of state in deciduous forests. Specimens were collected at Plattsmouth, Fremont and Lincoln, February 27 to September 11. The Plattsmouth individual, taken May 16, 1926, and the Lincoln specimen, collected February 27, 1923, were both mature. It must pass the winter in the mature stage, as does *Herpyllus vasifer*. The Fremont specimen, collected September 11, 1923, was immature. It was collected by sweeping underbrush, while the others were found on the ground under stones.

Sosticus continentalis Chamberlin, was described in 1922 from Dallas county, Iowa. We mention this species and include this genus in our key because of the proximity of the type locality to Nebraska.

Zelotes subterraneus (C. Koch). *Prothesima? subterranea* C. Koch, De Arach., 1839, p. 85.

Specimens: 5 males; 15 females; 2 immature males; 12, immature.

Distribution: Entire eastern United States, extending northwestward to Utah and Washington.

Occurrence in Nebraska: Entire state, abundant. We have specimens from Plattsmouth, Weeping Water, Elmwood, Lincoln, Broken Bow, Halsey, Mitchell and Scottsbluff. Dates from February 15 to November 29. *Zelotes subterraneus* hibernates in the adult and immature stages under bark and under logs, boards and stones. In summer they are found in grass, on herbage in deciduous forests, and under stones.

FAMILY PHOLCIDAE

Genera (Comstock, 1912):

1. Abdomen elongate.....*Pholcus* Walck.
1. Abdomen globose
 2. Femur of first leg twice as long as the cephalothorax, and longer than femur IV; posterior row of eyes slightly procurved
Psilochorus Simon
 2. Femur of first leg not twice the length of the cephalothorax, and shorter than femur IV.....*Pholcophora* Banks

Pholcophora americana Banks, is mentioned here because it was described from Colorado and may occur in Nebraska, although collectors have not found it.

Pholcus phalangioides (Fuesslin). *Aranea phalangioides* Fuesslin, Verz. Schweiz. Ins., 1775, p. 61.

Specimens: Only a few taken.

Distribution: This is a cosmopolitan domestic species found throughout North America, in northern South America, Europe, Asia, and Africa (Petrunkévitch, 1911).

Occurrence in Nebraska: In houses throughout the state. It was first collected by Bruner.

Psilochorus pullulus (Hentz). *Theridion pullulum* Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 282.

Specimens: 5 mature females; 2 immature females.

Distribution: Southern United States, north to Colorado and Nebraska.

Occurrence in Nebraska: Prairie and plains regions of the state from Lincoln west to Halsey and Mitchell. Dates from June 18 (mature females collected at Lincoln) to August 12. Found under stones in the high plains region, under boards in the sandhills, and under a strip of tin along a railroad in the prairie region.

FAMILY THERIDIIDAE

Genera (Banks, 1905; Comstock, 1912):

1. Lateral eyes of each side widely separated.....*Latrodectus* Walck.
1. Lateral eyes of each side contiguous or nearly so
 2. Posterior median eyes fully three times the diameter of one of them apart; abdomen prolonged behind.....*Spintharus* Hentz
 2. Posterior median eyes rarely more than twice the diameter of one of them apart
 3. Anterior median eyes larger than posterior median eyes and much wider apart; clypeus rather high and concave; legs short, leg IV often as long as leg I; palpi thick in female; abdomen pointed behind and somewhat flat.....*Euryopsis* Menge
 3. Anterior median eyes rarely larger than posterior median eyes; if so, then not wider apart
 4. Cephalothorax with a transverse furrow in the middle; abdomen usually produced above and behind with no chitinous pieces at base; leg I longer than leg IV.....*Argyrodes* Simon
 4. Cephalothorax with ordinary dorsal groove or impression; abdomen not prolonged behind
 5. Sternum broadly truncate between coxae IV; small species usually one-twelfth inch or less in length
 - 6a. Cephalothorax with numerous small crescent-shaped elevations, each at one side of a puncture
Crustulina Menge
 - 6a. Cephalothorax lacking crescent-shaped elevations; cuticle of abdomen soft, without horny shields or sigillae; abdomen globose; cephalothorax short and high, narrow in front; posterior median eyes nearer the lateral eyes than to each other; median ocular area narrower in front than behind.....*Theonoe* Simon
 5. Sternum pointed behind; coxae IV not broadly separated
 - 6b. Anterior median eyes much larger than anterior lateral eyes*Steatoda* Sund.

Nebraska Spiders

- 6b. Anterior median eyes not much, if any, larger than anterior lateral eyes
 - 7. Lateral eyes of each side slightly, but distinctly, separate
 - 8a. Clypeus not wider than area occupied by eyes
Lithyphantes Thor.
 - 8a. Clypeus much wider than area occupied by eyes
Asagena Sund.
 - 7. Lateral eyes of each side contiguous
 - 8b. Abdomen dark brown with two white spots across middle.....*Asagena* Sund.
 - 8b. Abdomen not so marked
 - 9. Labium long and pointed, more than half as long as maxillae.....*Teulana* Simon
 - 9. Labium wide and shorter, not more than half as long as maxillae
 - 10. Maxillae nearly straight and parallel or slightly convergent
 - 11a. Larger species; males at least one-sixth inch in length; females, one-fourth inch in length
 - 12a. Lower margin of the cheliceral furrow conspicuously toothed; abdomen moderately high in front
Enoplognatha Pav.
 - 12a. Lower margin of the cheliceral furrow with a very small tooth or with none; abdomen very high in front*Theridion* Walck.
 - 11a. Smaller species
 - 12b. Males only; tibia of male palpus enormously developed
Theridula Emerton
 - 12b. Females and males in which the palpus is not so developed
Theridion Walck.
 - 10. Maxillae curved and strongly convergent at tip
 - 11b. Abdomen wider than long, with a hump on each side near middle of its length.....*Theridula* Emerton
 - 11b. Abdomen without humps on sides
 - 12c. First pair of legs longer than fourth pair; legs usually long
Theridion Walck.
 - 12c. Fourth pair of legs longer than first pair; all short
Pedanostethus Simon

Argyrodes trigonum (Hentz). *Theridium trigonus* Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 280.

Specimens: 3 females.

Distribution: Eastern United States.

Occurrence in Nebraska: Probably in all deciduous forests throughout the state, although all of our specimens were collected by Worley at Cedar Bluffs, April 25, 1925. The webs were suspended in deep forest in bushes. All of our specimens were mature.

Asagena americana Emerton, Trans. Conn. Acad. Sci., 1882, v. 6, p. 23.

Specimens: 3 females.

Distribution: Chiefly in eastern United States from New England to Florida, west to Nebraska and on the Pacific Coast, in Washington.

Occurrence in Nebraska: Mature females were collected at Murdock, by Pickwell, June 25, 1922, from the nest of a mud-dauber wasp.

Crustulina guttata (Wider). *Theridion guttatum* Wider, Reuss's Zool. Misc., 1834, p. 241.

Specimens: 2 immature females.

Distribution: New England, New York and New Jersey, west to Washington.

Occurrence in Nebraska: Known only from Lincoln, where Pickwell collected an immature female, March 26, 1922, and Worley another under a log in a field, July 1, 1922. It obviously is of unusual occurrence.

Genus *Enoplognatha* Pavesi, 1880:

1. Abdomen with two rows of large rectangular dark spots, about four to each row.....*marmorata* (Hentz)
1. Abdomen of other coloration.....*tecta* (Keys.)

Enoplognatha marmorata (Hentz). *Theridion marmoratum*, Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 273.

Specimens: 53 females; 11, immature.

Distribution: "Northern states" (Banks, 1910), south to Virginia.

Occurrence in Nebraska: Entire state from Lincoln west to Mitchell, common. From January 6 to October 11. In winter this species hibernates under logs, boards and tin, in the immature condition. They mature in early April and after that may be found on herbage, shrubbery and trees in deciduous forests. Many of our specimens were taken from wasp's nests. Bruner collected this in Nebraska.

Enoplognatha tecta (Keyserling), was described from specimens collected at Denver, Colorado, and is included here for that reason. It has also been collected in California and Washington.

Genus *Euryopis* Menge, 1868 (Banks, 1908):

1. Dorsal silvery mark on abdomen extending around base; marks on legs fine and much broken up.....*scriptipes* Banks
1. Dorsal silvery mark on abdomen not extending around base; marks on legs in the form of distinct rings.....*funnebris* (Hentz)

Euryopis funnebris (Hentz). *Theridium funebre* Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 277.

Distribution: All states (Petrunkevitch, 1911) and the Canadian Rockies.

Occurrence in Nebraska: *Euryopis funnebris* is entitled to a place in the list of Nebraska spiders since it was collected by Bruner. Recent collectors have not found it.

Euryopis scriptipes Banks is said to be found in Colorado and New Mexico (Petrunkevitch, 1911). We have included it here because of the possibility that it may be collected in Nebraska at some future time.

Latrodectus mactans (Fabricius). *Aranea mactans* Fabricius, Ent. Syst., 1775, v. 2, p. 410.

Specimens: 2 females.

Distribution: Entire United States, north to New Hampshire and British Columbia. More abundant in the south.

Occurrence in Nebraska: Western Nebraska in the plains region. Recorded from Danbury in Red Willow county, May 1, 1922, and from Mitchell, June 24, 1923. The Mitchell speci-

men was collected from a web under a rock that was constructed in such a way that part of it extended to the outside.

Genus *Lithyphantes* Thorell, 1870:

1. Anterior median eyes noticeably smaller than posterior median eyes
cyaneus Worley
1. Anterior median eyes scarcely, if any, smaller than posterior median eyes
 2. Cephalothorax shorter than femur I; cephalothorax and legs yellow *corollatus* L.
 2. Cephalothorax longer than femur I; cephalothorax and legs reddish *fulvus* Keys.

Lithyphantes cyaneus Worley, Ann. Ent. Soc. Amer., 1928, v. 21, p. 621.

Specimen: 1 female.

Distribution: Known from a single specimen, collected at Haigler in extreme southwest Nebraska, June 4, 1927, in sweepings from milkweeds, cattails and spike-rushes.

Lithyphantes corollatus (Linnaeus). *Aranea corollata* Linnaeus, Syst. Nat., 10 ed., 1758, v. 1, p. 621.

Specimens: over 250, including males, females, and immature individuals.

Distribution: All states and Canada (Petrunkevitch, 1911).

Occurrence in Nebraska: Entire state, abundant. Found at Lincoln, Mitchell, Scottsbluff, Gering, and in southern Sioux county. Dates, February 15 to August 13. This *Lithyphantes* hibernates in the immature stage and matures in May and early June. In winter it may be found under boards in grassy places; in summer we have collected it under boards and stones, in wasps's nests, and in low prairie grass. 165 females were taken from a wasp's nest, August 1, 1923.

Lithyphantes fulvus Keyserling, Die Spinnen Amerikas, 1884, v. 1, p. 142.

Specimens: 2 females.

Distribution: Known from Utah, New Mexico, Nebraska and Florida.

Occurrence in Nebraska: Extreme western part of state. Worley removed two specimens from a wasp's nest at Mitchell, August 1, 1923.

Genus *Pedanostethus* Simon, 1884:

1. First and last legs in female one and one-third times as long as body.....*laticeps* (Keys.)
1. First and last legs of female only slightly longer than body
riparius Keys.

Pedanostethus laticeps (Keyserling). *Theridion laticeps* Keyserling, Die Spinnen Amerikas, 1884, v. 1, p. 96.

Specimen: 1 female.

Distribution: Described from Wyoming and may range over a large part of the Great Plains region.

Occurrence in Nebraska: A single female specimen was removed from a wasp's nest at Mitchell, August 1, 1923, by Worley.

Pedanostethus riparius Keyserling, Die Spinnen Amerikas, 1886, v. 2, p. 265.

Specimens: 3 males; 4 females; 2, immature.

Distribution: New England west to Nebraska and north-west to Alaska.

Occurrence in Nebraska: Eastern part of state, Lincoln and Plattsmouth. Taken from March 27 to October 11. *Pedanostethus riparius* hibernates in both immature and mature stages and immature hibernating individuals mature early in the spring, usually by April 1. Our specimens have been collected under pieces of tin and logs and by sweeping flood plain herbage.

Spintharus flavidus Hentz is not known to occur in Nebraska although it is said to occur throughout the United States. It is given a place here for that reason.

Genus *Steatoda* Sundevall, 1833:

1. Cephalothorax reddish; legs reddish with black rings.....*distincta* Thor.
1. Cephalothorax and legs chocolate-brown to black.....*borealis* (Hentz)

Steatoda borealis (Hentz). *Theridion boreale* Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 274.

Specimens: about 160, including males, females, and immature individuals.

Distribution: Entire United States and southern Canada.

Occurrence in Nebraska: Abundant throughout the state. Collected at Plattsmouth, Fremont, Ashland, Fairbury, Valparaiso, Murdock, Lincoln, Saltillo, Elmwood, Sprague, Ainsworth, Halsey, Scottsbluff and Mitchell, and at Colorado Springs, Colorado. Dates, January 13 to November 30. This abundant spider hibernates in the adult stage under logs, boards, stones, bark and strips of tin. In summer it is found in similar places and in barns, in grass, and we have collected many specimens from wasps's nests. The time of reaching maturity does not seem entirely definite but specimens collected throughout the winter were usually fully mature. A group of nearly twenty spiders was taken from a single large web in December, 1921, under a large steel tank at Murdock. These spiders were all mature and some of them had built egg sacs before the closing in of winter.

Steatoda distincta Thorell was described from Manitou, Colorado, and may extend into Nebraska and Kansas. Recent collectors have not found it at all.

Teutana triangulosa (Walckenaer). *Aranea triangulosa* Walckenaer, Faune Paris, 1802, v. 2, p. 207.

Specimens: Several hundred, including both males and females.

Distribution: Eastern states west to Colorado and south to Mississippi.

Occurrence in Nebraska: Eastern Nebraska, west to Halsey. Collected from April 18 to October 10. This domestic species is usually found on ceilings of dwellings or under the eaves on the outside of houses. We have also collected it under rocks and in prairie grass. All of our specimens are mature and they probably pass the winter in the adult as well as in the immature stages. A score or more of mud-daubers' nests examined the fall of 1923 contained this species almost exclusively. A total of several hundred individuals was collected in this manner, thus indicating that this species must be exceedingly common in late August and early September.

Theonoe stridula Crosby was described from Missouri and may range as far north as Nebraska although we have no specimens from this state.

Genus *Theridion* Walckenaer, 1805 (Keyserling, 1884):

1. Males:

- 2a. Very small, 1.5 mm. in length; abdomen higher than long
globosum Hentz
- 2a. Larger; well over 1.5 mm. in length
 - 3a. Metatarsus I the same length or shorter than tibia I
 - 4a. Median ocular area not rectangular; cephalothorax unicolorous.....*differens* Emerton
 - 4a. Median ocular area rectangular in shape with median darker stripe.....*spirale* Emerton
 - 3a. Metatarsus I longer than tibia I
 - 4b. A small sharp hillock forward above on the mandible
frondeum Hentz
 - 4b. No such hillock on mandible
 - 5a. A short, blunt, winding, cork-screw-like process at end of palpus.....*tepidariorum* C. Koch
 - 5a. End of palpus with two short, sharp processes
murarium Emerton

1. Females:

- 2b. Posterior median eyes farther from each other than from posterior lateral eyes.....*globosum* Hentz
- 2b. Eyes of posterior row all equidistant or else the median eyes not so far from each other as from lateral eyes
 - 3b. Metatarsus I as long or longer than tibia I
 - 4c. Median ocular area wider in front.....*differens* Emerton
 - 4c. Median ocular area rectangular.....*spirale* Emerton
 - 3b. Metatarsus I shorter than tibia I
 - 4d. Cephalothorax at least half its length shorter than tibia I
frondeum Hentz
 - 4d. Cephalothorax the length of tibia I, or at least only slightly shorter, much less than half its length shorter than tibia I
 - 5b. Epigynum consisting of two openings 2 to 3 times their diameter from each other.....*murarium* Emerton
 - 5b. Epigynum a bioval opening, the parts separated by a distance not greater than the diameter of one of them
tepidariorum C. Koch

Theridion differens Emerton is said to occur throughout the United States and in southern Canada (Petrunkévitch, 1911). It has not been collected in Nebraska.

?*Theridion frondeum* Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 274.

Specimen: 1, immature.

Distribution: Probably throughout the United States. Recorded from New England, west to Washington and south to Lower California and Mexico, according to Petrunkevitch (1911).

Occurrence in Nebraska: Our single specimen was swept from bur oak (*Quercus macrocarpa*) at Lincoln, May 15, 1927. Since the specimen was immature and could not be positively identified it can be placed in this list only tentatively, although the authors are familiar with the species as it appears in both the adult and immature condition and feel reasonably sure of this specimen. It is the only record of *T. frondeum* for Nebraska.

Theridion globosum Hentz is distributed, according to Banks (1910), through New England and the eastern states; according to Petrunkevitch (1911), it ranges south to Florida and west to Illinois. It might reach Nebraska, but no specimens have ever been found here.

Theridion murarium Emerton, Trans. Conn. Acad. Sci., 1882, v. 6, p. 11.

Specimens: 1 male; 6 females.

Distribution: Eastern states from New England and New York west to Colorado, Arizona and Washington.

Occurrence in Nebraska: Eastern part of the state. Males and females were collected by Pickwell at Murdock and at Lincoln, from June 20 to August 31. The Lincoln specimens were in part taken from light cobwebs under a bridge.

Theridion spirale Emerton, Trans. Conn. Acad., Sci., 1882, v. 6, p. 10.

Specimen: 1 female.

Distribution: Entire United States (Banks, 1910).

Occurrence in Nebraska: Worley collected one specimen, a mature female, at Halsey, August 14, 1925, under the eaves of a dwelling. It may be more common than this would indicate.

Tredidion tepidariorum C. Koch. Die Arach., 1841, v. 8, p. 75.

Specimens: About a hundred, comprising males, females, and immature individuals.

Distribution: Entire North America; cosmopolitan.

Occurrence in Nebraska: About dwellings over the whole state. We have collected it at Mynard, Elmwood, Murdock, Fremont, Lincoln, Ainsworth and Danbury, June 16 to October 5. Our specimens are from houses, barns and caves, and several specimens were collected from tombstones in cemeteries. The adults, male and female, occupy the same webs peacefully and the brown egg sacs are also suspended in them.

Theridula opulenta (Walckenaer). Petrunkevitch (1911) says of this species, "Cosmopolitan, of all latitudes." It has not yet been found in Nebraska.

FAMILY LINYPHIIDAE

Subfamilies:

1. Female with palpal claw; epigynum with a finger or hook; male palpus without tibial apophysis, although sometimes enlarged, with a tooth at tip; usually two spines or erect bristles above on tibia IV
Linyphiinae
1. No claw on tarsus of female palpus; epigynum without finger or hook; male palpus with tibial apophysis; usually only one spine above on tibia IV.....*Erigoninae*

SUBFAMILY LINYPHIINAE

Genera (Banks, 1905):

1. Tibia without lateral spines; metatarsus I not longer than tibia I; usually small spiders
 - 2a. Posterior eyes close together; lateral eyes on slight tubercles; legs long and very slender; clypeus more or less depressed below the eyes.....*Microneta* Menge
 - 2a. Posterior eyes farther apart; lateral eyes not on tubercles; legs less slender; clypeus flat.....*Tmeticus* Menge
1. Tibia with lateral spines; metatarsus I usually as long as, often longer than, tibia I; larger spiders
 - 2b. No spines on metatarsi; posterior median eyes rather close together.....*Bathyphantes* Menge
 - 2b. Some spines on metatarsi
 3. Posterior median eyes at least twice their diameter apart, or else plainly farther from lateral eyes than from each other; median ocular area plainly wider behind.....*Linyphia* Latr.
 3. Posterior median eyes scarcely more than their diameter apart and equidistant from posterior lateral eyes
Lepthyphantes Menge

Genus *Bathyphantes* Menge, 1866:

1. Cephalothorax mostly light-colored.....*sabulosus* Keys.
1. Cephalothorax dark
 2. Abdomen uniform in color throughout.....*formica* Emerton
 2. Abdomen with dark herring-bone marks in middle
albiventris (Banks)

The genus *Bathyphantes* is a large one and the distribution of most of its species is not well known. Many species may be found in Nebraska when the spider population is more thoroughly studied and for this reason the above key cannot be relied upon. It includes only those species whose known range includes this state. *Bathyphantes unimaculatus* Banks is not included in the key.

Bathyphantes albiventris (Banks). *Diplostyla albiventris* Banks, Proc. Acad. Nat. Sci. Phila., 1892, p. 43.

Specimens: 2 males; 7 females; 1 immature male; 1, immature.

Distribution: Probably entire eastern half of the United States.

Occurrence in Nebraska: Eastern part of the state, west to Halsey. Localities, Elmwood, Lincoln and Halsey. Dates, March 11 to November 29. This species hibernates under logs and matures very early in the spring. Mature individuals were collected on March 11 and on April 8. Our hibernating specimens were all immature with the exception of one female. The Halsey specimen was taken from a web near a spring; the others were collected under logs and boards.

?*Bathyphantes formica* Emerton, Trans. Conn. Acad. Sci., 1882, v. 6, p. 71.

Specimen: 1 female.

Distribution: Collected in New England, New York and Alaska; south to Lower California (Petrunkevitch, 1911).

Occurrence in Nebraska: Crosby has identified as probably this species a female collected at Murdock, by Pickwell, August 31, 1923. There are no other records for the state.

?*Bathyphantes unimaculatus* Banks, Proc. Acad. Nat. Sci. Phila., 1892, p. 45.

Specimen: 1 male.

Distribution: Probably occurs throughout the eastern states. Recorded from New York.

Occurrence in Nebraska: A male *Bathypantes* collected by Pickwell at Lincoln, April 18, 1822, was questionably referred to this species by Crosby. It can not be considered at all common in this state.

Bathypantes sabulosus (Keyserling) is recorded in the United States from New York to Utah and thus Nebraska is included in its range.

Lepthyphantes nebulosus (Sundevall). *Linyphia nebulosa* Sundevall, Svensk. Spind., 1830, p. 218.

Specimens: 14 males; 7 females.

Distribution: "All states" (Petrunkevitch, 1911).

Occurrence in Nebraska: Entire state, from Sprague to Mitchell. Dates, May 27 to August 1. The Mitchell specimens were collected in barns and in wasp's nests; the Sprague specimen was found in a web over a stream in a deciduous forest. All of our specimens are mature.

Genus *Linyphia* Latreille, 1804 (Keyserling, 1886):

1. Males:

- 2a. A thorn or prolonged process above at end of patella of palpus
 - 3a. A short thick thorn ending sharply above at the end of the palpus..... *communis* Hentz
 - 3a. A blunt process as long or longer than the tibia of patella at end of palpus..... *phrygiana* C. Koch
- 2a. No thorn or process above at end of patella of palpus
 - 3b. A long thin process bent backward on the fore part of the palpus *pusilla* Sund.
 - 3b. No such process
 - 4a. Median eyes of posterior row more than twice as far from lateral eyes as from each other..... *marginata* C. Koch
 - 4a. Median eyes of posterior row not, or only slightly, farther from lateral eyes than from each other..... *lineata* L.

1. Females:

- 2b. Cephalothorax the length of femur I..... *lineata* L.
- 2b. Cephalothorax decidedly shorter than femur I
 - 3c. Epigynum consisting of a long process extending posteriorly..... *phrygiana* C. Koch
 - 3c. Epigynum without a process or with one so short that it does not reach the genital groove or only projects over it slightly
 - 4b. Posterior median eyes much nearer each other than posterior lateral eyes..... *marginata* C. Koch

- 4b. Eyes of the posterior row about equidistant
- 5. Posterior border of epigynum with a complete short process; cephalothorax yellowish; abdomen white on sides
pusilla Sund.
- 5. Epigynum without a complete process; cephalothorax brown; abdomen gray on sides.....*communis* Hentz

Linyphia communis Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 5, p. 28.

Specimen: 1 female.

Distribution: All of the states (Petrunkévitch, 1911) and southern Canada.

Occurrence in Nebraska: Worley collected one specimen, a female, under a stone on Scott's Bluff at Gering, August 13, 1923.

Linyphia lineata (Linnaeus). *Aranea lineata* Linnaeus, Syst. Nat., 10 ed., 1758, v. 1, p. 620.

Specimens: 1 male; 3, immature.

Distribution: Eastern states from Massachusetts to New Jersey; west to Nebraska and north to Canada.

Occurrence in Nebraska: Recorded only from Lincoln, February 28 to November. One mature male was collected under a damp log in a deciduous forest, April 10. This species hibernates under logs and stones in the immature stage.

Linyphia marginata C. Koch, Herr. Schaeff. Deutsch. Ins., 1834, hft. 127, p. 21.

Specimens: 18 males; 20 females; 6, immature.

Distribution: Eastern states from Massachusetts to Nebraska.

Occurrence in Nebraska: Eastern part of state in deciduous forests. Plattsmouth, Union, Wabash, Weeping Water, Gretna, Fremont, Lincoln and Sprague. Dates, April 11 to October 21. Collected from webs on gooseberry bushes, in flood plain shrubbery, and in bur oak and elm shrubbery. We have not found any hibernating individuals, but this species probably hibernates in an immature state, as does *Linyphia lineata*, since our early spring specimens are immature.

Maturation occurs in late April and in May and we have found immature specimens as late as May 21.

In the wooded regions about the Platte and Missouri rivers and in all the wooded ravines which lead up from those streams, in the southeastern part of the state, these beautiful linyphiids are abundant throughout the summer. They build their delicate snares and platform webs among low shrubs and herbs of the moist woodlands and in the crevices of the rock walls of the gullies. They have a special liking for the nettle patches that abound in many of the shaded valleys near the rivers.

Linyphia phrygiana C. Koch, Die Arach., 1836, v. 3, p. 83.

Specimens: 58 males; 25 females; 2 immature females.

Distribution: All states, north through Canada to Alaska.

Occurrence in Nebraska: Known only from the eastern part of the state, where specimens have been collected at Plattsmouth, Weeping Water, Wabash, Fremont, Saltillo, Lincoln and Valparaiso, from March 11 to October 8. In early spring this species can be found under bark, but later it appears on shrubbery in deciduous forests, on flood plains, and in other similar habitats. All of our specimens are mature except two which were collected at Fremont, April 25.

Linyphia pusilla Sundevall, Svensk. Spind., 1830, p. 214.

Specimens: 2 females.

Distribution: All states and Alaska (Petrunkevitch, 1911).

Occurrence in Nebraska: Found only in a deciduous forest at Fremont, September 11, 1923, when two females were collected by Worley.

Microneta sp.

Specimen: 1 female.

A female *Microneta* was collected by Pickwell at Lincoln, April 8, 1922, under a strip of bark. Several species of the genus are known in the northeastern states, but this is the only specimen known from Nebraska.

Tmeticus sp.

Specimen: 1 male.

Worley has a spider representing this genus, collected at Lincoln, October 11, 1927, in deciduous forest herbage. It is a mature male, but has not been specifically determined.

SUBFAMILY ERIGONINAE

Genera (Banks, 1905). The table applies mostly to males:

1. Tarsus I only about half as long as metatarsus I; male with lobate head *Hypselistes* Simon
1. Tarsus I two-thirds or more of length of metatarsus I
 2. Dorsum of abdomen with a corneous shield; often also present in female
 - 3a. Claw of chelicerae with a double curve, first concave, then convex without (Bishop and Crosby, 1925)..... *Ceratinella* Emerton
 - 3a. Claw of chelicera with a single curve..... *Ceraticelus* Simon
 2. Dorsum of abdomen without a shield in both sexes
 - 3b. Head of male plainly lobed or at least a hole in head behind lateral eyes; posterior lateral eyes on top of lobe
Diplocephalus Bertkau
 - 3b. Head not lobed, nor with a hole in side
 4. Male with horn from middle of clypeus..... *Delorrrhipis* Simon
 4. Male without such horn
 5. A projection below at tip of tibia of male palpus; sides of cephalothorax often with teeth; posterior eye-row slightly recurved..... *Erigone* Aud.
 5. No such projection on tibia of male palpus
 6. Lateral eyes placed on a slight elevation, making head broad in front; sternum rather broadly truncate behind between hind coxae; tibia I shorter than cephalothorax..... *Ceratinopsis* Emerton
 6. Lateral eyes not on elevations; sternum narrowly, if at all, produced between hind coxae
 7. Posterior median eyes closer to each other than to posterior lateral eyes; a hump behind eye region in male..... *Grammonota* Emerton
 7. Eyes of posterior row about equidistant; no hump behind eye region
 8. Head of male elevated..... *Tiso* Simon
 8. Head of male not elevated..... *Oedothorax* Bertkau

Genus *Ceraticelus* Simon, 1884 (Crosby and Bishop, 1925).

Key to males:

1. Head divided into two lobes..... *fissiceps* Camb.
1. Head not divided
 2. Eye-region broadly concave..... *laticeps* Emerton
 2. Eye-region not concave

- 3. Apical part of embolus with long lateral branch..*emertoni* Camb.
- 3. Apical part of embolus without a lateral branch, sometimes with a short point
 - 4. Posterior lateral angles of epigastric sclerite not coalescent behind the furrow*laetabilis* Camb.
 - 4. Posterior lateral angles of epigastric sclerite coalescent behind the furrow
 - 5. Posterior lateral angles of epigastric sclerite narrowly united*minutus* Emerton
 - 5. Posterior lateral angles of epigastric sclerite broadly united*micropalpis* Emerton

Only two of the many species of *Ceraticelus* are known to occur within the limits of the state of Nebraska, but we have included four others in the key because of the possibility of their occurrence here. *Ceraticelus laticeps* Emerton is found from New York and Georgia west to British Columbia. It has been collected by Crosby at Columbia, Missouri. *C. micropalpis* has been found from Massachusetts, west as far as Missouri (Columbia) and Kansas (Blue Mound). *C. laetabilis* has been found from Newfoundland to Alberta and south to North Carolina. It has been collected in South Dakota (Hill City) and Missouri (Columbia). *C. minutus* ranges from New Hampshire and North Carolina to Minnesota (Lake Minnetonka) and Missouri (Columbia). Any of these species might be expected to occur in Nebraska.

Ceraticelus emertoni (Cambridge). *Erigone emertoni* Cambridge, Proc. Zool. Soc. London, 1874, p. 435.

Specimens: 1 male; 2 females?

Distribution: Eastern United States, from Maine to Virginia; west to Ohio, Missouri and Nebraska.

Occurrence in Nebraska: We have a male and two females (the latter are apparently this species, but positive identification could not be made) representing *Ceraticelus emertoni*. These were collected at Lincoln, February 19, 1928, by J. F. Schuett, under stones in a deciduous forest.

Ceraticelus fissiceps (Cambridge). *Erigone fissiceps* Cambridge, Proc. Zool. Soc. London, 1874, p. 438.

Distribution: Abundant in eastern United States from

New England south to North Carolina and west to Ohio, Missouri and Nebraska.

Occurrence in Nebraska: *Ceraticelus fissiceps* is entitled to a place in the list of Nebraska spiders because of Bruner's collection of a specimen.

Genus *Ceratinella* Emerton, 1882 (Crosby and Bishop, 1925):

Males:

1. Abdomen distinctly hairy.....*placida* Banks
1. Abdomen not so hairy.....*brunnea* Emerton

Ceratinella brunnea Emerton is distributed from Labrador and New England south to North Carolina and west to Oklahoma (Newkirk), Missouri (Columbia), New Mexico (Beulah) and Minnesota (Lake Minnetonka), so it may reach Nebraska. *C. placida* Banks is much less common, but is found over much the same territory; from New York to Missouri (Columbia).

Genus *Ceratinopsis* Emerton, 1882:

1. Clypeus double the height of the eye area.....*interprex* (Camb.)
1. Clypeus scarcely higher than the height of the eye area
xanthippe (Keys.)

Ceratinopsis interprex (Cambridge) is said to occur in all the United States (Petrunkévitch, 1911), while *C. xanthippe* was described from Peoria, Illinois. Either of these species might occur in Nebraska, but neither have been recorded.

Delorhipis monoceros (Keyserling) is distributed from Washington to Colorado and therefore may reach Nebraska.

Diplocephalus lobiceps (Banks) has been reported from Ohio and Illinois, and since eastern Nebraska is similar in climate and topography to these states, it may reach eastern Nebraska.

Genus *Erigone* Audouin, 1827:

1. Cephalothorax dark brown.....*tridentata* (Emerton)
1. Cephalothorax lighter colored
 2. Cephalothorax red brown.....*coloradensis* Keys.
 2. Cephalothorax yellow brown.....*strabo* Thor.

Erigone coloradensis Keyserling, Die Spinnen Amerikas, 1886, v. 2, p. 168.

Specimen: 1 male.

Distribution: Recorded from Colorado to Alaska.

Occurrence in Nebraska: Worley has one mature male collected on the ground at Mitchell, June 25, 1923.

E. strabo Thorell has been collected in Colorado, but it is a very rare species; and *E. tridentata* (Emerton) has been found from New England and Florida to Indiana and southwest to Lower California. There is a possibility of the occurrence of either of these species in Nebraska.

Grammonota sp.

Specimen: 1 female.

Occurrence in Nebraska: Our specimen was collected in southern Sioux county, July 6, 1923, under dung on the shore of a lake. It was a female and therefore could not be specifically identified.

Grammonota pictilis (Cambridge), according to Banks, ranges throughout the eastern states. We do not know of the occurrence of it in Nebraska.

Hypselistes florens (Cambridge) inhabits all states and southern Canada (Petrunkévitch, 1911). It has not been found in this state.

Oedothorax sp.

Specimen: 1 female.

A female *Oedothorax* was collected by Pickwell at Lincoln, April 20, 1922, under a stone. The specific identification is in doubt and this may possibly represent a new species. *Oedothorax* is well represented in the eastern states, but none of the species found there are known to reach Nebraska.

Tiso spirotubus Banks was described from Colorado and may therefore be found in this state.

FAMILY ARGIOPIDAE

Key to subfamilies (Comstock, 1912):

1. Eyes dissimilar.....Theridiosomatinae
1. Eyes similar
 2. Epigastric plates not marked by transverse furrows; lateral condyle of chelicerae wanting or rudimentary
 - 3a. Genital furrow between the spiracles procurved..Tetragnathinae
 - 3a. Genital furrow nearly straight.....Metinae
 2. Epigastric plates marked by transverse furrows; lateral condyle of chelicerae distinct
 - 3b. Spinnerets elevated on a very large projection and occupying a circular space limited by a thick flange in the form of a tube or ring.....Gasteracanthinae
 - 3b. Spinnerets not elevated in above manner
 4. Posterior row of eyes strongly procurved; legs relatively longer; metatarsi and tarsi together longer than patellae and tibiaeArgiopinae
 4. Posterior row of eyes barely, if at all, procurved; legs relatively shorter; matatarsi and tarsi together rarely longer than patellae and tibiae.....Araneinae

The subfamily Theridiosomatinae is represented in the United States by several species, one of which is very widely distributed in the eastern part of the country. This is the *Theridiosoma gemmosum* of L. Koch. It has not been found in Nebraska, but ranges west at least as far as Illinois, and may occur here.

SUBFAMILY TETRAGNATHINAE

Genera (Comstock, 1912):

1. Maxillae more or less convergent and not dilated at the distal end; lateral eyes on each side near together; tarsi without accessory claws
Pachygnatha Sund.
 1. Maxillae parallel, dilated at the distal end; lateral eyes on each side usually distant; tarsi with accessory claws
 2. Spinnerets at or very near the end of the abdomen
Tetragnatha Latr.
 2. Tip of abdomen projecting beyond the spinnerets.....*Eucta* Simon
- Eucta lacerata* (Walckenaer). *Tetragnatha lacerata* Walckenaer, Ins. Apt., 1837, v. 2, p. 224.

Specimen: 1 male.

Distribution: Eastern United States and Canada, west to the Rockies.

Occurrence in Nebraska: A single male specimen was col-

lected by Worley in marsh grass at Scottsbluff on July 16, 1923. There are no other records of its occurrence in Nebraska.

Pachygnatha tristriata C. Koch, Die Arach., 1845, v. 12, p. 145.

Distribution: Eastern United States from Maine and New York to Nebraska and Texas.

Occurrence in Nebraska: Bruner collected *Pachygnatha tristriata* in Nebraska, but the exact data have been lost. Recent collectors have not found it.

Genus *Tetragnatha* Latreille, 1804 (Comstock, 1912):

1. Lateral eyes of each side not so widely separated as the anterior median and posterior median eyes
 - 2a. Chelicerae of male longer than the cephalothorax; those of female about one-tenth shorter than the cephalothorax
elongata Walck.
 - 2a. Chelicerae of male shorter than the cephalothorax; those of female about one-half as long as the cephalothorax.....*extensa* (Linn.)
1. Lateral eyes of each side as far apart as the anterior median eyes and posterior median eyes
 - 2b. Lateral eyes of each side the same distance apart as the anterior median and posterior median eyes.....*laboriosa* Hentz
 - 2b. Lateral eyes of each side farther apart than the anterior median and posterior median eyes
3. Males:
 - 4a. Tibia of palpus not longer than the patella; chelicerae shorter than the cephalothorax.....*vermiformis* Emerton
 - 4a. Tibia of palpus twice as long as patella.....*straminea* Emerton
3. Females:
 - 4b. Outer side of chelicerae nearly straight
vermiformis Emerton
 - 4b. Outer side of chelicerae concave.....*straminea* Emerton

Tetragnatha elongata Walckenaer, Tabl. Aran., 1805, p. 69.

Specimens: 6 males; 13 females.

Distribution: All states and Canada (Petrunkévitch, 1911).

Occurrence in Nebraska: Entire state from Union and Lincoln to southern Sioux county, but not usually common. Our Lincoln specimens, 2 males and 3 females, were collected August 24, 1923, from webs stretched over a creek in a decidu-

ous forest. The Sioux county specimens were collected in low prairie grass surrounding a lake, July 6, 1923. Specimens were collected by Pickwell at Valentine, August 24, 1922, on which occasion every dead tree and limb that overhung the Minnechadusa creek was fairly alive with them, and forty or fifty were secured within a few minutes.

Tetragnatha extensa (Linnaeus). *Aranea extensa* Linneus, Syst. Nat., 10 ed., 1758, v. 1, p. 621.

Specimens: 2 males.

Distribution: Entire United States, southern Canada and Alaska.

Occurrence in Nebraska: Our specimens are from Lincoln and Sprague, collected by Worley May 27 and August 23, one in a web over water in a deciduous forest, the other by sweeping high prairie grass. Bruner collected *T. extensa* in Nebraska.

Tetragnatha laboriosa Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 27.

Specimens: 33 males; 56 females; 39, immature.

Distribution: Entire United States, southern Canada and Alaska.

Occurrence in Nebraska: Abundant throughout the state and undoubtedly the most abundant grass-inhabiting species. Recorded from Plattsmouth, Weeping Water, Fremont, Sprague, Lincoln, Ainsworth, Ender's Lake, Mitchell, Scottsbluff and southern Sioux county. Dates from April to October. We have collected this species on sourdocks (*Rumex*), in high and low prairie grass, on arrowhead lilies (*Sagittaria*), in weeds, in cattails (*Typha*), in salt grass (*Dondia*), in flood plain herbage in forests, in houses, and in elm, linden and bur oak trees. Specimens mature early in May and breed, and immature individuals appear early in the fall, in September and October. They pass the winter probably in this immature state although we have not found any hibernating individuals.

Tetragnatha straminea Emerton, Trans. Conn. Acad. Sci., 1885, v. 6, p. 335.

Specimens: 3 males; 5 females.

Distribution: Eastern United States east of the Rockies.

Occurrence in Nebraska: Entire state from Lincoln west to Scottsbluff, but uncommon. Dates, July 19 to August 5. Our specimens were collected in marsh grass. Bruner also collected the species in Nebraska.

Tetragnatha vermiformis Emerton, Trans. Conn. Acad. Sci., 1885, v. 6, p. 333.

Specimens: 5 males; 2 females.

Distribution: Entire eastern United States east of the Rocky Mountains.

Occurrence in Nebraska: Known from Scottsbluff, Ainsworth and Ender's Lake, July 16 to August 16. Our specimens were collected in marsh grass.

SUBFAMILY METINAE

Genera (Comstock, 1912):

1. Posterior femora with a single or double fringe of hairs on external face of basal half.....*Leucauge* White
1. Posterior femora not fringed.....*Meta* C. Koch

Leucauge venusta (Walckenaer). *Epeira venusta* Walckenaer, Ins. Apt., 1837, v. 2, p. 90.

Specimens: 1 male; 12 females; 1, immature.

Distribution: Entire United States (Petrunkevitch, 1911).

Occurrence in Nebraska: Eastern fourth of the state in deciduous forests. Lincoln, Fremont, Union, Wabash and Weeping Water, from May to September 11. *Leucauge venusta* constructs webs in gooseberry bushes and shrubbery in deciduous forests. We have collected it in sweepings from linden trees.

Meta menardi (Latreille) is said (Petrunkevitch, 1911) to occur throughout the United States. We have not found it in Nebraska and it does not appear on Bruner's list.

SUBFAMILY GASTERACANTHINAE

The genus *Micrathena* Sundevall, 1833, represents this subfamily in Nebraska. Key to females:

1. Abdomen arrow-head shaped; narrowed in front and terminating behind in two large spreading spines.....*sagittata* (Walck.)
1. Abdomen armed with five pairs of spines.....*gracilis* (Walck.)
1. Abdomen armed with not more than two pairs of spines
reduviana (Walck.)

Micrathena gracilis (Walckenaer). *Plectana gracilis* Walckenaer, Ins. Apt., 1837, v. 2, p. 193.

Specimens: 209 females.

Distribution: East of the Rocky Mountains in the United States.

Occurrence in Nebraska: Eastern part of state in deciduous forests. Plattsmouth, Union, Walton, Waverly, Fremont and Lincoln, July 24 to September 11. Probably passes the winter in the egg stage like most other members of the family. We have never collected the male.

The delicate web of this species is rarely over six inches in diameter but it is sure to be constructed between guy lines that are ten to thirty feet in length. These guy lines meet on one tree and with a second tree form a long small-angled triangle; where the sides of the triangle are a little over six inches apart there *A. gracilis* spins her orb. The spider rests throughout the day upon the center of the orb, resembling a bit of shapeless dried leaf. When slightly disturbed she shakes the web as if in annoyance but when frightened she climbs slowly and awkwardly to a tree twig and flattens herself against it, becoming thus inconspicuous; when the disturbance ceases she soon returns to her orb. The spider was never observed to drop upon a drag line as some of the argiopids do and there was no orb retreat unless a particular bit of twig could be so designated.

Micrathena reduviana (Walckenaer). *Plectana reduviana* Walckenaer, Ins. Apt., 1837, v. 2, p. 201.

Specimens: 17 females.

Distribution: Eastern United States (Petrunkévitch, 1911).

Occurrence in Nebraska: Eastern edge of state in deciduous forests. Union, Fremont, Wabash, Waverly, Weeping Water, Havelock and Lincoln. August 21 to October 11. Habits very much like those of *M. gracilis*. It seems to prefer the flood plain to other parts of the forest.

The guy lines which support the web of *M. rediviana* are much shorter than are those of the other two members of the genus and the web is placed lower, among shrubs and bushes. When disturbed this spider drops abruptly from its web and does not seem to leave a drag line.

Micrathena sagittata (Walckenaer). *Plectana sagittata* Walckenaer, Ins. Apt., 1837, v. 2, p. 174.

Specimens: 18 females.

Distribution: All states east of the Rockies (Petrunkovitch, 1911).

Occurrence in Nebraska: Eastern edge of state in deciduous forests. Collected at Wabash, Union, Fremont and Lincoln, August 21 to September 11. Very common for a short period each fall in gooseberry shrubbery in deciduous forests.

SUBFAMILY ARGIOPINAE

Genera (Comstock, 1912):

1. Epigynum of female divided by a septum into two equal concavities
Metargyope Camb.
1. Epigynum of female not divided by a septum, but the atrium is extended into a broad, convex process with a single cavity beneath
Miranda Camb.

Metargyope trifasciata (Forskål). *Aranea trifasciata* Forskål, Descr. Anim., 1775.

Specimens: 8 males; 18 females; 25 immature females; 23, immature.

Distribution: Entire country from Canada to Mexico.

Occurrence in Nebraska: Entire state from Elmwood, Murdock, Lincoln and York, west through Oconto and Wood Lake to Mitchell and Agate. Dates from June 26 to October 3. Maturation takes place in late July or early August. We have found *M. trifasciata* in prairie grass, in grape-vines, in

forests, in cattails, in marsh grass, in alfalfa and in wasp's nests.

Miranda aurantia (Lucas). *Argiope aurantia* Lucas, Ann. Soc. Ent. France, 1833, v. 2, p. 87.

Specimens: 9 males; 21 females.

Distribution: Entire United States (Petrunkévitch, 1911).

Occurrence in Nebraska: Entire state, from Wahoo, Union, Plattsmouth, Murdock, and Lincoln to Halsey and Mitchell. August 4 to September 7. Our specimens were collected in sunflowers, in prairie grass, in thistles, in wild grape vines, and in alfalfa.

Pickwell observed the mating of this spider in the fall of 1923. While collecting spiders along a stream about dusk he noticed an unusual activity in one of the numerous orbs in the shrubbery. Three males were attempting to approach a female spider on the center of her web. Two other males had previously been captured and were suspended, at the time, in their silk shrouds in the orb. The three males persisted in their advances and, after an interval of ten or fifteen minutes, two of them succeeded in rushing in under the female and between her body and her web and in applying their pedipalps to her epigynum. This they repeated, one after the other, with their heads to her head, their dorsa to her abdomen and their pedipalps raised up to meet the epigynum. With the exception of the pugnacity of the first few minutes the female offered no resistance. This observation was made August 24. *A. aurantia* matures in August, mates when about one-third the maximum size for the female, and lays her eggs toward the end of September, after having grown to a large size; thereafter she stays with the eggs until she dies. The sexes are marked differently and the males are much smaller than the females.

SUBFAMILY ARANEINAE

Genera (Comstock, 1912):

1. Cephalothorax with horny outgrowths.....*Glyptocranium* Simon
1. Cephalothorax without horny outgrowths
 2. Median furrow of the cephalothorax, when a narrow longitudinal one, slight, not reaching the cervical groove; often a pit with transverse extensions

- 3a. Head and thorax in female separated by a deep cervical groove.....*Cyclosa* Menge
- 3a. Head and thorax not separated by a well-marked cervical groove
 - 4a. Abdomen with a median hump or cone at base, as well as lateral projections.....*Marxia* McCook
 - 4a. Abdomen without median or lateral projections
 - 5a. Posterior median eyes nearly or quite as close to posterior lateral eyes as to each other.....*Zilla* C. Koch
 - 5a. Posterior median eyes much nearer to each other than to posterior lateral eyes
 - 6a. Abdomen as high behind its middle line as at its base and elliptical in outline, or broader behind the middle; small species with short legs.....*Singa* C. Koch
 - 6a. Abdomen highest toward its base and usually broadest near base
 - 7a. Abdomen with several marginal tubercles behind
Verrucosa McCook
 - 7a. Abdomen lacking tubercles behind
 - 8a. Metatarsus and tarsus of the first legs together longer than tibia and patella; males with no hook on coxa of first legs and no groove on femur of second legs.....*Metopeira* Camb.
 - 8a. Metatarsus and tarsus of the first legs not longer than tibia and patella, except in a very few species; males with a hook on coxa of first legs and a groove on femur of second legs
Aranea Clerck
- 2. Thorax with a deep median longitudinal furrow, which usually extends forward so as to reach the cervical groove
 - 3b. Elongate spiders; abdomen 2 to 3 times as long as wide
Larinia Simon
 - 3b. Abdomen not greatly elongate
 - 4b. Tibia of third legs with a cluster of long bristles on anterior side near base; second row of eyes straight or procurved.....*Mangora* Chamb.
 - 4b. Tibia of third legs without a cluster of long bristles on the anterior side near the base; second row of eyes more or less recurved
 - 5b. Abdomen marked with a broad folium, darker at edges and bordered by a white line, and enclosing a lanciform stripe bordered in a similar manner.....*Acacesia* Simon
 - 5b. Abdomen not so marked.
 - 6b. Females:
 - 7b. Epigynum with scape directed backward
Neoscona Simon
 - 7b. Epigynum with scape directed forward
Eustala Simon
 - 6b. Males:
 - 7c. Patellae of palpi with a single apical spine
Eustala Simon

- 7c. Patellae of palpi with two apical spines
 8b. Lateral eyes of each side situated on a prominent tubercle.....*Aranea* Clerck
 8b. Lateral eyes of each side not situated on a prominent tubercle.....*Neoscona* Simon

Acacesia foliata (Hentz) is included here because its hypothetical range includes Nebraska, although it is mostly a southern species. It has been found from New England south to Florida and west to Texas.

Genus *Aranea* Clerck, 1757.

Aranea carbonaria (L. Koch), *A. cucurbitina* (Clerck) and *A. diademata* (Clerck) are not included in the following key because of our unfamiliarity with these species. *A. carbonaria* is known from Wisconsin and Utah, but has never been found in Nebraska. *A. cucurbitina* was collected years ago in Nebraska by Bruner. *A. diademata* is known from Minnesota and Wisconsin, but not from Nebraska.

Key to species:

1. Abdomen round-shouldered without tubercles or hillocks
 - 2a. Adults of large size, females 13 to 20 mm. or more in length
 - 3a. Each lateral half of epigynum of female divided by a prominent oblique furrow; venter of abdomen black in the middle with a semicircular yellow spot on each side; the tibia of the second legs of the male thickened and armed with many short, thick spines*marmorea* Clerck
 - 3a. The lateral halves of the epigynum not divided by a furrow; ventral surface of abdomen usually lacking the semicircular yellow spots; tibia of second legs of male not thickened
trifolium (Hentz)
 - 2a. Adults smaller, females less than 13 mm. in length
 - 3b. Females between 10 and 13 mm. in length; abdomen with a broad folium; spiders brown and usually found about dwellings
 - 4a. Males (Comstock, 1912):
 - 5a. Median apophysis of bulb of palpus nearly as wide as long and split nearly to its base.....*patagiata* Clerck
 - 5a. Median apophysis of bulb of palpus more than twice as long as wide and split less than half way to its base
 - 6a. Bulb of palpus with a long blunt terminal apophysis
sericata Clerck
 - 6a. Terminal apophysis of bulb of palpus stouter at base but ending in a slender spear-like tip.....*cornuta* Clerck
 - 4a. Females (Comstock, 1912).

- 5b. Scape of epigynum flat and widened at tip
patagiata Clerck
- 5b. Scape of epigynum finger-like
 - 6b. Openings of spermathecae exposed; posterior lateral thickenings of epigynum nearly or quite meeting on the median line.....*sericata* Clerck
 - 6b. Epigynum with a prominent lobe on each anterior lateral part; posterior lateral thickenings of epigynum widely separated; posterior half of central portion prominently elevated.....*cornuta* Clerck
- 3b. Females under 10 mm. in length; abdomen with or without folium; not house species usually
 - 4b. Abdomen with a distinct folium.....*pegnia* (Walck.)
 - 4b. Abdomen without a folium.....*thaddea* (Hentz)
- 1. Abdomen angulate with tubercles or humps on shoulders
 - 2b. Adult females under 6 mm. in length; male under 4 mm.
mineata (Walck.)
 - 2b. Adult females over 8 mm. in length; males over 6 mm.
 - 3c. Scape of female epigynum triangular, as wide at base as long
gemma (McCook)
 - 3c. Scape of female epigynum longer than its width at base
 - 4c. Ocular quadrangle higher than wide; scape of epigynum longer, ending in a slightly hollowed tip (McCook, 1893)
solitaria Emerton
 - 4c. Ocular quadrangle as wide as high; scape of epigynum shorter, ending in a spoon-shaped tip.....*angulata* Clerck

Aranea angulata Clerck, Aran. Svec., 1757, p. 22.

Specimens: 6 females.

Distribution: Entire United States and southern Canada (Petrunkevitch, 1911).

Occurrence in Nebraska: Entire state from Lincoln to Mitchell. From August 1 to October. All of our specimens were collected in barns.

Aranea cornuta Clerck, Aran. Svec., 1757, p. 39.

Specimens: 8 males; 16 females; 2 immature males; 1 immature female; 15, immature.

Distribution: All states and Canada (Petrunkevitch, 1911).

Occurrence in Nebraska: Entire state, from Union on the Missouri river to Weeping Water, Lincoln, Ainsworth, Valentine and Halsey, and at Cheyenne, Wyoming. From February 2 to November. This is not so much a domestic spider as *A. patagiata* and in fact most of our specimens have been

collected under logs, on fences, under bark, in grass, in wasp's nests and in deciduous forests of bur oak, red oak and linden. They mature in the spring, so probably hibernate in an immature condition.

Aranea gemma (McCook). *Epeira gemma* McCook, Proc. Acad. Nat. Sci. Phila., 1888, p. 193.

Distribution: Western United States from California and British Columbia east to Louisiana and Nebraska.

Occurrence in Nebraska: Bruner's collection of Nebraska spiders included this species.

Aranea marmorea Clerck, Svensk. Spind., 1757, p. 29.

Specimens: 3 male; 15 female; 1, immature.

Distribution: All states and Canada (Petrunkévitch, 1911).

Occurrence in Nebraska: Eastern part of state in deciduous forests. Collected at Omaha, Plattsmouth, Union, Mynard, Fremont and Lincoln. Dates, May 23 to October 11. Our May specimens are immature, while those taken in September and October are mature. We have collected specimens in cedar forests as well as in trees and herbage of deciduous forests.

The giant orb web, two feet or so in diameter, which is usually asymmetrical, is suspended by short guy lines between adjacent trees and among the low branches. At one side of the orb a maze of silk conceals the rolled-leaf retreat of the spider. In the shaded woods the spider will occupy the center of the orb continuously but in the more open stretches the day is spent in the retreat, with a trapline as a means of communication.

Aranea mineata (Walckenaer) is found in southern United States from Florida to California and north to New Jersey and Illinois, so it may reach Nebraska, although it is not known to occur here.

Aranea patagiata Clerck, Aran. Svec., 1757, p. 38.

Specimens: 8 males; 12 females; 2, immature.

Distribution: Entire United States, eastern Canada, and Alaska (Petrunkévitch, 1911).

Occurrence in Nebraska: Entire state. Collected at Murdock, Alvo, Lincoln, Valentine, Wood Lake, Ender's Lake, Ainsworth and Mitchell, May to August 14. This is a house species, but we have also found it under logs in fields and under strips of tin near marshes. It matures in spring and summer.

Aranea pagnia (Walckenaer) is said to range through all the states, but we know of no records for Nebraska.

Aranea solitaria (Emerton). *Epeira solitaria* Emerton, Trans. Conn. Acad. Sci., 1884, v. 6, p. 299.

Specimens: 2 males; 9 females; 51, immature.

Distribution: Northern United States and southern Canada, south to the District of Columbia, Ohio, Colorado and Oregon; northwest to Alaska.

Occurrence in Nebraska: Known only from Mitchell, where 62 specimens were collected between June 23 and August 12, 1923. Some of these specimens were found about houses, others in wasp's nests, and some under rocks on dry hills.

Aranea thaddea (Hentz). *Epeira thaddeus* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 473.

Specimens: 1 male; 2 females.

Distribution: All states (Petrunkévitch, 1911).

Occurrence in Nebraska: Deciduous forests of eastern Nebraska. It has been found at Plattsmouth, Union and Fremont, from August 25 to October 23. All of them were swept from coralberry bushes (*Symphoricarpos*).

Aranea trifolium (Hentz). *Epeira trifolium* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 471.

Specimens: 2 males.

Distribution: All states, Canada and Alaska, according to Petrunkévitch (1911).

Occurrence in Nebraska: Entire state. We have one specimen collected at Fremont, September 11, 1923, in a deciduous forest, and another collected at Scottsbluff, July 16, 1923, in marsh grass. This was included in Bruner's collection of Nebraska spiders.

Genus *Cylosa* Menge, 1866:

1. Abdomen with a pair of dorsal median tubercles and a slender caudal projection.....*turbinata* (Walck.)
1. Abdomen without a dorsal tubercle and with caudal projection stout.....*conica* (Pallas)

Cyclosa conica (Pallas). *Aranea conica* Pallas, Spicil. Zool., 1772, p. 48.

Distribution: All states (Banks, 1910).

Occurrence in Nebraska: Bruner appears to have collected this species in Nebraska. Recent collectors have not found it.

Cyclosa turbinata (Walckenaer) is said to be found throughout all the United States and in Canada. It has never been found in Nebraska, however.

Eustala anastera (Walckenaer). *Epeira anastera* Walckenaer, Ins. Apt., 1837, v. 2, p. 33.

Specimens: 8 males; 14 females; 10, immature.

Distribution: All states (Petrunkévitch, 1911).

Occurrence in Nebraska: Eastern half of state from Plattsmouth and Union on the Missouri, to Murdock, Ashland, Fremont, Lincoln, Sprague and west as far as Brewster. Dates from April 25 to October 17. Individuals mature in June. Our specimens were collected on gooseberry bushes, in wasp's nests, in cedar trees and in clover. Bruner also collected *Eustala anastera* in Nebraska. It spins its small orbs, six to nine inches in diameter, among the lower branches of trees.

Glyptocranium cornigerum (Hentz). *Epeira cornigera* Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 20.

Specimen: 1 male.

Distribution: All states and Alaska.

Occurrence in Nebraska: A single specimen, a male, was collected near Mynard, August 29, 1923, where it was suspended in a small orb on a porch.

Larinia famulatoria (Keyserling). *Epeira famulatoria* Keyserling, Verh. zool.-bot. Ges. Wien, 1882, v. 32, p. 201.

Specimens: 18 immature males and females.

Distribution: Known from the plains region of Colorado and Nebraska.

Occurrence in Nebraska: Our specimens were collected at Halsey, on August 12 and 13, 1923, in sandhill grass. There are no other records for the state.

Genus *Mangora* Cambridge, 1889:

1. Abdomen with a dark median longitudinal band extending the entire length of the abdomen, narrowing at anterior end, wider at posterior end *placida* (Hentz)
1. Abdomen without a dark median band
 2. Abdomen white, mottled with yellow and striped and spotted with black *gibberosa* (Hentz)
 2. Abdomen with several pairs of black spots on the hinder half, which may be connected with brownish transverse bands

maculata (Keys.)

Mangora gibberosa (Hentz). *Epeira gibberosa* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 457.

Specimens: 2 males; 3 females.

Distribution: Eastern states from New England to Florida and west to eastern Nebraska.

Occurrence in Nebraska: Eastern part of state in deciduous forests. We have specimens from Weeping Water, Fremont and Oconto. Taken from August 12 to October. It matures in early August (Comstock, 1912).

Mangora maculata (Keyserling). *Epeira maculata* Keyserling, Verh. zool.-bot. Ges. Wien, 1865, v. 14, p. 827.

Specimens: 7 females.

Distribution: Eastern states, west to Nebraska.

Occurrence in Nebraska: Eastern edge of state in deciduous forests. Pickwell collected specimens at Union and Fremont, August 23 to September 11. All these specimens are females. The webs are constructed in low vegetation.

Mangora placida (Hentz). *Epeira placida* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 475.

Specimens: 6 males; 8 females; 1 immature female.

Distribution: Eastern United States from New England and Florida, west to Nebraska.

Occurrence in Nebraska: Eastern part of state in deciduous forests. Our specimens are from Weeping Water and Lin-

coln, collected from May to October 8. They mature in May and are most abundant in herbage of the flood plain, but are also found in forests.

Marxia stellata (Walckenaer). *Epeira stellata* Walckenaer, Tab. Aran., 1805, p. 65.

Specimens: 1 male; 13 female; 5, immature.

Distribution: Entire United States (Petrunkevitch, 1911).

Occurrence in Nebraska: Probably the entire state. Recorded from Plattsmouth, Murdock, Saltillo, Lincoln, Chambers, Ainsworth, Ender's Lake and Wood Lake. Dates, April 11 to October 17. Our April, May and October specimens are mature; the June, August and September specimens are all immature. We have collected *Marxia stellata* in low prairie and marsh grass and in weeds and cottonwoods. It also occurs in our collections from wasp's nests.

Metepeira labyrinthica (Hentz). *Epeira labyrinthica* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 471.

Distribution: Entire United States and southern Canada.

Occurrence in Nebraska: Bruner collected this araneid in Nebraska, but recent collectors have not found it.

Genus *Neoscona* Simon, 1864 (Comstock, 1912):

1. Males:

2a. Coxa of fourth leg with a coniform spur beneath

3a. Abdomen with a brown median dorsal stripe

pratensis (Hentz)

3a. Abdomen uniformly dark in color.....*vulgaris* (Hentz)

2a. Coxa of fourth leg without a coniform spur beneath

3b. Tibia of second leg straight or nearly so....*benjamina* (Walck.)

3b. Tibia of second leg strongly curved, concave on inner side

arabesca (Walck.)

1. Females:

2b. Abdomen triangularly oval, broad anteriorly

3c. Epigynum short, hardly longer than its width at base

vulgaris (Hentz)

3c. Epigynum elongate.....*benjamina* (Walck.)

2b. Abdomen uniformly oval

3d. Dorsal surface of the abdomen with a dark band in the middle bordered on each side with a yellow stripe or a series of yellow spots.....*pratensis* (Hentz)

3d. Dorsal surface of abdomen with a yellow band in the middle or a series of yellow spots.....*arabesca* (Walck.)

Neoscona arabesca (Walckenaer). *Epeira arabesca* Walckenaer, Ins. Apt., 1837, v. 2, p. 74.

Specimens: 16 males; 17 females; 1 immature female; 5, immature.

Distribution: Entire United States and southern Canada (Petrunkévitch, 1911).

Occurrence in Nebraska: Entire state from Union and Lincoln west to Ainsworth, Ender's Lake, Haigler, Mitchell, Scottsbluff and southern Sioux county. Dates, June 4 to August 28. This is a marsh-loving species. We have collected it from arrowhead lilies (*Sagittaria*), in sunflowers, from rank weeds and cattails, in low prairie grass, in marsh grass, from milkweeds, and in spike-rushes. Individuals mature from June to August.

Neoscona benjamina (Walckenaer). *Epeira benjamina* Walckenaer, Ins. Apt., 1837, v. 2, p. 42.

Specimens: 3 males; 50 females; 1, immature.

Distribution: Entire United States.

Occurrence in Nebraska: Entire state, from Wabash, Mynard, Elmwood, Murdock, Lincoln, Milford and Fremont, west to Ender's Lake and Ainsworth. Specimens collected from July 1 to October. This species is most common in shrubbery and about dwellings, but we have also found it under logs, and in deciduous forests. It matures in late June and July.

The orbs of the older females are enormous, reaching, apparently, a greater size than those of any other orb weaver of the state; occasionally they will measure as much as two feet in diameter. These large orb webs are supported, however, with very short guy lines. During the day the spider will be found in a rolled-leaf retreat at one side of her snare but she comes out toward evening. Specimens vary remarkably in coloration, and reach, in early autumn, a large size. Like the majority of Nebraska argiopids they do not survive the winter as adults but leave the fate of the next generation to the eggs and young of their cocoons.

This spider is very pugnacious and with its large mandibles is usually able to draw blood when it bites, but no poisonous effects were ever experienced.

Neoscona pratensis (Hentz). *Epeira pratensis* Hentz, Journ. Bost. Soc. Not. Hist., 1847, v. 5, p. 475.

Specimens: 1 male; 1 female; 20 immature females; 38, immature.

Distribution: Entire United States (Banks, 1912).

Occurrence in Nebraska: Entire state from Murdock and Lincoln in extreme eastern Nebraska to Mitchell in the extreme western part of the state. Dates, May 27 to August 22. We have collected specimens in high and low prairie grass, in sunflowers, and by sweeping alfalfa, as well as in wasp's nests. They mature in late July and early August.

Neoscona vulgaris (Hentz). *Epeira vulgaris* Hentz, Journ. Bost. Soc. Hist., 1847, v. 5, p. 108.

Specimen: 1 female.

Distribution: Southern United States (Banks), north to New Hampshire (Keyserling) and Nebraska.

Occurrence in Nebraska: A single female was collected by Worley near a house at Plattsmouth, August 10, 1922. There are no other records for the state. This is sometimes known as *Epeira volucripes* Keyserling (McCook, 1893) and *Araneus nauticus* (L. Koch) (Petrunkevitch, 1911).

Singa variabilis Emerton, Trans. Conn. Acad. Sci., 1884, v. 6, p. 322.

Specimen: 1 immature male.

Distribution: Entire United States (Banks, 1910).

Occurrence in Nebraska: Worley collected a single immature male at Sprague, May 27, 1923, in gooseberry sweepings. This species was also collected by Bruner.

Verrucosa arenata (Walckenaer). *Epeira arenata* Walckenaer, Ins. Apt., 1837, v. 2, p. 133.

Specimens: 33 females.

Distribution: Southern United States from Florida to California and north to New Jersey, Ohio, Nebraska and Utah.

Occurrence in Nebraska: Probably the entire southern half of the state, but it has been collected only in the southeastern part at Union, Wabash, Fremont and Lincoln. All of our specimens are mature females collected in the fall between August 19 and September 11, in webs in deciduous forests. The spider matures in early autumn and dies before winter.

Zilla x-notata (Clerck) is included in this list because it is said to range throughout the United States. However, McCook states (1893) that it may occur only on the coasts, where it may have been introduced from the Old World, and that it is not known from the interior of the country. It is very common in Europe.

FAMILY MIMETIDAE

Genera (Comstock, 1912):

1. Clypeus much narrower than ocular area; posterior legs much shorter than anterior legs.....*Mimetus* Hentz
1. Clypeus not narrower than ocular area; posterior legs not much shorter than anterior legs.....*Ero* C. Koch

Ero furcata (Villers) is not known from Nebraska, but is said to occur throughout this country.

Genus *Mimetus* Hentz, 1832 (Chamberlin, 1923):

Males:

1. Outer margin of covering of palpal bulb with a chitinous, spiny process proximad of the curved apical one.....*epeiroides* Emerton
1. Outer margin of the covering of the palpal bulb without such a chitinous process.....*interfector* Hentz

Mimetus epeiroides Emerton, Trans. Conn. Acad. Sci., 1882, v. 6, p. 17.

Specimen: 1 male.

Distribution: Not well known. This species was described from New England by Emerton, but was later considered a synonym of *M. interfector* by Banks (1910) and Petrunkevitch (1911). Recently (1923) Chamberlin has included the species as distinct in his revision of the genus and has furnished a key for the separation of the males.

Occurrence in Nebraska: We have a single mature male specimen, collected by sweeping low prairie grass in southern Sioux county, July 6, 1923, which answers Emerton's description and which is identifiable by Chamberlin's key as *M. epeiroides*. The consideration of it as a distinct species seems to be justified.

Mimetus intersector Hentz, Journ. Bost. Soc. Nat. Hist., 1850, v. 6, p. 3.

Specimens: 1 female; 1 immature female; 1, immature.

Distribution: Entire United States.

Occurrence in Nebraska: From Murdock and Lincoln to Mitchell. Dates, June 27 to September 8. We have collected this species about houses, in gooseberry bushes, and in cedar trees. A specimen, collected August 31, was mature, but another specimen collected September 8 was not, although they usually mature in June and July, for our June specimen was almost mature, and we have a mature specimen of *M. epeiroides* collected July 6.

FAMILY THOMISIDAE

Subfamilies (Comstock, 1912):

1. Tarsi of the first and second pairs of legs not scopulate beneath; third and fourth pairs of legs usually much shorter than the first and second pairs; hairs of the body filiform or rod-shaped and erect; upper margin of the cheliceral furrow without teeth.....*Misumeninae*
1. Tarsi of the first and second pairs of legs scopulate beneath, in the females at least; third and fourth pairs of legs as long or nearly as long as the first and second pairs; hairs of the body pubescent or plumose, and prone, not erect; upper margin of the cheliceral furrow with one or two teeth.....*Philodrominae*

SUBFAMILY MISUMENINAE

Genera (Comstock, 1912):

1. First and second pairs of legs devoid of spines except beneath the tibiae and metatarsi, or with one or two minute ones elsewhere
Misumena Latr.
1. First and second pairs of legs with distinct spines in addition to those on the tibiae and metatarsi
 2. Abdomen high and pointed behind.....*Tmarus* Simon
 2. Abdomen broadly rounded behind
 3. Cephalothorax very flat.....*Coriarachne* Thor.
 3. Cephalothorax moderately high

4. Abdomen, cephalothorax and legs pale whitish or yellowish, but little marked except for bands on legs of male
Misumenops Camb.
4. Abdomen or cephalothorax and legs dark or heavily marked with dark
 5. Median ocular area longer than wide; tibiae of the first and second pairs of legs with only two pairs of spines below; some of the setae clavate.....*Oxyptila* Simon
 5. Median ocular area as wide as or wider than long; tibiae of the first and second pairs of legs with more than two pairs of inferior spines; setae sometimes blunt but never clavate
 6. Tarsal claws of first two pairs of legs with only five or six teeth.....*Xysticus* C. Koch
 6. Tarsal claws of the first two pairs of legs with more than six teeth.....*Synaema* Simon

Coriarachne versicolor Keyserling, Die Spinnen Amerikas, 1880, p. 53.

Specimens: 1 male; 3 immature males; 1 immature female; 2, immature.

Distribution: Entire United States and Canada.

Occurrence in Nebraska: Southeastern Nebraska. Found at Lincoln, Havelock, Waverly, Murdock and Roca. Dates, February 13 to fall. Our specimens have been collected under bark, under logs and stones, and on foliage in woods. They hibernate under the bark of upright dead trees, making no hibernating sac.

Genus *Misumena* Latreille, 1804:

1. A ridge connects the eye tubercles of the posterior lateral eyes; female either unspotted and without bands, or else there are distinct bands and spots in addition to the pair of stripes on each side of the abdomen.....*aleatoria* (Hentz)
1. No such ridge between posterior lateral eyes; female with a pinkish stripe on each side of the abdomen.....*vatia* (Clerck)

Misumena aleatoria (Hentz). *Thomisus aleatorius* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 444.

Specimens: 11 males; 43 females; 19, immature.

Distribution: All states and Canada (Petrunkevitch, 1911).

Occurrence in Nebraska: Eastern half of state from Plattsmouth, Murdock and Lincoln to Oconto, Broken Bow and Halsey. Dates, August 9 to September 12. Although very

common for a very short period each fall, *M. aleatoria* disappears very suddenly and individuals are not again noted until the next year. It frequents blossoms of many kinds of wild flowers, particularly sunflowers and goldenrods. We have also collected it in grass and in marshes. It is much commoner than the following species, matures in late August and early September, and dies before winter.

Misumena vatia (Clerck). *Araneus vatius* Clerck, Svensk. Spind., 1757, p. 128.

Specimens: 2 females; 1 immature female; 1 immature.

Distribution: North America, from Alaska southward over the entire United States.

Occurrence in Nebraska: Eastern portion of state. Collected at Plattsmouth, Lincoln and Weeping Water, from May 21 to August 12. This beautiful predatory spider is often found on flowers, but all of our Nebraska specimens were found by sweeping high prairie grass.

Genus *Misumenops* Cambridge, 1900 (Keyserling, under genus *Misumena*, 1880):

1. Males:

2a. Cephalothorax not more than the length of femur IV
oblongus (Keys.)

2a. Cephalothorax noticeably longer than femur IV

3a. Embolus of palpus sharply bent toward the outside
asperatus (Hentz)

3a. Embolus of palpus not bent.....*celer* (Hentz)

1. Females:

2b. Anterior eyes equidistant.....*asperatus* (Hentz)

2b. Anterior eyes not equidistant

3b. Anterior median eyes obviously closer to each other than to lateral eyes.....*oblongus* (Keys.)

3b. Anterior median eyes somewhat farther from each other than from lateral eyes

4. Cephalothorax the length of patella and tibia IV
americanus (Keys.)

4. Cephalothorax longer than patella and tibia IV
celer (Hentz)

Misumenops americanus (Keyserling). *Misumena americana* Keyserling, Die Spinnen Amerikas, 1880, p. 85.

Distribution: Southeastern United States, west to Illinois and Nebraska.

Occurrence in Nebraska: This spider was collected by Bruner. There are no other records.

Misumenops asperatus (Hentz). *Thomisus asperatus* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 447.

Specimens: about 150, including males, females, and immature individuals.

Distribution: United States from New England to Washington and south over at least the eastern half of the country.

Occurrence in Nebraska: Entire state, from Plattsmouth, Weeping Water, Fremont, Havelock, Sprague and Lincoln, west to Halsey, Haigler, Mitchell, and Lyons, Colorado. A very common predatory species found on foliage from May 1 to October 17. Our spring specimens are mostly mature while those collected later in the season, in August, September and October, are mostly immature. We have collected *Misumenops asperatus* on goldenrods, sunflowers, gooseberries and asters; we have swept it from high and low prairie grass, linden, bur oak, sandhill grass, flood plain foliage, coralberry and elm shrubbery, milkweed, spike-rush and cattail patches; and we have found it under stones and in wasp's nests.

Misumenops celer (Hentz). *Thomisus celer* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 78.

Specimens: 2 males; 6 females; 2 immature females; 1, immature.

Distribution: Gulf coast states and north to Nebraska.

Occurrence in Nebraska: Entire state, not common. Our specimens are from Lincoln, Chambers, Mitchell, Scottsbluff, southern Sioux county, and Haigler. Collected from May 2 to September in thistle blossoms, low and high prairie grass, in alfalfa, in sunflowers, and in sweepings from milkweeds, cattails and spike-rushes. We have immature specimens collected May 2 and immature females were collected July 1 and 6; the mature specimens were collected in June, July, August and September. It probably matures in late June.

Misumenops oblongus (Keyserling). *Misumena oblonga* Keyserling, Die Spinnen Amerikas, 1880, p. 79.

Specimen: 1 male.

Distribution: Eastern United States from Massachusetts to Georgia; west to New Mexico, Indiana, Illinois and Nebraska.

Occurrence in Nebraska: Known only from a male, collected by Pickwell at Lincoln, June 11, 1922.

Genus *Oxyptila* Simon, 1864 (Banks, 1896):

1. Abdomen irregularly spotted; cephalothorax pale behind and near eyes; legs often quite pale.....*conspurcata* Thor.
1. Abdomen regularly dotted; cephalothorax pale only behind; legs dark brownish.....*monroensis* Keys.

Oxyptila modesta (Scheffer) was described from Kansas and may be found in Nebraska.

Oxyptila conspurcata Thorell, Bull. U. S. Geol. Surv., 1877, v. 3, p. 496.

Specimens: 5 females.

Distribution: Eastern United States from New Hampshire to Georgia; west to Illinois, Iowa, Nebraska, Colorado and the Canadian Rockies.

Occurrence in Nebraska: Entire state, from Lincoln to Scottsbluff; dates, March 20 to November 30. All of these individuals were mature females and were collected under bark and logs in deciduous forests and one specimen was swept from marsh grass.

?*Oxyptila monroensis* Keyserling, Verh. zool.-bot. Ges. Wien, 1883, v. 33, p. 671.

Distribution: Known from New York, District of Columbia and Virginia. This species has been included here because it appears in the list of Nebraska spiders collected by Bruner. It was identified by Marx with some doubt and it is to be considered a very questionable record.

Tmarus angulatus (Walckenaer). *Thomisus angulatus* Walckenaer, Ins. Apt., 1837, v. 1, p. 537.

Specimens: 4 males; 2 immature males; 4, immature.

Distribution: All states (Petrunkevitch, 1911).

Occurrence in Nebraska: Deciduous forests in eastern Nebraska. Localities are Lincoln, Fremont and Sprague. Our specimens were collected from shrubbery, mainly gooseberry, and bur oak trees, from May 15 to September 24. All of our spring specimens are mature, while the fall specimens are all immature except one male individual.

?*Tmarus griseus* Keyserling, Verh. zool.-bot. Ges. Wien, 1883, v. 33, p. 672.

Distribution: Described from Florida from specimens collected by Marx. Marx later identified specimens collected by Bruner in Nebraska as this species, but we consider this record as very questionable.

Genus *Xysticus* C. Koch, 1835 (Keyserling, 1880):

1. Males:

2a. Cephalothorax decidedly shorter than femur I

3a. Cephalothorax much shorter than tibia I.....*funestus* Keys.

3a. Cephalothorax as long or longer than tibia I

4a. Both processes on the palpal bulb situated close beside each other on the same base.....*locuples* Keys.

4a. Processes on the posterior part of the palpal bulb situated at a distance from each other, one on the posterior edge, the other in the middle.....*auctificus* Keys.

2a. Cephalothorax as long as or longer than femur I

3b. Palpus lacking apophysis on posterior part.....*benefactor* Keys.

3b. Palpus with one or two apophyses on posterior part

4b. First pair of legs only dark-colored.....*triguttatus* Keys.

4b. Legs other than first pair dark-colored

5a. Femur and patella of first and second legs dark-colored
ontariensis Emerton

5a. All the legs dark-colored

6a. Process on posterior part of palpal bulb very long and directed on the sides; overtopped by the edge of cymbium on the inner side.....*limbatus* Keys.

6a. Process on the posterior part of the palpal bulb not long

7a. Posterior part of palpal bulb with one process

8a. Process of palpal bulb provided on the side with a sharp point.....*elegans* Keys.

8a. Process of palpal bulb blunt and directed backward*formosus* Banks

7a. Posterior part of the palpal bulb with two processes

8b. Both processes similar, being equal in thickness and approximately equal in length

gulosus Keys.

- 8b. Processes unlike
 - 9. Fore process thin and bent; hind process thin and straight; equal in length.....*nervosus* Banks
 - 9. Processes of other form
 - 10. The fore process quite thin; the hinder thick and stout.....*ferox* (Hentz)
 - 10. The fore process broad and bent
 - 11. Hind process short and in the form of a small blunt tooth.....*discursans* Keys.
 - 11. Hind process thin, but the length of the fore; crossing under it
luctans (C. Koch)
- 1. Females:
 - 2b. Cephalothorax decidedly shorter than femur I.....*funestus* Keys.
 - 2b. Cephalothorax as long as or longer than femur I
 - 3c. Posterior median eyes the same distance from each other as the anterior
 - 4c. Four median eyes equal in size
 - 5b. Epigynum cut in the middle of its length by a transversion that is equal to the side piece.....*cunctator* Thorell
 - 5b. Epigynum not cut by a transversion that is equal to the side piece
 - 6b. Epigynum just as wide as long.....*formosus* Banks
 - 6b. Epigynum somewhat wider than long, having in the middle of the posterior border a small anteriorly extending angle.....*elegans* Keys.
 - 6b. Epigynum somewhat longer than wide and without a forwardly extending angle in the middle of posterior border
 - 7b. Epigynum with a single round-cornered cavity
discursans Keys.
 - 7b. Epigynum with two cavities and these with rounded angular corners.....*benefactor* Keys.
 - 4c. The four median eyes unequal in size
 - 5c. Posterior border of epigynum cut deeply in the middle
ferox (Hentz)
 - 5c. Posterior border of epigynum not cut and with a prominent longitudinal septum
 - 6c. Septum about same width throughout....*auctifiscus* Keys.
 - 6c. Septum becoming very broad anteriorly
 - 7c. Epigynum nearly twice as wide as long
nigromaculatus Keys.
 - 7c. Epigynum barely as wide as long.....*limbatus* Keys.
 - 3c. Anterior median eyes not so far from each other as the posterior median eyes
 - 4d. Four median eyes equal in size
 - 5d. Epigynum consisting of a deep groove as wide as long
triguttatus Keys.
 - 5d. Epigynum consisting of a slight depression lying between two small oval bodies

- 6d. Cephalothorax equal in length to combined length of tarsus and metatarsus I.....*nervosus* Banks
- 6d. Cephalothorax shorter than metatarsus I and tarsus I.....*locuples* Keys.
- 6d. Cephalothorax sometimes longer than metatarsus I and tarsus I.....*gulosus* Keys.
- 4d. Four median eyes unequal in size, the posterior being the larger.....*luctans* (C. Koch.)

The males of *Xysticus nigromaculatus* Keyserling and *Xysticus cunctator* Thorell have not been described and are therefore not included in the key to males. *Xysticus ontariensis* Emerton is known only from male specimens and can not be included in the key to females.

Xysticus auctificus Keyserling, *Xysticus benefactor* Keyserling, *Xysticus discursans* Keyserling, *Xysticus locuples* Keyserling and *Xysticus nigromaculatus* Keyserling have not been recorded in Nebraska, but all are found in Colorado and were described from there by Keyserling. They have not been found in many localities since. *Xysticus formosus* Banks is found over a large part of the United States, but we have never taken it in Nebraska.

Xysticus cunctator Thorell, Bull. U. S. Geol. Surv., 1877, v. 3, p. 494.

Specimens: 4 females.

Distribution: *Xysticus cunctator* is known from Florida, Colorado, New Mexico and Nebraska.

Occurrence in Nebraska: All of our specimens were collected at Mitchell, June 21 and 24, 1923, under dung and stones on the dry plains. There are no other records.

Xysticus elegans Keyserling, Die Spinnen Amerikas, 1880, p. 31.

Specimens: 4 immature males; 2, immature.

Distribution: Known from Georgia, New Mexico, New Hampshire and Nebraska.

Occurrence in Nebraska: Entire state, in forests. Known from Lincoln, Havelock, Weeping Water and Chadron. We have collected it from March 20 to October, by sifting leaves

in woods, under logs, in bur oak sweepings and in elm shrubbery. All of our specimens were immature.

Xysticus ferox (Hentz). *Thomisus ferox* Hentz, Jour. Bost. Soc. Nat. Hist., 1847, v. 5, p. 445.

Specimens: 3 males; 6 females; 1 immature female; 3, immature.

Distribution: Entire United States.

Occurrence in Nebraska: Entire state from Plattsmouth, Lincoln, Elmwood and Sprague, west to Cheyenne, Wyoming. Collected from March 28 to November 30 under stones, bark, logs, and tin and in sweeping gooseberry and other shrubbery. This species matures in May and early June.

Xysticus funestus Keyserling, Die Spinnen Amerikas, 1880, p. 10.

The Nebraska record of *Xysticus funestus* is due to Bruner who collected a specimen here many years ago which was later identified by Marx. Recent collectors have not found this spider.

Xysticus gulosus Keyserling, Die Spinnen Amerikas, 1880, p. 43.

Specimens: 4 males; 13 females; 4 immature males; 3, immature.

Distribution: Entire United States (Petrunkévitch, 1911).

Occurrence in Nebraska: Eastern half of state, from Plattsmouth, Havelock and Lincoln, west to Valentine and Halsey. Dates, February 27 to November 30. We have found it under bark and logs; in saltmarsh grass, sandhill grass, in high prairie grass, and in herbage in deciduous forests. *X. gulosus* matures in April, but many individuals hibernate in the adult stage.

Xysticus limbatus Keyserling, Die Spinnen Amerikas, 1880, p. 35.

Specimens: 2 males; 3 females; 3, immature.

Distribution: Entire United States (Banks, 1910).

Occurrence in Nebraska: Entire state from Weeping Water to Scottsbluff and Mitchell. Dates, May 21 to October 8. They probably mature in May; our immature specimens were collected in October. Bur oak foliage, flood plain herbage and cavities under stones and dung are inhabited by this species.

Xysticus luctans (C. Koch). *Thomisus luctans* C. Koch, Die Arach., 1845, v. 12, p. 63.

Specimens: 1 male; 1 female; 1, immature.

Distribution: Entire United States.

Occurrence in Nebraska: Extreme eastern Nebraska in deciduous forests. Our specimens are from Lincoln and Plattsmouth, collected from April 22 to August 25, under logs and carrion and in sunflowers. *Xysticus luctans* hibernates in the adult stage, for we have found mature specimens in the spring and in the fall.

Xysticus nervosus Banks, Proc. Acad. Nat. Sci. Phila, 1892, p. 55.

Specimens: 1 female; 2, immature.

Distribution: Eastern United States, from Massachusetts and New York, west to Indiana, Kansas and Nebraska.

Occurrence in Nebraska: Extreme eastern Nebraska, not found west of Lincoln. Collected at Plattsmouth and Lincoln, from February 24 to March 31, under dung, bark and logs. Our mature female was found on February 24; the March specimens were immature.

Xysticus ontariensis Emerton, Can. Ent., 1919, v. 51, p. 105.

Specimen: 1 male.

Distribution: Northeastern fourth of the United States, south and west to Nebraska.

Occurrence in Nebraska: Known from Nebraska only from a single male specimen collected by Pickwell at Valentine, August 24, 1923.

Xysticus triguttatus Keyserling, Die Spinnen Amerikas, 1880, p. 12.

Specimens: 11 males; 5 females.

Distribution: Eastern United States, from Massachusetts to Georgia and west to Indiana, Nebraska, Kansas and Colorado.

Occurrence in Nebraska: Entire state, in grassland and marshes. We have specimens from Lincoln, Mitchell and southern Sioux county, collected from May 30 to July 6. All of our specimens are mature and none of them were collected early in the spring so we cannot say whether or not they hibernate as adults.

Synaema parvula (Hentz) is found in the southern states and north to Indiana and Kansas. Scheffer collected his Kansas specimens in the vicinity of Manhattan, not far from the Nebraska line, so this might reasonably be expected to be found in Nebraska.

SUBFAMILY PHILODROMINAE

Genera (Comstock, 1912):

1. Tibiae of the first and second pairs of legs armed with five pairs of spines beneath.....*Philodromoides* Scheffer
1. Tibiae of the first and second pairs of legs armed with less than five pairs of spines
 2. Posterior eyes in a slightly recurved line; posterior median eyes much farther from each other than from the lateral eyes; anterior lateral eyes nearer to the anterior median eyes than to the posterior median eyes.....*Philodromus* Walck.
 2. Posterior eyes in a strongly recurved line; posterior median eyes farther from the lateral eyes than from each other
 3. Cephalothorax not at all or hardly longer than wide
Thanatus C. Koch
 3. Cephalothorax much longer than wide.....*Tibellus* Simon

Philodromoides pratariae Scheffer was described from Kansas and the type locality is only about 60 miles from the Nebraska border, so it may also occur in this state.

Genus *Philodromus* Walckenaer, 1825 (Keyserling, 1880):

1. Males:
 - 2a. Cephalothorax the length of femur III or IV.....*satullus* Keys.
 - 2a. Cephalothorax shorter than femur III or IV
 - 3a. Cephalothorax the length of or longer than metatarsus III
 - 4a. A single short and pointed spine on distal part of tibia
virescens Thor.

- 4a. Tibia of palpus with a prominent apophysis
 - 5a. Tibia of palpus twice as long as patella.....*spectabilis* Keys.
 - 5a. Tibia of palpus not longer than patella
 - 6a. Palpal bulb elongate and not particularly swollen on inner side
 - 7a. Tibial apophysis of palpus simple.....*aureolus* Clerck
 - 7a. Tibial apophysis compound, bearing one or two teeth*infuscatus* Keys.
 - 6a. Palpal bulb strongly swollen on inner side
 - 7b. Palpal organ spherical*robustus* Emerton
 - 7b. Palpal organ longer than wide
 - 8a. Legs quite light in color while hairs of legs are conspicuously dark.....*rufus* Walck.
 - 8a. Legs darker and hairs same color.....*ornatus* Banks
 - 3a. Cephalothorax shorter than metatarsus III
 - 4b. Tibial apophysis broad.....*pernix* Black.
 - 4b. Tibial apophysis narrow
 - 5b. Apophysis blunt*thorelli* Marx
 - 5b. Apophysis sharp-pointed.....*praelustris* Keys.
- 1. Females:
 - 2b. Cephalothorax the length of femur I.....*satullus* Keys.
 - 2b. Cephalothorax shorter than femur I
 - 3b. Cephalothorax longer than tibia IV
 - 4c. Cephalothorax wider than long
 - 5c. Abdomen dark with black markings on dorsal surface
pernix Black.
 - 5c. Abdomen white with black markings on the sides
ornatus Banks
 - 4c. Cephalothorax as wide as long, but no wider
 - 5d. Cephalothorax the length of femur III
 - 6b. Epigynum consisting of two swellings bent toward each other.....*aureolus* Clerck
 - 6b. Epigynum consisting of two oblong apertures between which runs a wide separating wall
 - 7c. Abdomen covered with very small white spots
virescens Thorell
 - 7c. Abdomen not so marked.....*praelustris* Keys.
 - 5d. Cephalothorax shorter than femur III.....*rufus* Walck.
 - 3b. Cephalothorax no longer than tibia IV
 - 4d. Epigynum as wide as long and bearing two oval depressions bent toward each other anteriorly.....*infuscatus* Keys.
 - 4d. Epigynal plate longer than wide and with depressions narrow and long and nearly parallel.....*spectabilis* Keys.
 - 4d. Epigynal plate shaped much like an inverted heart, with two longitudinal ridges approaching each other at their middle and departing from each other at their extremities; as wide or wider than long.....*thorelli* Marx

The female of *Philodromus robustus* Emerton has not been described and is not included in the key. *Philodromus satullus*

Keyserling and *P. spectabilis* Keyserling were described from Colorado; so there is a possibility that either of these may occur in Nebraska, but they are not known from this state.

?*Philodromus aureolus* (Clerck). *Araneus aureolus* Clerck, Svensk. Spind., 1757, p. 133.

Specimens: 13, immature.

Distribution: Most of the United States, from New York to Utah and Arizona.

Occurrence in Nebraska: Eastern Nebraska; collected at Lincoln and Plattsmouth from March 28 to October 17 under logs, on sand in deciduous forest, and on bur oak trees. Our records of this European species are very questionable, but we have not been able to place several almost mature specimens in any place more suitable than here. The hypothetical range of *P. aureolus* includes Nebraska.

Philodromus infuscatus Keyserling, Die Spinnen Amerikas, 1880, p. 222.

Distribution: Eastern United States. Known from New York and Maryland. This eastern spider appears on the list of Bruner's collection. It must be considered of very rare occurrence in this state for other collectors have not found it.

Philodromus ornatus Banks, Proc. Acad. Nat. Sci. Phila., 1892, p. 61.

Specimens: 3 females; 5, immature?

Distribution: Eastern United States from New England to Florida and west to Nebraska.

Occurrence in Nebraska: Entire state. Recorded from Lincoln, Danbury and Haigler, May 1 to October. *Philodromus ornatus* probably hibernates in the immature condition and also mature; those hibernating as immature individuals become adult in the spring. Our October specimens are immature, but we cannot be absolutely sure of the identification of these immature specimens. Specimens were collected from both coralberry bushes and cattails.

Philodromus pernix Blackwall, Ann. Mag. Nat. Hist., 1846, v. 17, p. 38.

Specimens: 110, including males, females, and immature specimens.

Distribution: All states and Canada (Petrunkevitch, 1911).

Occurrence in Nebraska: Eastern part of state. Found at Plattsmouth, Lincoln, Havelock, Saltillo, Murdock, Wabash, Danbury and Ainsworth, from January 6 to May 26 and again from October 11 to December. We have collected this spider in large numbers under bark in winter and under logs and stones. In the warmer months we have found it in flood plain herbage and in low prairie grass. It is a very common hibernating species, but does not spin a hibernating sac. Maturation occurs in the fall or spring.

Philodromus praelustris Keyserling, Die Spinnen Amerikas, 1880, p. 209.

Specimens: 3 males; 2 females; 3, immature.

Distribution: Plains region of Colorado, Arizona and Nebraska.

Occurrence in Nebraska: Western Nebraska, in the Great Plains region. Specimens have been collected at Mitchell, Haigler, and in southern Sioux county, from June 4 to July 6. They mature in June, for our immature specimens that we presume to belong to this species were collected June 4, and several individuals collected after June 24 were mature. This species is most common about houses, but we have also found it in low prairie grass and in milkweed, cattail and spike-rush sweepings.

?*Philodromus robustus* Emerton, Trans. Conn. Acad. Sci., 1892, v. 8, p. 376.

Specimens: 6 males; 4 females.

Distribution: Described by Emerton from Massachusetts and not known from other states with the possible exception of Nebraska.

Occurrence in Nebraska: Three males and a female which appear to be this species were collected by Pickwell at Lincoln,

June 1 and 18, 1922. The specimens were mature, though not fully grown. They were submitted to Emerton, who could not positively identify them, and because of the improbability of such a record we prefer to place this species on the list of Nebraska spiders only doubtfully.

Philodromus rufus Walckenaer, Faune Francaise, 1825, p. 91.

Specimens: 4 males; 4 females; 1, immature.

Distribution: Entire United States, Canada and Europe (Petrunkévitch, 1911).

Occurrence in Nebraska: Entire state; collected at Plattsmouth on the Missouri River, at Lincoln and Chambers, and at Mitchell and in southern Sioux county in extreme western Nebraska. Specimens collected from May 22 to August 16 were mature, but specimens collected October 17 were immature. We have found *Philodromus rufus* in low prairie grass, in shrubbery, in red oak forest and about dwellings. This species appears in the list of Bruner's collection.

Philodromus thorelli Marx, Catalogue, 1888, p. 559.

Specimen: 1 female.

Distribution: Known from the Canadian Rockies, Colorado and New Mexico, according to Petrunkévitch (1911). We have found it also in Nebraska.

Occurrence in Nebraska: Known from this state by a single female specimen collected by Worley at Mitchell, June 25, 1923, on the outside of a house.

Philodromus virescens Thorell, Bull. U. S. Geol. Surv., 1877, v. 3, p. 500.

Specimens: 6 females.

Distribution: Plains region of Colorado, Nevada and Nebraska.

Occurrence in Nebraska: Plains region of western Nebraska. Collected at Mitchell and Scottsbluff from June 23 to July 1, about houses, on shrubbery and under stones. All of our specimens are mature. Bruner also collected this species in Nebraska.

Genus *Thanatus* C. Koch, 1837:

1. Anterior median eyes as large as the anterior lateral eyes
coloradensis Keys.
1. Anterior median eyes much smaller than the anterior lateral eyes
rubicundus Keys.

Thanatus coloradensis Keyserling, Die Spinnen Amerikas, 1880, p. 206.

Specimens: 6 females; 1, immature.

Distribution: Throughout the United States and southern Canada.

Occurrence in Nebraska: Entire state from Lincoln to Halsey, Mitchell and Scottsbluff. Our specimens were collected from February 19 to August 12. *Thanatus coloradensis* matures in the spring after hibernating in the immature state, under stones. In the spring and summer they are found under stones and in grass.

Thanatus rubicundus Keyserling, Die Spinnen Amerikas, 1880, p. 204.

Distribution: Southern states, north to New York, Kansas and Nebraska.

Occurrence in Nebraska: This crab spider is entitled to a place on the list of Nebraska spiders because it was collected by Bruner in the state, but the locality is unknown.

Genus *Tibellus* Simon, 1875.

There appears to be some question as to the number of species belonging to this genus that are found in North America. Banks (1910) in his catalogue lists two species, while Petrunkevitch (1911) mentions but one. Comstock (1912) described two species in his Spider Book. If there are two distinct species representing this genus in North America, then both of them are found in Nebraska. It is possible to separate them by the following key, published by Comstock (1912):

1. Space between posterior median eyes only a little less than that between one of them and a posterior lateral eye of the same side; male with short embolus nearly straight.....*oblongus* (Walck.)

1. Space between posterior median eyes considerably less, sometimes only half as great, as the space between one of them and the posterior lateral eye of the same side; male with embolus of palpus much curved.....*duttoni* (Hentz)

Tibellus duttoni (Hentz). *Thomisus duttoni* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 448.

Specimen: 1 immature male.

Distribution: Entire United States (Banks, 1910).

Occurrence in Nebraska: A single specimen was collected by Worley at Lincoln, April 30, 1927, in the low prairie grass of the salt flats.

Tibellus oblongus (Walckenaer). *Aranea oblonga* Walckenaer, Faune Francaise, 1802, p. 228.

Specimens: 38 males; 56 females; 10, immature.

Distribution: Northern States (Banks, 1910). Entire United States and Alaska (Petrunkévitch, 1911).

Occurrence in Nebraska: Entire state, from Plattsmouth, Weeping Water, Sprague and Lincoln, to Halsey, Oconto, Danbury, Haigler, Scottsbluff and Mitchell. Collected from February 15 to October 8 in marsh grass, high and low prairie grass, in goldenrods, under boards, stones, in sandhill grass, in houses and barns. Specimens mature in the spring, usually in April, and by August and September young individuals of *Tibellus oblongus* may be seen that have hatched during the summer.

FAMILY CLUBIONIDAE

Genera (Banks, 1907):

1. On the venter there is a transverse furrow, remote from the spinnerets, representing the openings of the posterior spiracles
 - 2a. The furrow placed at or before the middle of the venter; anterior median eyes equal to the anterior lateral eyes..*Anyphaena* Sund.
 - 2a. The furrow behind the middle of the venter; anterior median eyes smaller than the anterior lateral eyes.....*Gayenna* Nicolet
1. No such furrow remote from the spinnerets
 - 2b. Two rows of large spines under tibia I and II, more than two in each row
 - 3a. Sternum broad, prolonged between the hind coxae; posterior eye-row not recurved; tibia I with five or six pairs of spines below*Phrurolithus* C. Koch

- 3a. Sternum not prolonged between the hind coxae, which are nearly contiguous; posterior eye-row recurved; tibia I with three pairs of spines below.....*Syrisca* Simon
- 2b. Not more than two pairs of spines under tibia I and II or else irregularly placed and legs banded
- 3b. Maxillae impressed with an oblique furrow; no dorsal groove.....*Micaria* West.
- 3b. Maxillae without a furrow, convex; dorsal groove usually present
4. Leg I plainly longer than IV; body and legs pale; legs with spines.....*Chiracanthium* C. Koch
4. Leg I not longer than IV
5. No spines on legs, or only a few under tibia I
Trachelas L. Koch
5. Spines fairly numerous on legs
6. Anterior median eyes several times their diameter from the clypeal margin; often a horny spot near the base of the abdomen; legs usually partly dark
Castaneira Keys.
6. Anterior median eyes scarcely their diameter from the clypeal margin; no horny spot on abdomen; legs never dark
7. Labium longer than wide; mandibles long; cephalothorax not mottled.....*Clubiona* Latr.
- Labium broader than long; cephalothorax mottled with brown; anterior eye-row procurved
Agroeca West.

Agroeca pratensis Emerton, Trans. Conn. Acad. Sci., 1889, v. 8, p. 190.

Specimen: 1 female.

Distribution: Eastern United States, west to Indiana and Nebraska.

Occurrence in Nebraska: The single female specimen was collected by Worley at Lincoln in November, 1923. It was mature.

Anyphaena gracilis (Hentz). *Clubiona gracilis* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 452.

Specimens: 3 males; 3 females; 8, immature.

Distribution: Eastern United States from New York to Florida. West to Missouri, Kansas and Nebraska.

Occurrence in Nebraska: Eastern part of state in deciduous forests. Collected at Plattsmouth, Union, Fremont, Havelock, Lincoln, and once at Danbury; from February 13 to

October 17. Individuals mature in April and May. They are found in winter under bark and under logs, but with the coming of spring they emerge and may then be found on undergrowth in woodlands, on box-elder, willow, elm, ash and linden.

A. gracilis probably would be more properly referred to the genus *Aysha*. *Anyphaena rubra* Emerton, which was described from the Atlantic coast and has been collected in Kansas, is considered synonymous with this species.

Genus *Castaneira* Keyserling, 1879 (Banks, 1893):

1. Legs lineate with black.....*cingulata* (C. Koch)
1. Legs not lineate with black
 2. Abdomen red with a longitudinal black stripe on each side
descripta (Hentz)
 2. Abdomen not so marked.
 3. Body without black; red, with a few dark bands on the abdomen.....*amoena* (C. Koch)
 3. Body black or with black bands
 4. Anterior femora red.....*trilineata* (Hentz)
 4. Anterior femora blackish; posterior femora red or reddish or black
 5. In life or when dry with three fine transverse white bands on the abdomen.....*longipalpis* (Hentz)
 5. No light bands on abdomen.....*tricolor* (C. Koch)

Castaneira amoena (C. Koch). *Corinna amoena* C. Koch, Die Arach., 1842, v. 9, p. 21.

Specimens: 2 females; 14, immature.

Distribution: Southeastern United States, from North Carolina to Florida; west to Nebraska, Texas and Utah.

Occurrence in Nebraska: Eastern part of state on sandstone outcrops. We have collected them from April 17 to late summer, all under rocks and stones, at Lincoln. Spiders of this species mature in May, June and July.

Castaneira cingulata (C. Koch). *Corinna cingulata* C. Koch, Die Arach., 1842, v. 9, p. 22.

Specimens: 5 females; 3, immature.

Distribution: Entire United States (Petrunkévitch, 1911).

Occurrence in Nebraska: Eastern part of state in deciduous forests. Collected at Weeping Water, Fremont and Lincoln, from May 10 to September 11, under sandstone, under elm

logs, on elm shrubbery, in prairie and in forest. *Castaneira cingulata* matures in midsummer.

Castaneira descripta (Hentz). *Herpyllus descriptus* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 456.

Specimens: 6 females.

Distribution: Entire United States (Petrunkevitch, 1911).

Occurrence in Nebraska: Entire state from Lincoln to Sioux county. Collected from July 6 to October on dusty roads and under boards. All of our specimens are mature. They probably mature in the late spring.

?*Castaneira tricolor* (C. Koch). *Corinna tricolor* C. Koch, Die Arach., 1842, v. 9, p. 24.

Specimens: 1 male; 3 females; 1, immature.

Distribution: Perhaps the entire United States. Little is known about the distribution of *Castaneira tricolor*, but it has been collected in Pennsylvania, Utah, and California and it is listed in Petrunkevitch's catalogue (1911) as occurring in Nebraska.

Occurrence in Nebraska: Western arid regions of Nebraska. Collected at Scottsbluff, Mitchell and Gering, from July 1 to August 13 under stones, rocks and dung. We are in doubt as to the identification of this species.

Castaneira trilineata (Hentz). *Herpyllus trilineatus* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 460.

Specimen: 1 female.

Distribution: Southern states, from New York to Florida; west to Nebraska and Missouri.

Occurrence in Nebraska: Known in this state from a single female specimen collected by Worley at Mitchell, August 6, 1923, on clay.

Castaneira longipalpis (Hentz) is said to occur over all of the United States. It is not known from Nebraska, but may occur here.

Chiracanthium inclusum (Hentz) is not known from Nebraska, but may be found in this state, since the species is very common over a large part of the United States.

Genus *Clubiona* Latreille, 1804 (Comstock, 1912):

1. Small species; body one-sixth to one-fifth inch in length; epigynum of female with two circular cavities.....*moesta* Banks
1. Larger species; body over one-fifth inch in length
 2. Abdomen with distinct dark spots or bands in the middle; sides of abdomen marked with oblique spots.....*pallens* Hentz
 2. Abdomen not marked with distinct dark spots or bands
 3. Apophysis of tibia of male very wide.....*tibialis* Emerton
 3. Apophysis of tibia of male narrow.....*obesa* Hentz

Clubiona moesta Banks, Trans. Amer. Ent. Soc., 1893, v. 23, p. 65.

Specimen: 1 female.

Distribution: Middle states from Illinois to eastern Colorado.

Occurrence in Nebraska: Known only from a single female specimen collected by Worley at Lincoln, in November, 1923, under a log in a deciduous forest.

Clubiona obesa Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 450.

Specimens: 9 males; 28 females; 12, immature.

Distribution: Eastern United States, from Massachusetts to North Carolina; west to Indiana and Nebraska.

Occurrence in Nebraska: Eastern half of state, abundant. Known from Plattsmouth, Murdock, Weeping Water, Fremont, Lincoln and Ainsworth, where it has been collected from January 9 to November. *Clubiona obesa* matures in the early spring, in March and April, but most of them hibernate as immature individuals, since all of our late fall and early spring specimens are immature. It hibernates under logs, boards, bark and stones in thin silken hibernating sacs, but in the spring we have found it mostly on shrubbery in deciduous woods. We have also collected it from cattails in marshes.

Clubiona pallens Hentz, Journ. Bost. Soc. Nat. Hist. 1847, v. 5, p. 449.

Specimens: 1 male; 1 immature female; 1, immature.

Distribution: Eastern United States, from Massachusetts to Alabama; west to Nebraska.

Occurrence in Nebraska: Known from Plattsmouth in the extreme eastern part of the state and Valentine in the north-central part. A mature male and an immature female were collected at Valentine, August 24, 1922. An immature individual was collected at Plattsmouth, March 31, 1923, under a log in a pasture. They probably mature at about the same time as *Clubiona obesa* or a little later.

Clubiona tibialis Emerton, Trans. Conn. Acad. Sci., 1889, v. 8, p. 180.

Distribution: Eastern states, from Massachusetts to Florida and west to Nebraska.

Occurrence in Nebraska: Bruner collected *Clubiona tibialis* in Nebraska, but recent collectors have not found it.

Genus *Gayenna* Nicolet, 1849 (Comstock, 1912):

1. Males:

2. Tibia of palpus about three times as long as the patella; apophysis of tibia apparently arising before the middle of its length
saltabunda (Hentz)
2. Tibia of palpus not greatly elongate; principal apophysis elongate and terminal in position.....*celer* (Hentz)

1. Females:

2. Epigynum longer than wide.....*celer* (Hentz)
2. Epigynum wider than long.....*saltabunda* (Hentz)

Gayenna celer (Hentz). *Clubiona celer* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 452.

Specimens: 2 males; 2 females; 15, immature.

Distribution: Eastern United States, from Massachusetts to Alabama; west to Nebraska and Wyoming.

Occurrence in Nebraska: Entire state from Lincoln west, and at Cheyenne, Wyoming. Collected at Lincoln and Havelock, from May 22 to October 11, under elm logs, in elm shrubbery, in flood plain herbage, and under stones. *Gayenna celer* matures in the summer and probably hibernates in the immature state.

Gayenna saltabunda (Hentz). *Clubiona saltabunda* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 454.

Specimen: 1, immature.

Distribution: Eastern United States, from Massachusetts to Alabama; west to Missouri and Nebraska.

Occurrence in Nebraska: Known only from Plattsmouth at the eastern border of the state, where a single specimen was collected in a clover field by Worley, October 17, 1926.

This species has been recently (1931) designated as the type species of a new genus *Anyphaenella* Bryant.

Genus *Micaria* Westring, 1851 (Banks, 1896):

1. Abdomen not constricted
 - 2a. Anterior femora darker than rest of legs, especially in the male; cephalothorax brown; male palpus conically swollen at base
perfecta Banks
 - 2a. Anterior femora paler than the anterior metatarsi and tarsi
coloradensis Banks
1. Abdomen constricted
 - 2b. Body pale, covered with golden scales; legs almost wholly white
agilis Banks
 - 2b. Body dark, with dark scales; legs dark; cephalothorax pale yellow-brown*aurata* (Hentz)

The key does not include *Micaria limnicunae* McCook, described from Illinois, in 1884. *Micaria agilis* Banks has been taken in Missouri.

Micaria aurata (Hentz). *Herpyllus auratus* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 459.

Specimens: 6 males; 11 females; 5, immature.

Distribution: Eastern United States, from Massachusetts to Florida; west to Texas and Nebraska.

Occurrence in Nebraska: Eastern half of state, from Lincoln, Murdock, and Fremont to Halsey in the sandhills. Collected from March 5 to September 11 under boards, pieces of tin, limestone and on sand in the sandhills. Maturation takes place in July; individuals probably hibernate in an immature condition, one immature specimen being taken from a small and tight hibernating sac on the under side of a log.

Micaria coloradensis Banks and *M. perfecta* Banks were both described from Colorado, but they have not been found in Nebraska.

Genus *Phrurolithus* C. Koch, 1839:

1. Abdomen marked with several chevrons.....*alarius* (Hentz)
1. Abdomen marked on the sides with two pairs of oblique stripes which do not meet in the middle above.....*pugnatus* Emerton

1. Abdomen black, with an indistinct pale curved spot on each side before the middle; a still less distinct pair at base (Banks, 1896)

affinis Banks

Phrurolithus affinis Banks was described from Colorado and *P. pugnatus* Emerton is said to range throughout the United States (Banks, 1910). Neither of these species have been found in Nebraska, to our knowledge.

Phrurolithus alarius (Hentz). *Herpyllus alarius* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 461.

Specimen: 1 female.

Distribution: Eastern United States from Canada to the District of Columbia, west to Ohio and Nebraska.

Occurrence in Nebraska: A mature female of this species was collected by Pickwell at Lincoln, March 11, 1922, from a hibernating sac under the bark of a standing tree.

Syrisca nigriceps (Banks) was described under the name of *Teminius nigriceps* from Colorado. It has not yet been found in this state, but may be in the future.

Trachelas tranquillus (Hentz). *Clubiona tranquilla* Hentz, Journ. Bost. Soc. Nat. Hist., 1847, v. 5, p. 450.

Specimens: 3 females.

Distribution: Entire United States (Petrunkevitch, 1911).

Occurrence in Nebraska: Known only from Lincoln, where it has been found in dwellings and on a tombstone in a cemetery, from August 20 to September 29. All of our specimens are mature.

FAMILY AGELENIDAE

Genera (Comstock, 1912):

1. Fore spinnerets but little separate; hind spinnerets placed behind the fore spinnerets and occupying only a little wider space
2. Upper spinnerets longer than lower pair; labium longer than wide; posterior coxae contiguous
3. Both rows of eyes very strongly procurved, so that the anterior median eyes and the posterior lateral eyes form nearly a straight line.....*Agelena* Walck.
3. Both rows of eyes not at all or but slightly procurved
4. Anterior median eyes much larger than the anterior lateral eyes.....*Coras* Simon

4. Anterior median eyes either smaller than the anterior lateral eyes or of the same size
 5. Clypeus at least twice as wide as the anterior eyes; chelicerae usually but slightly convex; the lower margin of the cheliceral furrow usually 4-, 5- or 6-toothed, rarely 3-toothed *Tegenaria* Latr.
 5. Clypeus scarcely wider than the anterior eyes; chelicerae very strongly convex; lower margin of the cheliceral furrow 2- or 3-toothed..... *Coelotes* Black.
 2. Upper spinnerets not longer than the lower pair; labium nearly always as wide as or wider than long; posterior coxae usually well separated; clypeus much wider than the anterior lateral eyes
 - *Cicurina* Menge
 1. Fore spinnerets widely separate; all spinnerets in one straight or curved line..... *Hahnina* C. Koch
- Agelena naevia* Walckenaer, Tab. Aran., 1805, p. 51.

Specimens: about 60, including males, females, and immature young.

Distribution: Entire United States and Canada.

Occurrence in Nebraska: Entire state, from Lincoln and Plattsmouth to Halsey and Mitchell. Collected also at Cheyenne, Wyoming. Collected from July 19 to October 17, in grass, under stones, logs, around houses, in floodplain herbage, in gooseberry shrubbery and in high prairie grass. The winter is passed in the egg stage. Individuals mature in July, or late June. This is our most abundant spider.

Comstock's statement (1912) regarding the large number of grass spiders is certainly true for Nebraska, as this spider is found everywhere and in considerable numbers during the summer. As fall approaches its number becomes more evident, for its funnel webs increase in size and conspicuousness. Then it will be found in almost every heap of debris, every brush pile, and every clump of grass. The web of *A. naevia* is the most noticeable spider web of late summer and early autumn. The female spider, grown large by this time, is usually in evidence in the mouth of the long tube that leads back from the mouth of the funnel web and the males are encountered everywhere as they run about in search of the females. Males taken at Valentine, in the northern part of the state, possessed a palpus with an extraordinarily long em-

bolus; all others taken had the usual short embolus. These striking differences should receive further study.

Genus *Cicurina* Menge, 1869:

Cicurina pallida Keyserling has been found in Indiana and *Cicurina robusta* Simon was described from Colorado, so either of these species might occur in Nebraska.

Cicurina arcuata Keyserling, Verh. zool.-bot. Ges. Wien, 1887, v. 37, p. 460.

Specimens: 11 males; 11 females; 1 immature male; 9, immature.

Distribution: Entire United States (Petrunkévitch, 1911).

Occurrence in Nebraska: Eastern part of state, mostly in deciduous forests. Recorded from Plattsmouth, Murdock, Saltillo, Fremont, Walton, Valparaiso, Elmwood, Roca and Lincoln. Collected from January 6 to December 2, under bark, logs, sandstone, boards, and on shrubbery. Individuals hibernate either in the mature or immature state, usually the former, in thin hibernating sacs.

Coelotes calcaratus Keyserling, Verh. zool.-bot. Ges. Wien, 1887, v. 37, p. 420.

Specimen: 1, immature.

Distribution: Eastern states, from Connecticut to the District of Columbia; west to Colorado and Wyoming.

Occurrence in Nebraska: Known from a single specimen collected at Lincoln, May 15, 1925, under a stone in deciduous woods.

Coelotes fidelis Banks, Proc. Acad. Nat. Sci. Phila., 1892, p. 24.

Specimen: 1 female.

Distribution: Eastern states from New York to Nebraska.

Occurrence in Nebraska: A female individual of *Coelotes fidelis* was collected at Valentine, August 24, 1922, from a platform-like web on the moist bank of a stream.

Coras medicinalis (Hentz). *Tegenaria medicinalis* Hentz, Journ. Acad. Nat. Sci. Phila., 1821, v. 2, p. 53.

Specimens: 15 females; 15, immature.

Distribution: Entire United States.

Occurrence in Nebraska: Eastern part of state, in deciduous forests; near Lincoln, Union, Plattsmouth, Ashland, Fairbury and Valparaiso. Collected from March 26 to June 2. Hibernation is undergone in both the adult and immature stages. Those that hibernate as immature individuals may not mature until summer.

Hahnia magna Keyserling was described by Keyserling from Wyoming so this species may occur in western Nebraska.

Tegenaria domestica (Clerck). *Araneus domesticus* Clerck, Aran. Svec., 1757.

Specimens: 4 males; 21 females.

Distribution: Entire United States and Canada.

Occurrence in Nebraska: Collected at Plattsmouth, Elmwood, Murdock, Lincoln and Danbury; probably distributed over the entire state. It is abundant in houses at all seasons. Their platform webs are found in cellar corners, and are so firm as to hold a considerable accumulation of dust and fine debris. Mature and immature forms were found throughout the winter and spring.

FAMILY PISAURIDAE

Genera (Bishop, 1924):

1. Lower margin of the furrow of the chelicerae with three teeth
Pisaurina Simon
1. Lower margin of the furrow of the chelicerae with four teeth
Dolomedes Latr.

Genus *Dolomedes* Latreille, 1804 (Bishop, 1924):

1. Females:
 - 2a. Median lobe of epigynum hemispherical; as broad or broader than long *tenebrosus* Hentz
 - 2a. Median lobe of epigynum not hemispherical; considerably longer than broad
 - 3a. Abdomen above with several pairs of small, white dots in two rows

4. Cephalothorax above with submarginal band of bright white hairs; sternum with six small, black spots, three on each side near the coxae.....*triton* Walck.
4. Cephalothorax above without a submarginal band of bright white hairs; a pair of black, wedge-shaped marks in front of dorsal groove.....*urinator* Hentz
- 3a. Abdomen above without small, white spots arranged in two rows, but above dark brown; posterior half crossed by several transverse, w-shaped, white lines.....*scriptus* Hentz
1. Males:
- 2b. A spinose hump on the femur of the fourth leg beneath; tibial apophysis very long, extending almost one-half the length of the bulb*triton* Walck.
- 2b. No spinose hump on femur of the fourth leg beneath
- 3b. Median apophysis of bulb small at base, stout, dilated distally, produced to a point on the side toward the tip of embolus
scriptus Hentz
- 3b. Median apophysis of bulb slender; distal half narrow, ribbon-like, almost transparent.....*tenebrosus* Hentz

The male of *Dolomedes urinator* Hentz is unknown.

Dolomedes scriptus Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 189.

Specimens: 2 females; 2, immature.

Distribution: Canada to Florida; west to Missouri, Arizona and Colorado (Bishop, 1924).

Occurrence in Nebraska: Eastern and northern part of state along streams in deciduous forests from Lincoln and Fremont to Valentine. Found from August 24 to September

11. Our August specimens are in part mature and in part immature; the September specimen is immature. Collected over water in forest and by sweeping undergrowth.

Dolomedes tenebrosus Hentz, Journ. Bost. Soc. Nat. Hist., 1843, v. 4, p. 396.

Specimens: 1 male; 5 females; 3 immature males; 1 immature female; 11, immature.

Distribution: Ontario, Nova Scotia and Quebec, south to Florida; west to Iowa, Nebraska, Arizona and Texas.

Occurrence in Nebraska: Eastern part of state in deciduous forests and collected at Plattsmouth, Weeping Water, Fremont, Lincoln, Sprague and Fairbury. Dates, February 28

to October 8. Maturation takes place from early April to May 15. The males mature later than the females. Our specimens were collected under logs and bark, in early spring; the late spring and summer specimens were swept from flood plain herbage and taken from webs over water in deciduous forests.

Dolomedes triton sexpunctatus Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 191.

Specimens: 18 males; 19 females; 13, immature.

Distribution: Eastern states from Newfoundland to Florida; west to Missouri, Nebraska and Washington (Bishop, 1924).

Occurrence in Nebraska: Known only from Lincoln where specimens have been collected from February 27 to August 23. They mature between April 5 and May 26, but are common during all the warmer months of the year in marshes, under debris there or on the surface of the water.

Dolomedes urinator Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 190.

Distribution: Eastern United States, from Massachusetts to Florida; west to Ohio, Illinois, Nebraska and Texas.

Occurrence in Nebraska: Known only through the list of Nebraska spiders collected by Bruner.

Pisaurina mira (Walckenaer). *Dolomedes mirus* Walckenaer, Ins. Apt., 1837, v. 1, p. 357.

Specimens: 11 females; 42, immature.

Distribution: Ontario to Florida in eastern United States; west to Missouri, Texas and Nebraska.

Occurrence in Nebraska: Eastern portion of state in the vicinity of deciduous forests. Known from Plattsmouth, South Bend, Gretna, Weeping Water, Havelock, Sprague, Fremont and Lincoln. Collected from February 27 to October 17, in high prairie grass, in floodplain herbage, in gooseberry shrubbery and in elm, ash and linden trees in summer. During the colder months it is found under logs and bark.

We have a mature specimen collected April 5 and others collected September 11. Immature specimens are found throughout the year.

FAMILY LYCOSIDAE

Genera (Chamberlin, 1908):

1. Anterior row of eyes very strongly procurved, the median eyes much farther from the lateral than from each other.....*Trabaea* Simon
1. Anterior row of eyes not strongly procurved, the median eyes little or not at all farther from the lateral eyes than from each other
 2. Distal pair of ventral spines of the anterior tibiae never apical in position; cephalothorax with a median band, enclosing in its anterior portion a black v-shaped mark.....*Pirata* Sund.
 2. Distal pair of ventral spines of the anterior tibiae apical in position; median pale band of cephalothorax when present not enclosing anteriorly a dark v-shaped mark
 3. Labium wider than long, with basal excavations short
Pardosa C. Koch
 3. Labium longer than wide, with basal excavations long
 4. Female with the lateral extensions of the guide of epigynum divided so as to be double. Male with the embolus distinctly elbowed, and with the terminal apophysis of the bulb of the palpus conspicuously elevated and usually more or less produced into a horn-like process extending beyond the front margin of the alveolus.....*Schizocosa* Chamb.
 4. Female with the lateral extensions of the guide of the epigynum undivided. Male with the embolus curved evenly, not elbowed, and terminal apophysis of the bulb of the palpus not conspicuously elevated or produced above into a horn-like process extending beyond the front margin of the alveolus
 5. Lower margin of cheliceral furrow armed with only two teeth*Alopecosa* Simon
 5. Lower margin of cheliceral furrow armed with three teeth
 6. No spine at all above on tibiae of third and fourth legs*Geolycosa* Mont.
 6. Spine at middle or both at middle and at proximal end on the tibiae of the third and fourth legs
 7. No true stout spine at base above on tibiae of third and fourth legs, replaced by a basally stout, apically slender and pointed, elongate bristle....*Arctosa* C. Koch
 7. A true robust spine at base above on tibiae of third and fourth legs.....*Lycosa* Latr.

Alopecosa kochii (Keyserling). *Tarentula kochii* Keyserling, Verh. zool.-bot. Ges. Wien, 1876, v. 26, p. 636.

Specimen: 1 female.

Distribution: Mountain regions of North America, from New York and New Jersey to Washington and California.

Occurrence in Nebraska: Known as a Nebraska species from specimens found by Bruner, and from a female collected by Pickwell, September 11, 1923, at Fremont, under a rotting log.

Genus *Arctosa* C. Koch, 1848 (Comstock, 1912):

1. Eyes upon a black patch; legs not marked with dark annuli
cinerea (Fabr.)
1. Eyes not upon a black patch; legs marked with dark annuli
rubicunda (Keys.)

Arctosa cinerea (Fabricius). *Aranea cinerea* Fabricius, Ent. Syst., 1790, v. 2, p. 423.

Specimens: 14 males; 14 females; 3 immature females; 24, immature.

Distribution: On sand throughout the United States.

Occurrence in Nebraska: Eastern half of state. Found at Waverly, Sprague, Lincoln and Wood Lake, from April 22 to October, all under boards on sand or running on sand of beaches. Maturation occurs from April 22 to September 18, but almost always immature specimens can be collected.

Arctosa rubicunda (Keyserling). *Trochosa rubicunda* Keyserling, Verh. zool.-bot. Ges. Wien, 1876, v. 26, p. 663.

Specimens: 4 males; 1 female; 1 immature female; 1, immature.

Distribution: Eastern United States, from Canada to the District of Columbia, west to Indiana, Missouri and Nebraska.

Occurrence in Nebraska: Eastern and southern Nebraska in deciduous woodland; collected at Wabash, Saltillo, Roca, Lincoln and Danbury, from April 11 to October. Our specimens were collected either in woods under logs or on the floors in houses. The latter specimens must have been attracted by the light. We have collected adults in April and May and immature specimens in October.

Geolycosa fatifera (Hentz). *Lycosa fatifera* Hentz, Journ. Bost. Soc. Nat. Hist., 1842, v. 4, p. 229.

Specimen: 7 females.

Distribution: Southern states, from Alabama and Georgia to Texas; north to Indiana, Illinois, Nebraska and Utah.

Occurrence in Nebraska: Entire state from Lincoln, South Bend, and Ashland, north to Chambers and west to Danbury, Mitchell and Minatare. Dates, July 29 to October 17. All of our specimens are mature; they probably mature in the spring.

This spider seems to be restricted to sand or sandy regions where it builds its tunnels. The sand banks along the Platte are especially well adapted to it. One specimen had a half-inch turret of sand above a burrow which was ten inches deep. At the bottom of the burrow, with the spider, was a decapitated tiger beetle. Two of the specimens here noted, one taken in April and the other in May, were large and fully mature. A third, taken in May, was immature. The life of the spider may thus be more than one year in duration.

Genus *Lycosa* Latreille, 1804 (Chamberlin, 1908):

1. Venter of abdomen black in front of epigastric furrow and in a spot at base of spinnerets, elsewhere pale brown.....*coloradensis* Banks
1. Not so
 2. Cephalothorax with a light median longitudinal stripe, which is very narrow or line-like anteriorly, and which extends forward to or between eyes of second row
 - 3a. Legs strongly banded with black, or if annulations are indistinct, legs wholly black
 - 4a. Anterior row of eyes as long or a little longer than the second row.....*aspersa* Hentz
 - 4a. Anterior row of eyes shorter than second.....*riparia* Hentz
 - 3a. Legs yellow or light brown, not at all annulate, or with few dark markings on femora
 - 4b. Males:
 - 5a. Cephalothorax about 1 cm. in length; fourth leg not more than 3.25 times as long as cephalothorax
permunda Chamb.
 - 5a. Cephalothorax under 8 mm. in length; fourth leg 3.7 or more times as long as cephalothorax
 - 6a. Tibia and patella of the first leg together longer than tibia and patella of the fourth leg together
grandis Banks
 - 6a. Tibia and patella of the first leg together shorter than the tibia and patella of the fourth leg together
helluo Walck.

- 4b. Females:
 - 5b. Fourth leg less than three times the length of cephalothorax.....*permunda* Chamb.
 - 5b. Fourth leg more than three times the length of cephalothorax
 - 6b. Abdomen beneath and the sternum immaculate pale yellow, clothed with yellow hair.....*grandis* Banks
 - 6b. Sternum mostly black or nearly so and clothed largely with black hair; abdomen beneath mostly with dark dots and sometimes nearly black.....*helluo* Walck.
- 2. Cephalothorax either without a median band or with a band which is as wide or nearly as wide as the third eye-row
 - 3b. Dorsum of abdomen marked along its entire length by a distinct median dark band
 - 4c. Sternum yellow or light brown; dorsal dark band of abdomen usually with margins behind dentate or else enclosing along each side a series of small oblique light spots
rabida Walck.
 - 4c. Sternum black; dorsal band of abdomen with margins always straight and not dentate or enclosing light spots behind.....*punctulata* Hentz
 - 3b. Abdomen not so marked
 - 4d. All tibiae black at both ends beneath and the femora black beneath at the distal end; large, the cephalothorax 1 cm. or more in length.....*carolinensis* Walck.
 - 4d. Tibiae and femora not banded thus; smaller, the cephalothorax less than 1 cm. in length
 - 5c. Females:
 - 6c. Lateral depressed areas of the epigynum wide, sub-circular, not elongate in the usual way.....*avara* (Keys.)
 - 6c. Epigynum not so
 - 7a. Guide of epigynum inversely T-shaped, the transverse arms relatively slender
 - 8. Septum of guide strongly widening from base of transverse arms to anterior end, where it extends entirely or nearly across the median depression
pratensis Emerton
 - 8. Not so
 - 9. Transverse piece of guide extending across or almost entirely across the epigynum behind, some longer than median piece, scarcely confined by side ridges at ends....*frondicola* Emerton
 - 9. Transverse piece of guide not so long, distinctly confined by ridges at ends.....*avida* Walck.
 - 7a. Guide enlarged at posterior end, but not inversely T-shaped or anchor-shaped.....*gulosa* Walck.
 - 5c. Males:
 - 6d. Anterior row of eyes shorter than the second
 - 7b. Embolus curving out ventralward and forward,

- resting only its apical part obliquely across the conductor *gulos* Walck.
 7b. Not so; dorsum of abdomen with a median light band extending to the spinnerets.....*avida* Walck.
 6d. Anterior row of eyes as long as or longer than second
 7c. Venter with a wide irregularly edged black band extending from the epigastric furrow to the spinnerets and sometimes embracing entire width of abdomen.....*frondicola* Emerton
 7c. Venter with no such broad black band
pratensis Emerton

Lycosa aspersa Hentz, *Lycosa avara* (Keyserling) and *Lycosa riparia* Hentz have all been collected in northern Kansas according to Petrunkevitch (1911), and so they may occur in Nebraska.

Lycosa avida Walckenaer, Ins. Apt., 1837, v. 1, p. 322.

Specimens: 12 males; 16 females; 5 immature females; 8, immature.

Distribution: Entire United States from New England to Washington and south to Florida.

Occurrence in Nebraska: Entire state, common in rocky, grassy places. Localities, Lincoln, Omaha, Plattsmouth and Murdock in the eastern part of the state and Scottsbluff, Mitchell and Agate in the western part. Collected from March 10 to September 24 under rocks, logs, stones, boards, and in grass of both high and low prairie. Female specimens mature in the spring from March 10 to July 2, but usually in late May; males in late March or April.

Lycosa carolinensis Walckenaer, Ins. Apt., 1837, v. 1, p. 285.

Specimens: 8 males; 14 females; 2, immature.

Distribution: United States, east of the Rocky Mountains.

Occurrence in Nebraska: Eastern half of state. Noted at Lincoln, Murdock, Sprague, Wabash and Chambers, from May to November. Maturation usually occurs in May. Our specimens have been collected in a variety of places, but most of them are from the ground in gardens or fields. A few have been collected at lights. This spider is one of the few the

lifetime of which may be more than a year. Mature specimens have been collected in spring, summer and fall. Two mature individuals taken in October, 1921, were kept alive in the laboratory until May 31, 1922, when they were preserved.

Lycosa coloradensis Banks, Journ. N. Y. Ent. Soc., 1894, v. 2, p. 50.

Specimen: 1 female.

Distribution: Great Plains region of Colorado, Arizona, New Mexico, Kansas and Nebraska.

Occurrence in Nebraska: Our single specimen was found by Worley at Mitchell, June 28, 1923, under a stone on the open plains. It was mature.

Lycosa frondicola Emerton, Trans. Conn. Acad. Nat. Sci., 1885, v. 6, p. 484.

Specimens: 2 males; 4 females.

Distribution: Entire United States (Petrunkévitch, 1911).

Occurrence in Nebraska: Eastern part of state. Found at Valparaiso and Lincoln from March 26 to May 13. All of our specimens are mature, and they probably mature in the spring. Collected under bark and under logs in deciduous forests. Specimens collected in the salt marshes near Lincoln were under an old board and under a piece of sandstone rock.

Lycosa grandis Banks, Journ. N. Y. Ent. Soc., 1894, v. 2, p. 49.

Specimens: 2 males; 3 females; 2, immature.

Distribution: Plains region of Nebraska, Colorado and New Mexico.

Occurrence in Nebraska: Known only from the eastern part of the state, where specimens have been collected at Lincoln and Fremont, under logs and stones, from August 18 to September 11. We have two immature specimens collected August 23, but all the other specimens are mature.

Lycosa gulosa Walckenaer, Ins. Apt., 1837, v. 1, p. 338.

Specimens: 8 males; 10 females.

Distribution: Eastern United States, from New Hampshire to Alabama; west to Texas and Utah.

Occurrence in Nebraska: Eastern portion of state in deciduous forests. Collected at Plattsmouth, Weeping Water, Lincoln, Havelock, Fremont and Roca, from March 20 to November. We have found *Lycosa gulosa* under boards, leaves and logs in forest, and by sweeping herbage in forests. All of our specimens are mature and this species probably matures in the early spring.

Lycosa helluo Walckenaer, Ins. Apt., 1837, v. 1, p. 337.

Specimens: 11 males; 22 females; 9, immature.

Distribution: Entire United States and Canada.

Occurrence in Nebraska: Eastern part of state. Localities, Lincoln, Plattsmouth, Milford, Omaha, Roca, Sprague, Murdock and Union. Dates, March 27 to November. Maturation occurs in the spring from April 29 to June 1 or possibly later. Immature specimens appear by late July or early August. We have collected *Lycosa helluo* under logs in woods and in fields, in dwellings, in high prairie grass, and on the ground in deciduous forests.

Lycosa permunda Chamberlin, Can. Ent., 1904, v. 36, p. 286.

Specimens: 1 male; 12 females.

Distribution: Kansas and southern Nebraska.

Occurrence in Nebraska: Southeastern part of state in habitats similar to those chosen by *L. helluo*. Collected at Lincoln, Fairbury and Plattsmouth, from March 28 to September 23. All of the specimens that we have identified as this species are necessarily mature, but some of our immature specimens referred to under *L. helluo* may belong here. *L. permunda* probably matures at about the same time as that species and is very similar in habits.

Lycosa pratensis Emerton, Trans. Conn. Acad. Sci., 1885, v. 6, p. 483.

Specimens: 3 males; 5 females; 1 immature female.

Distribution: Eastern United States, from New Hampshire to New Jersey and west to Indiana and Nebraska.

Occurrence in Nebraska: Eastern portion of state in deciduous forests. Collected at Weeping Water, Plattsmouth, Fremont, Lincoln and Valentine, from May 13 to September 25, under logs in deciduous forests and on the leaves on the ground in summer. Specimens mature in the spring, usually by May 22, and we have found mature females with egg-sacs as early as May 21.

Lycosa punctulata Hentz, Journ. Bost. Soc. Nat. Hist., 1844, v. 4, p. 390.

Distribution: Said to occur in all states east of the Rocky Mountains.

Occurrence in Nebraska: Bruner collected this species in this state, but recent collectors have not found it to our knowledge. It is probably of rare occurrence in Nebraska.

Lycosa rabida Walckenaer, Ins. Apt., 1837, v. 1, p. 329.

Specimen: 1 female.

Distribution: Eastern United States, west to the Rocky Mountains (Petrunkevitch, 1911).

Occurrence in Nebraska: A single female was collected by Pickwell, at Union, August 25, 1923, under a rotting log.

Genus *Pardosa* C. Koch, 1848 (Chamberlin, 1908):

1. Males:

- 2a. Median apophysis of the bulb of the palpus short and stout, not at all or but slightly longer than broad
 - 3a. Anterior depressed lobe of bulb separated into two furrows by an elevated narrow fold extending from above obliquely downward and outward, externally from its lower end two hooked tenacula, and at corner opposite its upper end a lamellate, inflexed chitinous angle.....*lapidicina* Emerton
 - 3a. Not so
 - 4a. Embolus extending across bulb almost to outer side of alveolus*modica* (Black.)
 - 4a. Apex of embolus scarcely extending beyond median apophysis of bulb of palpus.....*groenlandica* (Thor.)
- 2a. Median apophysis of bulb several times longer than broad
 - 3b. Median apophysis of bulb of palpus extending obliquely forward and outward quite to, or to some distance beyond, margin of alveolus
 - 4b. Embolus strongly bent into an S-shape; spur of median apophysis of palpus turned forward at apex.....*sternalis* (Thor.)

- 4b. Embolus but little curved, extending nearly straight transversely; spur of median apophysis of palpus turned backward at apex.....*saxatilis* (Hentz)
- 3b. Not so
 - 4c. Median apophysis dentate at apex; spur nearly straight, subconical.....*mackenziana* (Keys.)
 - 4c. Median apophysis of palpus not dentate at base
 - 5a. Spur short and stout, abruptly turned posteriorly at apex into an acute hook.....*milvina* (Hentz)
 - 5a. Spur cylindrical, longer.....*pauxilla* Mont.
- 1. Females:
 - 2b. Epigynal plate or area widest at anterior end, distinctly narrowed posteriorly; guide wider anteriorly than toward apex
xerampelina (Keys.)
 - 2b. Not as above
 - 3c. Epigynum presenting each side of the guide posteriorly a sharply delimited, relatively small fovea as long as wide; the anterior region of epigynum scarcely depressed.....*sternalis* Thor.
 - 3c. Not as above
 - 4d. Lateral furrows with the shallow anterior fossae short and narrow, behind these deepening and abruptly widely expanding, becoming widest near middle of epigynum; septum of guide elevate, its more depressed transverse arms extending into excavations in the inner face of the lateral ridges
 - 5b. Transverse arms of guide bending backwards, septum of guide widest at posterior end, becoming gradually narrower toward the anterior end, its sides sub-straight or but little curving.....*groenlandica* Thor.
 - 5b. Not so; transverse arms of guide bending forward; septum widest behind the middle of its length, typically expanding into a broad plate-like form over the origins of transverse arms which it usually in part covers
modica Black.
 - 4d. Lateral furrows with anterior fossae not short and narrow and epigynum of other form
 - 5c. Over anterior and median portion of epigynum a narrow and very shallow fossa, passing behind into a large transversely elliptical depression, which is completely occupied by the expanded guide, the lateral ends of which lie in excavations in the side ridges.....*mackenziana* (Keys.)
 - 5c. Not so
 - 6. Lateral plates extending along guide for much of total length of epigynum, gradually narrowing in width anteriorly; outer margin of epigynum presenting a small abrupt shoulder on each side just below middle
pauxilla Mont.
 - 6. Not so, the lateral plates largely confined to transverse arms, abruptly narrowing and extending forward but a short distance on the septal piece
 - 7. Sides of epigynum protruded into an angle in front of middle; no distinctly defined lateral ridges in

middle region of sides, the sides gradually convexly
rounding from middle to outer margin

7. Sides of epigynum not angulate in front of middle;
more or less distinct lateral ridges along middle
region *saxatilis* (Hentz)
..... *milvina* (Hentz)

Pardosa groenlandica (Thorell). *Lycosa groenlandica*
Thorell, Ofvers. K. Vet. Akad. Förh., 1872, v. 29, p. 157.

Specimens: 4 males; 21 females.

Distribution: Mountains of northern United States and
Canada and extending down into the valleys and on plains of
Nebraska, east of the mountains.

Occurrence in Nebraska: Entire state, but much more com-
mon in the western part. Collected at Lincoln, Mitchell,
Scottsbluff, in southern Sioux county, and at Cheyenne,
Wyoming, from June 2 to August 5. All of our specimens
are mature, but we would be unable to identify an immature
specimen so we may have some in our collection. We have
collected this species under boards, logs, rocks and dung, and
on wet ground in marshes.

The presence of this boreal species in eastern Nebraska is
a little surprising since it is ordinarily found only at high
mountain levels in the United States. The suggestion has
been made that strong winds may be responsible for blowing
individuals off the Rocky Mountains during spring or
autumnal ballooning.

Pardosa lapidicina Emerton, Trans. Conn. Acad. Sci., 1885,
v. 6, p. 494.

Specimens: 1 male; 6 females; 4 immature males; 7, im-
mature.

Distribution: Entire United States, but more common in
the northern states, and Canada.

Occurrence in Nebraska: Entire state, from Fairbury in
eastern Nebraska to Mitchell in the extreme western part of
the state. Collected from May 12 to August 12. Maturation
occurs in the spring; our immature specimens were collected
in August and probably represent the generation hatched

from the eggs of that year. Collected in deciduous forests along streams and on rocks and clay in the open.

Pardosa mackenziana (Keyserling). *Lycosa mackenziana* Keyserling, Verh. zool.-bot. Ges. Wien, 1876, v. 26, p. 621.

Specimen: 1 female.

Distribution: Known from Colorado, Utah, Idaho and Nebraska, and Canada and Alaska.

Occurrence in Nebraska: Known only from Fairbury in the southern part of the state, where Worley collected a mature female under a log in a deciduous forest, May 12, 1923.

Pardosa milvina Hentz, Journ. Bost. Soc. Nat. Hist., 1844, v. 4, p. 392.

Specimens: 14 males; 24 females; 8, immature.

Distribution: Most of the United States from Massachusetts and Florida west across the Rockies to Utah and possibly Washington.

Occurrence in Nebraska: Probably the entire state, but we have collected it only at Plattsmouth, Union, Wabash, Murdock, Lincoln, Milford, Fremont and Ashland. Dates, April 5 to November. Mature specimens are collected after April 25; hibernating individuals are immature. Our specimens of this species were found running on very wet ground, and under logs, stones and debris of most any kind in damp places in woods and fields.

This little spider is the most abundant of the Lycosidae of Nebraska and, excepting *Agelena naevia*, it seems to be the most abundant of all the spiders. During the warmer days of winter and early spring it swarms over the dead leaves of sunny openings in the woods and in hollows in proximity to water and in summer a journey along the weedy margin of any quiet stream will be accompanied by an intermittent stream of these spiders that shoot out from the bank upon the surface of the water. On the surface film they skip about as proficiently as water-striders, returning quickly, however, to the shore. Literally hundreds of females with their eggs

were observed at the Arrowhead Slough northeast of Lincoln on June 28, 1922. Many males were also seen.

Pardosa modica (Blackwall). *Lycosa modica* Blackwall, Ann. Mag. Nat. Hist., 1846, v. 17, p. 33.

Distribution: Eastern United States in mountainous regions, from Massachusetts and New Hampshire west to Colorado, Utah, Idaho and California; north to Labrador and Alaska.

Occurrence in Nebraska: Bruner collected *Pardosa modica* in Nebraska, but no other specimens have been secured.

Pardosa pauxilla Montgomery, Proc. Acad. Nat. Sci. Phila., 1904, p. 268.

Specimen: 1 female.

Distribution: Known from Texas and Nebraska, the former being the type locality.

Occurrence in Nebraska: A single female specimen of this *Pardosa* was collected in eastern Nebraska in the spring of 1922.

Pardosa saxatilis (Hentz). *Lycosa saxatilis* Hentz, Journ. Bost. Soc. Nat. Hist., 1844, v. 4, p. 392.

Specimens: 7 males; 7, immature.

Distribution: Eastern United States, east of the Rocky Mountains (Petrunkévitch, 1911).

Occurrence in Nebraska: Eastern part of state. Collected at Lincoln and Plattsmouth, from February 2 to August 12. Maturation occurs either early in the spring or in the fall before hibernation, for both immature and mature individuals may be found in early February. *Pardosa saxatilis* is found in sunflower blossoms, on clay and under boards.

Pardosa sternalis (Thorell). *Lycosa sternalis* Thorell, Bull. U. S. Geol. Surv., 1877, v. 3, p. 504.

Specimens: 5 males; 31 females; 7, immature.

Distribution: Western United States, from California, Arizona, New Mexico and Idaho to Utah, Colorado, Kansas and Nebraska.

Occurrence in Nebraska: Entire state, from Plattsmouth, Omaha, Lincoln and Fairbury, to Mitchell, Scottsbluff and southern Sioux county. Dates, February 27 to October. Individuals usually mature very early in the spring and we have collected mature females with egg-sacs as early as April 1. We have secured immature individuals as late as May 29, but of course our determinations of immature specimens are questionable. *Pardosa sternalis* is found in a variety of habitats. We have found it under logs in deciduous forests, on beaches, in marshes, in shrubbery, in low and high prairie grass, and under logs in pastures.

Pardosa xerampelina (Keyserling). *Lycosa xerampelina* Keyserling, Verh. zool.-bot. Ges. Wien, 1876, v. 26, p. 622.

Specimens: 1 male; 6 females; 1 immature male.

Distribution: Eastern United States, from Labrador, Massachusetts, New York and Pennsylvania to Illinois, Nebraska, Colorado and Utah.

Occurrence in Nebraska: Eastern part of state in deciduous forests. Found at Union, Fremont, Sprague, Lincoln and Milford, from April 1 to May 27. A male specimen, collected April 1, was immature, but it was with a mature female. All of our other specimens are mature and all were collected in deciduous forests on the ground and in leaves.

Genus *Pirata* Sundevall, 1833 (Chamberlin, 1908):

1. Cephalothorax less than 2 mm. long, or at most no longer
humicola Mont.
1. Cephalothorax much more than 2 mm. long
 2. Cephalothorax in life or when dry showing on each side a stripe of bright white hair..... *febriculosa* (Beck.)
 2. Cephalothorax showing no bright white stripe when dry
insularis Emerton

Pirata prodigiosa Keys. is not included in the key.

Pirata febriculosa (Becker). *Lycosa febriculosa* Becker, C. R. Soc. Ent. Belgique, 1881, v. 25, p. 45.

Specimens: 18 males; 21 females.

Distribution: Known mostly from the central states,

Kansas, Nebraska, Louisiana, Iowa and Texas, but has also been found in New York.

Occurrence in Nebraska: Entire state, from Lincoln, Murdock and Fairbury to Mitchell. Dates, February 13 to October 31. Mature individuals are found from April 5 until fall. They are spiders of marshes and damp places. We have found this species mostly in marshes and on muddy ground in woods, running on water and in shrubbery.

Pirata humicola Montgomery, Proc. Acad. Nat. Sci. Phila., 1902, p. 575.

Specimens: 2 females.

Distribution: Eastern United States, from New York and Pennsylvania to Nebraska.

Occurrence in Nebraska: Two mature female specimens were collected by Worley at Scottsbluff, on July 16, 1923, in sweepings from marsh grass in a bullrush marsh. There are no other records for Nebraska.

Pirata insularis Emerton, Trans. Conn. Acad. Sci., 1885, v. 6, p. 492.

Specimens: 4 females; 4, immature.

Distribution: Eastern United States, from Massachusetts and Pennsylvania to Indiana and Nebraska.

Occurrence in Nebraska: Eastern edge of state in the deciduous forest region. Collected at Lincoln, Fremont and Fairbury, in marshes and under logs in forests. Mature and immature specimens were collected April 5; immature specimens, April 29; and mature individuals, May 12.

Pirata prodigiosa Keyserling, Verh. zool.-bot. Ges. Wien, 1876, v. 26, p. 669.

Specimens: 2 males; 5 females; 6, immature.

Distribution: Known only from the type locality in Illinois and from Nebraska.

Occurrence in Nebraska: This rare *Pirata* was found at Lincoln and Murdock from April 1 to July 19, 1922. It is found in much the same situations as *Pardosa milvina* but is more restricted to the margins of streams and ponds.

Though *Pirata prodigiosa* has hitherto been known only from the single type specimen, taken at Peoria, Illinois, there is little doubt that these Nebraska individuals are of the same species, since they fit Keyserling's description closely, and, furthermore, the conditions at Peoria are similar to those of eastern Nebraska.

Genus *Schizocosa* Chamberlin, 1904 (Chamberlin, 1908):

1. Males:

2a. First tibia clothed with dense black hair standing out in brush-like form

3a. Legs yellow, without dark annuli or markings

bilineata (Emerton)

3a. Legs annulate with dark.....*crassipes* (Walck.)

2a. First tibia not so clothed

3b. Tarsus of palpus and palpal organ swollen and broader than the tibia.....*saltatrix* (Hentz)

3b. Tarsus of palpus not wider than tibia.....*crassipalpis* (Emerton)

1. Females:

2b. Sternum yellow, with two dark lines or rows of dark spots converging posteriorly.....*bilineata* (Emerton)

2b. Sternum dark, not marked as in *bilineata*

3c. Septal piece of guide very broad immediately in front of transverse arms, narrowing anteriorly where it is not sinuous or bent; the median piece between anterior and posterior divisions of arms very narrow, much narrower than the septum in front of arms; sternum usually black except marginally

crassipes (Walck.)

3c. Septal piece of guide sinuous or bent near anterior end; median piece between anterior and posterior divisions of arms wide, wider than septum in front of transverse arms; sternum usually reddish-brown

4. Distance from point at which guide disappears anteriorly to posterior end of epigynum equal to width of epigynum at arms.....*crassipalpis* (Emerton)

4. Distance from point at which guide disappears anteriorly to posterior end of epigynum approximately four-fifths the width of epigynum at arms.....*saltatrix* (Hentz)

Schizocosa bilineata (Emerton) has not been found in Nebraska, but it is known from many of the eastern states and Kansas and may occur in this state as well.

Schizocosa crassipalpis (Emerton). *Lycosa crassipalpis* Emerton, Trans. Conn. Acad. Sci., 1909, v. 14, p. 206.

Specimens: 1 male; 3 females.

Distribution: Probably entire eastern United States, but known only from Massachusetts, Maine and Nebraska.

Occurrence in Nebraska: Pickwell collected this *Schizocosa* at Union and South Bend, April 29 and May 6, 1922. There are no other specimens known from this state.

The specimens here listed were running over the leaves of the timbered slopes of the Missouri and Platte rivers; all mature. The male fits Emerton's description and the females, though they have never been described, were taken with the male in one case and, moreover, do not correspond to the descriptions of other species of *Schizocosa*.

Schizocosa crassipes (Walckenaer). *Lycosa crassipes* Walckenaer, Ins. Apt., 1837, v. 1, p. 323.

Specimens: 12 males; 11 females; 14, immature.

Distribution: Entire United States east of the Rocky Mountains (Petrunkevitch, 1911).

Occurrence in Nebraska: Eastern and southern part of Nebraska, from Plattsmouth, Weeping Water, Murdock, Sprague, Lincoln, Milford and Fremont, to Danbury and Exeter. Dates, May to October 17. Our specimens were collected under logs and stones on the ground in deciduous forests. Individuals pass the winter in the immature condition and mature in May.

Schizocosa saltatrix (Hentz). *Lycosa saltatrix* Hentz, Journ. Bost. Soc. Nat. Hist., 1844, v. 4, p. 387.

Specimens: 5 males; 7 females; 2 immature females; 4, immature.

Distribution: Eastern United States from New York to Alabama; west to Texas, Kansas and Nebraska.

Occurrence in Nebraska: Eastern part of state in deciduous forests. Collected at Plattsmouth, Omaha, Weeping Water, Union, South Bend, Roca and Lincoln, from March 27 to August 29. Individuals mature from April 19 to June 17 after hibernating in an immature condition. *Schizocosa saltatrix* is similar in habits to *S. crassipes*. Our specimens were all collected under logs in deciduous forests or running over dead leaves.

Trabaea aurantiaca (Emerton). *Aulonia aurantiaca* Emerton, Trans. Conn. Acad. Sci., 1885, v. 6, p. 499.

Distribution: Eastern United States from Massachusetts to the District of Columbia and west to Nebraska.

Occurrence in Nebraska: Known as a Nebraska spider only from the list of Bruner's collection.

FAMILY OXYOPIDAE

Genus *Oxyopes* Latreille, 1804 (Banks, 1896):

1. Femora with black line on under side.....*salticus* Hentz
1. Femora without black line on under side; abdomen light with black side and median stripes.....*scalaris* Hentz

Oxyopes salticus Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 196.

Specimens: 1 male; 2 females; 7, immature.

Distribution: Eastern and southern United States, from New York to Florida; west to Nebraska, Kansas and California.

Occurrence in Nebraska: Eastern half of state, from Lincoln and Sprague to Halsey. Collected under stones, on gooseberry bushes, from elm and coralberry sweepings, in rank weeds and cattails, and in sandhill grass. Dates, May 15 to September 24. Individuals mature in May or later in the summer.

Oxyopes scalaris Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 196.

Distribution: Eastern United States, from Maine to Florida and west to Nebraska.

Occurrence in Nebraska: Known only from its inclusion in Bruner's collection. Recent collectors have not found it.

FAMILY SALTICIDAE

Genera (Peckham, 1909):

1. Posterior margin of cephalothorax and the pedicle of the abdomen visible from above; ant-like spiders
 - 2a. Hind part of thorax narrow and with parallel sides, thus adding to the apparent length of the pedicle.....*Synemosyna* Hentz
 - 2a. Hind part of thorax not narrowed so as to add to the apparent length of the pedicle

- 3a. Quadrangle of eyes more than one-half the length of the cephalothorax *Peckhamia* Simon
- 3a. Quadrangle of eyes less than one-half the length of the cephalothorax *Myrmarachne* MacLeay
- 1. Posterior margin of the cephalothorax and pedicle covered by abdomen; the second and third coxae of each side contiguous; not ant-like spiders
 - 2b. Tibia and patella of third leg shorter than tibia and patella of fourth leg
 - 3b. Small eyes situated midway between the anterior lateral and posterior lateral eyes, or nearly so
 - 4a. Sternum not greatly narrowed in front, the anterior coxae separated by a distance greater than the width of labium
 - 5a. Quadrangle of eyes occupying less than one-half of the length of cephalothorax
 - 6a. Abdomen marked with white stripes *Wala* Keys,
 - 6a. Abdomen not marked with stripes
 - 7a. Abdomen marked with transverse bands
 - 8a. Quadrangle of eyes occupying much less than one-half length of cephalothorax; posterior margin of anterior eyes in a straight or slightly procurved line *Salticus* Latr.
 - 8a. Quadrangle of eyes occupying one-half length of cephalothorax; posterior margin of anterior eyes in a recurved line *Dendryphantes* Simon
 - 7a. Abdomen not marked with transverse bands, except sometimes a whitish band at base
 - 8b. Posterior three pairs of legs white, translucent, without marks *Wala* Keys.
 - 8b. Posterior three pairs of legs not uniform white
 - Icius* Simon
 - 5a. Quadrangle of eyes occupying more than one-half of the length of the cephalothorax *Sitticus* Simon
 - 4a. Sternum narrowed in front so that the anterior coxae are separated by a distance less than the width of labium
 - 5b. Tibia of first leg with three pairs of spines beneath and some anterior lateral spines *Marpissa* C. Koch
 - 5b. Tibia of first leg with four pairs of spines beneath
 - 6b. Lower margin of cheliceral furrow armed with a single tooth *Hycia* Simon
 - 6b. Lower margin of cheliceral furrow armed with a compound tooth
 - 7b. Abdomen with four longitudinal white lines on a dark ground *Fuentes* Peck.
 - 7b. Abdomen without white lines *Maevia* C. Koch
 - 3b. Small eyes much more remote from posterior eyes than from anterior eyes
 - 4b. Quadrangle of eyes much wider behind. Cephalothorax very wide, the thoracic part shorter or at least no longer than cephalic part

- 5c. Abdomen marked with only a white basal band
Agassa Simon
- 5c. Abdomen marked with white in addition to the basal band *Zygoballus* Peck.
- 4b. Quadrangle of eyes with sides nearly parallel. Thoracic part of cephalothorax longer than cephalic part
- 5d. Cephalothorax more or less depressed behind the posterior eyes and furnished with a median furrow situated behind the eyes but before the middle of thoracic part
- 6c. Cephalothorax high, heavy and convex; first legs heavy and hairy, often fringed; large species, rarely less than 7 mm. in length *Phidippus* C. Koch
- 6c. Cephalothorax not heavy; first legs not especially hairy; small species, rarely more than 6 mm. in length
- 7c. Posterior three pairs of legs white, translucent, without marks *Wala* Keys.
- 7c. Posterior three pairs of legs not uniform white
Dendryphantes Simon
- 5d. Cephalothorax not depressed behind the eyes; median furrow remote from the eyes, very small, obsolete; cephalothorax short and thick; two or three pairs of spines on tibia of first leg *Sassacus* Peck.
- 2b. Tibia and patella of third leg as long or longer than tibia and patella of fourth leg
- 3c. Quadrangle of eyes wider in front than behind
Habrocestum Simon
- 3c. Quadrangle of eyes with sides parallel or wider behind
- 4c. Tibiae of first pair of legs with four bulbous setae
Thiodina Simon
- 4c. Tibiae of first pair of legs without four bulbous setae
Pellenes Simon

Agassa cyanea (Hentz). *Attus cyaneus* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 365.

Distribution: Eastern United States, from Massachusetts to Florida; west to New Mexico, Iowa and Nebraska (Peckham, 1909).

Occurrence in Nebraska: We include this species in our list of Nebraska spiders because its range is given by Peckham as including this state. We know of no records for Nebraska.

Genus *Dendryphantes* Simon 1901 (Peckham, 1909):

1. Males:
 2. Tibial apophysis bifurcate; abdomen with four white stripes alternating with three brown stripes *glacialis* Scheffer
 2. Tibial apophysis simple

3. Tube of palpus simple and curved.....*marginatus* (Walck.)

3. Tube of palpus concave or somewhat crescent-shaped, with two ends, both pointed and of unequal length....*capitatus* (Hentz)

No key to the females is available. *Dendryphantes pervagus* Peckham is not included in the key.

Dendryphantes capitatus (Hentz). *Attus capitatus* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 200.

Specimens: 5 males; 17 females; 31, immature.

Distribution: Eastern United States; west to Utah and California, and probably occurs throughout the country.

Occurrence in Nebraska: Eastern part of the state in deciduous forests. Collected at Union, Plattsmouth, Weeping Water, Sprague and Lincoln. Dates, April 29 to October 8. Maturation occurs in May and June after hibernation in the immature stages. In the warm months, *Dendryphantes capitatus* can be found in shrubbery of most any kind. We have collected it from gooseberry, elm, coralberry and linden shrubbery, from high prairie grass and salt grass, and from flood plain herbage.

Dendryphantes marginatus (Walckenaer). *Attus marginatus* Walckenaer, Ins. Apt., 1837, v. 1, p. 466.

Specimens: 21 males; 50 females; 15, immature.

Distribution: Entire United States, from New England and Florida to California and Washington.

Occurrence in Nebraska: Eastern half of state, from Plattsmouth, Weeping Water, Fairbury, Sprague, Havelock, Lincoln and Fremont, as far west as Valentine. From May 12 to November. In the colder months this *Dendryphantes* hibernates under bark, but by the middle of May they emerge and may then be found on shrubbery until late fall. Maturation takes place in late May. We have specimens collected beneath logs, about houses, from gooseberry, elm, bur oak, linden, and flood plain shrubbery, and some from prairie grass.

Dendryphantes pervagus Peckham, Trans. Wis. Acad. Sci., v. 16, p. 474.

Specimen: 1 female.

Distribution: Known only from Kansas and Nebraska.

Occurrence in Nebraska: Our single female specimen was collected by Worley at Plattsmouth, on the Missouri River, October 17, 1926, in sweepings in clover.

Dendryphantes glacialis Scheffer was described from the vicinity of Manhattan, Kansas, and may be found in Nebraska.

Fuentes lineata Peckham is distributed through the eastern states and extends west as far as Kansas, and may therefore be expected to range into Nebraska.

Habrocestum pulex (Hentz). *Attus pulex* Hentz, Journ. Bost. Soc. Nat. Hist., 1846, p. 362.

Specimens: 1 female; 1, immature.

Distribution: Eastern states from Connecticut and Massachusetts to Florida; west to Kansas, Iowa and Nebraska.

Occurrence in Nebraska: Eastern part of state in deciduous forests along rivers. We have collected it at Fremont and Lincoln, in April and June. A specimen collected April 25 was mature, while the June specimen was not.

Genus *Hycia* Simon, 1876:

1. Abdomen more than three times as long as wide.....*piki* Peck.
1. Abdomen hardly more than twice as long as wide.....*bina* (Hentz)

Hycia bina (Hentz). *Attus binus* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 352.

Specimens: 2 males; 7 females; 5, immature.

Distribution: Eastern United States, from Maine to South Carolina; west to Illinois, Missouri and Nebraska.

Occurrence in Nebraska: Eastern half of state, from Plattsmouth, South Bend, Havelock, Sprague and Lincoln, to Ainsworth. Collected from April 10 to October 12. Hibernation is undergone under logs and bark in tight silken hibernation sacs; emergence takes place in late April. Our specimens collected April 10 were in hibernating sacs and were mature. Following emergence, *Hycia bina* can be collected on gooseberry shrubbery, flood plain herbage, high and low prairie grass, and in rank weeds in marshes. Immature individuals appear in midsummer.

Hyetia pikei Peckham, Trans. Wis. Acad. Sci., 1888, v. 7, p. 79.

Specimen: 1, immature.

Distribution: Eastern states, from Massachusetts to Florida; west to New Mexico, Kansas and Nebraska.

Occurrence in Nebraska: Our single immature specimen was collected in sandhill grass at Halsey, August 11, 1925. This species is listed in Petrunkevitch's catalogue (1911) as occurring in Nebraska.

Genus *Icius* Simon, 1874 (Peckham, 1909):

1. Males:

2a. Abdomen iridescent or metallic

3a. Conspicuous tufts over the front eyes

4a. A black spot and a tuft of black hairs at distal end of tibia I; tube of palpus slender.....*elegans* (Hentz)

4a. No black spot or tuft on tibia I; tube of palpus stout
similis Banks

3a. No tufts over front eyes

4b. Chelicerae obliquely directed, with an apophysis below
vitis (Cock.)

4b. Chelicerae vertical, without apophyses.....*hartii* Emerton

2a. Abdomen not iridescent or metallic.....*hartii* Emerton

1. Females:

2b. Tibia I not fringed; abdomen iridescent

3b. Abdomen with a white band around front end

4c. No white on abdomen except basal band; legs with longitudinal stripes.....*elegans* (Hentz)

4c. One or two pairs of oblique or curved white bands on sides behind middle; legs without stripes.....*vitis* (Cock.)

3b. Abdomen lacking white band around front end.....*similis* Banks

2b. Tibia I plainly fringed; abdomen gray or slightly metallic
hartii Emerton

Icius elegans (Hentz). *Attus elegans* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 352.

Specimens: 5 males; 11 females.

Distribution: Eastern United States, from Maine to Florida; west to Nebraska.

Occurrence in Nebraska: Eastern, southern and western parts of state, from Plattsmouth, Murdock and Lincoln to Mitchell. Dates, June 18 to October 23. All of our specimens are mature, but according to Peckham (1909) it does not

mature until about July 10 in Wisconsin. Our specimens were collected by sweeping coralberry shrubbery and under stones and dung on the high plains.

Icius hartii Emerton, Trans. Conn. Acad. Sci., 1891, v. 8, p. 235.

Specimens: 1 male; 4 females.

Distribution: According to Peckham (1909), Massachusetts and New York; west to Nebraska.

Occurrence in Nebraska: Western Nebraska. Worley collected *Icius hartii* at Mitchell, from June 21 to June 24, 1923. These specimens were found under dung and stones on the high plains. Pickwell collected a male in Nebraska in 1922, but further data are lost.

Icius similis Banks, Can. Ent., 1895, v. 27, p. 100.

Specimens: 1 male; 3 females.

Distribution: Western United States chiefly, from New Mexico to Washington; east to Nebraska, Wisconsin, New York and New Hampshire.

Occurrence in Nebraska: Western edge of state, where it has been collected only at Mitchell and Scottsbluff, from June 21 to June 24, 1923, under dung on the arid high plains hills. There are no other records for this state.

Icius nigromaculatus Keyserling and *I. vitis* (Cockerell) have both been collected by Scheffer in Kansas, but neither are known from Nebraska.

Maevia vittata (Hentz). *Attus vittatus* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 360.

Specimens: 7 males; 3 females; 2, immature.

Distribution: According to Petrunkevitch (1911), all the United States.

Occurrence in Nebraska: Eastern half of state, from Platts-mouth, Lincoln, Sprague and Saltillo, west to Halsey in the sandhills. Collected from March 18 to October 17. Maturation occurs in late May, and during the summer months this spider is found on shrubbery in forests; in linden, ash, and

elm foliage; and we have collected it under boards in sandhill grass.

Marpissa undata (DeGeer). *Aranea undata* DeGeer, Mem., 1778, v. 7, p. 320.

Specimens: about 80, including males, females, and immature individuals.

Distribution: Eastern, southern and western states as far west as Salt Lake City, Utah (Peckham, 1909).

Occurrence in Nebraska: Eastern portion of state; Lincoln, Murdock, Mynard, Waverly, Weeping Water, Saltillo and Plattsmouth. Collected from January 6 to October. In winter *Marpissa undata* hibernates in a tight hibernating sac under bark, under logs and in similar protected places. Most hibernating individuals are mature, but a few hibernate in Nebraska almost mature and mature in the spring. Emergence occurs in late April or May and then they are common on herbage and shrubbery. We have found them particularly common on flood plain herbage in elm forests. During the winter, groups with as many as fifty individuals have been observed hibernating in large masses under the bark of upright trees. Each spider had spun for itself a firm cocoon but the groups were so closely woven together that a large silken blanket was formed under the loose bark of the dead trees. These colonies consisted of spiders in many stages of development from small ones to individuals which were near maturity, indicating that these masses were not the offspring of a single egg cocoon but had congregated here for hibernating purposes. Several such colonies were uncovered during the winter of 1921-22. On July 15, 1922, in the business section of Lincoln, a mud-dauber's nest was found which was filled with this species of spider alone. A single cell contained nearly a dozen individuals, complete or represented by fragments.

Myrmarachne albocinctus (C. Koch) occurs in eastern United States and extends as far west as Missouri, so it may reach Nebraska.

Genus *Peckhamia* Simon, 1901 (Peckham, 1909) :

1. Tube of male palpus long, slightly curved; two tibial apophyses on palpus; tibia I with one pair and an additional spine farther back; eye-region occupying two-thirds of the cephalothorax.....*scorpiona* (Hentz)
1. Tube of male palpus spiral, heavy at origin and tapering at end; eye-region occupying one-half the cephalothorax.....*picata* (Hentz)
1. Tube of male palpus spiral, heaviest in middle, equally slender at origin and at end, where it bends abruptly; eye-region occupying one-half the cephalothorax.....*americana* (Peck.)

Peckhamia americana (Peckham) and *P. scorpiona* (Hentz) both occur in eastern United States and range as far west as Texas, so either or both may occur in Nebraska.

Peckhamia picata (Hentz). *Synemosyna picata* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 370.

Specimens: 3 males; 1, immature.

Distribution: Entire United States (Petrunkevitch, 1911).

Occurrence in Nebraska: Eastern part of state in deciduous forests. Collected at Lincoln, Fremont and Plattsmouth from September 11 to October 23. Maturation probably occurs in the summer. Our specimens are all mature except one; the latter was collected in May in shrubbery. The mature specimens were collected by sweeping coralberry bushes and undergrowth in forests.

Genus *Pellenes* Simon, 1876 (Peckham, 1909) :

1. Males:

2a. First or third leg modified or fringed

3a. Enlargements or fringes on both first and third legs

4a. Clypeus red; spatulate spines on tibia of first leg

coronatus (Hentz)

4a. Clypeus not red

5a. Femur and patella of third leg modified; clypeus white; spatulate spines on tibia of first leg.....*brunneus* Peck.

5a. Only patella of third leg modified; first leg with fringe of light-colored hairs; abdomen banded

6a. Abdomen with solid black and white stripes; fourth leg longer than first; tibia of first with two long spines, not spatulate.....*peregrinus* (Peck.)

6a. Abdomen black with white-notched band down middle and white basal and side bands; first leg longer than fourth; tibia of first with two large spatulate spines

viridipes (Hentz)

3a. Only the first leg fringed or enlarged

- 4b. Three longitudinal lines of white hairs running back on eye-region; abdomen black with central and side white bands; first leg fringed with black and white.....*agilis* (Banks)
- 4b. No such lines on eye-region; abdomen banded centrally with white; first leg with double fringe.....*elegans* Peck.
- 2a. Legs not modified or fringed
 - 3b. Abdomen with iridescent scales
 - 4c. Cephalothorax dark, iridescent.....*decorus* (Black.)
 - 4c. Cephalothorax not iridescent; covered with white pubescence.....*roseus* (Hentz)
 - 3b. Abdomen without iridescent scales
 - 4d. Palpus with large tibial apophysis, straight on lower edge, rounded above, wider at end than at base; abdomen with light foliated band outlined in black.....*montanus* (Emerton)
 - 4d. Palpus without such an apophysis; abdomen with middle dorsum yellow; palpus with tibial apophysis long, square at end, and bulb with angular corner on inner side.....*hoyi* Peck.
- 1. Females:
 - 2b. Clypeus marked with white and dark bands
 - 3c. Cephalothorax with white bands.....*agilis* (Banks)
 - 3c. Cephalothorax uniform in color.....*elegans* Peck.
 - 2b. Clypeus not banded
 - 3d. Abdomen plainly banded above
 - 4e. Abdomen with at least one transverse band behind basal band; color yellowish.....*coronatus* (Hentz)
 - 4e. All abdominal bands except basal band, longitudinal
 - 5b. Abdomen with central light band reaching a light basal band.....*peregrinus* (Peck.)
 - 5b. Abdomen without such a central band
 - 6b. Abdomen without light basal band, but with central band reaching front end.....*montanus* (Emerton)
 - 6b. Abdomen without light central band which reaches front end.....*decorus* (Black.)
 - 3d. Abdomen not plainly banded above; oblique bands on sides of abdomen edged with black
 - 4f. Sides of abdomen with black bands on fawn ground; cephalothorax fawn above, whitish on sides and behind
viridipes (Hentz)
 - 4f. Sides of abdomen with pale or white bands on dark ground
 - 5c. Cephalothorax with black inverted V between posterior eyes; epigynum lacking a central shield.....*hoyi* Peck.
 - 5c. Cephalothorax all dark; clypeus white.....*brunneus* Peck.

Pellenes decorus (Blackwall) and *P. montanus* (Emerton) have both been found in eastern Colorado in the vicinity of Denver and Fort Collins. *Pellenes elegans* Peckham has been collected in Kansas and *Pellenes hoyi* is said to occur in the eastern and central states. Any of these species of *Pellenes* might be found in Nebraska.

Pellenes agilis (Banks). *Habrocestum agilis* Banks, Journ. N. Y. Ent. Soc., 1893, v. 1, p. 127.

Specimen: 1 male.

Distribution: Eastern states, from Maine to Georgia; west to Kansas and New Mexico.

Occurrence in Nebraska: A single specimen was found by Worley in sandhill grass at Halsey, August 12, 1925. Bruner also found this species in this state.

Pellenes brunneus Peckham, Bull. Wis. Nat. Hist. Soc., 1900, v. 1, p. 210.

Specimens: 1 male; 2 females; 3 immature males.

Distribution: Southern states, from Florida to New Mexico and north to Nebraska, Colorado and Utah.

Occurrence in Nebraska: All of our specimens of *Pellenes brunneus* have come from Lincoln, collected from March 15 to August 31. All were collected under logs and stones except one female which was collected by sweeping high prairie grass. Mature specimens were found on March 15, June 2 and August 25; immature specimens, April 10, August 25 and August 31. *P. brunneus* hibernates in both immature and mature stages.

Pellenes coronatus (Hentz). *Attus coronatus* Hentz, Jour. Bost. Soc. Nat. Hist., 1846, v. 5, p. 361.

Specimen: 1 female.

Distribution: Eastern states from New York to Florida; west to Missouri, Nebraska and Colorado.

Occurrence in Nebraska: Pickwell secured a female at South Bend, Cass county, May 6, 1922, from a sand bank.

Pellenes peregrinus (Peckham). *Attus peregrinus* Peckham, Des. New or Lit. Kn. Attidae, 1883, p. 17.

Specimens: 2, immature.

Distribution: Eastern states from Maine to Florida; west to Nebraska.

Occurrence in Nebraska: Known only from two specimens collected by Worley in sandhill grass, at Halsey, August 11, 1925.

Pellenes roseus (Hentz). *Attus roseus* Hentz, Journ. Bost. Soc. Nat. Hist., 1846, v. 5, p. 362.

Specimen: 1 male.

Distribution: Eastern states from Massachusetts and Pennsylvania, west to Wisconsin and Nebraska.

Occurrence in Nebraska: Pickwell collected a single specimen of this *Pellenes* at Lincoln, June 5, 1922.

Pellenes viridipes (Hentz). *Attus viridipes* Hentz, Journ. Bost. Soc. Nat. Hist., 1846, v. 5, p. 362.

Specimen: 1 male.

Distribution: Southern states from Florida to California; north to Massachusetts, Nebraska and Oregon.

Occurrence in Nebraska: Our single male specimen was collected at Lincoln, in high prairie grass, August 28, 1923.

Genus *Phidippus* C. Koch, 1846 (Peckham, 1909):

1. Males:

- 2a. Abdomen red or marked with red
 - 3a. Cephalothorax black and white.....*insignarius* C. Koch
 - 3a. Cephalothorax red above
 - 4a. Abdomen red with two black bands.....*mccookii* Peck.
 - 4a. Abdomen red without black bands
 - 5a. Cephalothorax with bare black region over front eyes; abdomen sometimes having a pair of white spots at end; fringe on first leg all white; palpus with white band above
whitmanii (Peck.)
 - 5a. Cephalothorax all red above; abdomen without white spots; fringe on first leg brown, or black and white; no white band on palpus
 - 6a. First leg fringed with black and white; abdomen without basal band.....*cardinalis* (Hentz)
 - 6a. First leg fringed with brown; abdomen with indistinct light basal band.....*mccookii* Peck.
- 3a. Cephalothorax black, with inconspicuous black, brown or gray hairs
 - 4b. Abdomen black spotted with red.....*insolens* (Hentz)
 - 4b. Abdomen red, or red banded with black
 - 5b. Abdomen banded with black
 - 6b. Abdomen with one black band; outer corner of maxilla with hooked apophysis
 - 7a. First leg longer than second by only tarsus and metatarsus; fringe on first leg not very heavy
clarus Keys.

- 7a. First leg longer than second by tarsus, metatarsus and part of tibia; fringe on first leg heavy and conspicuous.....*coloradensis* Thor.
- 6b. Abdomen with two black bands; palpus all black
ardens Peck.
- 5b. Abdomen uniform red
 - 6c. Palpus without white hairs above
 - 7b. Cephalothorax with brownish hairs over a black ground; abdomen with scattered white hairs, mostly behind; no white hairs on femur of first leg
ardens Peck.
 - 7b. Cephalothorax with black hairs over a black ground; abdomen with scattered black hairs; femur of first leg with white hairs above.....*formosus* Peck.
 - 6c. Palpus with white hairs above
 - 7c. Distal end of femur of first leg with bunch of white hairs below
 - 8a. Apophysis of palpal bulb more than twice as long as wide at base.....*insolens* (Hentz)
 - 8a. Apophysis of palpal bulb less than twice as long as wide at base.....*brunneus* Emerton
 - 7c. No distinct bunch of white hairs below femur of first leg.....*johnsoni* Peck.
- 2a. Abdomen black, marked with white, or covered above with silvery hairs
 - 3b. Cephalothorax dark with a white dot between dorsal eyes, a white bar on each side of head between eyes of second and third rows, and ridges of rusty hairs on cephalic plate; femur of first leg with crest of hairs above and enlarged plate below
putnami (Peck.)
 - 3b. Whole body black; upper surface of cephalothorax and abdomen covered with silvery hairs.....*opifex* (McCook)
 - 3b. Cephalothorax black; abdomen black with tripunctate white markings.....*audax* (Hentz)
- 2a. Abdomen brown, gray, yellow or spotted
 - 3c. Body small (6 to 7 mm.); yellow with two dark bands dotted with white on abdomen.....*pius* Scheff.
 - 3c. Larger; body not yellow
 - 4c. Cephalic plate without ridges of hairs; cephalothorax with uniform coloring of gray hairs.....*purpuratus* Keys.
 - 4c. Cephalic plate with ridges of rusty red hairs
 - 5c. Cephalothorax dark spotted with white; mandibles with long white hairs covering front faces; femur of first leg with crest of hairs above and enlarged plate below
putnami (Peck.)
 - 5c. Cephalothorax with uniform coloring of white hairs; mandibles with white hairs cut squarely off half-way down; femur of first leg with a bunch of hairs at distal end above and a heavy fringe below.....*carolinensis* Peck.

1. Females:

- 2b. Abdomen red or marked with red
 - 3d. Cephalothorax red above
 - 4d. Abdomen marked with black
 - 5d. Abdomen with two black bands
 - 6d. Abdomen without light basal band.....*cardinalis* (Hentz)
 - 6d. Abdomen with light basal band
 - 7d. Abdomen with indistinct light basal band; black bands on abdomen going only half way forward
mccookii Peck.
 - 7d. Abdomen with distinct white basal band; black bands on abdomen going nearly to base.....*clarus* Keys.
 - 5d. Abdomen with one black band.....*insolens* (Hentz)
 - 4d. Abdomen all red
 - 5e. Cephalic plate with bare black region back of first row of eyes.....*whitmanii* (Peck.)
 - 5e. Cephalic plate all red
 - 6e. No basal band on abdomen.....*cardinalis* (Hentz)
 - 6e. Abdomen with light basal band
 - 7e. Sides of cephalothorax black.....*insolens* (Hentz)
 - 7e. Sides of cephalothorax covered with yellowish-red hairs*mccookii* Peck.
 - 3d. Cephalothorax black, or dark covered with inconspicuous brown, black or gray hairs
 - 4e. Cephalothorax black with black hairs.....*formosus* Peck.
 - 4e. Cephalothorax dark, covered with inconspicuous brown or gray hairs
 - 5f. Abdomen red, with black band marked with central white spot in front; or abdomen black, spotted with white, and having an irregular red patch on each side; or abdomen black with bands and spots which are white in the upper and red in the lower part.....*johnsoni* Peck.
 - 5f. Abdomen red, with black band notched on edges with white or red
 - 6f. Fourth leg about as long as whole body
coloradensis Thor.
 - 6f. Fourth leg only three-fourths as long as body
ardens Peck.
 - 3d. Cephalothorax dark with white hairs or bands on sides
insignarius (C. Koch)
- 2b. Abdomen black marked with white.....*audax* (Hentz)
- 2b. Abdomen brown, gray, yellow or spotted
 - 3e. Spiders yellow, or marked with yellow
 - 4f. Whole spider yellow, abdomen marked only with two dark bands dotted with white on posterior half.....*pius* Scheff.
 - 4f. Abdomen marked with white or with yellow and white
johnsoni Peck.
 - 3e. Spiders gray, brown or spotted
 - 4g. Spider all gray, abdomen sometimes with one or two pairs of white dots; length 15 mm.....*opifex* (McCook)

- 4g. Spider all brown; abdomen sometimes showing two indistinct dark longitudinal bands marked with white dots; length 9.5 mm.....*brunneus* Emerton
- 4g. Abdomen more or less spotted or banded
- 5g. Cephalothorax covered with snow white hairs except for a band of reddish hairs between the eyes of the second row; abdomen light gray with white spots and bands outlined in black; mandibles with a band of white hairs above.....*carolinensis* Peck.
- 5g. Cephalothorax gray; abdomen with a metallic band and four pairs of white spots.....*purpuratus* Keys.
- 5g. Cephalothorax covered with whitish hairs, more or less tinged with yellow; abdomen with central white band, forked behind.....*texanus* Banks

The male of *Phidippus texanus* Banks and the female of *P. putnami* (Peck.) have not been described. *Phidippus coloradensis* Thorell was described from Denver, Colorado, so may occur in Nebraska. *Phidippus formosus* Peckham, *P. insignarius* C. Koch, *P. insolens* (Hentz) and *P. texanus* Banks have all been found in Kansas. Any of these species may reach this state and are therefore included in the key.

Phidippus ardens Peckham, Trans. Wis. Acad. Sci., 1900, v. 13, p. 288.

Specimen: 1 female.

Distribution: Southwestern United States from California north and east to Kansas, Colorado and Nebraska.

Occurrence in Nebraska: A single female was collected by Pickwell from a silk sac in a seed pod of yucca at Ainsworth, August 20, 1922.

Phidippus audax (Hentz). *Attus audax* Hentz, Journ. Bost. Soc. Nat. Hist., 1844, v. 5, p. 199.

Specimens: over 100. including males, females, and immature ones.

Distribution: Entire United States (Petrunkévitch, 1911).

Occurrence in Nebraska: Entire state. Collected at Plattsmouth, Weeping Water, Elmwood, Murdock, Valparaiso, Salltillo, Sprague, Fremont, Ashland, Lincoln, Ainsworth and Danbury, west to Cheyenne, Wyoming. Collected from January 6 to November 30, in winter in tight silk hibernating sacs, under logs and bark; in summer, on flowers such as

goldenrods, sunflowers, and asters, in cottonwood trees, in high prairie grass, in shrubbery of the flood plain, in barns and houses, and on fences in forests and fields. This is a very common and widely distributed species. Maturation is usually reached in the fall before hibernation; emergence takes place in the spring from April 15 to June 1.

Phidippus brunneus Emerton, Trans. Conn. Acad. Sci., 1891, v. 8, p. 225.

Specimens: 1 female; 1, immature.

Distribution: Eastern states, from Massachusetts and New York, west to Nebraska.

Occurrence in Nebraska: Collected only at Lincoln, July 17 and September 22, in wasp's nests and by sweeping high prairie grass. The July specimen was mature; the September one, immature.

Phidippus cardinalis (Hentz). *Attus cardinalis* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 200.

Distribution: Eastern states, from New York to Florida; west to California, Kansas and Nebraska.

Occurrence in Nebraska: Known only from the list of Nebraska spiders collected by Bruner.

Phidippus carolinensis Peckham, Trans. Wis. Acad. Sci., v. 13, p. 422.

Specimen: 1 immature female.

Distribution: North Carolina, west to Kansas, Nebraska and Texas.

Occurrence in Nebraska: Known from a single specimen found at Lincoln in October, 1926, collected by Worley in shrubbery around a dwelling. The specimen was not quite mature.

Phidippus clarus Keyserling, Ver. zool.-bot. Ges. Wien, 1884, v. 34, p. 297.

Specimen: 1 male.

Distribution: Entire United States (Banks, 1910).

Occurrence in Nebraska: Collected only at Lincoln, July 15, 1927, by E. F. Powell. The specimen was mature.

Phidippus johnsoni Peckham, Des. New. Lit. Kn. Attidae, 1883, p. 22.

Specimen: 1 female.

Distribution: Western states, from California to Washington; east to Utah and Nebraska.

Occurrence in Nebraska: A single specimen was collected by Worley at Mitchell, June 24, 1923, under a stone on the high plains. There are no previous records for this species this far east in the United States.

Phidippus mccoockii (Peckham). *Attus mccoockii* Peckham, Des. New or Lit. Kn. Attidae, 1883, p. 16.

Specimen: 1 immature male.

Distribution: Eastern states from Massachusetts to Pennsylvania; west to Missouri and Nebraska.

Occurrence in Nebraska: Known from a single specimen collected by Worley at Halsey, in the sandhills, August 11, 1925. It was found by sweeping sandhill grass. The specimen was not quite mature.

Phidippus opifex (McCook). *Attus opifex* McCook, Proc. Acad. Nat. Sci. Phila., 1883, p. 276.

Specimen: 1 male.

Distribution: Western states from California and New Mexico east to Colorado and Nebraska.

Occurrence in Nebraska: Worley secured a single mature male specimen at Halsey, August 12, 1925, in sandhill grass, in a planted pine forest.

Phidippus pius Scheffer, Industrialist, 1905, v. 31, p. 6.

Specimen: 1 female.

Distribution: Kansas and Nebraska.

Occurrence in Nebraska: A single female specimen was found under a log at Lincoln in May, 1923. It agrees very closely with the type specimens in the Museum of Comparative Zoology.

Phidippus purpuratus Keyserling, Verh. zool.-bot. Ges. Wien, 1884, v. 16, p. 429.

Specimens: 3 males; 6 females; 25, immature.

Distribution: Eastern three-fourths of the United States, from New England and New York to Texas, Missouri, Nebraska and Utah.

Occurrence in Nebraska: Entire state, common. We have specimens from Fairbury, Lincoln, Sprague, Plattsmouth, Weeping Water, Chambers and Mitchell, collected from May 12 to October 17. Maturation occurs in the summer, in June, July and August, and the immature individuals probably hibernate under logs and bark as do hibernating individuals of *Phidippus audax*. We have collected *Phidippus purpuratus* under stones, bark and logs, and by sweeping coralberry, gooseberry, high prairie grass, clover, cattails and weeds, and we have found it in wasp's nests.

Phidippus putnami (Peckham). *Attus putnami* Peckham, Des. New or Lit. Kn. Attidae, 1883, p. 1.

Specimen: 1 male.

Distribution: Central states; Kentucky, Indiana, Ohio, Missouri, Iowa and Nebraska.

Occurrence in Nebraska: A single mature male specimen of this spider was collected by Pickwell at Fremont, September 11, 1923, from the trunk of a cedar.

?*Phidippus whitmanii* Peckham, Trans. Wis. Acad. Sci., 1909, v. 16, p. 394.

Distribution: Eastern states from New England to Wisconsin.

Occurrence in Nebraska: "*Phidippus whitmanii*" appears on the list of Nebraska spiders collected by Bruner, but this list was written in 1893 and this species was not described until 1909. It probably does not range as far west as Nebraska.

Sassacus papenhoei Peckham, Occ. Pap. N. H. Soc. Wis., 1895, v. 2, p. 177.

Specimens: 1 male; 1 female.

Distribution: Southern states from Texas, California and New Mexico, north to Kansas and Nebraska.

Occurrence in Nebraska: Two mature specimens of this

species were found by Pickwell at Lincoln, June 11 and 13, 1922, in salt marsh grass.

Salticus scenicus (Clerck). *Araneus scenicus* Clerck, Aran. Svec., 1757, p. 117.

Specimens: 2 males; 10 females; 3, immature.

Distribution: Entire North America (Petrunkevitch, 1911).

Occurrence in Nebraska: Eastern part of state; Lincoln and Milford. Specimens collected from May 22 to November, under logs and boards in the fall and by sweeping prairie grass and shrubbery in the summer. Winter is passed in the adult stage.

Sitticus cursor Barrows, Ohio Journ. Sci., 1919, v. 19, p. 359.

Specimen: 1 male.

Distribution: Eastern United States from North Carolina to Nebraska.

Occurrence in Nebraska: A specimen in the Museum of Comparative Zoology, Cambridge, Massachusetts, from Omaha, Nebraska, labeled "*Neon sanfordii*" proved to be this species. *Neon sanfordii* was never described.

Synemosyna formica Hentz is said to range throughout the United States, but it has never been found in Nebraska.

Thiodina sylvana (Hentz). *Attus sylvana* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 264.

Distribution: Southern states, from Florida to Arizona; north to Colorado, Nebraska and Missouri.

Occurrence in Nebraska: Known only from the list of the spiders collected by Bruner.

Genus *Wala* Keyserling, 1884 (Peckham, 1909):

1. Males:

2a. First legs brown, except tarsus; whole body brown with white stripes along sides; in large specimens, mandibles horizontal

palmarum (Hentz)

2a. First legs white, fringed with white; body light with white stripes along sides; mandibles vertical.....*mitrata* (Hentz)

1. Females:

2b. Abdomen white with three pairs of dark spots.....*mitrata* (Hentz)

2b. Abdomen white with a central, branching rufous band made up of many spots and lines.....*palmarum* (Hentz)

Wala mitrata (Hentz). *Attus mitratus* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 363.

Specimens: 4 males; 7 females; 1, immature.

Distribution: Eastern United States from Massachusetts to Florida; west to Missouri and Nebraska.

Occurrence in Nebraska: Eastern part of state in deciduous forests. Collected at Lincoln, Weeping Water and Sprague, from May 15 to September, in gooseberry sweepings, elm, linden, and bur oak trees, and coralberry shrubbery. This *Wala* apparently hibernates in the adult stage.

Wala palmarum (Hentz). *Epiblemum palmarum* Hentz, Journ. Bost. Soc. Nat. Hist., 1845, v. 5, p. 366.

Specimens: 2 males; 3 females; 1, immature.

Distribution: Eastern states, from Massachusetts to Florida; west to Texas and Nebraska.

Occurrence in Nebraska: Eastern portion of state in deciduous forests, at Fremont, Lincoln, Plattsmouth and Fairbury, and west to Ainsworth in northern Nebraska. Dates, July 1 to October 17. Our specimens were collected by sweeping shrubbery, in forests and about houses. The July specimens are mature; the September specimen is immature and the October specimen is mature. Hibernation probably occurs in the adult stage.

Genus *Zygoballus* Peckham, 1885 (Peckham, 1909):

1. Males:

2. Face and sides of cephalothorax beyond second row of eyes, covered thickly with white scales; tibia I about four times as long as wide*bettini* Peck.

2. Sides of cephalothorax dark, or covered with rather inconspicuous whitish scales; tibia I two and one-half times as long as wide..... *nervosus* (Peck.)

Zygoballus nervosus (Peckham) is found in the eastern states and as far west as Illinois, so it may reach Nebraska and is included in the key for this reason.

Zygoballus bettini Peckham, Trans. Wis. Acad. Sci., 1888, v. 7, p. 89.

Specimens: 10 males; 9 females.

Distribution: Eastern United States, from Maine to Florida; west to Texas, Missouri and Nebraska.

Occurrence in Nebraska: Eastern part of state in deciduous forests. Collected at Wabash, Fremont and Lincoln, from May 22 to September 11, on shrubbery and foliage in deep forests. We have found it particularly common on elm shrubbery.

III. SUMMARY

1. The spider fauna of four of the five faunal regions of Nebraska has been studied. Only the Pine ridge region has been omitted.

2. Two hundred and thirty species of spiders, representing 112 genera and 17 families, are definitely listed for the state.

3. Eighteen species are listed as occurring throughout the state, while 17 are restricted to the deciduous forests of the Missouri River region; 35 are characteristic of the prairie region, 11 are restricted to the sandhill region, and 26 have been found only in the high plains area.

4. Forty-two species are found in the deciduous forest and prairie regions, but are excluded from the others; 18 are found in these two regions and the sandhills, but not in the high plains region; 19 appear to be found in all regions except the sandhills; 2 are excluded from the Missouri River region, but are found elsewhere throughout the state. Seventeen species inhabit only the prairie and plains regions. Three species are found in the prairie and sandhill regions only; one species appears to occur in only the Missouri region and the sandhills and one is found only in the sandhills and plains.

5. The distribution of the remaining 26 species in the state is not clearly understood.

IV. BIBLIOGRAPHY

Banks, Nathan

- 1891 Notes on the Dysderidae of the United States. *Can. Ent.*, v. XXIII, pp. 207-209.
- 1892 A Classification of North American Spiders. *Can. Ent.*, v. XXIV, pp. 88-97.
- 1895 The Genus *Oxyptila*. *Psyche*, v. VII, pp. 241-244.
- 1896 A Few New Spiders. *Can. Ent.*, v. XXVIII, pp. 62-65.
- 1897 Descriptions of New Spiders. *Can. Ent.*, v. XXIX, pp. 193-197.
- 1905 Families and Genera of Araneidea. *Am. Nat.*, v. XXXIX, pp. 293-323.
- 1907 A Preliminary List of the Arachnida of Indiana. *31st Annual Report of the Department of Geology and Natural Resources of Indiana*, pp. 715-747.
- 1910 Catalogue of Nearctic Spiders. *Bull. U. S. Nat. Mus.*, No. 72, pp. 1-80.

Bishop, Sherman C.

- 1924 A Revision of the Pisauridae of the United States. *N. Y. State Mus. Bull.*, No. 252, pp. 1-140.

Bryant, Elizabeth B.

- 1931 Notes on North American Anyphaeninae in the Museum of Comparative Zoology. *Psyche*, v. XXXVIII, pp. 102-126, pls. vi-viii.

Chamberlin, Ralph V.

- 1908 A Revision of the North American Spiders of the Family Lycosidae. *Proc. Acad. Nat. Sci. Phila.*, v. LX, pp. 158-318, pls. viii-xxiii.
- 1922 The North American Spiders of the Family Gnaphosidae. *Proc. Biol. Soc. Wash.*, v. XXXV, pp. 145-172.
- 1923 The North American Species of *Mimetes*. *Journ. Ent.-Zool. Claremont*, v. XV, pp. 3-9.

Comstock, John Henry

- 1912 The Spider Book. Doubleday, Page and Co., New York.

Crosby, C. R. and Bishop, Sherman C.

- 1925 Studies in New York Spiders, Genera: *Ceratinella* and *Ceraticelus*. *N. Y. State Mus. Bull.*, No. 264, pp. 1-71.
- 1928 Revision of the Spider Genera *Erigone*, *Eperigone* and *Catabrithorax* (Erigoneae). *N. Y. State Mus. Bull.*, No. 278, pp. 1-98.

Emerton, James H.

- 1902 Common Spiders of the United States. Ginn and Co., Boston.

Keyserling, Graf Eugen

- 1880-1893 Die Spinnen Amerikas. Vols. I, II, III and IV. Bauer and Raspe, Nürnberg.

- McCook, Henry C.
1889-1893 American Spiders and their Spinning Work. Published by the author, Philadelphia.
- Peckham, G. W. and E. G.
1909 Revision of the Attidae of North America. *Trans. Wis. Acad. Sci.*, v. XVI, pp. 355-646, pls. xxix-li.
- Petrunkévitch, Alexander
1911 Synonymic Index-Catalogue of Spiders of North, Central and South America. *Bull. Am. Mus. Nat. Hist.*, v. XXIX.
- Scheffer, T. W.
1904 List of Kansas Spiders. *Industrialist*, v. XXX, pp. 1-16.
1905 Additions to List of Kansas Spiders. *Industrialist*, v. XXXI, pp. 435-444.

EXPLANATION OF PLATE

Localities in Nebraska to Which Reference Is Made

1. Agate	24. Mitchell
2. Ainsworth	25. Murdock
3. Alvo	26. Mynard
4. Ashland	27. Oconto
5. Brewster	28. Plattsmouth
6. Broken Bow	29. Roca
7. Chadron	30. Saltillo
8. Chambers	31. Scottsbluff
9. Danbury	32. South Bend
10. Elmwood	33. Sprague
11. Ender's Lake	34. Union
12. Exeter	35. Valentine
13. Fairbury	36. Valparaiso
14. Fremont	37. Wabash
15. Gering	38. Wahoo
16. Gretna	39. Walton
17. Haigler	40. Waverly
18. Halsey	41. Weeping Water
19. Hanlon	42. Wood Lake
20. Havelock	43. York
21. Lincoln	44. Cedar Bluffs
22. Milford	45. Omaha
23. Minatare	

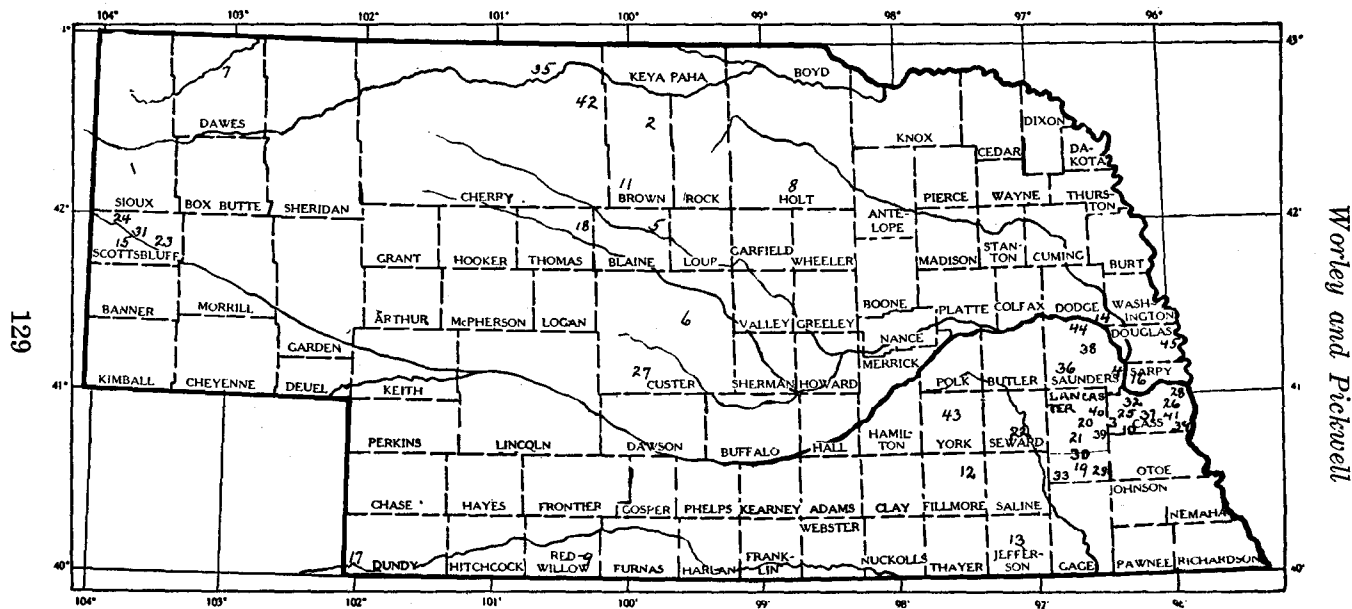


PLATE
MAP OF NEBRASKA SHOWING LOCALITIES REFERRED TO IN THIS PAPER

Worley and Pickwell