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NEW AND RARE SPIDERS FROM WISCONSIN AND ADJACENT STATES

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Little has been published on Wisconsin spiders since George W. and Elizabeth G. Peckham, residents of the state and eminent students of the jumping spiders, made their collections at the turn of the century. In their papers they record many species and describe the habits of various salticids found in this state. In 1893 McCook listed a number of argiopids from Wisconsin, most of them presumably sent to him by the Peckhams. In 1938 Howard M. Field submitted a thesis to the University of Wisconsin in which he listed the 235 species of spiders he had collected in the previous five years. The thesis (unpublished) includes a list of spiders collected by Miss Alma Sherman while she was in Madison between 1929 and 1931.

The author was fortunate in being able to examine an important collection made by Dr. D. C. Lowrie in southeastern Wisconsin between 1938 and 1940. A small collection of spiders made by Dr. William Elder about 1938 was found at the University of Wisconsin. The author wishes here to thank Drs. Lowrie and Elder for the use of their collections, Sister M. Melan   and her enthusiastic students, Mr. R. Hunt, Miss R. Schiferl, Miss K. E. Dorney, Mr. R. Sleeter, and the many others who, between 1946 and 1949, contributed to his collection.

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The purpose of this paper is to record the rare and some of the new species out of over 360 that have been collected in this state, and some new species found in this and neighboring states. The types of the new species and most of the listed specimens are deposited in the American Museum of Natural History.

SUBORDER MYGALOMORPHAE

ATYPIDAE

Atypus niger Hentz

Atypus niger HENTZ, 1842, Jour. Boston Soc. Nat. Hist., vol. 5, p. 224, pl. 8, fig. 1.

A male of this little tarantula was found after a heavy rain on June 14, 1949, crossing a road in Wyalusing State Park, Grant County. The road on which the animal was found leads to "The Knob" and traverses maple and basswood forest. Gertsch (1936) records that this rare species had been reported by Simon (1890) as having been collected in Wisconsin by Peckham.

SUBORDER ARANEOMORPHAE

PHOLCIDAE

Spermophora meridionalis Hentz

Spermophora meridionalis HENTZ, 1841, Amer. Jour. Sci., vol. 41, p. 117.

WISCONSIN RECORDS: Crawford County: Prairie du Chien, August, 1949 (L. Smethurst). Dane County: Cambridge, common (H. Field); Madison, 1947, October 13, 1948, April, 1949.

This spider was found in dark corners of houses.

THERIDIIDAE

Theridion alabamense Gertsch and Archer

Theridion cinereum EMERTON, 1913, Trans. Connecticut Acad. Arts and Sci., vol. 18, p. 212, pl. 1, fig. 2.

Theridion alabamense GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 4.

WISCONSIN RECORDS: Grant County: Wyalusing State Park, one female, June 15, 1949, collected in river bottom.

Gertsch and Archer record the range of this species from New England to Florida, Alabama, and Louisiana, being relatively rare in the north. Lowrie (1948) reports this species from northern Illinois.

***Theridion aurantium* Emerton**

Figure 10

Theridion aurantium EMERTON, 1915, Trans. Connecticut Acad. Arts and Sci., vol. 20, p. 136, pl. 1, fig. 2, ♂.

WISCONSIN RECORDS: Forest County: Laona, one female, July 23, 1949.

Emerton collected *T. aurantium* from New Hampshire, Maine, and the Adirondacks.

***Theridion fieldi*, new species**

Figure 46

FEMALE: Total length, 3.1 mm. Carapace, 1.2 mm. long, 1.0 mm. wide. Abdomen, 1.9 mm. long, 1.7 mm. wide.

The carapace is white, with a black median line which is as wide as the posterior lateral eyes anteriorly and becomes narrower behind. This line continues over the clypeus but is only as wide there as the anterior median eyes. There is a black marginal line on the carapace. The chelicerae, labium, and coxae are white. The tips of the maxillae are dark. The sternum is dark towards the side but white in the center and in front. The palpi and leg segments have dark bands. The femora of the legs have indications of two or three bands, the tibia and metatarsi a proximal, median, and distal band, while the tarsi have a distal band which may be split and may appear as two individual bands. The abdominal markings are much like those of *T. zelotypum* Emerton, 1882. There is a longitudinal stripe, with lateral extensions, which is rufous in color and has a lighter border. To the side of the band, the abdomen is darker. The sides and venter of the abdomen are white but have some irregular dark brown spots.

The structure is typical, and much like that of *T. zelotypum*.

The clypeus is equal in height to three and one-half diameters of the anterior median eyes and is excavated below the eyes. The anterior eye row is procurved if viewed from in front. The anterior median eyes are three-fourths the diameter of the anterior laterals in size and are about two diameters apart, and a distance equal to a radius from the anterior laterals. The posterior row is procurved. The posterior medians are subequal in size to the posterior laterals which are equal to the anterior laterals. The posterior medians are about seven-eighths of their diameter apart and the same distance from the laterals. The anterior and posterior laterals touch each other.

	I	IV
Femur	2.2 mm.	1.7 mm.
Patella	0.5	0.3
Tibia	1.9	1.2
Metatarsus	2.0	1.2
Tarsus	0.8	0.6
Total	7.4	5.0

The epigynum is illustrated in figure 46.

TYPE MATERIAL: The female holotype was collected at Wyalusing State Park, Grant County, in the Wisconsin River bottom on June 15, 1949. A paratype comes from a similar habitat in Merrick State Park, Buffalo County, July 15, 1949. Field apparently collected this species, which he called *T. zelotypum*, at Madison, Dane County; La Crosse, La Crosse County; Prairie du Sac, Sauk County; and Trout Lake, Vilas County.

Theridion fieldi resembles *T. zelotypum* Emerton, 1882, but can be differentiated readily by the comparative size of the opening of the epigynum.

***Theridion zelotypum* Emerton**

Figure 47

Theridium zelotypum EMERTON, 1882, Trans. Connecticut Acad. Arts and Sci., vol. 6, p. 11, fig. 4.

Theridion zelotypum is found in northern Wisconsin.

***Euryopis gertschi*, new species**

Figures 1-4

MALE: Total length, 2.6 mm. Carapace, 1.2 mm. long,

1.0 mm. wide. Sternum, 0.7 mm. long, 0.5 mm. wide. Abdomen, 1.5 mm. long, 1.1 mm. wide.

The carapace is yellowish orange, except for the area between the eyes, which is dark gray to black. The clypeus is yellow orange, the chelicerae, sternum, maxillae, labium, and coxae are yellowish white. The sternum has a gray marginal line. The legs are yellow orange, the distal segments being darker, and the tarsi almost brown. The dorsum of the abdomen is black with a number of silvery spots as shown in figure 4. The venter of the abdomen is gray, with some lighter whitish areas. The epigastric plates are white, the spinnerets brown. The sparse, short setae on the abdomen are brown.

The carapace is heart-shaped, being indented above the pedicel and pointed anteriorly. The head is high. The thoracic groove is midway between the posterior eyes and the posterior border of the carapace. The anterior eye row is procurved if viewed from in front, the posterior recurved if viewed from above. The ocular quadrangle is wider than long, being much wider in front. The anterior median eyes are about one and one-half diameters apart and one-fourth their diameter from the laterals. The posterior medians are a little more than their diameter apart and are the same distance from the posterior laterals. The anterior and posterior lateral eyes nearly touch each other. The clypeus is concave and is almost three times the length of the ocular quadrangle in height. The chelicerae are small; viewed from in front, they are about one and one-half times as high (measured without the claw) as the ocular triangle is long. The leg formula is 4, 1, 3, 2. The first, second, and third legs are subequal.

	I	IV
Femur	1.0 mm.	1.4 mm.
Patella	0.3	0.3
Tibia	0.7	0.8
Metatarsus	0.6	0.7
Tarsus	0.5	0.5
Total	3.1	3.7

The palp is shown in figures 1 and 2.

FEMALE: Total length, 2.6 mm. Carapace, 1.0 mm. long, 1.0 mm. wide. Sternum, 0.6 mm. long, 0.5 mm. wide. Abdomen, 1.9 mm. long, 1.7 mm. wide.

The color of the female is like that of the male. The abdominal pattern is shown in figure 4. The structure again resembles that of the male, except for the carapace which appears wider than long. The thoracic groove cannot be discerned. The clypeus is not so high as that of the male, being about two times the length of the median ocular quadrangle in height. The abdomen overhangs the carapace. The first three pairs of legs are shorter than those of the male; the leg formula is 4, 3, 1, 2. The first, second, and third legs are subequal in length.

	I	IV
Femur	0.9 mm.	1.0 mm.
Patella	0.4	0.5
Tibia	0.7	0.9
Metatarsus	0.5	0.8
Tarsus	0.4	0.6
Total	2.9	3.8

The epigynum is shown in figure 3.

TYPE MATERIAL: The male holotype and paratypes were collected in the E. S. George Reserve, Livingston County, Michigan, on June 12, 1937, by I. J. Cantrall. The female allotype was collected in Norwalk, Connecticut, on August 4, 1935, by W. J. Gertsch.

Euryopsis gertschi differs from *E. argentea* Emerton, 1882, in the arrangement of the silvery abdominal marks, the coloration of the carapace, the smaller eyes of the latter species, and in the structure of the epigynum and palp.

***Euryopsis saukea*, new species**

Figures 5-9

MALE: Total length, 2.5 mm. Carapace, 1.2 mm. long, 1.2 mm. wide. Sternum, 0.7 mm. long, 0.5 mm. wide. Abdomen, 1.7 mm. long, 1.3 mm. wide.

The carapace, chelicerae, maxillae, labium, and sternum are dark brown; the eyes are on black spots. The coxae are white but have a dark distal ring. The trochanters are white, some having dark distal spots or rings. The femora are white on the dorsum, may be white on the venter, and are dark brown anteriorly and posteriorly. These dark brown stripes run the whole length of the first and second femora, only the distal

two-thirds of the third femur, and distal one-half of the fourth femur. All femora have a distal ring of dark brown. The other leg segments are all dark brown, with occasional lighter spots on the patella and tibia. The tarsi are lighter brown. The abdomen is black. A dorsal longitudinal dark band is very slightly darker. Laterad and ventrad the abdomen is slightly darker again. The dorsum has a variable number of silver marks, as shown in figures 8 and 9. The muscle impressions show up as brownish chitinous spots. The epigastric scutum is brownish. The sparse short setae that cover the abdomen are brown.

The carapace is evenly rounded on the sides and the back except for an indentation of the edge above the pedicel. The head is very high. The thoracic groove is midway between the posterior eyes and the posterior border of the carapace. The anterior eye row is procurved in frontal view, the posterior re-curved if viewed from above. The median eyes are round, the laterals oval, with their longer diameter slightly longer than that of the anterior medians which in turn are slightly larger than the posterior medians. The ocular quadrangle is wider than long and is wider in front than behind. The anterior median eyes are about two diameters apart, the posterior medians about one and one-half. The latter are about their diameter from the anterior median eyes and about two diameters from the posterior laterals. The anterior and posterior laterals almost touch each other, the anterior being about one-half their longer diameter from the anterior median eyes. The clypeus is concave and is almost four times the length of the ocular quadrangle in height. The chelicerae are very small; viewed from in front they are about as high (measured without the claw) as the ocular quadrangle is long. The labium is longer than wide and the maxillae are more than twice as long as they are wide. The leg formula is 4, 1, 2, 3.

	I	IV
Femur	0.9 mm.	1.1 mm.
Patella	0.3	0.4
Tibia	0.7	0.8
Metatarsus	0.8	0.8
Tarsus	0.5	0.5
Total	3.2	3.6

The palp is shown in figures 5, 6, and 7.

TYPE MATERIAL: The male holotype was collected on a goat prairie 5 miles south of Sauk City, Dane County, Wisconsin, on July 9, 1938, by D. C. Lowrie. A paratype was collected in Itasca Park, Minnesota, on May 30, 1932, by W. J. Gertsch.

LINYPHIIDAE

***Baryphyma longitarsum* (Emerton)**

Figures 11, 12

Lophocarenum longitarsus EMERTON, 1882, Trans. Connecticut Acad. Arts and Sci., vol. 4, p. 48, pl. 8, fig. 4, ♂.

Baryphyma longitarsum CROSBY AND BISHOP, 1933, Ann. Ent. Soc. Amer., vol. 26, p. 153, pl. 7, figs. 177-180, ♂.

FEMALE: Total length, 1.5 mm. The female appears similar to the male. The anterior eye row is straight, the posterior is very slightly procurved. The anterior median are the smallest of the eyes and nearly touch each other. They are about three-quarters of their diameter from the anterior lateral eyes. The posterior medians are about their diameter apart and about one-half to three-quarters of their diameter from the laterals. The anterior and posterior laterals seem to touch each other.

The epigynum has a large rectangular opening whose anterior edge projects. Three pairs of bean-shaped or spherical bodies show through the chitin to the side and anteriorly, while one pair of bodies shows through the posterior margin of the opening (fig. 12).

A male and two females were collected by sweeping on July 27, 1949, in Point Beach State Forest, Manitowoc County, Wisconsin.

***Ceratinops annulipes* (Banks)**

Ceratinella annulipes BANKS, 1892, Proc. Acad. Nat. Sci. Philadelphia, p. 33, pl. 2, fig. 56.

Ceratinops annulipes CROSBY AND BISHOP, 1933, Ann. Ent. Soc. Amer., vol. 26, p. 109, pl. 1, figs. 1-5.

WISCONSIN RECORDS: Dane County: Madison, one female, October 9, 1947 (J. Budd), under pines in the University Arboretum.

According to Crosby and Bishop this species is known from New York.

***Ceratinopsis auriculata* Emerton**

Ceratinopsis auriculata EMERTON, 1909, Trans. Connecticut Acad. Arts and Sci., vol. 14, p. 185, pl. 2, fig. 9.

Ceratinopsis auriculatus BISHOP AND CROSBY, 1930, Jour. New York Ent. Soc., vol. 38, p. 18, pl. 3, figs. 8-11, pl. 4, figs. 12-13.

WISCONSIN RECORDS: Walworth County: Lake Geneva, one female, July 2, 1938 (D. C. Lowrie).

This species is known from New York.

***Cornicularia indirecta* (O. P. Cambridge)**

Erigone indirecta O. P. CAMBRIDGE, 1874, Proc. Zool. Soc. London, p. 440, pl. 55, fig. 10.

Cornicularia indirecta CROSBY AND BISHOP, 1931, Jour. New York Ent. Soc., vol. 39, p. 370, pl. 27, figs. 34-36.

WISCONSIN RECORDS: Dane County: Madison, one male, October 16, 1935 (H. Field).

Cornicularia indirecta is known from New York, New Jersey, and New England.

***Diplocephalus cristatus* (Blackwall)**

Walckenaera cristata BLACKWALL, 1833, London and Edinburgh Phil. Mag., ser. 3, vol. 3, p. 107.

Diplocephalus cristatus BISHOP AND CROSBY, 1935, Jour. New York Ent. Soc., vol. 43, p. 239, pl. 20, figs. 42-43.

WISCONSIN RECORDS: Winnebago County: Oshkosh, one male, October 3, 1933 (H. Field).

Diplocephalus cristatus is known from Europe, New England, New York, and Toronto, Ontario.

***Dismodicus decemoculatus* (Emerton)**

Lophocarenum decemoculatum EMERTON, 1882, Trans. Connecticut Acad. Arts and Sci., vol. 6, p. 46, pl. 12, fig. 4.

Dismodicus decemoculatus CROSBY AND BISHOP, 1933, Ann. Ent. Soc. Amer., vol. 26, p. 149, pl. 7, figs. 165-169.

WISCONSIN RECORDS: Florence County: Tipler, one male, July 1, 1949 (L. R. Levi).

This species is known from New York, Manitoba, Ontario, Quebec, and British Columbia.

Eridantes utibilis Crosby and Bishop

Figure 13

Eridantes utibilis CROSBY AND BISHOP, 1933, Ann. Ent. Soc. Amer., vol. 26, p. 148, pl. 7, figs. 159–164, ♂.

FEMALE: Total length, 1.3 mm. The general appearance, color, and structure, except for the head, are like those of the male. The anterior eye row is slightly procurved. The small median eyes are less than their radius apart; the laterals are separated from the medians by three-quarters of the latter's diameter. The posterior eye row is procurved. The medians and laterals appear to be the same size. The medians are about three-quarters of their diameter from each other and a little less than their diameter from the laterals. The laterals on each side seem to touch each other.

The epigynum consists of a plate, in the middle of which is a lighter triangular area pointing anteriorly. The receptacles show through as spherical bodies on each side of the base of the triangle.

WISCONSIN RECORDS: Pattison State Park, Douglas County, one male and one female, July 18, 1949.

Gnathonaroides pedalis (Emerton)

Araeoncus pedalis EMERTON, 1923, Canadian Ent., vol. 55, p. 239, fig. 2.

Gnathonaroides pedalis BISHOP AND CROSBY, 1938, Jour. New York Ent. Soc., vol. 46, p. 84, pl. 6, figs. 65–66.

WISCONSIN RECORDS: Dane County: Madison, 1948, in a leaf pile at Picnic Point.

Gnathonaroides pedalis is known from Manitoba and New York.

Grammonota vittata Barrows

Grammonota vittata BARROWS, 1919, Ohio Jour. Sci., vol. 19, p. 357, pl. 15, fig. 1. BISHOP AND CROSBY, 1932, Jour. New York Ent. Soc., vol. 4, p. 412, pl. 19, figs. 50–52.

WISCONSIN RECORDS: Walworth County: Lyons Township, Sect. 28, 29, one male, July 26, 1938 (D. C. Lowrie), in a bog.

This species is known from Hebron, Ohio, and Mays Landing, New Jersey.

Hormathion limnatum Crosby and Bishop

Hormathion limnatum CROSBY AND BISHOP, 1933, Ann. Ent. Soc. Washington, vol. 26, pp. 161–162, pl. 8, figs. 205–210.

WISCONSIN RECORDS: Marathon County: Nutterville, one male, September 17, 1949, on a farm, under boards.

Minyriolus arenarius (Emerton)

Lophocarenum arenarium EMERTON, 1911, Trans. Connecticut Acad. Arts and Sci., vol. 16, p. 391, pl. 2, fig. 4.

Minyriolus arenarius CROSBY AND BISHOP, 1933, Ann. Ent. Soc. Washington, vol. 26, p. 136, pl. 5, figs. 110-115.

WISCONSIN RECORDS: Dane County: Madison, one female, May 25, 1948 (C. Brandt).

Minyriolus arenarius is known from New York and Massachusetts.

Minyriolus castaneus (Emerton)

Lophocarenum castaneum EMERTON, 1882, Trans. Connecticut Acad. Arts and Sci., vol. 6, p. 45, pl. 12, fig. 1.

Minyriolus castaneus CROSBY AND BISHOP, 1933, Ann. Ent. Soc. Washington, vol. 26, p. 138, pl. 5, figs. 116-121.

WISCONSIN RECORDS: Dane County: Madison, one male, October 14, 1933 (H. Field), one female, September 7, 1947.

This species is known from New England and New York.

Oedothorax trilobatus (Banks)

Dicyphus trilobatus BANKS, 1896, Canadian Ent., vol. 28, p. 64.

Oedothorax trilobatus BISHOP AND CROSBY, 1935, Jour. New York Ent. Soc., vol. 33, p. 268, pl. 22, figs. 79-84.

WISCONSIN RECORDS: Vilas County: Trout Lake, six males and nine females, July 28, 1933 (H. Field).

Soulgas corticarius (Emerton)

Tmetiscus corticarius EMERTON, 1909, Trans. Connecticut Acad. Arts and Sci., vol. 14, p. 194, pl. 4, fig. 4.

Soulgas corticarius CROSBY AND BISHOP, 1936, Festschr. Strand, vol. 2, p. 55, pl. 4, figs. 8-10.

WISCONSIN RECORDS: Price County: Memorial Grove, Chequamegon National Forest, one female, July 22, 1949, in a hemlock forest.

ARGIOPIDAE

Aculepeira carbonaria (L. Koch)

Epeira carbonaria L. KOCH, 1869, Zeitschr. Ferdinandeums Tirol u. Vorarlberg, vol. 14, p. 168.

Epeira carbonaria McCook, 1893, American spiders, vol. 3, p. 157, pl. 5, figs. 1-2.

McCook reported this European alpine spider from Wisconsin, as having been collected by Peckham. This spider may have been *Aculepeira verae* Chamberlin and Ivie, 1942, which occurs in the Rocky Mountains.

***Aranea corticaria* (Emerton)**

Epeira corticaria EMERTON, 1884, Trans. Connecticut Acad. Arts and Sci., vol. 6, p. 300, pl. 33, fig. 14, pl. 35, fig. 9.

WISCONSIN RECORDS: Vilas County: Trout Lake, one female, September 3, 1932 (H. Field).

***Aranea gemmoides* Chamberlin and Ivie**

Figures 14-16

Aranea gemmoides CHAMBERLIN AND IVIE, 1935, Bull. Univ. Utah, vol. 26, no. 4, (biol. ser., vol. 2, no. 8), p. 22, pl. 10, fig. 80, ♀.

WISCONSIN RECORDS: Clark County: Neillsville (J. Stucki). Dane County: Cottage Grove, Madison. Grant County: Wyalusing State Park. Marathon County: Wausau. Milwaukee County: Granville (R. Ehn). Rock County: Milton (H. Field). Walworth County: Delavan (D. C. Lowrie). Washburn County: Spooner (H. Field). Waukesha County: (D. C. Lowrie).

According to Chamberlin and Ivie, the distribution of this spider is from northern California, north to British Columbia, Idaho, Montana to Minnesota. Stiles and Stevens (1940) reported *A. gemmoides* from Iowa. In Wisconsin it has been found in farm buildings.

***Aranea mayo* (McCook)**

Epeira mayo McCook, 1893, American spiders, vol. 3, p. 179, pl. 8, fig. 11.

WISCONSIN RECORDS: "Wisconsin" (McCook). Jefferson County: Lake Ripley, one female, June 9, 1936 (H. Field). La Crosse County: La Crosse, one female, June 30, 1933 (H. Field).

***Cercidia prominens* (Westring)**

Epeira prominens WESTRING, 1851, Götheborgs K. Vetensk.-Samh. Handl., vol. 2, p. 35.

WISCONSIN RECORDS: Dane County: Madison, one female, October 14, 1933 (H. Field).

According to Kaston (1948), this spider has been found in Illinois, New York, and Massachusetts. Chickering (1935) reports it from Michigan. It is common in Europe.

***Gea heptagon* (Hentz)**

Epeira heptagon HENTZ, 1850, Jour. Boston Soc. Nat. Hist., vol. 6, p. 20.

WISCONSIN RECORDS: Sauk County: Parfrey's Glen, two females and two males, July 4, 1934 (H. Field).

The distribution of *Gea heptagon* is Guatemala, Brazil, and the southern United States as far north as the District of Columbia (Petrunkevitch, 1911).

***Larinia borealis* Banks**

Larinia borealis BANKS, 1894, Ent. News, vol. 5, p. 8.

WISCONSIN RECORDS: Dane County: Madison, 32 females and nine males, June 25, 1935; one male, September 24, 1935; one female, October 15, 1935 (H. Field); one immature female, September 7, 1946, in an abandoned field. Walworth County: East Troy, one immature male, October 8, 1949 (J. Dogger), in a marsh.

Larinia borealis has been found in New York, along the Atlantic coast, in Michigan, Illinois, and the state of Washington.

***Metepeira labyrinthea* (Hentz)**

Epeira labyrinthea HENTZ, 1847, Jour. Boston Soc. Nat. Hist., vol. 5, p. 471, pl. 31, fig. 3.

Metepeira labyrinthea CHAMBERLIN AND IVIE, 1942, Bull. Univ. Utah, vol. 32, no. 13 (biol. ser., vol. 7, no. 1), p. 63, pl. 13, figs. 161-164.

WISCONSIN RECORDS: Racine County: south of Burlington, one female, August 17, 1949, edge of oak wood, bordering a field.

This species is common in the eastern United States.

***Metepeira palustris* Chamberlin and Ivie**

Metepeira palustris CHAMBERLIN AND IVIE, 1942, Bull. Univ. Utah, vol. 32, no. 13 (biol. ser., vol. 7, no. 1), p. 73, pl. 16, figs. 208-210.

WISCONSIN RECORDS: Portage County: Stevens Point, one female, July 10, 1949, in a pasture. Sawyer County: Lac

Court Oreilles, one female, one male, July, 1933 (H. Field).

Chamberlin and Ivie report *M. palustris* from Nova Scotia and North Dakota; Emerton (1915) reported it from Colorado and Maine as a variety of *Epeira labyrinthica* Hentz.

MICRATHENA

The spiders of the genus *Micrathena*, listed below, with the exception of *Micrathena mitrata* (Hentz), have not been credited heretofore to Wisconsin. Since these three species are rather showy and among the easiest to collect, their present appearance might be considered as a recent extension of their range, especially since H. Field apparently collected the same localities where they are now found. The distribution of the spiders belonging to the genus *Micrathena* is the eastern states, the Gulf states, and much of the central United States east of the Rockies.

Micrathena gracilis (Walckenaer)

Plectana gracilis WALCKENAER, 1837, Histoire naturelle des insectes, aptères, vol. 2, p. 193.

WISCONSIN RECORDS: Green County: 2 miles north of New Glarus, two females, July 31, 1949 (R. Nero), in a dry oak wood.

Micrathena mitrata (Hentz)

Epeira mitrata HENTZ, 1850, Jour. Boston Soc. Nat. Hist., vol. 6, p. 22, pl. 3, fig. 11.

Acrosoma redivianum MCCOOK, 1893, American spiders, vol. 3, p. 213, pl. 23, figs. 6-7.

WISCONSIN RECORDS: "Wisconsin" (McCook). Door County: Peninsula State Park, one female, July 27, 1949. Green County: New Glarus, two females, August 26, 1947. Monroe County: Coon Valley, one female, August 12, 1949. Vernon County: Coon Valley, one female, August 12, 1949; Wildcat Mountain, one female, August 13, 1949.

Micrathena mitrata is usually found in maple and basswood forest.

Micrathena sagittata (Walckenaer)

Plectana sagittata WALCKENAER, 1837, Histoire naturelle des insectes, aptères, vol. 2, p. 174.

WISCONSIN RECORDS: Dane County: Madison, one female, September 15, 1946, which had its web on goldenrod in an oak

wood of the University Arboretum. Monroe County: Coon Valley, two females, August 12, 1949, at road side in maple and basswood forest. Richland County: Rockbridge, one male, July 14, 1949.

***Epeira peckhami* McCook**

Epeira peckhamii McCook, 1893, American spiders, vol. 3, p. 189, pl. 18, figs. 5-6.

The type of this species was collected by Peckham in "Wisconsin." McCook had another specimen from Biscayne Bay, Florida.

***Neoscona pratensis* Hentz**

Epeira pratensis HENTZ, 1847, Jour. Boston Soc. Nat. Hist., vol. 5, p. 475, pl. 31, fig. 11.

WISCONSIN RECORDS: Dane County: Madison, one female, September 28, 1946 (Fass), in the University Arboretum. Rock County: Milton, three females, June, 1937 (H. Field).

***Pachygnatha kuratai*, new species**

Figures 29-31

MALE: Total length, 5.3 mm. Carapace, 2.9 mm. long, 1.9 mm. wide. Chelicerae, 1.4 mm. long (frontal). Sternum, 1.5 mm. long, 1.3 mm. wide. Abdomen, 2.8 mm. long, 2.1 mm. wide.

The coloration is much like that of *Pachygnatha xanthostoma* C. Koch, 1845. The cephalothorax is red-brown, with an indistinct, broad, darker, submarginal stripe and a median brown stripe which is wider in front. The chelicerae, maxillae, labium, and sternum are red-brown, the legs a lighter brown. The abdomen is brown, bearing a darker brown dorsal folium like that of *P. xanthostoma*. The venter has an indistinct medium dark brown stripe, at the sides of which are indistinct dark maculations.

The carapace is without any humps. The sides of the carapace and the region of the head behind the eyes are granular. The suture shows as a dark, Y-shaped mark. Both eye rows are recurved. The median ocular quadrangle is almost square. The anterior median eyes are the largest, the posterior medians

being about two-thirds their diameter in size. The anterior laterals are slightly larger than the posterior medians which are subequal to the posterior laterals. The anterior median eyes are about one diameter apart, about an equal distance from the posterior medians, and less than two diameters from the anterior laterals. The posterior medians are about two diameters apart and about three diameters from the laterals. The laterals on each side nearly touch each other. The height of the clypeus varies between two diameters of the anterior median eyes and the length of the ocular quadrangle. The chelicerae are granular in front, have three large teeth on the promargin (the middle one being the smallest) and four smaller ones on the retromargin (fig. 30). The sternum is granular and seems to extend between the coxae. The leg proportions are as follows:

	I	II	III	IV
Femur	2.9 mm.	2.7 mm.	1.6 mm.	2.1 mm.
Patella	0.9	0.8	0.6	0.5
Tibia	2.8	2.7	1.5	2.0
Metatarsus	2.2	2.0	1.1	1.6
Tarsus	1.2	1.0	0.7	0.9
Total	10.0	9.2	5.5	7.1

The palp is illustrated in figure 29 (drawn from a Wisconsin paratype).

FEMALE: Total length, 4.8 mm. Carapace, 2.2 mm. long, 1.7 mm. wide. Chelicerae, 1.2 mm. long (frontal). Sternum 1.4 mm. long, 1.1 mm. wide. Abdomen, 2.6 mm. long, 1.9 mm. wide.

The coloration is like that of the male.

The structure likewise resembles that of the male, but the granulations are less obvious. There is a distinct hump on the chelicerae above the fang. The promargin of the chelicerae has three large teeth, the distal one being the smallest. The retromargin has four smaller teeth (fig. 31).

	I	II	III	IV
Femur	2.2 mm.	2.1 mm.	1.5 mm.	1.9 mm.
Patella	0.8	0.7	0.4	0.5
Tibia	2.3	2.0	1.0	1.7
Metatarsus	2.0	1.6	0.9	1.3
Tarsus	0.9	0.9	0.6	0.7
Total	8.2	7.3	4.4	6.1

The external epigynum is a slit near the middle of the abdomen and is slightly recurved.

TYPE MATERIAL: The male holotype, female allotype, male and female paratypes were collected at Toronto, Ontario, by W. J. Gertsch August 27, 1946. A male paratype was collected by R. Hine at Picnic Point, Madison, Wisconsin, September 26, 1946, and another at Lake Larina, Hurley, Iron County, Wisconsin, September 12, 1947.

The male of *Pachygnatha kuratai* differs from *P. xanthostoma* L. Koch, 1845, in having only four teeth on the retromargin of its chelicerae, and in the shape of the tip of the embolus and conductor.

***Tetragnatha harrodi*, new species**

Figures 32-37

MALE: Total length, 7.0 mm. Carapace, 2.5 mm. long, 1.4 mm. wide. Chelicerae, 1.7 mm. long (frontal). Sternum, 1.3 mm. long, 0.9 mm. wide. Abdomen, 5.1 mm. long, 1.7 mm. wide.

The color of the carapace is light red-brown. There are no distinct markings except for black areas around all eyes but the anterior medians. The chelicerae, maxillae, labium, sternum, and legs are also light red-brown. The dorsum of the abdomen is silvery, with some dusky to black markings in front which extend laterally, and some dark marks above the spinnerets. The median area of the venter is gray, bordered on each side by a light silvery band.

The carapace is rather flat. The eyes are subequal in size, except the posterior medians which are slightly larger. The posterior median eyes are two and one-half diameters from each other, while the anterior medians are two of their diameters from each other, and more than three diameters from the anterior laterals. The posterior medians are slightly less than three of their diameters from the posterior laterals. The lateral eyes are closer to each other than the anterior and posterior median eyes are to each other, the distance between the former being equal to one and one-half of their diameters. The anterior and posterior medians are more than two of the former's diameters from each other. The height of the clypeus is equal to one and one-half diameters of the anterior median eyes. The chelicerae are long and extended forward. There are five

teeth on the promargin, five on the retromargin, and the usual spur on the anterior face (figs. 34 and 35). The leg proportions are as follows:

	I	II	III	IV
Femur	5.2 mm.	4.0 mm.	2.2 mm.	4.1 mm.
Patella	1.0	0.8	0.4	0.6
Tibia	5.6	3.8	1.5	3.1
Metatarsus	6.3	4.0	1.8	3.8
Tarsus	1.5	1.0	0.7	0.8
Total	19.6	13.6	6.6	12.4

The palp is shown in figures 32 and 33 (drawn from a para-type). The base of the abdomen is swollen.

FEMALE: Total length, 7.8 mm. Carapace, 2.3 mm. long, 1.5 mm. wide. Chelicerae, 1.2 mm. long (frontal). Sternum, 1.3 mm. long, 0.9 mm. wide. Abdomen, 6.2 mm. long, 3.1 mm. wide.

The color is like that of the male, except for a dusky ring around the anterior median eyes and some additional branching gray areas between the dorsal silvery areas of the abdomen.

The carapace is low. The posterior eyes are slightly larger than the anterior. The posterior median eyes are one and one-half of their diameter from each other. The anterior medians are less than one and one-half their diameters from each other, and are about two and one-half diameters from the anterior laterals. The posterior medians are about two of their diameters from the posterior laterals. The distance between the anterior and posterior laterals is equal to less than one diameter of the anterior laterals. The distance between the anterior and posterior medians is slightly less than one and one-half diameters of the anterior medians (fig. 37). The height of the clypeus is equal to less than one diameter of the anterior median eyes. The chelicerae are extended forward. There are five teeth on the promargin, and about five on the retromargin (fig. 36). The base of the abdomen is swollen.

	I	II	III	IV
Femur	5.0 mm.	3.8 mm.	1.8 mm.	4.0 mm.
Patella	1.0	0.8	0.5	0.6
Tibia	5.0	3.0	1.2	2.7
Metatarsus	5.5	3.4	1.5	3.3
Tarsus	1.4	1.0	0.7	0.7
Total	17.9	12.0	5.7	11.3

TYPE MATERIAL: The male holotype, female allotype, and male and female paratypes were collected at Harrowell, Prince Edward County, Ontario, July 6, 1930, by T. Kurata. Other localities are: Lost Lake Camp, Tipler, Florence County, Wisconsin, collected by L. R. Levi, July 1, 1949, and west of Gotham, Richland County, Wisconsin, June 17, 1949.

Tetragnatha harrodi differs from *T. versicolor* Walckenaer, 1841, in the structure of the chelicerae and palps.

***Tetragnatha vermiformis* Emerton**

Tetragnatha vermiformis EMERTON, 1884, Trans. Connecticut Acad. Arts and Sci., vol. 6, p. 333, pl. 39, figs. 12-14.

Eugnatha vermiformis MCCOOK, 1893, American spiders, vol. 3, p. 264, pl. 25, fig. 9.

WISCONSIN RECORDS: "Wisconsin" (McCook).

MIMETIDAE

***Mimetus notius* Chamberlin**

Mimetus notius CHAMBERLIN, 1923, Pomona Coll. Jour. Ent. and Zool., vol. 15, p. 7, figs. 4, 10.

WISCONSIN RECORDS: Juneau County: SW 19 N3E, one female, May 15, 1949, in river bottom land. Marathon County: Wausau, one male, October 6, 1949, inside a house.

Mimetus notius occurs from Florida to New England in the coast states (Kaston, 1948).

***Mimetus puritanus* Chamberlin**

Mimetus puritanus CHAMBERLIN, 1923, Pomona Coll. Jour. Ent. and Zool., vol. 15, p. 5, figs. 1, 6.

WISCONSIN RECORDS: Polk County: St. Croix Falls, one female, July 16, 1949. Sauk County: Prairie du Sac, two females, July 4, 1935 (H. Field).

According to Chamberlin, *M. puritanus* occurs in New England, New York, Virginia, and Georgia.

AGELENIDAE

***Cicurina itasca* Chamberlin and Ivie**

Figure 18

Cicurina itasca CHAMBERLIN AND IVIE, 1940, Bull. Univ. Utah, vol. 30, no. 18 (biol. ser., vol. 5, no. 9), p. 62, pl. 7, fig. 48, ♀.

One female was collected in Fish Creek, Door County, Wisconsin, July 25, 1949. Another female collected on July 22, 1949, in a hemlock forest in Memorial Grove, Chequamegon National Forest, Price County, shows some differences. The size of the latter is over 4 mm. long, and the fourth tibia has the ventral, posterior, proximal spine ("No. 12") which was absent from the specimens examined by Chamberlin and Ivie and from the female from Fish Creek. The ducts, as seen through the chitin of her epigynum, seem more tightly wound.

The male appears like the female collected at Fish Creek except for the usual differences that are found in this genus. Total length, 3.4 mm. Carapace, 1.6 mm. long, 1.0 mm. wide. Tibia-patella I, 1.6 mm. long, tibia-patella IV, 1.6 mm. long. The palp is illustrated in figure 18. The male was found in a hemlock forest west of Neopit, Shawano County, Wisconsin, July 23, 1949.

***Cicurina lowriei*, new species**

Figures 17, 19

MALE: Total length, 3.5 mm. Carapace, 1.6 mm. long, 1.4 mm. wide. Sternum, 1.1 mm. long, 1.0 mm. wide. Abdomen, 1.8 mm. long, 0.9 mm. wide.

The carapace is light yellow, the chelicerae being only slightly darker. The sternum is yellowish white. The legs are yellow; the distal segments are darker. The abdomen is uniformly white, without any markings. The spinnerets are yellowish.

The head is convexly elevated behind the eyes. The median depression is distinct and shows as a dark mark. The chelicerae are only slightly geniculate. The sternum is truncate anteriorly, widest between the second and third pairs of legs, and truncate between the fourth coxae. The labium appears wider than long. The anterior eye row is procurved; the posterior is almost straight if viewed from above. The anterior median eyes are considerably larger than any of the other eyes. They are one-fourth of a diameter apart and separated from the laterals by about one-eighth of their diameter. The diameter of the anterior laterals is about three-quarters of that of the anterior medians. The posterior medians are only slightly larger than the anterior laterals and about one and one-half their own diameter apart. The posterior laterals equal in size the anterior laterals and are separated from the posterior

medians by a little more than two-thirds their diameter and from the anterior laterals by one-fourth their diameter. The clypeus is as high as the diameter of the anterior median eyes.

The legs are strongly spinose as usual in the genus. The first tibia has two pairs of ventral and two prolateral spines. The metatarsus has three pairs of ventral spines and a basal, prolateral spine. The second tibia has two pairs of ventral and two prolateral spines; the metatarsus has three pairs of ventral spines and three prolateral spines.

	I	II	III	IV
Femur	1.4 mm.	1.3 mm.	1.0 mm.	1.4 mm.
Patella	0.4	0.4	0.4	0.4
Tibia	1.1	0.9	0.8	1.3
Metatarsus	1.0	0.9	0.9	1.3
Tarsus	0.7	0.6	0.6	0.7
Total	4.6	4.1	3.7	5.1

The palpus is illustrated in figure 17.

FEMALE: Total length, 4.9 mm. Carapace, 2.3 mm. long, 1.5 mm. wide. Sternum, 1.1 mm. long, 1.0 mm. wide. Abdomen, 2.6 mm. long, 1.3 mm. wide.

The carapace is orange brown in color; the chelicerae are slightly darker. The sternum is orange brown. The legs are orange, the distal segments slightly darker. The abdomen is uniformly light gray, without markings. The spinnerets are yellow.

The structure of the female shows the usual differences from the male in this genus (Chamberlin and Ivie, 1940). The anterior eye row is procurved, the posterior straight. The anterior median eyes are the largest; the other eyes are about equal in size. The anterior median eyes are about one-fifth of their diameter apart and almost touch the laterals. The posterior medians are a diameter and a half from each other and a distance equal to their diameter from the laterals. The anterior and posterior lateral eyes almost touch each other. The clypeus is as wide as the anterior median eyes.

The leg spines are essentially as in the male. The first tibia has two pairs and a single apical spine below. The second tibia has a single basal, a median pair, and a single apical spine below. The second metatarsus has four ventral pairs and a single medial apical below.

	I	II	III	IV
Femur	1.3 mm.	1.3 mm.	1.0 mm.	1.6 mm.
Patella	0.6	0.5	0.5	0.6
Tibia	1.3	1.0	0.9	1.6
Metatarsus	1.0	0.9	0.9	1.6
Tarsus	0.7	0.6	0.6	0.8
Total	4.9	4.3	3.9	6.2

The epigynum is illustrated in figure 19.

TYPE MATERIAL: The male holotype was collected in Hoyt Park, Madison, Wisconsin, on November 5, 1948. The female allotype was collected in Wychwood, Lake Geneva, Walworth County, Wisconsin, June 29, 1938, by D. C. Lowrie.

Cicurina lowriei differs from *C. placida* Banks, 1892, an eastern species (which has been found in New Jersey, New York, and in Randolph, New Hampshire), in the structures of the genitalia and the lack of abdominal markings. Both species are related to *C. brevis* (Emerton), 1889, the most common *Cicurina* in Wisconsin. *C. lowriei* can be distinguished from *C. brevis* and other cicurinas in this region by the large anterior median eyes.

LYCOSIDAE

Lycosa baltimoriana (Keyserling)

Tarentula baltimoriana KEYSERLING, 1876, Verhandl. Zool. Bot. Gesellsch. Wien, vol. 26, p. 632 pl. 7, fig. 16.

WISCONSIN RECORDS: Crawford County: Prairie du Chien, one female, May, 1949 (M. Melanie); one male, one female, September, 1949 (L. Smethurst); one female, October, 1949 (M. Melanie). Waushara County: Wautoma, one immature female, August, 1949 (R. Hunt).

GNAPHOSIDAE

Drassodes auriculoides Barrows

Drassodes auriculoides BARROWS, 1919, Ohio Jour. Sci., vol. 19, p. 355, pl. 15, fig. 4.

WISCONSIN RECORDS: Sauk County: Baraboo, two females, July 6, 1949 (E. L. Schiller).

Drassodes auriculoides is known from Ohio, Michigan, New York, and Connecticut.

Drassyllus fallens Chamberlin

Drassyllus fallens CHAMBERLIN, 1922, Proc. Biol. Soc. Washington, vol. 35, p. 166.

WISCONSIN RECORDS: Grant County: Wyalusing State Park, one male, June 15, 1949, in river bottom.

This species is known from Massachusetts; Long Island, New York; Virginia; and North Carolina.

Drassyllus virginianus Chamberlin

Drassyllus virginianus CHAMBERLIN, 1922, Proc. Biol. Soc. Washington, vol. 35, p. 168.

WISCONSIN RECORDS: Walworth County: College Camp, one female, July 3, 1938 (D. C. Lowrie).

This species is known from Connecticut, Long Island, West Virginia, and Virginia.

Gnaphosa fontinalis Keyserling

Gnaphosa fontinalis KEYSERLING, 1887, Verhandl. Zool. Bot. Gesellsch. Wien, vol. 37, p. 426, pl. 6, fig. 4.

WISCONSIN RECORDS: Grant County: Wyalusing State Park, one female, June 15, 1949, in maple and basswood forest. Walworth County: Wychwood, June 29, 1938 (D. C. Lowrie).

Gnaphosa fontinalis has been collected in Kentucky, Texas, and New York.

Haplodrassus bicornis (Emerton)

Drassus bicornis EMERTON, 1909, Trans. Connecticut Acad. Arts and Sci., vol. 14, p. 218, pl. 9, fig. 2.

WISCONSIN RECORDS: Polk County: St. Croix Falls, one female, July 16, 1949.

Haplodrassus bicornis has been found in New Hampshire, Connecticut, Michigan, and Illinois.

Nodocion melanie, new species

Figures 20-22

MALE: Total length, 4.9 mm. Carapace, 1.9 mm. long, 1.2 mm. wide. Sternum, 1.3 mm. long, 0.9 mm. wide. Labium, 0.4 mm. long, 0.2 mm. wide. Maxillae, 0.7 mm. long, 0.2 mm. wide.

The carapace is orange brown except for black rings around the eyes; the head and chelicerae are somewhat darker. The chelicerae are set with setae in front. The sternum is orange and covered around the edge with black setae. The legs are a little lighter than the carapace, the metatarsus and tarsus of the first and second legs being slightly darker than the rest of the legs, and are covered with black setae. The abdominal scutellum is orange brown, and the rest of the abdomen is gray, covered with gray setae.

The carapace is low. The median groove is a short depression and shows up as a dark mark. The sternum is longer than wide, widest between the second and third coxae; it is evenly rounded anteriorly and comes to a blunt point between the fourth coxae. The abdominal scutellum covers two-fifths of the length of the abdomen. It is widest in front, becoming narrower and evenly rounded behind.

Both eye rows are slightly procurved. The anterior and posterior laterals are oval in shape, their longest diameter being equal to that of the anterior median eyes. The posterior median eyes are one-half the diameter of the anterior medians. The anterior median eyes are one-third their diameter apart and almost touch the laterals. The posterior medians are separated by two-thirds of their diameter and by one-third from the laterals. The anterior and posterior laterals are separated by one-third their largest diameter. The median ocular quadrangle is longer than wide, being slightly wider in front. The width of the clypeus equals the diameter of the anterior median eyes. The lower margin of the chelicerae is unarmed.

The tarsus and metatarsus of the first leg and the tarsus and distal part of the metatarsus of the third are scopulate below. The femur of the first leg has three dorsal and one prolateral distal spine; the tibia has a pair of ventral distal spines; the metatarsus a pair of ventral proximal ones. The femur of the second leg has three dorsal spines and one prolateral distal; the tibia has one ventral median and a pair of ventral distal; the metatarsus has a pair of ventral spines. The third and fourth legs are more strongly spinose on most surfaces. The third and fourth tibiae have a single basal, a median pair, and an apical pair of spines below.

	I	II	III	IV
Femur	1.5 mm.	1.3 mm.	1.2 mm.	1.5 mm.
Patella	0.9	0.6	0.4	0.7
Tibia	1.2	0.9	0.7	1.1
Metatarsus	0.9	0.7	0.9	1.1
Tarsus	0.6	0.5	0.6	0.6
Total	5.1	4.0	3.8	5.0

The palpus is illustrated in figures 20 and 21.

FEMALE: Total length, 4.9 mm. Carapace, 1.8 mm. long, 1.2 mm. wide. Sternum, 1.3 mm. long, 1.0 mm. wide. Labium, 0.4 mm. long, 0.2 mm. wide. Maxillae, 0.7 mm. long, 0.2 mm. wide.

The color and structure of the carapace, sternum, and chelicerae are as in the male. The legs are orange brown, except for the distal segments of the first leg which are darker. The abdomen is gray, covered with gray and black setae.

The anterior and posterior eye rows are slightly procurved. The anterior lateral eyes are oval, the posterior laterals and medians are slightly oval. The longer diameter of all eyes is about equal, the anterior lateral being slightly larger. The anterior median eyes are their radius apart and almost touch the laterals. The posterior median eyes are separated by two-thirds their larger diameter and are separated from the laterals by one-half that diameter. The anterior and posterior lateral eyes are separated by one-half their diameter. The anterior lateral eyes seem to face straight forward. The median ocular quadrangle is longer than broad, the sides being parallel.

The metatarsus and tarsus of the first and second legs are scopulate beneath. The tip of the metatarsus and the tarsus of the third leg and the tarsus of the fourth leg are scopulate below. The first femur has three dorsal spines, the tibia one distal, ventral spine, and the metatarsus has one ventral spine near the base of the segment. The second femur has three weak dorsal and one prolateral spine. The tibia has one ventral distal spine and the metatarsus a pair of ventral proximal spines. The third and fourth legs are strongly spinose on all surfaces as in the male. The fourth tibia has a single basal, a median pair, and an apical pair of spines below.

	I	II	III	IV
Femur	1.2 mm.	1.1 mm.	1.0 mm.	1.3 mm.
Patella	0.8	0.6	0.5	0.7
Tibia	1.0	0.8	0.8	1.0
Metatarsus	0.7	0.7	0.6	1.0
Tarsus	0.5	0.5	0.5	0.7
Total	4.2	3.7	3.4	4.7

The epigynum is illustrated in figure 22.

TYPE MATERIAL: The male holotype was collected near Hill's Lake, Wautoma, Waushara County, Wisconsin, in June, 1949, by R. Hunt. The female allotype was found in Prairie du Chien, Crawford County, Wisconsin, by L. Smethurst in August, 1949. Field reports in his thesis, "*Nodocion* sp. a male taken at Mazomanie by Wm. Elder in April belongs to this genus and may possibly be the male of Worley's species *N. rufithoracica*."

Nodocion melanie differs from *N. rufithoracica* Worley, 1928, and *N. utus* (Chamberlin), 1936, in the structure of the epigynum and from *N. florissantes* (Chamberlin and Gertsch), 1940, in the details of the palp.

Other species belonging to this genus are found in the West.

***Sosticus insularis* (Banks)**

Prothesima insularis BANKS, 1895, Jour. New York Ent. Soc., vol. 3, p. 78.

WISCONSIN RECORDS: Eastman, one male and one female, May, 1949 (L. Fisher); Prairie du Chien, one male, June, 1949 (L. Smethurst). Fond du Lac County: Ripon, one female, found by R. Sleeter, September, 1949.

Sosticus insularis has been collected in Ontario; Long Island, New York; and northern Illinois.

***Sostogeus zygethus* Chamberlin and Gertsch**

Sostogeus zygethus CHAMBERLIN AND GERTSCH, 1940, Amer. Mus. Novitates, no. 1068, p. 1, figs. 1-4.

WISCONSIN RECORDS: Crawford County: Prairie du Chien, one immature male, June, 1949 (M. Melanie). Dane County: Madison, one female, 1946, behind a house. Grant County: Glen Haven, one male, June, 1949 (R. Breuer). Marathon County: Wausau, one immature male, November, 1949.

Chamberlin and Gertsch report *S. zygethus* from Brookings, South Dakota; near Chicago, Illinois; and from Logan, Utah. Recently Kaston found a specimen in his kitchen sink at New Britain, Connecticut (personal communication).

CLUBIONIDAE

Clubiona chippewa Gertsch

Clubiona chippewa GERTSCH, 1941, Amer. Mus. Novitates, no. 1148, p. 16, figs. 50, 51.

WISCONSIN RECORDS: Florence County: Morgan Lake near Tipler, one male, July 8, 1949 (L. R. Levi). Polk County: St. Croix Falls, the male holotype, May, 1931 (W. J. Gertsch).

Micaria longispina Emerton

Micaria longispina EMERTON, 1911, Trans. Connecticut Acad. Arts and Sci., vol. 16, p. 403, pl. 5, fig. 6.

WISCONSIN RECORDS: Douglas County: Pattison State Park, one female, July 18, 1949.

Emerton collected his specimens in Massachusetts. Kaston (1948) reports on a pair from Florida.

SCOTINELLA BANKS

Scotinella BANKS, 1911, Proc. Acad. Nat. Sci. Philadelphia, vol. 63, p. 442.
Phruronellus CHAMBERLIN, 1921, Canadian Ent., vol. 53, p. 69.

Scotinella madisonia, new species

Figures 23, 27

FEMALE: Total length, 2.0 mm. Carapace, 0.9 mm. long, 0.7 mm. wide. Sternum, 0.7 mm. long, 0.6 mm. wide.

The carapace is brown in color, with some indistinct darker mottling; the sides have a submarginal darker line. The sternum is yellowish brown. The legs are yellow brown. The dorsum of the abdomen is mottled black on yellowish background, except for a large, lighter chevron across the center, two lighter spots behind this, and three indistinct, lighter, caudal chevrons. The venter is yellowish brown.

The carapace is moderately convex, constricted in the head portion, the sides are evenly rounded. Towards the posterior part, a suture is weakly indicated. The sternum is slightly longer than broad, convex, and bluntly pointed between the

last coxae. The anterior median eyes are two-thirds of the anterior laterals in size, and the posterior laterals about four-fifths the size of the anterior laterals. The posterior medians are oval and slightly larger than the anterior medians. The anterior eye row is procurved. The anterior medians are their own diameter apart and almost touch the laterals. The posterior medians are one-third of their short diameter apart and two-thirds of this diameter from the laterals. The posterior laterals are two-thirds of their diameter from the anterior laterals. All except the posterior medians seem surrounded by distinct black rings. The clypeus is as high as two and one-half diameters of the anterior median eyes.

The femur of the first leg has two stout distal spines on the prolateral surface, the tibia five pairs of ventral spines, the metatarsus three or four pairs of ventral spines. The second tibia has four pairs of ventral spines, and the metatarsus has three pairs of ventral spines.

The epigynum is shown in figure 23.

TYPE MATERIAL: Female holotype from Madison, Dane County, Wisconsin, collected inside a house, June 3, 1949.

The single female differs from *Scotinella goodnighti* (Muma), 1945, found in Illinois and Maryland in details of the epigynum.

***Scotinella minnetonka* (Chamberlin and Gertsch)**

Phruronellus minnetonka CHAMBERLIN AND GERTSCH, 1930, Proc. Biol. Soc. Washington, vol. 43, p. 139, pl. 3, figs. 13-15.

WISCONSIN RECORDS: Douglas County: Brule, one female, July 19, 1949. Chamberlin and Gertsch record *S. minnetonka* from Minnetonka, Minnesota, and from Starkville, Mississippi.

***Scotinella manitou*, new species**

Figures 24-26, 28

MALE: Total length, 2.1 mm. Carapace, 0.9 mm. long, 0.7 mm. wide. Sternum, 0.5 mm. long, 0.5 mm. wide. Abdomen, 1.0 mm. long, 0.7 mm. wide.

Carapace light olive brown in color, covered with indistinct darker mottling. There is a marginal black line. The sternum is somewhat lighter. The legs are greenish white, the proximal end of the first and second femora having some darker olive

pigment which extends on the dorsal side. The dorsum of the abdomen is covered by a shiny scutum. The color of the abdomen is a mottled black, lighter on the venter. In the middle of the dorsum is a large white chevron; at the anterior are two light spots. Both the chevron and light spots continue laterally (but less distinctly) and fuse ventrally on each side to run as two lighter bands towards the spinnerets.

The carapace is convex, constricted near the eye region; the back and the sides are evenly rounded. A suture is weakly indicated near the posterior part. The sternum is about as wide as long, slightly convex and bluntly pointed between the posterior coxae. The anterior median eyes are smallest, their diameter being half that of the anterior laterals. The posterior eyes are slightly smaller than the anterior laterals. The anterior eye row is procurved, the posterior straight. The anterior median eyes are about two and one-quarter diameters apart, and one diameter distant from the laterals. The posterior median eyes are their radius apart and about the same distance from the laterals. The anterior and posterior laterals are separated by a distance of approximately the diameter of the posterior lateral eyes. The clypeus is as high as three diameters of the anterior lateral eyes.

The femur of the first leg has two stout spines on its prolateral surface, the tibia has five ventral pairs of spines, and the metatarsus has four ventral pairs. The tibia of the second leg has four pairs, the metatarsus three; the other legs seem devoid of stout spines.

The palpus is illustrated in figures 24 and 25.

FEMALE: Total length, 2.4 mm. Carapace, 0.9 mm. long, 0.7 mm. wide. Sternum, 0.5 mm. long, 0.5 mm. wide. Abdomen, 1.4 mm. long, 0.9 mm. wide.

The carapace is dark reddish brown, covered with indistinct darker mottling. There is a marginal dark line. The sternum is yellowish brown, and the legs are dark yellowish brown in color. The femora and some other segments of the legs have dark prolateral and retrolateral stripes. The abdomen is colored as in the male except that the venter is lighter, lacking most of the dark mottling except for an indistinct ring anterior to the spinnerets.

The structure of the female is for the most part like that of the male. The anterior median eyes are of the same size as

the posterior medians, a third of their diameter apart and almost touching the laterals. The posterior medians are one-third their diameter from each other and two-thirds their diameter from the laterals. The anterior and posterior laterals are separated by a little less than the diameter of the posterior eyes.

The leg spination is like that of the male. The epigynum is shown in figure 26.

TYPE MATERIAL: The male holotype and female allotype were collected on July 18, 1949, in Pattison State Park, Douglas County, Wisconsin, in moist woods. The male seems just to have molted.

This species differs from *Scotinella formidabilis* (Chamberlin and Gertsch), 1930, in the length of the lateral apophysis of the tibia and other details of the palpus, and from *Scotinella madisonia*, new species, in the distance that separates the openings from the receptacles in the female.

THOMISIDAE

Philodromus michiganense, new species

Figures 38, 39

MALE: Total length, 3.0 mm. Carapace, 1.5 mm. long, 1.4 mm. wide. Sternum, 0.9 mm. long, 0.7 mm. wide. Abdomen, 1.6 mm. long, 1.2 mm. wide.

The carapace is orange in color. There are no marks except for a white marginal line. The sternum, maxillae, and labium are yellowish white, the chelicerae slightly darker. The legs are orange in color, the tibia and metatarsus being the darkest segments. The abdomen is whitish. The dorsum has a basal brown lanceolate mark; there are brown spots above the muscle impressions, and at the posterior end there are several indistinct brown chevrons or bands. The sides of the abdomen are brown; the venter is white, with darker areas.

The structure is typical. Both eye rows are recurved. The ratio of the anterior to the posterior row is 10:17. The posterior laterals are slightly larger in size than the other eyes which are subequal. The anterior median eyes are three diameters apart and one and one-third of a diameter from the laterals. The posterior medians are more than five diameters apart, two and one-half to three diameters from the anterior laterals and almost four diameters from the posterior laterals.

The anterior and posterior laterals are about two and one-half the latter's diameter apart. The height of the clypeus is a little less than the distance between the posterior median eyes.

	I	II	III	IV
Femur	(missing)	1.9 mm.	1.5 mm.	1.5 mm.
Patella		0.7	0.5	0.5
Tibia		1.7	1.1	1.2
Metatarsus		1.5	1.0	1.0
Tarsus		0.9	0.7	0.7
Total		6.7	4.8	4.9

The palp is shown in figures 38 and 39.

TYPE MATERIAL: The male holotype was collected at East Lansing, Ingham County, Michigan, June 21, 1921.

Philodromus michiganense can be differentiated from *P. abboti* Walckenaer, 1837, by the shape of the dorsal tibial apophysis of the palp.

***Philodromus oneida*, new species**

Figures 40-42

MALE: Total length, 3.6 mm. Carapace, 1.9 mm. long, 1.9 mm. wide. Sternum, 1.0 mm. long, 0.7 mm. wide. Abdomen, 1.9 mm. long, 1.3 mm. wide.

The carapace is dark brown except for a median whitish band, which is as wide as the posterior eye row in front and slightly narrower at the caudal margin where it ends. The clypeus is dark brown except for a marginal white band. The sternum is creamy white; the chelicerae and labium are brown. The maxillae and coxae are yellowish white. Except for a distal brown band, the under side of the femur is yellowish. Dorsally the femora have brown maculations. The other leg segments are yellowish except for proximal and distal brown bands on each segment and some dorsal maculations. The abdomen has a basal lanceolate dark mark; posteriorly on each side of this mark are two darker spots. Towards the posterior end are several indistinct dark chevrons, which are broken in the middle by some white pigment. The sides of the abdomen are dark brown; the venter is white.

Both eye rows are recurved. The ratio of the anterior to the posterior row is 12:17. The posterior lateral eyes are slightly larger than any of the others which are equal in size.

The anterior median eyes are a diameter and one-half apart and two-thirds of a diameter from the anterior laterals. The posterior median eyes are about four diameters apart and a little more than two diameters from the anterior laterals and three diameters from the posterior laterals. The posterior lateral eyes are a little more than two diameters from the anterior laterals. The clypeus is about as high as three diameters of the anterior median eyes. The sternum is truncated anteriorly, widest between the first and second coxae, and truncated between the fourth coxae which are a little less than their diameter apart.

	I	II	III	IV
Femur	2.6 mm.	3.0 mm.	2.2 mm.	2.2 mm.
Patella	0.8	0.9	0.7	0.6
Tibia	2.3	3.0	1.9	1.9
Metatarsus	2.2	2.6	1.6	1.6
Tarsus	1.0	1.6	0.9	0.9
Total	8.9	11.1	7.3	7.2

The palp is illustrated in figure 40. The dorsal and smaller of the tibial projections seems to have one point on the left palp, as shown in figure 41, but seems to have two points on the right palp.

FEMALE: Total length, 3.9 mm. Carapace, 1.6 mm. long, 1.7 mm. wide. Sternum, 0.9 mm. long, 0.8 mm. wide. Abdomen, 2.2 mm. long, 1.5 mm. wide.

Except for a marginal white band around the carapace, the color of the female resembles that of the male. The structure likewise resembles that of the male with the exception of the sternum which is widest between the second and third coxae. The leg proportions are as follows:

	I	II	III	IV
Femur	2.2 mm.	2.4 mm.	1.9 mm.	1.9 mm.
Patella	0.8	0.9	0.6	0.6
Tibia	1.9	2.1	1.6	1.4
Metatarsus	1.5	1.6	1.2	1.3
Tarus	1.0	1.2	0.7	0.7
Total	7.4	8.2	6.0	5.9

The epigynum is illustrated in figure 42.

TYPE MATERIAL: The male holotype was collected at Marquette, Michigan, on June 28, 1940, by W. J. Gertsch. The

female allotype was collected in July, 1930, at Rhinelander, Oneida County, Wisconsin, and was given to the author by D. C. Lowrie.

This species is close to *Philodromus speciosus* Gertsch, 1934, found in the Rocky Mountain region, but differs from it in the structure of the palp and epigynum.

SALTICIDAE

Admestina tibialis (C. L. Koch)

Maevia tibialis C. L. KOCH, 1848, Die Arachniden, vol. 14, p. 78, pl. 479, fig. 1333.

Admestina tibialis PECKHAM, 1909, Trans. Wisconsin Acad. Sci., vol. 16, p. 510, pl. 42, fig. 3.

WISCONSIN RECORDS: Dane County: Madison, one male, August 22, 1947, Picnic Point, in elm and cottonwood litter. Marathon County: Wausau, one male, August 1, 1933 (H. Field).

Peckham reports *A. tibialis* from Massachusetts, New York, Pennsylvania, District of Columbia, Louisiana, Texas, and Wisconsin. Lowrie (1948) has collected it in Illinois.

Ballus youngi Peckham

Ballus youngi PECKHAM, 1888, Trans. Wisconsin Acad. Sci., vol. 8, p. 87, pl. 1, fig. 66, pl. 6, figs. 66, 66a, 66b; 1909, *ibid.*, vol. 16, p. 586, pl. 49, fig. 9, pl. 51, fig. 13.

WISCONSIN RECORDS: "Pine Lake, Wisconsin" (Peckham). Kenosha County: north of Salem, one female, August 17, 1949.

Hasarius adansonii (Audouin)

Attus adansonii AUDOUIN, 1827, in Savigny, Description de l'Egypte, ed. 2, vol. 22, p. 404, pl. 7, figs. 8, 13.

WISCONSIN RECORDS: Dane County: Madison, males and females, 1931, 1932, 1933, and 1934 (H. Field). Sauk County: Prairie du Sac, one female, July 4, 1935 (H. Field).

Though common in the tropics, *H. adansonii* has also been collected in the northern latitudes of North America.

Icius fontanus, new species

Figures 43-45

MALE: Total length, 3.0 mm. Carapace, 1.5 mm. long,

1.0 mm. wide. Sternum, 0.6 mm. long, 0.2 mm. wide. Abdomen, 1.5 mm. long, 1.0 mm. wide.

The carapace is dark brown, with some setae and some iridescent scales in the eye region. There is a marginal stripe on the carapace consisting of white scales, which is more distinct towards the posterior. The chelicerae, sternum, maxillae, labium, and coxae are brown. The last coxae are somewhat lighter than the first ones. The legs are brown and have a darker dorsal stripe on the patella and tibia which is more distinct on the first two pairs of legs than on the last two. The abdomen is brown, clothed with darker setae and iridescent scales.

The carapace is fairly robust and is very slightly convex above and rounded at the sides. The posterior eye row is slightly wider than the anterior in a ratio of 9:8. The small eyes are slightly closer to the anterior laterals than to the posterior eyes. The ocular quadrangle occupies three-sevenths of the length of the carapace. The clypeus is very narrow, the anterior median eyes almost touching the chelicerae. The chelicerae are large and are directed forward. There are two small teeth on the promargin and a large tooth on the retromargin (fig. 45). The first pair of legs is stout, but there are no conspicuous tufts of setae. The first tibia has three pairs of ventral spines, the first metatarsus two pairs. The other legs appear devoid of spines. The abdomen is slightly constricted in the region of the second pair of muscle impressions.

	I	II	III	IV
Femur	0.8 mm.	0.5 mm.	0.6 mm.	0.8 mm.
Patella	0.4	0.3	0.2	0.3
Tibia	0.6	0.4	0.3	0.5
Metatarsus	0.4	0.3	0.3	0.5
Tarsus	0.4	0.3	0.3	0.4
Total	2.6	1.8	1.7	2.5

The palp is shown in figures 43 and 44.

TYPE MATERIAL: Bog, Lake Geneva outlet at Fontana, Walworth County, Wisconsin, collected by D. C. Lowrie July 3, 1938.

Icius fontanus differs from *I. formicarius* Emerton, 1891, in its smaller size, the shape of the tibial apophysis, which lies against

a depression in the cymbium, and in the shape of the spur of the embolus.

***Hycitia pikei* Peckham**

Hycitia pikei PECKHAM, 1888, Trans. Wisconsin Acad. Sci., vol. 7, p. 79, pl. 1, fig. 59, pl. 5, fig. 59, pl. 6, fig. 59.

WISCONSIN RECORDS: Walworth County: Fontana, one female, July 3, 1938 (D. C. Lowrie), in a bog at outlet of Lake Geneva.

***Metaphidippus canadensis* (Banks)**

Icius canadensis BANKS, 1897, Canadian Ent., vol. 29, p. 196.

WISCONSIN RECORDS: Sauk County: Prairie du Sac, four males, immature males, and females, July 4, 1935 (H. Field).

***Phlegra fasciata* (Hahn)**

Salpicus fasciatus HAHN, 1831, Die Arachniden, vol. 1, p. 54, pl. 14, fig. 41.

Phlegra leopardus PECKHAM, 1909, Trans. Wisconsin Acad. Sci., vol. 16, p. 572, pl. 42, fig. 6.

WISCONSIN RECORDS: "Wisconsin" (Peckham, 1909). Polk County: St. Croix Falls, one female, July 16, 1949.

This spider is common in Europe and has been found in the New England states, Michigan, Kansas, and Texas.

***Sassacus aemulus* Gertsch**

Sassacus aemulus GERTSCH, 1934, Amer. Mus. Novitates, no. 726, p. 22, fig. 20.

WISCONSIN RECORDS: Douglas County: Cedar Island, Brule, one male, July 19, 1949.

The holotype of this species came from Itasca Park, Minnesota.

***Sassacus papenhoei* Peckham**

Sassacus papenhoei PECKHAM, 1895, Occas. Papers Nat. Hist. Soc. Wisconsin, vol. 2, p. 177.

WISCONSIN RECORDS: Walworth County: Delavan, one female, August 22, 1940 (D. C. Lowrie).

Peckham (1909) had specimens of this species from Kansas, Arizona, New Mexico, Texas, and California.

Sitticus cursor Barrows

Sittacus cursor BARROWS, 1919, Ohio Jour. Sci., vol. 9, no. 6, p. 359, pl. 15, fig. 8.

WISCONSIN RECORDS: Iowa County: Barneveld, one female, June 13, 1949, at road side.

Barrows described *S. cursor* from Ohio.

Sitticus striatus Emerton

Sittacus striatus EMERTON, 1911, Trans. Connecticut Acad. Arts and Sci., vol. 16, p. 407, pl. 6, fig. 6.

WISCONSIN RECORDS: Vilas County: Trout Lake, one male, August 13, 1932 (H. Field).

Emerton collected this species in Massachusetts and Maine.

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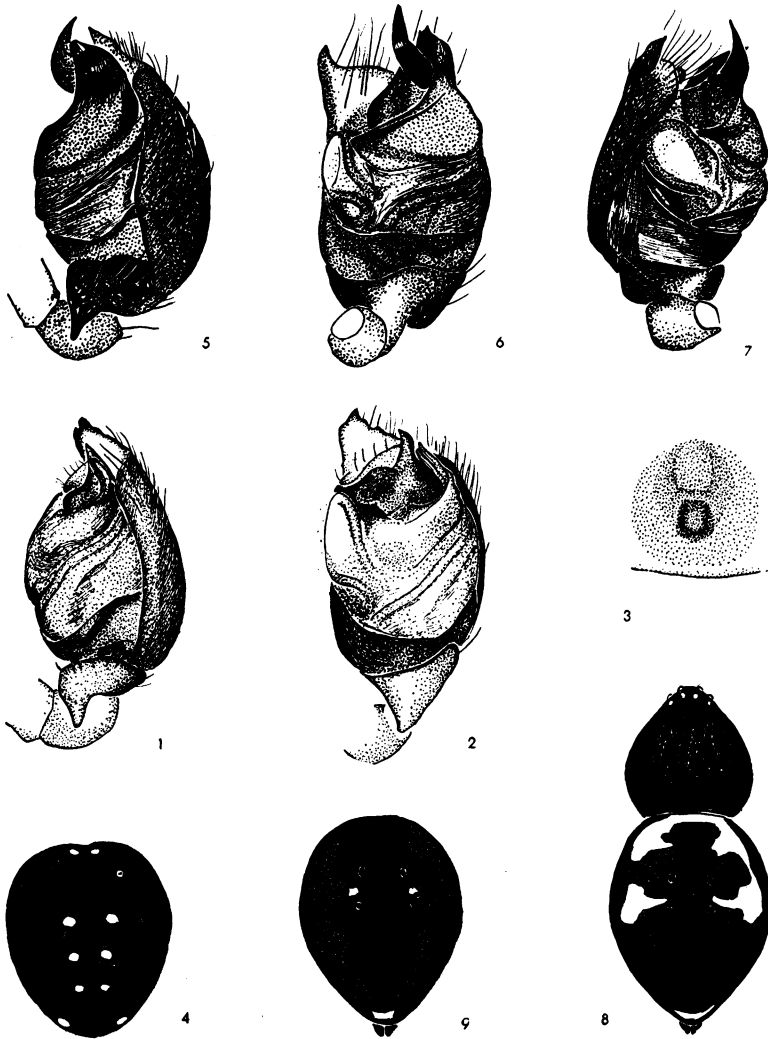
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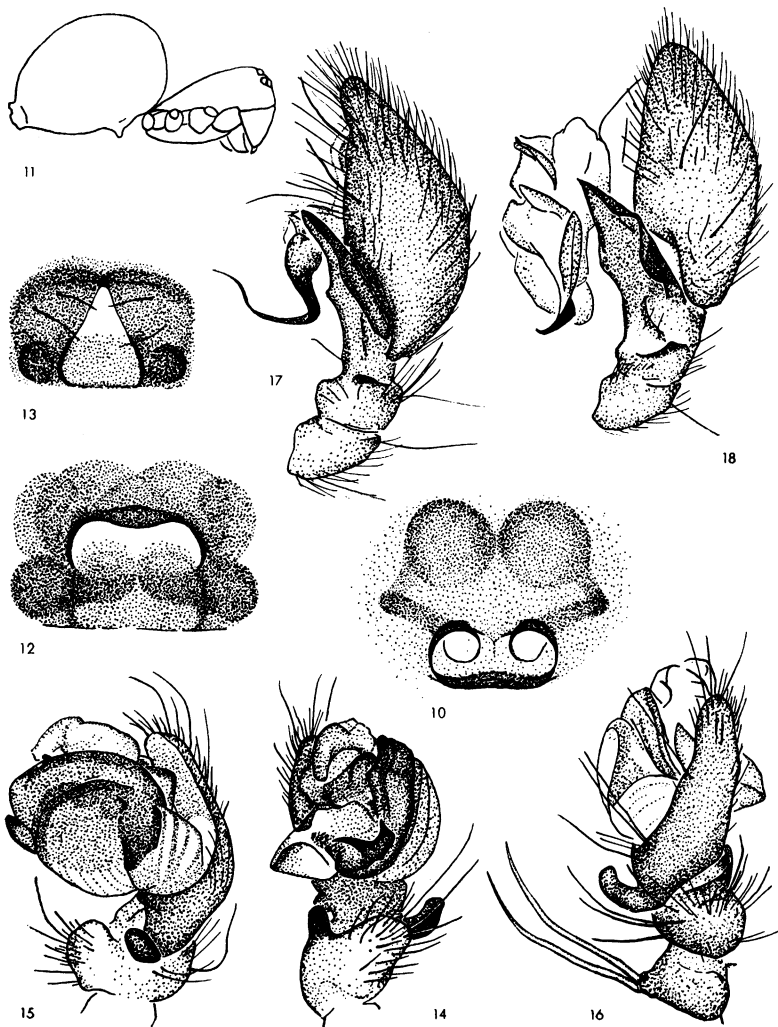
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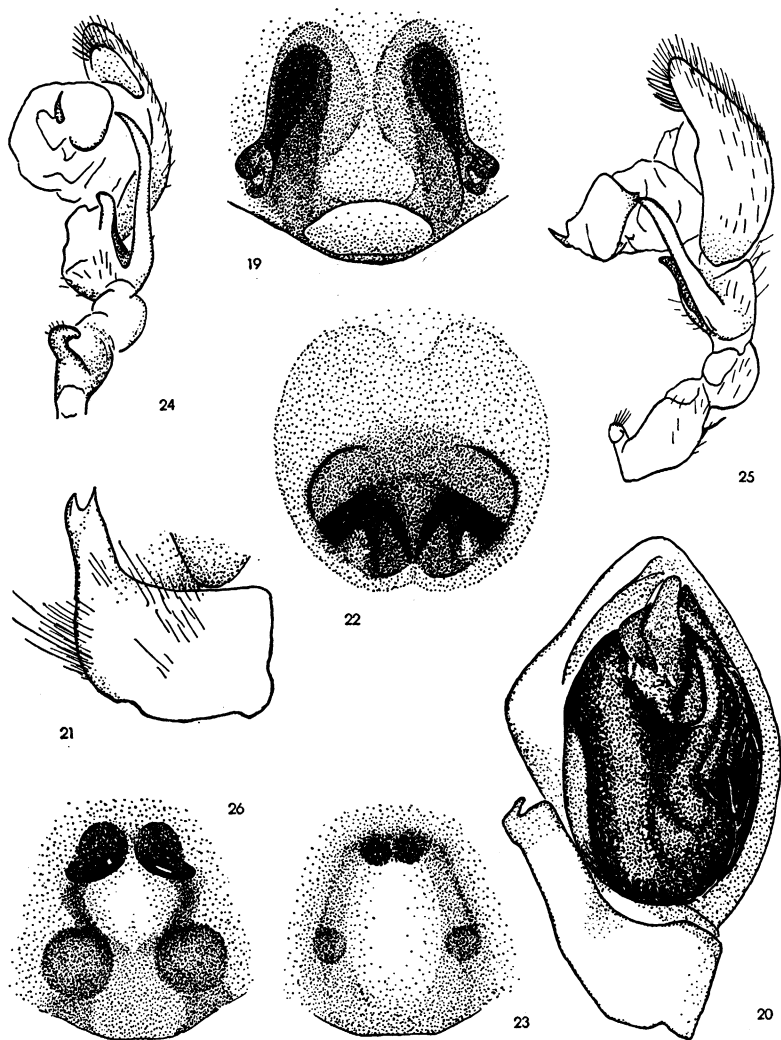
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- FIG. 1. *Euryopis gertschi*, new species, palp, lateral aspect.
 FIG. 2. Idem, palp, ventral aspect.
 FIG. 3. Idem, epigynum.
 FIG. 4. Idem, dorsal aspect of abdomen of female.
 FIG. 5. *Euryopis saukea*, new species, palp, lateral aspect.
 FIG. 6. Idem, palp, ventral aspect.
 FIG. 7. Idem, palp, mesal aspect.
 FIG. 8. Idem, dorsal aspect of male holotype.
 FIG. 9. Idem, dorsal aspect of abdomen of male paratype.



- FIG. 10. *Theridion aurantium* Emerton, epigynum.
 FIG. 11. *Baryphyma longitarsum* (Emerton), female, lateral aspect.
 FIG. 12. Idem, epigynum.
 FIG. 13. *Eridantes utilis* Crosby and Bishop, epigynum.
 FIG. 14. *Aranea gemmoides* Chamberlin and Ivie, palp, ventral aspect.
 FIG. 15. Idem, palp, lateral aspect.
 FIG. 16. Idem, palp, dorsal aspect.
 FIG. 17. *Cicurina lowriei*, new species, palp, lateral aspect.
 FIG. 18. *Cicurina itasca* Chamberlin and Ivie, palp, lateral aspect.



- FIG. 19. *Cicurina lowriei*, new species, epigynum.
 FIG. 20. *Nodocion melanie*, new species, palp, ventral aspect.
 FIG. 21. *Idem*, tibia of palp, mesal aspect.
 FIG. 22. *Idem*, epigynum.
 FIG. 23. *Scotinella madisonia*, new species, epigynum.
 FIG. 24. *Scotinella manitou*, new species, palp, ventral aspect.
 FIG. 25. *Idem*, palp, lateral aspect.
 FIG. 26. *Idem*, epigynum.

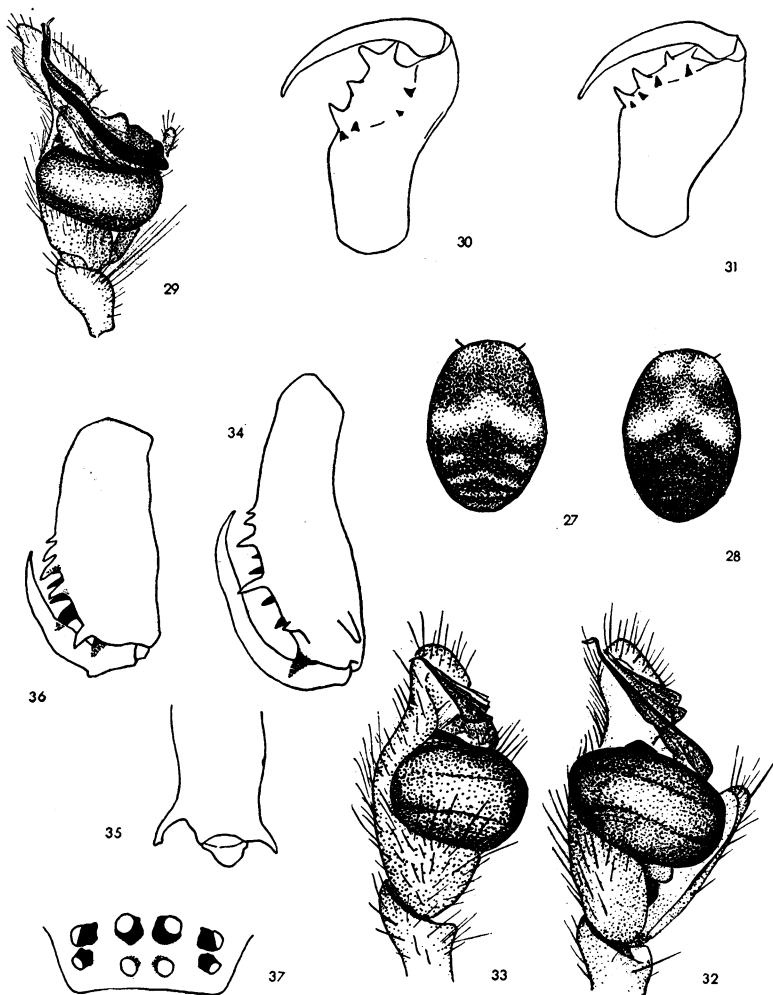


FIG. 27. *Scotinella madisonia*, new species, dorsal aspect of abdomen of female.

FIG. 28. *Scotinella manitou*, new species, dorsal aspect of abdomen of female.

FIG. 29. *Pachygnatha kuratai*, new species, palp, lateral aspect.

FIG. 30. Idem, chelicera of male, posterior aspect.

FIG. 31. Idem, chelicera of female, posterior aspect.

FIG. 32. *Tetragnatha harrodi*, new species, palp, lateral aspect.

FIG. 33. Idem, palp, ventral aspect.

FIG. 34. Idem, chelicera of male, anterior aspect.

FIG. 35. Idem, chelicera of male, lateral aspect.

FIG. 36. Idem, chelicera of female, anterior aspect.

FIG. 37. Idem, anterior aspect of eyes of female.

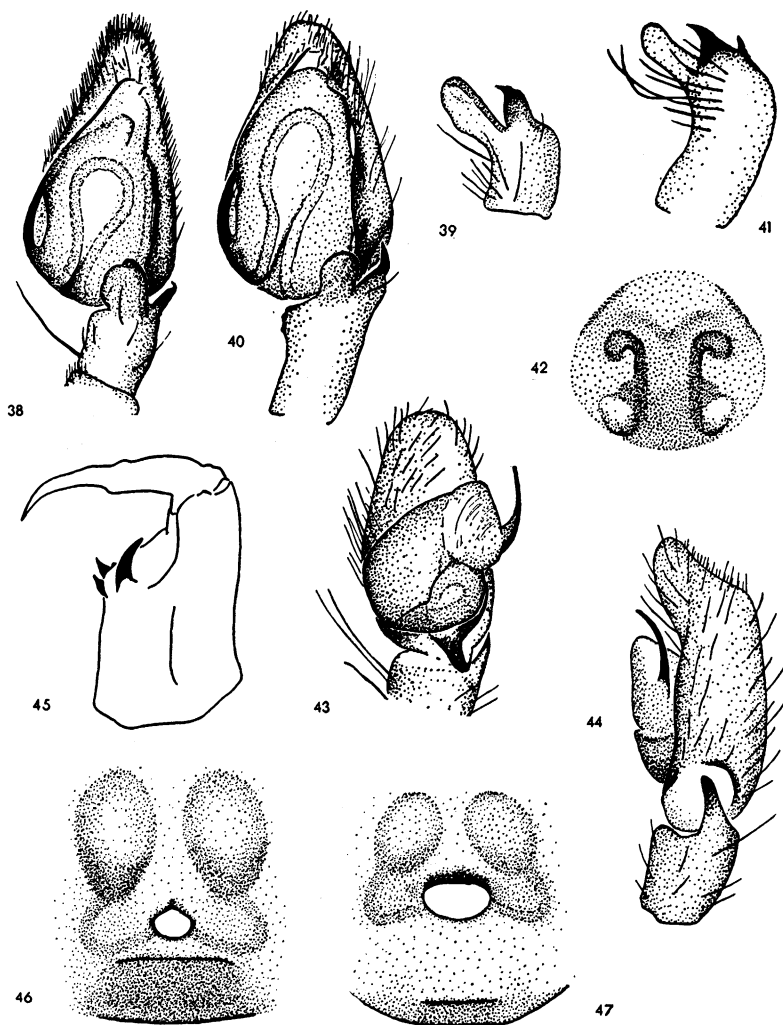


FIG. 38. *Philodromus michiganense*, new species, palp, ventral aspect.

FIG. 39. Idem, tibia of palp, lateral aspect.

FIG. 40. *Philodromus oneida*, new species, palp, ventral aspect.

FIG. 41. Idem, tibia of palp, lateral aspect.

FIG. 42. Idem, epigynum.

FIG. 43. *Icius fontanus*, new species, palp, ventral aspect.

FIG. 44. Idem, palp, lateral aspect.

FIG. 45. Idem, chelicera of male, posterior aspect.

FIG. 46. *Theridion fieldi*, new species, epigynum.

FIG. 47. *Theridion zelotypum* Emerton, epigynum.

