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AND *PAIDISCA* IN AMERICA
NORTH OF MEXICO
(ARANEAE, THERIDIIDAE)

HERBERT W. LEVI

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INTRODUCTION

THE VARIOUS RELATED GENERA revised in the present paper contain some of the most familiar and common theridiid spiders. Many of the species, even including some of the most abundant, have never been adequately illustrated before, whereas others have remained undescribed.

Some uncertainty and confusion exist in the use of the various generic names; however, it seems best to continue the established practices of the last 70 years. Thorell (1869, *Nova Acta Soc. Uppsala*, ser. 3, vol. 7, p. 90) noticed that *Theridion ovatum* did not belong to the genus *Theridion*, and made *T. ovatum* the type species of his new genus *Phyllonethis*. However, Thorell overlooked the fact that Latreille (1810, *Considérations générales sur l'ordre naturel des animaux*, p. 424) had much earlier made *T. ovatum* the type of *Theridion*. Archer (1950, *Paper Alabama Mus. Nat. Hist.*, no. 30, p. 23) pointed out further, after a study of the male genitalia, that *Theridion ovatum* belonged to the genus *Enoplognatha*. The presence in *T. ovatum*, as in other species of *Enoplognatha*, of a colulus, of large male chelicerae, and of a tooth on the posterior margin of each chelicera in the female further substantiates the opinions of Thorell and Archer. If we follow Archer, we must synonymize *Enoplognatha Pavesi*, 1880, with *Theridion Walckenaer*, 1805 (subjective synonymy), and find another generic name for the species previously included in *Theridion*. Archer proposed the name *Allotheridion* for this group. However, several older generic names are available, of which unfortunately the genotypes are based on rare species. It seems best, for this reason, to continue current usage and apply to the International Commission on Zoological Nomenclature for the assignment of a substitute type species for *Theridion* and the suppression of *Phyllonethis*.

The present revision is based principally on the large collection of the American Museum of Natural History, which was made available to me through the generosity of Dr. W. J. Gertsch. All the research was done while the author was a member of the staff of the Department of Zoology of the University of Wisconsin at Madison. Dr. P. J. Darlington, Jr., made it possible for me to examine the types and other specimens in the Museum of Comparative Zoölogy at Harvard College and to

make use of the library during a visit to the Museum in the summer of 1955. Dr. R. V. Chamberlin lent a large collection from the University of Utah and permitted examination of the types in his collection. Additional specimens were made available by the following colleagues and institutions: Cornell University by Dr. H. Dietrich; the United States National Museum by Dr. J. F. Gates Clarke; by Mrs. D. Frizzell (Dr. Harriet Exline) of Rolla, Missouri; Dr. R. Gering of Wells College, New York; Mr. Wilton Ivie of Furlong, Pennsylvania; Dr. B. J. Kaston of the Teachers College of Connecticut; Dr. L. W. Quate of the University of Nebraska; Mr. Vincent R. Roth of Salem, Oregon; and Mr. R. X. Schick of the University of California at Los Angeles. I am also indebted to Dr. J. Braendegaard, who sent drawings and compared specimens with Sørensen's types at the Copenhagen Museum; to Mr. H. B. Leech, who sent paratypes from the collection of the California Academy of Sciences; and to Dr. E. Leloup who sent cotypes of *Theridion glaucescens* from the Institut Royal des Sciences Naturelles de Belgique. Mr. H. Locket of Harrow, England, Dr. M. Vachon of the Museum d'Histoire Naturelle, Paris, and Dr. H. Wiehle of Dessau, Germany, supplied me with some European specimens. Mr. H. Locket and Dr. G. Owen Evans examined some types in the British Museum (Natural History), and Dr. Owen Evans consulted Hahn's "Monographie der Spinnen" in the library of the British Museum for me. Dr. C. C. Hoff of the University of New Mexico supplied ecological data for southwestern species. My wife helped in organizing the material for publication; Mr. Ross Norris prepared the maps. To all these, I express sincere gratitude.

The present study was supported in part by a grant from the Sigma Xi-RESA Research Fund.

Holotypes of all new species are deposited in the American Museum of Natural History.

The female genitalia were mounted in Hoyer's fluid (Baker and Wharton, 1952, *An introduction to acarology*, Macmillan), or those of rare species were examined by my submerging the abdomen in clove oil and cutting around three sides of the genital area so that the epigynum could be turned back without being removed.

SYSTEMATIC DESCRIPTIONS

ENOPOLOGNATHA PAVESI

Drepanodus MENGE, 1868, Schr. Naturf. Gesell. Danzig, new ser., vol. 2, no. 2, p. 241. Type species: *Drepanodus obscurus* Menge (= *Enoplognatha thoracica* Hahn). This name had previously been used by Pander, 1856, for an annelid worm.

Phylloneithis THORELL, 1869, Nova Acta Soc. Uppsala, ser. 3, vol. 7, p. 90. Type species: *Theridion lineatum* (Clerck) (= *Enoplognatha ovata* Clerck).

Enoplognatha PAVESI, 1880, Ann. Mus. Civ. Stor. Nat. Genova, vol. 15, p. 325.¹ Type species: *Theridion mandibulare* Lucas.

Marmatha CHAMBERLIN AND IVIE, 1942, Bull. Univ. Utah, biol. ser., vol. 7, no. 1, p. 40. Type species: *Theridion marmoratum* Hentz.

Rugatha CHAMBERLIN AND IVIE, 1942, *ibid.*, biol. ser., vol. 7, no. 1, p. 42. Type species: *Enoplognatha (Rugatha) pikes* Chamberlin and Ivie (= *Enoplognatha intrepida* Sørensen).

Medium-sized theridiid spiders (2–9 mm. total length). Carapace slightly longer than wide. Carapace of male with a stridulating area on each side of pedicel. Anterior eye row straight when viewed from front, posterior row straight when viewed from above. Eyes subequal in size or anterior medians slightly smaller. Fourth coxae separated by about one-half of their diameter, sternum pointed between them. Male chelicerae much enlarged; female chelicerae each with teeth on anterior margin, one tooth on posterior margin. First and fourth legs subequal in length and longest, third shortest. Abdomen spherical to slightly dorsoventrally flattened. Abdomen of male above pedicel with a rasp of setae on a more or less sclerotized carina. Abdomen of *Enoplognatha thoracica* male with a lightly sclerotized scutum. A colulus between anterior spinnerets; two setae at base (fig. 10) or sides of colulus, and in most species (except *E. marmorata*), a median seta, or sometimes two median setae with one near the base and one close to the tip.

Epigynum heavily sclerotized. One pair of seminal receptacles. Palpus with prominent ventral radix (R in figs. 8, 9, 11) supporting

¹ This reference gives *Theridion mandibulare* as the type species. Pavesi described *Enoplognatha* twice during 1880; the other description (Rend. R. Ist. Lombardo Sci. Lett., ser. 2, vol. 13, p. 192) does not give a type species.

embolus. Conductor (C in figs. 8, 9, 11) projecting above radix, apparently without function.

The large chelicerae and the characteristic palpus distinguish the males from those of other genera. The single large tooth on the posterior margin of each chelicera of the females distinguishes them from those of other theridiid genera (most lack teeth on the posterior margin; *Ctenium* has two denticles). The presence of a colulus in *Enoplognatha* distinguishes it from *Theridion*.

Most species of *Enoplognatha* have been described from Eurasia and North America, some from Africa and South America. Different species occur in Europe and North America, except for two European species (*E. ovata*, *E. thoracica*) which are found in North America. Presumably they have been introduced in recent times.

Most members of the genus are dark colored and found on the ground in litter or under logs and stones. *Enoplognatha ovata*, white in color, is found on shrubs.

Many of the North American species of this genus are closely related and sometimes difficult to separate. Several are quite variable. The shapes of the palpal parts in the male of *Enoplognatha joshua* differ in different parts of the range. There is a great deal of individual variation in the palpus, epigynum, and coloration of *Enoplognatha ovata*, even in specimens collected together.

The following species, described in *Enoplognatha*, does not belong in the genus: *Enoplognatha pallida* Emerton (1914, Jour. New York Ent. Soc., vol. 22, p. 262, fig. 1, female); it is *Nesticus pallidus* Emerton (new synonymy).

Enoplognatha mandibularis (Lucas)

Theridion mandibularis LUCAS, "1846" (1849), Exploration scientifique de l'Algérie, Zoologie, vol. 2, pt. 1, p. 260, pl. 17, fig. 1.

Pachygnatha mandibularis, O. P.-CAMBRIDGE, 1872, Proc. Zool. Soc. London, p. 299.

Enoplognatha mandibularis, PAVESI, 1880, Ann. Mus. Civ. Stor. Nat. Genova, vol. 15, p. 327. WIEHLE, 1937, in Dahl, Die Tierwelt Deutschlands, pt. 33, p. 210, figs. 254–258 (male, female). LOCKET AND MILLIDGE, 1953, British spiders, vol. 2, p. 85, figs. 54c, 55c, 55d, 56b, 56d (male, female).

Drepanodus mandibularis, SIMON, 1880, Ann. Soc. Ent. France, ser. 5, vol. 10, p. 113.

DISTRIBUTION: Southern England, Mediterranean, Azores, and France (Wiehle, 1937).

***Enoplognatha ovata* (Clerck)**

Figures 1-10; map 1

Araneus ovatus CLERCK, 1757, Svenska Spindlar, p. 58, pl. 3, fig. 8 (female).

Araneus redimitus CLERCK, 1757, *op. cit.*, p. 59, pl. 3, fig. 9 (female).

Araneus lineatus CLERCK, 1757, *op. cit.*, p. 60, pl. 3, fig. 10 (female).

Aranea redimita LINNÉ, 1758, Systema naturae, ed. 10, p. 621.

Aranea coronata DE GEER, 1778, Mémoires pour

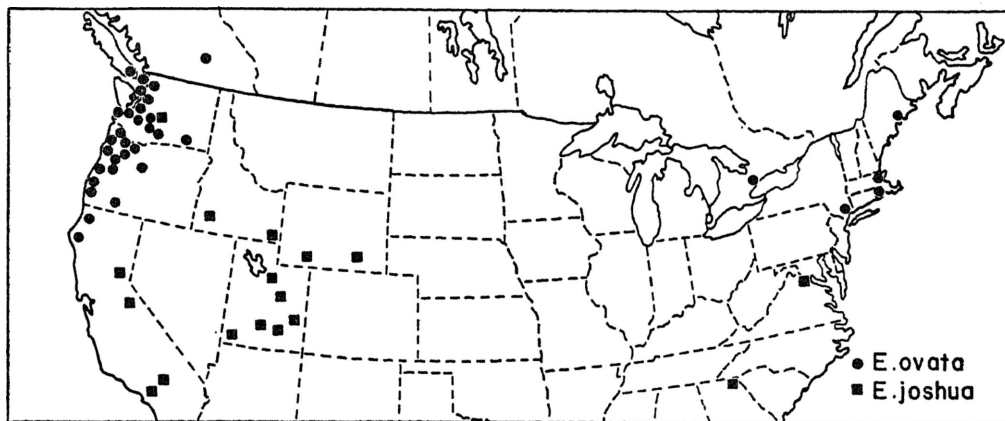
Canadian Inst., vol. 12, p. 311. KURATA, 1939, Canadian Field Nat., vol. 53, p. 81.

Theridion ovatum, WALCKENAER, 1805, Tableau des aranéides, p. 73. KASTON, 1938, Bull. Connecticut Nat. Hist. Surv., no. 60, p. 186.

Steatoda redimita, C. L. KOCH, 1837, Uebersicht des Arachnidensystems, pt. 1, p. 9, pl. 2, fig. 17.

Phyllonethis lineata, THORELL, 1870, Remarks on synonyms of European spiders, p. 78.

Theridion redimitum, ROEWER, 1942, Katalog der Araneae, vol. 1, p. 474. GERTSCH, 1946, in Procter, Biological survey of the Mount Desert region, pt. 7, p. 519. KASTON, 1948, Bull. Connecticut Nat. Hist. Surv., no. 70, p. 111, figs. 141-142, 172-173 (male, female). ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 23, pl. 3, fig. 7 (male).



MAP 1. North American distribution of *Enoplognatha ovata* and *E. joshua*.

servir à l'histoire des insectes, vol. 7, p. 242, pl. 14, figs. 4-12. (Reference not seen.)

Aranea myopa FABRICIUS, 1781, Species insectorum, vol. 1, p. 545.

Aranea vittata FOURCROY, 1785, Entomologia Parisiensis, pt. 2, p. 534.

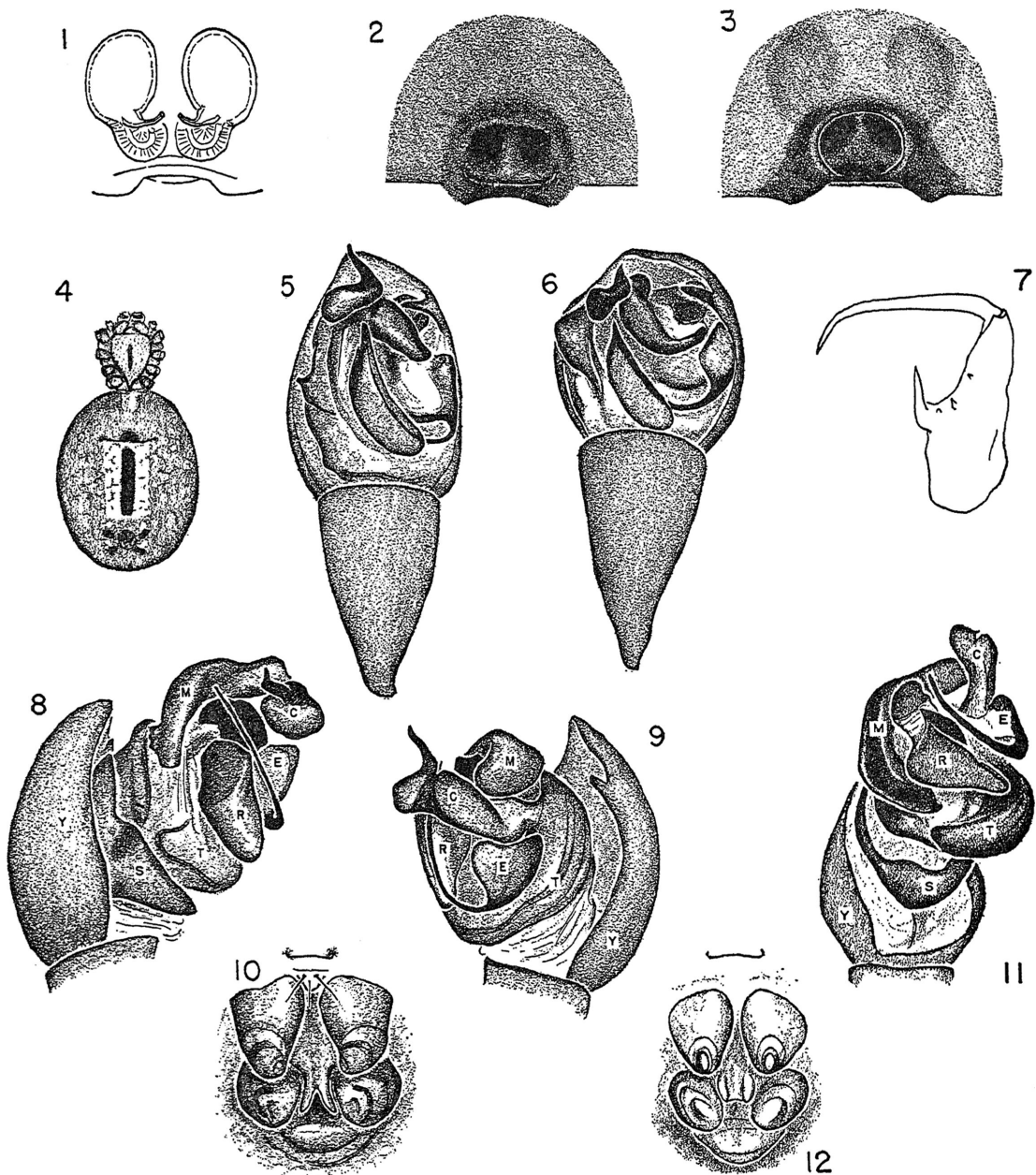
Aranea venusta WALCKENAER, 1802, Fauna Parisienne, vol. 2, p. 209.

Aranea rubricata SCHRANK, 1803, Fauna Boica, vol. 3, p. 240. (Reference not seen.)

Aranea purpurata PANZER, 1804, Faunae insectorum Germaniae, pt. 84, p. 22. (Reference not seen.)

Theridion lineatum, WALCKENAER, 1805, Tableau des aranéides, p. 73. EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 16, pl. 3, figs. 2, 2a (female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519. BRYANT, 1908, Occas. Papers Boston Soc. Nat. Hist., no. 7, p. 13. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 198. EMERTON, "1919" (1920), Trans. Roy.

FEMALE: Carapace, chelicerae, legs yellow-white. Sternum yellow-white, with narrow dark border and median black line (fig. 4). Abdomen creamy white, with median ventral black band, bordered by wider white band (fig. 4). Two pairs of black spots on sides of spinnerets. Dorsum of abdomen frequently with five pairs of small black spots, sometimes with two dorsal red bands or dorsum all dark red. Anterior median eyes one diameter apart, one and one-half diameters from laterals. Posterior medians one diameter apart, one and three-quarters diameters from laterals. Chelicerae with one or two strong teeth on anterior margin, one smaller tooth on posterior margin. Epigynum variable, a depression containing an opening on each side (figs. 2, 3). Total length, 4.3-6.8 mm. Measurements of a female from Oregon: total



FIGS. 1-10. *Enoplognatha ovata* (Clerck). 1. Female genitalia, dorsal view. 2, 3. Epigyna. 4. Female, ventral view. 5, 6. Left palpi, ventral view. 7. Left male chelicera from below. 8. Palpus, mesal view, expanded. 9. Palpus, subeternal view, expanded. 10. Spinnerets of female showing colulus, bearing setae. FIG. 11. *Enoplognatha tecta* (Keyserling), palpus, ventral view, expanded. FIG. 12. *Theridion murarium* Emerton, spinnerets of female, lacking colulus. Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix; S, subtegulum; T, tegulum; Y, cymbium.

length, 6.0 mm.; carapace 2.3 mm. long, 2.0 mm. wide; first femur, 3.6 mm.; patella and tibia, 4.2 mm.; metatarsus, 4.0 mm.; tarsus, 1.2 mm.; second patella and tibia, 2.7 mm.; third, 2.2 mm.; fourth, 3.4 mm.

MALE: Chelicerae illustrated by figure 7; palpus, by figures 5, 6, 8, 9. Total length, 3.5–5.2 mm. Measurements of a male from Oregon: total length, 4.3 mm.; carapace, 2.2 mm. long, 1.6 mm. wide; first femur, 4.4 mm.; patella and tibia, 5.0 mm.; metatarsus, 5.0 mm.; tarsus, 1.3 mm.; second patella and tibia, 3.2 mm.; third, 2.4 mm.; fourth, 4.0 mm.

Almost all larger collections contain individuals with variations in the epigyna or palpi. In some males the cymbium is relatively short (fig. 6); in others it is longer (fig. 5), resulting in differences in position of the palpal structures. Despite these variations in the cymbium, and also in the shape of the distal hook of the conductor, apparently only one species is represented. It is not known if these variations exist in collections made in Europe.

Enoplognatha ovata makes its web in shrubs and bushes.

TYPE LOCALITIES: The types of *Araneus ovatum*, *A. lineatus*, and *A. redimitus* came from Sweden.

DISTRIBUTION AND MARGINAL AMERICAN RECORDS: Europe, Mediterranean countries, Turkestan, Japan (Roewer, 1942), Pacific coast of North America, Ontario, to New England. British Columbia: Wellington (R. Guppy); Salmon Arm (H. B. Leech; R. Guppy). California: Trinidad, Humboldt County (W. J. Gertsch). Ontario: Westhill, York County (Kurata, 1939). Maine: Seal Harbor Brook, Mount Desert Island (Gertsch, 1946, in Procter). New York: New Rochelle, Westchester County (L. Lacey).

RECORDS: See Appendix.

Enoplognatha thoracica (Hahn)

Figures 13, 14, 17, 18, 21; map 3

Theridion thoracicum HAHN, 1831, Die Arachniden, p. 88, fig. 66 (female). ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 24.

Eucharia thoracica, MENGE, 1850, Neueste Schr. Naturf. Gesell. Danzig, vol. 4, p. 70.

Micryphantus thoracica, C. L. KOCH, 1851, Uebersicht des Arachnidensystems, vol. 5, p. 20.

Drepanodus obscurus MENGE, 1869, Schr.

Naturf. Gesell. Danzig, new ser., vol. 2, p. 242, pl. 47, fig. 141 (male).

Nerine hispida O. P.-CAMBRIDGE, 1871, Trans. Linnean Soc. London, vol. 27, p. 449.

Nerine albipunctata O. P.-CAMBRIDGE, 1873, Trans. Linnean Soc. London, vol. 28, p. 451, pl. 34, fig. 15 (male, female).

Erigone albipunctata, O. P.-CAMBRIDGE, 1878, Ann. Mag. Nat. Hist., ser. 5, vol. 1, p. 115.

Steatoda thoracica, BECKER, 1879, Ann. Soc. Ent. Belgique, vol. 22, p. 106.

Drepanodus thoracica, BERTKAU, 1884, Verhandl. Naturf. Ver. Rheinland Westfalen, vol. 40, p. 245. (Reference not seen.)

Enoplognatha quadripunctata, SIMON, 1884, Ann. Soc. Ent. France, ser. 6, vol. 4, p. 333.

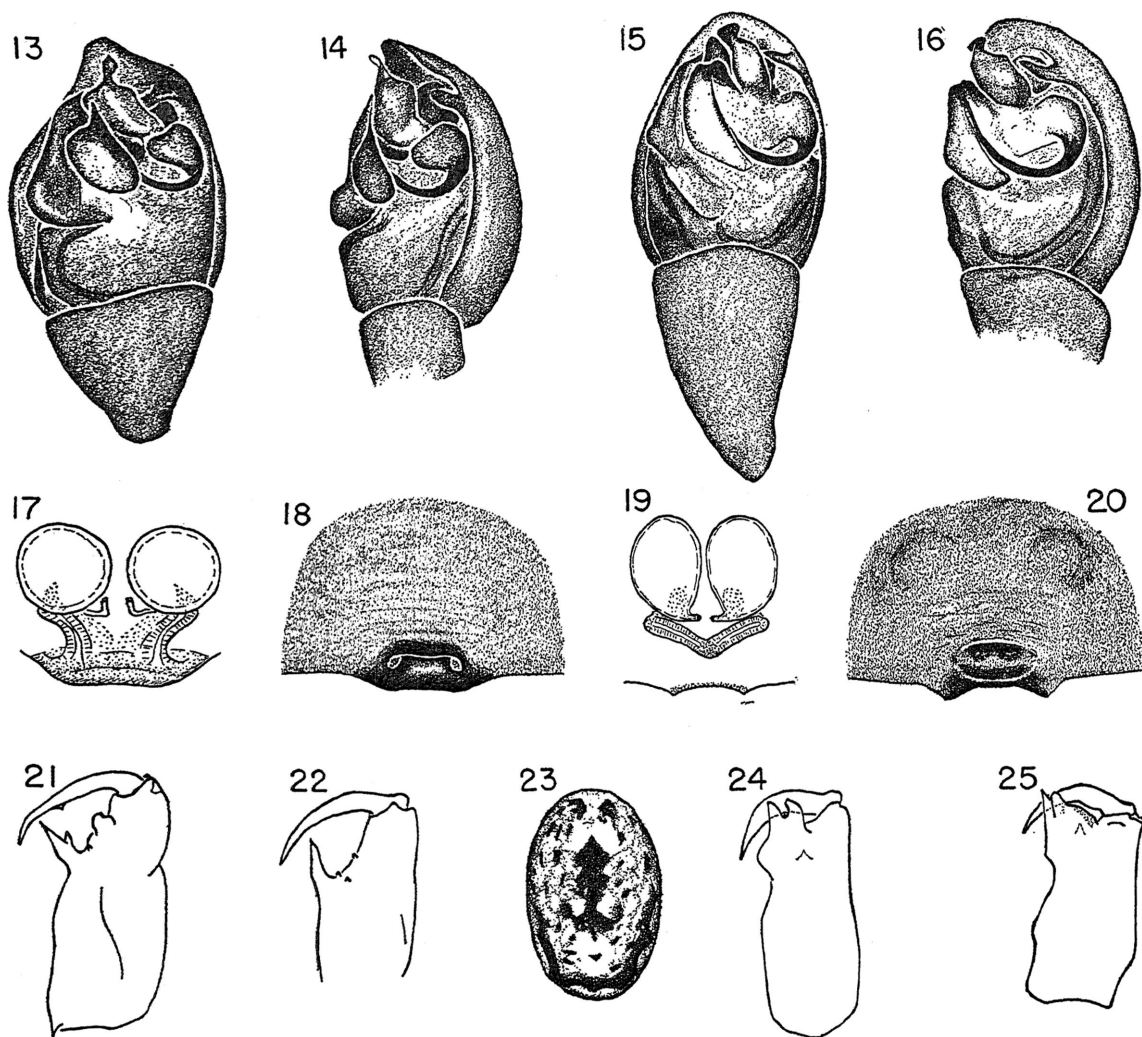
Enoplognatha thoracica, SIMON, 1884, Arachnides de France, vol. 5, pt. 2, p. 191. WIEHLE, 1937, in Dahl, Die Tierwelt Deutschlands, pt. 33, p. 205, figs. 237–243 (male, female). LOCKET AND MILLIDGE, 1953, British Spiders, vol. 2, p. 83, figs. 54a, 54d (male, female).

FEMALE: Carapace and legs brown. Sternum darker brown. Abdomen gray to black, without pattern. Anterior median eyes one and one-quarter diameters apart, same distance from laterals. Posterior medians about one diameter apart, one and one-quarter diameters from laterals. Chelicerae with two large teeth on anterior margin, one tooth on posterior margin. Epigynum with openings on sides of swollen area (fig. 18). Total length of females, 4.1–4.9 mm. Measurements of a female from McMinnville, Oregon: total length, 4.9 mm.; carapace 1.9 mm. long, 1.5 mm. wide; first patella and tibia, 1.9 mm.; second, 1.5 mm.; third, 1.3 mm.; fourth femur, 1.6 mm.; patella and tibia, 1.9 mm.; metatarsus, 1.1 mm.; tarsus, 0.7 mm.

MALE: Chelicerae and palpi illustrated by figures 13, 14, and 21. Dorsum of abdomen slightly sclerotized. Total length, 2.7–3.4 mm. Measurements of a specimen from McMinnville, Oregon: total length, 3.4 mm.; carapace 1.7 mm. long, 1.4 mm. wide; first femur, 1.5 mm.; patella and tibia, 1.8 mm.; metatarsus, 1.0 mm.; tarsus, 0.6 mm.; second patella and tibia, 1.4 mm.; third, 1.2 mm.; fourth, 1.6 mm.

This species was collected in Portland, Oregon, in soil, and males have also been found inside buildings.

TYPE LOCALITY: The types of *Theridion thoracicum* Hahn came from forests and quar-



FIGS. 13, 14. *Enoplognatha thoracica* (Hahn), left palpus. 13. Ventral view. 14. Ectal view.

FIGS. 15, 16. *Enoplognatha selma* Chamberlin and Ivie, palpus. 15. Ventral view. 16. Ectal view.

FIGS. 17, 18. *Enoplognatha thoracica* (Hahn). 17. Female genitalia, dorsal view. 18. Epigynum.

FIGS. 19, 20. *Enoplognatha selma* Chamberlin and Ivie. 19. Female genitalia, dorsal view. 20. Epigynum.

FIG. 21. *Enoplognatha thoracica* (Hahn), left male chelicera, from below.

FIGS. 22, 23. *Enoplognatha selma* Chamberlin and Ivie. 22. Male chelicera from below. 23. Abdomen of male, dorsal view.

FIG. 24. *Enoplognatha marmorata* (Hentz), male chelicera from below.

FIG. 25. *Enoplognatha tecta* (Keyserling), male chelicera from below.

ries under stones in the vicinity of Nuremberg, Germany.

DISTRIBUTION: Great Britain, Europe (outside Russia), North Africa, Syria (Wiehle, 1938), and Oregon.

RECORDS: *Oregon:* Benton County: Corvallis (V. Roth). Marion County: Salem (V. Roth). Multnomah County: Portland (V. Roth). Polk County: Dallas (V. Roth).

Yamhill County: McMinnville (K. M. Fender).

Enoplognatha selma Chamberlin and Ivie

Figures 15, 16, 19, 20, 22, 23; map 4

Enoplognatha (Rugatha) selma CHAMBERLIN AND IVIE, 1946, Bull. Univ. Utah, biol. ser., vol. 9, no. 5, p. 3, figs. 1, 2 (male).

FEMALE: Carapace yellow, with dusky line around margin. Sternum dusky brown. Legs yellow, with ends of segments dusky. Abdomen black, gray, and white; dorsal pattern as in *Enoplognatha tecta*, venter gray, with light spots. Anterior median eyes a little more than one diameter apart, almost one diameter from laterals. Posterior medians one diameter apart, a little more than one diameter from laterals. One large tooth and one smaller tooth (between larger and base of fang) on anterior margin of furrow. The epigynum is an indistinct small oval depression (fig. 20). Measurements of a female: total length, 4.5 mm.; carapace 1.5 mm. long, 1.2 mm. wide;

1937 (J. C. Chamberlin), in the University of Utah collection.

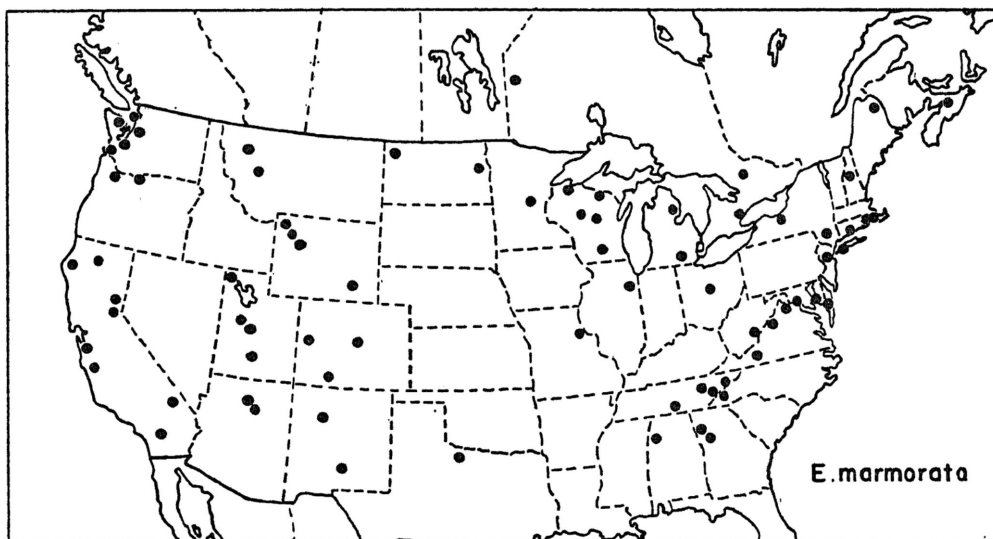
DISTRIBUTION: Southern Oregon, California.

RECORDS: *California:* Napa County: Putah Canyon Hills, March 2, 1951 (E. I. Schlinger), one male. Solano County: Green Valley Falls, April 27, 1941 (W. M. Pearce), one female. Yolo County: Davis, January 2, 1952 (E. I. Schlinger), one female.

***Enoplognatha marmorata* (Hentz)**

Figures 24, 26, 27, 30-33; map 2

Theridion marmoratum HENTZ, 1850, Jour. Boston Soc. Nat. Hist., vol. 6, p. 273, pl. 9, fig. 3



MAP 2. Distribution of *Enoplognatha marmorata*.

first patella and tibia, 2.0 mm.; second, 1.5 mm.; third, 1.3 mm.; fourth femur, 1.8 mm.; patella and tibia, 2.1 mm.; metatarsus, 1.2 mm.; tarsus, 0.7 mm.

MALE: Coloration (fig. 23) and structure as in female; eyes slightly farther apart than in female. Palpus illustrated by figures 15 and 16. Measurements of holotype: total length, 3.6 mm.; carapace 1.8 mm. long, 1.3 mm. wide; first femur, 1.7 mm.; patella and tibia, 2.2 mm.; metatarsus, 1.4 mm.; tarsus, 0.8 mm.; third patella and tibia, 1.4 mm.; fourth, 2.0 mm.

TYPE LOCALITY: Male holotype from Selma, Josephine County, Oregon, April 6,

(female); 1875, The spiders of the United States, p. 144, pl. 16, fig. 3 (female), ?pl. 21, ?fig. 16 (male). LEVI AND LEVI, 1951, Zoologica, vol. 36, p. 220. LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 444. LOWRIE AND GERTSCH, 1955, Amer. Mus. Novitates, no. 1736, p. 7.

Steatoda marmorata, EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 20 (in part), pl. 4, figs. 3, 3d, 3e (male, female); 1902, The common spiders, p. 120 (in part), fig. 282 (female).

Lithyphantes marmorata, KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 136, pl. 6, fig. 84 (female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 522 (in part).

Enoplognatha marmorata, SIMON, 1894, Histoire naturelle des araignées, vol. 1, p. 578. ?EMERTON,

1909, Trans. Connecticut Acad. Sci., vol. 14, pl. 1, fig. 9 (male). BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 21 (in part). PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 175 (in part). COMSTOCK, 1912, The spider book, p. 364, fig. 371 (female); 1940, The spider book, rev. ed., p. 379, fig. 371 (female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 403 (in part). MUMA, 1945, Bull. Univ. Maryland Agr. Exp. Sta., no. A38, p. 25. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 22. LOWRIE, 1948, Ecology, vol. 29, p. 338. KASTON, 1948, Bull. Connecticut Nat. Hist. Surv., no. 70, p. 77 (in part), figs. 35, 37 (male, female).

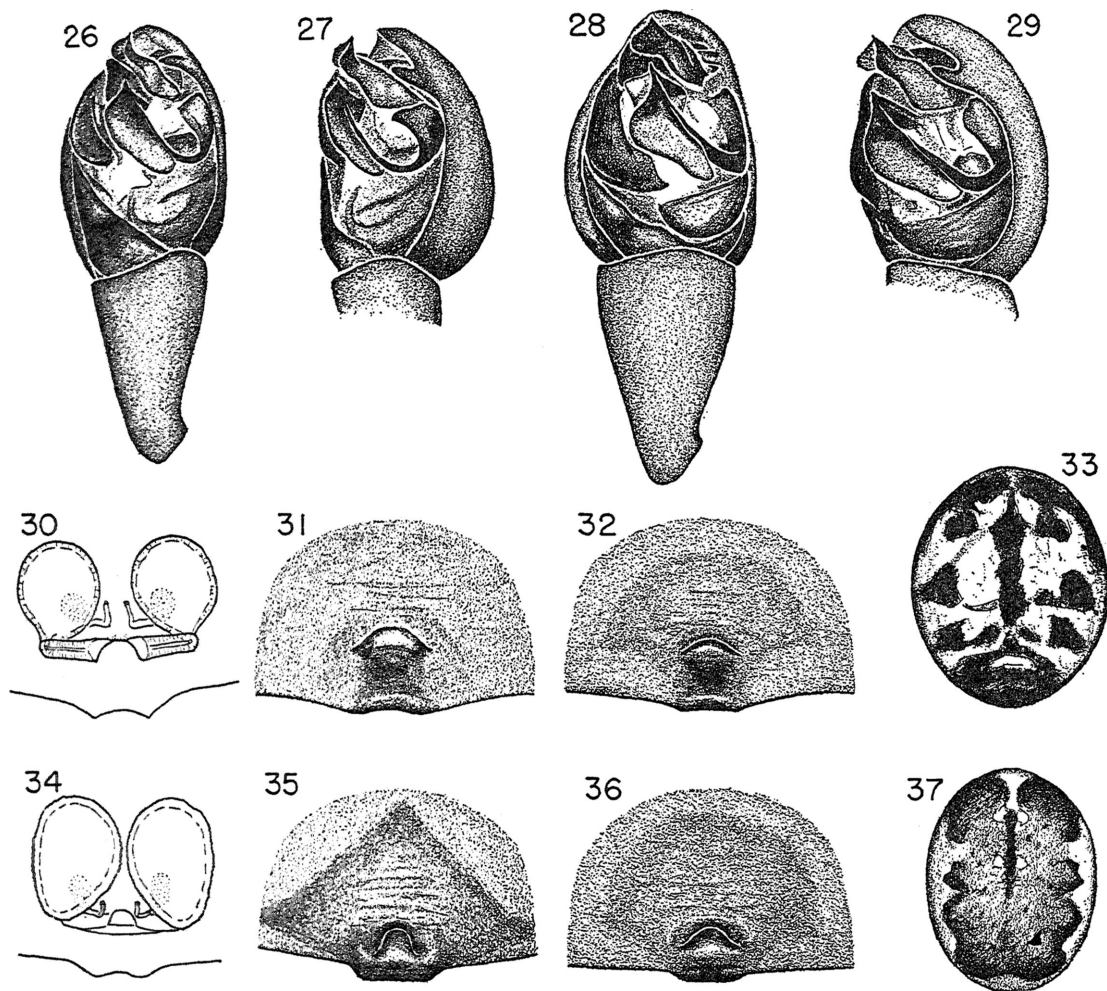
Lithyphantes mimoides CHAMBERLIN, 1920, Jour. Ent. and Zool., vol. 12, p. 8, pl. 3, fig. 4 (female).

Enoplognatha mimoides, ?CHAMBERLIN AND IVIE, 1933, Bull. Univ. Utah, biol. ser., vol. 2, no. 2, p. 8, fig. 8 (female). GERTSCH, 1939, Amer. Mus. Novitates, no. 1032, p. 3. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 403.

Enoplognatha tecta, WORLEY, 1932, Univ. Washington Publ. Biol., vol. 1, no. 1, p. 24. Not *Enoplognatha tecta* (Keyserling).

Enoplognatha (Marmatha) marmorata, CHAMBERLIN AND IVIE, 1942, Bull. Univ. Utah, biol. ser., vol. 7, no. 1, p. 40, fig. 85 (male).

Enoplognatha (Marmatha) marmorata parvior



FIGS. 26, 27. *Enoplognatha marmorata* (Hentz), left palpus. 26. Ventral view. 27. Ectal view.

FIGS. 28, 29. *Enoplognatha tecta* (Keyserling), palpus. 28. Ventral view. 29. Ectal view.

FIGS. 30-33. *Enoplognatha marmorata* (Hentz). 30. Female genitalia, dorsal view. 31, 32. Epigyna. 33. Abdomen of female, dorsal view.

FIGS. 34-37. *Enoplognatha tecta* (Keyserling). 34. Female genitalia, dorsal view. 35, 36. Epigyna. 37. Abdomen of female, dorsal view.

CHAMBERLIN AND IVIE, 1942, *ibid.*, biol. ser., vol. 7, no. 1, p. 41, fig. 86 (male).

Theridion (Marmatha) marmorata, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 24.

FEMALE: Carapace dark yellow-brown, eye region and sides darker. Sternum darker brown, dusky on sides. Legs brown, duskiness at distal ends of segments. Dorsum of abdomen usually with more or less distinct black spots on silvery white background (fig. 33); venter black, with gray streaks. Sometimes dorsal pattern as in *Enoplognatha tecta*. Anterior median eyes one diameter apart, slightly farther from laterals. Posterior medians one diameter apart, one and one-half diameters from laterals. Chelicerae with two large teeth on anterior margin, one tooth on posterior margin. Epigynum has an anterior facing lip, of variable shape; between lip and posterior margin is a groove or depression (figs. 31, 32). Total length, 3.9–7.0 mm. Measurements of a female from Tennessee: total length, 5.8 mm.; carapace 2.2 mm. long, 1.8 mm. wide; first femur, 2.5 mm.; patella and tibia, 3.0 mm.; metatarsus, 2.2 mm.; tarsus, 0.9 mm.; second patella and tibia, 2.2 mm.; third, 1.9 mm.; fourth, 2.8 mm.

MALE: Considerable variation in palpus (figs. 26, 27) and chelicerae (fig. 24). Total length, 4.0–6.4 mm. Measurements of a male from Massachusetts: total length, 6.1 mm.; carapace 2.7 mm. long, 1.9 mm. wide; first femur, 2.9 mm.; patella and tibia, 3.5 mm.; metatarsus, 2.2 mm.; tarsus, 0.9 mm.; second patella and tibia, 2.8 mm.; third, 2.0 mm.; fourth, 2.9 mm.

Although there is considerable variation in appearance of the genitalia, the group of variants is undoubtedly only one species. Chamberlin and Ivie (1942) described a subspecies based on a single male from Vermont.

This species is found under stones and boards and in leaf litter (Muma, 1945; Archer, 1946).

TYPE LOCALITIES: *Theridion marmorata* was described from Alabama, but Hentz's types have been lost. Four female syntypes of *Lithyphantes mimoides* from Portland, Oregon, June 19, 1882 (S. Henshaw), are in the Museum of Comparative Zoölogy. Male holotype of Chamberlin and Ivie's *Enoplognatha (Marmatha) marmorata parvior* from

Vermont is in the University of Utah collection.

DISTRIBUTION AND MARGINAL RECORDS: Southern Canada, United States. Nova Scotia: Truro (J. H. Emerton). Ontario: Minaki (J. H. Emerton). Florida: Crescent City (G. Marx). New Mexico: Camp Mary White, Otero County (S. Mulaik).

RECORDS: See Appendix.

Enoplognatha tecta (Keyserling)

Figures 11, 25, 28, 29, 34–37; map 3

Steatoda marmorata, EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 20 (in part), pl. 4, figs. 3a, 3b, 3c, 3f (male, female); 1902, The common spiders, p. 120 (in part), fig. 283 (female). Not *Theridion marmoratum* Hentz.

Lithyphantes tectus KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 138, pl. 6, fig. 86 (male).

Enoplognatha camtschadalis KULCZYŃSKI, 1885, Pamiętnik Akademii Umiejętności W Krakowie, Matematyczno-Przyrodniczy, vol. 11, p. 28, pl. 9, fig. 9 (female). SCHENKEL, 1930, Arkiv Zool., vol. 21A, p. 6, fig. 3 (male). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 400. New synonymy.

Lithyphantes marmoratus, MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 522 (in part).

Enoplognatha tecta, SIMON, 1894, Histoire naturelle des araignées, vol. 1, p. 578. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 21. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 175. COMSTOCK, 1911, The spider book, p. 364; 1940, The spider book, rev. ed., p. 379. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 403. CHAMBERLIN AND IVIE, 1947, Bull. Univ. Utah, biol. ser., vol. 10, no. 3, p. 27.

Enoplognatha (Marmatha) puritana CHAMBERLIN AND IVIE, 1942, Bull. Univ. Utah, biol. ser., vol. 7, no. 1, p. 41, figs. 87, 88 (male, female).

Enoplognatha puritana, MUMA, 1945, Bull. Univ. Maryland Agr. Exp. Sta., no. A38, p. 26. MUMA AND JEFFERS, 1945, Ann. Ent. Soc. Amer., vol. 38, p. 248. GERTSCH, 1946, in Procter, Biological Survey of the Mount Desert region, pt. 7, p. 519.

Enoplognatha marmorata, KASTON, 1948, Bull. Connecticut Nat. Hist. Surv., no. 70, p. 77 (in part), figs. 36, 41, 42 (male, female); 1953, How to know the spiders, p. 165, fig. 414 (female). Not *Enoplognatha marmorata* (Hentz).

Theridion (Marmatha) tectum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 24, pl. 3, fig. 7 (male).

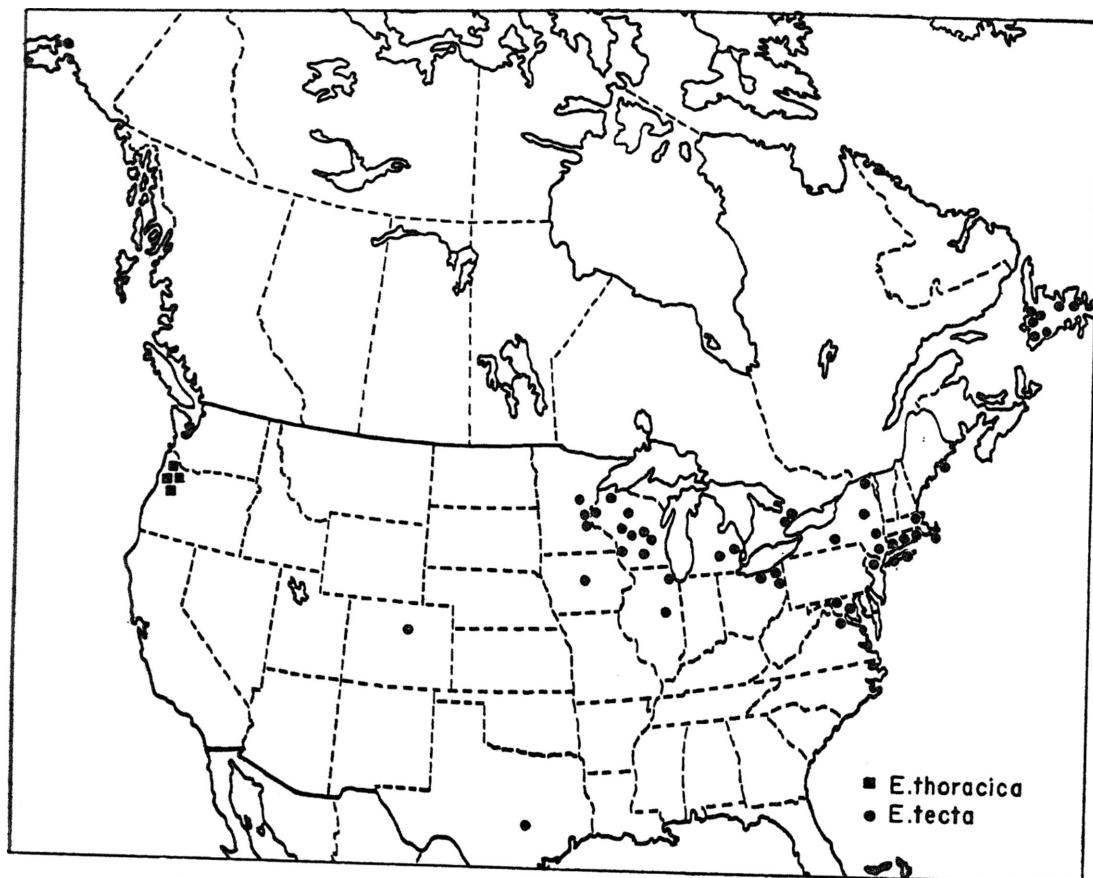
Theridion tectum, HACKMAN, 1954, Acta Zool. Fennica, vol. 79, p. 49.

Theridion puritanum, LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 444.

FEMALE: Carapace, chelicerae, and legs yellow-brown. Sternum dusky brown. Dorsum of abdomen white, brown, and black, with folium (fig. 37) and ventral median black band bordered by gray line on each side. Sides with white streaks on black. Anterior median eyes one diameter apart, three-quarters of a diameter from laterals. Posterior medians one diameter apart, one and one

tarsus, 2.2 mm.; tarsus, 1.1 mm.; second patella and tibia, 2.4 mm.; third, 1.9 mm.; fourth, 2.9 mm.

MALE: Chelicerae and palpi illustrated by figures 11, 25, 28, and 29. Total length, 4.5–5.3 mm. A male from Minnesota measured: total length, 4.9 mm.; carapace 2.3 mm. long, 1.7 mm. wide; first femur, 2.9 mm.; patella and tibia, 3.5 mm.; metatarsus, 2.3



MAP 3. North American distribution of *Enoplognatha thoracica* and distribution of *E. tecta*.

quarter diameters from laterals. Chelicerae with two large teeth, and one small tooth on base of outer large one, on anterior margin; one small tooth on posterior margin. Epigynum openings anterior to swollen area of variable shape (figs. 35, 36). Total length, 4.3–9.0 mm. Measurements of a specimen from Minnesota: total length, 5.4 mm., carapace 2.4 mm. long, 1.9 mm. wide; first femur, 2.7 mm.; patella and tibia, 3.1 mm.; meta-

mm.; tarsus, 1.4 mm.; second patella and tibia, 2.5 mm.; third, 1.9 mm.; fourth, 2.8 mm.

Hackman (1954) reports that this species prefers "more or less dry ground on culture influenced places" in Newfoundland. An adult pair was collected in April at Madison, Wisconsin, in the sifting of litter from woods with a Berlese funnel; both appeared freshly molted.

TYPE LOCALITIES: Male holotype of *Lithyphantes tectum* reported to have been collected at Denver, Colorado (G. Marx), in the United States National Museum (U.S.N.M. No. 1324). This may be an error in the locality label. Male holotype of *Enoplognatha* (*Mar-matha*) *puritana* from Ithaca, New York, is in the University of Utah collection. The female holotype of *E. camtschadalica* is from Kamchatka, Russia.

DISTRIBUTION AND MARGINAL RECORDS: Kamchatka. Alaska to eastern United States. Alaska: Matanuska (J. C. Chamberlin). Texas: Austin.

RECORDS: See Appendix.

***Enoplognatha joshua* Chamberlin and Ivie**
Figures 42-46, 54-56; map 1

Enoplognatha (*Rugatha*) *rugosa*, CHAMBERLIN AND IVIE, 1942, Bull. Univ. Utah, biol. ser., vol. 7, no. 1, p. 43, fig. 92 (male). Not *Enoplognatha rugosa* Emerton.

Enoplognatha (*Rugatha*) *joshua* CHAMBERLIN AND IVIE, 1942, *ibid.*, biol. ser., vol. 7, no. 1, p. 44, figs. 96, 97 (male).

Enoplognatha (*Rugatha*) *joshua pictura* CHAMBERLIN AND IVIE, 1942, *ibid.*, biol. ser., vol. 7, no. 1, p. 44, figs. 98-101 (male, female).

Enoplognatha (*Rugatha*) *piuta* CHAMBERLIN AND IVIE, 1942, *ibid.*, biol. ser., vol. 7, no. 1, p. 44, figs. 102-103 (male). New synonymy.

Enoplognatha rugosa, CHAMBERLIN AND IVIE, 1944, *ibid.*, biol. ser., vol. 8, no. 5, p. 40. Not *Enoplognatha rugosa* Emerton.

Theridion joshua, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 24.

FEMALE: Carapace yellow-brown, with margin dusky. Chelicerae and legs yellow-brown. Legs sometimes banded. Sternum dusky. Dorsum of abdomen gray and white, with black marks (fig. 56). Side streaked with black. Venter with a median black band bordered on each side by a white band of equal width. Black around spinnerets. Sometimes abdomen all black except for some white dorsal spots. Anterior median eyes one to one and one-quarter diameters apart, same distance from laterals. Posterior medians one to one and one-quarter diameters apart, same distance from laterals. Chelicerae with one large tooth on anterior margin, a small one on posterior margin. Epigynum a small, dark, dumbbell-shaped sclerotized area, separated from the posterior margin by a light-colored,

weakly sclerotized area of variable width (fig. 55). Total length, 3.6-5.8 mm. Measurements of female allotype: total length, 4.5 mm.; carapace 2.2 mm. long, 1.8 mm. wide; first femur, 2.6 mm.; patella and tibia, 3.1 mm.; metatarsus, 2.2 mm.; tarsus, 1.1 mm.; second patella and tibia, 2.6 mm.; third, 1.9 mm.; fourth, 2.9 mm.

MALE: Similar to female, except anterior median eyes closer to laterals. Large variation in chelicerae (fig. 46) and palpus (figs. 42-44). Total length, 2.9-4.6 mm. Measurements of holotype: total length, 3.6 mm.; carapace 1.9 mm. long, 1.4 mm. wide; first patella and tibia, 2.1 mm.; second, 2.1 mm.; third, 1.6 mm.; fourth femur, 2.0 mm.; patella and tibia, 2.3 mm.; metatarsus, 1.7 mm.; tarsus, 1.0 mm.

No two males have identical palpi (figs. 42-44) even when collected together. The chelicerae of a male from Washington have the tooth on the side of the spur much larger. There is little variation in the epigyna of females.

TYPE LOCALITIES: Male holotype and female allotype of *Enoplognatha joshua* from 6 miles southwest of Victorville, San Bernardino County, California, March 9, 1941 (W. Ivie). Male holotype of *E. joshua pictura* from Hurricane, Washington County, Utah, March, 1939 (W. Ivie). Male holotype and female allotype of *E. piuta* from Spring Canyon, Carbon County, Utah, April 16, 1933 (W. Ivie). All types are in the University of Utah collection.

DISTRIBUTION AND MARGINAL RECORDS: Southeastern and western United States. Virginia: Falls Church, Fairfax County. Georgia: Tallulah Falls, Rabun County (W. Ivie). Washington: Six miles west of Vantage, Kittitas County (H. B. Leech). California: Palmdale, Los Angeles County (R. X. Schick).

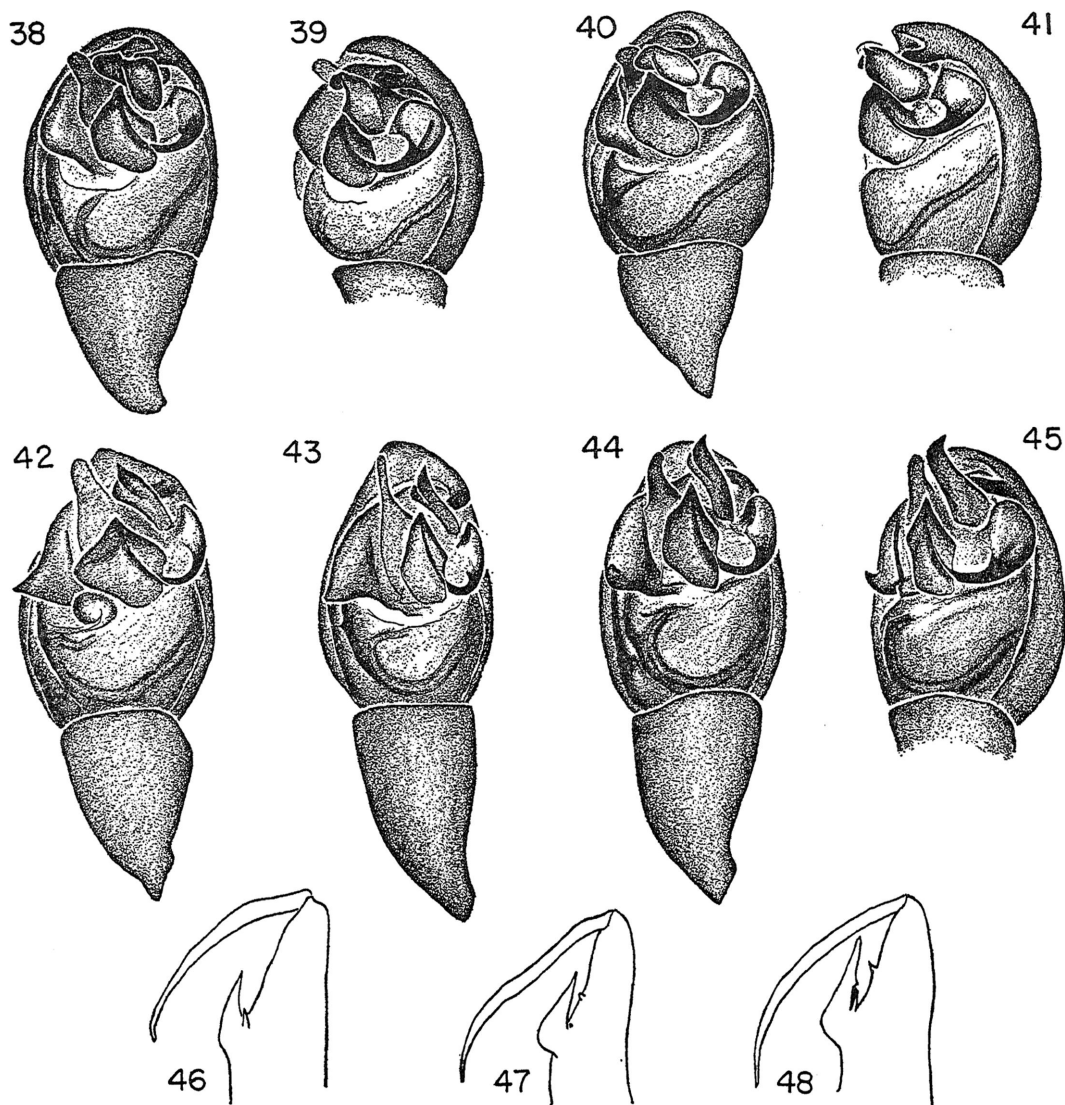
RECORDS: See Appendix.

***Enoplognatha wyuta* Chamberlin and Ivie**
Figures 38, 39, 47, 49, 50, 53; map 4

Enoplognatha (*Rugatha*) *wyuta* CHAMBERLIN AND IVIE, 1942, Bull. Univ. Utah, biol. ser., vol. 7, no. 1, p. 43, figs. 93-95 (male, female).

Theridion wyuta, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 24.

FEMALE: Carapace yellow, with dusky margin and dusky spot in center. Sternum dusky,



FIGS. 38, 39. *Enoplognatha wyuta* Chamberlin and Ivie, left palpus. 38. Ventral view. 39. Ectal view.

FIGS. 40, 41. *Enoplognatha intrepida* (Sørensen), palpus. 40. Ventral view. 41. Ectal view.

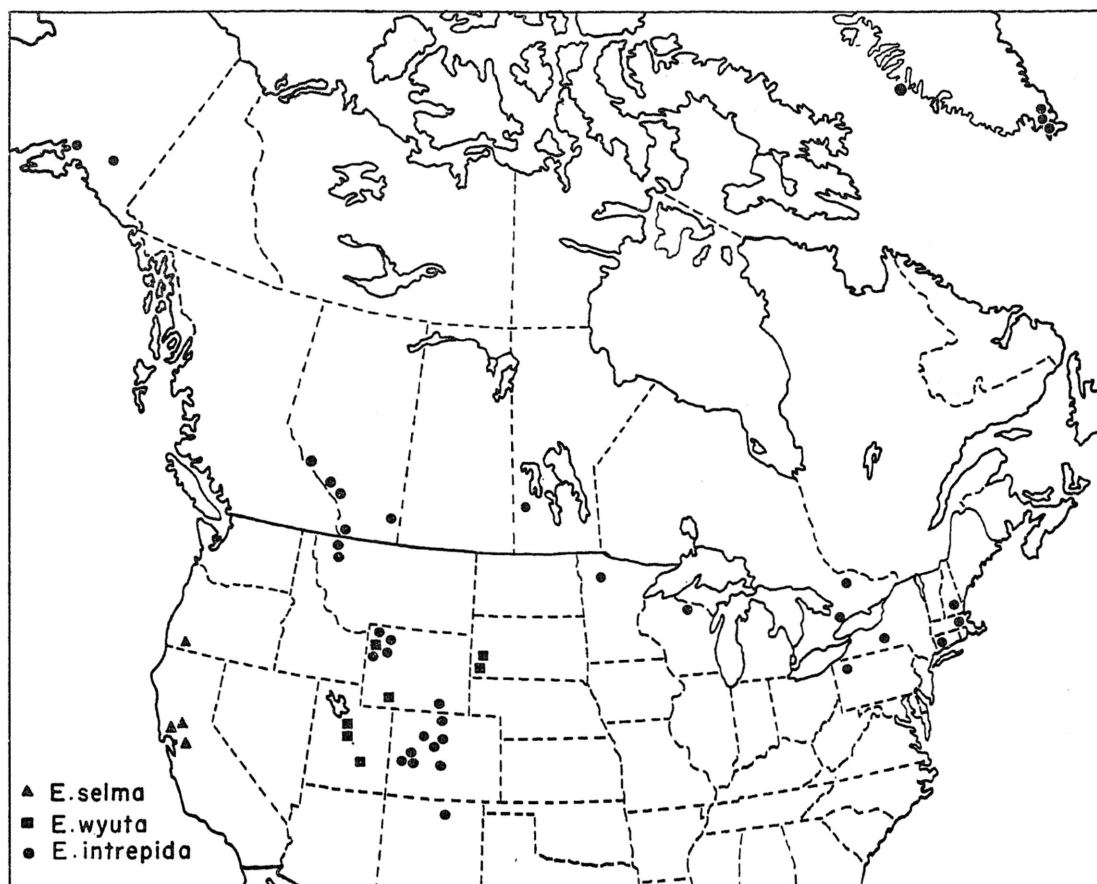
FIGS. 42-46. *Enoplognatha joshua* Chamberlin and Ivie. 42-44. Palpus, ventral view. 42. Virginia. 43. Utah. 44. California. 45. Palpus, ectal view, California. 46. Left male chelicera from below.

FIG. 47. *Enoplognatha wyuta* Chamberlin and Ivie, male chelicera from below.

FIG. 48. *Enoplognatha intrepida* (Sørensen), male chelicera from below.

lighter in center. Legs yellow-brown. Dorsum of abdomen light gray, with large black patches and small white spots (fig. 53). Sides streaked with black; venter light except for median black band. Anterior median eyes one and one-half diameters apart, one diameter

from laterals. Posterior medians one diameter apart, a little more than one diameter from laterals. Chelicerae with a large tooth on anterior margin and indications of a small tooth on posterior margin. Epigynum similar to that of *Enoplognatha intrepida*; however, pos-



MAP 4. Distribution of *Enoplognatha selma*, *E. wyuta*, and *E. intrepida*.

terior edge of anterior dark band straight (fig. 50). Total length, 3.0–4.3 mm. Measurements of allotype: total length, 3.4 mm.; carapace 1.4 mm. long, 1.2 mm. wide; first femur, 1.8 mm.; patella and tibia, 2.2 mm.; metatarsus, 1.5 mm.; tarsus, 0.8 mm.; second patella and tibia, 1.7 mm.; third, 1.3 mm.; fourth, 2.2 mm.

MALE: Palpus illustrated by figures 38 and 39. Measurements of holotype: total length, 3.5 mm.; carapace 1.9 mm. long, 1.4 mm. wide; first femur, 2.1 mm.; patella and tibia, 2.6 mm.; metatarsus, 1.8 mm.; tarsus, 0.8 mm.; second patella and tibia, 2.1 mm.; third, 1.6 mm.; fourth, 2.5 mm.

This species has been found under boards and logs.

TYPE LOCALITY: Male holotype and female allotype from 13 miles north of Old Faithful, Yellowstone National Park, Wyoming, June

17, 1938 (W. Ivie), in the University of Utah collection.

DISTRIBUTION AND MARGINAL RECORDS: South Dakota to Utah. South Dakota: Horsethief Lake, Pennington County (H. and L. Levi). Utah: West of Emery (W. Ivie).

RECORDS: See Appendix.

Enoplognatha intrepida (Sørensen)

Figures 40, 41, 48, 51, 52; map 4

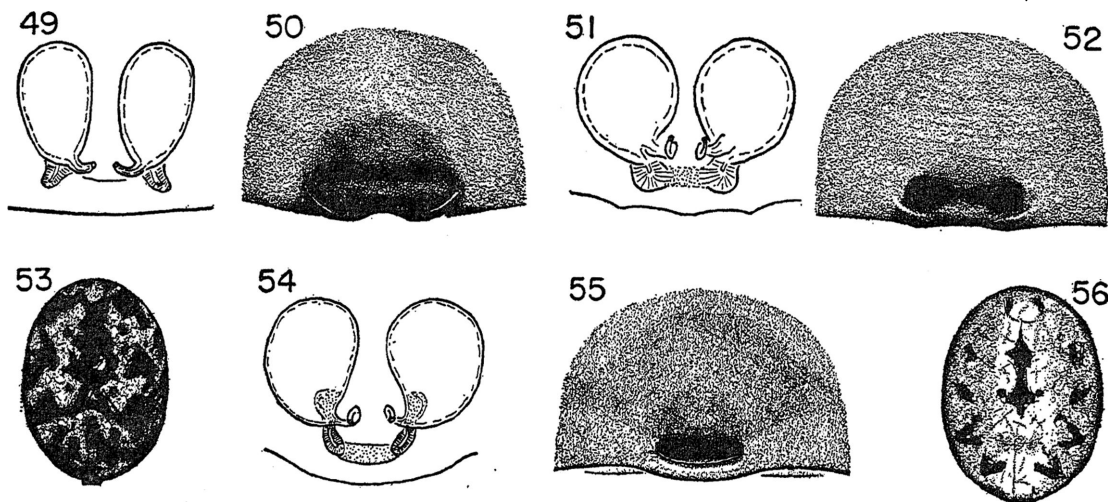
Theridion intrepidum SØRENSEN, 1898, Vidensk. Meddel. Naturhist. For. Kjøbenhavn, p. 190 (sub *Theridium*). STRAND, 1906, Fauna arctica, vol. 4, p. 441. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 198. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 503.

Enoplognatha rugosa EMERTON, 1909, Trans. Connecticut Acad. Sci., vol. 14, p. 182, pl. 1, fig. 8 (male, female). BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 21. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 175. COM-

STOCK, 1911, The spider book, p. 364. EMERTON, 1913, Appalachia, vol. 12, p. 155. KURATA, 1939, Canadian Field Nat., vol. 53, p. 81. COMSTOCK, 1940, The spider book, rev. ed., p. 379. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 403. CHAMBERLIN AND IVIE, 1947, Bull. Univ. Utah, biol. ser., vol. 10, no. 3, p. 27. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 77, figs. 43-46 (male, female). SCHENKEL, 1950, Verhandl. Naturf. Gesell. Basel, vol. 61, p. 52. New synonymy.

Enoplognatha intrepida, JACKSON, 1930, Ann.

eyes one diameter apart, less than one diameter from laterals. Posterior medians one diameter apart, slightly more than one diameter from laterals. Each chelicera with a large tooth on anterior margin. Epigynum as in *Enoplognatha wyuta*, except dark mark dumb-bell shaped (fig. 52). Total length, 2.9-5.0 mm. A female from Colorado measured: total length, 3.8 mm.; carapace 1.6 mm. long, 1.3 mm. wide; first patella and tibia, 1.9 mm.; second, 1.5 mm.; third, 1.3 mm.; fourth



FIGS. 49, 50. *Enoplognatha wyuta* Chamberlin and Ivie. 49. Female genitalia, dorsal view. 50. Epigynum.

FIGS. 51, 52. *Enoplognatha intrepida* (Sørensen). 51. Female genitalia, dorsal view. 52. Epigynum.

FIG. 53. *Enoplognatha wyuta* Chamberlin and Ivie, female abdomen, dorsal view.

FIGS. 54-56. *Enoplognatha joshua* Chamberlin and Ivie. 54. Female genitalia, dorsal view. 55. Epigynum. 56. Female abdomen, dorsal view.

Mag. Nat. Hist., ser. 10, vol. 6, p. 642, pl. 17, fig. 7 (female). BRAENDEGAARD, 1937, Meddel. om Grønland, vol. 108, p. 6; 1946, *ibid.*, vol. 121, p. 27, fig. 12 (female).

Enoplognatha (Rugatha) pikes CHAMBERLIN AND IVIE, 1942, Bull. Univ. Utah, biol. ser., vol. 7, no. 1, p. 42, figs. 89-91 (male, female). New synonymy.

Theridion rugosum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 24. LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 444. LOWRIE AND GERTSCH, 1955, Amer. Mus. Novitates, no. 1736, p. 7. New synonymy.

FEMALE: Carapace yellow-brown, with dusky line around margin. Sternum and legs yellow-brown. Abdomen gray-brown, pattern indistinct in most specimens, consisting of single median dorsal mark usually with four or five spots on each side. Venter and sides finely spotted light on dark. Anterior median

femur, 1.7 mm.; patella and tibia, 2.0 mm.; metatarsus, 1.2 mm.; tarsus, 0.7 mm.

MALE: Chelicerae and palpi illustrated by figures 40, 41, and 48. Total length, 2.9-3.9 mm. A male from Colorado measured: total length, 3.4 mm.; carapace 1.7 mm. long, 1.3 mm. wide; first patella and tibia, 2.1 mm.; second, 1.7 mm.; third, 1.3 mm.; fourth femur, 1.6 mm.; patella and tibia, 2.1 mm.; metatarsus, 1.3 mm.; tarsus, 0.6 mm.

This species is found under stones above timberline in the Rocky Mountains. Kurata (1939) found it in leaf mold in Ontario.

TYPE LOCALITIES: Syntypes of *Theridion intrepidum* from Ilua (latitude 59° 55' N.) and Holsteenborg (latitude 66° 55' N.), Greenland, are in the Copenhagen Museum. Male syntype of *Enoplognatha rugosa* from

Blue Hill, Milton, Massachusetts, May 6, 1905, and female syntype from Lake Winnepesaukee, Three Mile Island, New Hampshire, May 30, 1906 (J. H. Emerton), are in the Museum of Comparative Zoölogy. Male holotype, female allotype, and female paratypes of *E. pikes* from Pikes Peak, 11,600 feet, Colorado, June 22, 1940 (W. Ivie), are in the University of Utah collection.

DISTRIBUTION AND MARGINAL RECORDS: Above timberline in the Rocky Mountains, Alaska, Greenland, south to Minnesota and Pennsylvania. Alaska: Matanuska Valley (J. C. Chamberlin). Pennsylvania: President, Venango County. Minnesota: Itaska Park, Clearwater County (W. J. Gertsch). New Mexico: Penitente Peak, Cowles (C. C. Hoff).

RECORDS: See Appendix.

Theridion Walckenaer

*Theridion*¹ WALCKENAER, 1805, Tableau des aranéides, Paris, p. 72. (Problems concerning type are discussed in the Introduction above.)

?*Tobesoa* KEYSERLING, 1889, in Koch, Die Arachniden Australiens, Nuremberg, pt. 2, p. 239. Type species: *Tobesoa theridioides* Keyserling.

?*Liger* O. P.-CAMBRIDGE, 1896, Biologia Centrali-Americana, Arachnida-Araneidea, vol. 1, p. 210. Type species: *Liger incompta* O. P.-Cambridge.

?*Garricola* CHAMBERLIN, 1916, Bull. Mus. Comp. Zool., vol. 60, p. 231. Type species: *Garricola sanctus* Chamberlin.

Allotheridion ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 41. Type species: *Theridion murarium* Emerton.

Allodipoena BRYANT, 1947, Psyche, vol. 54, p. 184. Type species: *Allodipoena diana* Bryant (= *Theridion atropunctatum* Petrunkevitch).

Chindellum ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 12. Type species: *Theridion intervallatum* Emerton.

Phylloneta ARCHER, 1950, *ibid.*, no. 30, p. 19. Type species: *Theridion pictipes* Keyserling.

Nesticodes ARCHER, 1950, *ibid.*, no. 30, p. 22. Type species: *Theridion rufipes* Lucas.

¹ W. E. Leach (1824, Encyclopaedia Britannica, suppl. vol. 1, p. 438) changed the spelling of Walckenaer's name to *Theridium*. Although Leach did not give a reason for the change, many authors during the nineteenth century followed his 1824 spelling. (Some references give the date of Leach's article in the Encyclopaedia as 1816.) As Walckenaer did not indicate the derivation of the generic name *Theridion* and he himself consistently used the original spelling, before as well as after the publication of Leach's article, the original spelling is used in the present paper.

Rugathodes ARCHER, 1950, *ibid.*, no. 30, p. 24. Type species: *Theridion sexpunctatum* Emerton.

Paidiscura ARCHER, 1950, *ibid.*, no. 30, p. 26. Type species: *Theridion pallens* Blackwall.

Small- to medium-sized theridiid spiders (1–5 mm. total length). Carapace usually slightly longer than wide, usually lacking stridulating structures, except in males of smallest species. Thoracic depression usually indistinct. Anterior eye row straight or procurved from front, posterior row straight from above. Eyes usually subequal in size, anterior medians sometimes slightly larger or smaller than others. Fourth coxae separated by about one-half to one and one-half diameters; sternum usually bluntly pointed between. Chelicerae enlarged in males of some species. Chelicerae of females each with one or two teeth on anterior margin, posterior margin lacking teeth. Legs long, first patella and tibia at least one and a half times as long as carapace. In females, first legs longest, fourth next in length, third shortest; in males, second legs longer than fourth. Abdomen more or less spherical, usually longer than high, sometimes wider than long, subtriangular, without tubercles or plates. Colulus absent (fig. 12).

Epigynum may be weakly sclerotized; openings often difficult to see. One pair of seminal receptacles present. Palpus with median apophysis (M in figs. 62, 153, 163, 186, 189, 199, 200, 226, 243, 244, 264, 307, 323, 324), conductor (C), and radix (R); positions of these parts quite variable.

The lack of a colulus differentiates *Theridion* from most other theridiid genera, including *Enoplognatha* and *Anelosimus*, with which it has been confused. The subspherical abdomen can be used to distinguish *Theridion* from *Chrysso*, *Coleosoma*, *Tidarren*, and *Achaearanea*, which also lack the colulus. *Theridion* differs further from *Tidarren* and *Achaearanea* in that the alveolus of the male palpus usually occupies the whole cymbium, from *Achaearanea* in that the bulb has a well-developed radix, and from *Tidarren* in that there are two palpi present. The lack of sclerotized plates on the abdomen of the male separates the genus from the closely related *Coleosoma*, and the long legs separate it from the short-legged *Paidisca*.

The genus *Theridion* is world wide in dis-

tribution. *Theridion rufipes*, and most likely *T. hobbsi*, are cosmopolitan. Several species have been found in Europe as well as North America (*T. petraeum*, *T. ornatum*, *T. melanurum*, *T. impressum*, and *T. ohlerti*); others have a more limited distribution on this continent and may have been introduced in more recent times from Europe (*T. tinctum*, *T. varians*, and *T. simile*). An American species, *T. berkeleyi*, may have been introduced into Scandinavia. Most North American species have a restricted range; others (*T. murarium*, *T. differens*) are found throughout the United States and southern Canada, *T. murarium* as far south as Chiapas. Several species (*T. montanum*, *T. sexpunctatum*, *T. aurantium*) have a range that extends from Alaska to New England. *Theridion intervallatum* is found in the Atlantic coast states from Maine south, the Gulf coast states, and the Pacific coast states from Oregon south through Central America and to Brazil. Unfortunately the spider fauna of most parts of the world is so poorly known that it is difficult to obtain a complete picture of the distributions. No doubt other North American species will be found to occur in southern Europe or other parts of the world.

Some of the species in the genus are dark colored and live in litter or in crevices of rocks and logs. Most, however, are light colored and live in foliage of trees and shrubs. Although the ground-living species and also the smaller ones seem to have shorter legs, it appears advisable to split off *Paidisca* as a group having much shorter legs, having the carapace frequently modified, and sometimes having sclerotized spots on the abdomen.

Although there are several distinct groups in the genus, they intergrade. One might consider the genus in North America as containing the *murarium* group, having the base of the embolus a flat enlarged piece on the ventral side of the male palpus and a median apophysis which extends into a prominent sclerite. The species belonging to this group have a median scalloped band on the abdomen. Some species of this group are difficult to separate. The *melanurum* group (*T. simile*, *T. melanurum*, and *T. rufipes*) have an embolus similar to that of the preceding group; the median apophysis, however, does not extend ventrad as a prominent sclerite.

The *tinctum* group (*T. alabamense*, *T. antonii*, *T. punctosparsum*, *T. tinctum*, and *T. hobbsi*) has the base of the embolus exposed, although of different shape (figs. 195, 197, 199, 203) than that of the *murarium* group. The coloration of members of this group may be dark or white, with prominent dark spots. The *intervallatum* group, although most distinct, contains only two species (*T. intervallatum* and *T. atropunctatum*). The abdomen of members of this group may be wider than long; the cymbium of the palpus extends beyond the bulb. Archer considered this group distinct and placed it in the genus *Chindellum*. The *frondeum* group is probably closest to the genus *Achaearanea*. The base of the embolus is usually hidden, and the median apophysis is a prominent sclerite. The base of the chelicerae of males may have a mastidion, and the chelicerae may be enlarged. The coloration is usually white, with some dark spots on the abdomen. The *sexpunctatum* group (*T. sexpunctatum*, *T. aurantium*, and *T. cheimatos*) has a palpus similar to that of the preceding group, and the chelicerae of the male are large and modified.

Many *Theridion* species show considerable geographic variation. Some as a result of this variation have been considered separate species. There are a number of species pairs (sibling species). *Theridion frondeum* and *T. albidum*, although commonly collected together, are very similar; their habits may be similar. *Theridion punctosparsum* and *T. antonii* are difficult to separate but are distinct species. The females of *T. sexpunctatum* and *T. aurantium* are easily separated in that part of the ranges in which they are sympatric, but specimens from the allopatric portion of their ranges are more similar; another example of this can be seen in the males of *T. montanum* and *T. lawrencei*.

The following species north of Mexico have in the past been placed in *Theridion* but do not belong in it:

albomaculatum O. P.-Cambridge = *Chrysso albomaculata*

albomaculatum Sundevall = *Stemonyphantes lineatus* (Linnaeus)

ambitum Barrows does not belong in *Theridion*
ampullaceum Walckenaer = *Linyphia pusilla* Sundevall

amputatum Keyserling = *Paidisca unimaculata* (Emerton)

- analyticum* Chamberlin = *Anelosimus analyticum*
anglicanum Hentz = *Ceratinopsis anglicana*
ansatum Walckenaer = *Tidarren sisypoides*
 (Walckenaer)
arcadicum Gertsch and Archer = *Mysmena quad-*
rimaculata (Banks)
bicorne Wider = *Diplocephalus cristatus* (Black-
 wall)
bimaculatum Linnaeus = *Neottiura bimaculata*
boreale Hentz = *Steatoda borealis*
cancellatum Hentz = *Conopistha cancellata*
canionis Chamberlin and Gertsch = *Achaeearanea*
canionis
carolinum Butler = *Latrodectus mactans* (Fabric-
 ius)
catalinae Gertsch and Archer = *Paidisca pictipes*
 (Banks)
catapetraeum Gertsch and Archer = *Achaeearanea*
porteri (Banks)
cheliferum Wider = *Gonatium rubens* (Blackwall)
conjunctum Gertsch and Mulaik = *Achaeearanea*
conjuncta
credulum Gertsch and Davis = *Achaeearanea schullei*
 (Gertsch and Mulaik)
dentatum Wider = *Gnathonarium dentatum*
edinburgensis Gertsch and Mulaik = *Paidisca pal-*
lida (Emerton)
eigenmanni Banks = *Gaucelmus augustinus* Keyser-
 ling
elevatum Banks = *Tidarren texanum* (Banks)
expulsum Gertsch and Mulaik = *Paidisca expulsa*
ficilium Hentz = *Rhomphaea ficilium*
foliaceum Hentz = *Dictyna foliacea*
fordum Keyserling = *Tidarren fordum*
foxi McCook = *Mimognatha foxi*
funebre Hentz = *Euryopsis limbata* (Walckenaer)
gemmosum L. Koch = *Theridiosoma gemmosum*
globosum Hentz = *Achaeearanea globosa*
grossum C. L. Koch = *Teutana grossa*
guttatum Wider = *Crustulina guttata*
hansii Schenkel = *Paidisca pictipes* (Banks)
hypophyllum Fitch = *Dictyna foliacea* (Hentz)
imparatum Bishop and Crosby = *Paidisca unima-*
culata (Emerton)
inornatum Banks = *Achaeearanea conjuncta*
 (Gertsch and Mulaik)
insulum Gertsch and Mulaik = *Achaeearanea in-*
sula
interruptum Banks = *Coleosoma floridana* Banks
intrepidum Sørensen = *Enoplognatha intrepida*
lascivulum Keyserling = *Paidisca unimaculata*
 (Emerton)
lascivum Keyserling = *Paidisca unimaculata*
 (Emerton)
laticeps Keyserling = *Ctenium laticeps*
leoninum Hentz = *Ero furcata* (Villers)
liliputanum Keyserling = *Paidisca unimaculata*
 (Emerton)
lineamentum McCook = *Latrodectus mactans* (Fa-
 bricius)
lineatum Clerck = *Enoplognatha ovata* (Clerck)
lineatum Hentz = *Latrodectus mactans* (Fabricius)
maderae Gertsch and Archer = *Paidisca maderae*
marmoratum Hentz = *Enoplognatha marmorata*
morologum Hentz = *Dictyna sublata* (Hentz)
nicoleti Keyserling = *Paidisca unimaculata* (Em-
 erton)
opulentum Walckenaer = *Theridula opulenta*
ornatum Walckenaer = *Mangora maculata* Keyser-
 ling
ornatum Roewer = *Mangora maculata* Keyser-
 ling
ovatum Clerck = *Enoplognatha ovata*
pallidum Walckenaer = ? *Achaeearanea tepidariorum*
 (C. L. Koch)
paradisicum Gertsch and Archer = *Paidisca un-*
imaculata (Emerton)
pullulum Hentz = *Psilochorus pullulus*
redemptum Gertsch and Mulaik = *Achaeearanea*
porteri (Banks)
redimitum Clerck = *Enoplognatha ovata* (Clerck)
roscidum Hentz = *Dictyna roscida*
rupicola Emerton = *Achaeearanea rupicola*
saylori I. Fox = *Teutana triangulosa* (Walckenaer),
 new synonymy
schullei Gertsch and Mulaik = *Achaeearanea schullei*
serenoae Gertsch and Archer = *Achaeearanea seren-*
oae
serpentinum Hentz = *Teutana triangulosa* (Wal-
 ckenaer)
sexsetosum Barrows = *Graphomoa theridioides*
 Chamberlin
signatum Hahn = *Linyphia pusilla* Sundevall
sisypoides Walckenaer = *Tidarren sisypoides*
sphaerulum Hentz = *Theridula opulenta* (Wal-
 ckenaer)
stictum O. P.-Cambridge = *Crustulina sticta*
studiosum Hentz = *Anelosimus textrix* (Wal-
 ckenaer)
sublatum Hentz = *Dictyna sublata* (Hentz)
subterraneum Banks = *Nesticus pallidus* Emerton
tepidariorum C. L. Koch = *Achaeearanea tepidar-*
iorum
terrestre Emerton = *Nesticus cellulanus* (Clerck)
terrestrellum Roewer = *Nesticus cellulanus* (Clerck)
texanum Banks = *Tidarren texanum*
trigonum Hentz = *Conopistha trigona*
unimaculatum Emerton = *Paidisca unimaculata*
ventillans Keyserling = *Theridula opulenta* (Wal-
 ckenaer)
verecundum Hentz = *Latrodectus mactans* (Fabric-
 ius)
vulgare Hentz = *Achaeearanea tepidariorum* (C. L.
 Koch)
wallacei Gertsch and Archer = *Paidisca pallida*
 (Emerton)

The following species described in the genus *Theridion* from America north of Mexico are not recognizable:

americanum Walckenaer, 1841
atrilabrum Walckenaer, 1841
blandum Hentz, 1850
catenatum Walckenaer, 1841
cruciatum Hentz, 1850
inconstans Curtis, 1897
incisuratum Walckenaer, 1841
intantum Hentz, 1850
oryx Walckenaer, 1841
oscitabundum Hentz, 1850
pertenuis Hentz, 1850

Walckenaer's (1841, *Histoire naturelle des insectes, aptères*, vol. 2) names are based on drawings by Abbot which are in the British Museum (Natural History) in London. Hentz's types (1850, *Jour. Boston Soc. Nat. Hist.*, vol. 6, pp. 275, 278, 283) have been lost. The type of *Theridion inconstans* and Curtis's notes on this species have not been kept. The description (1897, *Ent. News*, vol. 8, p. 91) of this latter species is based entirely on the variable coloration of his specimens. No morphological structures are given by which one can identify this species. Several of Curtis's specimens are in the Museum of Comparative Zoölogy, but it is not known whether or not they were the ones described. These specimens are *T. sexpunctatum* Emerton.

Theridion murarium Emerton

Figures 12, 57, 58, 61-63; map 5

Theridion murarium EMERTON, 1882, *Trans. Connecticut Acad. Sci.*, vol. 6, p. 11, pl. 1, fig. 5 (male, female) (*sub Theridium*). KEYSERLING, 1884, *Die Spinnen Amerikas, Theridiidae*, pt. 1, p. 17, pl. 1, fig. 5 (male, female). MARX, 1890, *Proc. U. S. Natl. Mus.*, vol. 12, p. 519; 1892, *Proc. Ent. Soc. Washington*, vol. 2, p. 155. BANKS, 1892, *Proc. Acad. Nat. Sci. Philadelphia*, p. 30. FOX, 1892, *Proc. Ent. Soc. Washington*, vol. 2, p. 268. BANKS, 1895, *Jour. New York Ent. Soc.*, vol. 3, p. 83; 1899, *Proc. Ent. Soc. Washington*, vol. 4, p. 189. ?BANKS, 1902, *Proc. U. S. Natl. Mus.*, vol. 25, p. 214. EMERTON, 1902, *The common spiders*, p. 115, figs. 267-269 (male, female). SCHEFFER, 1905, *Trans. Kansas Acad. Sci.*, vol. 19, p. 192. BANKS, 1907, *Indiana Dept. Geol. Nat. Resources*, 31st Ann. Rept., p. 738. BRYANT, 1908, *Occas. Papers Boston Soc. Nat. Hist.*, vol. 7, p. 13. BANKS, 1910, *Bull. U. S. Natl. Mus.*, no. 72, p. 19; 1911, *Proc. Acad. Nat. Sci. Philadelphia*, vol. 63, p. 445. PETRUNKEVITCH, 1911, *Bull.*

Amer. Mus. Nat. Hist., vol. 29, p. 200. COMSTOCK, 1912, *The spider book*, p. 353, figs. 353-354 (male, female). BANKS, 1916, *Proc. U. S. Natl. Mus.*, vol. 51, p. 68. BARROWS, 1918, *Ohio Jour. Sci.*, vol. 18, p. 304. EMERTON, 1919, *Ent. News*, vol. 30, p. 167; "1919" (1920), *Trans. Roy. Canadian Inst.*, vol. 12, p. 310. BISHOP AND CROSBY, 1926, *Jour. Elisha Mitchell Sci. Soc.*, vol. 41, p. 183. CROSBY AND BISHOP, 1928, *Mem. Cornell Univ. Agr. Exp. Sta.*, no. 101, p. 1041. EMERTON, 1930, *Publ. Nantucket Maria Mitchell Assoc.*, vol. 3, p. 163. WORLEY AND PICKWELL, 1931, *Univ. Nebraska Studies*, vol. 27, p. 31. BANKS, NEWPORT, AND BIRD, 1932, *Publ. Univ. Oklahoma Biol. Surv.*, vol. 4, p. 22. WORLEY, 1932, *Univ. Washington Publ. Biol.*, vol. 1, no. 1, p. 26. ELLIOTT, 1932, *Proc. Indiana Acad. Sci.*, vol. 41, p. 424. CHICKERING AND BACORN, 1933, *Papers Michigan Acad. Sci.*, vol. 17, p. 523. KASTON, 1938, *Bull. Connecticut Geol. Nat. Hist. Surv.*, no. 60, p. 186. KURATA, 1939, *Canadian Field Nat.*, vol. 53, p. 81. COMSTOCK, 1940, *The spider book*, rev. ed., p. 368, figs. 353-354 (male, female). FOX, 1940, *Proc. Biol. Soc. Washington*, vol. 53, p. 42. KURATA, 1941, *Univ. Toronto Studies, biol. ser.*, no. 48, p. 109. ROEWER, 1942, *Katalog der Araneae*, vol. 1, p. 504. LOWRIE, 1942, *Bull. Chicago Acad. Sci.*, vol. 6, p. 169. TRUMAN, 1942, *Proc. Pennsylvania Acad. Sci.*, vol. 16, p. 27. KASTON, 1945, *Amer. Mus. Novitates*, no. 1292, p. 5, fig. 15 (female). MUMA AND JEFFERS, 1945, *Ann. Ent. Soc. Amer.*, vol. 38, p. 248. MUMA, 1945, *Bull. Univ. Maryland Agr. Exp. Sta.*, no. A38, p. 28. GERTSCH, 1946, *in Procter, Biological survey of the Mount Desert region*, pt. 7, p. 520. ARCHER, 1946, *Paper Alabama Mus. Nat. Hist.*, no. 22, p. 48. KASTON, 1948, *Bull. Connecticut Geol. Nat. Hist. Surv.*, no. 70, p. 104, figs. 125, 146-147. LOWRIE, 1948, *Ecology*, vol. 29, p. 338. ELLIOTT, 1953, *Proc. Indiana Acad. Sci.*, vol. 62, p. 309.

Allotheridion (Allotheridion) murarium, ARCHER, 1950, *Paper Alabama Mus. Nat. Hist.*, no. 30, p. 18, pl. 3, fig. 5 (male).

Allotheridion murarium, BARNES, 1953, *Amer. Mus. Novitates*, no. 1632, p. 3; 1953, *Ecol. Monogr.*, vol. 23, p. 321. Levi and Field, 1954, *Amer. Midland Nat.*, vol. 51, p. 442.

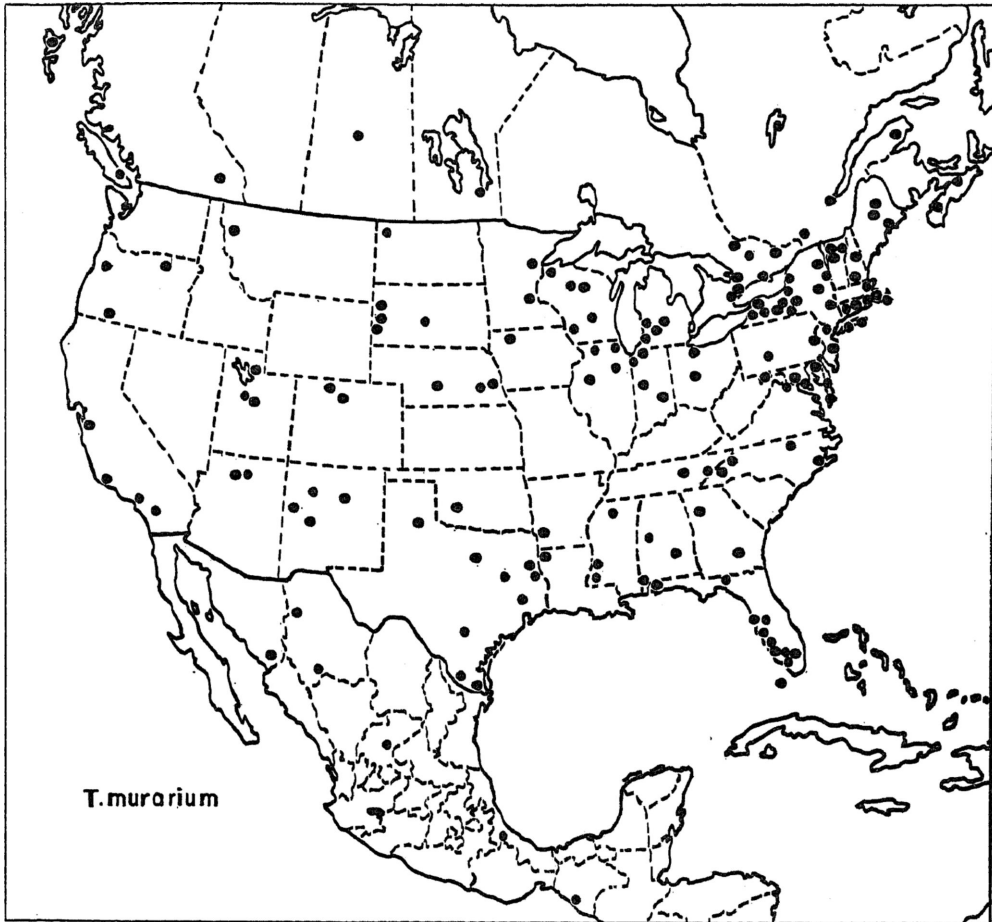
Theridion (Allotheridion) murarium, KASTON, 1953, *How to know the spiders*, p. 168, fig. 421 (female).

FEMALE: Carapace yellow-white, with black border and median black stripe which narrows posteriorly. Eye region black. Sternum yellow-white, with median black stripe and dark spots along margin. Legs yellow-white, with black rings or marks at middle or distal

ends of segments. Dorsum of abdomen has light, median, scalloped margins as in *T. differens*. Sides of band darker. Sides and venter gray to white, sometimes with a black spot on venter. Anterior median eyes about one and one-third diameters apart, one-half of a diameter from laterals. Posterior eyes one

tarsus, 1.82 mm.; tarsus, 0.59 mm.; second patella and tibia, 1.30 mm.; third, 0.85 mm. fourth, 1.36 mm.

MALE: Similar in color to female. Palpi illustrated by figures 57, 58, and 62. Total length of males, 2.1–3.2 mm. Measurements of a male from Wisconsin: total length, 2.7



MAP 5. Distribution of *Theridion murarium*.

diameter apart. Epigynum two circular discs separated by two and one-half diameters (fig. 63). The connecting ducts loop towards each other; sometimes they touch. In a specimen from northern Wisconsin, these loops are missing and the ducts separate towards the sides after leaving opening. Total length, 2.8–4.3 mm. A female from Wisconsin measured: total length, 3.2 mm.; carapace 1.17 mm. long, 1.00 mm. wide; first femur, 1.89 mm.; patella and tibia, 2.10 mm.; meta-

mm.; carapace 1.32 mm. long, 1.11 mm. wide; first femur, 2.20 mm.; patella and tibia, 2.56 mm.; metatarsus, 2.32 mm.; tarsus, 0.68 mm.; second patella and tibia, 1.71 mm.; third, 0.98 mm.; fourth, 1.40 mm.

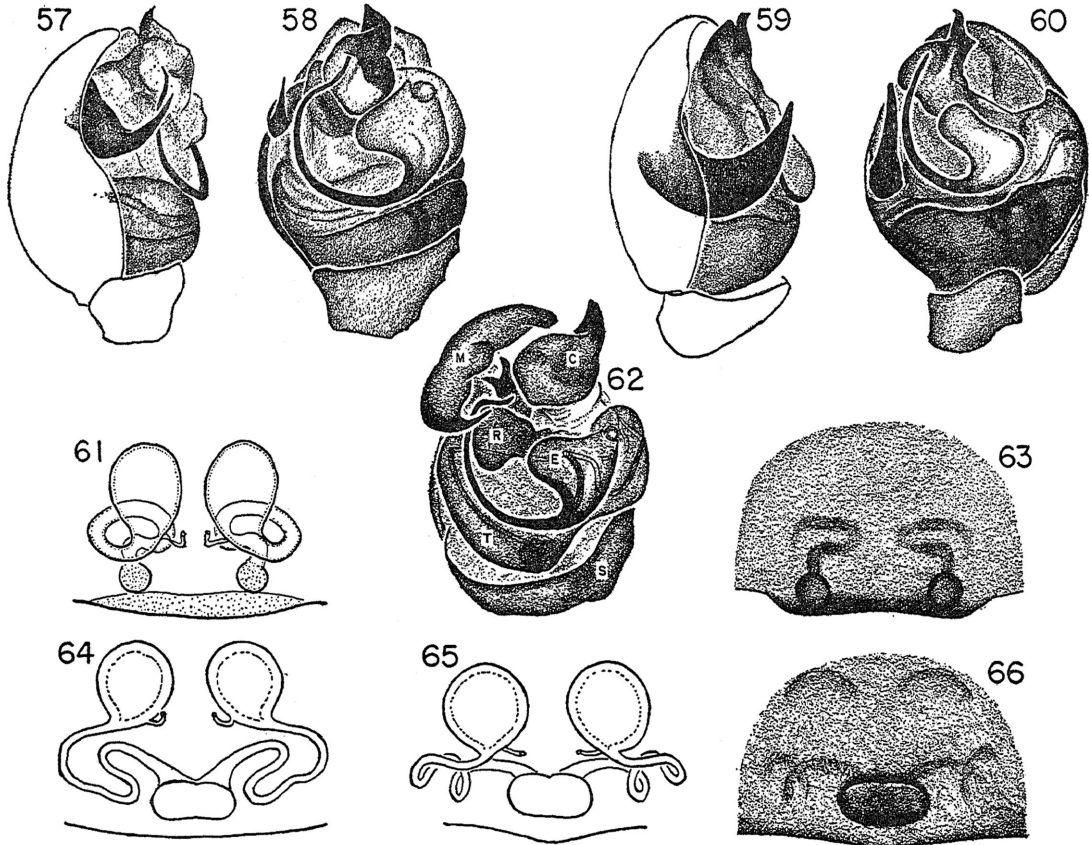
Theridion murarium is found on branches of bushes and trees, and on fences and buildings. In Connecticut specimens were observed to over-winter as adults (Kaston, 1948). In New Mexico this species has been collected in the sweeping of junipers and yellow pines.

TYPE LOCALITY: Male and female syntypes from Salem, Massachusetts, from fences, June 25 (J. H. Emerton), in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Southern Canada south to Chiapas. Most

Ferdinandeum für Tirol, ser. 3, vol. 17, p. 246. SCHENKEL, 1939. Ark. Zool., vol. 30, no. 24, p. 6, fig. 1 (male, female).

Theridion maxillare EMERTON, 1913, Trans. Connecticut Acad. Sci., vol. 18, p. 212, pl. 1, fig. 1 (male) (*sub Theridium*). CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp.



FIGS. 57, 58. *Theridion murarium* Emerton, left palpus. 57. Mesal view. 58. Ventral view.

FIGS. 59, 60. *Theridion petraeum* L. Koch, palpus. 59. Mesal view. 60. Ventral view.

FIGS. 61–63. *Theridion murarium* Emerton. 61. Female genitalia, dorsal view. 62. Palpus, ventral view, expanded. 63. Epigynum.

FIGS. 64–66. *Theridion petraeum* L. Koch. 64, 65. Female genitalia, dorsal view. 64. Utah. 65. Maine. 66. Epigynum, Maine.

Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix; S, subtegulum; T, tegulum.

common in eastern United States. Quebec: Gaspé National Park. Saskatchewan: Prince Albert (Emerton, 1920). British Columbia: Masset (Emerton, 1920). Chiapas: La Zucualpa (A. Petrunkevitch).

RECORDS: See Appendix.

Theridion petraeum L. Koch

Figures 59, 60, 64–66; map 6

Theridion petraeum L. KOCH, 1872, Zeitschr.

Sta., no. 101, p. 1041. GERTSCH, 1946, in Procter, Biological survey of the Mount Desert region, pt. 7, p. 520. Not *Theridion maxillare* Brullé, 1832. New synonymy.

Theridion maxillatum ROEWER, 1942, Katalog der Araneae, vol. 1, p. 503. New name for *Theridion maxillare*, preoccupied. New synonymy.

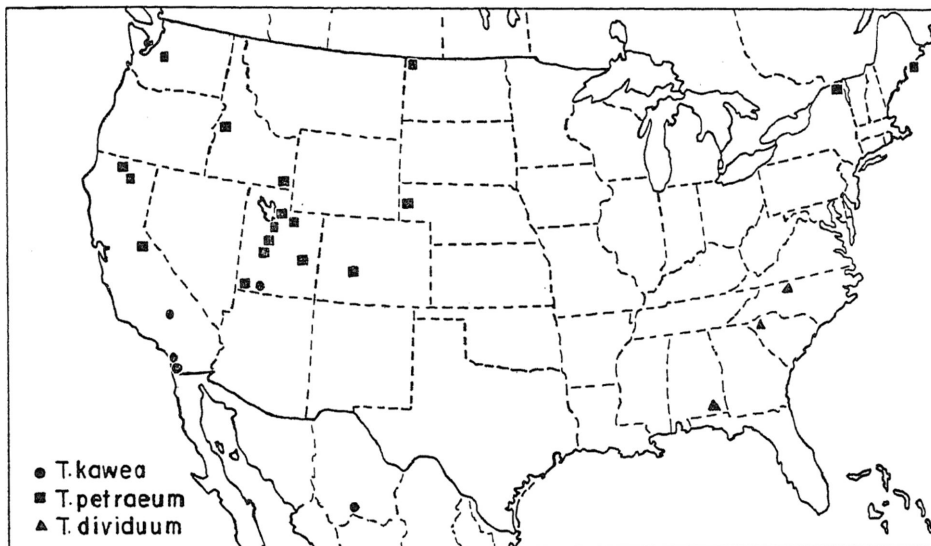
FEMALE: Carapace yellow-white, with narrow median line and narrow black margin. Sternum yellow-white, dusky on sides. Legs

yellow-white, sometimes with black narrow rings at middle and ends of segments. Dorsum of abdomen has a more or less distinct white median band with scalloped margins. Sides white. Venter white, with a triangular, anteriorly pointing black spot between spinnerets and epigynum. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior medians one diameter apart, one or less diameter from laterals.

males from those of *Theridion transgressum* where sympatric.

This species has been found in low bushes in Maine (Emerton, 1913), on potatoes in Nebraska, and under logs in Colorado.

TYPE LOCALITY: *Theridion petraeum* was collected from under stones near K  thai, Tirol, Austria. Male holotype of *T. maxillare* from low bushes in the large sphagnum bog at Southeast Harbor, Mount Desert Island,



MAP 6. North American distribution of *Theridion petraeum* and distribution of *T. dividuum* and *T. kawea*.

Epigynum an oval dark plate (fig. 66). Total length, 2.0–3.5 mm. Measurements of a female from Maine: total length, 2.6 mm.; carapace 0.91 mm. long, 0.81 mm. wide; first femur, 1.72 mm.; patella and tibia, 1.87 mm.; metatarsus, 1.52 mm.; tarsus, 0.60 mm.; second patella and tibia, 1.17 mm.; third, 0.78 mm.; fourth, 1.24 mm.

MALE: Darker in color than female. Abdomen on each side of pedicel with a sclerotized area. Palpus illustrated by figures 59 and 60. Total length of males, 2.5–2.9 mm. Measurements of a specimen from Nebraska: total length, 2.7 mm.; carapace 1.06 mm. long, 0.97 mm. wide; first femur, 2.21 mm.; patella and tibia, 2.65 mm.; metatarsus, 1.98 mm.; tarsus, 0.75 mm.; second patella and tibia, 1.46 mm.; third, 0.86 mm.; fourth, 1.47 mm.

The triangular ventral black spot and the internal genitalia can be used to separate fe-

Maine, July 1, 1909, is in the Museum of Comparative Zo  logy.

DISTRIBUTION AND AMERICAN MARGINAL RECORDS: Central and southern Europe, North Africa (Wiehle, 1937; Roewer, 1942), Ontario, northern United States. Ontario: "Gunchennon." Maine: Mount Desert Island (W. Procter). Washington: Yakima. California: McGee Creek, Mono County (W. H. Pearce).

RECORDS: See Appendix.

Theridion dividuum Gertsch and Archer

Figures 67, 68, 71–74; map 6

Theridion dividuum GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 6, fig. 29 (male). ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 50 (in part, not female).

Allotheridion (Allotheridion) dividuum, ARCHER, 1950, *ibid.*, no. 30, p. 20.

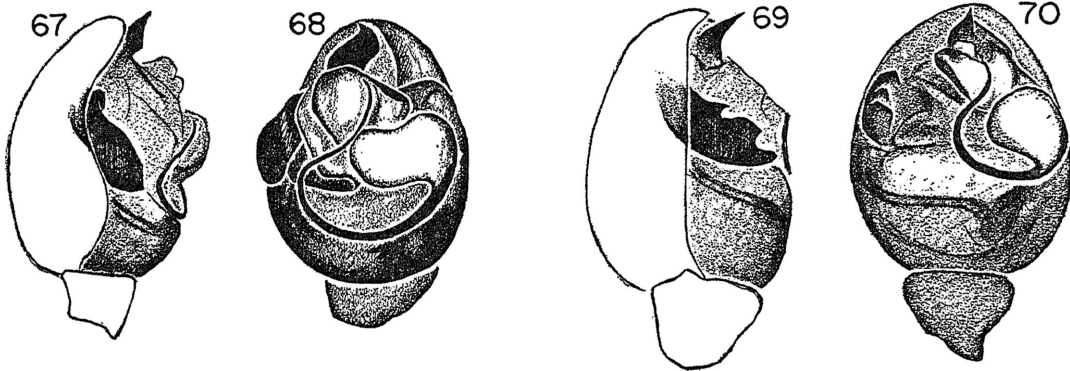
FEMALE: Carapace yellow, anterior portion, including eye region and clypeus, black (fig. 71); legs yellow. Abdomen yellow-white, with a dorsal black spot above spinnerets and a black spot on venter (fig. 74). Eyes very small, subequal in size. Anterior median eyes one and one-half diameters apart, three-quarters of a diameter from laterals. Posterior medians more than two diameters apart, two diameters from laterals. Epigynum with an oval sclerotized plate (fig. 73). Measure-

County: (R. D. Barnes). *South Carolina:* Pickens County: Two miles south of Easley (R. D. Barnes).

***Theridion dulcineum* Gertsch and Archer**

Figures 69, 70, 75, 76; map 16

Theridion dulcineum GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 4, figs. 11, 12, 17 and 18 (male, female). CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 50. MUMA, 1945, Bull. Univ. Maryland, Agr. Exp. Sta., no. A38, p. 28. ARCHER, 1946,



FIGS. 67, 68. *Theridion dividuum* Gertsch and Archer, palpus. 67. Mesal view. 68. Ventral view.

FIGS. 69, 70. *Theridion dulcineum* Gertsch and Archer, palpus. 69. Mesal view. 70. Ventral view.

ments: total length, 1.5 mm.; carapace 0.70 mm. long, 0.59 mm. wide; first femur, 0.91 mm.; patella and tibia, 0.90 mm.; metatarsus, 0.70 mm.; tarsus, 0.33 mm.; second patella and tibia, 0.62 mm.; third, 0.43 mm.; fourth 0.66 mm.

MALE: Color as in female. Palpus illustrated by figures 67 and 68. Measurements of a specimen from North Carolina: total length, 1.5 mm.; carapace 0.65 mm. long, 0.57 mm. wide; first femur, 0.98 mm.; patella and tibia, 1.04 mm.; metatarsus, 0.81 mm.; tarsus, 0.43 mm.; second patella and tibia, 0.68 mm.; third, 0.45 mm.; fourth, 0.71 mm.

This species can be readily distinguished by its coloration.

TYPE LOCALITY: Male holotype from Pea River Project, Dale County, Alabama, summer, 1940 (A. F. Archer), in the American Museum of Natural History.

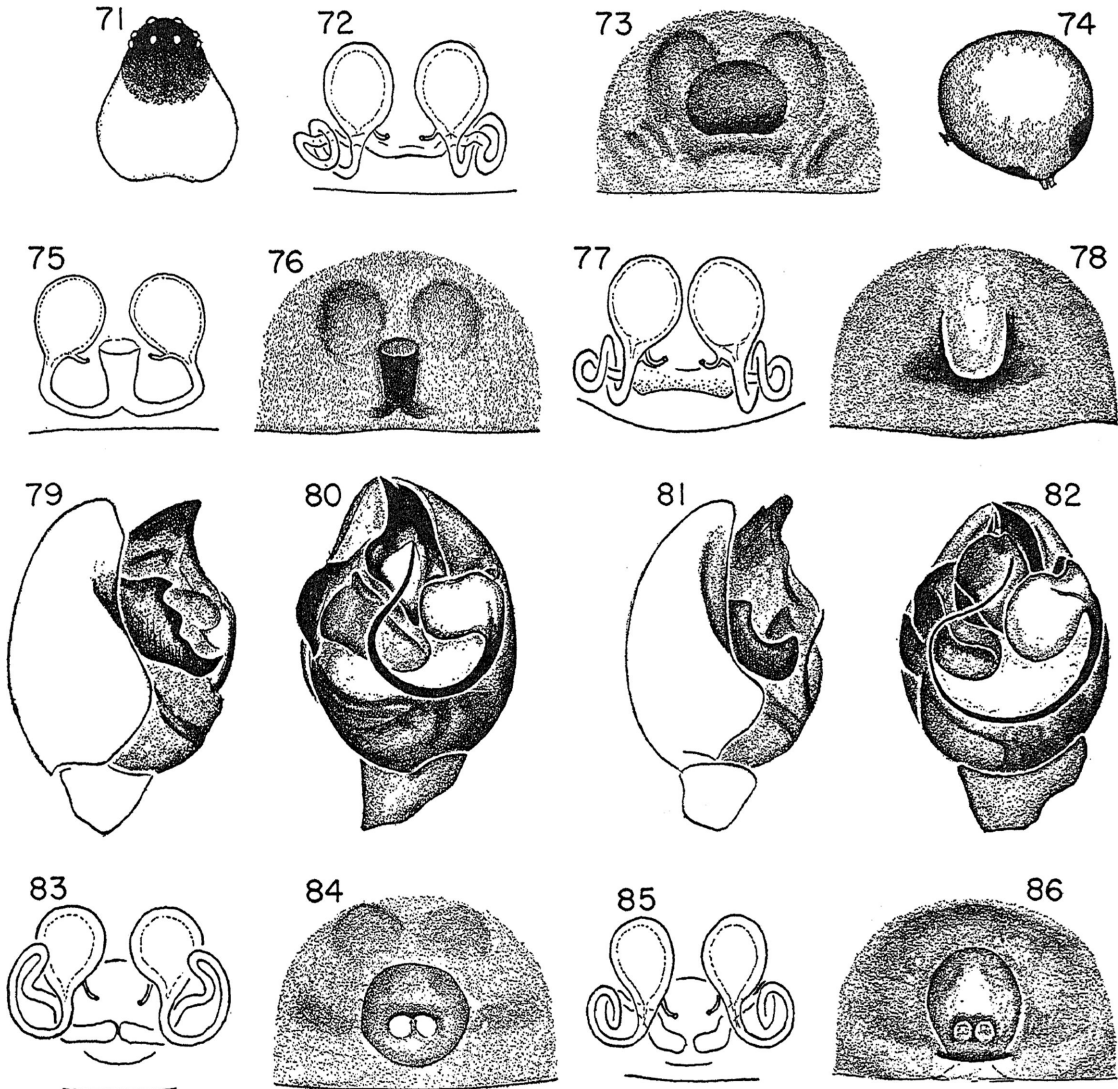
DISTRIBUTION: Southeastern states.

RECORDS: *North Carolina:* Alamance

Paper Alabama Mus. Nat. Hist., no. 22, p. 46. GIBSON, 1947, Ohio Jour. Sci., vol. 47, p. 39.

Allotheridion (Allotheidion) dulcineum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 20.

FEMALE: Carapace, sternum white. Leg white, with some narrow black rings at ends of segments. Abdomen whitish, with two rows of white pigment spots on dorsum, smaller spots on sides. Two dusky marks above spinnerets. Sides with a dusky mark and some white spots; venter with white spots. Anterior median eyes one diameter apart, almost touching laterals. Posterior medians one-half of a diameter apart, one-third of a diameter from laterals. Sternum convex, wider than long. Epigynum with indistinct openings anterior to a dark area (fig. 76). Total length, 1.0–1.2 mm. Measurements of a female: total length, 1.2 mm.; carapace 0.47 mm. long, 0.46 mm. wide; first femur, 0.58 mm.; patella and tibia, 0.55 mm.; metatarsus,



FIGS. 71-74. *Theridion dividuum* Gertsch and Archer. 71. Carapace of female. 72. Female genitalia, dorsal view. 73. Epigynum. 74. Abdomen of a female, lateral view.

FIGS. 75, 76. *Theridion dulcineum* Gertsch and Archer. 75. Female genitalia, dorsal view. 76. Epigynum.

FIGS. 77-80. *Theridion llano*, new species. 77. Female genitalia, dorsal view. 78. Epigynum. 79. Palpus, mesal view. 80. Palpus, ventral view.

FIGS. 81-86. *Theridion rabuni* Chamberlin and Ivie. 81. Palpus, mesal view. 82. Palpus, ventral view. 83. Female genitalia, dorsal view, Maryland. 84. Epigynum, Maryland. 85. Female genitalia, dorsal view, Utah. 86. Epigynum, Utah.

0.37 mm.; tarsus, 0.29 mm.; second patella and tibia, 0.46 mm.; third, 0.34 mm.; fourth, 0.50 mm.

MALE: Eyes slightly smaller than in female. Palpus weakly sclerotized and difficult

to study (figs. 69, 70). Measurements: total length, 1.2 mm.; carapace 0.52 mm. long, 0.51 mm. wide; first femur, 0.89 mm.; patella and tibia, 0.88 mm.; metatarsus, 0.56 mm.; tarsus, 0.39 mm.; second patella and tibia,

0.59 mm.; third, 0.43 mm.; fourth, 0.63 mm.

Webs of this species are found in dead leaves of leaf litter (Archer, 1946).

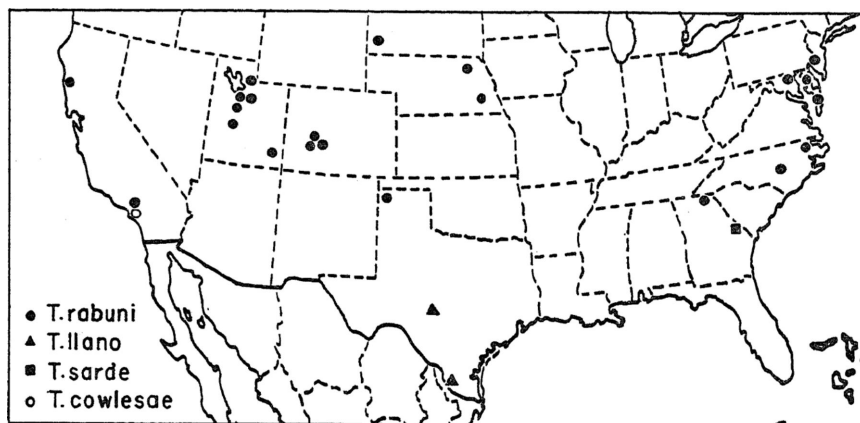
TYPE LOCALITY: Male holotype, female allotype, two female paratypes, and two immature male paratypes from Cypress Creek, Lauderdale County, Alabama, September, 1940 (A. F. Archer), are in the American Museum of Natural History.

DISTRIBUTION: Southeastern states

RECORDS: *Maryland:* Prince Georges County (Muma, 1945), College Park (M. H.

pression with posterior and lateral borders. Total length, 1.5–1.8 mm. Measurements of female allotype: total length, 1.5 mm.; carapace 0.55 mm. long, 0.65 mm. wide; first femur, 1.10 mm.; patella and tibia, 1.15 mm.; metatarsus, 0.81 mm.; tarsus, 0.48 mm.; second patella and tibia, 0.71 mm.; third, 0.50 mm.; fourth, 0.78 mm.

MALE: Eyes subequal in size. Palpus illustrated by figures 79 and 80. Measurements of holotype: total length, 1.7 mm.; carapace 0.70 mm. long, 0.68 mm. wide; first femur,



MAP 7. Distribution of *Theridion llano*, *T. rabuni*, *T. sarde*, and *T. cowlesae*.

Muma). *Tennessee:* Shelby County: (Gibson, 1947). *Georgia:* Hall County: Five miles northeast of Gainesville (W. Ivie).

***Theridion llano*, new species**

Figures 77–80; map 7

FEMALE: Carapace white, with median dusky band and dusky margin. Eyes reddish. Sternum white, with dusky spots along margin. Legs white, with ventral reddish spots at middle and ends of segments and a red line on dorsal surface. Abdomen dusky, with an indistinct median white band; venter darker dusky except for area behind epigastric furrow which is whitish or has a pair of white spots. Anterior median eyes one and one-quarter diameters apart, one-quarter of a diameter from laterals. Posterior medians one diameter apart, three-quarters of a diameter from laterals. Anterior medians slightly smaller than others. Epigynum (fig. 78) a de-

pression with posterior and lateral borders. Total length, 1.5–1.8 mm. Measurements of female allotype: total length, 1.5 mm.; carapace 0.55 mm. long, 0.65 mm. wide; first femur, 1.10 mm.; patella and tibia, 1.15 mm.; metatarsus, 0.81 mm.; tarsus, 0.48 mm.; second patella and tibia, 0.71 mm.; third, 0.50 mm.; fourth, 0.78 mm.

The genitalia of *Theridion llano* clearly separate the species from related ones.

TYPE LOCALITY: Male holotype, female allotype, and one male paratype from Llano, Llano County, Texas, July 9, 1936 (L. I. Davis).

DISTRIBUTION: Texas.

RECORDS: *Texas:* McCook, April 18, 1936 (D. and S. Mulaik), one female. Starr County: Five miles east of Rio Grande City, May, 31, 1939 (D. Mulaik), one female.

***Theridion rabuni* Chamberlin and Ivie**

Figures 81–86; map 7

Theridion reticulatum MUMA, 1944, Amer. Mus. Novitates, no. 1257, p. 7, figs. 9, 10 (male); 1945, Proc. Biol. Soc. Washington, vol. 58, p. 96,

fig. 10 (female); 1945, Bull. Univ. Maryland Agr. Exp. Sta., no. A38, p. 29. MUMA AND MUMA, 1949, Ecology, vol. 30, p. 489. Not *Theridion reticulatum* HAHN, 1834 (= *Siemonyphantes lineatus* Linnaeus); not *Theridion reticulatum* C. L. Koch, 1845 (= *Neottiura bimaculata* Linnaeus).

Theridion rabuni CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 53, figs. 75-77 (female). New synonymy.

Theridion mumae ROEWER, 1951, Abhandl. Naturwiss. Ver. Bremen, vol. 32, p. 455. New name for *Theridion reticulatum* Muma, pre-occupied.

FEMALE: Carapace yellow-white, dusky in center, a black line around margin. Sternum yellow-white, dusky on sides. Legs yellow-white, with some black marks at ends of segments. Dorsum of abdomen with a white scalloped dorsal band. Sides dusky, center dusky to black, with two white spots side by side. Anterior median eyes one or more diameters apart, one-third of a diameter from laterals. Posterior medians three quarters of a diameter apart, one diameter from laterals. Anterior medians sometimes slightly smaller than others. Epigynum (figs. 84, 86) with a large subcircular shallow depression, quite variable in size and shape, containing two more or less distinct openings. The internal genitalia are illustrated by figures 83 and 85. Total length of females, 1.5 mm.-1.7 mm. Measurements of a female from Maryland: total length, 1.6 mm.; carapace 0.65 mm. long, 0.61 mm. wide; first femur, 0.94 mm.; patella and tibia, 0.99 mm.; metatarsus, 0.73 mm.; tarsus, 0.41 mm.; second patella and tibia, 0.63 mm.; third, 0.49 mm.; fourth, 0.78 mm.

MALE: Color as in female or lighter; a Texas specimen almost white. Palpus illustrated by figures 81 and 82. Western specimens have median apophysis slightly heavier and embolus slightly shorter. Total length of males, 1.3-1.9 mm. Measurements of a male from Maryland: total length, 1.9 mm.; carapace 0.74 mm. long, 0.67 mm. wide; first femur, 1.30 mm.; patella and tibia, 1.40 mm.; metatarsus, 1.03 mm.; tarsus, 0.44 mm.; second patella and tibia, 0.89 mm.; third, 0.58 mm.; fourth, 0.89 mm.

There is considerable geographic variation in the genitalia. Figure 84 illustrates the epigyna of the eastern forms; figure 86, those of the western.

This species has been found on the under sides of stones in the Colorado mountains and is abundant locally. Living specimens varied in color from pink, brown, and greenish to gray. Muma (1944, 1945) collected his specimens by sweeping a field.

TYPE LOCALITY: Male holotype of *Theridion reticulatum* from College Park, Maryland, November 6, 1941 (E. Beardsley), in the American Museum of Natural History. Female holotype of *T. rabuni* Chamberlin and Ivie from Tallulah Falls, Georgia, April 27, 1943 (W. Ivie), in the University of Utah collection.

DISTRIBUTION AND MARGINAL RECORDS: United States. New Jersey: Glassboro, Gloucester County (W. F. Rapp). South Dakota: Blue Bell, 4900 feet, Custer County (H. and L. Levi). California: Hopland, Mendocino County (W. J. and J. W. Gertsch); Topanga Canyon, Los Angeles County (W. Ivie).

RECORDS: See Appendix.

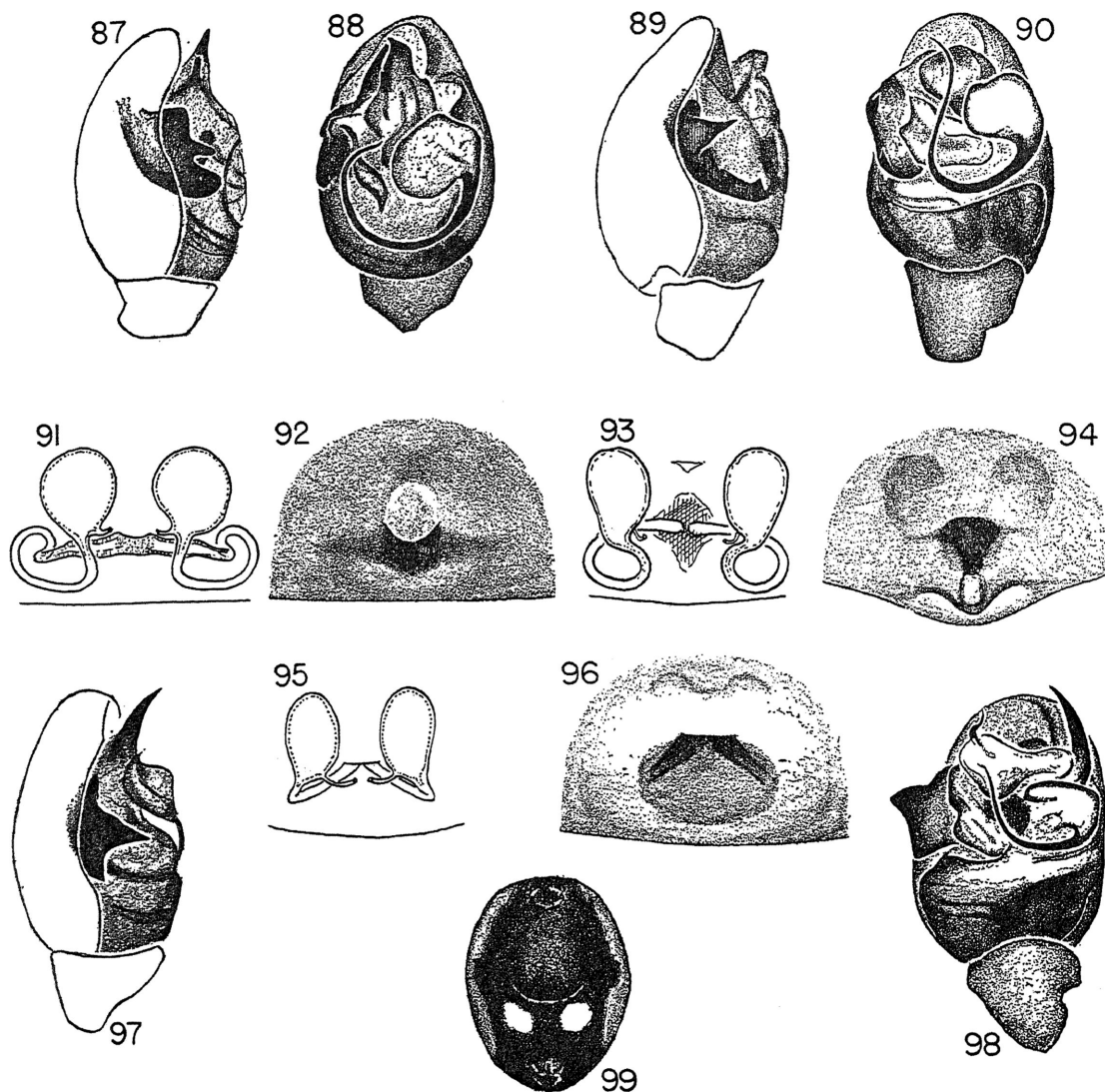
Theridion cinctipes Banks

Figures 87, 88, 99; map 11

Theridion cinctipes BANKS, 1898, Canadian Ent., vol. 30, p. 186 (sub *Theridium*); 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 193. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502.

MALE: Carapace yellow-white, with median dusky mark and narrow black border. Sternum dusky yellow. Legs yellow-white, with black spots at distal ends of segments. Dorsum of abdomen white or with a scalloped median band; venter black, with two white spots (fig. 99). Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior medians one-half of a diameter apart, two-thirds of a diameter from laterals. Sternum convex. Palpus very small, illustrated by figures 87 and 88. Total length of males, 1.4-1.7 mm. Measurements of a male: total length, 1.4 mm.; carapace 0.62 mm. long, 0.55 mm. wide; first femur, 1.32; patella and tibia, 1.37 mm.; metatarsus, 1.14 mm.; tarsus, 0.52 mm.; second patella and tibia, 0.81 mm.; third, 0.53 mm.; fourth, 0.83 mm.

TYPE LOCALITY: Male holotype in the Museum of Comparative Zoology. Banks gives



FIGS. 87, 88. *Theridion cinctipes* Banks, left palpus. 87. Mesal view. 88. Ventral view.
 FIGS. 89, 90. *Theridion sarde* Chamberlin and Ivie, palpus. 89. Mesal view. 90. Ventral view.
 FIGS. 91, 92. *Theridion cowlesae*, new species. 91. Female genitalia, dorsal view. 92. Epigynum.
 FIGS. 93, 94. *Theridion timpanogos*, new species. 93. Female genitalia, dorsal view. 94. Epigynum.
 FIGS. 95-98. *Theridion myersi*, new species. 95. Female genitalia, dorsal view. 96. Epigynum. 97. Palpus, mesal view. 98. Palpus, ventral view.
 FIG. 99. *Theridion cinctipes* Banks, abdomen of male, ventral view.

Brazos County, Texas, as the type locality, but the type specimen is labeled as coming from Brownwood, Brown County, Texas.

DISTRIBUTION: Texas and Jalisco.

RECORDS: Texas: Jasper County: Five miles north of Jasper, June 6, 1936 (S.

Mulaik), one male. Jalisco: San Pedro Tlaquepaque, June 19, 1941 (L. I. Davis), one male.

Theridion sarde Chamberlin and Ivie

Figures 89, 90; map 7

Theridion sardis CHAMBERLIN AND IVIE, 1944,

Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 54, figs. 78-80.

MALE: Carapace yellow-white, with median dusky line; eye region black. Sternum yellow-white, dusky on sides. Legs yellow-white. Dorsum of abdomen with white spots and a series of black spots delimiting median band; venter and sides dusky. Anterior median eyes one diameter apart, almost touching laterals. Posterior eyes two-thirds of a diameter apart. Anterior medians slightly larger than others. Sternum convex. Palpus illustrated by figures 89 and 90. Measurements: total length, 1.20 mm.; carapace 0.54 mm. long, 0.52 mm. wide; first femur, 0.78 mm.; patella and tibia, 0.95 mm.; metatarsus, 0.56 mm.; tarsus, 0.33 mm.; second patella and tibia, 0.66 mm.; third, 0.50 mm.; fourth, 0.65 mm.

TYPE LOCALITY: Male holotype from Brier Creek, 7 miles north of Sylvania, Georgia, April 12, 1943 (W. Ivie), is in the University of Utah collection.

DISTRIBUTION: Known from type locality only.

***Theridion cowlesae*, new species**

Figures 91, 92; map 7

FEMALE: Carapace yellow-white, with broad median dark band and wide dusky margin. Labium dark; sternum dusky; coxae yellow-white. Legs yellow-white, with some black spots on middle and distal ends of segments. Dorsum of abdomen spotted gray, with a median band which has slightly scalloped parallel margins. Venter black, with two white spots side by side as in *T. cinctipes* (fig. 99). Anterior median eyes one diameter apart, almost touching laterals. Posterior eyes two-thirds of a diameter apart. Epigynum (fig. 92) has an anterior depression and a posterior dark area. Measurements of holotype: total length, 1.3 mm.; carapace 0.55 mm. long, 0.52 mm. wide; third patella and tibia, 0.39 mm.; fourth, 0.65 mm.

This species differs from other females in its epigynum (fig. 92). However, it may be the female of *Theridion cinctipes* Banks.

TYPE LOCALITY: Female holotype from West Los Angeles, Los Angeles County, California, March or April, 1943 (C. B. Cowles).

DISTRIBUTION: Known only from type locality.

***Theridion timpanogos*, new species**

Figures 93, 94; map 10

FEMALE: Carapace yellow-white, with marginal dusky line. Sternum yellow-white, sides slightly dusky. Legs yellow-white, with narrow dusky black rings at middle and ends of segments. Abdomen covered by small white pigment spots. Anterior median eyes one diameter apart, almost touching laterals. Posterior eyes two-thirds of a diameter apart. Anterior medians slightly smaller than others. Epigynum (fig. 94), which distinguishes this species from *Theridion cowlesae*, with an elevated dark area anterior to an opening. Measurements: total length, 1.3 mm.; carapace, 0.52 mm. long, 0.52 mm. wide; first femur, 0.88 mm.; patella and tibia, 0.88 mm.; metatarsus, 0.61 mm.; tarsus, 0.36 mm.; second patella and tibia, 0.65 mm.; third, 0.45 mm.; fourth, 0.66 mm.

TYPE LOCALITY: Female holotype from Timpanogos, American Fork Canyon, Utah County, Utah, May 12, 1934 (W. Ivie).

DISTRIBUTION: Known only from type locality.

***Theridion myersi*, new species**

Figures 95-98; map 12

FEMALE: Carapace yellow-white; eye region and area immediately posterior to it black; a narrow median black band, sides dusky. Clypeus, distal portions of chelicerae, labium, and maxillae black. Sternum and legs yellow-white. Dorsum of abdomen with two white zigzag lines on dusky and white spotted background. Sides gray, venter yellow-white. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior median eyes less than one diameter apart, one diameter from laterals. Epigynum (fig. 96) a swollen area with an oval plate on the posterior face. Two connecting ducts visible through the plate. Measurements of female allotype: total length, 1.7 mm.; carapace 0.62 mm. long, 0.62 mm. wide; first femur, 1.26 mm.; patella and tibia, 1.32 mm.; metatarsus, 0.98 mm.; tarsus, 0.45 mm.; second patella and tibia, 0.80 mm.; third, 0.53 mm.; fourth, 0.80 mm.

MALE: Carapace all yellow-white; white dorsal abdominal lines straight. Palpus illustrated by figures 97 and 98. Measurements of male holotype: total length, 1.8 mm.; carapace 0.72 mm. long, 0.64 mm. wide; second patella and tibia, 0.94 mm.

The female allotype has only seven eyes; a posterior median eye is missing. The genitalia can be used to separate this species from *Theridion atkinsi* Bryant, known from Cuba.

TYPE LOCALITY: Male holotype and female allotype from Fort Myers, Lee County, Florida, January 12, 1942.

DISTRIBUTION: Florida and Tamaulipas to Oaxaca.

RECORDS: *Florida:* Lee County: Sanibel (Leon). *Tamaulipas:* Kilometer 681, Laredo Road near Ciudad Victoria, August 20, 1947 (C. and M. Goodnight), one female. *Nuevo León:* Monterrey, June 10, 1936 (L. I. Davis), one female. *Oaxaca:* Ixtepec, September 2, 1947 (B. Malkin).

***Theridion differens* Emerton**

Figures 100, 101, 104-106; map 8

Theridion differens EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 9, pl. 1, figs. 1, 1a, 1b (male, female) (*sub Theridium*). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 52, pl. 2, fig. 30 (male, female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519; 1892, Proc. Ent. Soc. Washington, vol. 2, p. 155. BANKS, 1892, Proc. Acad. Nat. Sci. Philadelphia, p. 30; 1895, Jour. New York Ent. Soc., vol. 3, p. 83. EMERTON, 1902, The common spiders, p. 114, figs. 263-266 (male, female). BANKS, 1904, Proc. California Acad. Sci., ser. 3, vol. 3, p. 343; 1904, Proc. Acad. Nat. Sci. Philadelphia, vol. 56, p. 125. SCHEFFER, 1906, Trans. Kansas Acad. Sci., vol. 20, p. 127. BANKS, 1907, Indiana Dept. Geol. Nat. Resources, 31st Ann. Rept., p. 738. BRYANT, 1908, Occas. Papers Boston Soc. Nat. Hist., vol. 7, p. 12. EMERTON, 1909, Trans. Connecticut Acad. Sci., vol. 14, p. 180, pl. 1, fig. 7 (female). BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 194. COMSTOCK, 1912, The spider book, p. 352, fig. 351 (male, female). EMERTON, 1913, Appalachia, vol. 12, p. 155. BANKS, 1916, Proc. U. S. Natl. Mus., vol. 51, p. 68; 1917, Ent. News, vol. 28, p. 60. BARROWS, 1918, Ohio Jour. Sci., vol. 18, p. 304. EMERTON, "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 310; 1925, Canadian Field Nat., vol. 39, p. 140. MOLES AND JOHNSON, 1921, Jour. Ent.

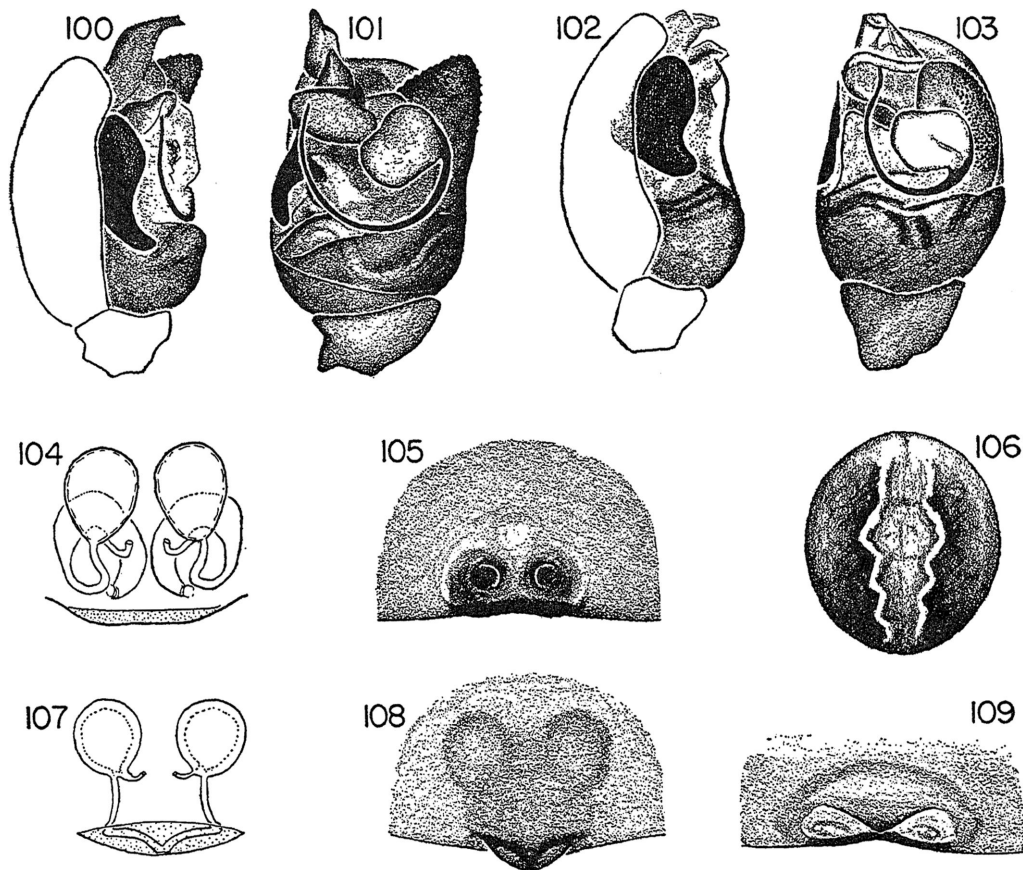
and Zool., vol. 13, p. 41. BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 181. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101, p. 1041. EMERTON, 1930, Publ. Nantucket Maria Mitchell Assoc., vol. 3, p. 163. ELLIOTT, 1930, Ohio Jour. Sci., vol. 30, p. 5. WORLEY AND PICKWELL, 1931, Univ. Nebraska Studies, vol. 27, p. 30. BANKS, NEWPORT, AND BIRD, 1932, Publ. Univ. Oklahoma Biol. Surv., vol. 4, p. 22. WORLEY, 1932, Univ. Washington Publ. Biol., vol. 1, no. 1, p. 26. ELLIOTT, 1932, Proc. Indiana Acad. Sci., vol. 41, p. 424. CHICKERING, 1934, Papers Michigan Acad. Sci., vol. 19, p. 578. KASTON, 1938, Bull. Connecticut Geol. Nat. Hist. Surv., no. 60, p. 186. KURATA, 1939, Canadian Field Nat., vol. 53, p. 81. FOX, 1940, Proc. Biol. Soc. Washington, vol. 53, p. 42. COMSTOCK, 1940, The spider book, rev. ed., p. 367, fig. 351 (male, female). KURATA, 1941, Univ. Toronto Studies, biol. ser., no. 48, p. 109. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502. LOWRIE, 1942, Bull. Chicago Acad. Sci., vol. 6, p. 169. TRUMAN, 1942, Proc. Pennsylvania Acad. Sci., vol. 16, p. 27. KURATA, 1943, Canadian Field Nat., vol. 57, p. 10. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 50. KASTON, 1945, Amer. Mus. Novitates, no. 1292, p. 4, fig. 14 (female). GERTSCH, 1946, in Procter, Biological survey of the Mount Desert region, pt. 7, p. 520. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 46. GIBSON, 1947, Ohio Jour. Sci., vol. 47, p. 39. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 103, figs. 123-124, 144-145, 2016 (male, female). LOWRIE, 1948, Ecology, vol. 29, p. 338. GERTSCH, 1949, American spiders, p. 166. MUMA AND MUMA, 1949, Ecology, vol. 30, p. 489. ELLIOTT, 1953, Proc. Indiana Acad. Sci., vol. 62, p. 309.

Allotheridion (Allotheridion) differens, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 20, pl. 3, fig. 45 (male).

Allotheridion differens, LEVI AND LEVI, 1951, Zoologica, vol. 36, p. 219. LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 441. LOWRIE AND GERTSCH, 1955, Amer. Mus. Novitates, no. 1736, p. 7.

Theridion spirale, MUMA, 1944, Common spiders of Maryland, pl. 13, fig. 4 (female). Not *Theridion spirale* Emerton.

FEMALE: Carapace orange, sometimes yellow. Sternum orange. Legs yellow, sometimes with brown bands on middle and distal ends of tibiae and metatarsi. Dorsum of abdomen usually with a gray to reddish scalloped median dorsal band, bordered by a white line (fig. 106). Sides of dorsum dark brown. Sides



FIGS. 100, 101. *Theridion differens* Emerton, left palpus. 100. Mesal view. 101. Ventral view. FIGS. 102, 103. *Theridion flavonotatum* Becker, palpus. 102. Mesal view. 103. Ventral view. FIGS. 104-106. *Theridion differens* Emerton. 104. Female genitalia, dorsal view. 105. Epigynum. 106. Abdomen of female, dorsal view. FIGS. 107-109. *Theridion flavonotatum* Becker. 107. Female genitalia, dorsal view. 108. Epigynum, ventral view. 109. Epigynum, posterior view.

and venter, white, gray, or brown; epigastric area orange. Sometimes abdomen all white or dark. Anterior median eyes one diameter apart, one-third of a diameter from laterals. Posterior median eyes slightly less or more than one diameter apart, one diameter or more from laterals. Epigynum with two depressions (fig. 105). Total length, 1.6-3.5 mm. A female from Montana measured: total length, 3.2 mm.; carapace 1.14 mm. long, 1.10 mm. wide; first femur, 1.82 mm.; patella and tibia, 1.82 mm.; metatarsus, 1.47 mm.; tarsus, 0.62 mm.; second patella and tibia, 1.19 mm.; third, 0.82 mm.; fourth, 1.26 mm.

MALE: Darker in color than female; legs

dusky orange, abdomen dark gray, sometimes no indications of a pattern. Anterior median eyes slightly larger than others. Conductor of palpus variable in shape. Ectal portion of tegulum extended and rugose (figs. 100, 101). Total length of males, 1.8-2.5 mm. Measurements of a male from Montana: total length, 2.3 mm.; carapace 1.04 mm. long, 0.89 mm. wide; first femur, 1.85 mm.; patella and tibia, 2.08 mm.; metatarsus, 1.66 mm.; tarsus, 0.68 mm.; second patella and tibia, 1.30 mm.; third, 0.80 mm.; fourth, 1.10 mm.

There is considerable variation in color and in the shape of the parts of the palpus.

Theridion differens can be collected on low vegetation, grass, bushes, and small trees.

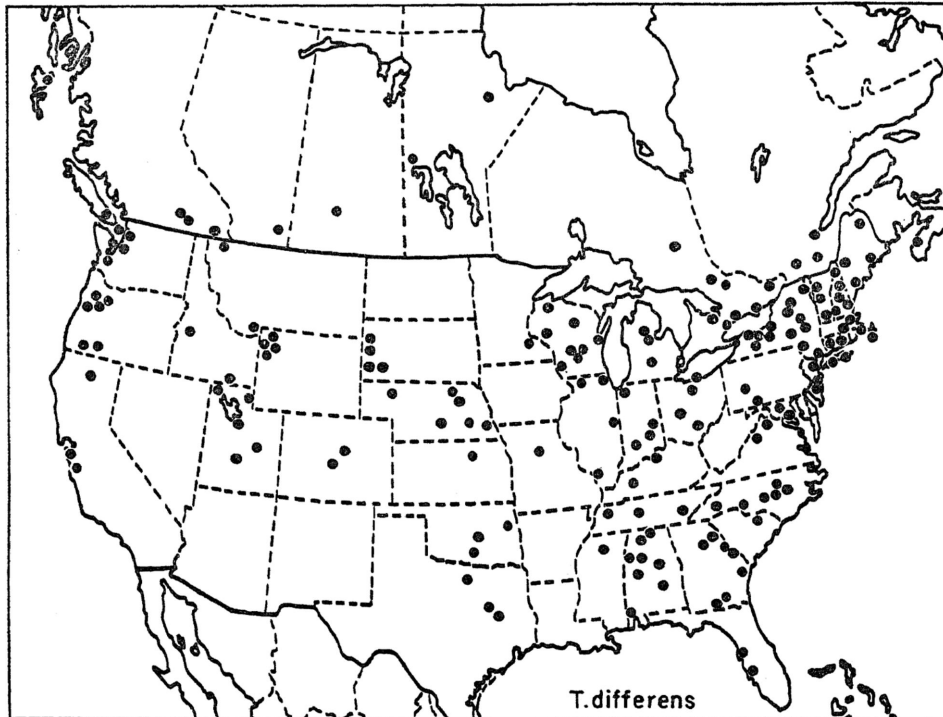
The web has a small tent, not much larger than the spider. An irregular network of lines spreads out from the web (Gertsch, 1949).

TYPE LOCALITY: Male and female syntypes from Saugus, Massachusetts, June 12, 1873 (J. H. Emerton), are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Southern Canada and the United States. Most common in northeastern states. Mani-

araignées, vol. 1, p. 540. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 195. BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 182, pl. 23, fig. 29 (male). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 503. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 50. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 42.

Theridion pascagoulense BECKER, 1879, Ann. Soc. Ent. Belgique, vol. 22, p. 80, pl. 1, fig. 10



MAP 8. Distribution of *Theridion differens*.

toba: Kettle Rapids (J. H. Emerton). British Columbia: Masset (N. Banks). Florida: Tampa (B. Malkin). California: Palo Alto (Banks, 1904).

RECORDS: See Appendix.

***Theridion flavonotatum* Becker**

Figures 102, 103, 107–109; map 9

Theridion flavonotatum BECKER, 1879, Ann. Soc. Ent. Belgique, vol. 22, p. 79, pl. 1, figs. 7–9 (female). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 61, pl. 3, fig. 36 (female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519; ?1892, Proc. Ent. Soc. Washington, vol. 2, p. 155. SIMON, 1894, Histoire naturelle des

(female). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 22, pl. 1, fig. 8 (female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 520. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 202. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 504. New synonymy.

Theridion lyra KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 50, pl. 2, fig. 28 (female). Not *Theridion lyra* Hentz.

Theridion floridense BANKS, 1904, Proc. Acad. Nat. Sci. Philadelphia, vol. 56, p. 125 (*sub Theridion*, new name for *Theridion lyra* Keyserling, not Hentz); 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. BRYANT, 1940, Bull. Mus. Comp. Zool., vol. 86, p. 319, fig. 85 (female); 1945, Trans.

Connecticut Acad. Sci., vol. 36, p. 206, figs. 3, 6 (male, female).

Theridion atromontanum BANKS, 1911, Proc. Acad. Nat. Sci. Philadelphia, vol. 63, p. 444, pl. 35, fig. 12 (male, female) (*sub Theridium*). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 501.

Theridion dimachaerum BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 181, pl. 23, fig. 28 (male). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 50. New synonymy.

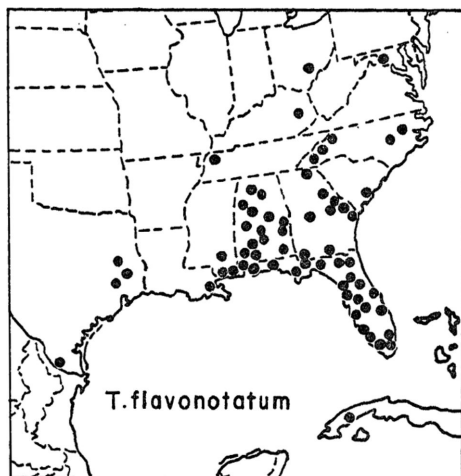
Allotheridion (Allotheridion) flavonotatum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 20.

FEMALE: Carapace yellow-white to orange, usually with a median dark band almost as wide as posterior eye row. Band reddish in front, grayish behind, with parallel sides. A fine line around margin of carapace. Clypeus reddish brown. Sternum yellow-white. Legs yellow-white, with small black marks at middle and ends of segments. Abdomen white or with white spots on dorsum, median band indistinct. Dorsum sometimes black. Venter grayish white. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior medians one diameter apart, almost three-quarters of a diameter from laterals. Epigynum (figs. 108, 109) with two openings usually facing posterior and covered by a broad, short piece of variable shape. Posterior view (fig. 109) was illustrated by Bryant (1940, 1945) and is quite variable. Total length of females, 1.3–2.8 mm. Measurements of a female from Florida: total length, 2.2 mm.; carapace 0.85 mm. long, 0.73 mm. wide; first femur, 1.71 mm.; patella and tibia, 1.77 mm.; metatarsus, 1.39 mm.; tarsus, 0.57 mm.; second patella and tibia, 1.04 mm.; third, 0.64 mm. fourth, 1.00 mm.

MALE: Coloration as in female. Ectal portion of tegulum of palpus is rugose (fig. 103). Total length, 1.4–2.3 mm. Measurements of a male from Florida: total length, 1.8 mm.; carapace 0.83 mm. long, 0.72 mm. wide; first femur, 2.20 mm.; patella and tibia, 2.38 mm.; metatarsus, 1.93 mm.; tarsus, 0.66 mm.; second patella and tibia, 1.30 mm.; third, 0.72 mm.; fourth, 1.04 mm.

Archer (1946) found webs of this species on under surfaces of leaves.

TYPE LOCALITIES: Female holotypes of both *Theridion flavonotatum* and *T. pascagoulense* from the vicinity of Pascagoula, Mississippi (E. Van Bruyssel), are in the Institut Royal des Sciences Naturelles de Belgique in Brussels. Male and female syntypes of *T. floridense* from Runnymede, Florida, are in the Museum of Comparative Zoölogy. Male and female syntypes of *T. atromontanum* from Swannanoa River, Black Mountain, North



MAP 9. Distribution of *Theridion flavonotatum*.

Carolina, May 18–30, are in the Museum of Comparative Zoölogy. Male holotype of *T. dimachaerum* from Billy's Island, Okefenokee Swamp, Georgia, June, 1912, is in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Southeastern states, Cuba. Ohio: Cantwell Cliffs, Hocking County (W. Ivie). District of Columbia (Marx, 1891). Texas: Pharr, Hidalgo County (M. Welch). Cuba, Sierra de Anafe, Pinar del Río (M. Barro).

RECORDS: See Appendix.

Theridion intritum (Bishop and Crosby)

Figures 110, 111, 120–122; map 10

Dipoena intrita BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 176, fig. 21 (male). CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 39. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 424.

Theridion indianorum GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 9, figs. 4, 5 (male, female). CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 52.

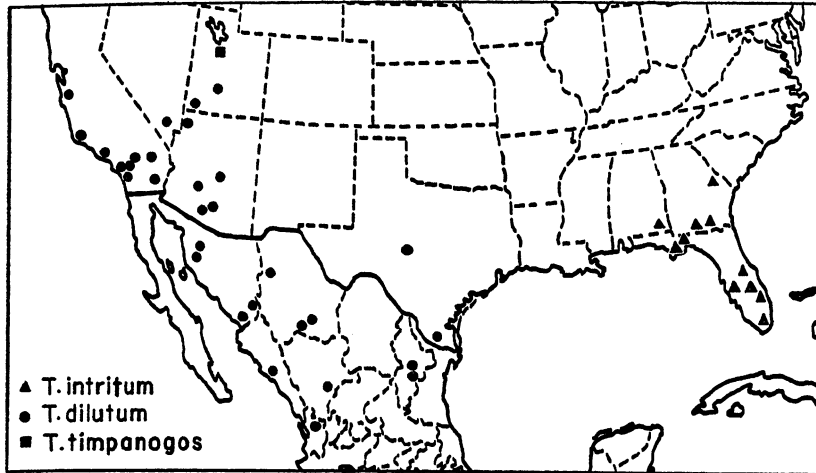
ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 45. New synonymy.

Allotheridion indianorum, ARCHER, 1950, *ibid.*, no. 30, pl. 3, fig. 5 (male). New synonymy.

FEMALE: Carapace orange-white, eye region black, black area extending over head. Clypeus, distal portion of chelicerae, labium, and maxillae black. Sternum orange. Legs

and tibia, 1.43 mm.; metatarsus, 1.23 mm.; tarsus, 0.52 mm.; second patella and tibia, 0.85 mm.; third, 0.59 mm.; fourth, 1.03 mm.

MALE: Coloration as in female. Eyes slightly closer together. Palpus very small, weakly sclerotized and difficult to study (figs. 120, 121). Conductor at slightly different angle in different specimens. Total length,



MAP 10. Distribution of *Theridion timpanogos*, *T. intritum*, and *T. dilutum*.

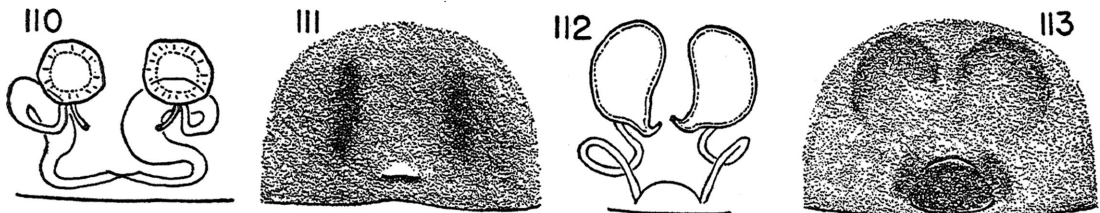
orange-white. Abdomen all orange-gray or dorsum with a median white scalloped band. Anterior median eyes one and one-half diameters apart, one-third of a diameter from laterals. Posterior medians slightly more than one diameter apart, one diameter from laterals. Anterior medians slightly larger than others. Epigynum with a very indistinct slit (fig. 111). Connecting ducts lightly sclerotized, although wall of seminal receptacles is sclerotized (fig. 110). Total length, 2.2–2.7 mm. Measurements of one specimen: total length, 2.2 mm.; carapace 0.88 mm. long, 0.78 mm. wide; first femur, 1.43 mm.; patella

1.6–1.8 mm. Measurements of one individual: total length, 1.8 mm.; carapace 0.78 mm. long, 0.65 mm. wide; first femur, 1.32 mm.; patella and tibia, 1.50 mm.; metatarsus, 1.15 mm.; tarsus, 0.51 mm.; second patella and tibia, 0.85 mm.; third, 0.52 mm.; fourth, 0.85 mm.

The usually black labium and maxillae clearly separate this species from *Theridion australe* and *T. dividuum*, which are similar in having black heads.

Archer (1946) collected this species by sweeping vegetation.

TYPE LOCALITY: Male holotype and female



FIGS. 110, 111. *Theridion intritum* (Bishop and Crosby). 110. Female genitalia, dorsal view. 111. Epigynum.

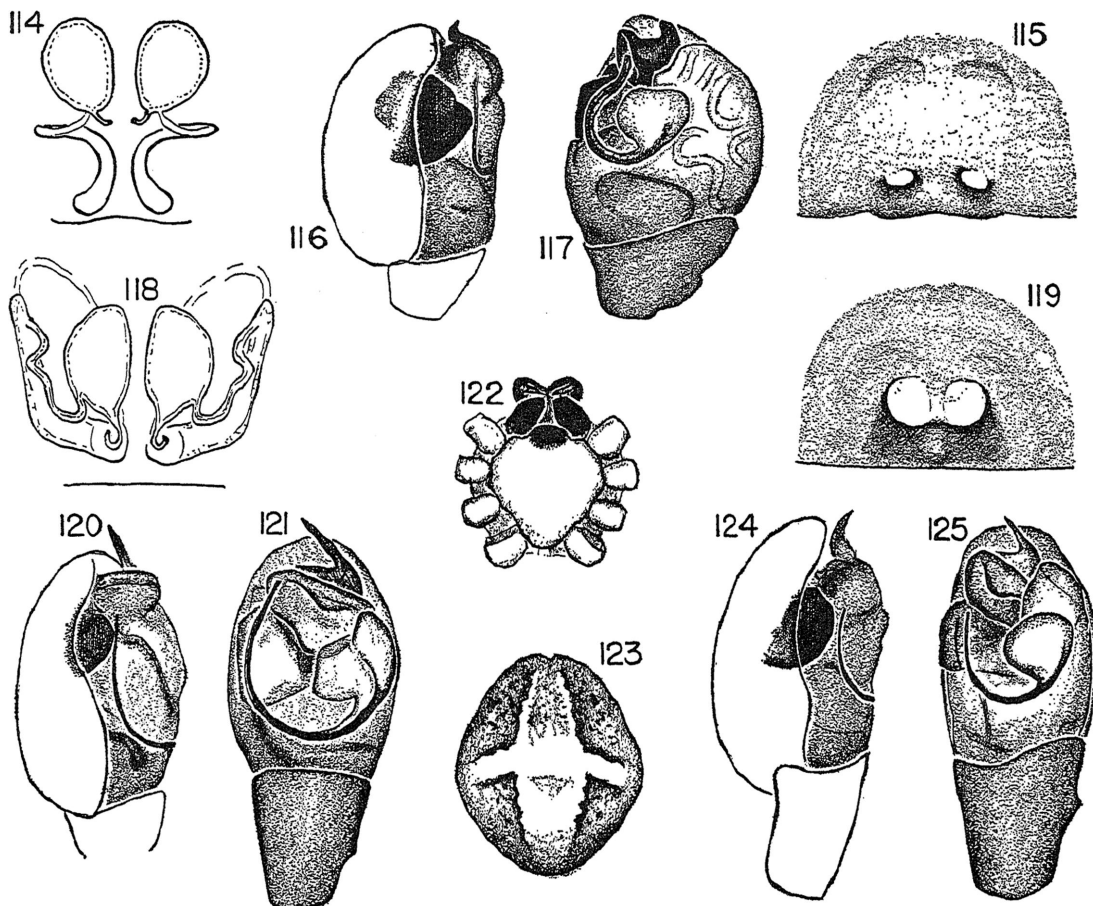
FIGS. 112, 113. *Theridion dilutum*, new species. 112. Female genitalia, dorsal view. 113. Epigynum.

paratype of *Diplocephalus intrita* from Billy's Island, Okefenokee Swamp, Georgia, June, 1912. Male holotype and female allotype of *Theridion indianorum* from Indian Town, Martin County, Florida, March 28, 1938

Theridion dilutum, new species

Figures 112, 113, 123-125; map 10

FEMALE: Carapace yellow-white, sometimes with a rusty median band. Sternum and legs yellow-white. Abdomen with a median



FIGS. 114, 115. *Theridion cameronense*, new species. 114. Female genitalia, dorsal view. 115. Epigynum.

FIGS. 116, 117. *Theridion submissum* Gertsch and Davis, left palpus. 116. Mesal view. 117. Ventral view.

FIGS. 118, 119. *Theridion kawea*, new species. 118. Female genitalia, dorsal view. 119. Epigynum.

FIGS. 120-122. *Theridion intritum* (Bishop and Crosby). 120. Palpus, mesal view. 121. Palpus, ventral view. 122. Cephalothorax of female, ventral view.

FIGS. 123-125. *Theridion dilutum*, new species. 123. Abdomen of female, dorsal view. 124. Palpus, mesal view. 125. Palpus, ventral view.

(W. J. Gertsch). All are in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Southeastern states. Georgia: Briar Creek, Screven County (W. Ivie). Alabama: Big Creek, Houston County (Archer, 1946).

RECORDS: See Appendix.

dorsal band on gray background, some specimens with a white cross band (fig. 123), sometimes abdomen all white. Venter yellow-white. Anterior median eyes about one diameter apart, one-quarter of a diameter from laterals. Posterior medians one diameter apart, slightly more than one diameter from

laterals. Epigynum with a very indistinct darker shadow close to posterior margin (fig. 113), sometimes indistinct anterior border of shadow straight or with an indistinct median tooth projecting posteriorly. Seminal receptacles brown and easily seen; connecting canals, however, white and translucent. Total length of females, 2.0 mm. (Texas) to 2.9 mm. (California). Measurements of female allotype: total length, 2.1 mm.; carapace 0.81 mm. long, 0.73 mm. wide; first femur, 1.45 mm.; patella and tibia, 1.56 mm.; metatarsus, 1.23 mm.; tarsus, 0.51 mm.; second patella and tibia, 0.83 mm.; third, 0.53 mm.; fourth, 0.91 mm. (measurements of second and third legs from paratype).

MALE: Much darker in color than female. First femora, patellae, and distal ends of tibiae rusty, other parts yellow-white. Eyes slightly closer together than those of female. Palpus (figs. 124, 125) very small and difficult to study. Palpus of California specimens slightly wider than that of holotype drawn. Total length of males, 2.0 mm.–2.8 mm. Measurements of holotype: total length, 2.0 mm.; carapace 0.85 mm. long, 0.74 mm. wide; second patella and tibia, 1.02 mm.; third, 0.63 mm. A male from California measured: total length, 2.5 mm.; carapace 0.91 mm. long, 0.84 mm. wide; first femur, 2.24 mm.; second patella and tibia, 2.24 mm.; metatarsus, 1.86 mm.; tarsus, 0.56 mm.; second patella and tibia, 1.26 mm.; third, 0.78 mm.; fourth, 1.17 mm.

The genitalia can be used to distinguish this species from related ones.

One specimen was collected under citrus trees in Arizona.

TYPE LOCALITY: Male holotype from south of Pharr, Hidalgo County, Texas, April 5, 1936 (S. Mulaik). Female allotype and paratype from Edinburg, Hidalgo County, Texas, March 28, 1936, November 14, 1934 (S. Mulaik).

DISTRIBUTION AND MARGINAL RECORDS: Southwestern states to Nayarit. California: Ben Lomond, Santa Cruz County (L. W. Saylor). Utah: Richfield (W. J. Gertsch). Texas: Llano (L. I. Davis). Nayarit: Acaponeta (P. and C. Vaurie).

RECORDS: See Appendix.

***Theridion submissum* Gertsch and Davis**

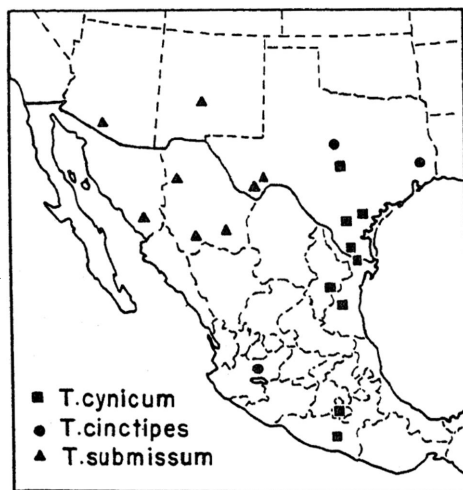
Figures 116, 117; map 11

Theridion submissum GERTSCH AND DAVIS, 1936, Amer. Mus. Novitates, no. 881, p. 10, fig. 21 (male). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 505.

MALE: Carapace yellow-brown, with triangular rusty patch, as wide in front as eye row, coming to point in cervical depression. Sides dusky towards posterior. Sternum yellow. Legs dusky yellow. Dorsum of abdomen with median slightly scalloped white band on gray and black stippled background. Sides, venter yellowish. Anterior median eyes one diameter apart, almost touching laterals. Posterior eyes two-thirds of a diameter apart. Lateral eyes slightly smaller than medians. Palpus illustrated by figures 116 and 117. Total length of males, 1.9–2.2 mm. Measurements of male holotype: total length, 2.2 mm.; carapace 0.99 mm. long, 0.89 mm. wide; fourth patella and tibia, 0.76 mm. A male from Chihuahua measured: total length, 2.0 mm.; carapace 0.91 mm. long, 0.78 mm. wide; first femur, 1.80 mm.; patella and tibia, 1.93 mm.; metatarsus, 1.61 mm.; tarsus, 0.60 mm.; second patella and tibia, 1.10 mm.; third, 0.50 mm.; fourth, 0.93 mm.

One specimen from New Mexico was swept from junipers in an area of mixed trees.

TYPE LOCALITY: Male holotype from Chisos Mountains, Brewster County, Texas,



MAP 11. Distribution of *Theridion cinctipes*, *T. submissum*, and *T. cynicum*.

July, 1935 (L. I. Davis), is in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Southwestern states to Chihuahua. New Mexico: Water Canyon, 7000 feet; Socorro County (C. C. Hoff). Arizona: Browns Canyon, Boboquivari Mountains (W. J. Gertsch). Chihuahua: Aqua Caliente, west of Santa Bárbara (W. J. Gertsch).

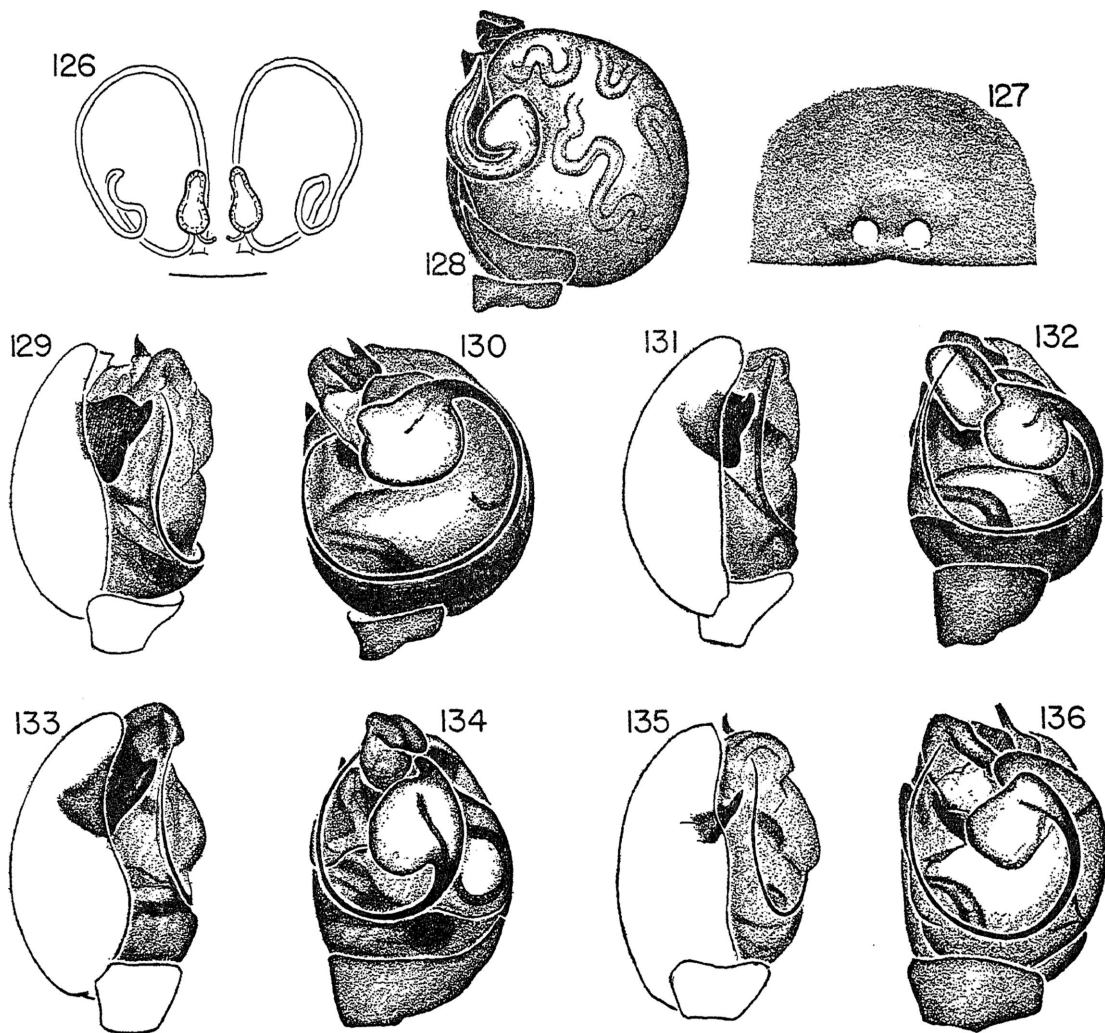
RECORDS: See Appendix.

***Theridion cynicum* Gertsch and Mulaik**

Figures 126-128; map 11

Theridion cynicum GERTSCH AND MULAİK, 1936, Amer. Mus. Novitates, no. 863, p. 10, fig. 12 (male). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502.

FEMALE: Carapace, sternum yellow. Legs yellow or whitish, with femora dusky, patellae yellow, and ends of tibiae and metatarsi yellow. Abdomen white above, with faint in-



FIGS. 126-128. *Theridion cynicum* Gertsch and Mulaik. 126. Female genitalia, dorsal view. 127. Epigynum. 128. Left palpus, ventral view.

FIGS. 129, 130. *Theridion goodnightorum*, new species, palpus. 129. Mesal view. 130. Ventral view.

FIGS. 131, 132. *Theridion australe* Banks, palpus. 131. Mesal view. 132. Ventral view.

FIGS. 133, 134. *Theridion hidalgo*, new species, palpus. 133. Mesal view. 134. Ventral view.

FIGS. 135, 136. *Theridion geminipunctum* Chamberlin, palpus. 135. Mesal view. 136. Ventral view.

dications of white lines bordering the scalloped margins of the median band. A dark pair of patches above spinnerets. Venter gray to reddish brown, with a black ring on each side of pedicel. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior medians almost two-thirds of a diameter apart, two-thirds of a diameter from laterals. Epigynum (fig. 127) with two indistinct openings at a variable distance from each other. When epigynum is turned back, the seminal receptacles are not readily visible; however, dark-colored tissue enclosed in the loops of the connecting ducts often gives the impression of a very large seminal receptacle of indistinct outline. Clearing the area reveals two very small receptacles close to the posterior margin (fig. 126). Total length, 2.1–2.8 mm. Measurements of a female from Texas: total length, 2.8 mm.; carapace 1.11 mm. long, 1.04 mm. wide; first femur, 2.38 mm.; patella and tibia, 2.48 mm.; metatarsus, 2.08 mm.; second patella and tibia, 1.36 mm.; third, 0.92 mm.; fourth, 1.56 mm.

MALE: Tegulum of palpus (fig. 128) enlarged, containing coiled duct. The dorsal part of the large tegulum appears thin-walled,

haematodocha-like. Median apophysis not forked. Radix and conductor present. Measurements of a specimen from Texas: total length, 2.5 mm.; carapace 1.04 mm. long, 0.96 mm. wide; first femur, 2.46 mm.; patella and tibia, 2.70 mm.; metatarsus, 2.33 mm.; tarsus, 0.78 mm.; second patella and tibia 1.56 mm.; third, 0.99 mm.; fourth, 1.40 mm.

The palpal tegulum of a male from Guerrero is considerably smaller than that of Texas specimens.

TYPE LOCALITY: Male holotype from Edinburg, Texas, May 27, 1935 (S. Mulaik), is in the American Museum of Natural History.

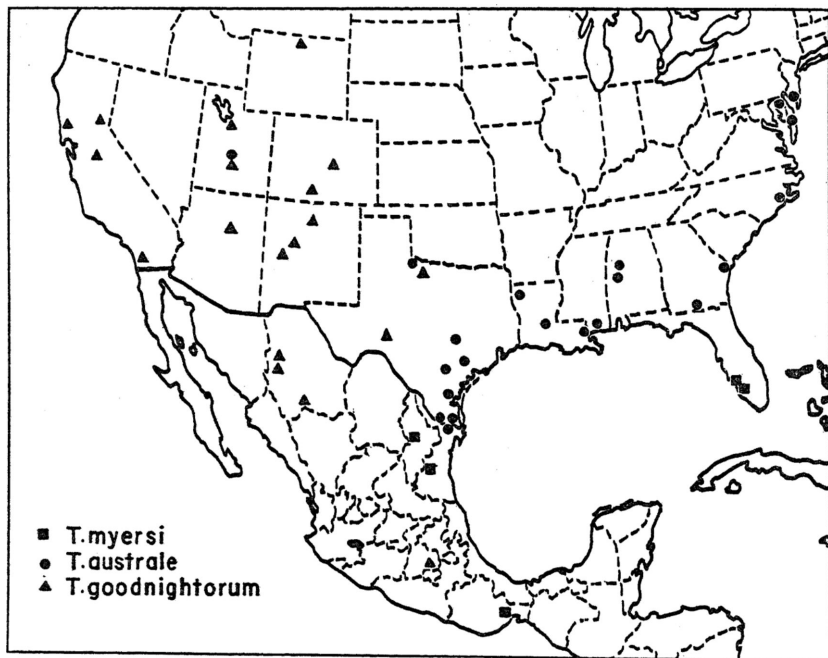
DISTRIBUTION AND MARGINAL RECORDS: Texas to Guerrero. Texas: Llano County, August, 1935 (L. I. Davis), one female; July 9, 1936 (L. I. Davis), one male; August 21, 1940 (L. I. Davis), one female. Guerrero: Sixty-two miles north of Acapulco, June 18, 1936 (A. M. and L. I. Davis), three females and one male.

RECORDS: See Appendix.

Theridion cameronense, new species

Figures 114, 115; map 14

FEMALE: Carapace, sternum, and legs yellow-white. Abdomen white. Anterior median



MAP 12. Distribution of *Theridion myersi*, *T. goodnightorum*, and *T. australe*.

eyes one diameter apart, one-quarter of a diameter from laterals. Posterior median eyes two-thirds of a diameter apart, three-quarters of a diameter from laterals. The epigynum (fig. 115), which has two openings, each with a posterior lip, clearly separates this species from others. Measurements: total length, 2.7 mm.; carapace 0.93 mm. long, 0.91 mm. wide; first femur, 1.73 mm.; patella and tibia, 1.76 mm.; metatarsus, 1.43 mm.; tarsus, 0.55 mm.; second patella and tibia, 0.96 mm.; third, 0.73 mm.; fourth, 1.07 mm.

TYPE LOCALITY: Female holotype from Harlingen, Cameron County, Texas.

DISTRIBUTION: Known only from type locality.

***Theridion goodnightorum*, new species**

Figures 129, 130, 145-147; map 12

FEMALE: Carapace yellow, with a median dorsal band which is widest in front, narrower behind; eye region black, sides dusky. Clypeus black, sternum dusky. Legs yellow-white, sometimes with black marks at middle and ends of segments. Dorsum of abdomen white, with faint indications of a median band. Two black spots above spinnerets. Venter usually black (fig. 147). Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior medians two-thirds of a diameter apart, one diameter from laterals. Epigynum a lighter area with two indistinct circular openings (fig. 146). The distance between openings variable. Total length of females, 3.0-4.0 mm. Measurements of female holotype: total length, 3.3 mm.; carapace 1.20 mm. long, 1.20 mm. wide; first femur, 2.10 mm.; patella and tibia, 2.20 mm.; metatarsus, 2.04 mm.; tarsus, 0.65 mm.; second patella and tibia, 1.44 mm.; third, 0.98 mm.; fourth, 1.53 mm.

MALE: Carapace dusky, median stripe indistinct. Palpus illustrated by figures 129 and 130. Measurements: total length, 2.7 mm.; carapace 1.10 mm. long, 1.04 mm. wide; first femur, 2.74 mm.; patella and tibia, 3.02 mm.; metatarsus, 2.60 mm.; tarsus, 0.87 mm.; second patella and tibia, 1.95 mm.

Some specimens from Texas and California have the dorsum of the abdomen much darker, the venter lighter. *Theridion goodnightorum* differs from *T. hispidum* O. P.-Cambridge in that the former species is slightly larger and the conductor and radix are of slightly differ-

ent shape. The epigyna of the two species are distinct. *Theridion goodnightorum* is larger in size and lacks the distinct black head of *T. australe*.

A specimen from New Mexico was collected under a rock in a yellow-pine area.

TYPE LOCALITY: Female holotype from Blanca, Costilla County, Colorado, 8000 feet, July 22, 1941 (C. and M. Goodnight).

DISTRIBUTION AND MARGINAL RECORDS: At low elevations from Wyoming to California, to central Mexico. Wyoming: Sheridan (Metz). California: Peavine, Sierra County (W. M. Pearce). Distrito Federal: Tlalpan (J. C. Pallister).

RECORDS: See Appendix.

***Theridion australe* Banks**

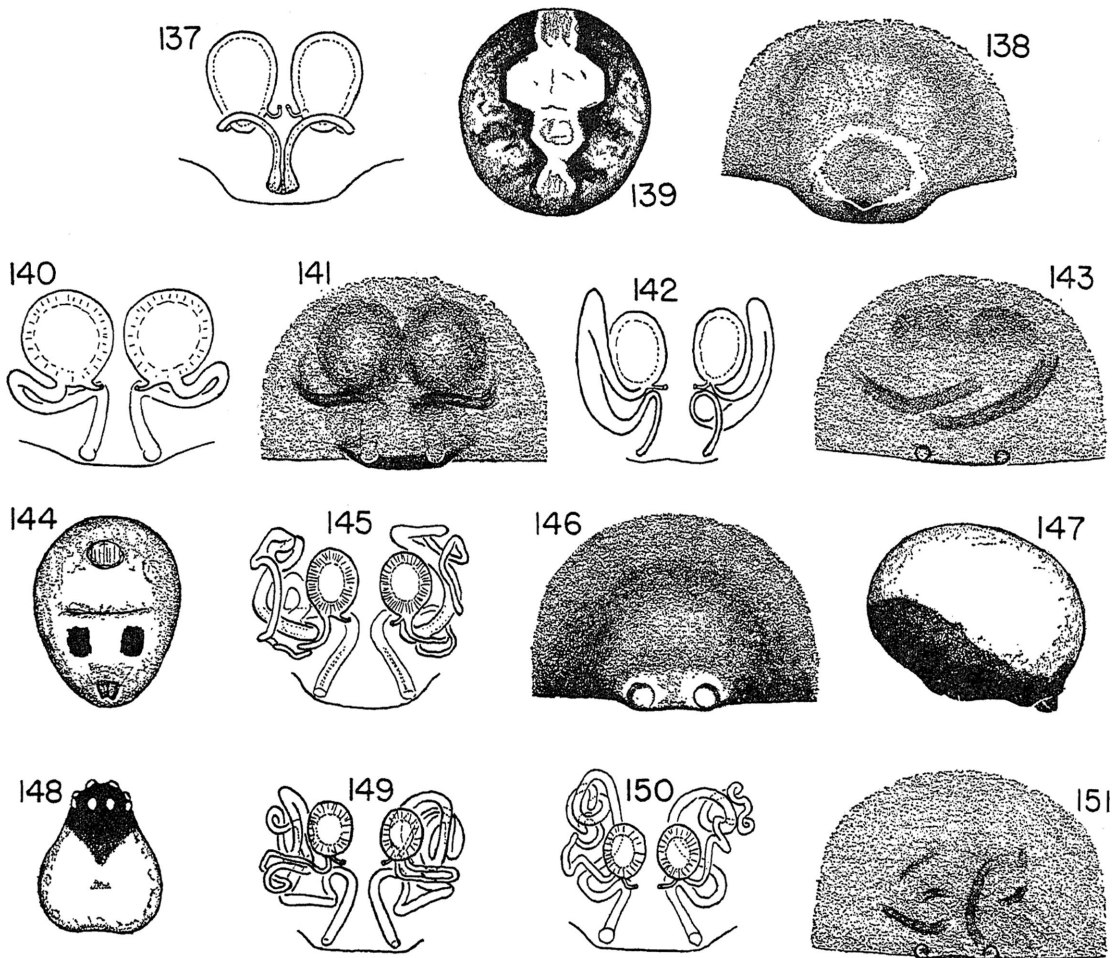
Figures 131, 132, 148-151; map 12

Theridion australe BANKS, 1899, Proc. Ent. Soc. Washington, vol. 4, p. 191 (*sub Theridion australis*); 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 192. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 501. MUMA, 1944, Amer. Mus. Novitates, no. 1257, p. 7; 1945, Bull. Univ. Maryland Agr. Exp. Sta., no. A38, p. 27. MUMA AND JEFFERS, 1945, Ann. Ent. Soc. Amer., vol. 38, p. 248. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 45.

Theridion glaucescens, CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 51. Not *Theridion glaucescens* Becker.

Allotheridion australe, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, pl. 3, fig. 5 (male). BARNES, 1953, Amer. Mus. Novitates, no. 1632, p. 3; 1953, Ecol. Monogr., vol. 23, p. 321.

FEMALE: Carapace yellow to orange, eye and head region black (fig. 148). Clypeus black. Maxillae usually black. Sternum orange. Legs light orange, sometimes with dusky patches. Abdomen orange-white, dorsum with two black spots above spinneret; or darker with a light, median, scalloped, dorsal band and spots on sides. Anterior median eyes one diameter apart, almost touching laterals. Posterior eyes one diameter apart. Epigynum with two very indistinct openings near posterior margin (fig. 151). There is considerable variation in internal genitalia (figs. 149, 150). The coil of the connecting duct is different in each specimen. Total length, 2.0-3.0 mm. A specimen from Texas measured: total length, 3.0 mm.; carapace 0.91 mm. long, 0.87 mm. wide; first fe-



FIGS. 137, 138. *Theridion arizonense*, new species. 137. Female genitalia, dorsal view. 138. Epigynum. FIGS. 139–141. *Theridion hidalgo*, new species. 139. Abdomen of female, dorsal view. 140. Female genitalia, dorsal view. 141. Epigynum.

FIGS. 142–144. *Theridion geminipunctum* Chamberlin. 142. Female genitalia, dorsal view. 143. Epigynum. 144. Abdomen of female, ventral view.

FIGS. 145–147. *Theridion goodnightorum*, new species. 145. Female genitalia, dorsal view. 146. Epigynum. 147. Abdomen of female, lateral view.

FIGS. 148–151. *Theridion australe* Banks. 148. Carapace of female. 149, 150. Female genitalia, dorsal view. 149. Texas. 150. Maryland. 151. Epigynum.

mur, 1.33 mm.; patella and tibia, 1.36 mm.; metatarsus, 1.04 mm.; tarsus, 0.52 mm.; second patella and tibia, 0.91 mm.; third, 0.65 mm.; fourth, 1.04 mm.

MALE: Similar to female in color. Palpus illustrated by figures 131 and 132. Total length, 1.9–2.3 mm. Measurements of a specimen from Texas: total length, 1.9 mm.; carapace 0.89 mm. long, 0.76 mm. wide; first femur, 1.61 mm.; patella and tibia, 1.73 mm.;

metatarsus, 1.46 mm.; tarsus, 0.58 mm.; second patella and tibia, 1.09 mm.; third, 0.68 mm.; fourth, 1.04 mm.

Theridion australe is distinguishable from *T. goodnightorum* by its black head and smaller size; from *T. intritum*, which has the head, maxillae, and labium black, by its light labium.

Barnes (1953) reports sweeping this species from dune grass.

TYPE LOCALITY: Several female syntypes and a juvenile male syntype from Shreveport, Louisiana, are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Southeastern states, Texas, Utah, Tamaulipas. New Jersey: Cape May (C. and M. Goodnight). Utah: Richfield (W. J. Gertsch). Tamaulipas: Reynosa (W. Green; C. Rutherford).

RECORDS: See Appendix.

***Theridion hidalgo*, new species**

Figures 133, 134, 139–141; map 13

FEMALE: Carapace yellow-white, with a dark dusky or red band as wide as eye region in front, slightly narrower behind. Sides dusky. Sternum yellow-white, with a wide dusky margin. Legs yellow-white, with irregular black patches on venter and sides. Dorsum of abdomen with a median scalloped white band (fig. 139) on gray spotted background. Sides white, venter white or dusky white, with a pair of small black spots anterior to spinnerets and a black spot anterior to pedicel. Anterior median eyes one diameter apart, almost touching laterals. Posterior eyes one diameter apart. Epigynum quite variable but distinct in that the two connecting ducts posterior to the seminal receptacles are parallel to the posterior margin (figs. 140, 141). Total length of females, 1.5–2.0 mm. Measurements of female allotype: total length, 1.8 mm.; carapace 0.62 mm. long, 0.59 mm. wide; first femur, 0.78 mm.; patella and tibia, 0.72 mm.; metatarsus, 0.52 mm.; tarsus, 0.28 mm.; second patella and tibia,

0.53 mm.; third, 0.45 mm.; fourth, 0.61 mm.

MALE: Color and structure as in female. Anterior median eyes slightly larger than others. Distinguished from other species by palpus (figs. 133, 134). Total length of males, 1.4–1.7 mm. Measurements of male holotype: total length, 1.7 mm.; carapace 0.71 mm. long, 0.65 mm. wide; first femur, 1.40 mm.; patella and tibia, 1.43 mm.; metatarsus, 1.17 mm.; tarsus, 0.41 mm.; second patella and tibia, 0.87 mm.; third, 0.57 mm.; fourth, 0.80 mm.

The genitalia can be used to distinguish this species from others.

TYPE LOCALITY: Male holotype, female allotype, and one female paratype from 5 miles west of Rio Grande City, Starr County, Texas, April 10, 1936 (S. Mulaik).

DISTRIBUTION AND MARGINAL RECORDS: Central Texas to Tamaulipas. Texas: Riesel, McLellan County, one female. Tamaulipas: San Pedro, May, 1936 (S. Mulaik).

RECORDS: See Appendix.

***Theridion geminipunctum* Chamberlin**

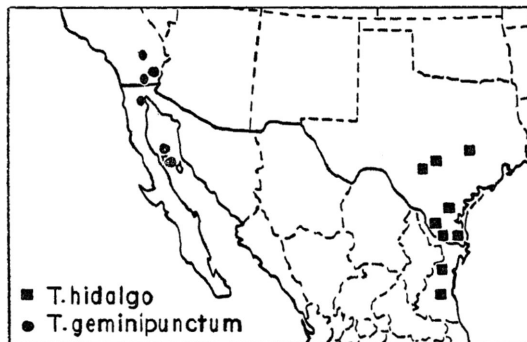
Figures 135, 136, 142–144; map 13

Theridion geminipunctum CHAMBERLIN, 1924, Proc. California Acad. Sci., ser. 4, vol. 12, no. 28, p. 638, figs. 78, 79 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 493 (*sub geminipunctatum*).

Theridion mohave GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 9, fig. 8 (female). New synonymy.

FEMALE: Carapace, sternum, and legs yellow-white. Abdomen white except for two ventral black spots (fig. 144). Anterior median eyes one-half of a diameter apart, one-quarter of a diameter from laterals. Posterior medians two-thirds of a diameter apart, one diameter from laterals. Anterior medians slightly larger than others. Epigynum with two indistinct openings (fig. 143). Ducts may vary in size (fig. 142, 143). Measurements of a female: total length, 2.7 mm.; carapace 0.88 mm. long, 0.78 mm. wide; first femur, 1.48 mm.; patella and tibia, 1.45 mm.; metatarsus, 1.17 mm.; tarsus, 0.54 mm.; second patella and tibia, 0.94 mm.; third, 0.65 mm.; fourth, 0.97 mm.

MALE: Carapace yellow-white, with narrow median black band and black margin. Clypeus with black spot. Sternum dusky on



MAP 13. Distribution of *Theridion hidalgo* and *T. geminipunctum*.

sides. Legs yellow-white, with small dusky spots. Abdomen with a median dorsal white band on black-spotted background. Venter white, with two black spots side by side. Anterior median eyes one diameter apart, almost touching laterals. Posterior medians three-quarters of a diameter apart, one diameter from laterals. Anterior medians slightly larger than others. Palpus illustrated by figures 135 and 136. Measurements: total length, 2.3 mm.; carapace 0.91 mm. long, 0.80 mm. wide; second patella and tibia, 1.17 mm.; third, 0.78 mm.; fourth, 1.11 mm.

The connecting ducts usually show indistinctly through the epigynum and, though they vary in position, separate the females of this species from others.

TYPE LOCALITIES: Male holotype, female allotype, and 18 paratypes of *Theridion geminipunctum* from Pond Island, Gulf of California, July 1, 1921 (J. C. Chamberlin), are in the California Academy of Sciences. Female holotype and male paratype of *T. mohave* from near Twentynine Palms, Mohave Desert, California, August, 1939 (J. A. Anderson), are in the American Museum of Natural History.

DISTRIBUTION: Southern California and Baja California.

RECORDS: *California:* Imperial County: (R. X. Schick); Winter Haven (M. A. Landis). *Baja California:* Gulf of California: Angel de la Guarda Island; South San Lorenzo Island (Chamberlin, 1924); North San Lorenzo Island (J. C. Chamberlin); El Mayor.

Theridion glaucescens Becker

Figures 152, 153, 155, 156; map 14

Theridion glaucescens BECKER, 1879, Ann. Soc. Ent. Belgique, vol. 22, p. 81, pl. 1, fig. 11 (female). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 55, pl. 2, fig. 32 (female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519. BANKS, 1895, Jour. New York Ent. Soc., vol. 3, p. 84. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 51. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 47.

Theridion spirale EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 10, pl. 1, fig. 2 (male, female) (*sub Theridium*). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 56, pl. 3, fig. 33 (male, female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 520; 1892,

Proc. Ent. Soc. Washington, vol. 2, p. 156. BANKS, 1892, Proc. Acad. Nat. Sci. Philadelphia, p. 30. BAKER, 1894, Ent. News, vol. 5, p. 164. BANKS, 1895, Jour. New York Ent. Soc., vol. 3, p. 83. EMERTON, 1902, The common spiders, p. 116, figs. 270-273 (male, female). MACGILLIVRAY AND HOUGHTON, 1903, Ent. News, vol. 14, p. 262. BANKS, 1907, Indiana Dept. Geol. and Nat. Resources, 31st Ann. Rept., p. 738. BRYANT, 1908, Occas. Papers Boston Soc. Nat. Hist., vol. 7, p. 14. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 20; 1911, Proc. Acad. Nat. Sci. Philadelphia, vol. 63, p. 444. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 206. COMSTOCK, 1912, The spider book, p. 354, figs. 355-356 (male, female). EMERTON, 1913, Appalachia, vol. 12, p. 155. BARROWS, 1918, Ohio Jour. Sci., vol. 18, p. 304. EMERTON, "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 310; 1924, Canadian Ent., vol. 56, p. 124. BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 183. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101, p. 1042. EMERTON, 1930, Publ. Nantucket Maria Mitchell Assoc., vol. 3, p. 163. WORLEY AND PICKWELL, 1931, Univ. Nebraska Studies, vol. 27, p. 31. CHICKERING, 1932, Papers Michigan Acad. Sci., vol. 15, p. 351. BANKS, NEWPORT, AND BIRD, 1932, Univ. Oklahoma Biol. Surv., vol. 4, p. 22. ELLIOTT, 1932, Proc. Indiana Acad. Sci., vol. 41, p. 419. KASTON, 1938, Bull. Connecticut Geol. Nat. Hist., Surv., no. 60, p. 186. KURATA, 1939, Canadian Field Nat., vol. 53, p. 81. COMSTOCK, 1940, The spider book, rev. ed., p. 369, figs. 355-356 (male, female). FOX, 1940, Proc. Biol. Soc. Washington, vol. 53, p. 43. KURATA, 1941, Univ. Toronto Studies, biol. ser., no. 48, p. 109. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 501. TRUMAN, 1942, Proc. Pennsylvania Acad. Sci., vol. 16, p. 27. KASTON, 1945, Amer. Mus. Novitates, no. 1292, p. 5, fig. 13 (female); 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 105, figs. 126-127, 148-149 (male, female). LOWRIE, 1948, Ecology, vol. 29, p. 338. ELLIOTT, 1953, Proc. Indiana Acad. Sci., vol. 62, p. 309.

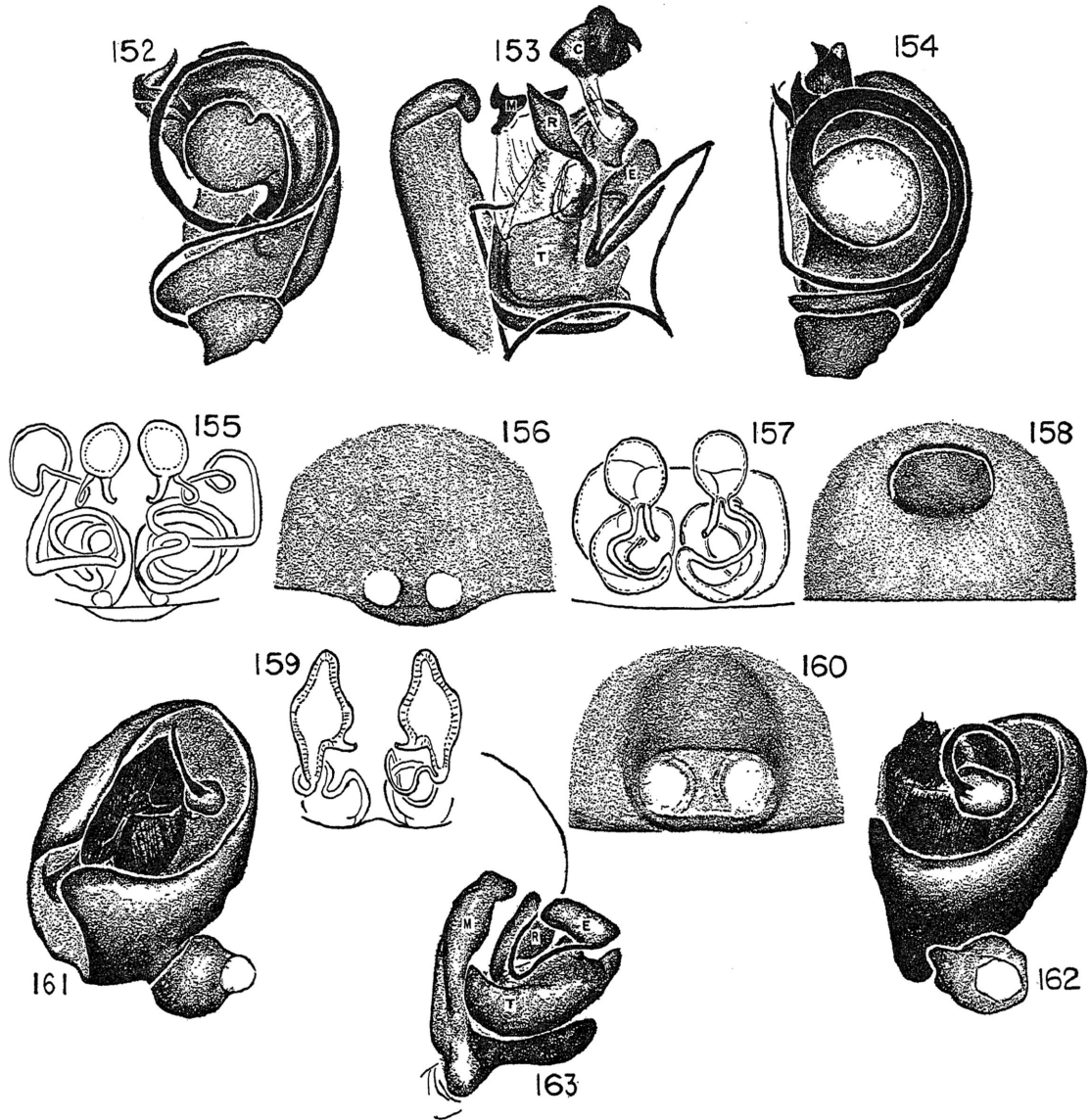
Steatoda spirale, F. O. P.-CAMBRIDGE, 1902, Biologia Centrali-Americana, Arachnida-Araneidea, vol. 2, p. 384.

Theridion differens, MUMA, 1944, The common spiders of Maryland, pl. 13, fig. 2 (female). Not *Theridion differens* Emerton.

Allotheridion glaucescens, LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 442 (in part).

Theridion (Allotheridion) glaucescens, HACKMAN, 1954, Acta Zool. Fennica, vol. 79, p. 49.

FEMALE: Carapace yellow, usually with a median dusky band and dusky border. Legs



FIGS. 152, 153. *Theridion glaucescens* Becker, left palpus. 152. Subectal view. 153. Ectal view, expanded.

FIG. 154. *Theridion transgressum* Petrunkevitch, palpus, ventral view.

FIGS. 155, 156. *Theridion glaucescens* Becker. 155. Female genitalia, dorsal view. 156. Epigynum.

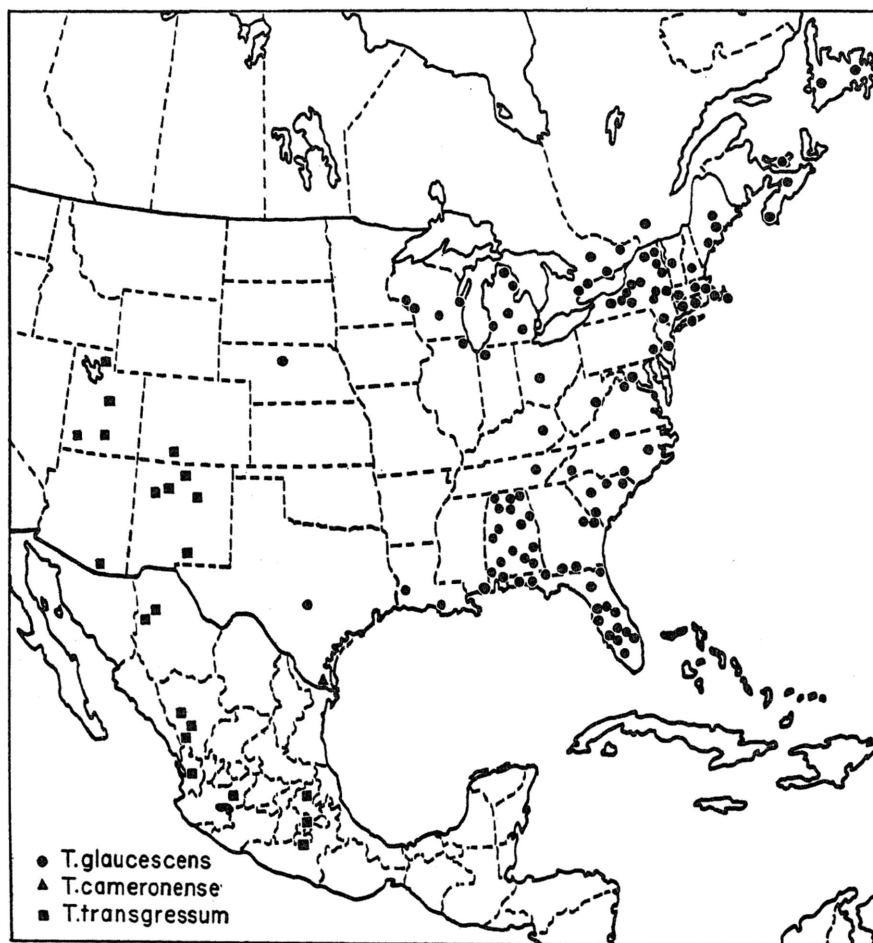
FIGS. 157, 158. *Theridion transgressum* Petrunkevitch. 157. Female genitalia, dorsal view. 158. Epigynum.

FIGS. 159-163. *Theridion michelbacheri*, new species. 159. Female genitalia, dorsal view. 160. Epigynum. 161-163. Palpus. 161. Mesal view. 162. Ventral view. 163. Subventral view, expanded, cymbium removed.

Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix; T, tegulum.

yellow, sometimes banded. Abdomen usually with scalloped median dorsal band; sometimes all white. Sides dusky, venter gray. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior eyes one diameter apart. Epigynum with two

bolus of palpus a long spiral (figs. 152, 153). Total length, 1.4–2.5 mm. Measurements of a specimen from Florida: total length, 2.2 mm.; carapace 0.91 mm. long, 0.80 mm. wide; first femur, 1.70 mm.; patella and tibia, 1.95 mm.; metatarsus, 1.49 mm.; tarsus, 0.59



MAP 14. Distribution of *Theridion cameronense*, *T. glaucescens*, and *T. transgressum*.

distinct circular fossae (fig. 156); connecting ducts very long (fig. 155). Total length of females, 1.6–3.0 mm. Measurements of a female from Florida: total length, 2.2 mm.; carapace 0.80 mm. long; 0.69 mm. wide; first femur, 1.17 mm.; patella and tibia, 1.17 mm.; metatarsus, 0.85 mm.; tarsus, 0.45 mm.; second patella and tibia, 0.78 mm.; third, 0.56 mm.; fourth, 0.78 mm.

MALE: Slightly darker than female. Em-

mm.; second patella and tibia, 1.20 mm.; third, 0.75 mm.; fourth, 1.04 mm.

The syntypes of *Theridion glaucescens*, although poorly preserved, have been examined and are the same as *T. spirale*. The fossae of the epigynum are separated by more than their diameter.

This species is found on under surfaces of leaves on shrubs and trees.

TYPE LOCALITIES: Female syntypes of

Theridion glaucescens from the vicinity of Pascagoula, Mississippi (E. Van Bruyssel), are in the Institut Royal des Sciences Naturelles de Belgique in Brussels. Four female syntypes of *T. spirale*, from Essex, Massachusetts, June 24, 1872 (J. H. Emerton), are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Eastern North America. Newfoundland: Gambo and Woody Point (Hackman, 1954). Nebraska: Halsey, Thomas County (Worley and Pickwell, 1931). Texas: San Marcos, Hays County (V. P. Wilder).

RECORDS: See Appendix.

***Theridion transgressum* Petrunkevitch**

Figures 154, 157, 158; map 14

Theridion transversum O. P.-CAMBRIDGE, 1898, Biologia Centrali-Americana, Arachnida, Araneidea, vol. 1, p. 256, pl. 35, figs. 3, 4 (male, female). Not *Theridion transversum* Nicolet, 1849.

Seatoda transversa, F. O. P.-CAMBRIDGE, 1902, Biologia Centrali-Americana, Arachnida, Araneidea, vol. 2, p. 383, pl. 36, fig. 11 (male).

Theridion transgressum PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 208. New name for *Theridion transversum*, preoccupied.

Theridion ritae GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 7, fig. 22 (male). New synonymy.

FEMALE: Carapace yellow-white, eye region and sides dusky. Sternum yellow-white, sides dusky. Legs yellow-white, with two to four narrow dusky bands on each segment. Dorsum of abdomen with a brown, scalloped, white-edged band (as in *Theridion differens*). Band widest towards anterior. Dorsum lateral to band spotted black on white. Venter white except for two incomplete dusky rings on each side of epigastric area. Some Mexican specimens much darker; sternum black, venter of abdomen black, with a white median spot. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior eyes less than one diameter apart. Epigynum with a large oval depression separated by more than its length from the posterior margin (fig. 158). Total length of females, 2.3–3.8 mm. (The total length of Cambridge's specimen was 4.5 mm.) Measurements of a specimen from Colorado: total length, 2.3 mm.; carapace 1.00 mm. long, 0.89 mm. wide; first femur, 1.71 mm.; patella and tibia, 1.88 mm.; metatarsus, 1.47 mm.;

tarsus, 0.55 mm.; second patella and tibia, 0.98 mm.; third, 0.75 mm.; fourth, 1.06 mm.

MALE: Much darker in color than female. Carapace and legs reddish brown. Posterior median eyes less than one diameter apart, more than one diameter from laterals. The palpus (fig. 154) resembles that of *Theridion glaucescens*. Total length, 2.2–2.5 mm. Measurements of a specimen from Arizona: total length, 2.3 mm.; carapace 0.98 mm. long, 0.83 mm. wide; first femur, 2.09 mm.; patella and tibia, 2.20 mm.; metatarsus, 1.73 mm.; tarsus, 0.62 mm.; second patella and tibia, 1.30 mm.; third, 0.75 mm.; fourth, 1.00 mm.

The white venter of specimens north of Mexico and the internal genitalia differentiate the females of this species from those of *T. petraeum*.

Webs of *Theridion transgressum* were abundant in the lower dead branches of an oak in Colorado. It has also been swept from grasses, herbs, cinquefoil, and mountain mahogany in open forest in New Mexico.

TYPE LOCALITY: Syntypes of *Theridion transversum* from Mexico City, collected in weeds in the Aztec Canal (H. H. Smith), are in the British Museum (Natural History). Male holotype and immature male paratype of *T. ritae* from Madera Canyon, Santa Rita Mountains, Arizona, July 16, 1940 (W. J. Gertsch), are in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Utah to central Mexico. Utah: North Ogden Canyon (D. M. Hammond); Weber River (R. V. Chamberlin). Morelos: Cuernavaca (L. I. Davis).

RECORDS: See Appendix.

***Theridion michelbacheri*, new species**

Figures 159–163; map 15

FEMALE: Carapace, sternum, and legs yellow-white to orange. Legs faintly ringed with black at middle and ends of segments. Abdomen white or gray, with a scalloped, median, dorsal gray band, bordered by a narrow white line. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior medians one diameter apart, slightly more than one diameter from laterals. Anterior medians slightly larger than others. Epigynum (fig. 160) an indistinct, white, raised oval area. Seminal receptacles dark,

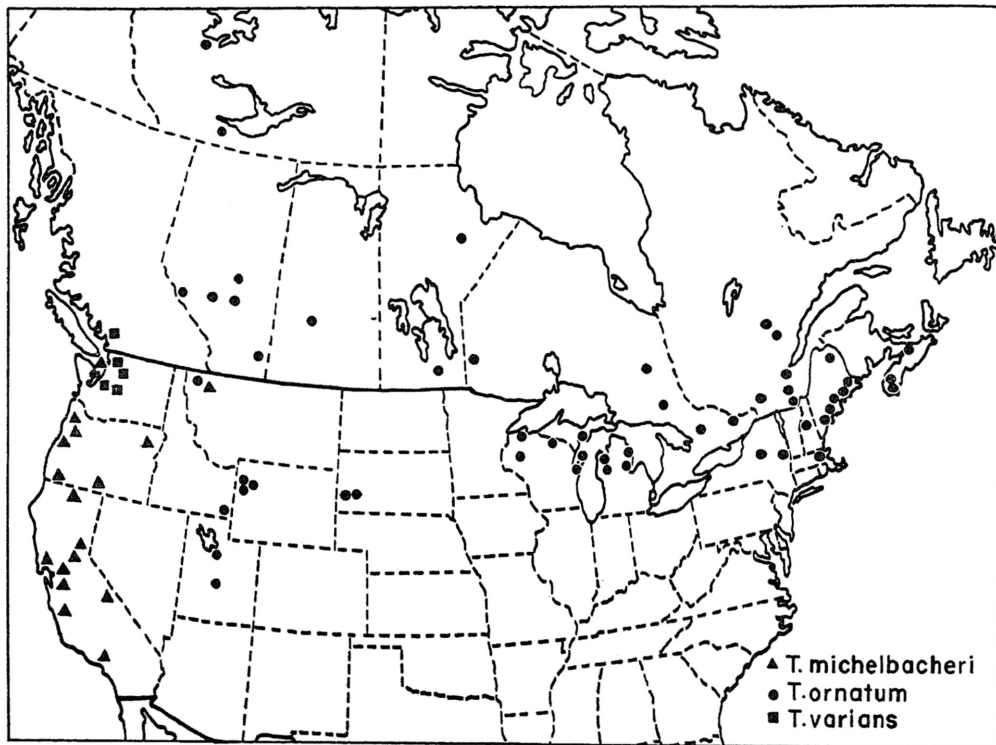
connecting ducts translucent. Total length of females, 2.2–2.9 mm. Measurements of a female allotype: total length, 2.2 mm.; carapace 0.86 mm. long, 0.85 mm. wide; first femur, 1.30 mm.; patella and tibia, 1.30 mm.; metatarsus, 0.95 mm.; tarsus, 0.42 mm.; second patella and tibia, 0.87 mm.; third, 0.62 mm.; fourth, 0.91 mm.

MALE: Similar in color to female. Palpus

from Dorris, Siskiyou County, California, July 3, 1952 (W. J. Gertsch).

DISTRIBUTION AND MARGINAL RECORDS: Montana, Washington to California. Montana: Kintla Lake, Glacier National Park (L. W. Saylor). Washington: Friday Harbor. California: Littlerock, Los Angeles County (A. E. Michelbacher).

RECORDS: See Appendix.



MAP 15. Distribution of *Theridion michelbacheri* and North American distribution of *T. ornatum* and *T. varians*.

(figs. 161–163) curiously modified, with cymbium wrapped around bulb; cymbium black. Total length of males, 1.8–2.5 mm. Measurements of male holotype: total length, 2.2 mm.; carapace 0.89 mm. long, 0.94 mm. wide; first femur, 1.69 mm.; patella and tibia, 1.78 mm.; metatarsus, 1.70 mm.; tarsus, 0.52 mm.; second patella and tibia, 1.12 mm.; third 0.66 mm.; fourth, 0.91 mm.

This species can be readily distinguished from all other members of the genus by the peculiar palpus and the epigynum.

TYPE LOCALITY: Male holotype, female allotype, two male and one female paratypes

Theridion kawea, new species

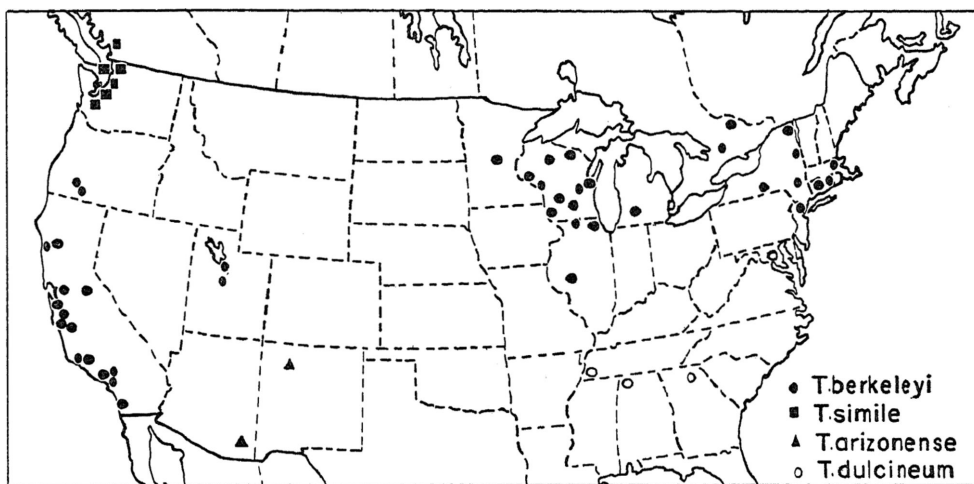
Figures 118, 119; map 6

FEMALE: Carapace yellow-white, with triangular median dusky reddish band enclosing the eye region anteriorly and coming to a point in thoracic region. Sternum yellow-white. Legs yellow-white, with some black spots. Abdomen white to dusky white, with a median, scalloped, reddish band bordered by white line. Venter white. Anterior median eyes one diameter apart, one-third of a diameter from laterals. Posterior medians two-thirds of a diameter apart, one diameter from

laterals. Epigynum (fig. 119) an oval depression with a posterior border; a median raised area divides the depression into two equal halves. Total length, 2.9–3.9 mm. Measurements of female holotype: total length, 3.8 mm.; carapace 1.30 mm. long, 1.24 mm. wide; first femur, 2.54 mm.; patella and tibia, 2.60 mm.; metatarsus, 2.30 mm.; tarsus, 0.72 mm.; third patella and tibia, 0.98 mm.; fourth, 1.53 mm.

The epigynum can be used to separate this species from related ones.

with wide black rings at ends of segments and at middle of tibiae. Abdomen whitish, with an indistinct, median, scalloped, dorsal band; several pairs of black spots on sides of band; two black patches above spinnerets. Venter with a large black patch between epigastric furrow and spinnerets; epigynum black. Anterior median eyes one and one-half diameters apart, one-half of a diameter from laterals. Posterior medians two-thirds of a diameter apart, one diameter from laterals. Anterior medians slightly smaller than others. Epigy-



MAP 16. Distribution of *Theridion dulcineum*, *T. arizonense*, and *T. berkeleyi* and North American distribution of *T. simile*.

TYPE LOCALITY: Female holotype and one female paratype from Kawea River, 5 miles east of Three Rivers, California, 1258 feet, July 17, 1952 (W. J. Gertsch).

DISTRIBUTION: Utah, California, and Chihuahua.

RECORDS: *Utah:* Zion National Park, July, 1928 (A. M. Woodbury), one female. *California:* San Diego County: Barrett, June 23, 1947 (W. M. Pearce), one female; Guatay, July 9, 1953 (W. J. and J. W. Gertsch), one female. *Chihuahua:* Delicias, 4150 feet, July 12, 1947 (W. J. Gertsch), one female.

***Theridion arizonense*, new species**

Figures 137, 138; map 16

FEMALE: Carapace yellow-white, with dusky median band which covers eye region in front and narrows behind. Margin dusky. Sternum yellow-white. Legs yellow-white,

num (fig. 138), which differentiates this species from others, is a shallow depression with a posterior lip. The lip hides the small round opening on the posterior edge of the depression. Measurements: total length, 3.5 mm.; carapace 1.17 mm. long, 1.07 mm. wide; first femur, 2.14 mm.; patella and tibia, 2.38 mm.; metatarsus, 2.10 mm.; tarsus, 0.73 mm.; second patella and tibia, 1.48 mm.; third, 0.94 mm.; fourth, 1.60 mm.

This species has been swept from *Jamesia americana* along a stream in New Mexico.

TYPE LOCALITY: Female holotype from Rustler Camp, Chiricahua Mountains, Cochise County, Arizona, September 9, 1950 (W. J. Gertsch).

DISTRIBUTION: New Mexico and Arizona.

RECORDS: *New Mexico:* Sandoval County: Las Huertas Canyon Road, Sandia Mountains, 7900 feet (C. C. Hoff).

Theridion ornatum Hahn

Figures 164, 165, 168-170, 173; map 15

Aranea picta WALCKENAER, 1802, Faune Parisienne, vol. 2, p. 207. Not *Aranea picta* Razoumowsky, 1789 (= *Araneus patagiatus* Clerck).

Theridion pictum, WALCKENAER, 1805, Tableau des aranéides, p. 74. MARX, 1892, Proc. Ent. Soc. Washington, vol. 2, p. 190. WIEHLE, 1937, in Dahl, Die Tierwelt Deutschlands, pt. 33, p. 168, figs. 126-131 (male, female). LOCKET AND MILIDGE, 1953, British spiders, vol. 2, p. 68, figs. 45-47 (male, female).

Theridion ornatum HAHN, 1831, Monographie der Spinnen, pt. 6, pl. 3, fig. c (female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 468. TULLGREN, 1949, Ent. Tidskr., vol. 70, p. 45 (in part), fig. 5b (female, not 5a).

Steatoda picta, C. L. KOCH, 1837, Uebersicht des Arachnidensystems, vol. 1, p. 9.

Theridion zelotypum EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 11, pl. 1, fig. 4 (female) (sub *Theridium*). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 25, pl. 1, fig. 10 (female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 520; 1892, Proc. Ent. Soc. Washington, vol. 2, p. 156. EMERTON, 1909, Trans. Connecticut Acad. Sci., vol. 14, p. 180, pl. 1, fig. 5 (male). BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 20. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 210. COMSTOCK, 1912, The spider book, p. 350, fig. 349 (female). EMERTON, 1914, Appalachia, vol. 13, p. 153; 1915, Trans. Connecticut Acad. Sci., vol. 20, p. 148, pl. 2, fig. 1; 1915, Canadian Alpine Jour., vol. 6, p. 161; 1917, Canadian Ent., vol. 49, p. 14; 1918, *ibid.*, vol. 50, p. 128; 1918, Rept. Ent. Soc. Ontario, vol. 48, p. 76; "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 310; 1921, Canadian Field Nat., vol. 34, p. 107; 1924, Canadian Ent., vol. 56, p. 122; 1925, Canadian Field Nat., vol. 39, p. 140; 1927, Maine Nat., vol. 7, p. 35. CROSBY AND BISHOP, 1928, Mem. Cornell Agr. Exp. Sta., no. 101, p. 1042. CROSBY AND ZORSCH, 1935, Canadian Ent., vol. 67, p. 40. KASTON, 1938, Bull. Connecticut Geol. Nat. Hist. Surv., no. 60, p. 186. COMSTOCK, 1940, The spider book, rev. ed., p. 365, fig. 349 (female). TRUMAN, 1942, Proc. Pennsylvania Acad. Sci., vol. 16, p. 27. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 505. KURATA, 1943, Canadian Field Nat., vol. 57, p. 10. GERTSCH, 1946, in Procter, Biological survey of the Mount Desert region, pt. 7, p. 520. KASTON, 1948, Bull. Connecticut Nat. Hist. Surv., no. 70, p. 109 (in part), fig. 128, 150 (not 151) (male, female). KURATA, 1949, Canadian Ent., vol. 81, p. 127. GERTSCH, 1949, American Spiders, p. 163. LEVI, 1951, Amer. Mus. Novitates, no. 1501, p. 4, fig. 47 (female). New synonymy.

Allotheridion zelotypum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 19. LEVI AND LEVI, 1951, Zoologica, vol. 36, p. 220. LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 442, fig. 3 (female). LOWRIE AND GERTSCH, 1955, Amer. Mus. Novitates, no. 1736, p. 7. New synonymy.

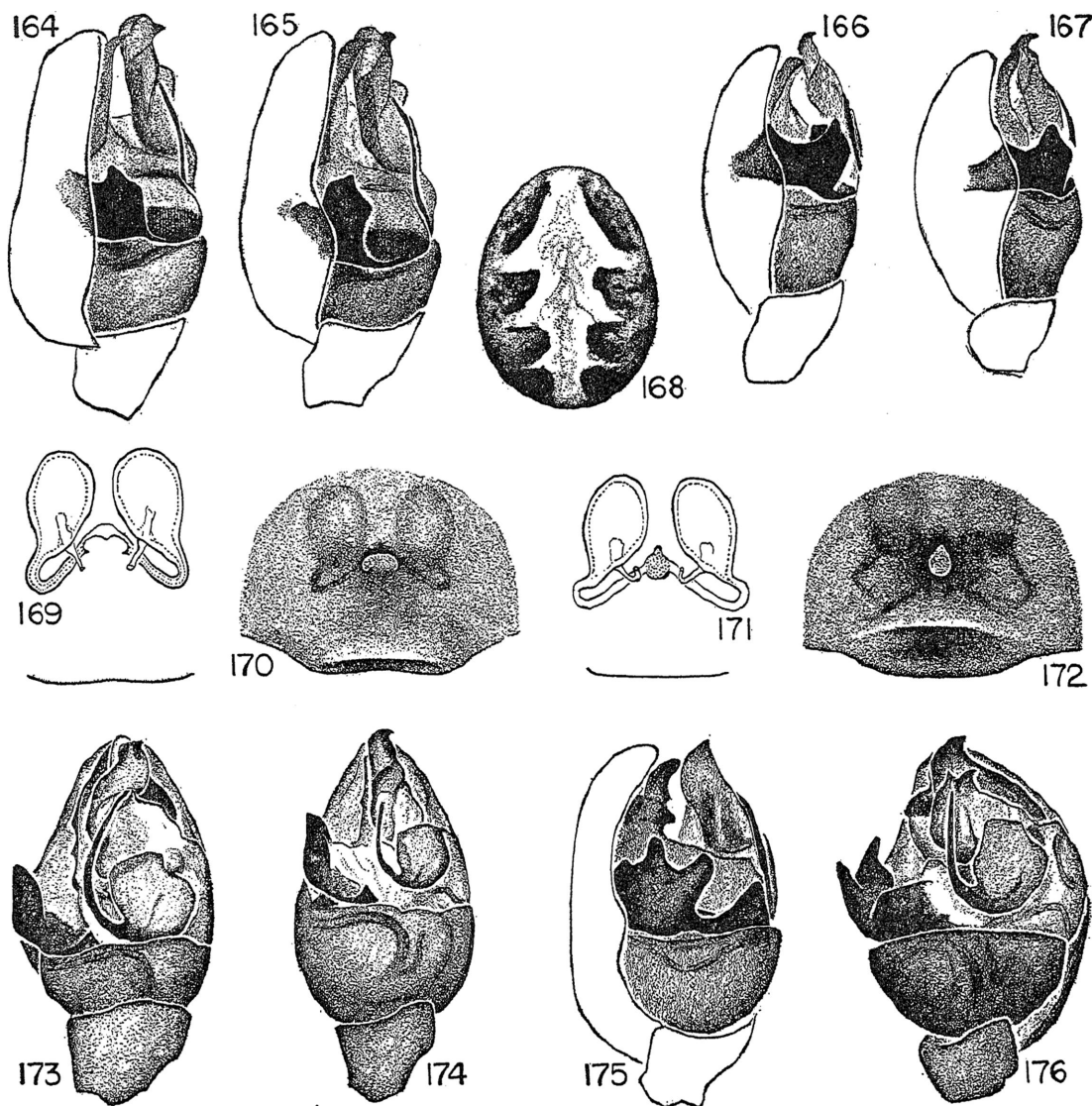
Allotheridion (Phylloneta) ornatum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 19.

Allotheridion (Allotheridion) pictum, ARCHER, 1950, *ibid.*, no. 30, p. 20.

FEMALE: Carapace yellowish, with a median dusky line and dark line around margin. Sternum yellow-white. Legs yellow-white, with some dusky marks around ends of segments. Dorsum of abdomen with white to pink, branching, median band (fig. 168) on gray-brown. Sides white; venter gray, sometimes with a black spot anterior to spinnerets. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior eyes one diameter apart. Opening of epigynum usually wider than long, located on anterior face of a furrow (fig. 170). Total length, 2.9-4.7 mm. Measurements of a female from Alberta: total length, 4.3 mm.; carapace 1.30 mm. long, 1.17 mm. wide; first femur, 2.33 mm.; patella and tibia, 2.48 mm.; metatarsus, 2.18 mm.; tarsus, 0.83 mm.; second patella and tibia, 1.56 mm.; third, 1.10 mm.; fourth, 1.82 mm.

MALE: Similar in color to female. Palpi illustrated by figures 164, 165, and 173. Measurements of a male from Alberta: total length, 3.1 mm.; carapace 1.30 mm. long, 1.11 mm. wide; first femur, 2.20 mm.; patella and tibia, 2.21 mm.; metatarsus, 2.08 mm.; tarsus, 0.78 mm.; second patella and tibia, 1.56 mm.; third, 1.04 mm.; fourth, 1.70 mm.

The opening of the epigynum of eastern specimens appears slightly larger. There is, as in many species, variation in the shape of the median apophysis. Although *Theridion zelotypum* shows very slight differences from *T. ornatum*, the two are considered one species. In European specimens examined the median apophysis is of slightly different shape and is located more distally (fig. 164). Furthermore, the median curvature of the conductor is not quite so rounded. The measurements of specimens from Great Britain were almost identical with those given here; how-



FIGS. 164, 165. *Theridion ornatum* Hahn, left palpus, mesal view. 164. England. 165. Alberta.
 FIGS. 166, 167. *Theridion berkeleyi* Emerton, palpus, mesal view. 166. New Jersey. 167. California.
 FIGS. 168-170. *Theridion ornatum* Hahn. 168. Abdomen of female, dorsal view. 169. Female genitalia,
 dorsal view. 170. Epigynum.

FIGS. 171, 172. *Theridion berkeleyi* Emerton. 171. Female genitalia, dorsal view. 172. Epigynum.

FIG. 173. *Theridion ornatum* Hahn, palpus, ventral view.

FIG. 174. *Theridion berkeleyi* Emerton, palpus, ventral view.

FIGS. 175, 176. *Theridion varians* Hahn, palpus. 175. Mesal view. 176. Ventral view.

ever, a pair from Finland were smaller. The median apophysis of the Finnish male differed slightly from that of the British specimen. Dr. H. Wiehle reexamined specimens in the Berlin Museum from the type locality and found that they belong to this species.

Webs of *Theridion ornatum* are found in low

branches of shrubs, frequently in coniferous trees in moist areas. Gertsch (1949) described the web as being sewed together with dried spruce needles or other plant parts, providing a waterproof tent for eggs and young.

TYPE LOCALITIES: *Aranea picta* was described from Paris, France; *Theridion ornatum*,

from Nuremberg, Germany. Four female syntypes of *T. zelotypum* from Eastport, Maine, August 7, 1872 (J. H. Emerton), are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND AMERICAN MARGINAL RECORDS: North Africa, Europe, Siberia (Roewer, 1942). Canada, northern states. Northwest Territory: Great Bear Lake (Kurata, 1949). Manitoba: Kettle Rapids (J. H. Emerton). Utah: Richfield (W. J. Gertsch).

RECORDS: See Appendix.

***Theridion berkeleyi* Emerton**

Figures 166, 167, 171, 172, 174; map 16

Theridion berkeleyi EMERTON, 1924, Pan. Pacific Ent., vol. 1, p. 30, fig. 8 (male). CHAMBERLIN AND IVIE, 1941, Bull. Univ. Utah, biol. ser., vol. 6, no. 3, p. 12. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502.

Theridion zelotypum, KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 109 (in part), fig. 151 (female). Not *Theridion zelotypum* Emerton.

Theridion ornatum, TULLGREN, 1949, Ent. Tidskr., vol. 70, p. 45 (in part), fig. 5a (female). Not *Theridion ornatum* Hahn.

Theridion wallacei SCHENKEL, 1950, Verhandl. Naturf. Gesell. Basel, vol. 61, p. 49, fig. 13 (female). Not *Theridion wallacei* Gertsch and Archer. New synonymy.

Theridion fieldi LEVI, 1951, Amer. Mus. Novitates, no. 1501, p. 3, fig. 46 (female). New synonymy.

Allotheridion fieldi, LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 441. New synonymy.

FEMALE: Carapace yellow-white, with a wide median dusky band; margins, eye region dusky. Clypeus with a central black mark. Sternum yellow-white, bordered with black. Legs yellow-white, with black patches on bands at middle or distal ends of segments. Abdomen pattern usually less distinct than in *Theridion zelotypum* (fig. 168). Venter usually with two incomplete black circles on each side of epigastric area, sometimes with a black spot. Some individuals have dorsum of abdomen all black. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior eyes a little more than one diameter apart. Anterior medians sometimes larger than others. Epigynum usually with a drop-shaped opening: a carina almost halfway between opening and posterior border (fig. 172). Length of females, 2.3–4.5 mm.

Measurements of a California female: total length, 2.5 mm.; carapace 0.91 mm. long, 0.80 mm. wide; first femur, 1.80 mm.; patella and tibia, 1.82 mm.; metatarsus, 1.46 mm.; tarsus, 0.63 mm.; second patella and tibia, 1.11 mm.; third, 0.78 mm.; fourth, 1.30 mm.

MALE: Similar in color to female. Palpus as in *T. zelotypum*, except embolus much smaller (fig. 174). Total length of males, 2.4–3.3 mm. Measurements of a male from California: total length, 2.4 mm.; carapace 1.04 mm. long, 0.98 mm. wide; first femur, 2.08 mm.; patella and tibia, 2.23 mm.; metatarsus, 2.14 mm.; tarsus, 0.78 mm.; second patella and tibia, 1.42 mm.; third, 0.94 mm.; fourth, 1.33 mm.

This species, often confused with *Theridion zelotypum*, is variable in color and structure. Eastern males have an additional tooth on the median apophysis of the palpus. The shape of the epigynal opening may differ. Females are sometimes difficult to separate from those of *T. zelotypum*; however, the internal genitalia are distinct. The loop of the connecting ducts of *T. berkeleyi* is frequently larger than shown in figure 171.

In Wisconsin, *Theridion berkeleyi* has been swept from grass.

TYPE LOCALITIES: Male holotype of *Theridion berkeleyi* from outside of house, Berkeley, California (J. H. Emerton and G. W. Peckham), is in the California Academy of Sciences. Female holotype of *T. wallacei* from Russian River near Guerneville, California, June 1, 1939 (H. Schenkel-Rudin), is in the Naturhistorisches Museum, Basel. Female holotype of *T. fieldi* from Wyalusing State Park, Grant County, Wisconsin, June 15, 1949 (H. and L. Levi), is in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Probably found in Europe (Tullgren, 1949), Ontario south to New Jersey, Oregon to California. Ontario: Lake Opeongo, Algonquin Provincial Park (W. Ivie and T. B. Kurata). New Jersey: Ramsey (W. J. Gertsch). Illinois: near Springfield (W. Ivie). California: Jamacha, San Diego County (W. M. Pearce).

RECORDS: See Appendix.

***Theridion varians* Hahn**

Figures 175–178; map 15

Theridion varians HAHN, 1831, Die Arachniden, vol. 1, p. 93, pl. 22, figs. 71, 72 (female).

MARX, 1892, Proc. Ent. Soc. Washington, vol. 2, p. 190. WIEHLE, 1937, in Dahl, Die Tierwelt Deutschlands, pt. 33, p. 166, figs. 119–125 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 472. LOCKET AND MILLIDGE, 1953, British spiders, vol. 2, p. 70, figs. 46e, 46f, 47b (male, female).

Theridion leuconotum HAHN, 1831, Monographie der Spinnen, pt. 6.

Theridion abelardi WALCKENAER, 1841, Histoire naturelle des insectes, aptères, vol. 2, p. 304.

Theridion heloisti WALCKENAER, 1841, *op. cit.*, vol. 2, p. 317.

Steatoda varians, C. L. KOCH, 1851, Uebersicht des Arachniden-systems, vol. 5, p. 17.

Theridion cuneatum THORELL, 1875, Tijdschr. Ent., vol. 18, p. 91.

Theridion honorum O. P.-CAMBRIDGE, 1893, Proc. Dorset Field Club, vol. 14, p. 151, fig. 4 (female).

Allotheridion (Phylloneta) varians, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 19.

FEMALE: Carapace yellow-white, with median dorsal dusky band and fine dusky border. Legs yellow-white. Abdomen may be all white, sometimes in European specimens with a median dorsal black patch or, in some specimens, with an indistinct scalloped dorsal band. Venter and sides white. Anterior median eyes one diameter apart, one-half of a diameter from laterals. Posterior eyes one diameter apart. Epigynum a deep circular depression with a short lip at the anterior border; openings central. Posterior to the depression is a carina (fig. 178). Total length of females, 2.3–3.2 mm. Measurements of a female from Washington: total length, 3.0 mm.; carapace, 0.93 mm. long; 0.91 mm. wide; first femur, 1.81 mm.; patella and tibia, 1.88 mm.; metatarsus, 1.56 mm.; tarsus, 0.65 mm.; second patella and tibia, 1.17 mm.; third, 0.88 mm.; fourth, 1.40 mm.

MALE: Similar in color to female. Median apophysis of palpus with large teeth (figs. 175, 176). Total length, 2.5–3.1 mm. Measurements of a male from Washington: total length, 2.5 mm.; carapace, 1.04 mm. long, 0.98 mm. wide; first femur, 1.72 mm.; patella and tibia, 1.95 mm.; metatarsus, 1.56 mm.; tarsus, 0.55 mm.; second patella and tibia, 1.30 mm.; third, 0.85 mm.; fourth, 1.28 mm.

Wiehle (1937) reports this species common in gardens and parks, on shrubs and conifers.

TYPE LOCALITY: *Theridion varians* from

hedge rows and low bushes in the vicinity of Nuremberg, Germany.

DISTRIBUTION: North Africa, Europe, Asia Minor, Siberia (Wiehle, 1937), British Columbia, and Washington.

RECORDS: *British Columbia*: Vancouver. *Washington*: King County: Seattle (M. H. Hatch); Cedar Mountain (M. H. Hatch). *Snohomish County*: Everett (Forsell); Chase Lake (B. Malkin).

Theridion simile C. L. Koch

Figures 179, 180, 187; map 16

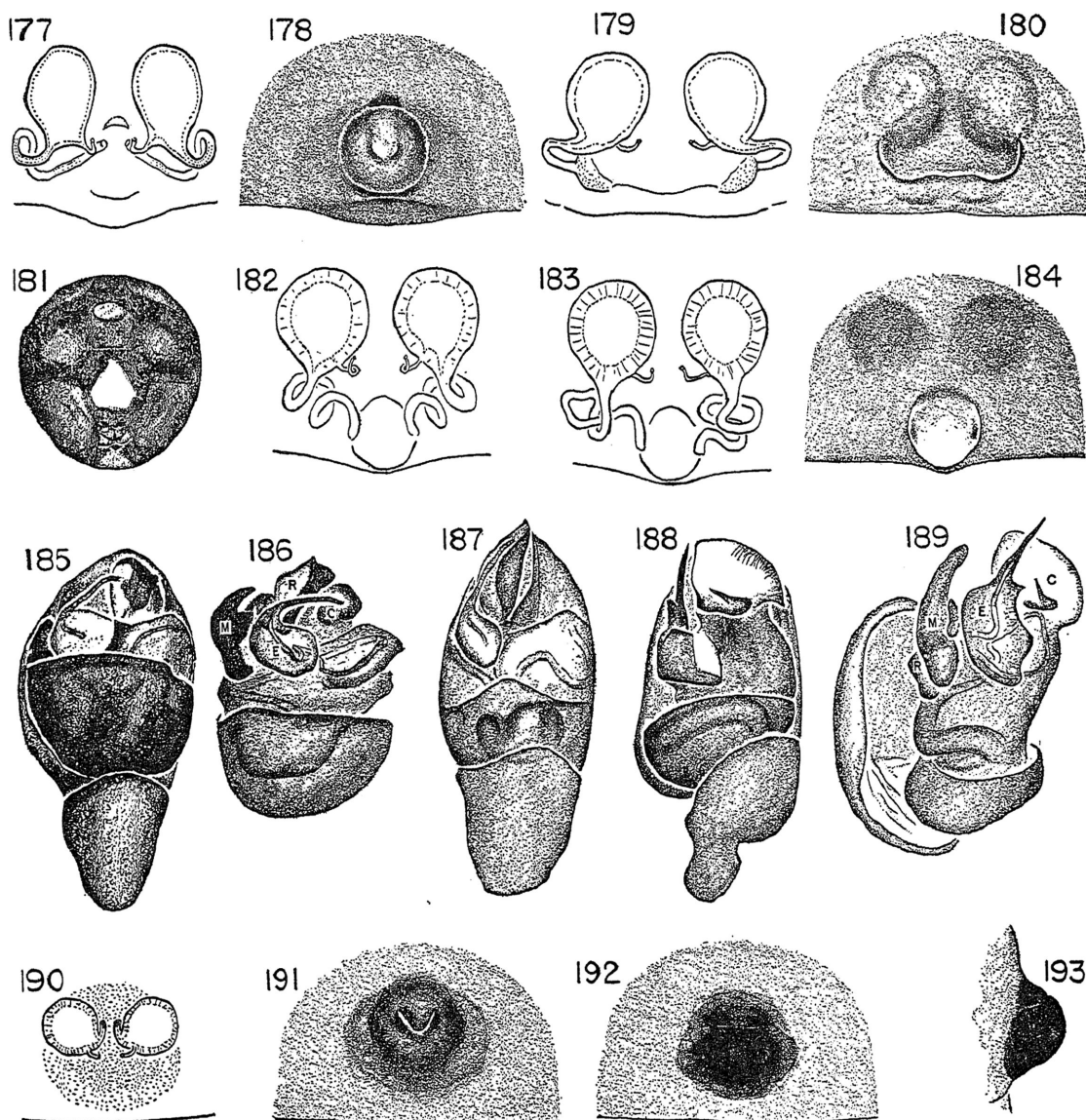
Theridion simile C. L. KOCH, 1836, Die Arachniden, vol. 3, p. 62, pl. 215 (female) (*sub Theridion*). WIEHLE, 1937, in Dahl, Die Tierwelt Deutschlands, pt. 33, p. 169, figs. 132–135 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 471. LOCKET AND MILLIDGE, 1953, British spiders, vol. 2, p. 68, figs. 46b, 47c (male, female).

Steatoda simile, C. L. KOCH, 1851, Uebersicht des Arachniden-systems, vol. 5, p. 17.

Theridion erebeum FÖRSTER AND BERTEAU, 1883, Verhandl. Naturwiss. Ver. Rheinland und Westfalen, vol. 40, p. 243, pl. 3, fig. 5 (male, female). (Reference not seen.)

Theridion saluum O. P.-CAMBRIDGE, 1912, Proc. Dorset Field Nat. Club, vol. 33, p. 74, pl. A, fig. 8 (male).

FEMALE: Carapace yellow-white to brown with some duskiness. Sternum yellow-white, sides dusky. Legs yellow-white. Dorsum of abdomen usually with a median brownish band, bordered with white; lateral to band gray-brown, broken by some white stripes which branch off median band. Sides dusky white, venter gray. Few specimens show similar coloration. Anterior median eyes one and one-quarter to one and one-half diameters apart, one-third of a diameter from laterals. Posterior medians one and one-quarter to one and one-half diameters apart, three-quarters of a diameter to one and one-half diameters from laterals. Eyes small. A fold halfway between spinnerets and epigastric furrow. Epigynum an oval depression with a posterior and lateral border (fig. 180). Total length of females, 1.9–2.7 mm. Measurements of one specimen: total length, 2.2 mm.; carapace 0.94 mm. long, 0.92 mm. wide; first femur, 1.43 mm.; patella and tibia, 1.46 mm.; metatarsus, 1.07 mm.; tarsus, 0.44 mm.; second patella and tibia, 1.01 mm.; third, 0.68 mm.; fourth, 1.05 mm.



FIGS. 177, 178. *Theridion varians* Hahn. 177. Female genitalia, dorsal view. 178. Epigynum.

FIGS. 179, 180. *Theridion simile* C. L. Koch. 179. Female genitalia, dorsal view. 180. Epigynum.

FIGS. 181-186. *Theridion melanurum* Hahn. 181. Abdomen of female, ventral view. 182, 183. Female genitalia, dorsal view. 182. Oregon. 183. Utah. 184. Epigynum. 185. Left palpus, ventral view. 186. Palpus, subventral view, expanded.

FIG. 187. *Theridion simile* C. L. Koch, palpus, ventral view.

FIGS. 188-193. *Theridion rufipes* Lucas. 188. Palpus, ventral view. 189. Palpus, subventral view, expanded. 190. Female genitalia, dorsal view. 191-193. Epigyna. 191. Distrito Federal, Mexico. 192. Florida. 193. Lateral view, Florida.

Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix.

MALE: Coloration of cephalothorax and legs slightly darker than in female. Coloration of abdomen variable. A small sclerotized area, probably a stridulating organ, on abdomen on each side of pedicel. Palpus illustrated by figure 187. Total length of males, 2.0–2.5 mm. Measurements of a specimen: total length, 2.4 mm.; carapace 1.04 mm. long, 0.92 mm. wide; first femur, 1.49 mm.; patella and tibia, 1.61 mm.; metatarsus, 1.17 mm.; tarsus, 0.50 mm.; second patella and tibia, 1.05 mm.; third, 0.73 mm.; fourth, 1.00 mm.

TYPE LOCALITY: Koch collected *Theridion simile* in Regensburg, Germany, on bushes in woods.

DISTRIBUTION AND AMERICAN MARGINAL RECORDS: Europe, Mediterranean countries (Wiehle, 1937), British Columbia, and Washington. British Columbia: Vancouver. Washington: Tacoma (Forsell).

RECORDS: See Appendix.

***Theridion melanurum* Hahn**

Figures 181–186; map 17

Aranea denticulata WALCKENAER, 1802, Faune Parisienne, vol. 2, p. 208. Not *Aranea denticulata* Oliver, 1789 (= *Textrix denticulata*).

Theridion denticulatum, WALCKENAER, 1805, Tableau des aranéides, p. 74. WIEHLE, 1937, in Dahl, Die Tierwelt Deutschlands, p. 165, p. 114–118 (male, female).

Theridion melanurum HAHN, 1831, Monographie der Spinnen, pt. 6, pl. 3, fig. a (female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 466. WIEHLE, 1952, Zool. Anz., vol. 149, p. 226 (male, female).

Steatoda undulata MENGE, 1868, Schr. Naturf. Gesell. Danzig, new ser., vol. 2, p. 158, pl. 30, fig. 67 (male, female).

Theridion mystaceum L. KOCH, 1870, Jahrb. Gelehrten Gesell. Krakau, vol. 41, p. 21.

Theridion dorsatum BANKS, 1897, Canadian Ent., vol. 29, p. 195 (sub *Theridium*); 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 194. WORLEY, 1932, Univ. Washington Publ. Biol., vol. 1, no. 1, p. 26. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502. New synonymy.

Theridion pictulum BANKS, 1908, Canadian Ent., vol. 40, p. 205 (sub *Theridium*); 1910, Bull. U. S. Natl. Mus., vol. 72, p. 20. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 203. MOLES AND JOHNSON, 1921, Jour. Ent. Zool., vol. 13, p. 41. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 504. New synonymy.

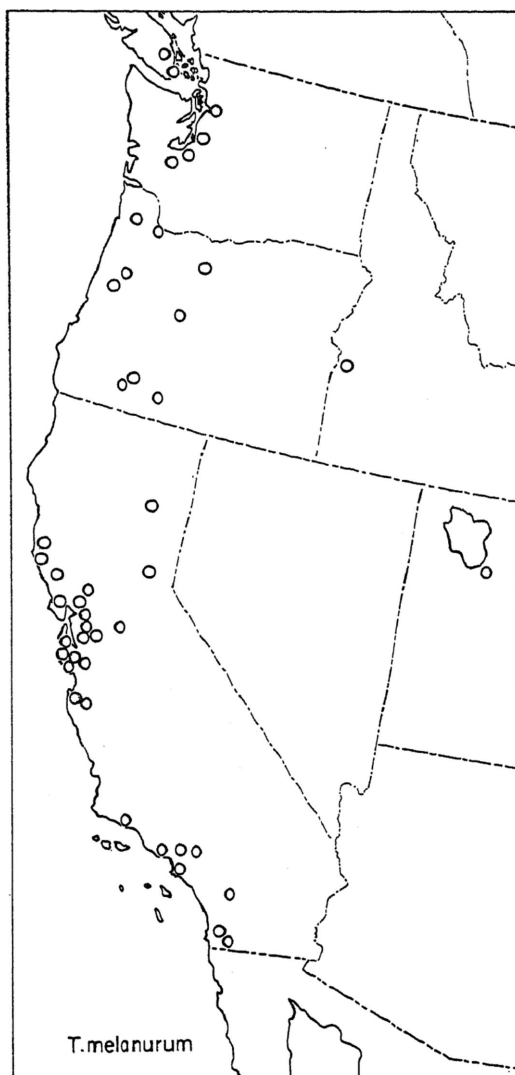
Theridion stanfordi EMERTON, 1924, Pan Pa-

cific Ent., vol. 1, p. 30, figs. 7, 9 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 505. New synonymy.

Allothieridion dorsatum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 19, pl. 3, fig. 4 (male). New synonymy.

Theridion bishopi SCHENKEL, 1951, Verhandl. Naturf. Gesell. Basel, vol. 61, p. 47, fig. 12 (female). New synonymy.

FEMALE: Carapace dusky brown, dusky patch in center; eye region dark brown. Sternum dusky brown. Coxae yellow-white to brown. Legs yellow-white to brown, with



MAP 17. North American distribution of *Theridion melanurum*.

dark brown bands or spots at middle and distal ends of segments. Dorsum of abdomen dark gray to black, with median, scalloped, lighter band having parallel margins. Sides gray. Venter with triangular white spot between spinnerets and epigastric line (fig. 181). Anterior median eyes slightly more than their diameter apart, one-quarter of a diameter from laterals. Posterior medians three-quarters of a diameter apart, one and one-quarter diameters from laterals. Lateral eyes slightly smaller than others. Clypeus concave, two tubercles near lower margin. Epigynum with subcircular depression (fig. 184). Internal genitalia illustrated by figures 182 and 183, sometimes with extra loops on one or both sides. A specimen from Utah has the ducts considerable longer on both sides (fig. 183). Total length, 3.0–4.8 mm. Measurements of a specimen from Oregon: total length, 3.6 mm.; carapace 1.56 mm. long, 1.43 mm. wide; first femur, 2.50 mm.; patella and tibia, 2.62 mm.; metatarsus, 2.22 mm.; tarsus, 0.78 mm.; second patella and tibia, 1.94 mm.; third, 1.24 mm.; fourth, 2.12 mm.

MALE: Color as in female except white ventral abdominal patch indistinct. Carapace with deep thoracic pit. Anterior median eyes slightly larger than others. Clypeus with tubercles as in female. Palpus with large subtegulum (figs. 185, 186). Total length of males; 2.8–4.6 mm. Measurements of one specimen: total length, 3.7 mm.; carapace 1.56 mm. long, 1.36 mm. wide; first femur, 2.60 mm.; patella and tibia, 3.11 mm.; metatarsus, 2.60 mm.; tarsus, 0.89 mm.; second patella and tibia, 2.08 mm.; third, 1.30 mm.; fourth, 1.82 mm.

There is some variation in the distances between eyes in individuals from different localities; there are slight variations in the connecting ducts of the female and in the conductor of the male palpus.

Wiehle (1952) says the habitat of this species is cliffs and houses, while the closely related *Theridion neglectum* Wiehle lives on tree trunks. *Theridion neglectum*, which differs mainly in having longer connecting ducts in the female, has not been found in North America. R. X. Schick (*in litt.*) reports that *T. melanurum* is found in small webs in depressions or cracks of walls.

TYPE LOCALITIES: *Aranea denticulata* is

from Paris, France. The types of *Theridion melanurum* are from rocks near Muggendorf, Bavaria. Female and juvenile male syntypes of *T. dorsatum* from Olympia, Washington (T. Kincaid), are in the Museum of Comparative Zoölogy. Female and juvenile male syntypes of *T. pictulum* from Palo Alto, California (K. R. Coolidge), are in the Museum of Comparative Zoölogy. Two female syntypes of *T. stanfordi* from Palo Alto, California (J. H. Emerton), are in the Museum of Comparative Zoölogy. Female holotype of *T. bishopi* Schenkel from Berkeley, California (H. Schenkel-Rudin), is in the Naturhistorisches Museum, Basel.

DISTRIBUTION AND AMERICAN MARGINAL RECORDS: Europe, North Africa, Azores, and Siberia (Wiehle, 1937). British Columbia to California and Utah. British Columbia: Wellington (R. Guppy). Utah: Big Cottonwood Canyon, Salt Lake County (W. J. Gertsch). California: Lyons Valley, San Diego County (W. M. Pearce).

RECORDS: See Appendix.

Theridion rufipes Lucas

Figures 188–193; map 18

Theridion rufipes LUCAS, "1846" (1849), Exploration scientifique de l'Algérie, Zoologie, vol. 2, pt. 1, p. 263, pl. 16, fig. 5 (female). SIMON, 1897, Ann. Soc. Ent. France, vol. 66, p. 271; 1897, Proc. Zool. Soc. London, p. 861. BANKS, 1898, Proc. California Acad. Sci., vol. 1, p. 236; 1902, Trans. Connecticut Acad. Sci., vol. 11, p. 272; 1906, Bull. Mus. Nat. Hist., vol. 22, p. 187; 1909, Proc. Acad. Nat. Sci. Philadelphia, vol. 61, p. 203. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 205. BRYANT, 1933, Bull. Mus. Comp. Zoöl., vol. 74, p. 183. REIMOSER, 1940, Ann. Naturhist. Mus. Wien, vol. 50, p. 347. BRYANT, 1940, Bull. Mus. Comp. Zoöl., vol. 86, no. 7, p. 319. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 459.

Theridion luteolum BLACKWALL, 1859, Ann. Mag. Nat. Hist., ser. 3, vol. 4, p. 259.

Theridion borbonicum VINSON, 1863, Aranéides des îles de la Réunion, Maurice et Madagascar, p. 318, pl. 14, fig. 6 (female).

Theridion luteipes O. P.-CAMBRIDGE, 1870, Jour. Linnean Soc., London, vol. 10, p. 382, pl. 12, figs. 46–51 (male, female).

Theridion albonotatum TACZANOWSKI, 1873, Horae Soc. Ent. Rossicae, vol. 10, p. 56 (*sub Theridium*). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 15, pl. 1, fig. 4 (male, female).

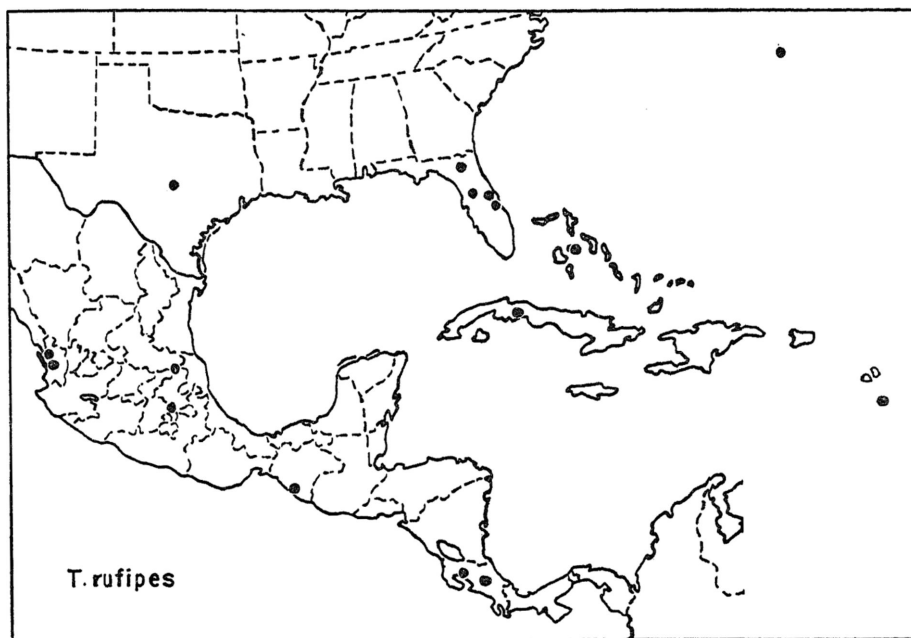
Theridion bajulans L. KOCH, 1875, Aegyptische und Abyssinische Arachniden, p. 21, pl. 2, figs. 4, 5 (male, female).

Theridion flavoaurantiacum SIMON, 1880, Ann. Soc. Ent. Belgique, vol. 23, p. 171.

Theridion longipes HASSELT, 1882, in Veth, Midden Sumatra, vol. 4, p. 33. (Reference not seen.)

Steatoda rufipes, F. O. P.-CAMBRIDGE, 1902, Biologia Centrali-Americana, Arachnida, Ara-

teeth on anterior margin of chelicerae. Epigynum an irregular knob with rough surface; indistinct openings on anterior surface (fig. 192) or sometimes in center as longitudinal slits (fig. 191). Total length of females, 4.2–5.3 mm. Measurements of a female from Florida: total length, 4.3 mm.; carapace 1.9 mm. long, 1.5 mm. wide; first femur, 3.2 mm.; patella and tibia, 3.5 mm.; metatarsus, 2.8



MAP 18. North and Central American distribution of *Theridion rufipes*.

neidea, vol. 2, p. 384, pl. 36, figs. 15, 16 (male, female).

Anelosimus nelsoni BRYANT, 1945, Trans. Connecticut Acad. Sci., vol. 36, p. 200, pl. 1, fig. 8 (male).

Nesticodes rufipes, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 23.

Robertus pilosus DENIS, 1955, Bull. Soc. Sci. Nat. Phys. Maroc, vol. 35, p. 203, figs. 15, 16 (male, female). New synonymy.

FEMALE: Carapace, sternum, and legs yellow. Abdomen gray, with indistinct darker and lighter markings; sometimes a median dorsal line of white spots above spinnerets and a dark ring around spinnerets. Anterior median eyes slightly less than one diameter apart, one-half of a diameter from laterals. Posterior medians one diameter apart. Posterior medians slightly longer than wide. Two

mm.; tarsus, 1.1 mm.; second patella and tibia, 2.4 mm.; third, 1.7 mm.; fourth, 2.8 mm.

MALE: Anterior median eyes slightly largest. Stridulating area around pedicel. Palpus with embolus moved mesad (figs. 188, 189). Total length of males, 2.8–3.7 mm. Measurements of a specimen from Florida: total length, 2.8 mm.; carapace 1.4 mm. long, 1.2 mm. wide; first femur, 2.5 mm.; patella and tibia, 2.9 mm.; metatarsus, 2.2 mm.; tarsus, 0.7 mm.; second patella and tibia, 1.7 mm.; third, 1.3 mm.; fourth, 1.8 mm.

According to Archer (1950), this is a house spider in southern Florida.

TYPE LOCALITIES: *Theridion rufipes* came from the vicinity of Oran, Algiers (M. Vailant). Male holotype and three female paratypes of *Anelosimus nelsoni* from Sebastian,

Florida, spring of 1938 (G. Nelson), are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND NORTH AMERICAN MARGINAL RECORDS: Cosmotropical. Florida: Alachua County (H. K. Wallace). Texas: San Marcos, Hays County. Bermuda Islands (Banks, 1902).

RECORDS: See Appendix.

Theridion alabamense Gertsch and Archer
Figures 202, 203, 206–208; map 19

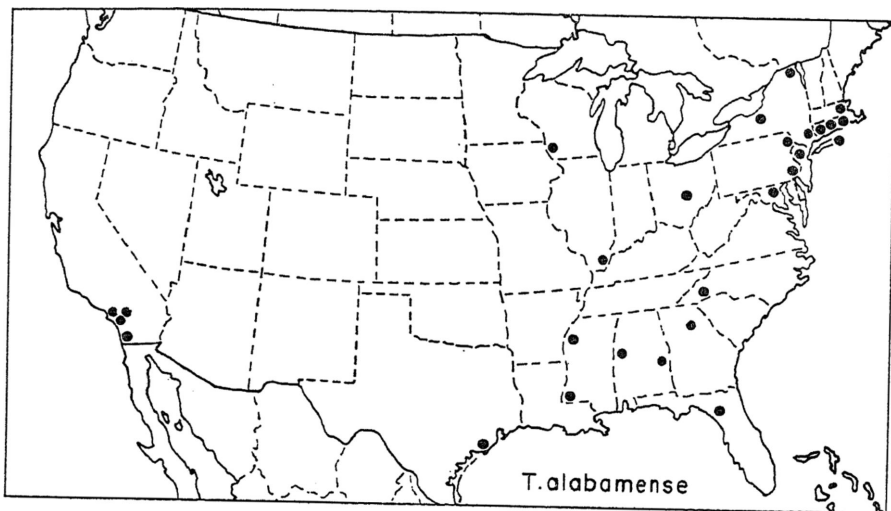
Theridion punctis-sparsum, KEYSERLING, 1884,
Die Spinnen Amerikas, Theridiidae, pt. 1, p. 14

Theridion americanum, CHAMBERLIN AND IVIE, 1944. Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 46, figs. 89, 106 (female). Not *Theridion americanum* Walckenaer.

Theridion talmo CHAMBERLIN AND IVIE, 1944, *ibid.*, biol. ser., vol. 8, no. 5, p. 55, figs. 81, 88 (male). New synonymy.

Allotheridion alabamense, LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 441.

FEMALE: Carapace yellowish: eye region, margins and central patch dusky. Sternum yellow, dusky sides. Legs dusky yellow to brown, lacking bands. Dorsum of abdomen black, with several light spots (fig. 206), dis-



MAP 19. Distribution of *Theridion alabamense*.

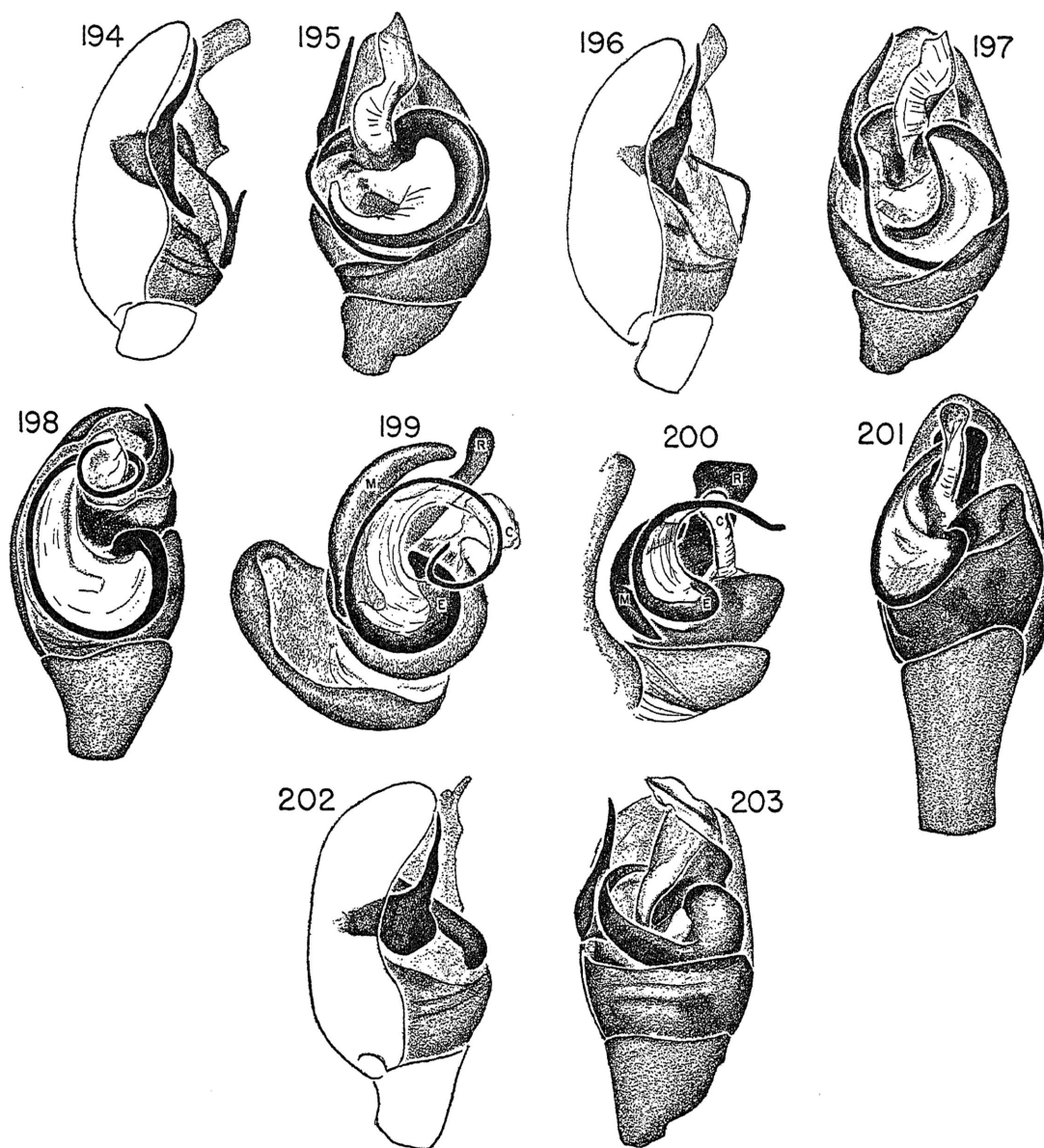
(in part), pl. 1, figs. 3a, 3b (female). Not *Theridion punctosparsum* Emerton, 1882.

Theridion cinereum EMERTON, 1913, Trans. Connecticut Acad. Sci., vol. 18, p. 212, pl. 1, fig. 2 (male) (*sub Theridium*). BARROWS, 1924, Ohio Jour. Sci., vol. 24, p. 312. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Sta., no. 101, p. 1041. LOWRIE, 1948, Ecology, vol. 29, p. 338. ELLIOTT, 1953, Proc. Indiana Acad. Sci., vol. 62, p. 309. Not *Theridion cinereum* Thorell, 1875.

Theridion alabamense GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 4 (new name for *Theridion cinereum* Emerton, preoccupied). ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 44. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 107, figs. 143, 165–166. LEVI, 1951, Amer. Mus. Novitates, no. 1501, p. 2.

Theridion cinerascens ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502. New name for *Theridion cinereum* Emerton, preoccupied.

tinct white mark above spinnerets. Venter yellowish gray, with some white pigment spots. Spinnerets surrounded by dusky ring. On venter two dusky parallel lines from spinnerets which bend towards the sides halfway to the epigynum. Anterior median eyes one diameter apart, almost touching laterals. Posterior medians less than one diameter apart, one diameter from laterals. Epigynum (fig. 208) a large oval depression containing an opening on each side. The width between the openings is quite variable. Total length, 1.9 mm.–3.7 mm. A female from Connecticut measured: total length, 2.2 mm.; carapace 0.92 mm. long, 0.90 mm. wide; first femur, 1.33 mm.; patella and tibia, 1.57 mm.; metatarsus, 1.19 mm.; tarsus, 0.55 mm.; second patella and tibia, 1.20 mm.; third, 0.85 mm.; fourth, 1.20 mm.



FIGS. 194, 195. *Theridion punctosparsum* Emerton, left palpus. 194. Mesal view. 195. Ventral view.
 FIGS. 196, 197. *Theridion antonii* Keyserling, palpus. 196. Mesal view. 197. Ventral view.
 FIGS. 198, 199. *Theridion hobbsi* Gertsch and Archer, palpus. 198. Ventral view. 199. Ventral view, expanded.
 FIGS. 200, 201. *Theridion tinctum* Walckenaer, palpus. 200. Ventral view, expanded. 201. Ventral view.
 FIGS. 202, 203. *Theridion alabamense* Gertsch and Archer. 202. Mesal view. 203. Ventral view.
 Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix.

MALE: Anterior median eyes slightly larger than others. Palpus illustrated by figures 202 and 203. Total length, 1.8–2.5 mm. Measurements of a specimen from Pennsylvania: total length, 2.5 mm.; carapace 1.16 mm. long, 0.93 mm. wide; first femur, 1.79 mm.; patella and tibia, 2.04 mm.; metatarsus, 1.56 mm.; tarsus, 0.61 mm.; second patella and tibia, 1.62 mm.; fourth, 1.32 mm.

Chamberlin and Ivie (1944) decided that *Theridion quadripunctatum americanum* Walckenaer, 1841, is this species and made a specimen from Georgia the neotype for *americanum*. Because *Theridion quadripunctatum* Walckenaer is *Steatoda bipunctata* of Europe and Walckenaer indicated that the differences between the latter and Abbot's drawings were small, we may assume that he dealt with a *Steatoda* rather than a *Theridion*.

This species is found under bark and under boards.

TYPE LOCALITY: Male holotype of *Theridion cinereum* from Wellesley, Massachusetts, is in the Museum of Comparative Zoölogy. Male holotype of *Theridion talmo* is from northwest of Pendergrass, Georgia, April 23, 1943 (W. Ivie).

DISTRIBUTION AND MARGINAL RECORDS: Eastern United States, southern states to California. New York: Peru, Clinton County. Wisconsin: Wyalusing State Park (H. and L. Levi). Florida: Alachua County (H. K. Wallace). California: Lyons Valley, San Diego County (W. M. Pearce).

RECORDS: See Appendix.

Theridion antonii Keyserling

Figures 196, 197, 205, 215, 216, 219, 220; map 20

Theridion antonii KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 54, pl. 2, fig. 31 (male). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 191. BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 181. FOX, 1940, Proc. Biol. Soc. Washington, vol. 53, p. 42. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 501.

FEMALE: Carapace yellow, usually with a dusky median band and dusky margin. Sternum dusky yellow. Legs yellow, usually with indistinct dusky bands. Dorsum of abdomen white, with black spots (fig. 205); sides with

black patches. Venter gray, with some black marks. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior eyes two-thirds of a diameter apart, one diameter from laterals. Lateral eyes slightly smaller than medians. Epigynum (figs. 219, 220) a depression with a septum. Total length, 1.8–3.0 mm. Measurements of a female from Mississippi: total length, 3.0 mm. carapace 1.17 mm. long, 1.00 mm. wide; first femur, 1.87 mm.; patella and tibia, 2.08 mm.; metatarsus, 1.58 mm.; tarsus, 0.65 mm.; second patella and tibia, 1.44 mm.; third, 1.00 mm.; fourth, 1.54 mm.

MALE: Legs without bands. Palpus illustrated by figures 196 and 197. Total length, 2.0–2.7 mm. Measurements of a male from Mississippi: total length, 2.5 mm.; carapace 1.17 mm. long, 0.91 mm. wide; first femur, 1.72 mm.; patella and tibia, 1.96 mm.; metatarsus, 1.56 mm.; tarsus, 0.67 mm.; second patella and tibia, 1.43 mm.; third, 0.98 mm.; fourth, 1.30 mm.

The female epigynum is similar to that of *T. punctosparsum*, but the shape is variable. The internal genitalia are more sclerotized near the seminal receptacles, and these are spherical, while those of *T. punctosparsum* are oval. The lighter coloration and the indistinct leg bands, broken on the dorsal surfaces of the legs, differentiate most females from those of *T. punctosparsum*.

TYPE LOCALITY: Male holotype from San Antonio, Texas, is in the United States National Museum (U.S.N.M. No. 1320).

DISTRIBUTION AND MARGINAL RECORDS: Eastern United States. Connecticut: Norwalk (W. J. Gertsch), one male. Florida: Jackson County (H. K. Wallace), two males.

RECORDS: See Appendix.

Theridion punctosparsum Emerton

Figures 194, 195, 204, 217, 218, 220, 221; map 20

Theridion puncto-sparsum EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 12, pl. 1, fig. 6 (female) (*sub Theridion*). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 14 (in part, *sub punctis-sparsum*), pl. 1, figs. 3, 3c (not 3a, 3b) (female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 520; 1892, Proc. Ent. Soc. Washington, vol. 2, p. 156. BANKS, 1892, Proc. Acad. Nat. Sci. Philadelphia, p. 30; 1904, *ibid.*, vol. 56, p. 126. SCHEFFER, 1906, Trans. Kansas Acad. Sci., vol. 20, p. 127. BRYANT, 1908, Occas.

Papers Boston Soc. Nat. Hist., vol. 7, p. 13. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 20; 1911, Proc. Acad. Nat. Sci., Philadelphia, vol. 63, p. 444. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 203. COMSTOCK, 1912, The spider book, p. 350, fig. 348 (female). BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 183. KASTON, 1938, Bull. Connecticut Geol. Nat. Hist. Surv., no. 60, p. 186. COMSTOCK, 1940, The spider book, rev. ed., p. 365, fig. 348 (female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 504. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 53. MUMA, 1944, Amer. Mus. Novitates, no. 1257, p. 7; 1945, Bull. Maryland Agr. Exp. Sta., no. A38, p. 28. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 45. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 108, figs. 133-134 (female). *Allotheridion (Allotheridion) punctosparsum*, ARCHER, 1950, Paper Alabama Mus. Hist., no. 30, p. 20.

FEMALE: Carapace brown, dusky in center and on sides. Sternum dusky brown. Legs yellow-white, with distinct brown bands at middle and distal ends of segments. Leg bands as wide as intermediate area. Abdomen dark gray to black, white spots on dorsum (fig. 204). Venter with white spot anterior to spinnerets; two on each side. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior eyes one diameter apart. Epigynum (figs. 220, 221) a depression showing indications of a septum. Openings anterior. Total length, 2.2-3.9 mm. Measurements of a female from Tennessee: total length, 2.9 mm.; carapace 1.14 mm. long, 0.97 mm. wide; first femur, 2.08 mm.; patella and tibia, 2.24 mm.; metatarsus, 1.69 mm.; tarsus, 0.72 mm.; second patella and tibia, 1.48 mm.; third, 1.00 mm.; fourth, 1.59 mm.

MALE: Similar in color to female. Eyes slightly closer together. Palpus (figs. 194, 195) similar to that of *T. antonii*, except embolus. Total length of males, 2.4 mm.-2.5 mm. Measurements of a male: total length, 2.5 mm.; carapace 1.17 mm. long, 1.00 mm. wide; first femur, 2.14 mm.; patella and tibia, 2.54 mm.; metatarsus, 1.97 mm.; tarsus, 0.75 mm.; second patella and tibia, 1.56 mm.; third, 1.00 mm.; fourth, 1.43 mm.

The darker coloration and the leg bands distinguish females of this species from those of *T. antonii*. The epigynum which is variable

in shape is similar in both species. However, the internal genitalia of *T. punctosparsum* are less sclerotized and the seminal receptacles are oval in shape.

Webs of *Theridion punctosparsum* are found under rotten logs, stones, and under stones in walls. The egg sac is semitransparent and fluffy, containing 70 eggs (Archer, 1946; Kaston, 1948).

TYPE LOCALITY: Female holotype from Salem, Massachusetts, July, 1877, under stone (J. H. Emerton), is in the Museum of Comparative Zoology.

DISTRIBUTION AND MARGINAL RECORDS: Northeastern United States. North Carolina: Murphy, Cherokee County (A. F. Archer). Arkansas: Berryville, Carroll County (C. Wilton).

RECORDS: See Appendix.

Theridion tinctum (Walckenaer)

Figures 200, 201, 210-212; map 29

Aranea tincta WALCKENAER, 1802, Faune Parisienne, vol. 2, p. 208.

Theridion tinctum, WALCKENAER, 1805, Tableau des aranéides, p. 75. WIEHLE, 1937, in Dahl, Die Tierwelt Deutschlands, pt. 33, p. 154, figs. 85-90 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 472. LOCKET AND MILLIDGE, 1953, British spiders, vol. 2, p. 75, figs. 48c, 48d, and 49b (male, female).

Theridion longimanum SUNDEVALL, 1831, Vetensk. Akad. Handl., p. 110.

Theridion irroratum C. L. KOCH, 1838, Die Arachniden, vol. 4, p. 120, fig. 327 (female) (*sub Theridium*).

Steatoda punctulata MENGE, 1868, Schr. Naturf. Gesell. Danzig, new ser., vol. 2, p. 160, pl. 30, fig. 68 (male, female).

FEMALE: Carapace yellow-white; dusky patch in cephalic region; broken line around margin. Sternum yellow-white, with black marks (fig. 210). Coxae with distal black spots. Legs white, three black spots on venter of each segment. Dorsum and venter (fig. 210) gray, with black spots. Sides and anterior white. Anterior median eyes one diameter apart, one-half of a diameter from laterals. Posterior medians one diameter apart. Epigynum a large oval depression (fig. 212), with an opening on each side. Total length, 3.2-3.8 mm. Measurements of a female from Oregon: total length, 3.6 mm.; carapace 1.56 mm. long; 1.44 mm. wide; first femur, 2.60 mm.;

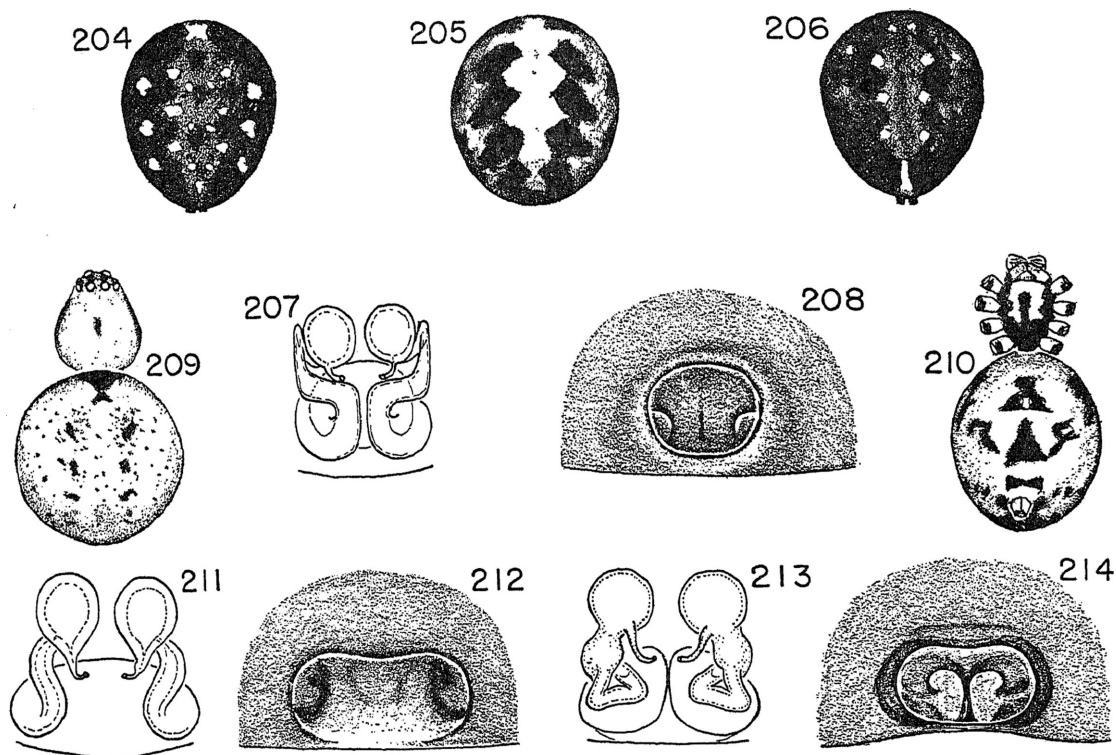


FIG. 204. *Theridion punctosparsum* Emerton, abdomen of female, dorsal view.

FIG. 205. *Theridion antonii* Keyserling, abdomen of female, dorsal view.

FIGS. 206–208. *Theridion alabamense* Gertsch and Archer. 206. Abdomen of female, posterior dorsal view. 207. Female genitalia, dorsal view. 208. Epigynum.

FIG. 209. *Theridion hobbsi* Gertsch and Archer, female, dorsal view.

FIGS. 210–212. *Theridion tinctum* Walckenaer. 210. Female, ventral view. 211. Female genitalia, dorsal view. 212. Epigynum.

FIGS. 213, 214. *Theridion hobbsi* Gertsch and Archer. 213. Female genitalia, dorsal view. 214. Epigynum.

patella and tibia, 3.00 mm.; metatarsus, 2.20 mm.; tarsus, 0.65 mm.; second patella and tibia, 2.31 mm.; third, 1.27 mm.; fourth, 1.60 mm.

MALE: Similar in color to female. Palpus illustrated by figures 200 and 201. Total length, 2.1–3.1 mm. A male from Oregon measured: total length, 3.1 mm.; carapace 1.42 mm. long, 1.17 mm. wide; first femur, 3.22 mm.; patella and tibia, 3.78 mm.; metatarsus, 2.86 mm.; tarsus, 0.68 mm.; second patella and tibia, 2.79 mm.; third, 1.44 mm.; fourth, 1.68 mm.

Wiehle (1937) reports this species from pines, more rarely spruce, on the borders of forests in Germany.

TYPE LOCALITY: *Aranea tinctoria* Walckenaer is from the vicinity of Paris, France.

DISTRIBUTION: Europe, Oregon, and Washington.

RECORDS: *Washington:* King County: Seattle (M. H. Hatch; T. Kincaid; B. Malkin; H. Frizzell). *Oregon:* Multnomah County: Portland (B. Malkin; V. Roth); Gresham (V. Roth).

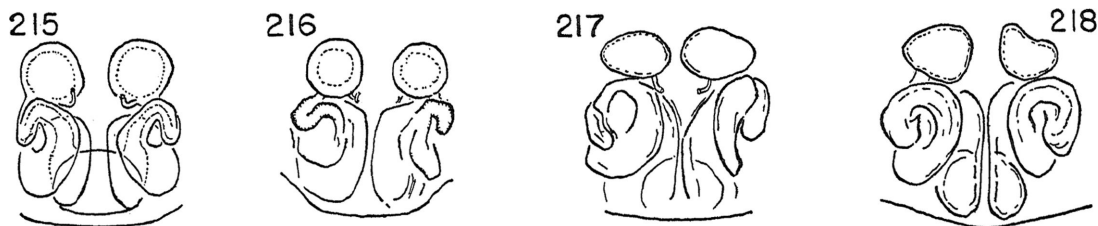
***Theridion hobbsi* Gertsch and Archer**

Figures 198, 199, 209, 213, 214; map 28

Theridion hobbsi GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 5, fig. 6 (female). ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 46.

Theridion blatchleyi BRYANT, 1945, Proc. Connecticut Acad. Sci., vol. 36, p. 205, pl. 1, fig. 5 (male).

Theridion insulicola BRYANT, 1947, Psyche, vol. 54, p. 88, fig. 1 (female). New synonymy.



FIGS. 215, 216. *Theridion antonii* Keyserling, female genitalia, dorsal view. 215. Mississippi. 216. New York.

FIGS. 217, 218. *Theridion punctosparsum* Emerton, female genitalia, dorsal view. 217. North Carolina. 218. Connecticut.

Chindellum magnificum ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 13, pl. 1, fig. 2 (female). New synonymy.

FEMALE: Carapace yellow-white, a black mark in center, a fine black line around border. Clypeus with black spot. Sternum yellow-white, with dusky median line and dusky sides. Each leg segment with two to four narrow bands, broken dorsally. Dorsum of abdomen with an indistinct median white band, bordered laterally by black spots of varying size (fig. 209). Venter with a semicircular black mark on each side. Anterior median eyes one diameter apart, one-third of a diameter from laterals. Posterior medians one diameter apart. Lateral eyes slightly smaller than medians. Chelicerae without teeth. Epigynum a large oval depression with a septum; openings lateral to septum (fig. 214). Total length, 2.3–3.8 mm. Measurements of one specimen: total length, 3.0 mm.; carapace 1.35 mm. long, 1.23 mm. wide; first femur, 1.89 mm.; patella and tibia, 2.34 mm.; metatarsus, 1.75 mm.; tarsus, 0.52 mm.; second patella and tibia, 2.01 mm.; third, 1.30 mm.; fourth, 1.39 mm.

MALE: Color as in female. Palpus illustrated by figures 198 and 199. Total length, 2.0–2.8 mm. Measurements of one specimen:

total length, 2.2 mm.; carapace 0.94 mm. long, 0.87 mm. wide; first femur, 1.76 mm.; patella and tibia, 2.02 mm.; metatarsus, 1.54 mm.; tarsus, 0.49 mm.; second patella and tibia, 1.69 mm.; third, 1.04 mm.; fourth, 1.04 mm.

Archer (1946) reports this species from an ornamental shrub in a garden.

TYPE LOCALITY: Female holotype of *Theridion hobbsi* and two female paratypes from Gainesville, Alachua County, Florida, June 15, 1934 (W. J. Gertsch), are in the American Museum of Natural History. The male holotype of *T. blatchleyi* from Dunedin, Florida, March, 1927 (W. S. Blatchley), is in the Museum of Comparative Zoölogy. Female holotype of *T. insulicola* from Mona Island, West Indies, April 5, 1944 (Serrallés), also is in the Museum of Comparative Zoölogy. The female holotype of *Chindellum magnificum* from Centreville, Wilkinson County, Mississippi, 1944 (A. F. Archer), is in the American Museum of Natural History.

DISTRIBUTION AND NORTH AMERICAN MARGINAL RECORDS: Florida to Texas, West Indies, Brazil, New Guinea. Alabama: Montgomery (Archer, 1946). Texas: Port Arthur, Jefferson County (E. D. Palmer).

RECORDS: See Appendix.

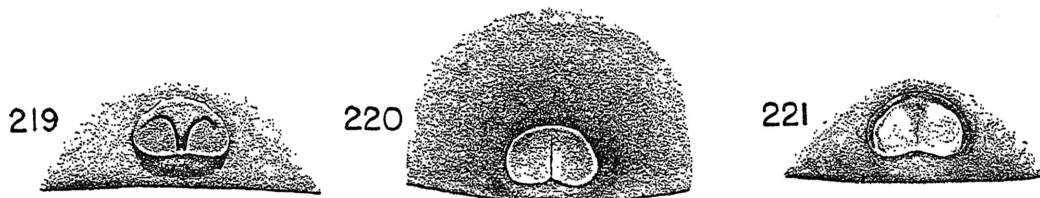


FIG. 219. *Theridion antonii* Keyserling, epigynum, posterior view.

FIG. 220. *Theridion antonii* Keyserling or *Theridion punctosparsum* Emerton, epigynum.

FIG. 221. *Theridion punctosparsum* Emerton, epigynum, posterior view.

Theridion intervallatum Emerton

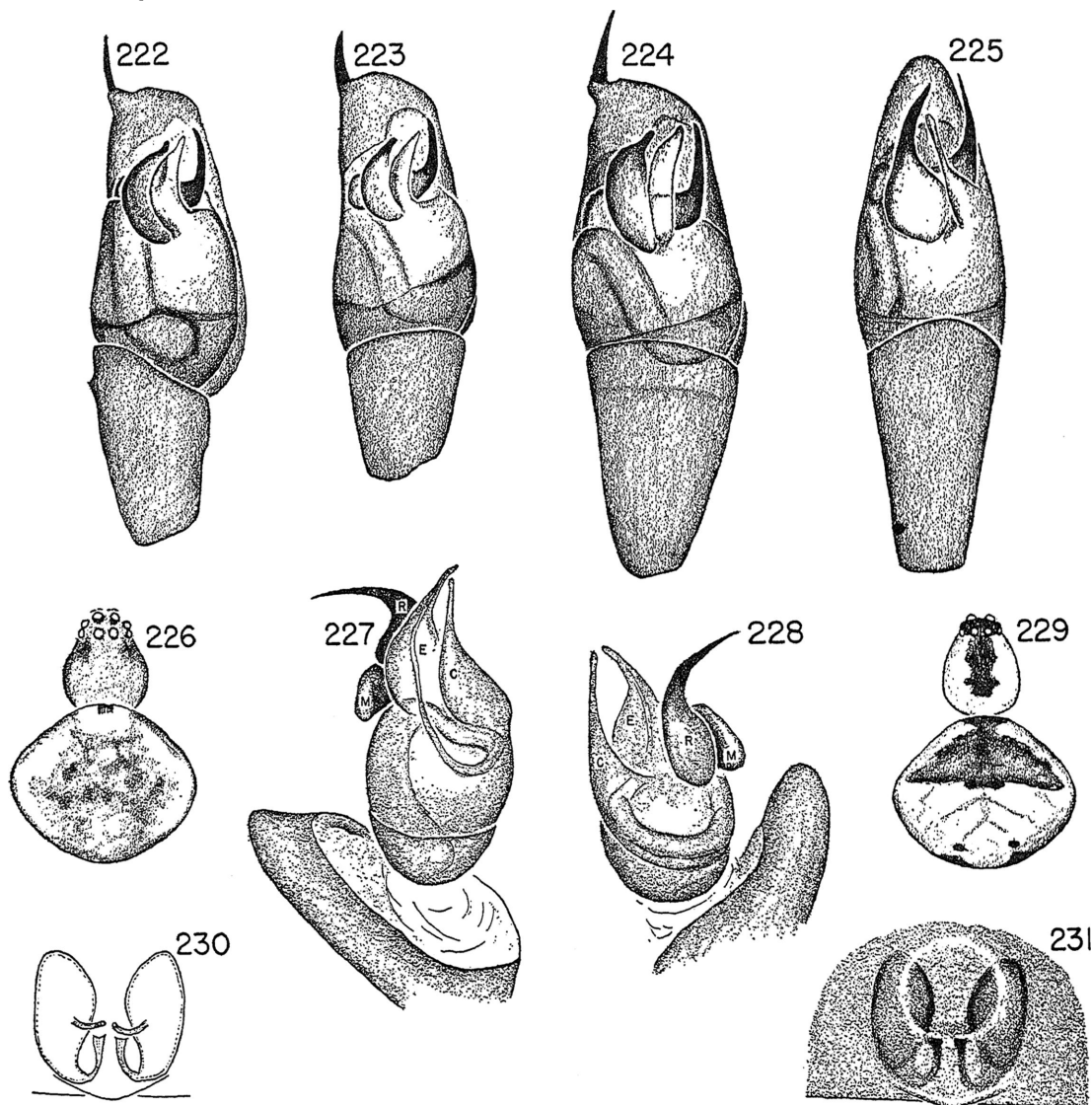
Figures 222–224, 229–231; map 21

Theridion intervallatum EMERTON, 1915, Trans. Connecticut Acad. Sci., vol. 20, p. 136, pl. 1, fig. 1 (male); 1930, Publ. Nantucket Maria Mitchell Assoc., vol. 3, p. 163. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 503. MUMA, 1945, Proc. Biol. Soc. Washington, vol. 58, p. 96.

Theridion realisticum GERTSCH AND MULAİK, 1936, Amer. Mus. Novitates, no. 863, p. 11, figs. 23, 24 (female, male). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 505. New synonymy.

Theridion chinda CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 49, figs. 82–84 (female). New synonymy.

Theridion blandum, KASTON, 1945, Amer. Mus. Novitates, no. 1292, p. 5, figs. 11, 12 (male,



FIGS. 222–224. *Theridion intervallatum* Emerton, left palpus, ventral view. 222. Maine. 223. Chiapas. 224. California.

FIGS. 225–228. *Theridion atropunctatum* Petrunkevitch. 225. Palpus, ventral view. 226. Female. 227. Palpus, subventral view, expanded. 228. Palpus, dorsal view, expanded.

FIGS. 229–231. *Theridion intervallatum* Emerton. 229. Female. 230. Female genitalia, dorsal view. 231. Epigynum.

Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix.



FIGS. 232-234. *Theridion atropunctatum* Petrunkevitch. 232. Female genitalia, dorsal view. 233, 234. Epigynum. 233. Puerto Rico. 234. Florida.

female); 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 110, figs. 176, 177 (male, female). Not *Theridion blandum* Hentz.

Theridion (*Allotheridion*) *realisticum*, ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 44. New synonymy.

Theridion (*Allotheridion*) *chinda*, ARCHER, 1946, *ibid.*, no. 22, p. 44. New synonymy.

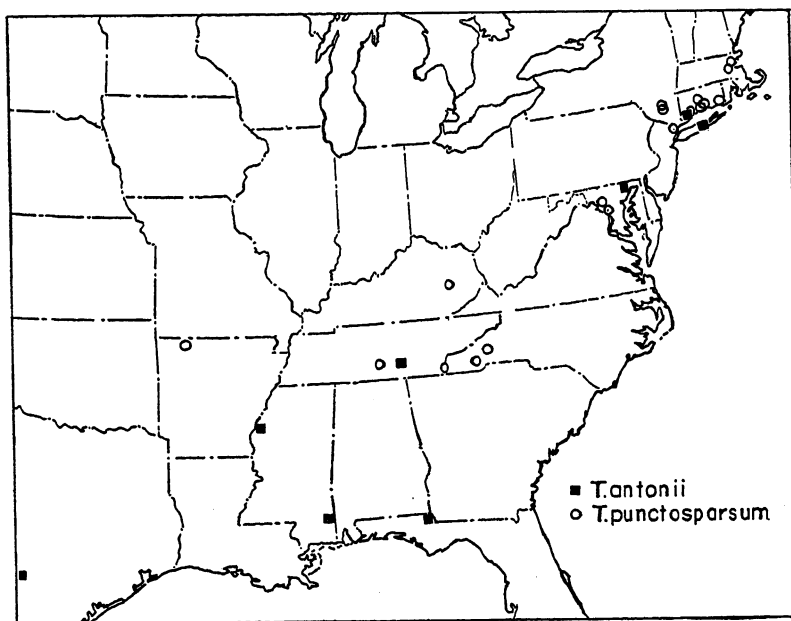
Chindellum intervallatum, ARCHER, 1950, *ibid.*, no. 30, p. 12, pl. 1, fig. 1 (male).

Allotheridion chinda, BARNES, 1953, Amer. Mus. Novitates, no. 1632, p. 3; 1953, Ecol. Monogr., vol. 23, p. 321. New synonymy.

FEMALE: Carapace quite variable, yellow-white, with median band. Eye region black. Clypeus with narrow black line. Legs yellow-white, with black spots and rings. Dorsum of abdomen with black pattern on white background (fig. 229). Venter gray, sometimes

with white spots. Anterior median eyes one diameter apart, one-third of a diameter from laterals. Posterior medians three-quarters of a diameter to one diameter apart, same distance from laterals. Anterior medians slightly larger than others. Sometimes laterals and posterior medians on slight tubercles. Openings of epigynum at posterior border of shallow circular depression (fig. 231). Total length, 1.4–2.6 mm. Measurements of a female from Florida: total length, 1.7 mm. carapace 0.75 mm. long, 0.65 mm. wide; first femur, 0.94 mm.; patella and tibia, 1.07 mm.; metatarsus, 0.60 mm.; tarsus, 0.29 mm.; second patella and tibia, 0.91 mm.; third, 0.55 mm.; fourth, 0.64 mm.

MALE: Palpus illustrated by figures 222–224. Length of palpal metatarsus variable.



MAP 20. Distribution of *Theridion antonii* and *T. punctosparsum*.

Total length, 1.2–1.6 mm. Measurements of a male from Florida: total length, 1.3 mm.; carapace 0.65 mm. long, 0.56 mm. wide; first femur, 0.82 mm.; patella and tibia, 0.86 mm.; metatarsus, 0.50 mm.; tarsus, 0.28 mm.; second patella and tibia, 0.69 mm.; third, 0.42 mm.; fourth, 0.52 mm.

isticum from Kingsville, Texas, October, 1934 (S. Mulaik), are in the American Museum of Natural History. Female holotype of *T. chinda* from Brier Creek, 7 miles north of Sylvania, Georgia, April 12, 1943 (W. Ivie), is in the University of Utah collection.

DISTRIBUTION AND NORTH AMERICAN



MAP 21. Distribution of *Theridion intervallatum* and *T. atropunctatum*.

There is considerable geographic variation in the male palpi.

This species is found on shrubs.

TYPE LOCALITIES: Although the original description of *Theridion intervallatum* is of a male, the type specimen is a female from Intervale, New Hampshire, July 18, 1913 (E. B. Bryant), in the Museum of Comparative Zoölogy. Another vial in the Museum of Comparative Zoölogy contains a male from Nantucket, Massachusetts. It seems probable that the specimens have been transposed. Male holotype and female allotype of *T. real-*

MARGINAL RECORDS: Atlantic, Gulf, and Pacific coast states, Mexico, Central America, and Brazil. Maine: Lincoln County (D. J. Borror). Oregon: Rogue River, 6 miles east of Gold Beach, Curry County (B. Malkin).

RECORDS: See Appendix.

Theridion atropunctatum Petrunkevitch

Figures 225–228, 232–234; map 21

Theridion atropunctatum PETRUNKEVITCH, 1930, Trans. Connecticut Acad. Sci., vol. 30, p. 210, figs. 59, 60 (female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 490.

Theridion brevipalpus BRYANT, 1942, Bull. Mus. Comp. Zool., vol. 89, p. 341, figs. 28, 31, 32 (male). New synonymy.

Allodipoena diana BRYANT, 1947, Psyche, vol. 54, p. 184 (in part), figs. 1, 2 (female). New synonymy.

FEMALE: Carapace yellowish white, dusky on sides or center. A black spot behind anterior median eyes. Posterior eyes may be red ringed. Sternum yellow-white. Legs yellow-white, some irregular dusky markings or spots. Dorsum of abdomen (fig. 226) white, with gray or black spots, often with pattern as in *Theridion intervallatum*; venter gray, sometimes with black spots. Anterior median eyes one-half to three-quarters of a diameter apart, one-third of a diameter from laterals. Posterior medians one-third to three-quarters of a diameter apart, less than one diameter from laterals. Abdomen wider than long. Epigynum with an indistinct central depression (figs. 233-234). Total length, 1.5-2.3 mm. A female from Puerto Rico measured: total length, 1.6 mm.; carapace 0.78 mm. long, 0.61 mm. wide; first femur, 1.20 mm.; patella and tibia, 1.36 mm.; metatarsus, 0.81 mm.; tarsus, 0.29 mm.; second patella and tibia, 1.16 mm.; third, 0.59 mm.; fourth, 0.78 mm.

MALE: Palpus very small; illustrated by figures 225, 227, and 228. Total length, 1.2-1.8 mm. A male from Puerto Rico measured: total length, 1.5 mm.; carapace 0.70 mm. long, 0.62 mm. wide; first femur, 1.00 mm.; patella and tibia, 1.14 mm.; metatarsus, 0.68 mm.; tarsus, 0.27 mm.; second patella and tibia, 0.91 mm.; third, 0.47 mm.; fourth, 0.62 mm.

Central American specimens are slightly larger, the carapace of females is yellow-brown and much more sclerotized, the male palpus has an apical bristle as in *Theridion intervallatum*, and the tip of the embolus is shorter. However, the conductor of the palpus is as in males from other parts of the range of this species. The length of the tibia of the palpus is quite variable in different specimens. The epigyna differ slightly in different parts of the range.

TYPE LOCALITY: Female holotype of *Theridion atropunctatum* from Arecibo, Puerto Rico, June 24, 1915, is in the American Museum of Natural History. Male holotype of *T. brevipalpus* from St Croix, Virgin Islands

(Beatty), is in the Museum of Comparative Zoölogy. Female holotype of *Allodipoena diana* from Luquillo Mountains. 3000 feet, Puerto Rico, July, 1944 (Beatty), is in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Southern Florida, Guatemala, Panama, and West Indies. Florida: Everglades (A. M. Nadler).

RECORDS: See Appendix.

Theridion istokpoga, new species

Figures 235, 236, 247, 248; map 22

FEMALE: Carapace whitish, with median dusky band. Sternum white. Legs yellow-white, with irregular black spots. Abdomen white, with anterior dorsal black marks, as in *Theridion positivum*, black dorsal marks on each side of spinnerets, and some spots; venter with a gray ring on white background on each side of pedicel. Anterior median eyes one and one-quarter to one and one-half diameters apart, almost touching laterals. Posterior medians one diameter apart, two-thirds of a diameter from laterals. Epigynum with openings in a depression (fig. 248); depression usually covered by an opaque white substance. Total length, 1.3-2.1 mm. Measurements of female allotype: total length, 1.6 mm.; carapace 0.65 mm. long, 0.61 mm. wide; first femur, 0.96 mm.; patella and tibia, 0.95 mm.; metatarsus, 0.71 mm.; tarsus, 0.37 mm.; second patella and tibia, 0.65 mm.; third, 0.45 mm.; fourth, 0.70 mm.

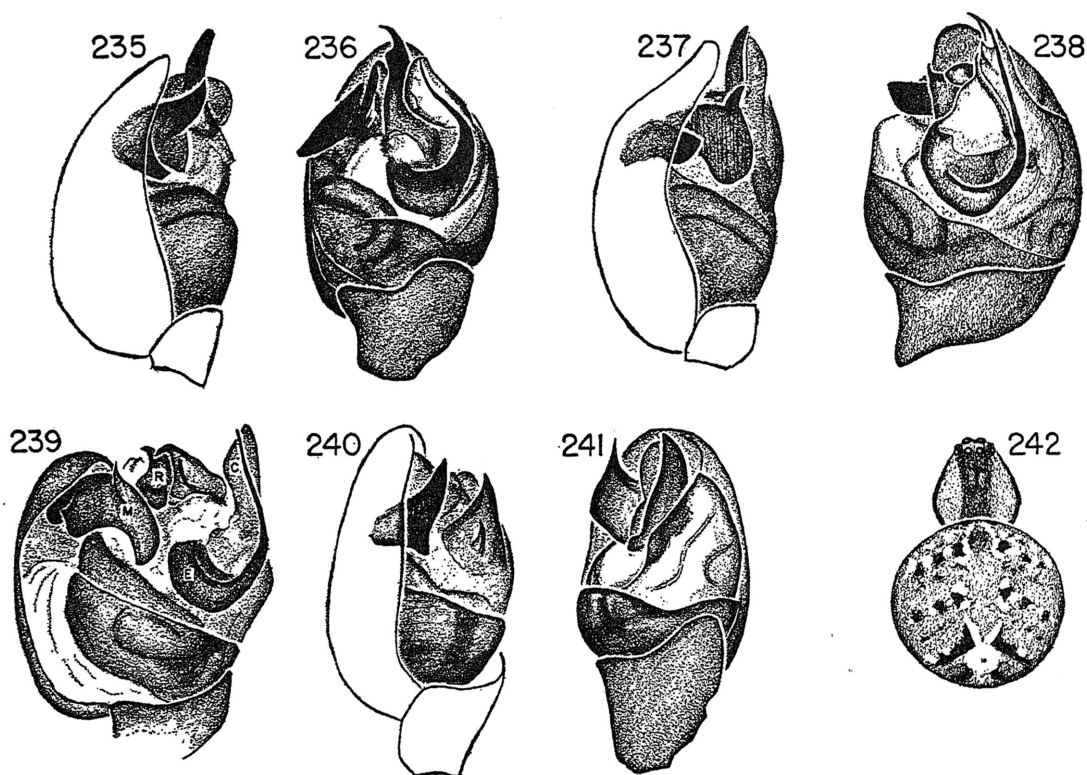
MALE: Color and structure as in female. Palpus (figs. 235, 236) similar to that of *T. positivum*. Measurements of male holotype: total length, 1.4 mm.; carapace 0.65 mm. long, 0.62 mm. wide; first femur, 1.00 mm.; patella and tibia, 1.17 mm.; metatarsus, 0.85 mm.; tarsus, 0.38 mm.; second patella and tibia, 0.81 mm.; third, 0.52 mm.; fourth, 0.68 mm.

Only details of the genitalia will differentiate this species from *Theridion positivum*.

TYPE LOCALITY: Male holotype and female allotype from Tavernier, Monroe County, Florida, February 16, 1951 (A. M. Nadler).

DISTRIBUTION AND MARGINAL RECORDS: Florida and Chiapas. Florida: Rock Bluff, Liberty County. Chiapas: Las Casas (C. and M. Goodnight, L. Stannard).

RECORDS: See Appendix.



FIGS. 235, 236. *Theridion istokpoga*, new species, left palpus. 235. Mesal view. 236. Ventral view. FIGS. 237–239. *Theridion positivum* Chamberlin, palpus. 237. Mesal view. 238. Ventral view. 239. Submesal view, expanded. FIGS. 240–242. *Theridion saanichum* Chamberlin and Ivie. 240. Palpus, mesal view. 241. Palpus, ventral view. 242. Female.

Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix.

Theridion positivum Chamberlin

Figures 237–239, 243–246; map 22

Theridion positivum CHAMBERLIN, 1924, Proc. California Acad. Sci., ser. 4, vol. 12, p. 636 (female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 497.

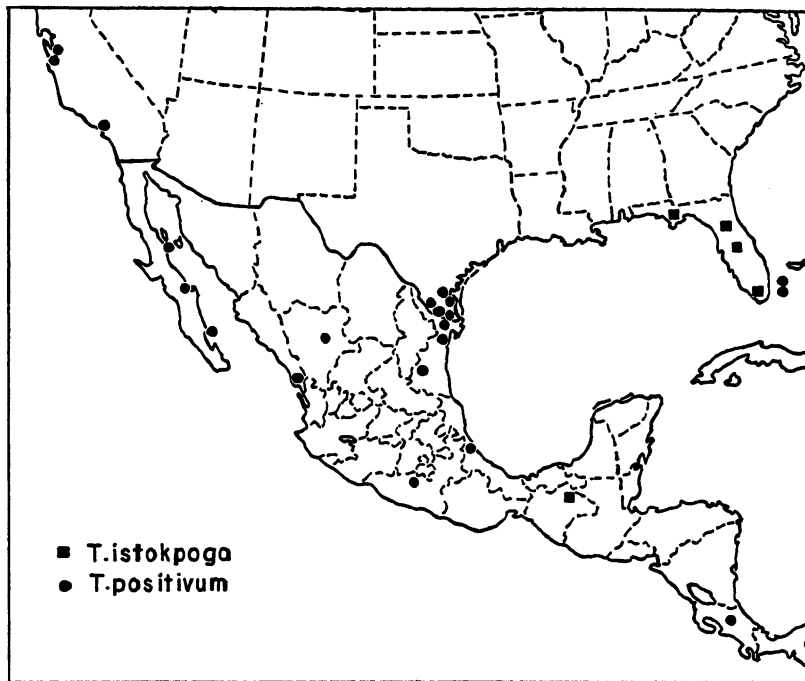
Theridion detractum GERTSCH AND MULAİK, 1936, Amer. Mus. Novitates, no. 863, p. 14, fig. 27 (female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502. New synonymy.

Theridion cybele BRYANT, 1942, Bull. Mus. Comp. Zool., vol. 89, p. 342, fig. 39 (female). New synonymy.

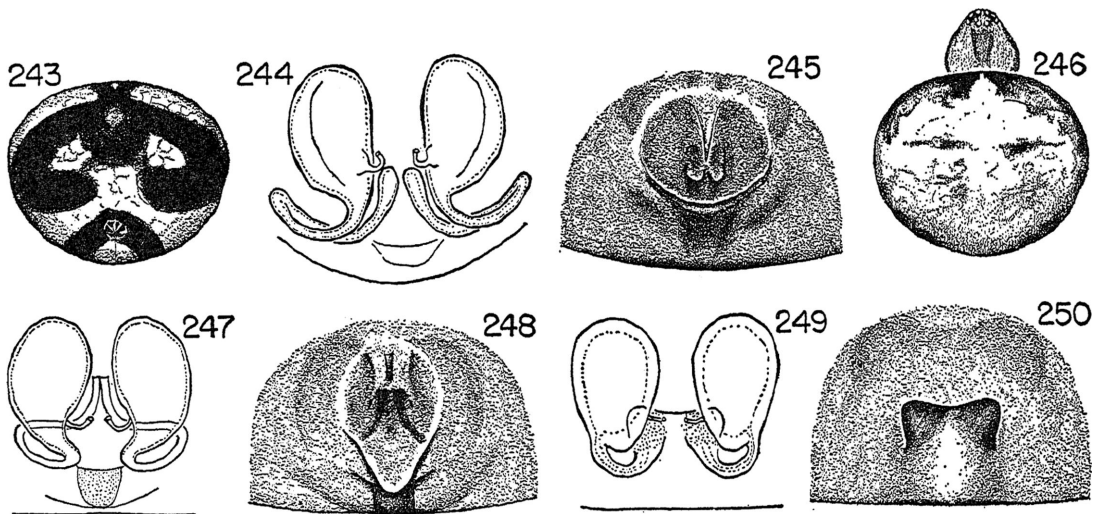
Theridion denisi Caporiacco, 1955, Acta Biol. Venezuelica, vol. 1, p. 332, fig. 24 (female). New synonymy.

FEMALE: Carapace yellow-white, with black margin and dusky median band. Chelicerae with black spot. Sternum yellow-white, sides dusky. Legs yellow-white, with black

spots. Abdomen with black and gray marks on white background (fig. 246). Some specimens from Baja California and California with sternum black, dorsum of abdomen white, and venter all black except white spot between epigastric furrow and spinnerets. Anterior median eyes one and one-quarter diameters apart, almost touching laterals. Posterior medians one diameter apart, less than one diameter from laterals. Anterior medians slightly larger than others. Openings of epigynum (fig. 245) in center of oval depression, usually covered by transparent whitish substance. Posterior border of depression quite variable in shape. Total length, 1.4–2.3 mm. Measurements of a female from Texas: total length, 2.0 mm.; carapace 0.73 mm. long, 0.67 mm. wide; first femur, 1.05 mm.; patella and tibia, 1.07 mm.; metatarsus, 0.77 mm.; tarsus, 0.36 mm.; second patella and



MAP 22. Distribution of *Theridion istokpoga* and *T. positivum*.



FIGS. 243-246. *Theridion positivum* Chamberlin. 243. Abdomen of female, ventral view. 244. Female genitalia, dorsal view. 245. Epigynum. 246. Female.

FIGS. 247, 248. *Theridion istokpoga*, new species. 247. Female genitalia, dorsal view. 248. Epigynum.

FIGS. 249, 250. *Theridion saanichum* Chamberlin and Ivie. 249. Female genitalia, dorsal view. 250. Epigynum.

tibia, 0.78 mm.; third, 0.53 mm.; fourth, 0.78 mm.

MALE: Palpus illustrated by figures 237, 238, and 239. Measurements of a specimen from Texas: total length, 1.7 mm.; carapace 0.68 mm. long, 0.70 mm. wide; first femur, 1.24 mm.; patella and tibia, 1.40 mm.; metatarsus, 1.04 mm.; tarsus, 0.39 mm.; second patella and tibia, 0.98 mm.; third, 0.47 mm.; fourth, 0.79 mm.

A male and female from Baja California, determined by Chamberlin, deposited in the California Academy of Natural Sciences were examined. Both were in very poor condition. The depression of the epigynum of the female was very deep and of peculiar shape, probably the result of warping after once having been dried. It is possible, however, that the openings in the depression were separated by a slightly greater distance. The male, however, was like other males of this species from California.

TYPE LOCALITIES: Female holotype of *Theridion positivum*, from Pond Island, Gulf of California, July 1, 1921 (J. C. Chamberlin), type number 1420 in the California Academy of Sciences. Two female paratypes from same locality are in the Museum of Comparative Zoölogy. Female holotype of *T. detractum*, from west of Arroyo el Tigre, Zapata County, Texas, November 11, 1934 (S. Mulaik), is in the American Museum of Natural History. Female holotype and one female paratype of *T. cybele* from St. Croix, Virgin Islands (Beatty), are in the Museum of Comparative Zoölogy. Female holotype of *T. denisi*, from Rancho Grande Aragua, Venezuela, August 9, 1949 (Racemis), is in the Museo Biología, Universidad Central de Venezuela, specimen number 607.

DISTRIBUTION AND MARGINAL RECORDS: California, Texas, to Venezuela, Bahama Islands. California: Stanford. Bahama Islands: North Bimini and South Bimini (A. M. Nadler).

RECORDS: See Appendix.

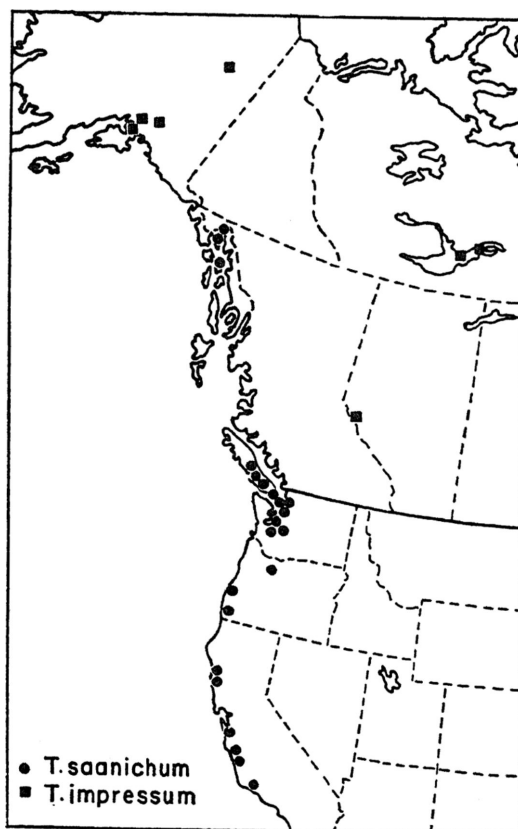
Theridion saanichum Chamberlin and Ivie
Figures 240–242, 249, 250; map 23

Theridion saanichum CHAMBERLIN AND IVIE, 1947, Bull. Univ. Utah, biol. ser., vol. 10, no. 3, p. 28, fig. 16 (female).

FEMALE: Carapace yellow-white, with dusky border and median line. Clypeus with dark

spot and fine line along margin. Sternum yellow-white, black border. Legs yellow-white, bands at middle and distal ends of segments; patellae dark. Abdomen gray, with white and black spots (fig. 242). Anterior median eyes one diameter apart, one-half of a diameter from laterals. Posterior medians three-quarters of a diameter to one diameter apart, one-half of a diameter to one diameter from laterals. Epigynum (fig. 250) with two dark knobs pointing anteriorly. Total length, 1.7 mm. (California) to 2.9 mm. (British Columbia). Measurements of female holotype: total length, 2.2 mm.; carapace 0.91 mm. long, 0.82 mm. wide; first femur, 1.43 mm.; patella and tibia, 1.44 mm.; metatarsus, 1.17 mm.; tarsus, 0.58 mm.; second patella and tibia, 0.98 mm.; third, 0.69 mm.; fourth, 1.14 mm.

MALE: Color lighter than in female. Palpus illustrated by figures 240 and 241. Measurements of a specimen from California: total length, 1.7 mm.; carapace 0.78 mm. long, 0.73 mm. wide; first femur, 1.20 mm.; patella



MAP 23. Distribution of *Theridion saanichum* and American distribution of *T. impressum*.

and tibia, 1.29 mm.; metatarsus, 1.03 mm.; tarsus, 0.52 mm.; second patella and tibia, 0.87 mm.; third, 0.57 mm.; fourth, 0.87 mm.

TYPE LOCALITY: Female holotype from west side of Saanich Inlet, British Columbia, September 14, 1935 (R. V. Chamberlin and W. Ivie), is in the University of Utah collection.

DISTRIBUTION AND MARGINAL RECORDS: Pacificcoast. Alaska: Skagway (S. C. Bishop). California: Santa Barbara.

RECORDS: See Appendix.

***Theridion lawrencei* Gertsch and Archer**

Figures 257-260; map 24

Theridion lawrencei GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 8, fig. 23 (male).

FEMALE: Carapace yellow-white, with narrow black border, and broad, median, dusky band; eye region black. A black spot on clypeus and on each chelicera. Sternum yellow-white, usually with a black border which is wider at bases of coxae. Legs yellow-white, with black rings at middle and distal ends of segments. Abdomen with white dorsal band as in *T. montanum* (fig. 251). Sides spotted gray and black. Venter grayish white, some white and black spots. Anterior median eyes more than one diameter apart, one-third of a diameter from laterals. Posterior medians three-quarters of a diameter apart, one diameter from laterals. Epigynum (fig. 258) has a black area on a raised sclerotized plate. Total length of females, 2.3-3.9 mm. Measurements of a female: total length, 2.9 mm.; carapace 1.17 mm. long; first femur, 2.60 mm.; patella and tibia, 2.80 mm.; metatarsus, 2.57 mm.; tarsus, 0.78 mm.; second patella and tibia, 1.56 mm.; third, 1.01 mm.; fourth, 1.71 mm.

MALE: Slightly darker in color than female. Palpus illustrated by figures 259 and 260. Total length of males, 1.7-2.2 mm. Measurements of one specimen: total length, 1.8 mm.; carapace 0.98 mm. long, 0.91 mm. wide; first femur, 2.30 mm.; patella and tibia, 2.52 mm.; metatarsus, 2.30 mm.; tarsus, 0.75 mm.; second patella and tibia, 1.40 mm.; third, 0.89 mm.; fourth, 1.45 mm.

There is considerable variation in palpal structure, particularly in the shape of the median apophysis. The males of *Theridion lawrencei* are at times difficult to distinguish from those of *T. montanum*. *Theridion lawrencei* is

distinct in that the median apophysis has two hooks on one end and only one on the other; furthermore, the conductor is longer than in *T. montanum*.

This species has been collected by the beating of vegetation in coniferous forests.

TYPE LOCALITY: Male holotype from Jackson County, Oregon, June, July, 1935 (F. Lawrence), is in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Pacific coast states and Idaho. Washington: Friday Harbor (L. G. Worley). Idaho: Moscow (H. H. Hatch). California: Mt. Palomar State Park, San Diego County (W. J. and J. W. Gertsch).

RECORDS: See Appendix.

***Theridion montanum* Emerton**

Figures 251-256; map 24

Theridion montanum EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 10, pl. 1, fig. 3 (male, female) (*sub Theridium*). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519. BRYANT, 1908, Occas. Papers Boston Soc. Nat. Hist., vol. 7, p. 13. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 200. EMERTON, 1914, Appalachia, vol. 13, p. 153; 1917, Ent. News, vol. 28, p. 60; 1918, Canadian Ent., vol. 50, p. 129; "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 310; 1925, Canadian Field Nat., vol. 39, p. 140. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101, p. 1041. CHICKERING, 1934, Papers Michigan Acad. Sci., vol. 19, p. 578. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 503. GERTSCH, 1946, in Procter, Biological survey of the Mount Desert region, pt. 7, p. 520. HACKMAN, 1954, Acta Zool. Fennica, vol. 79, p. 49.

Allotheridion (Phylloneta) montanum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 19.

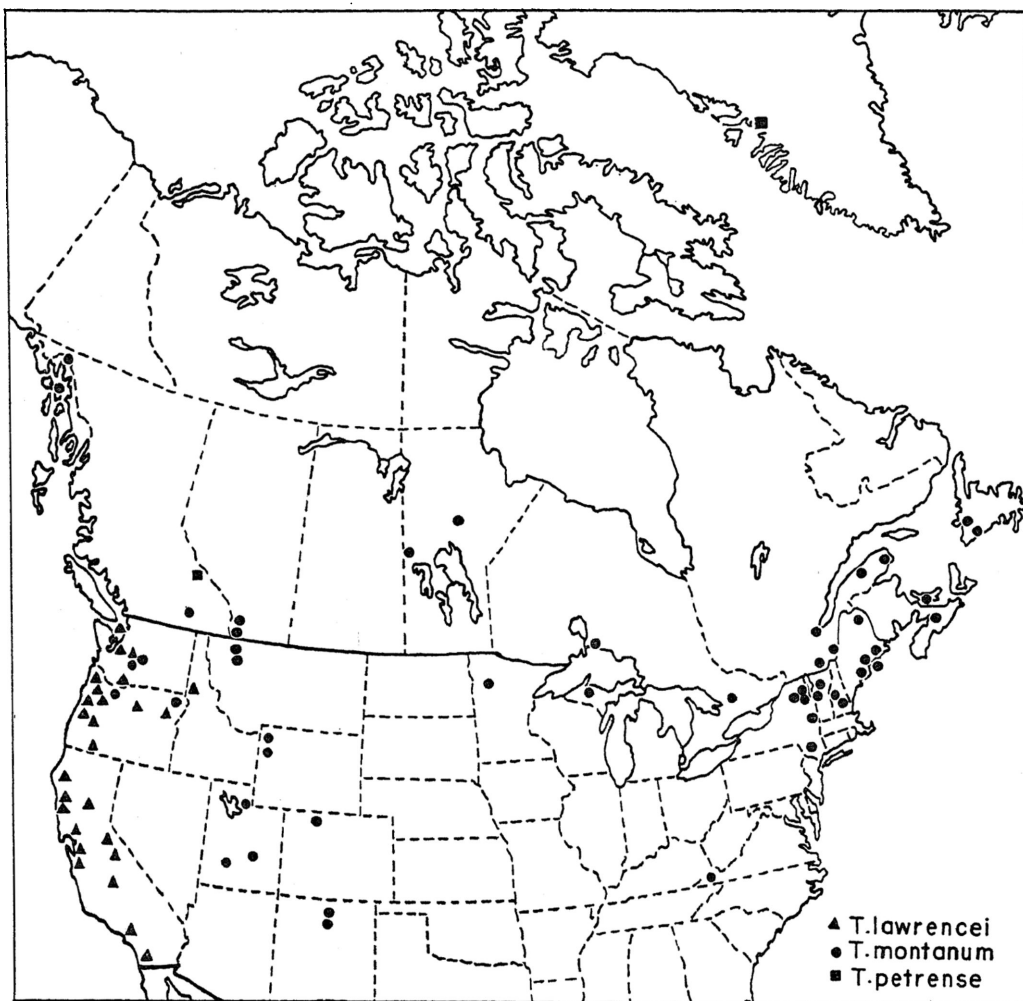
Allotheridion montanum, LOWRIE AND GERTSCH, 1955, Amer. Mus. Novitates, no. 1736, p. 7.

FEMALE: Carapace yellow-white, with a median dusky band as wide in front as posterior eye row, narrower behind; a narrow black border. Sternum bordered black. Legs yellow-white, with wide black and brown bands at middle and distal ends of segments. Dorsum of abdomen white, gray, and black (fig. 251). Sides spotted. Venter white. Anterior median eyes one diameter apart, two-thirds of a diameter from laterals. Posterior medians one diameter apart. Abdomen quite high. Epigy-

num a sclerotized elevated plate with an opening in center. On each side of opening a short piece of duct or a dark spot is visible (fig. 256). Total length, 2.7–3.6 mm. Measurements of a female from Alberta: total length, 3.6 mm.; carapace 1.24 mm. long, 1.24 mm.

1.10 mm. long, 1.10 mm. wide; first femur, 1.97 mm.; patella and tibia, 2.14 mm.; metatarsus, 1.95 mm.; tarsus, 0.78 mm.; second patella and tibia, 1.69 mm.; third, 1.14 mm.; fourth, 1.62 mm.

Differences in the structure of the palpus



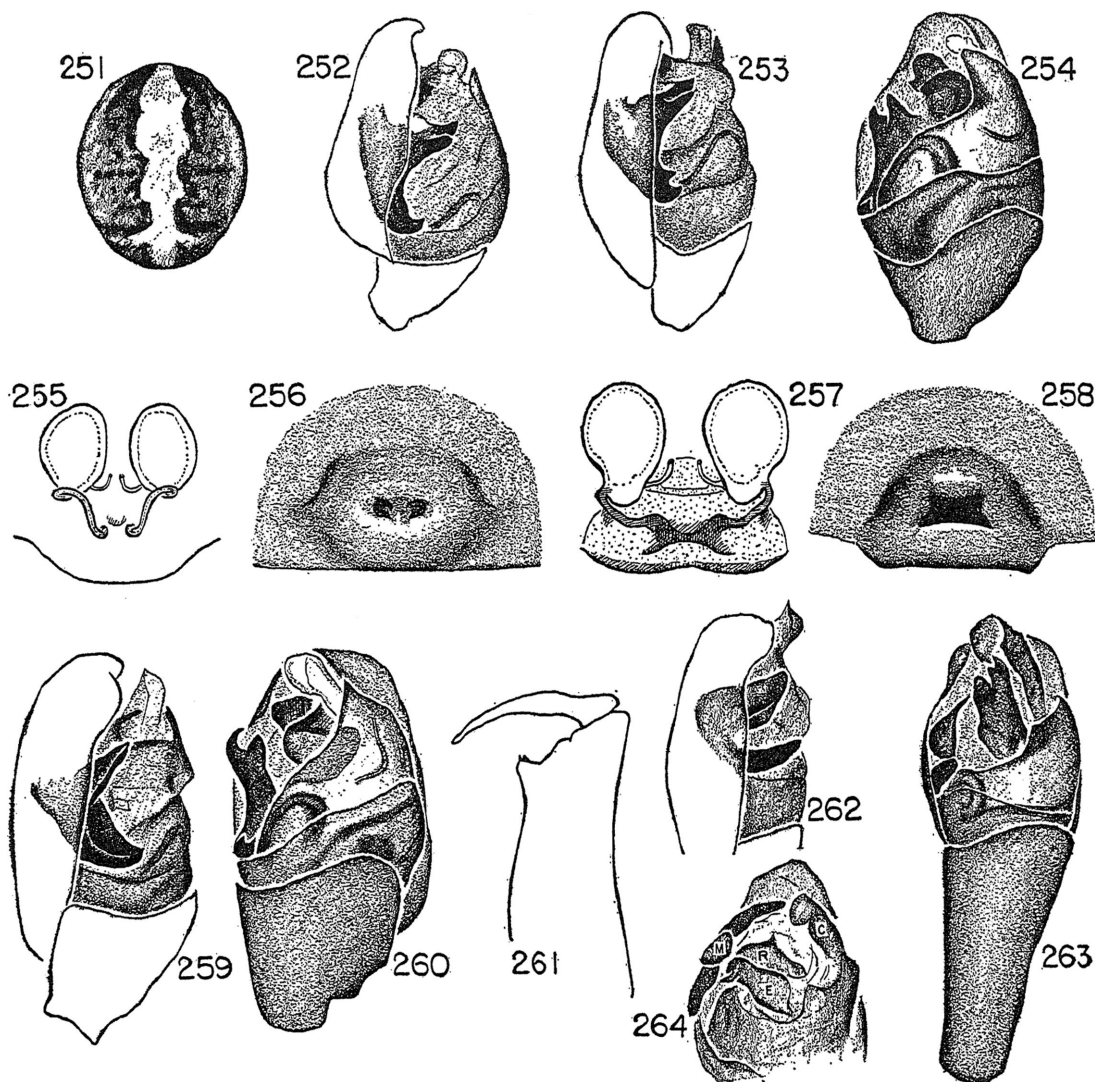
MAP 24. Distribution of *Theridion lawrencei*, *T. montanum*, and *T. petrense*.

wide; first femur, 1.84 mm.; patella and tibia, 2.00 mm.; metatarsus, 1.62 mm.; tarsus, 0.68 mm.; second patella and tibia, 1.48 mm.; third, 1.09 mm.; fourth, 1.62 mm.

MALE: Sometimes darker than female. Eyes slightly farther apart than in female. Palpus illustrated by figures 252 to 254. Total length, 2.2–2.6 mm. Measurements of a male from Alberta: total length, 2.5 mm.; carapace

of the few males examined are very large. These differences are geographic. In the area where both *Theridion lawrencei* and *T. montanum* are found, males can be separated in that the latter species has a shorter conductor and two hooks on both visible ends of the median apophysis.

As far as is known, this species occurs on vegetation in coniferous forest; it has also



FIGS. 251-256. *Theridion montanum* Emerton. 251. Abdomen of female, dorsal view. 252-254. Left palpus. 252. Mesal view, Minnesota. 253. Mesal view, Alberta. 254. Ventral view, Alberta. 255. Female genitalia, dorsal view. 256. Epigynum.

FIGS. 257-260. *Theridion lawrencei* Gertsch and Archer. 257. Female genitalia, dorsal view. 258. Epigynum. 259. Palpus, mesal view. 260. Palpus, ventral view.

FIGS. 261-264. *Theridion punctipes* Emerton. 261. Left male chelicera, posterior view. 262-264. Palpus. 262. Mesal view. 263. Ventral view. 264. Ventral view, expanded.

Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix.

been collected by the sweeping of meadows bordering coniferous forests. Hoff (*in litt.*) has swept this species from yellow pines and spruce trees in New Mexico.

TYPE LOCALITIES: Three male and one female syntypes from Mt. Washington, White Mountains, New Hampshire (J. H. Emerton), are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Canada, northern states, and Rocky Mountain states. Alaska: Trail to Denver Glacier, Skagway (Crosby). Newfoundland: St. Fintans (E. J. Gillan). Virginia: Grouts Mills, Stratton, Dickens County (J. H. Emerton), may be an erroneous record. New Mexico: Near Tres Ritos, 8500 feet, Taos County; 2

miles west of Red River, 8700 feet, Taos County (both C. C. Hoff). Oregon: Hood River meadows, Hood River County (H. and L. Levi).

RECORDS: See Appendix.

***Theridion leechi* Gertsch and Archer**

Figures 267, 268, 290, 291; map 25

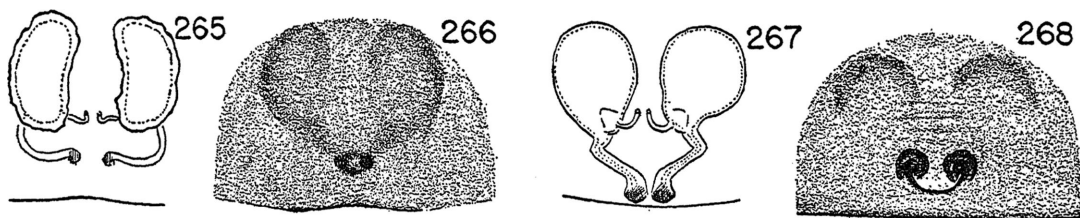
Theridion leechi GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 8, figs. 19, 20 (male, female).

Allotheridion leechi, LOWRIE AND GERTSCH, 1955, American Mus. Novitates, no. 1736, p. 7.

FEMALE: Carapace yellow-white, with a broad, median, dusky band which has parallel sides and includes the anterior median eyes, or a narrow band, double in cephalic region.

second patella and tibia, 1.9 mm.; third, 1.2 mm.; fourth, 2.2 mm.

MALE: Carapace yellowish, with indistinct median line, doubled in cephalic region. Clypeus with black spot. Legs yellow, black patches at ends of tibiae. Abdomen, dorsum white or with a pair of small black spots on posterior half. Anterior median eyes one and one-half diameters apart, more than one diameter from laterals. Posterior medians less than one diameter apart, one and three-quarters diameters from laterals. Chelicerae long, two teeth on anterior margin. Palpus as illustrated (figs. 290, 291). Total length of males 2.6–3.6 mm. Measurements of a male from California: total length, 3.6 mm.; carapace 1.8 mm. long, 1.4 mm. wide; first femur, 4.1



FIGS. 265, 266. *Theridion punctipes* Emerton. 265. Female genitalia, dorsal view. 266. Epigynum. FIGS. 267, 268. *Theridion leechi* Gertsch and Archer. 267. Female genitalia, dorsal view. 268. Epigynum.

Clypeus sometimes with a black spot. Sternum yellow-white. Legs yellow-white, sometimes with brown or black bands at distal ends of tibiae. Dorsum of abdomen white, sometimes with four black spots or with a white scalloped band. A slight thoracic depression on carapace. Anterior median eyes one and one-half diameters apart, three-quarters of a diameter to one diameter from laterals. Posterior medians one to one and one-half diameters apart, one to one and one-half diameters from laterals. Anterior medians slightly smaller than others. Two teeth on anterior margin of chelicerae. Epigynum (fig. 268) very small and indistinct. The size of the two dark spots and the distance of the depression from the posterior margin are variable. Internal genitalia (fig. 267) lightly sclerotized. Total length, 2.5–4.2 mm. Measurements of a female from California: total length 4.2 mm.; carapace 1.4 mm. long, 1.3 mm. wide; first femur, 3.1 mm.; patella and tibia, 3.2 mm.; metatarsus, 2.8 mm.; tarsus, 0.9 mm.;

mm.; patella and tibia, 4.9 mm.; metatarsus, 4.1 mm.; tarsus, 1.1 mm.; second patella and tibia, 3.0 mm.; third, 1.6 mm.; fourth, 2.7 mm.

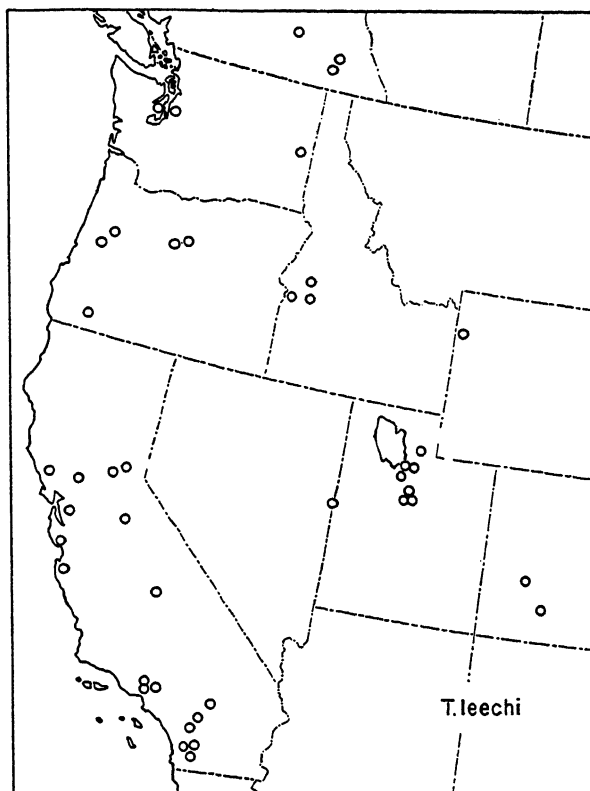
The small eyes of this species differentiate the females from those of the related *Theridion punctipes* and from juvenile specimens of *T. agrifoliae* and *T. californicum*.

One collection came from webs in depressions on cliffs in California.

TYPE LOCALITY: Male holotype and female allotype from Salmon Arm, British Columbia, May 25, 1938 (O. R. Leech), are in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: British Columbia and western states, west of the continental divide. Wyoming: Grand Teton National Park area (Lowrie and Gertsch, 1955). Colorado: West Fork of Wolf Creek, San Juan Mountains, 7800 feet, Mineral County (H. and L. Levi). California: Lakeview District, Alpine and Viejas Valley, San Diego County (W. M. Pearce).

RECORDS: See Appendix.

MAP 25. Distribution of *Theridion leechi*.***Theridion punctipes* Emerton**

Figures 261-266; map 34

Theridion punctipes EMERTON, 1924, Pan Pacific Ent., vol. 1, p. 29, figs. 1-3 (male). ROEWER, 1924, Katalog der Araneae, vol. 1, p. 504.

FEMALE: Carapace yellow-white, median dusky line with black border, narrowest in thoracic region; black line around margin of carapace. Chelicerae with black spot. Legs yellow-white; ends of segments brownish. Abdomen creamy-white, indications of median, scalloped dorsal band; sometimes dorsum gray, spotted with white and black. Two pairs of black spots lateral to spinnerets. Carapace with thoracic depression. Anterior median eyes one and one-quarter diameters apart, one-half of a diameter from laterals. Posterior medians three-quarters of a diameter apart, one diameter from laterals. Chelicerae with two teeth on anterior margin. Legs with some large spines on patellae and tibiae. Epigynum with two indistinct dark spots in an indistinct common depression (fig. 266).

Total length, 2.7-4.5 mm. Measurements of a specimen from Santa Barbara, California: total length, 4.00 mm.; carapace 1.24 mm. long, 1.10 mm. wide; first femur, 2.60 mm.; patella and tibia, 2.91 mm.; metatarsus, 2.54 mm.; tarsus, 0.91 mm.; second patella and tibia, 1.53 mm.; third, 1.10 mm.; fourth, 1.76 mm.

MALE: Abdomen gray, white and black patches on dorsum. A dark spot on epigastric plate. Chelicerae enlarged, as long as carapace (fig. 261). Tibia of palpus long (fig. 263). Total length, 2.7-3.7 mm. Measurements of a specimen from Santa Barbara, California: total length, 2.7 mm.; carapace 1.24 mm. long, 0.99 mm. wide; first femur, 2.68 mm.; patella and tibia, 2.99 mm.; metatarsus, 2.65 mm.; tarsus, 0.91 mm.; second patella and tibia, 1.69 mm.; third, 0.92 mm.; fourth, 1.56 mm.

There is some variation in the length of the male chelicerae and in the length of the palpal tibiae of the male. The larger eyes sepa-

rate females of this species from those of *T. leechi*.

This species has been collected among plant leaves.

TYPE LOCALITY: Male and female syntypes from Berkeley, California, June, 1905 (J. H. Emerton and G. W. Peckham), are in the Museum of Comparative Zoölogy and the California Academy of Sciences.

DISTRIBUTION AND MARGINAL RECORDS: Pacific coast states. Washington: Chevalis, Lewis County (R. V. Chamberlin and W. Ivie). Baja California: Seventeen miles north of Ensenada, 700 feet (W. S. Creighton).

RECORDS: See Appendix.

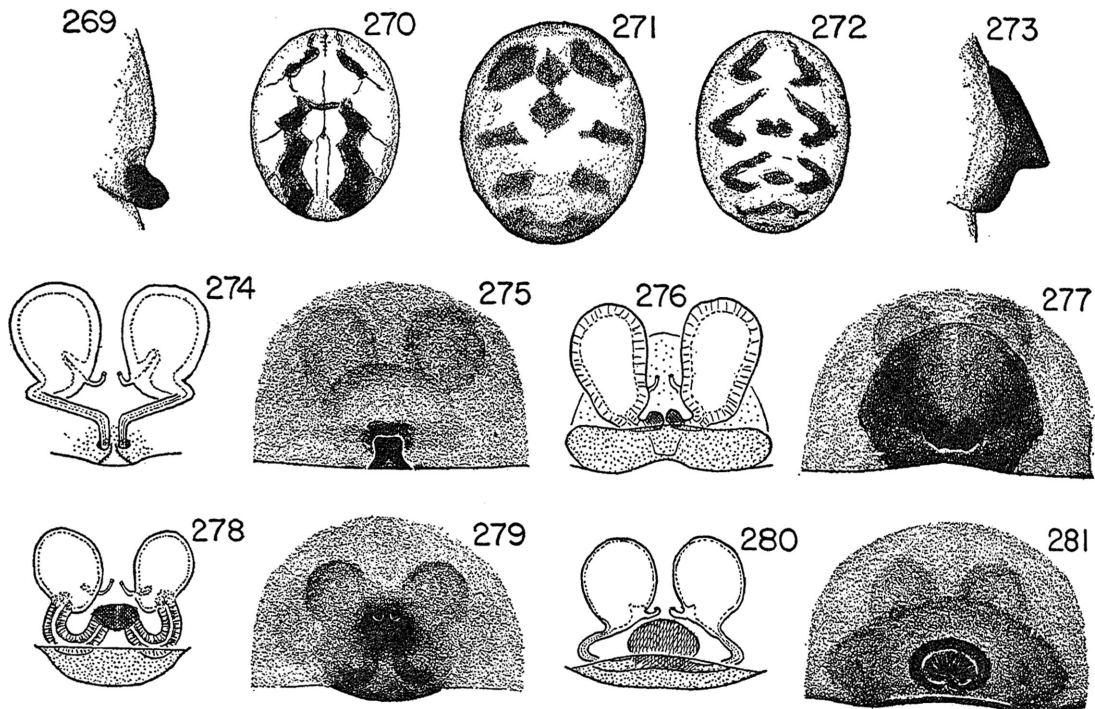
***Theridion neomexicanum* Banks**

Figures 269, 274, 275, 292, 293; map 26

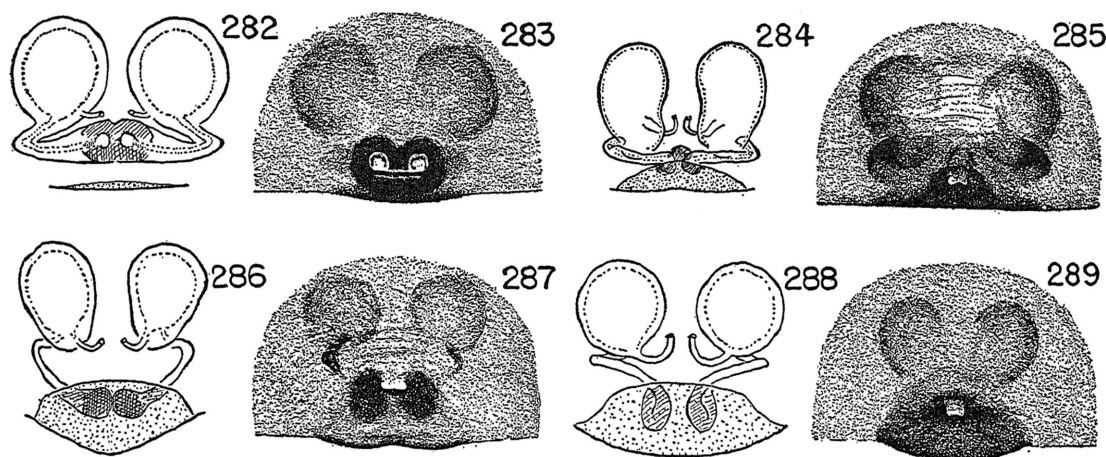
Theridion placens KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 71, pl. 3, fig.

43 (male). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 520. BANKS, 1904, Proc. California Acad. Sci., ser. 3, vol. 3, p. 343; 1910, Bull. U. S. Natl. Mus., no. 72, p. 20. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 203. BANKS, 1916, Proc. U. S. Natl. Mus., vol. 51, p. 68. EMERTON, "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 311. MOLES AND JOHNSON, 1921, Jour. Ent. and Zool., vol. 13, p. 41. EMERTON, 1924, Pan Pacific Ent., vol. 1, p. 29, fig. 4 (male). CHAMBERLIN AND GERTSCH, 1928, Proc. Biol. Soc. Washington, vol. 41, p. 179. CHAMBERLIN AND WOODBURY, 1929, Proc. Biol. Soc. Washington, vol. 42, p. 135. WORLEY, 1932, Univ. Washington Publ. Biol., vol. 1, no. 1, p. 27. GERTSCH, 1935, Amer. Mus. Novitates, no. 792, p. 21. Not *Theridion placens* Blackwall, 1877.

Theridion neomexicanum BANKS, 1901, Proc. Acad. Nat. Sci. Philadelphia, vol. 53, p. 577 (*sub Theridium*); 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 200. ROEWER, 1942, Katalog



- FIG. 269. *Theridion neomexicanum* Banks, epigynum, lateral view.
 FIG. 270. *Theridion pictipes* Keyserling, abdomen of female, dorsal view.
 FIG. 271. *Theridion jeanae* Gertsch and Archer, abdomen of female, dorsal view.
 FIG. 272. *Theridion petrense* Sørensen, abdomen of female, dorsal view.
 FIG. 273. *Theridion californicum* Banks, epigynum, lateral view.
 FIGS. 274, 275. *Theridion neomexicanum* Banks. 274. Female genitalia, dorsal view. 275. Epigynum.
 FIGS. 276, 277. *Theridion californicum* Banks. 276. Female genitalia, dorsal view. 277. Epigynum.
 FIGS. 278, 279. *Theridion pictipes* Keyserling. 278. Female genitalia, dorsal view. 279. Epigynum.
 FIGS. 280, 281. *Theridion jeanae* Gertsch and Archer. 280. Female genitalia, dorsal view. 281. Epigynum.



FIGS. 282, 283. *Theridion petrense* Sørensen. 282. Female genitalia, dorsal view. 283. Epigynum.
 FIGS. 284, 285. *Theridion agrifoliae*, new species. 284. Female genitalia, dorsal view. 285. Epigynum.
 FIGS. 286, 287. *Theridion albidum* Banks. 286. Female genitalia, dorsal view. 287. Epigynum.
 FIGS. 288, 289. *Theridion frondeum* Hentz. 288. Female genitalia, dorsal view. 289. Epigynum.

der Araneae, vol. 1, p. 504. New synonymy.

Theridion placidum ROEWER, 1942, *op. cit.*, vol. 1, p. 504. New name for *Theridion placens* Keyserling, preoccupied.

FEMALE: Carapace yellow-white, some median lines. Sternum and legs yellow-white. Abdomen white, with two small black spots above spinnerets, sometimes two longitudinal rows of black spots on dorsum. Anterior median eyes one diameter apart, one-third of a diameter to one diameter from laterals. Posterior medians three-quarters of a diameter apart, more than one diameter from laterals. Two teeth on anterior margin of chelicerae. Epigynum a protruding knob (fig. 275), profile of which (fig. 269) differs slightly in each specimen. Total length 2.5–4.0 mm. Measurements of a female from New Mexico: total length, 4.0 mm.; carapace 1.20 mm. long, 1.04 mm. wide; first femur, 2.58 mm.; patella and tibia, 2.80 mm.; metatarsus, 2.68 mm.; tarsus, 0.85 mm.; second patella and tibia, 1.83 mm.; third, 1.07 mm.; fourth, 1.95 mm.

MALE: Abdomen with median, white, scalloped band on dark gray to black background. Chelicerae with mastidia below clypeus and one blunt tooth on anterior margin. Palpus illustrated by figures 292 and 293. Total length of males 2.4–2.9 mm. Measurements of a male from New Mexico: total length, 2.9 mm.; carapace 1.24 mm. long, 1.08 mm. wide; first femur, 2.62 mm.; patella and tibia, 3.00 mm.; metatarsus, 2.66 mm.; tarsus, 0.80

mm.; second patella and tibia, 1.88 mm.; third, 1.04 mm.; fourth, 1.69 mm.

Worley (1932) reports collecting this species "in salal and in young fir around sphagnum bogs" in Washington. In New Mexico this species has been swept from herbs, shrubs, or trees in aspen, yellow-pine, or fir woods; it has also been swept from rabbit brush and herbs in an irrigated meadow.

TYPE LOCALITY: Male holotype of *Theridion placens* from the state of Washington is in the Museum National d'Histoire Naturelle, Paris. Two female syntypes of *T. neomexicanum* from Las Cruces, New Mexico (T. Cockerell), are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: British Columbia and western states. British Columbia: Kaslo (Banks, 1916). Montana: Gardiner (W. J. Gertsch). Colorado: Estes Park, Larimer County (A. and H. Jungster). New Mexico: Bear Creek Canyon, 20 miles southeast of Cloudcroft (S. Mulaik); Camp Mary White, Otero County (S. Mulaik).

RECORDS: See Appendix.

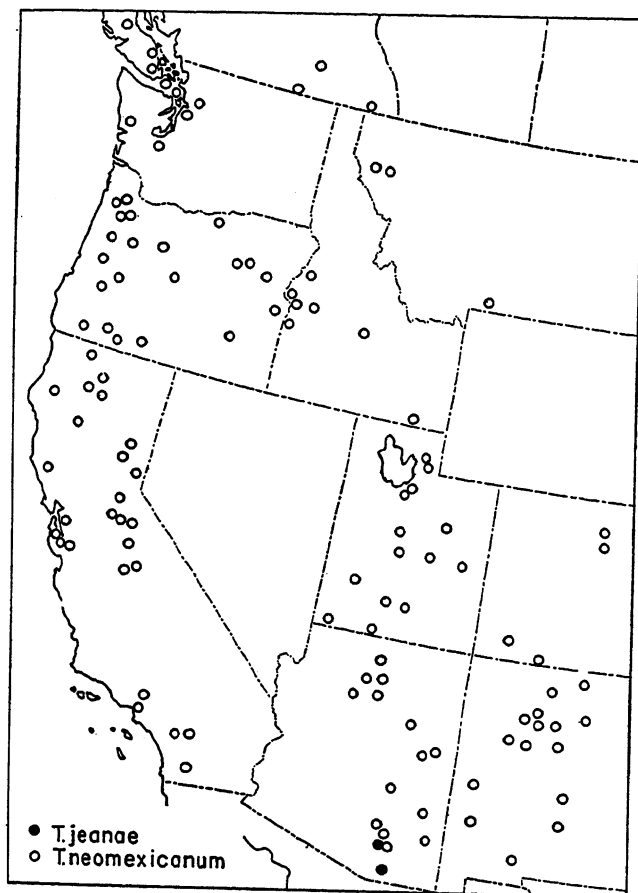
Theridion pictipes Keyserling

Figures 270, 278, 279, 294; 295; map 27

Theridion pictipes KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 64, pl. 3, no. 38 (female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 520. BANKS, 1904, Proc. Acad. Nat. Sci. Philadelphia, vol. 56, p. 126; 1910, Bull. U. S. Natl. Mus., no. 72, p. 20. PETRUNKE-

VITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 203. BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 183. FOX, 1940, Proc. Biol. Soc. Washington, vol. 53, p. 43. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 496. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 53. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 40.

covering half of the area between spinnerets and epigynum. Anterior median eyes less than one diameter apart, one-third of a diameter from laterals. Posterior eyes one diameter apart. Laterals on slight tubercles. Epigynum openings in large dark area in center of plate (fig. 279). On each side a black pigment spot



MAP 26. Distribution of *Theridion jeanae* and *T. neomexicanum*.

Allotheridion (Phylloneta) pictipes, ARCHER, 1950, *ibid.*, no. 30, p. 19, pl. 3, fig. 5 (male).

FEMALE: Carapace yellow-white, with a median black band and narrow black border. Eye region black. Clypeus with a black line between anterior median eyes. Sternum yellow-white. Legs yellow-white, gray to black bands usually at middle and both ends of segments. Abdomen, dorsum white with black patches (fig. 270). Sides white, with white and black patches. Venter white, with black spot

not shown in figure. Total length, 2.8–5.0 mm. Measurements of a female from Florida: total length, 3.6 mm.; carapace 1.5 mm. long, 1.3 mm. wide; first femur, 3.7 mm.; patella and tibia, 3.8 mm.; metatarsus, 3.7 mm.; tarsus, 1.1 mm.; second patella and tibia, 2.2 mm.; third, 1.4 mm.; fourth, 2.7 mm.

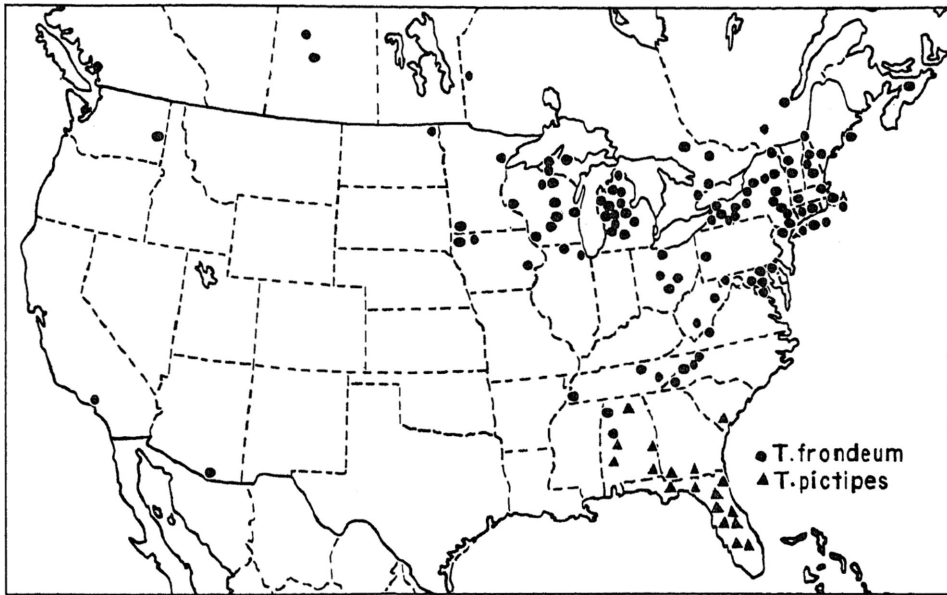
MALE: Color as in female. Eyes slightly farther apart. Mastidia on outside of chelicerae below clypeus. Palpus large as shown in figures 294 and 295. Total length of males,

2.5–3.5 mm. A male from Florida measured: total length, 3.5 mm.; carapace 1.7 mm. long, 1.4 mm. wide; first femur, 4.3 mm.; patella and tibia, 5.0 mm.; metatarsus, 4.8 mm.; tarsus, 1.4 mm.; second patella and tibia, 3.2 mm.; third, 1.6 mm.; fourth, 2.9 mm.

Archer (1946) reports finding webs of this species on the under sides of leaves, usually in woods.

TYPE LOCALITY: Female holotype from

cross band which curves anteriorly on sides. Anterior median eyes less than one diameter apart, one-third of a diameter from laterals. Posterior medians one diameter apart, more than one diameter from laterals. Epigynum a dark-rimmed oval depression (fig. 281). Measurements of a female: total length, 5.1 mm.; carapace 1.6 mm. long, 1.5 mm. wide; first femur, 2.9 mm.; patella and tibia, 3.5 mm.; metatarsus, 2.5 mm.; tarsus, 1.0 mm.; second



MAP 27. Distribution of *Theridion frondeum* and *T. pictipes*.

Centreville, Florida (G. Marx), is in the United States National Museum (U.S.N.M. No. 1321).

DISTRIBUTION AND MARGINAL RECORDS: South Carolina, Alabama to Florida. South Carolina: Bluffton, Beaufort County. Alabama: Lacon, Morgan County (Archer, 1946).

RECORDS: See Appendix.

Theridion jeanae Gertsch and Archer

Figures 271, 280, 281, 296, 297; map 26

Theridion jeanae GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 7, figs. 25, 26 (male, female).

FEMALE: Carapace and sternum yellow. Legs yellow, with faint indications of bands. Abdomen yellow-white, with series of dusky marks on dorsum (fig. 271). Venter between spinnerets and epigastric furrow with dusky

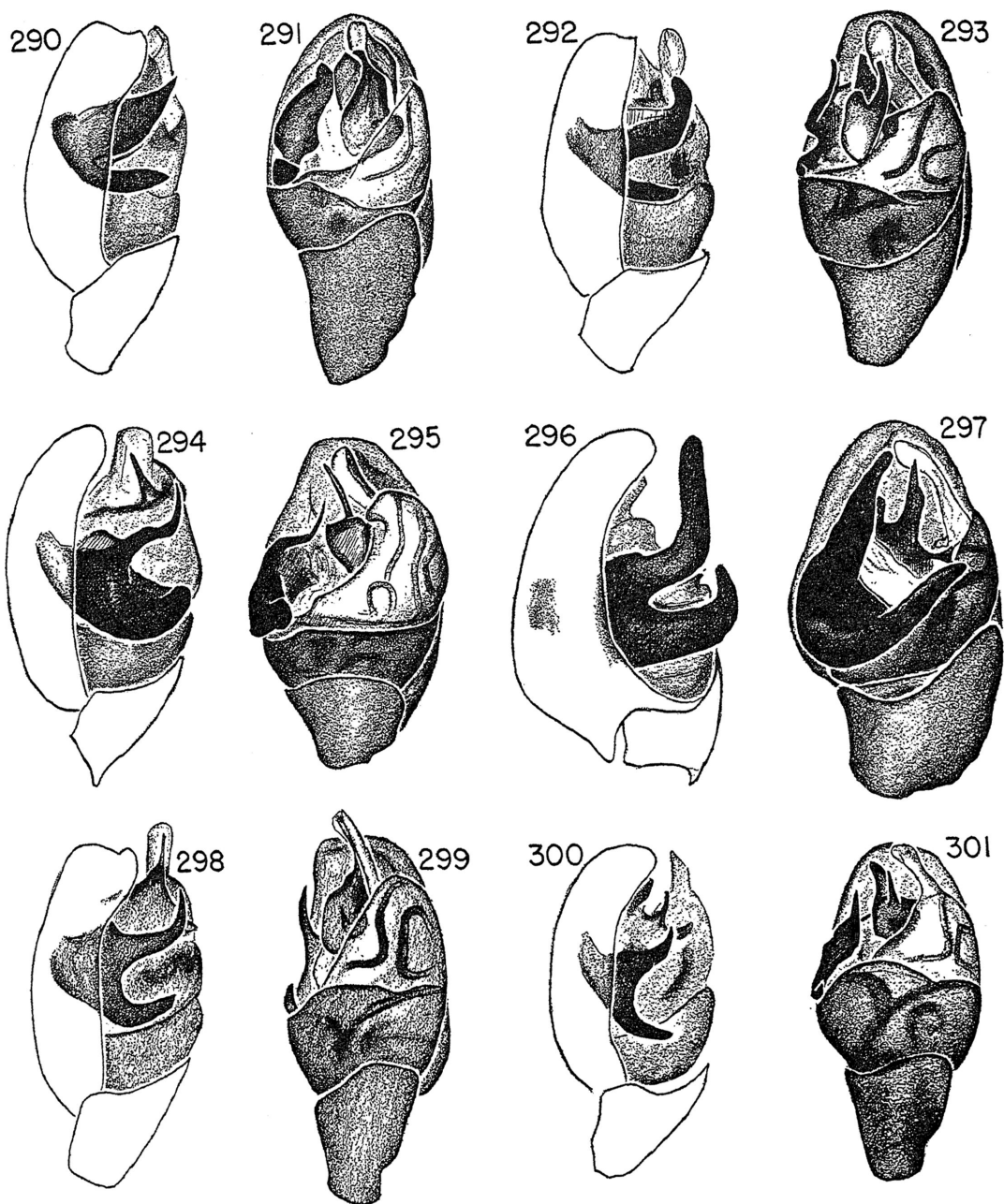
patella and tibia, 2.4 mm.; third, 1.9 mm.; fourth, 2.7 mm.

MALE: Color as in female. Palpus with very large median apophysis (figs. 296, 297). Measurements: total length, 3.3 mm.; carapace 1.6 mm. long, 1.4 mm. wide; first femur, 3.2 mm.; patella and tibia, 4.0 mm.; metatarsus, 3.2 mm.; tarsus, 1.2 mm.; second patella and tibia, 2.9 mm.; third, 2.0 mm.; fourth, 2.8 mm.

TYPE LOCALITY: Male holotype and female allotype from Summer Haven, Santa Catalina Mountains, Arizona, July 14, 1940, collected by sweeping (J. M. Gertsch), are in the American Museum of Natural History.

DISTRIBUTION: Arizona.

RECORDS: *Arizona:* Santa Cruz County: Roundup Camp, Madera Canyon in Santa Rita Mountains (W. Ivie).



FIGS. 290, 291. *Theridion leechi* Gertsch and Archer, left palpus. 290. Mesal view. 291. Ventral view.
 FIGS. 292, 293. *Theridion neomexicanum* Banks, palpus. 292. Mesal view. 293. Ventral view.
 FIGS. 294, 295. *Theridion pictipes* Keyserling, palpus. 294. Mesal view. 295. Ventral view.
 FIGS. 296, 297. *Theridion jeanae* Gertsch and Archer, palpus. 296. Mesal view. 297. Ventral view.
 FIGS. 298, 299. *Theridion frondeum* Hentz, palpus. 298. Mesal view. 299. Ventral view.
 FIGS. 300, 301. *Theridion albidum* Banks, palpus. 300. Mesal view. 301. Ventral view.

***Theridion petrense* Sørensen**

Figures 272, 282, 283; map 24

Theridion petrense SØRENSEN, 1898, Vidensk. Meddel., Copenhagen, ser. 5, vol. 10, p. 188 (*sub Theridium*). PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 202. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 504.

FEMALE: Carapace yellowish, with a dusky mark in center. Sternum and legs yellowish. Abdomen yellowish, with rows of dusky marks (fig. 272) on dorsum. Anterior median eyes one and one-half diameters apart, one-third of a diameter from laterals. Posterior eyes one diameter apart. Two teeth on anterior margin of chelicerae. Legs with many short setae. Abdomen covered by short setae. Epigynum illustrated by figure 283. Measurements of a specimen from British Columbia: total length, 2.2 mm.; carapace 0.91 mm. long, 0.88 mm. wide; first femur, 1.94 mm.; patella and tibia, 2.05 mm.; metatarsus, 1.62 mm.; tarsus, 0.73 mm.; second patella and tibia, 1.40 mm.; third, 1.02 mm.; fourth, 1.60 mm.

Dr. J. Braendegaard kindly sent drawings and compared a specimen from British Columbia to the type. The British Columbia specimen has longer legs. Dr. Braendegaard reports the ratio of length of the first femur to length of the carapace to be 1.9 in the specimen from British Columbia, 1.2 in the type. The septum of the epigynum is slightly wider in the British Columbia specimen, and the opening of the connecting ducts is slightly smaller. The general appearance and color are very similar. It is assumed that the two are the same species.

Collected under stones and shale.

TYPE LOCALITY: Female holotype from Ritenbenk, latitude 69° 45' N., Greenland (Lundbeck) in the Copenhagen Museum.

DISTRIBUTION: Greenland and British Columbia.

RECORDS: *British Columbia*: Yoho National Park, 5670 feet, under stones in talus above Ross Lake (H. and L. Levi), two females.

***Theridion frondeum* Hentz**

Figures 288, 289, 298, 299; map 27

Theridion frondeum HENTZ, 1850, Jour. Boston Soc. Nat. Hist., vol. 6, p. 275, pl. 9, fig. 7 (female); 1875, The spiders of the United States, p. 146, pl. 16, fig. 7 (female). EMERTON, 1882, Trans.

Connecticut Acad. Sci., vol. 6, p. 15, pl. 3, fig. 1 (male, female). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 69, pl. 3, fig. 42 (male, female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519; 1892, Proc. Ent. Soc. Washington, vol. 2, p. 155. BANKS, 1892, Proc. Acad. Nat. Sci. Philadelphia, p. 30; 1895, Jour. New York Ent. Soc., vol. 3, p. 84; 1899, Proc. Ent. Soc. Washington, vol. 4, p. 189. F. O. P.-CAMBRIDGE, 1902, Biologia Centrali-Americana, Arachnida, Araneidea, vol. 2, p. 389. EMERTON, 1902, The common spiders, p. 116, fig. 274 (female). BANKS, 1907, Indiana Dept. Geol. and Nat. Resources, 31st Ann. Rept., p. 738. BRYANT, 1908, Occas. Papers Boston Soc. Nat. Hist., vol. 7, p. 12. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 19; 1911, Proc. Acad. Nat. Sci. Philadelphia, vol. 63, p. 445. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 196. COMSTOCK, 1912, The spider book, p. 347, figs. 346-347 (female). EMERTON, 1913, Appalachia, vol. 12, p. 155. BARROWS, 1918, Ohio Jour. Sci., vol. 18, p. 304. EMERTON, 1919, Ent. News, vol. 30, p. 167; "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 311. BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 182. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101, p. 1041. EMERTON, 1930, Publ. Nantucket Maria Mitchell Assoc., vol. 3, p. 163. ELLIOTT, 1930, Ohio Jour. Sci., vol. 30, p. 5. CHICKERING, 1932, Papers Michigan Acad. Sci., vol. 15, p. 351. ELLIOTT, 1932, Proc. Indiana Acad. Sci., vol. 41, p. 424. KASTON, 1938, Bull. Connecticut Geol. Nat. Hist. Surv., no. 60, p. 186. KURATA, 1939, Canadian Field Nat., vol. 53, p. 81. COMSTOCK, 1940, The spider book, rev. ed., p. 362, figs. 346-347 (female). STILES AND STEVENS, 1940, Proc. Iowa Acad. Sci., vol. 47, p. 335. KURATA, 1941, Univ. Toronto Studies, biol. ser., no. 48, p. 109. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 501. LOWRIE, 1942, Bull. Chicago Acad. Sci., vol. 6, p. 169. TRUMAN, 1942, Proc. Pennsylvania Acad. Sci., vol. 16, p. 27. KURATA, 1943, Canadian Field Nat., vol. 57, p. 10. STILES AND LUBER, 1944, Proc. Iowa Acad. Sci., vol. 51, p. 474. MUMA, 1944, Common spiders of Maryland, p. 66, pl. 13, fig. 3; 1945, Bull. Univ. Maryland Agr. Exp. Sta., no. A38, p. 28. KASTON, 1945, Amer. Mus. Novitates, no. 1292, p. 5, figs. 18, 19 (male, female). GERTSCH, 1946, in Procter, Biological survey of the Mount Desert region, pt. 7, p. 520. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 40, pl. 1, fig. 2 (female). GIBSON, 1947, Ohio Jour. Sci., vol. 46, p. 38. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 105, figs. 135-140, 167-169 (male, female). LOWRIE, 1948, Ecology, vol. 29, p. 338. GERTSCH, 1949, American spiders, p. 166. ELLIOTT, 1953, Proc. Indiana Acad. Sci., vol. 62, p. 309.

Theridion brassicae FITCH, 1869, Trans. New York State Agr. Soc., vol. 29, p. 563. MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519.

Allotheridion (Phylloneta) frondeum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 19.

Theridion (Theridion) frondeum, KASTON, 1953, How to know the spiders, p. 169, fig. 442 (female).

Allotheridion frondeum, LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 442.

FEMALE: Carapace yellow-white, with two parallel median lines or broad dark median band. Sternum yellow-white. Legs yellow-white, sometimes with black rings. Dorsum of abdomen white to yellow, sometimes with two rows of black spots or a large median black patch. Usually two black spots above spinnerets. Venter light grayish white. Anterior median eyes one and one-quarter diameters apart, one diameter from laterals. Posterior eyes more than one diameter apart. Eyes subequal in size or anterior medians smallest. Epigynum (fig. 289) variable, opening anterior to a dark, more or less sclerotized, raised area. Total length of females, 3.0–4.2 mm. Measurements of a female from New York: total length, 4.0 mm.; carapace 1.34 mm. long, 1.27 mm. wide; first femur, 3.00 mm.; patella and tibia, 3.34 mm.; metatarsus, 3.05 mm.; tarsus, 0.97 mm.; second patella and tibia, 1.95 mm.; third, 1.17 mm.; fourth 2.28 mm.

MALE: Color darker than in female. A large mastidion on outside of each chelicera below clypeus. Palpus illustrated by figures 298 and 299. Total length, 3.0–3.9 mm. Measurements of a male from New York: total length, 3.5 mm.; carapace 1.47 mm. long, 1.36 mm. wide; first femur, 4.94 mm.; patella and tibia, 4.41 mm.; metatarsus, 3.87 mm.; tarsus, 1.14 mm.; second patella and tibia, 3.11 mm.; third, 1.48 mm.; fourth, 2.48 mm. There is considerable variation in color.

F. O. P.-Cambridge (1902) questions the determination of many specimens placed in this species. According to Cambridge, neither Keyserling's specimens in the British Museum nor Simon's specimen from St. Vincent Island in the Lesser Antilles agrees with Emerton's figures. Apparently many species have similar markings. Cambridge also questions whether Emerton had Hentz's species. This last point can never be answered. However, as the name *frondeum* has been used for the last 70 years for this species, which

occurs in the type locality, it is best to keep the name.

Theridion frondeum is found in high grass and in shrubs. Kaston (1948) reports that it matures in Connecticut late in June. Nineteen to 90 eggs have been found inside the egg sac.

TYPE LOCALITY: Hentz records *Theridion frondeum* from Alabama: "This distinct species occurred only once and was found on a weed." Hentz's specimens have been lost. *Theridion brassicae* came from under cabbage leaves in New York State; his specimens are presumed lost.

DISTRIBUTION AND MARGINAL RECORDS: Southern Canada. Common in northeastern and north central states, occasionally in western states. Nova Scotia: Truro (Emerton, 1920). Saskatchewan: Waskesiu (T. D. A. Cockerell). British Columbia: Salmon Arm (O. R. Leech). Louisiana: (Banks, 1899). Arizona: Madera Canyon, Santa Rita Mountains (E. Ellsworth). California: Sunland, Los Angeles County (R. X. Schick).

RECORDS: See Appendix.

Theridion albidum Banks

Figures 286, 287, 300, 301; map 28

Theridion albidum BANKS, 1895, Jour. New York Ent. Soc., vol. 3, p. 84 (*sub Theridium*); 1899, Proc. Ent. Soc. Washington, vol. 4, p. 189; 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 190. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101, p. 1041. MALKIN, 1941, Bull. Brooklyn Ent. Soc., vol. 36, p. 122. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 501. KASTON, 1945, Amer. Mus. Novitates, no. 1292, p. 5, figs. 16, 17 (male, female). ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 41. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 106, figs. 170–171 (male, female).

Allotheridion (Phylloneta) albidum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 19, pl. 3, fig. 4 (male).

Theridion frondeum, MUMA, 1944, Common spiders of Maryland, pl. 13, fig. 3 (female). Not *Theridion frondeum* Hentz.

Allotheridion albidum, LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 441.

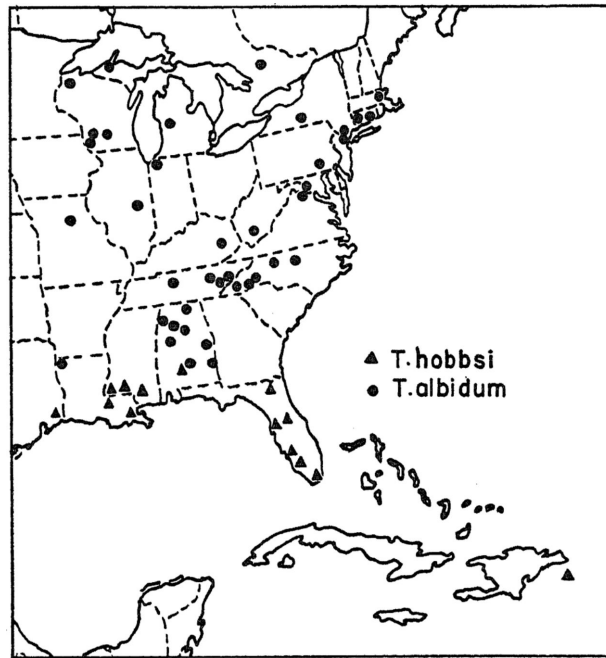
FEMALE: Carapace yellow-white, with median dorsal line. Sternum and legs yellow-white. Abdomen grayish white, white and sometimes black spots on dorsum. Anterior median eyes one to three diameters apart, one diameter from laterals. Posterior medians one

diameter apart, one to one and one-half diameters from laterals. Eyes subequal in size, or sometimes anterior medians half of the size of others. Epigynum a dark spot on each side of indistinct opening (fig. 287); sometimes these spots join posterior to opening. Total length, 2.2–3.3 mm. Measurements of a female from New York: total length, 2.5 mm.; carapace 0.98 mm. long, 0.89 mm. wide; first femur, 1.40 mm.; patella and tibia, 1.40 mm.; meta-

This species is slightly smaller and usually lighter in color than *Theridion frondeum*. The female internal genitalia (fig. 286) are often a better diagnostic character than is the epigynum.

This species is much less common than *Theridion frondeum*. The habits are believed to be similar. Kaston (1948) reports 68 eggs in an egg sac.

TYPE LOCALITY: Male and female syntypes



MAP 28. Distribution of *Theridion albidum* and North American distribution of *T. hobbsi*.

tarsus, 1.08 mm.; tarsus, 0.56 mm.; second patella and tibia, 0.91 mm.; third, 0.65 mm.; fourth, 1.04 mm.

MALE: Slightly darker than female. Some dark masses at distal ends of leg segments. Posterior median eyes one and one-half diameters apart, two diameters from laterals. Small mastidion on outside of each chelicera below clypeus. Palpus smaller than in *T. frondeum*, embolus of different shape (figs. 300, 301). Total length, 2.2–2.8 mm. Measurements of a male from New York: total length, 2.6 mm.; carapace 1.30 mm. long, 1.04 mm. wide; first femur, 3.12 mm.; patella and tibia, 3.22 mm.; metatarsus, 3.36 mm.; tarsus, 1.08 mm.; second patella and tibia, 2.01 mm.; third, 1.14 mm.; fourth, 1.92 mm.

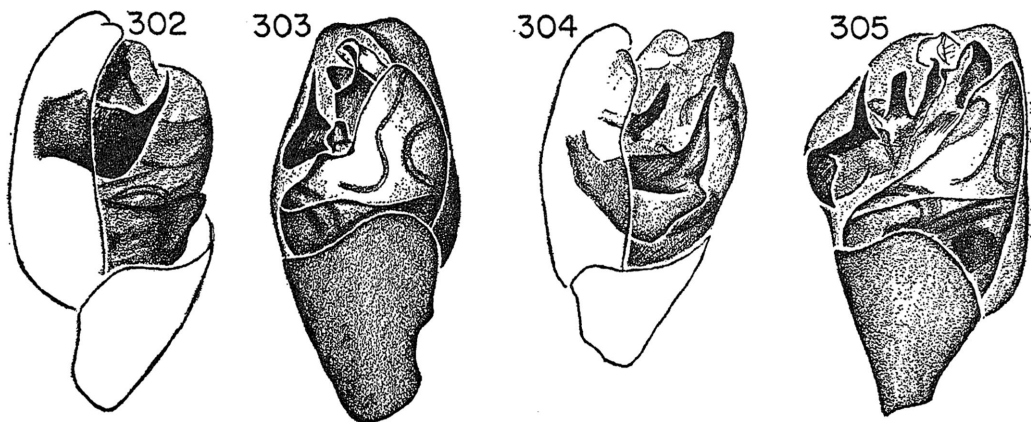
from Sea Cliff, Long Island, New York, are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Ontario, eastern United States. Ontario: Lake Opeongo, Algonquin Provincial Park (W. Ivie and T. B. Kurata). Maine: Wales (C. A. Frost). Missouri: Columbia. Louisiana: Shreveport (Banks, 1895).

RECORDS: See Appendix.

***Theridion agrifoliae*, new species**
Figures 284, 285, 302, 303; map 29

FEMALE: Carapace yellow-white, with a narrow marginal line and an indistinct median dusky band as wide as eye region in front, narrower behind. Sternum yellow-white. Legs yellow-white, distal ends of tibiae darker, or



FIGS. 302, 303. *Theridion agrifoliae*, new species, left palpus. 302. Mesal view. 303. Ventral view. FIGS. 304, 305. *Theridion californicum* Banks, palpus. 304. Mesal view. 305. Ventral view.

with indistinct bands. Abdomen white, with median dorsal white band between some gray marks, or dorsum spotted gray and black with scalloped median white band and gray to black streaks on sides. Anterior median eyes one and one-quarter diameters apart, three-quarters of a diameter from laterals. Posterior medians one diameter apart, more than one diameter from laterals. Anterior medians slightly smaller than others. Two teeth on anterior margin of each chelicera. Epigynum (fig. 285) as in *Theridion frondeum*, except a dark spot usually visible on each side, and

opening closer to posterior margin. The epigynal region of some females before the final molt resembles that of *T. leechi*. Total length, 3.0–4.3 mm. Measurements of female allotype: total length, 3.5 mm.; carapace 1.36 mm. long, 1.17 mm. wide; first femur, 2.62 mm.; patella and tibia, 3.00 mm.; metatarsus, 2.41 mm.; tarsus, 0.88 mm.; second patella and tibia, 1.71 mm.; third, 1.04 mm.; fourth, 1.99 mm.

MALE: Color slightly darker than in female. Small mastidia on chelicerae. The character of the palpus (figs. 302, 303) differentiates this species from others. Total length, 2.5–3.2 mm. Measurements of male holotype: total length, 3.1 mm.; carapace 1.46 mm. long, 1.20 mm. wide; first femur, 2.62 mm.; patella and tibia, 3.08 mm.; second patella and tibia, 1.90 mm.; third, 1.04 mm.; fourth, 1.69 mm. Another specimen measured: total length, 2.95 mm.; first femur, 2.78 mm.; patella and tibia, 3.25 mm.; metatarsus, 2.65 mm.; tarsus, 0.86 mm.

This species is found on vegetation.

TYPE LOCALITY: Male holotype from Seattle, Washington, May 12, 1938 (M. H. Hatch).

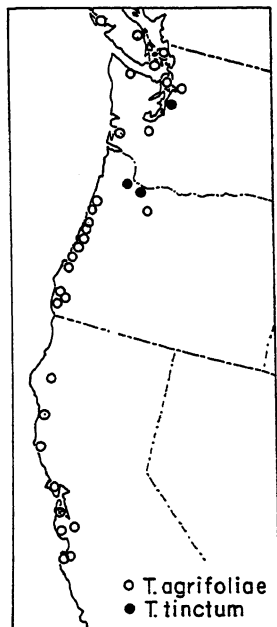
DISTRIBUTION AND MARGINAL RECORDS: Pacific coast states. British Columbia: Tofino (R. Guppy). California: South of Pacific Grove, Monterey County (A. F. Archer).

RECORDS: See Appendix.

Theridion californicum Banks

Figures 273, 276, 277, 304, 305; map 30

Theridion californicum BANKS, 1904, Proc. California Acad. Sci., ser. 3, vol. 3, p. 344, pl. 39, fig. 34 (female) (*sub Theridium*); 1910, Bull. U. S.



MAP 29. Distribution of *Theridion agrifoliae* and North American distribution of *T. tinctum*.

Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 192. EMERTON, "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 311. MOLES AND JOHNSON, 1921, Jour. Ent. and Zool., vol. 13, p. 41. EMERTON, 1924, Pan. Pacific Ent., vol. 1, p. 30, figs. 5, 6 (male). WORLEY, 1932, Univ. Washington Publ. Biol., vol. 1, no. 1, p. 26. CHAMBERLIN AND IVIE, 1941, Bull. Univ. Utah, biol. ser., vol. 6, no. 3, p. 12. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502.

Theridion (Theridion) californicum, ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 40.

Theridion pseudofrondeum SCHENKEL, 1950, Verhandl. Naturf. Gesell. Basel, vol. 61, p. 50, fig. 14 (female). New synonymy.

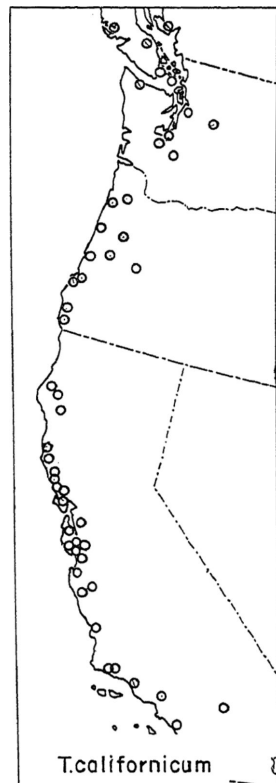
FEMALE: Carapace yellow-white, usually with median dusky band. Sternum yellow-white. Legs yellow-white, sometimes distal ends of segments with yellow or dusky rings. Abdomen grayish yellow, dorsum with white pigment spots or sometimes with additional black or gray spots or patches. One specimen with a median dorsal red band. Carapace with thoracic pit. Eyes small; anterior medians two diameters apart, one diameter from laterals. Posterior eyes one and one-half diameters apart. Anterior medians slightly smaller than others. Two teeth on anterior margin of each chelicera. Epigynum similar to that of *Tidarren*; a usually heavy sclerotized knob with profile (figs. 273, 277) variable. Total length, 3.9–4.5 mm. Measurements of a female from California: total length, 4.2 mm.; carapace 1.6 mm. long; 1.4 mm. wide; first femur, 3.3 mm.; patella and tibia, 3.8 mm.; metatarsus, 3.4 mm.; tarsus, 1.2 mm.; second patella and tibia, 2.2 mm.; third, 1.4 mm.; fourth, 2.5 mm.

MALE: Color as in female. Carapace with deep thoracic pit. Chelicerae slightly enlarged; a mastidion on each below clypeus. Two teeth on anterior margin of each chelicera. Palpus illustrated by figures 304 and 305. Total length, 2.5–3.5 mm. Measurements of a male from Oregon: total length, 3.5 mm.; carapace 1.5 mm. long, 1.3 mm. wide; first femur, 3.6 mm.; patella and tibia, 4.0 mm.; metatarsus, 3.6 mm.; tarsus, 1.3 mm.; second patella and tibia, 2.3 mm.; third, 1.3 mm.; fourth, 2.3 mm.

The epigynum of freshly molted females or of females before the final molt has two adjacent dark spots. These individuals can be separated from those of related species by the profile of the epigynum.

Worley (1932) indicates that this species is common in coniferous forests in western Washington. Roth has collected it on rhododendron shrubs in Oregon.

TYPE LOCALITY: Female holotype of *Theridion californicum* from Mill Valley, Marin County, California, May 30 (Fuchs), is in the Museum of Comparative Zoölogy. Female holotype of *T. pseudofrondeum* from Russian River near Monterio, California, June 4, 1939



MAP 30. Distribution of *Theridion californicum*.

(H. Schenkel-Rudin), is in the Naturhistorisches Museum, Basel.

DISTRIBUTION AND MARGINAL RECORDS: Pacific coast states. British Columbia: Tofino (R. Guppy). California: Twentynine Palms (J. H. Branch); San Juan Creek and Dana Point, Orange County (W. Ivie).

RECORDS: See Appendix.

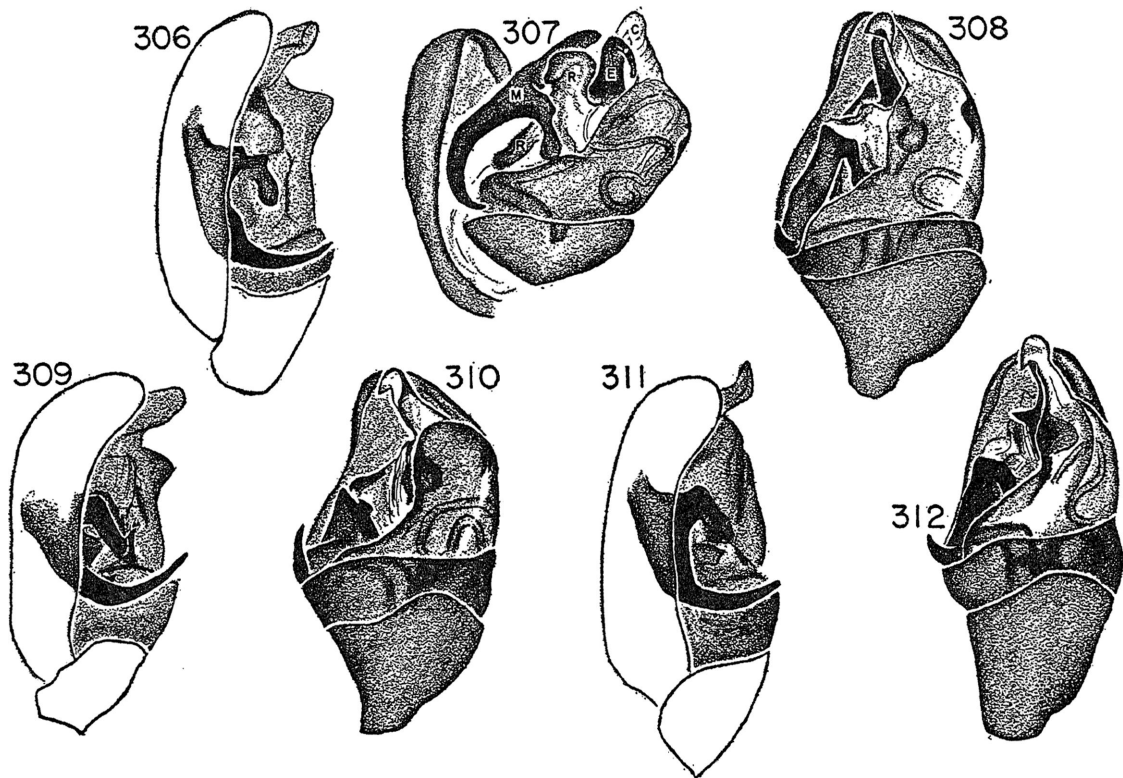
Theridion pennsylvanicum Emerton

Figures 306–308, 313, 314, 320, map 31

Theridion pennsylvanicum EMERTON, 1913, Bull. Amer. Mus. Nat. Hist., vol. 32, p. 255, pl. 48, fig. 1 (male, female) (*sub Theridium*); 1914, Appa-

lachia, vol. 13, p. 154. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101, p. 1042. ?ELLIOTT, 1930, Ohio Jour. Sci., vol. 30, p. 5; 1932, Proc. Indiana Acad. Sci., vol. 41, p. 424. KASTON, 1938, Bull. Connecticut Geol. Nat. Hist. Surv., no. 60, p. 186. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 504. MUMA, 1944, Amer. Mus. Novitates, no. 1257, p. 7; 1945, Bull. Univ. Maryland Agr. Exp. Sta., no. A38, p. 28. ARCHER,

Dorsum of abdomen as in figure 320, with white lines and black spots on yellow-white background. Venter yellow-white. Two black spots anterior to spinnerets. Anterior median eyes one diameter apart, one-fourth of a diameter from laterals. Posterior eyes one diameter apart. Epigynum has two circular depressions about two diameters apart (fig. 314).



FIGS. 306-308. *Theridion pennsylvanicum* Emerton, left palp. 306. Mesal view. 307. Submesal view, expanded. 308. Ventral view.

FIGS. 309, 310. *Theridion orlando* (Archer), palp. 309. Mesal view. 310. Ventral view.

FIGS. 311, 312. *Theridion neshamini*, new species. 311. Mesal view. 312. Ventral view.

Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix.

1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 49. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 110, figs. 174-175 (male, female). ?ELLIOTT, 1953, Proc. Indiana Acad. Sci., vol. 62, p. 309.

Allotheridion pennsylvanicum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, pl. 3, fig. 5 (male).

FEMALE: Carapace yellow-white, with median dusky band and wide dusky margin with narrow light line near edge. Clypeus with narrow black line between eyes. Sternum yellow-white. Legs yellow-white, with black spots.

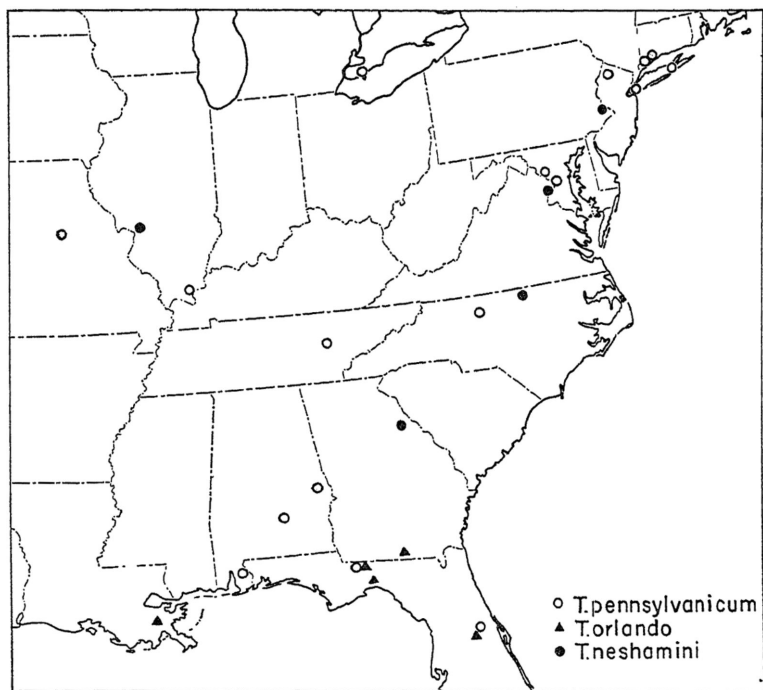
Connecting ducts heavily sclerotized for a short distance (fig. 313). Total length, 2.4-3.3 mm. A female from New Jersey measured: total length, 2.6 mm.; carapace 1.17 mm. long, 1.04 mm. wide; first femur, 2.06 mm.; patella and tibia, 2.10 mm.; metatarsus, 1.85 mm.; tarsus, 0.65 mm.; second patella and tibia, 1.55 mm.; third, 0.91 mm.; fourth, 1.62 mm.

MALE: Color as in female. Palpus illustrated by figures 306 to 308. Total length, 1.8-2.6 mm. Measurements of a male from New Jersey: total length, 1.9 mm.; carapace 0.85 mm. long, 0.78 mm. wide; first femur,

1.89 mm.; patella and tibia, 2.18 mm.; metatarsus, 1.86 mm.; tarsus, 0.66 mm.; second patella and tibia, 1.20 mm.; third, 0.76 mm.; fourth, 1.03 mm.

Archer (1946) records finding webs on the under surfaces of leaves. Kurata collected one specimen on a low tree in Ontario. According to W. Ivie (*in litt.*) *Theridion pennsylvanicum* occurs in woods.

FEMALE: Carapace gray-brown. Sternum and legs brown. Dorsum of abdomen with pattern as in *Theridion pennsylvanicum*: two white lines with branches to the outside and a pair of black spots anterior to each of three pairs of branches. Spinnerets surrounded by a diagnostic black ring broken on venter. Anterior median eyes one and one-quarter diameters apart, one-half of a diameter from lat-



MAP 31. Distribution of *Theridion pennsylvanicum*, *T. orlando*, and *T. neshamini*.

TYPE LOCALITY: Syntypes from Cold Spring Harbor, Long Island, New York, August 1 to 10, 1902, are in the American Museum of Natural History. One male syntype is in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Eastern states. Ontario: Point Pelee (T. B. Kurata). Missouri: Columbia (C. R. Crosby). Florida: Big Tree near Longwood, Seminole County (W. J. Gertsch).

RECORDS: See Appendix.

Theridion orlando (Archer)

Figures 309, 310, 315, 316; map 31

Allotheridion orlando ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 20, pl. 3, fig. 3 (female).

erals. Posterior eyes one diameter apart. Epigynum (fig. 316) as in *T. pennsylvanicum*, except openings appear larger; internal genitalia (fig. 315) more heavily sclerotized. Measurements of holotype: total length, 2.8 mm.; carapace 1.10 mm. long, 1.00 mm. wide; first femur, 1.82 mm.; patella and tibia, 1.90 mm.; metatarsus, 1.62 mm.; tarsus, 0.55 mm.; second patella and tibia, 1.22 mm.; third, 0.85 mm.; fourth, 1.47 mm.

MALE: Darker in color than female. An incomplete black ring around spinnerets. Palpus (figs. 309, 310) similar to that of *T. pennsylvanicum*. Measurements: total length, 2.6 mm.; carapace 1.27 mm. long, 1.14 mm. wide; first femur, 2.48 mm.; patella and tibia, 2.90 mm.; metatarsus, 2.46 mm.; second pa-

tella and tibia, 1.67 mm.; third, 1.04 mm.; fourth, 1.52 mm.

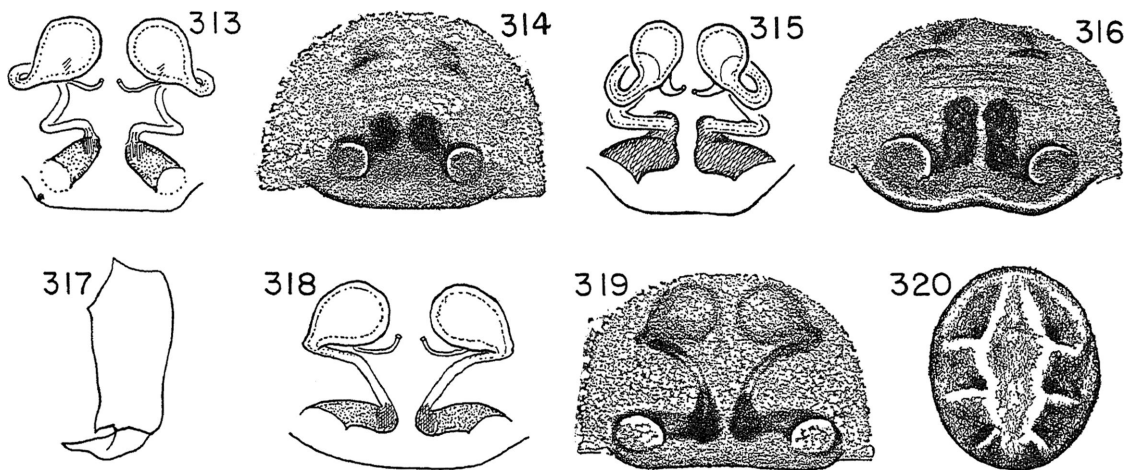
Some specimens were collected in Spanish moss in Louisiana.

TYPE LOCALITY: Female holotype from Orlando, Florida, August 15 to 30, 1944 (M. Nirenberg), is in the American Museum of Natural History.

DISTRIBUTION: Georgia, Florida, Louisiana.

RECORDS: *Georgia:* Lowndes County: Six miles south of Valdosta, April 20, 1938 (W. J.

Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior eyes less than one diameter apart. The distance between the openings of the epigynum (fig. 319) can be used to separate this species from *Theridion orlando* and *T. pennsylvanicum*. Total length, 1.8–2.6 mm. Measurements of female allotype: total length 2.5 mm.; carapace 0.91 mm. long, 0.80 mm. wide; first femur, 1.27 mm.; patella and tibia, 1.32 mm.; metatarsus, 1.04 mm.; tarsus, 0.57



FIGS. 313, 314. *Theridion pennsylvanicum* Emerton. 313. Female genitalia, dorsal view. 314. Epigynum.

FIGS. 315, 316. *Theridion orlando* (Archer). 315. Female genitalia, dorsal view. 316. Epigynum.

FIGS. 317–319. *Theridion neshamini*, new species. 317. Left male chelicera, anterior view. 318. Female genitalia, dorsal view. 319. Epigynum.

FIG. 320. *Theridion pennsylvanicum* Emerton, abdomen of female, dorsal view.

Gertsch), one male. *Florida:* Gadsden County: Quincy, December 1, 1934 (H. K. Wallace), two juveniles. Wakulla County: Wakulla Springs. *Louisiana:* Jefferson Parish: Harahan (F. G. Werner), two females.

***Theridion neshamini*, new species**

Figures 311, 312, 317–319; map 31

Theridion pennsylvanicum, CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 52. Not *Theridion pennsylvanicum* Emerton.

FEMALE: Carapace yellow-white, with narrow median line, a curved line on each side, and a fine black border. Clypeus with central line. Legs yellow-white, with dusky spots. Dorsum of abdomen white, with three or more pairs of small black spots and many white pigment spots; sides with some black spots. Venter with black spots anterior to spinnerets.

mm.; second patella and tibia, 0.91 mm.; third, 0.65 mm.; fourth, 1.09 mm.

MALE: Color as in female. Fangs of chelicerae flattened and short (fig. 317). Palpus (figs. 311, 312) narrower than in *T. orlando* and *T. pennsylvanicum*, and there are slight differences in shapes of parts. Total length of males, 1.6–2.0 mm. Measurements of male holotype: total length, 2.0 mm.; carapace 1.01 mm. long, 0.91 mm. wide; first femur, 1.60 mm.; patella and tibia, 1.82 mm.; metatarsus, 1.45 mm.; tarsus, 0.57 mm.; second patella and tibia, 1.17 mm.; third, 0.75 mm. fourth, 1.11 mm.

According to W. Ivie (*in litt.*) the habitat of *Theridion neshamini* is tall grass.

TYPE LOCALITY: Male holotype, female allotype, 10 male and 22 female paratypes from northeast of Jamison, Horseshoe Bend,

Neshaminy Creek, Bucks County, Pennsylvania, June, 1954 (W. Ivie).

DISTRIBUTION: Eastern states.

RECORDS: *Virginia*: Arlington County: Rosslyn (I. Fox), one female. North Carolina: Granville County: Two and seven-tenths miles north of Creedmore, June 2, 1953 (R. D. Barnes), one female. *Georgia*: Washington to Thomson, May 1, 1943 (W. Ivie), one female. *Illinois*: Madison County: Prairietown, July 9, 1941 (C. and M. Goodnight), three females.

***Theridion impressum* L. Koch**

Figures 321, 326-328; map 23

Steatoda sisypchia, MENGE, 1868, Schr. Naturf. Gesell. Danzig, new ser., vol. 2, p. 161, pl. 30, fig. 69 (male, female). Not *Theridion sisypchium* Clerck.

Theridion impressum L. KOCH, 1881, Abhandl. Naturf. Gesell. Görlitz, vol. 17, p. 45, pl. 2, fig. 1 (male). WIEHLE, 1937, in Dahl, Die Tierwelt Deutschlands, pt. 33, p. 152, figs. 81-84 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 465. WIEHLE, 1949, Vom Fanggewebe einheimischer Spinnen, p. 39, fig. 30. LOCKET AND MILLIDGE, 1953, British spiders, vol. 2, p. 65, figs. 44c, 44d (male, female).

Theridion frigidicola CHAMBERLIN AND IVIE, 1947, Bull. Univ. Utah, biol. ser., vol. 10, no. 3, p. 27, figs. 14, 15 (male, female). KURATA, 1949, Canadian Ent., vol. 81, p. 127. New synonymy.

Allotheridion (Allotheridion) impressum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., vol. 30, p. 20.

FEMALE: Carapace yellow-white, with median black band as wide as posterior eye row in front, narrower behind. Black marginal band as wide as median band at its widest. Sternum yellow, with black margin. Legs dusky yellow. Dorsum of abdomen with four pairs of large black spots (fig. 328); sides and venter grayish white except for small ventral black spot anterior to spinnerets. Anterior median eyes one diameter apart, three-quarters of a diameter from laterals. Posterior medians one diameter apart, one and one-half diameters from laterals. Epigynum (fig. 327) with an indistinct fossa, wider than long. Total length, 2.8-4.3 mm. Measurements of a female from Alberta: total length, 4.3 mm.; carapace 1.5 mm. long, 1.3 mm. wide. First femur, 2.5 mm.; patella and tibia, 2.5 mm.; metatarsus, 2.5 mm.; tarsus, 0.7

mm.; second patella and tibia, 1.7 mm.; third, 1.2 mm.; fourth, 2.0 mm.

MALE: Carapace and legs darker than in female. Chelicerae lack teeth. Palpus illustrated by figure 321. Measurements of a male from Switzerland: total length, 2.9 mm.; carapace 1.5 mm. long, 1.2 mm. wide; first femur, 2.3 mm.; patella and tibia, 2.5 mm.; metatarsus, 2.4 mm.; tarsus, 0.7 mm.; second patella and tibia, 1.4 mm.; third, 0.9 mm.; fourth, 1.5 mm.

In Europe, found in waste fields or along paths in fields, on shrubs which are slightly higher than surrounding vegetation (Wiehle, 1938, 1949). Specimens were abundant in shrubby cinquefoil along the banks of the Athabasca River in Alberta. Wiehle (1949) describes the web as having a small, dome-shaped retreat, covered on the outside by dead insects and dried leaves. From the dome threads go in all directions and attach to plant stems. Outside are some threads with sticky droplets.

TYPE LOCALITIES: *Theridion impressum* from near Niesky in Ober-Lausitz (Silesia), Germany. Female holotype of *T. frigidicola*, from Circle Hot Springs, longitude 145° W., latitude 65° N., Alaska, June 20-21, 1945 (J. C. Chamberlin), is in the University of Utah collection.

DISTRIBUTION: Europe, Siberia (Wiehle, 1937). Alaska, Northwest Territory, Alberta.

RECORDS: *Alaska*: Copper Center; Glenn Highway opposite Matanuska Glacier; Eklutna; Matanuska (all Chamberlin and Ivie, 1947). *Northwest Territory*: Great Slave Lake: Hearne Channel (D. S. Rawson); Pearson Point (Kurata, 1949). *Alberta*: Jasper (J. H. Emerton; H. and L. Levi).

***Theridion lyricum* Walckenaer**

Figures 322, 323, 329-331; map 32

Theridion lyricum WALCKENAER, 1841, Histoire naturelle des insectes, aptères, vol. 2, p. 288. MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 199. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 503. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 52. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 43.

Theridion lyra HENTZ, 1850, Jour. Boston Soc. Nat. Hist., vol. 6, p. 279, pl. 9, fig. 21 (female); 1875, The spiders of the United States, p. 150, pl.

16, fig. 21 (female). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 106, figs. 132, 153-154 (male, female).

Theridion kentuckyense KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 78, pl. 4, fig. 47 (male). MARX, 1890, Proc. U. S.

Natl. Hist., vol. 29, p. 198. COMSTOCK, 1912, The spider book, p. 349. BARROWS, 1918, Ohio Jour. Sci., vol. 18, p. 304. BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 183. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101, p. 1041. ELLIOTT, 1932, Proc. Indiana Acad. Sci., vol. 41, p. 425. KASTON, 1938, Bull. Connecticut Geol. Nat. Hist. Surv.,

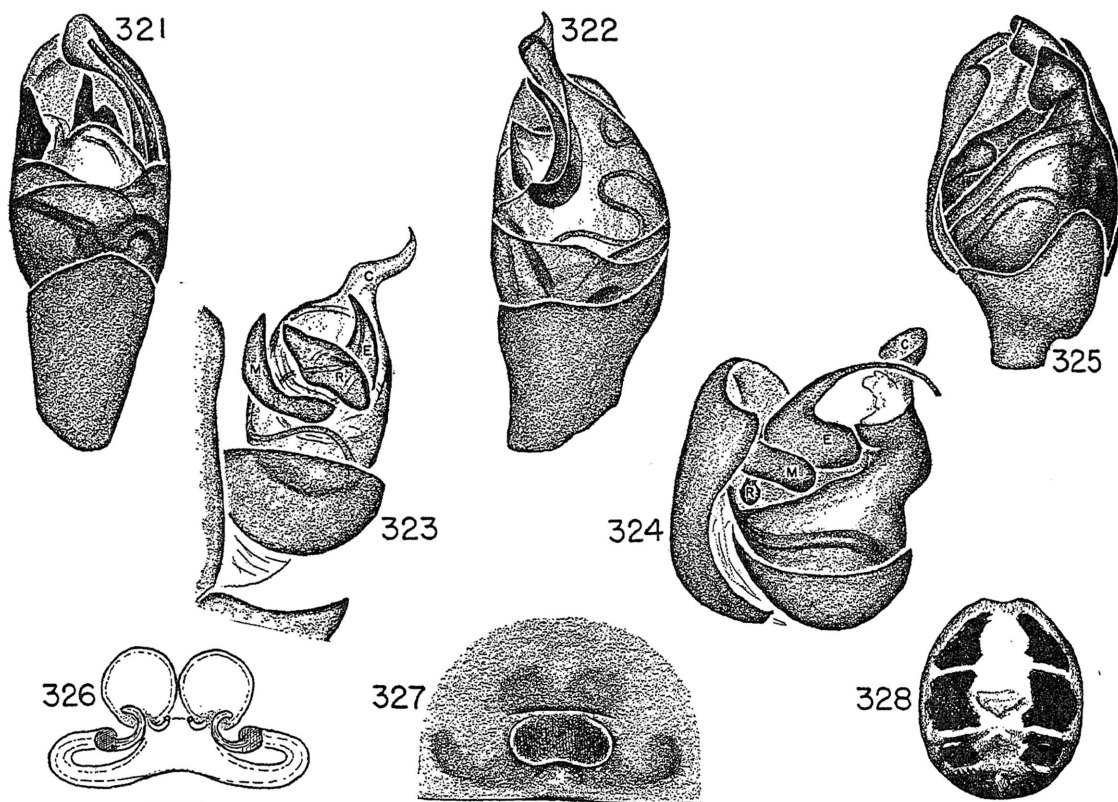


FIG. 321. *Theridion impressum* L. Koch, left palpus, ventral view.

FIGS. 322, 323. *Theridion lyricum* Walckenaer, palpus. 322. Ventral view. 323. Mesal view, expanded.

FIGS. 324, 325. *Theridion ohlerti* Thorell, palpus. 324. Submesal view, expanded. 325. Ventral view.

FIGS. 326-328. *Theridion impressum* L. Koch. 326. Female genitalia, dorsal view. 327. Epigynum. 328. Abdomen of female, dorsal view.

Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix.

Natl. Mus., vol. 12, p. 519; 1892, Proc. Ent. Soc. Washington, vol. 2, p. 155. BANKS, 1892, Proc. Acad. Nat. Sci. Philadelphia, p. 30, pl. 5, fig. 43 (female); 1895, Jour. New York Ent. Soc., vol. 3, p. 83; 1907, Indiana Dept. Geol. and Nat. Resources, 31st Ann. Rept., p. 738. BANTA, 1907, The fauna of Mayfield Cave, p. 60. BRYANT, 1908, Occas. Papers Boston Soc. Nat. Hist., vol. 7, p. 13. EMERTON, 1909, Trans. Connecticut Acad. Sci., vol. 14, p. 180, pl. 1, fig. 6, (male, female). BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus.

no. 60, p. 186. KURATA, 1939, Canadian Field Nat., vol. 53, p. 81. COMSTOCK, 1940, The spider book, rev. ed., p. 364. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 503. MUMA, 1945, Bull. Univ. of Maryland Agr. Exp. Sta., no. A38, p. 28. MUMA AND JEFFERS, 1945, Ann. Ent. Soc. Amer., vol. 38, p. 248. GERTSCH, 1946, in Procter, Biological survey of the Mount Desert region, pt. 7, p. 520. GIBSON, 1947, Ohio Jour. Sci., vol. 46, p. 39. LOWRIE, 1948, Ecology, vol. 29, p. 338. ELLIOTT, 1953, Proc. Indiana Acad. Sci., vol. 62, p. 309.

Allotheridion (Allotheridion) lyricum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 20.

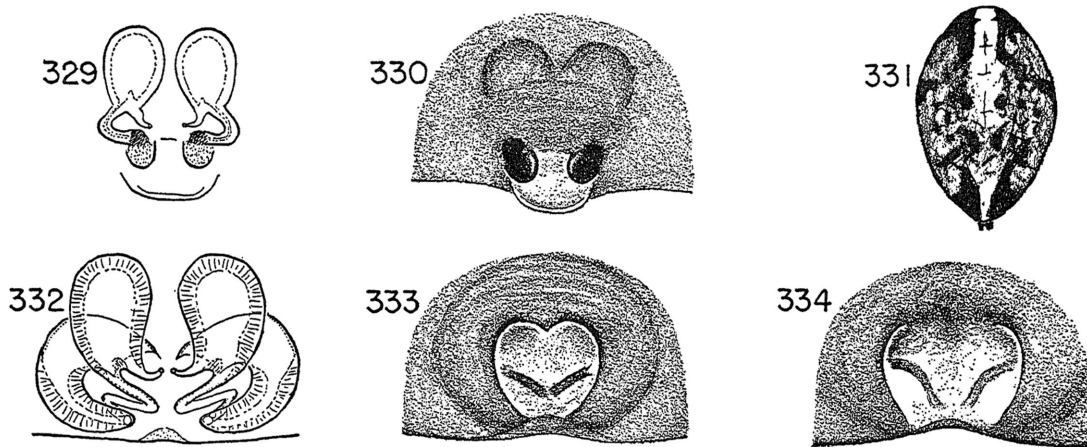
Allotheridion lyricum, BARNES, 1953, Ecol. Monogr., vol. 23, p. 321. LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 442.

FEMALE: Carapace whitish, sides and eye region dusky. Sternum dusky. Legs whitish, brown to black bands at middle and ends of segments. Dorsum of abdomen with black spots (fig. 331). Sides white, with black diagonal mark on each side. Venter black anterior to pedicel, a black spot anterior to spinnerets.

and tibia, 2.86 mm.; metatarsus, 2.70 mm.; tarsus, 0.85 mm.; second patella and tibia, 1.69 mm.; third, 0.84 mm.; fourth, 1.40 mm.

This species is found on vegetation, probably in forests or in shade, and also on fences and inside houses (Muma, 1945; Kaston, 1948).

TYPE LOCALITY: *Theridion lyricum* is described from a drawing by J. Abbot, of a specimen from Burke County, Georgia. The type of *T. lyra* from Alabama has been lost. Male holotype of *kentuckyense*, from Kentucky, is in the Museum of Comparative Zoölogy.



FIGS. 329-331. *Theridion lyricum* Walckenaer. 329. Female genitalia, dorsal view. 330. Epigynum. 331. Abdomen of female, dorsal view.

FIGS. 332-334. *Theridion ohlerti* Thorell. 332. Female genitalia, dorsal view. 333, 334. Epigynum. 333. Europe. 334. California.

Anterior median eyes one diameter apart, almost touching laterals. Posterior medians three-quarters of a diameter apart, one diameter from laterals. Two teeth on anterior margin of each chelicera. Epigynum with two dark pieces overhanging depression (fig. 330). Total length of females, 2.5-3.5 mm. Measurements of a female from Mississippi: total length, 2.5 mm.; carapace 0.99 mm. long, 0.91 mm. wide; first femur, 2.08 mm.; patella and tibia, 2.30 mm.; metatarsus, 2.04 mm.; tarsus, 0.74 mm.; second patella and tibia, 1.30 mm.; third, 0.79 mm.; fourth, 1.32 mm.

MALE: Color as in female. Eyes slightly closer together. Palpus illustrated by figures 322 and 323. Total length, 2.1-2.8 mm. Measurements of a male from Mississippi: total length, 2.2 mm.; carapace 1.03 mm. long, 0.83 mm. wide; first femur, 2.54 mm.; patella

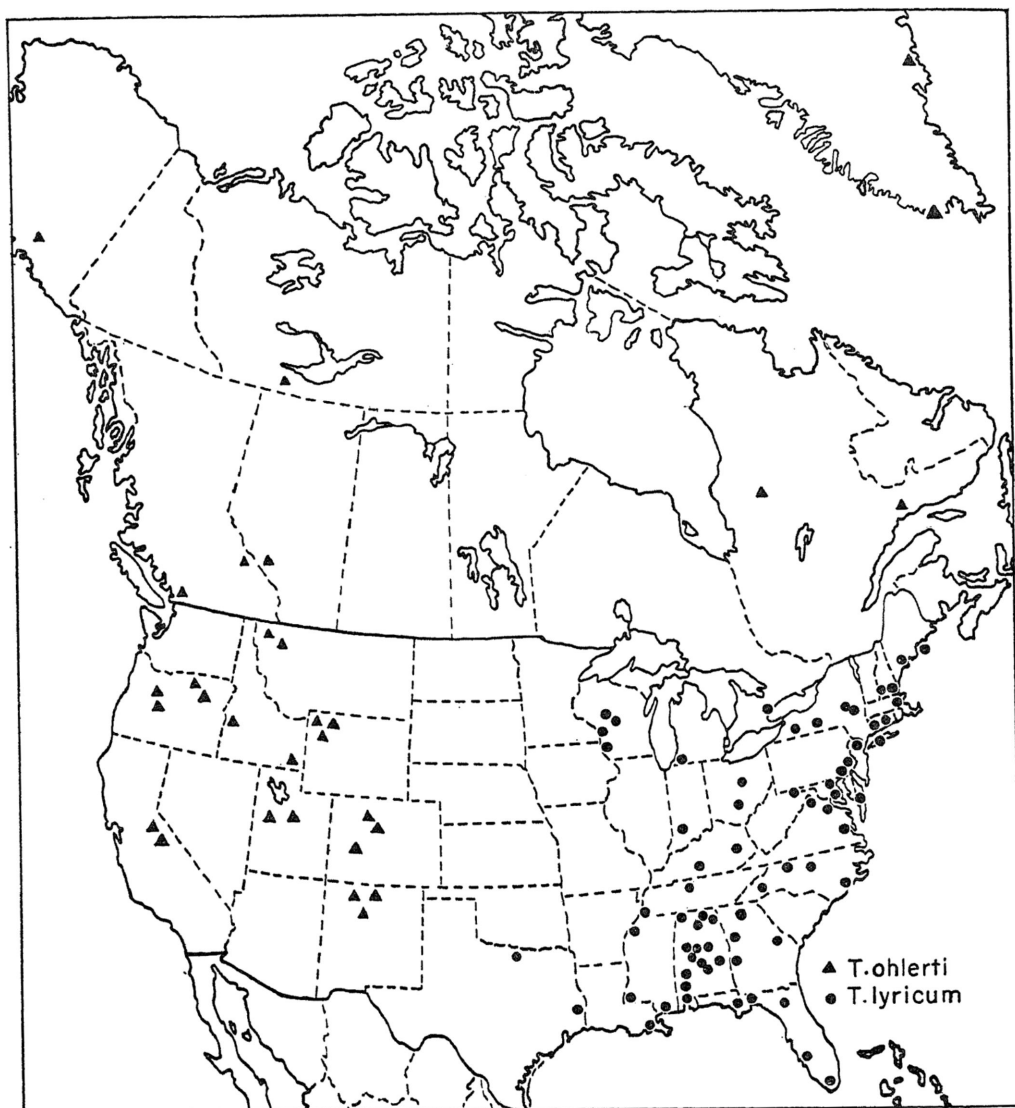
DISTRIBUTION AND MARGINAL RECORDS: Eastern states. Ontario: Pottageville (Kurata, 1939). Maine: Mount Desert Island (W. Procter). Texas: Clear Creek, Denton County (S. Jones).

RECORDS: See Appendix.

Theridion sexpunctatum Emerton

Figures 340-349; map 33

Theridion sexpunctatum EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 12, pl. 2, fig. 5 (male, female) (*sub Theridium*). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 520. EMERTON, 1894, Trans. Connecticut Acad. Sci., vol. 9, p. 406. BANKS, 1900, Proc. Washington Acad. Sci., vol. 2, p. 478; 1903, Proc. Ent. Soc. Washington, vol. 5, p. 106; 1904, Proc. California Acad. Sci., biol. ser., vol. 3, p. 344. BRYANT, 1908, Occas. Papers Boston Soc. Nat. Hist., vol. 7, p. 14. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p.



MAP 32. North American distribution of *Theridion ohlerti* and distribution of *T. lyricum*.

20. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 205. EMERTON, 1915, Trans. Connecticut Acad. Sci., vol. 20, p. 137, pl. 1, fig. 3 (male); 1915, *ibid.*, vol. 20, p. 148, pl. 2, fig. 2 (male, females); 1915, Canadian Alpine Jour., vol. 6, p. 160; 1917, Ent. News, vol. 28, p. 60; 1918, Rept. Ent. Soc. Ontario, vol. 48, p. 78; "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 311; 1921, Canadian Field Nat., vol. 34, p. 107. MOLES AND JOHNSON, 1921, Jour. Ent. and Zool., vol. 13, p. 41. BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 183. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101, p. 1042. WORLEY, 1932,

Univ. Washington Publ. Biol., vol. 1, no. 1, p. 27. CHAMBERLIN AND IVIE, 1933, Bull. Univ. Utah, biol. ser., vol. 2, no. 2, p. 9. CHICKERING, 1934, Papers Michigan Acad. Sci., vol. 19, p. 579. CROSBY AND ZORSCH, 1935, Canadian Ent., vol. 67, p. 38. KURATA, 1939, Canadian Field Nat., vol. 53, p. 81. GERTSCH AND JELLISON, 1939, Amer. Mus. Novitates, no. 1032, p. 4. KURATA, 1941, Univ. Toronto Studies, biol. ser., no. 48, p. 109. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 505. TRUMAN, 1942, Proc. Pennsylvania Acad. Sci., vol. 16, p. 27. MUMA, 1945, Bull. Univ. Maryland Agr. Exp. Sta., no. A38, p. 29. CHAMBERLIN AND IVIE, 1947, Bull. Univ. Utah, biol. ser., vol. 10, no. 3, p. 29. LEVI

AND LEVI, 1951, Zoologica, vol. 36, p. 220. LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 444, figs. 5, 9, 10 (male, female). HACKMAN, 1954, Acta Zool. Fennica, vol. 79, p. 49. LOWRIE AND GERTSCH, 1955, Amer. Mus. Novitates, no. 1736, p. 7.

Theridion marxi KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 68, pl. 3, fig. 41 (female); 1886, *op. cit.*, pt. 2, p. 231, pl. 20, fig. 285 (male). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 519; 1892, Proc. Ent. Soc. Washington, vol. 2, p. 190.

Theridion (Rugathodes) sexpunctatum, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 24, pl. 3, fig. 7 (male).

FEMALE: Carapace yellow-white, with median dark band as wide as posterior eye row in front, narrower behind. Margin dark. Sternum yellow-white, sometimes dusky. Legs yellow-white. Dorsum of abdomen with characteristic pattern (fig. 349), sides gray to black, venter light. Western specimens frequently with dorsum all black or with dark patches. Anterior median eyes one to one and one-half diameters apart, one-half of a diameter to one diameter from laterals. Posterior eyes one to one and one-half diameters apart. Eyes subequal or anterior medians slightly smaller. Internal genitalia heavily sclerotized (figs. 344-346), as in *T. aurantium*, except that ducts open into side of epigynal depression (figs. 347, 348). Total length, 1.5-2.5 mm. Measurements of a female from New York: total length, 2.0 mm.; carapace 0.80 mm. long, 0.78 mm. wide; first femur, 1.36 mm.; patella and tibia, 1.36 mm.; metatarsus, 1.07 mm.; tarsus, 0.50 mm.; second patella and tibia, 0.98 mm.; third, 0.68 mm.; fourth, 1.14 mm.

MALE: Color as in female. Chelicerae enlarged (fig. 343). Palpus illustrated by figures 340 to 342. Total length, 1.8-2.2 mm. Measurements of a male from New York: total length, 2.0 mm.; carapace 1.01 mm. long, 0.89 mm. wide; first femur, 1.82 mm.; patella and tibia, 2.03 mm.; metatarsus, 1.82 mm.; tarsus, 0.56 mm.; second patella and tibia, 1.40 mm.; third, 0.88 mm.; fourth, 1.27 mm.

The color and pattern of specimens from the Pacific coast are variable and usually different from those of eastern specimens illustrated by figure 349. Western species have the dorsum of the abdomen frequently as one large black patch. The connecting ducts differ greatly in length (figs. 344-346), being short-

est and most like those in *Theridion aurantium* in Oregon and longest in specimens from the east. Specimens from British Columbia (fig. 345), Utah, and Alaska are intermediate. There are slight geographical differences in the palpi (figs. 341, 342).

This species is usually found on coniferous trees.

TYPE LOCALITY: Two female syntypes of *Theridion sexpunctatum* from Mt. Washington, New Hampshire, June 11, 1877 (J. H. Emerton), are in the Museum of Comparative Zoölogy. Female syntypes of *T. marxi* from the Aleutian Islands, Alaska, are in the United States National Museum (U.S.N.M. No. 1630).

DISTRIBUTION AND MARGINAL RECORDS: Alaska, Canada, Newfoundland, northern United States, Appalachian Mountains, western slope of Rocky Mountains, and Pacific coast. Aleutian Islands: Kanaga Island; Yakutat (G. Marx). North Carolina: Summit of Mt. Mitchell (Bishop and Crosby, 1926). Arizona: Seventeen miles northeast of White-river, White Mountains, Navajo County (J. M. Gertsch). California: Ten miles west of Santa Barbara (W. Ivie).

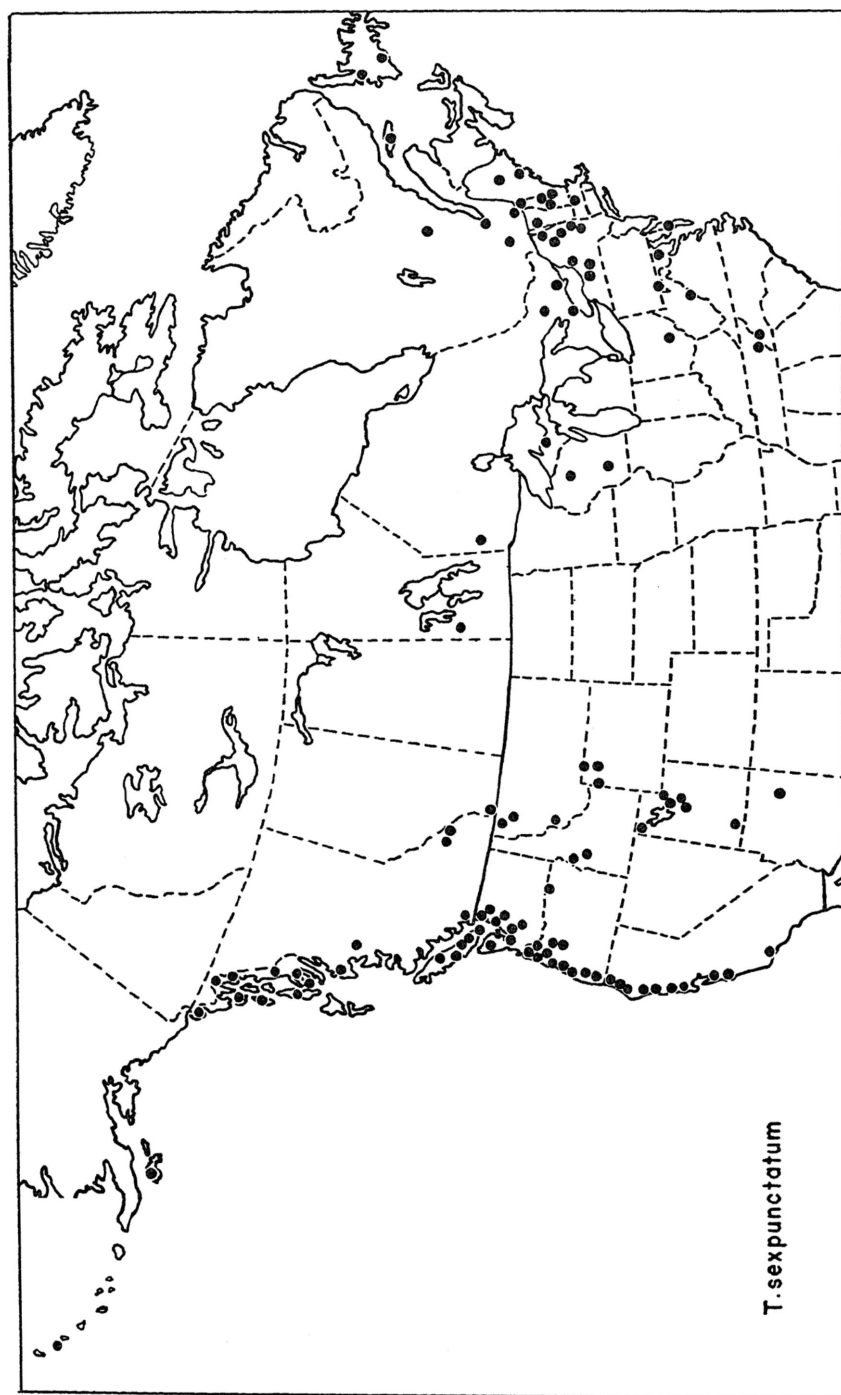
RECORDS: See Appendix.

Theridion aurantium Emerton

Figures 337-339, 350-352; map 34

Theridion aurantium EMERTON, 1915, Trans. Connecticut Acad. Sci., vol. 20, p. 136, pl. 1, fig. 2 (male, female); 1917, Ent. News, vol. 28, p. 59; "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 311; 1924, Canadian Ent., vol. 56, p. 124; 1925, Canadian Field Nat., vol. 39, p. 140. CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101, p. 1041. WORLEY, 1932, Univ. Washington Publ. Biol., vol. 1, no. 1, p. 26. CROSBY AND ZORSCH, 1935, Canadian Ent., vol. 67, p. 40. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 501. GERTSCH, 1946, in Procter, Biological survey of the Mount Desert region, pt. 7, p. 520. CHAMBERLIN AND IVIE, 1947, Bull. Univ. Utah, biol. ser., vol. 10, no. 3, p. 27. LEVI, 1951, Amer. Mus. Novitates, no. 1501, p. 3, fig. 10 (female). LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 444, figs. 7, 8 (male, female). HACKMAN, 1954, Acta Zool. Fennica, vol. 79, p. 49. LOWRIE AND GERTSCH, 1955, Amer. Mus. Novitates, no. 1736, p. 7.

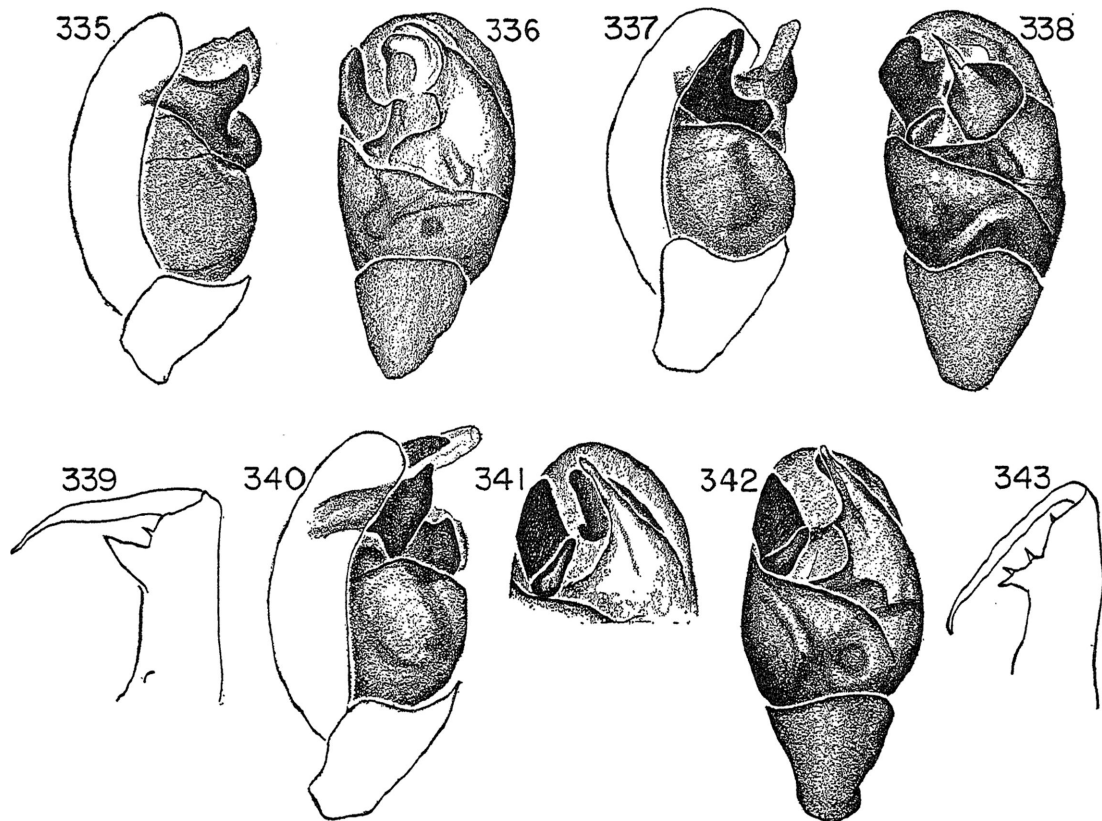
Theridion (Rugathodes) aurantium, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 24.



MAP 33. Distribution of *Theridion sexpunctatum*.

FEMALE: Carapace yellow to dark brown. Sternum dark brown. Legs yellow-white. Dorsum of abdomen usually with white pigment spots and a black band on each side (fig. 350); sometimes all black or all white. Sides and venter white. A black ring around spinnerets. Anterior median eyes one diameter apart,

MALE: Similar in color to female. Abdomen gray, with two dorsal black bands. Anterior median eyes farther apart than in female. Anterior median eyes slightly smaller than others. Chelicerae enlarged (fig. 339). Embolus of palpus with a prominent squarish sclerite, at the center of which is a very weak



FIGS. 335, 336. *Theridion cheimatos* Gertsch and Archer, left palpus. 335. Mesal view. 336. Ventral view.

FIGS. 337-339. *Theridion aurantium* Emerton. 337. Palpus, mesal view. 338. Palpus, ventral view. 339. Left chelicera of male, posterior view.

FIGS. 340-343. *Theridion sexpunctatum* Emerton. 340. Palpus, mesal view. 341-342. Palpus, ventral view. 341. Oregon. 342. New York. 343. Chelicera of male, posterior view.

one-third of a diameter from laterals. Distances between posterior eyes variable. Connecting ducts open into anterior part of epigynal depression (figs. 352). Total length, 1.7-2.4 mm. Measurements of a female from Ontario: total length, 1.8 mm.; carapace 0.70 mm. long, 0.65 mm. wide; first femur, 1.30 mm.; patella and tibia, 1.30 mm.; metatarsus, 1.17 mm.; tarsus, 0.50 mm.; second patella and tibia, 0.87 mm.; third, 0.62 mm.; fourth, 1.08 mm.

extension supported by a translucent conductor (figs. 337, 338). Total length, 1.6-2.0 mm. Measurements of a male from Ontario: total length, 1.8 mm.; carapace 0.91 mm. long, 0.78 mm. wide; first femur, 1.59 mm.; patella and tibia, 1.75 mm.; metatarsus, 1.69 mm.; tarsus, 0.60 mm.; second patella and tibia, 1.13 mm.; third, 0.73 mm.; fourth, 1.15 mm.

Some individual females are difficult to separate from those of *Theridion sexpunctatum*. The internal genitalia and the lack of

median dorsal stripe on the carapace may differentiate the two.

The habits of this species are probably similar to those of *T. sexpunctatum*. Hackman (1954) reports finding *T. aurantium* in leaf mold of maple groves in Newfoundland.

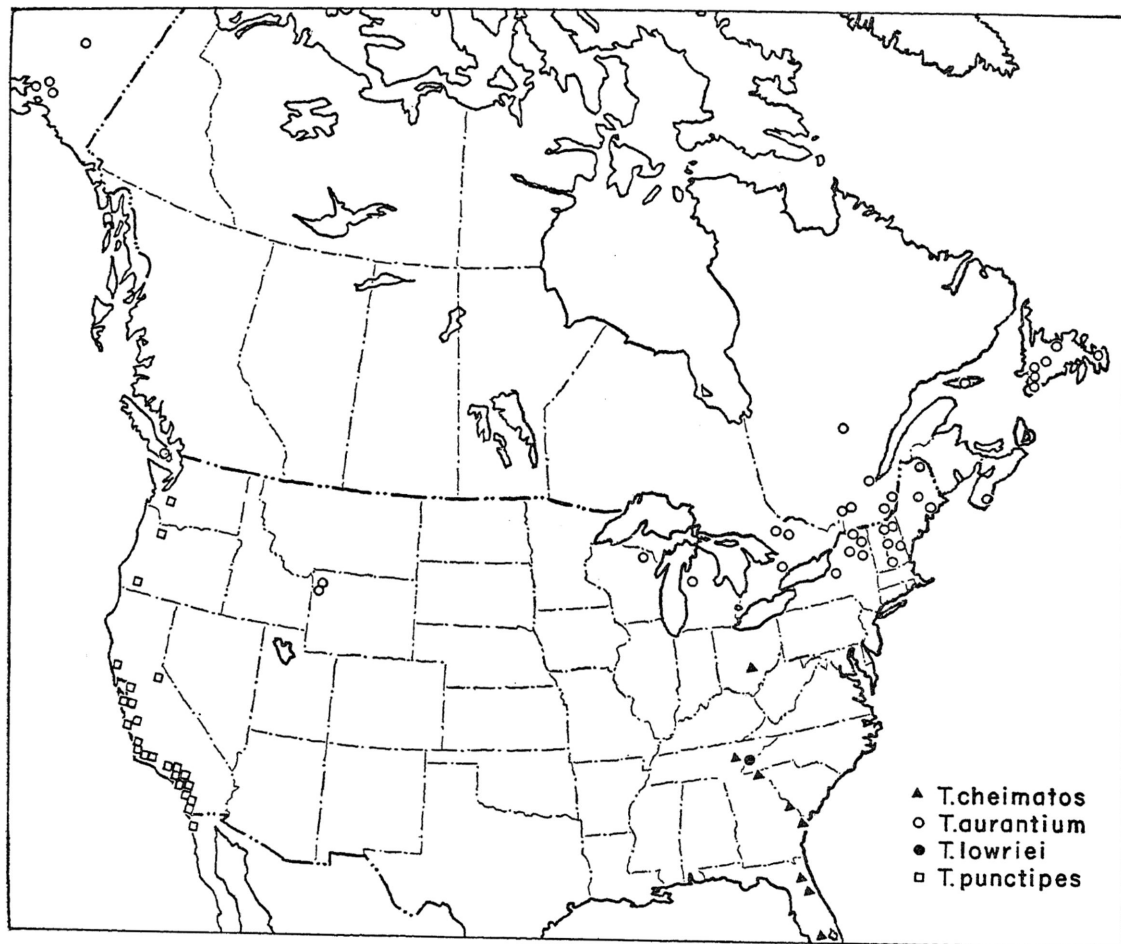
TYPE LOCALITY: Male and female syntypes from Crawford Notch, New Hampshire, July

***Theridion cheimatos* Gertsch and Archer**

Figures 335, 336, 354-357; map 34

Theridion cheimatos GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 3, figs. 15, 16 (female). CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 49.

FEMALE: Carapace with a narrow black marginal line. Eye region dusky. Sternum and



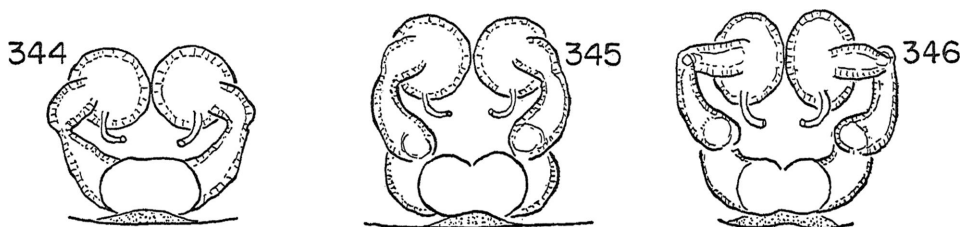
MAP 34. Distribution of *Theridion punctipes*, *T. cheimatos*, *T. aurantium*, and *T. lowriei*.

11, 1906 (J. H. Emerton), are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Alaska, Canada, Newfoundland, northern United States. Alaska: College (J. C. Chamberlin). Michigan: Wexford County (R. R. Dreisbach). Wisconsin: Laona, Forest County (H. and L. Levi). Wyoming: Hanging Canyon, Grand Teton National Park (D. C. Lowrie); Moran, (D. C. Lowrie).

RECORDS: See Appendix.

legs yellow. Dorsum of abdomen all white or with some black spots (fig. 354). Dusky marks above spinnerets. Venter with black patches anterior to pedicel and a black patch anterior to spinnerets. Anterior median eyes less than one diameter apart, almost touching laterals. Posterior eyes three-quarters of a diameter apart. Height of clypeus equals one and one-quarter diameters of anterior median eyes. Abdomen almost triangular, a slight tubercle above spinnerets (figs. 354, 357). Epigynum



FIGS. 344-346. *Theridion sexpunctatum* Emerton, Female genitalia, dorsal view. 344. Oregon. 345. British Columbia. 346. New York.

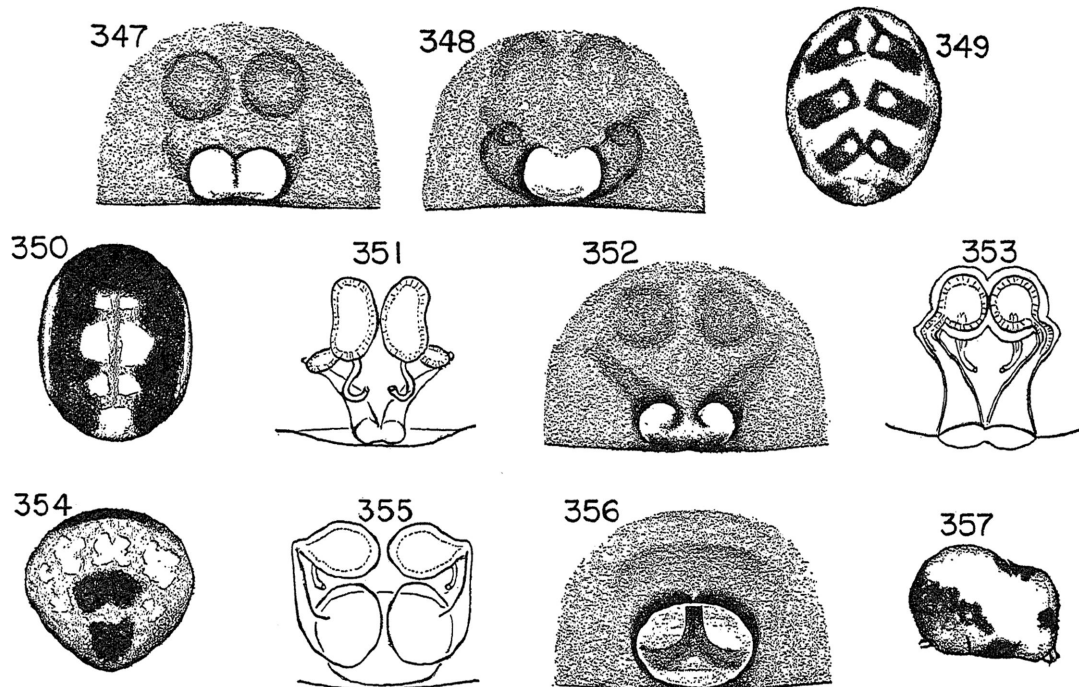
with a large oval depression (fig. 356). Seminal receptacles small (fig. 355). Total length, 1.2-1.6 mm. Measurements of one individual: total length, 1.6 mm.; carapace, 0.65 mm. long, 0.59 mm. wide; first femur, 1.12 mm.; patella and tibia, 1.12 mm.; metatarsus, 0.85 mm.; tarsus, 0.43 mm.; second patella and tibia, 0.70 mm.; third, 0.52 mm.; fourth, 0.85 mm.

MALE: Anterior median eyes two diameters apart, one diameter from laterals. Posterior eyes one diameter apart. Anterior medians slightly smaller than others. Chelicerae en-

larged but not so large as in *Theridion sexpunctatum*. Palpus illustrated by figures 335 and 336. Measurements of a male from Georgia: total length, 1.3 mm.; carapace 0.62 mm. long, 0.52 mm. wide; first femur, 1.12 mm.; patella and tibia, 1.20 mm.; metatarsus, 1.00 mm.; tarsus, 0.42 mm.; second patella and tibia, 0.73 mm.; third, 0.50 mm.; fourth, 0.78 mm.

This species is found under cover on ground in moderately damp places (Chamberlin and Ivie, 1944).

TYPE LOCALITY: Female holotype from



FIGS. 347-349. *Theridion sexpunctatum* Emerton. 347. Oregon. 348. New York. 349. Abdomen of female, dorsal view, New York.

FIGS. 350-352. *Theridion aurantium* Emerton. 350. Abdomen of female, dorsal view, Ontario. 351. Female genitalia, dorsal view. 352. Epigynum.

FIG. 353. *Theridion lowriei* Barrows, female genitalia (after Barrows).

FIGS. 354-357. *Theridion cheimatos* Gertsch and Archer. 354. Abdomen of female, dorsal view. 355. Female genitalia, dorsal view. 356. Epigynum. 357. Abdomen of female, lateral view.

north of Winter Park, Orange County, Florida, April 11, 1938 (W. J. Gertsch), is in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Southeastern states. Ohio: Sugar Grove, Fairfield County (W. M. Barrows). Florida: Fort Myers.

RECORDS: See Appendix.

***Theridion lowriei* Barrows**

Figure 353; map 34

Theridion lowriei BARROWS, 1945, Ann. Ent. Soc. Amer., vol. 38, p. 72, fig. 5 (female).

This species is not known to me. According to Barrows' description: carapace dusky tan; sternum darker than carapace; abdomen with "many flocculent white areas on a pale tan background, distributed along the sides, while the central part has three double white areas one behind the other. The venter is paler without markings." Anterior median eyes three diameters apart, one diameter from laterals. Anterior medians slightly smaller than laterals. Cleared epigynum illustrated by figure 353. Total length, 2.2 mm.; carapace, 0.9 mm. long.

TYPE LOCALITY: Female holotype from Mt. Leconte, Great Smoky Mountain National Park, Tennessee, June 15, 1939 (W. Kern), is in the collection of Ohio State University, Columbus, Ohio.

***Theridion ohlerti* Thorell**

Figures 324, 325, 332-334; map 32

Theridion ohlerti THORELL, 1870, Remarks on synonyms of European spiders, p. 85. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 468.

Theridion umbraticum L. KOCH, 1872, Zeitschr. Ferdinandeum für Tirol, ser. 3, vol. 17, p. 243. MARX, 1892, Proc. Ent. Soc. Washington, vol. 2, p. 190. WIEHLE, 1937, in Dahl, Die Tierwelt Deutschlands, pt. 33, p. 162, figs. 107-113 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 475.

Theridion lundbeckii SPRENGER, 1898, Vidensk. Meddel., Copenhagen, ser. 5, vol. 10, p. 191. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 199. JACKSON, 1930, Ann. Mag. Nat. Hist., ser. 10, vol. 6, p. 642, pl. 17, fig. 10 (female).

Theridion simulatum EMERTON, 1926, Canadian Ent., vol. 58, p. 115, figs. 1, 2 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 505. CHAMBERLIN AND IVIE, 1947, Bull. Univ. Utah, biol. ser., vol. 10, no. 3, p. 29.

Allotheridion ohlerti, LEVI AND LEVI, 1951,

Zoologica, vol. 36, p. 220, figs. 3, 7, and 8 (male, female). LOWRIE AND GERTSCH, 1955, Amer. Mus. Novitates, no. 1736, p. 7.

FEMALE: Carapace yellow to brown, with a median brown band. Eye region brown, sides dusky. Sternum brown, center yellow-white. Legs yellow-white, with brown band at middle and distal ends of segments. Abdomen spotted with indistinct markings, sometimes with a lighter or dark scalloped dorsal band. Venter light, with a black patch on each side of pedicel. Thoracic pit present. Anterior median eyes one to one and one-quarter diameters apart, one-quarter of a diameter from laterals. Posterior medians sometimes close to each other, in other specimens closer to laterals. Epigynum a depression of variable shape. The V-shaped mark in epigynal depression (figs. 333, 334) can be used to separate this species from related ones. Total length, 1.5-2.8 mm. A female from California measured: total length, 2.8 mm.; carapace 1.04 mm. long, 0.98 mm. wide; first femur, 1.62 mm.; patella and tibia, 1.80 mm.; metatarsus, 1.43 mm.; tarsus, 0.62 mm.; second patella and tibia, 1.17 mm.; third, 0.85 mm.; fourth, 1.24 mm.

MALE: Leg bands less distinct than in female; abdomen dark. Palpus (figs. 324, 325) with radix reduced (hidden in figure 324 by median apophysis). Total length of males, 2.1-2.3 mm. Measurements of a male from Montana: total length, 2.3 mm.; carapace 1.01 mm. long, 0.93 mm. wide; first femur, 1.89 mm.; patella and tibia, 2.01 mm.; metatarsus, 1.70 mm.; tarsus, 0.66 mm.; second patella and tibia, 1.30 mm.; third, 0.78 mm.; fourth, 1.28 mm.

The color and structure of this species are variable.

Theridion ohlerti has been collected in lodgepole pine forests in Wyoming (Levi and Levi, 1951). Hoff (*in litt.*) swept it from spruce and white fir in New Mexico. Wiehle (1937) reports it from spruce trees in the Alps.

TYPE LOCALITY: Thorell did not give a locality for *Theridion ohlerti*. His specimen, presumably from Norway, is in the Riksmuseum at Stockholm. Koch records *T. umbraticum* as common in the valleys of Tirol. Female syntypes of *T. lundbeckii* from Ivigtut, latitude 61° 10' N., Greenland, are in the Copenhagen Museum. Male and female syntypes of *T.*

simulatum from Seven Islands, Quebec, August, 1924 (F. W. Waugh), are in the Museum of Comparative Zoölogy.

DISTRIBUTION AND AMERICAN MARGINAL RECORDS: High mountains of Europe, Scandinavia, Siberia (Wiehle, 1937), Greenland, Alaska, and Canada, and high elevations in the Rocky Mountains and Cascades. Alaska: West of Glenallen on Glenn Highway (J. C. Chamberlin). New Mexico: Santa Fe ski area, 10,250 feet (C. C. Hoff). California: Moraine Meadows, 8600 feet, Yosemite National Park (E. O. Essig); Yosemite Creek Camp (W. Ivie).

RECORDS: See Appendix.

PAIDISCA BISHOP AND CROSBY

Paidisca BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 178. Type species: *Histagonia marxi* Crosby.

Tholocco ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 49. Type species: *Theridion amputatum* Keyserling (= *Paidisca unimaculata* Emerton).

Thymoella BRYANT, 1948, Bull. Mus. Comp. Zoöl., vol. 100, p. 377. Type species: *Thymoella banksi* Bryant (male, not female).

Small theridiid spiders (1.0–2.5 mm.). Carapace usually slightly longer than wide; cephalic portion sometimes modified in male and with stridulating structures. Thoracic depression usually indistinct. Anterior eye row straight or procurved as seen from in front, posterior eye row straight or slightly recurved as viewed from above. Eyes subequal in size or anterior medians smaller or slightly larger. Sternum more or less convex; fourth coxae separated by one to one and one-half of their length. Chelicerae each usually with one tooth on anterior margin, none on posterior. Legs short, first patella and tibia less than one and one-half times length of carapace. First or fourth legs the longest, third the shortest. First femora sometimes slightly swollen. Abdomen subspherical, sometimes with sclerotized spots or ventral scutes. Colulus lacking.

Epigynum an oval depression, or with small openings near posterior margin. One pair of seminal receptacles present. Tegulum of palpus tapering into a large conductor at the ectal side (figs. 366, 376, 392, 395). In *Paidisca camano*, the conductor is hidden behind the embolus. Radix and median apoph-

ysis present, or radix may be reduced, absent, or hidden underneath median apophysis.

As does *Theridion*, *Paidisca* lacks a colulus and can thereby readily be separated from most other microtheridiids. *Paidisca* grades into *Theridion*. The legs of *Paidisca* are much shorter than those of *Theridion*; the first patella and tibia of *Paidisca* are usually less than one and one-half times the length of the carapace, while those of *Theridion* are generally longer. The first patella and tibia of *Theridion* are usually more than one and one-quarter of the length of the fourth; in *Paidisca* they are usually less or the fourth may be longer. The fourth coxae are separated by a greater distance than those of *Theridion*. The largest species included in *Paidisca*, *P. unimaculata*, most resembles *Theridion* in regard to the legs. The smallest *Theridion*, *T. dividuum*, resembles *Paidisca* in regard to leg length and build of the sternum; however, the structure of the palpus clearly allies *T. dividuum* to *Theridion*. Some of the species here placed in *Paidisca* were described by Emerton and Banks in the genus *Dipoena*, which also has short legs. However, the females of *Dipoena* have four seminal receptacles; those of *Paidisca* have only two.

The distribution of *Paidisca* may be entirely American. No species are known from Europe; however, a number of species are from Central America and Mexico. Most species probably live in plant debris; *P. pictipes* has been collected from bark.

Paidisca pallida (Emerton), new combination

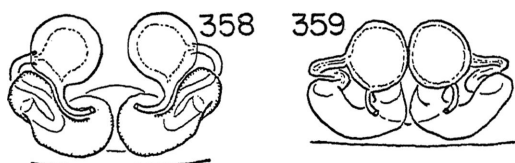
Figures 358–366; map 35

Dipoena pallida EMERTON, 1913, Trans. Connecticut Acad. Sci., vol. 18, p. 213, pl. 1, fig. 4 (male). CROSBY AND BISHOP, 1928, Mem. Cornell Agr. Exp. Sta., no. 101, p. 1039. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 424. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 91, fig. 93 (male). Not *Theridion pallidum* Walckenaer, 1841.

Theridion edinburghensis GERTSCH AND MULAİK, 1936, Amer. Mus. Novitates, no. 863, p. 9, figs. 18 and 19 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 502. New synonymy.

Dipoena cubana BRYANT, 1940, Bull. Mus. Comp. Zoöl., vol. 86, p. 304, fig. 82 (male). New synonymy.

Theridion wallacei GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 5, fig. 2 (female). CHAMBERLIN AND IVIE, 1944, Bull.



FIGS. 358, 359. *Paidisca pallida* (Emerton), female genitalia, dorsal view. 358. Texas. 359. North Carolina.

Univ. Utah, biol. ser., vol. 8, no. 5, p. 56. GIBSON, 1947, Ohio Jour. Sci., vol. 46, p. 39. New synonymy.

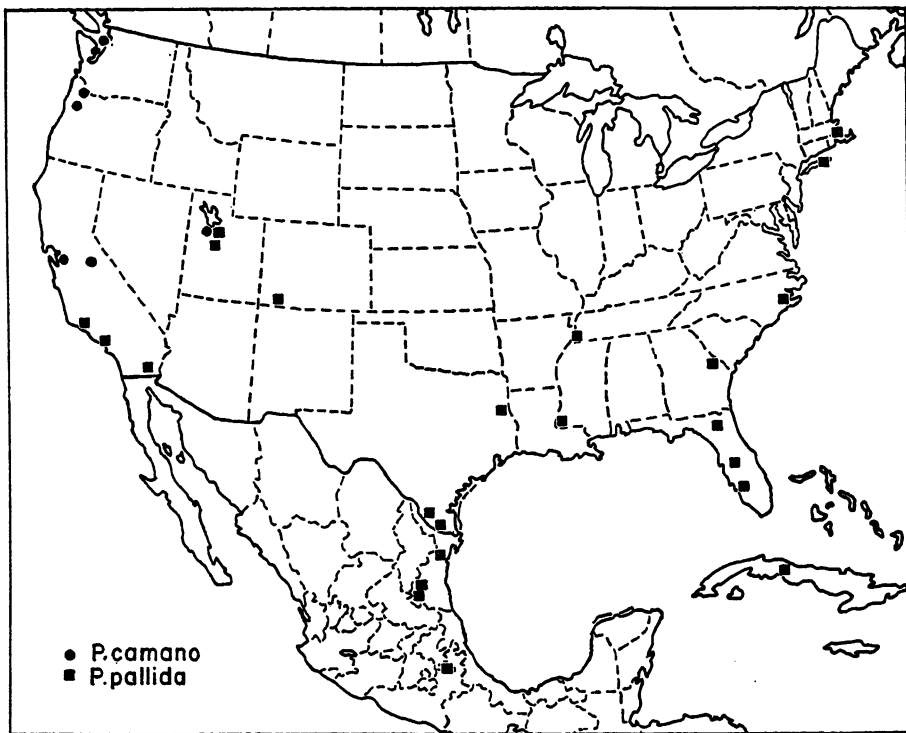
Tholocco pallida, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 16. BARNES, 1953, Amer. Mus. Novitates, no. 1632, p. 4; 1953, Ecol. Monogr., vol. 23, p. 321.

Tholocco edinburghensis, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 16. New synonymy.

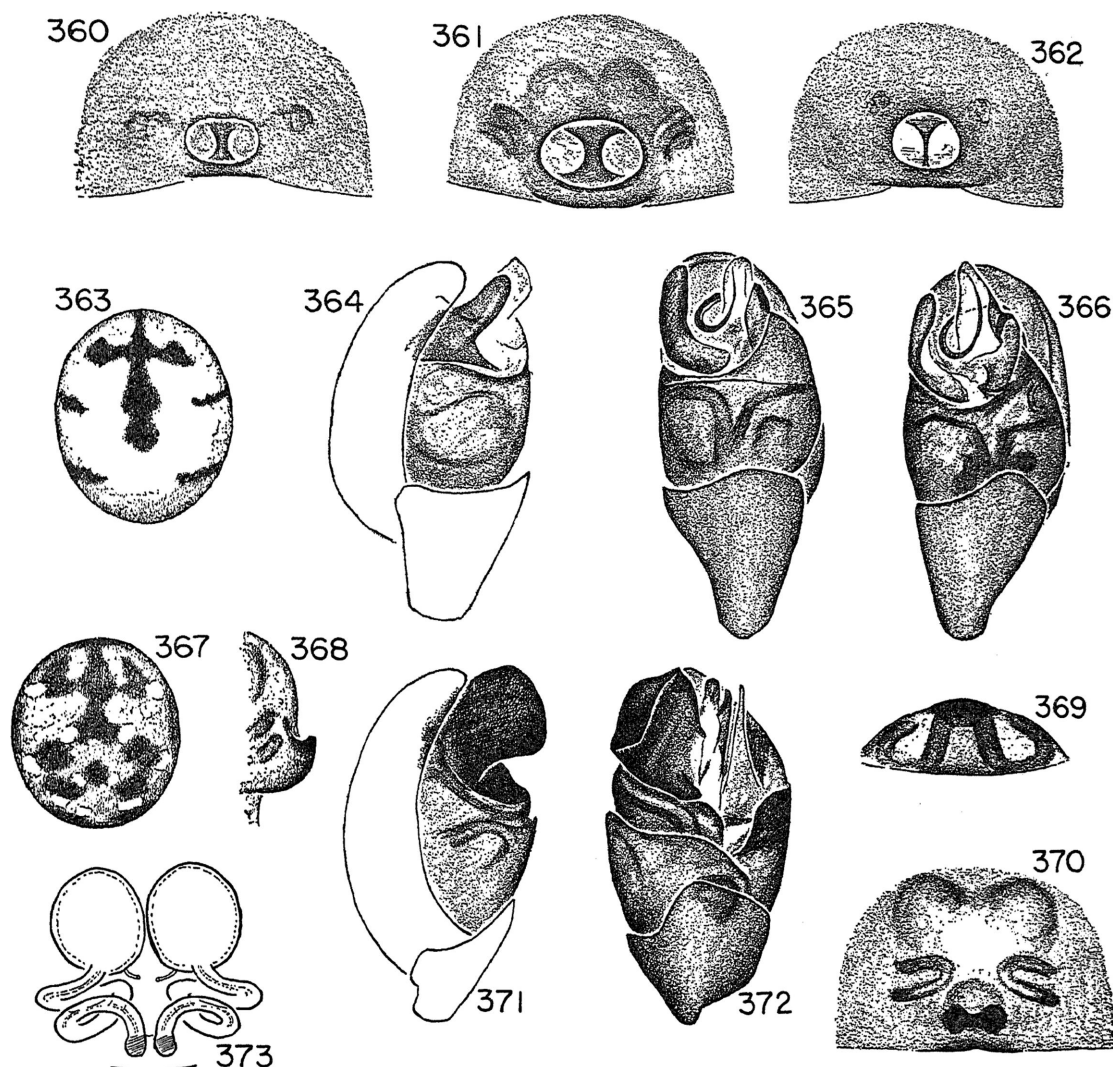
FEMALE: Carapace yellow, eye region sometimes black, some duskiness in center of carapace. Sternum yellow, dusky at sides. Legs yellow. Abdomen yellowish, with black spots or lines on dorsum (fig. 363) and a black ring around spinnerets. Venter with dusky spots.

Anterior median eyes two-thirds to one diameter apart, almost touching laterals. Posterior medians one diameter or more apart, one diameter or less from laterals. Eyes subequal or anterior medians slightly larger. Sternum convex. Oval depression of epigynum (figs. 360–362) variable in size; septum between openings variable, sometimes indistinct, or in eastern specimens resembling that of *Theridion alabamense*. Total length of females, 1.5–2.9 mm. Measurements of female allotype of *T. edinburghensis*: total length, 2.0 mm.; carapace 0.91 mm. long, 0.81 mm. wide; first femur, 0.91 mm.; patella and tibia, 0.87 mm.; metatarsus, 0.65 mm.; tarsus, 0.47 mm.; second patella and tibia, 0.75 mm.; third, 0.65 mm.; fourth, 0.88 mm.

MALE: Palpus illustrated by figures 364 to 366. Expanded palpus resembles that of *Theridion hobbsi*. Total length of males, 1.3–1.8 mm. Measurements of male holotype of *Theridion edinburghensis*: total length, 1.5 mm.; carapace 0.65 mm. long, 0.64 mm. wide; first femur, 0.87 mm.; patella and tibia, 0.79 mm.; metatarsus, 0.66 mm.; tarsus, 0.43



MAP 35. Distribution of *Paidisca camano* and *P. pallida*.



FIGS. 360-366. *Paidisca pallida* (Emerton). 360-362. Epigynum. 360. Florida. 361. North Carolina. 362. Texas. 363. Abdomen of female, dorsal view. 364-366. Palpus. 364. Mesal view. 365. Ventral view, Texas. 366. Ventral view, Utah.

FIGS. 367-373. *Paidisca camano*, new species. 367. Abdomen of female, dorsal view. 368-370. Epigynum. 368. Lateral view. 369. Posterior view. 370. Ventral view. 371-372. Palpus. 371. Mesal view. 372. Ventral view. 373. Female genitalia, dorsal view.

mm.; second patella and tibia, 0.65 mm.; third, 0.57 mm.; fourth, 0.67 mm.

There is considerable variation in the palpi and epigyna.

The genitalia of this species resemble those of the *Theridion tinctum* group and *Theridion ohlerti*.

TYPE LOCALITIES: Male holotype of *Diploena pallida* from Buttonwoods, near Providence, Rhode Island, is in the Museum of

Comparative Zoölogy. Male holotype and female allotype of *Theridion edinburgensis* from Edinburg, Texas, March, 1934 (S. Mulaik), are in the American Museum of Natural History. Male holotype of *Diploena cubana* from Soledad, near Cienfuegos, Cuba, August, 1931 (N. Banks), is in the Museum of Comparative Zoölogy. Female holotype of *Theridion wallacei* from Gator Sink, Alachua County, Florida, March 13, 1935 (H. K.

Wallace), is in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: United States to central Mexico, Cuba. Massachusetts: Woods Hole (H. Britcher). Utah: Hughes Canyon, Salt Lake County (W. Ivie). California: Santa Barbara (R. V. Chamberlin). Distrito Federal: Pedregales (A. Petrunkevitch).

RECORDS: See Appendix.

***Paidisca pictipes* (Banks), new combination**

Figures 374–379; map 36

Dipoena pictipes BANKS, 1904, Proc. California Acad. Sci., ser. 3, vol. 3, p. 345; 1910, Bull. U. S. Natl. Mus., no. 72, p. 23. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 174. MOLES AND JOHNSON, 1921, Jour. Ent. and Zool., vol. 13, p. 41. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 424. Not *Theridion pictipes* Keyserling.

Theridion catalinae GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 6, fig. 21 (female). New synonymy.

Theridion hansii SCHENKEL, 1950, Verhandl. Naturf. Gesell. Basel, vol. 61, p. 46, fig. 11 (male). New synonymy.

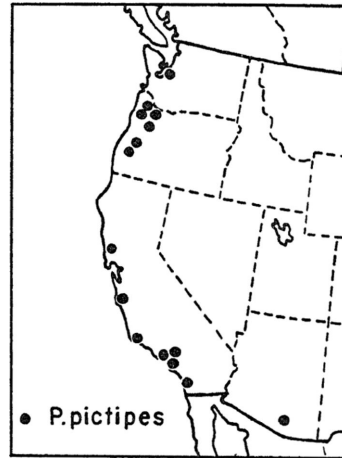
FEMALE: Carapace, sternum orange. Legs dusky orange; patellae and ends of segments less dusky, sides more so. Abdomen gray to black. Anterior eye row slightly recurved. Anterior median eyes three-quarters of a diameter apart, one-quarter of a diameter from laterals. Posterior medians about one diameter apart, one to one and one-half diameters from laterals. Anterior medians slightly larger than others. Epigynum (figs. 378, 379) and indistinct depression posterior to a darker sclerotized band, or a distinct depression with all edges slightly sclerotized, very similar to that of *Dipoena nigra* (Emerton). Total length of females, 2.0–3.5 mm. Measurements of a female from California: total length, 2.2 mm.; carapace 0.91 mm. long, 0.89 mm. wide; first femur, 1.00 mm.; patella and tibia, 1.00 mm.; metatarsus, 0.75 mm.; tarsus, 0.45 mm.; second patella and tibia, 0.91 mm.; third, 0.76 mm.; fourth, 0.94 mm.

MALE: Darker in color than female. Palpus illustrated by figures 374 to 376. Radix small and hidden by median apophysis. Measurements: total length, 2.2–2.4 mm.; carapace 1.17 mm. long, 0.94 mm. wide; first femur, 1.62 mm.; patella and tibia, 1.56 mm.; metatarsus, 1.24 mm.; tarsus, 0.50 mm.; sec-

ond patella and tibia, 1.30 mm.; third, 1.04 mm.; fourth, 1.21 mm.

One specimen was collected on tree bark.

TYPE LOCALITY: The type of *Dipoena pictipes* Banks (sex not indicated), from Claremont, California, has been lost. Female holotype of *Theridion catalinae* from Bear Wallow, Santa Catalina Mountains, Arizona, July 12–15, 1940 (W. J. Gertsch and L. Hook), is in the American Museum of Natural History.



MAP 36. Distribution of *Paidisca pictipes*.

Male holotype of *Theridion hansii* Schenkel from Russian River, California, June 8, 1939 (H. Schenkel-Rudin), is in the Naturhistorisches Museum, Basel.

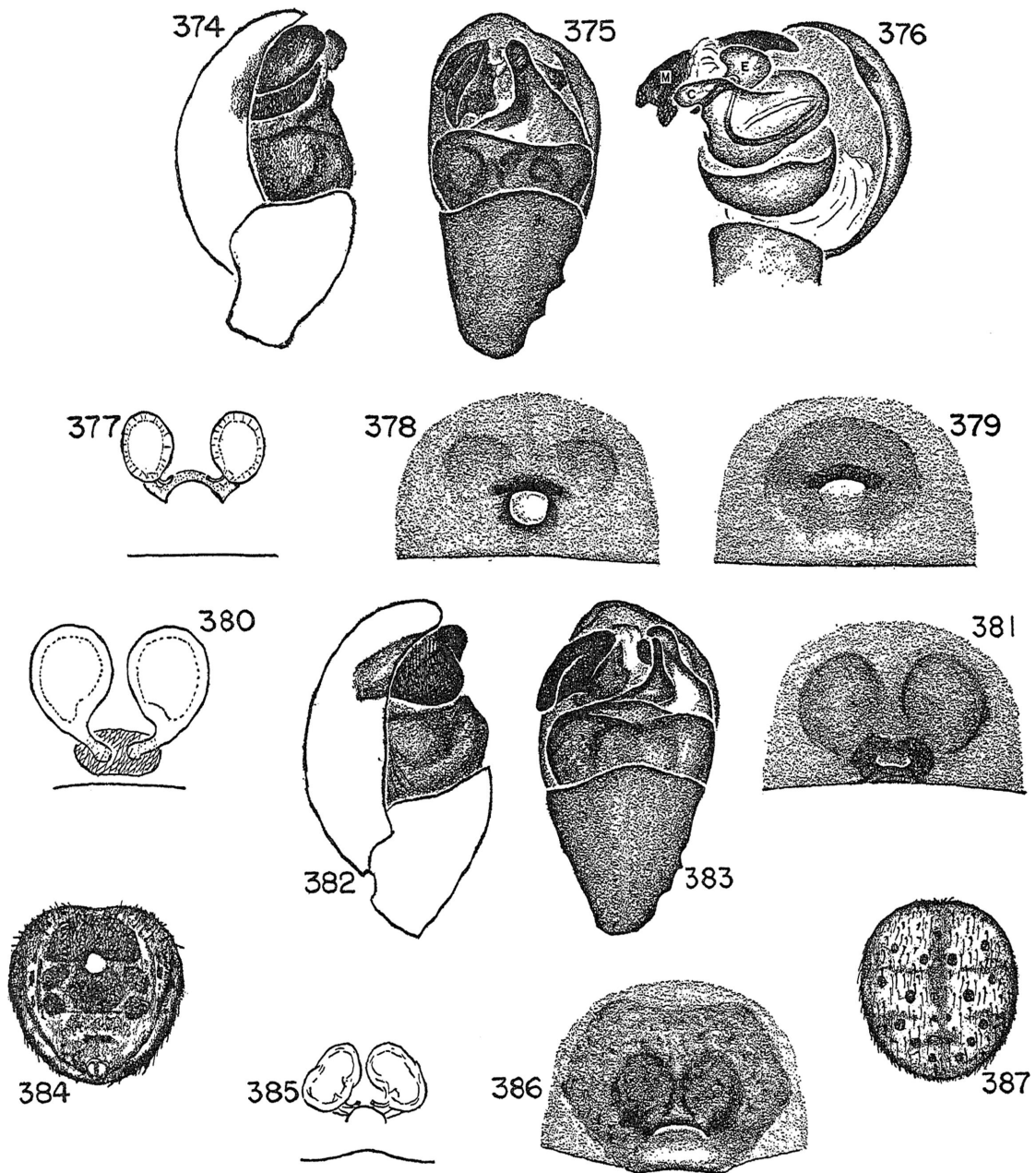
DISTRIBUTION AND MARGINAL RECORDS: Pacific coast states, Arizona. Washington: Seattle (M. H. Hatch). California: Mt. Palomar, San Diego County (R. V. Chamberlin, W. Ivie).

RECORDS: See Appendix.

***Paidisca missionensis*, new species**

Figures 380–383; map 37

FEMALE: Carapace, sternum orange. Proximal ends of femora orange, distal ends dusky; other leg segments black. Abdomen orange-white, with a circular black patch covering most of dorsum; an indistinct dusky ring around spinnerets. Anterior median eyes two-thirds of a diameter apart, less than one-fourth of a diameter from laterals. Posterior eyes one and one-quarter diameters apart. Anterior medians almost twice the size of other eyes. Epigynum (fig. 381) with a small,



FIGS. 374-379. *Paidisca pictipes* (Banks). 374-376. Left palpus. 374. Mesal view. 375. Ventral view. 376. Subectal view, expanded. 377. Female genitalia, dorsal view. 378. Epigynum, Oregon. 379. Epigynum, California.

FIGS. 380-383. *Paidisca missionensis*, new species. 380. Female genitalia, dorsal view. 381. Epigynum. 382. Palpus, mesal view. 383. Palpus, ventral view.

FIGS. 384-387. *Paidisca sclerotis*, new species. 384. Abdomen of female, ventral view. 385. Female genitalia, dorsal view. 386. Epigynum. 387. Abdomen of female, dorsal view.

Abbreviations: C, conductor; E, embolus; M, median apophysis.

slit-like opening in a sclerotized area. Total length of females, 2.0–2.7 mm. Measurements of allotype: total length, 2.7 mm.; carapace 0.98 mm. long, 0.92 mm. wide; first femur, 1.18 mm.; patella and tibia, 1.15 mm.; metatarsus, 0.91 mm.; tarsus, 0.52 mm.; second patella and tibia, 0.94 mm.; third, 0.85 mm.; fourth, 1.04 mm.

MALE: Color as in female; one male from Costa Rica with carapace yellow-brown; sternum and legs dark brown and abdomen black. Anterior eye row as in female. Poste-

paratype. *San Luis Potosí*: Tamazunchale, May 14, 1952 (E. S. Ross), one female. *Costa Rica*: San José (E. Schmidt), one male.

***Paidisca sclerotis*, new species**

Figures 384–387; map 37

FEMALE: Carapace, sternum dark orange. Legs lighter orange. Abdomen dark dusky on yellow background, with an indistinct dusky median band and dusky sides; sclerotized spots orange. Anterior median eyes one diameter apart, one-quarter of a diameter from lat-



MAP 37. Distribution of *Paidisca missionensis*, *P. sclerotis*, and *P. maderae*.

rior medians one diameter apart, one and one-half diameters from laterals. Palpus illustrated by figures 382 and 383. Measurements: total length, 2.0 mm.; carapace 0.91 mm. long, 0.88 mm. wide; first femur, 1.33 mm.; patella and tibia, 1.37 mm.; metatarsus, 1.10 mm.; tarsus, 0.50 mm.; second patella and tibia, 1.22 mm.; third, 0.89 mm.; fourth, 1.04 mm.

The coloration and genitalia can be used to separate this species from *Paidisca pictipes*.

TYPE LOCALITY: Male holotype and female allotype from 76 miles north of Monterrey, Nuevo León, July 7, 1936 (L. I. Davis), probably collected under piles of debris left by a flood in an arroyo.

DISTRIBUTION: Texas to Costa Rica.

RECORDS: *Texas*: Hidalgo County: Mission, March 14, 1936 (S. Mulaik), one female

erals. Posterior medians one diameter apart, one-third of a diameter from laterals. Anterior medians slightly smaller than others. Height of clypeus about three and one-half diameters of anterior median eyes. Sternum convex; coxae separated by one and one-half times their length. Abdomen, venter with a number of sclerotized areas; dorsum with 15 to 20 circular sclerotized spots (figs. 384, 387); covered by many strong setae. Epigynum (fig. 386) with an indistinct depression. Measurements: total length, 1.5 mm.; carapace 0.63 mm. long, 0.56 mm. wide; first patella and tibia, 0.52 mm.; second, 0.45 mm.; third, 0.39 mm.; fourth femur, 0.52 mm.; patella and tibia, 0.59 mm.; metatarsus, 0.28 mm.; tarsus, 0.29 mm.

The sclerotized spots and the genitalia can

be used to differentiate this species from other members of *Paidisca*.

TYPE LOCALITY: Female holotype and four female and two juvenile male paratypes from Rock Creek Camp, Mimbres Mountains, New Mexico (longitude 107° 47' W., latitude 32° 50' N.), September 7, 1941 (W. Ivie).

DISTRIBUTION: New Mexico.

RECORDS: *New Mexico:* Otero County: Camp Mary White, August 9–12, 1935 (S. Mulaik), one female.

***Paidisca camano*, new species**

Figures 367–373; map 35

FEMALE: Carapace yellow-white and brown, dusky in center and around margin. Sternum dusky. Legs yellow-white to brown, sometimes with dusky bands. Dorsum of abdomen with black and white spots (fig. 367). Utah specimens all yellow; sides and venter dusky. Anterior median eyes one and three-quarters diameters apart, one diameter from laterals. Posterior medians more than one diameter apart, less than one diameter from laterals. Anterior medians almost half of size of other eyes. Each chelicera with two teeth on anterior margin. Sternum convex. Epigynum large and sclerotized (figs. 368–370); some variation in position of loops of ducts. Total length of females, 1.3–2.5 mm. Measurements of female allotype: total length, 2.3 mm.; carapace 0.71 mm. long, 0.75 mm. wide; first femur, 1.04 mm.; patella and tibia, 1.04 mm.; metatarsus, 0.68 mm.; tarsus, 0.37 mm.; second patella and tibia, 0.80 mm.; third, 0.60 mm.; fourth, 0.92 mm.

MALE: Color as in female. Carapace high, resembling that of *Paidisca maderae*, and with a shallow thoracic depression. Anterior median eyes one and one-half diameters apart, one diameter from laterals. Posterior eyes one and one-half diameters apart. Anterior medians slightly smaller than others. Height of clypeus six diameters of anterior median eyes. Palpus large, illustrated by figures 371 and 372; palpal femur as long as height of carapace. Total length, 1.5–1.7 mm. Measurements of male holotype: total length, 1.7 mm.; carapace 0.91 mm. long, 0.91 mm. wide, 0.51 mm. high; first femur, 1.27 mm.; second patella and tibia, 1.04 mm.; third, 0.74 mm.; fourth, 1.00 mm.

As do other members of this genus, *Pai-*

disca camano resembles *Dipoena*. The large median apophysis and the epigynum can be used to separate this species from other *Paidisca*.

TYPE LOCALITY: Male holotype and female allotype from Castro Valley, Alameda County, California, March 22, 1941 (W. M. Pearce).

DISTRIBUTION AND MARGINAL RECORDS: Utah, Pacific coast states. Utah: Mill Creek Canyon, Salt Lake County, August 21, 1941 (J. C. Chamberlin), one female. Washington: Camano Island, June 5, 1932 (H. Exline), one female. California: Yosemite National Park, Bridal Veil Falls, May 23, 1936, two females; Yosemite Falls, May 24, 1936, one female.

RECORDS: See Appendix.

***Paidisca sarasota*, new species**

Figures 402–405; map 39

FEMALE: Carapace yellow-white, with central dusky patch and black border; eye region black, with reddish pigment around eyes. Clypeus with a black stripe and black margin. Chelicerae, labium, and maxillae black. Sternum yellow-white, with dusky margin. Legs yellow-white, with black bands at ends of segments. Dorsum of abdomen (fig. 402) white, sometimes with two black spots; sides and venter black, two white spots behind epigastric furrow. Anterior median eyes one and one-quarter diameters apart, almost touching laterals. Posterior medians one-third of a diameter apart, one-half of a diameter from laterals. Anterior medians slightly smaller than others. Epigynum illustrated by figures 404 and 405. In the illustrations, it is possible that the openings are plugged; the small size of the spiders prevented removal of extraneous material from the epigynum. Total length, 0.8–1.0 mm. Measurements of one specimen: total length, 1.0 mm.; carapace 0.45 mm. long, 0.42 mm. wide; first femur, 0.52 mm.; patella and tibia, 0.53 mm.; metatarsus, 0.34 mm.; tarsus, 0.27 mm.; second patella and tibia, 0.39 mm.; third, 0.29 mm.; fourth, 0.47 mm.

The coloration and epigynum can be used to separate this species from other *Paidisca*.

TYPE LOCALITY: Female holotype and one female paratype from Sarasota, Sarasota County, Florida, December 26, 1950 (A. M. Nadler).

DISTRIBUTION: Known only from type locality.

Paidisca maderae (Gertsch and Archer),
new combination

Figures 397, 398, 420, 421; map 37

Theridion maderae GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 12, figs. 30, 31 (male, female).

Tholocco maderae, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 16.

FEMALE: Carapace, sternum, and legs yellow. Abdomen yellow-white. Anterior median eyes more than one diameter apart, one-quarter of a diameter from laterals. Posterior medians one diameter apart, two-thirds of a diameter to one diameter from laterals. Anterior median eyes one-half of size of others. Epigynum (fig. 421) a dark projecting opening near posterior border; dark connecting ducts show through surface, vary in position. Measurements: total length, 1.00 mm.; carapace 0.52 mm. long, 0.52 mm. wide; first femur, 0.60 mm.; patella and tibia, 0.57 mm.; metatarsus, 0.35 mm.; tarsus, 0.26 mm.; second patella and tibia, 0.43 mm.; third, 0.40 mm.; fourth, 0.57 mm.

MALE: Carapace very high (fig. 397); height of clypeus about four diameters of anterior median eyes. Abdomen with a sclerotized ring around pedicel. Palpus illustrated by figure 398. Measurements of a male from Chihuahua: total length, 1.1 mm.; carapace 0.58 mm. long, 0.52 mm. wide, 0.39 mm. high; first femur, 0.55 mm.; patella and tibia, 0.57 mm.; metatarsus, 0.35 mm.; tarsus, 0.27 mm.; second patella and tibia, 0.49 mm.; third 0.39 mm.; fourth, 0.54 mm.

TYPE LOCALITIES: Male holotype, female allotype, and female paratype from Madera Canyon, Santa Rita Mountains, Arizona, June 24, 1939 (A. M. and L. I. Davis), are in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Arizona to Chiapas. Arizona: Bear Wallow, Santa Catalina Mountains, Pima County (W. J. Gertsch). Chiapas: Puerto Madero (C. and M. Goodnight).

RECORDS: See Appendix.

Paidisca unimaculata (Emerton),
new combination

Figures 388-392, 406-413; map 38

Theridion unimaculatum EMERTON, 1882, Trans. Connecticut Acad. Sci., vol. 6, p. 15, pl. 2, fig. 4

(male, female) (*sub Theridium*). KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 40, pl. 2, fig. 21 (male, female). MARX, 1890, Proc. U. S. Natl. Mus. vol. 12, p. 520; 1892, Proc. Ent. Soc. Washington, vol. 2, p. 156. BANKS, 1895, Jour. New York Ent. Soc., vol. 3, p. 84. EMERTON, 1902, The common spiders, p. 118, fig. 275 (female). BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 20. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 209. COMSTOCK, 1912, The spider book, p. 349. EMERTON, "1919" (1920), Trans. Roy. Canadian Inst., vol. 12, p. 310. BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 183. CROSBY AND BISHOP, 1928, Mem. Cornell Agric. Exp. Sta., no. 101, p. 1042. EMERTON, 1930, Publ. Nantucket Maria Mitchell Assoc., vol. 3, p. 164. KASTON, 1938, Bull. Connecticut Geol. Nat. Hist., Surv., no. 60, p. 186. COMSTOCK, 1940, The spider book, rev. ed., p. 364. FOX, 1940, Proc. Biol. Soc. Washington, vol. 53, p. 44. KURATA, 1941, Univ. Toronto Studies, biol. ser., no. 48, p. 109. TRUMAN, 1942, Proc. Pennsylvania Acad. Sci., vol. 16, p. 27. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 505. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 56. MUMA, 1945, Bull. Univ. Maryland Agr. Exp. Sta., no. A38, p. 30. GERTSCH, 1946, in Procter, Biological survey of the Mount Desert region, pt. 7, p. 520. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 107, figs. 162-164 (male, female). LOWRIE, 1948, Ecology, vol. 29, p. 338.

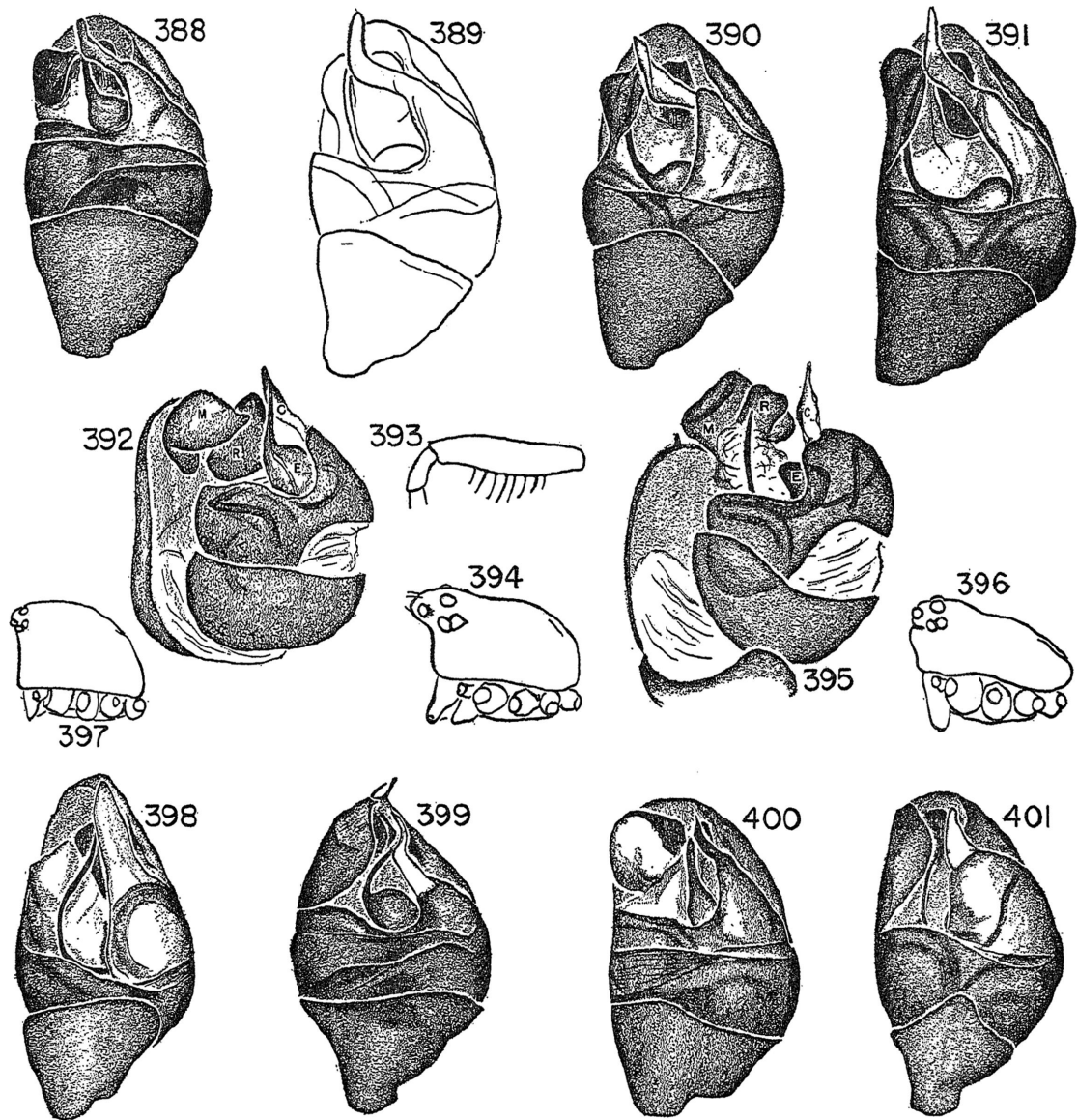
Theridion liliputanum KEYSERLING, 1884, Die Spinnen Amerikas, Theridiidae, pt. 1, p. 88, pl. 4, fig. 56 (male). Not *Theridion liliputanum* Nicolet, 1849.

Theridion amputatum KEYSERLING, 1884, *op. cit.*, pt. 1, p. 90, pl. 4, fig. 58 (male). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 518. BANKS, 1904, Proc. Acad. Nat. Sci. Philadelphia, vol. 56, p. 126; 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 191. FOX, 1940, Proc. Biol. Soc. Washington, vol. 53, p. 42. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 489. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 50. New synonymy.

Crustulina lascivula KEYSERLING, 1886, Die Spinnen Amerikas, Theridiidae, pt. 2, p. 39, pl. 12, fig. 155 (female). New synonymy.

Theridion nicoleti KEYSERLING, 1886, *op. cit.*, pt. 2, p. 293 (new name for *Theridion liliputanum* preoccupied). MARX, 1890, Proc. U. S. Natl. Mus., vol. 12, p. 520; 1892, Proc. Ent. Soc. Washington, vol. 2, p. 156. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 19. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 200. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 504.

Theridion lascivum, SIMON, 1894, Histoire



FIGS. 388–392. *Paidisca unimaculata* (Emerton), left palpus, ventral view. 388. Long Island. 389. Florida (holotype of *Theridion amputatum*). 390. Florida (paratype of *Theridion paradisiacum*). 391. Georgia (holotype of *Theridion imparatum*). 392. Expanded, Long Island.

FIGS. 393–395. *Paidisca marxi* (Crosby). 393. First left femur of male, retrolateral view. 394. Cephalothorax of male. 395. Palpus of male, ventral view, expanded.

FIG. 396. *Paidisca illudens* Gertsch and Mulaik, cephalothorax of male.

FIGS. 397, 398. *Paidisca maderae* (Gertsch and Archer). 397. Cephalothorax of male. 398. Palpus, ventral view.

FIG. 399. *Paidisca illudens* Gertsch and Mulaik, palpus, ventral view.

FIG. 400. *Paidisca expulsa* (Gertsch and Mulaik), palpus, ventral view.

FIG. 401. *Paidisca marxi* (Crosby), palpus, ventral view.

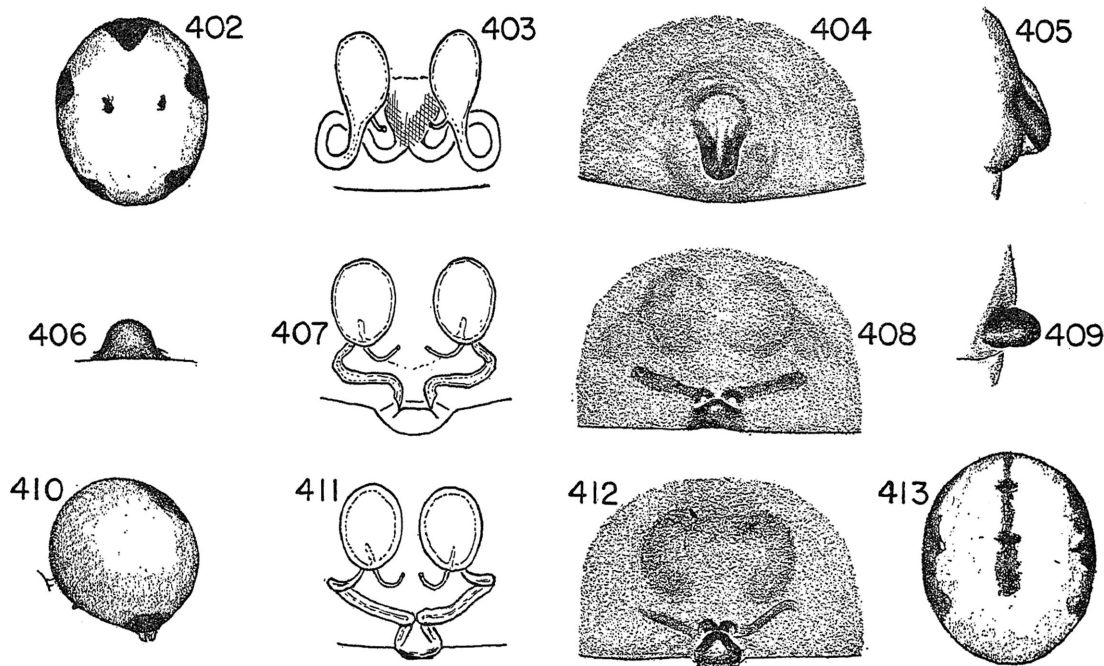
Abbreviations: C, conductor; E, embolus; M, median apophysis; R, radix.

naturelle des araignées, vol. 1, p. 541. New synonymy.

Dipoena lascivula, SIMON, 1894, *op. cit.*, vol. 1, p. 578. BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 23. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 173. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 424. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 39. New synonymy.

Theridion imparatum BISHOP AND CROSBY,

FEMALE: Carapace orange, eye region and cephalic area black; clypeus orange. Sternum orange, with dusky border. Legs orange-yellow. In northern specimens abdomen light orange, black ring around spinnerets and black spot on dorsum (fig. 410). In southern specimens eye region and cephalic area usually orange, carapace frequently with median dusky stripe, abdomen whitish, usually with



FIGS. 402-405. *Paidisca sarasota*, new species. 402. Abdomen of female, dorsal view. 403. Female genitalia, dorsal view. 404. Epigynum. 405. Epigynum, lateral view.

FIGS. 406-413. *Paidisca unimaculata* (Emerton). 406. Epigynum, posterior view. 407. Female genitalia, dorsal view, Long Island. 408. Epigynum, Long Island. 409. Epigynum, lateral view. 410. Abdomen of female, lateral view, Long Island. 411. Female genitalia, dorsal view, Florida. 412. Epigynum, Florida. 413. Abdomen of female, dorsal view, Florida.

1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 182, fig. 30 (male). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 503. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 51. New synonymy.

Theridion paradisiacum GERTSCH AND ARCHER, 1942, Amer. Mus. Novitates, no. 1171, p. 11, figs. 32-34 (male, female). New synonymy.

Tholocco amputata, ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 16. New synonymy.

Tholocco unimaculata, ARCHER, 1950, *ibid.*, no. 30, p. 16. LEVI AND FIELD, 1954, Amer. Midland Nat., vol. 51, p. 444.

three dusky stripes on dorsum and dusky spot above spinnerets (fig. 413). Anterior median eyes one diameter apart, one-half of a diameter from laterals. Posterior medians one diameter apart, one to one and one-quarter diameters from laterals. Epigynum (figs. 406, 408, 409, 412) a projecting lobe with two openings anterior to it. Total length, 1.2-2.3 mm. A female from Long Island, New York, measured: total length, 2.3 mm.; carapace 0.97 mm. long, 0.93 mm. wide; first femur, 1.30 mm.; patella and tibia, 1.32 mm.; metatarsus, 0.91 mm.; tarsus, 0.49 mm.; second patella

and tibia, 1.03 mm.; third, 0.78 mm.; fourth, 1.12 mm.

MALE: Sometimes with small teeth on abdomen at sides of pedicel. Palpus illustrated by figures 388 to 392. Total length, 1.4–1.9 mm. Measurements of a male from Long Island, New York: total length, 1.7 mm.; carapace 0.83 mm. long, 0.83 mm. wide; first femur, 1.32 mm.; patella and tibia, 1.34 mm.; metatarsus, 0.78 mm.; tarsus, 0.50 mm.; second patella and tibia, 1.03 mm.; third, 0.80 mm.; fourth, 1.03 mm.

The coloration of all southern specimens is quite different from that of northern ones, and their legs are slightly shorter. There is little variation in the epigyna, but some variation in position of the connecting ducts. The palpi of northern specimens are all alike; the palpi of specimens from no two collecting sites in Georgia or Florida are the same. Whether we are dealing with one species or several cannot be determined at the present time. Because the palpi intergrade and females could not be separated, the variants are considered here to be one species. All northern males (which includes those from the type locality of *Theridion unimaculatum*) and many southern males have the embolus short, the tegulum high, and the cymbium circular (fig. 388). The palpus of the male holotype of *T. imparatum* (fig. 391) has the longest embolus, the lowest tegulum, and the narrowest cymbium of all specimens examined. The *T. paradisiacum* paratypes examined are intermediate (fig. 390). The median apophyses of all are similar in shape.

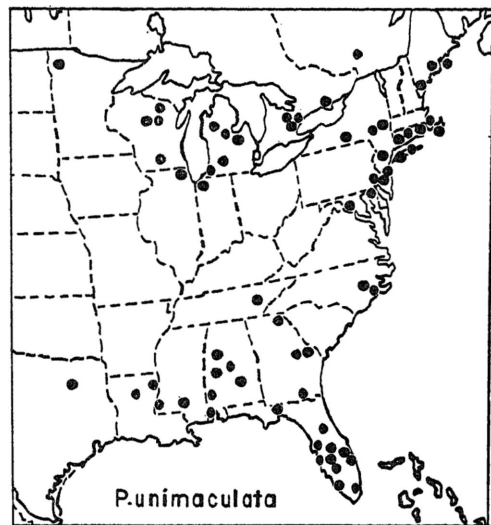
The webs of this species are found on low vegetation, and specimens can be sifted from debris (Kaston, 1948).

TYPE LOCALITY: Male and female syntypes of *Theridion unimaculatum* from Danvers, Massachusetts, August, 1878 (J. H. Emerton), are in the Museum of Comparative Zoölogy. *Theridion liliputanum* is from Washington, D. C. (G. Marx). Male holotype of *T. amputatum* from Centreville, Florida (G. Marx), is in the United States National Museum (U.S.N.M. No. 1322). Female holotype of *Crustulina lascivula* is from Georgia (G. Marx). Male holotype of *Theridion imparatum* from Billy's Island, Okefenokee Swamp, Georgia, June, 1912, is in the American Museum of Natural History. Male holotype, fe-

male allotype, and paratypes of *T. paradisiacum* from Hillsborough River State Park, Hillsborough County, Florida, April 8, 1938 (W. J. Gertsch), are in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Eastern United States. Quebec: Montreal (Emerton, 1920). Minnesota: Eight miles south of Warren, Marshall County (W. Ivie). Texas: East of Athens, Henderson County (O. Sanders).

RECORDS: See Appendix.



MAP 38. Distribution of *Paidisca unimaculata*.

Paidisca expulsa (Gertsch and Mulaik),
new combination

Figures 400, 416, 417; map 39

Theridion expulsum GERTSCH AND MULAİK, 1936, Amer. Mus. Novitates, no. 863, p. 9, figs. 16, 17 (male, female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 503. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 46.

Theridion dividuum, ARCHER, 1946, *ibid.*, no. 22, p. 50 (in part), pl. 2, fig. 4 (female). Not *Theridion dividuum* Gertsch and Archer.

Tholocco expulsa, ARCHER, 1950, *ibid.*, no. 30, pl. 1, fig. 7 (male).

Allotheridion dividuum, BARNES, 1953, Amer. Mus. Novitates, no. 1632, p. 3; 1953, Ecol. Monogr., vol. 23, p. 321. Not *Theridion dividuum* Gertsch and Archer.

FEMALE: Carapace yellow, eye region and area behind eyes black. Clypeus and sternum yellow. Legs yellow. Abdomen yellow-white;

around spinnerets, a black ring which is broken on venter. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior eyes one diameter apart. Epigynum illustrated by figure 417. Total length of females, 1.4–2.3 mm. Measurements of a female paratype: total length, 1.6 mm.; carapace 0.71 mm. long, 0.66 mm. wide; first femur, 0.88 mm.; patella and tibia, 0.92 mm.; metatarsus, 0.70 mm.; tarsus, 0.38 mm.; second patella and tibia, 0.70 mm.; third, 0.53 mm.; fourth, 0.78 mm.

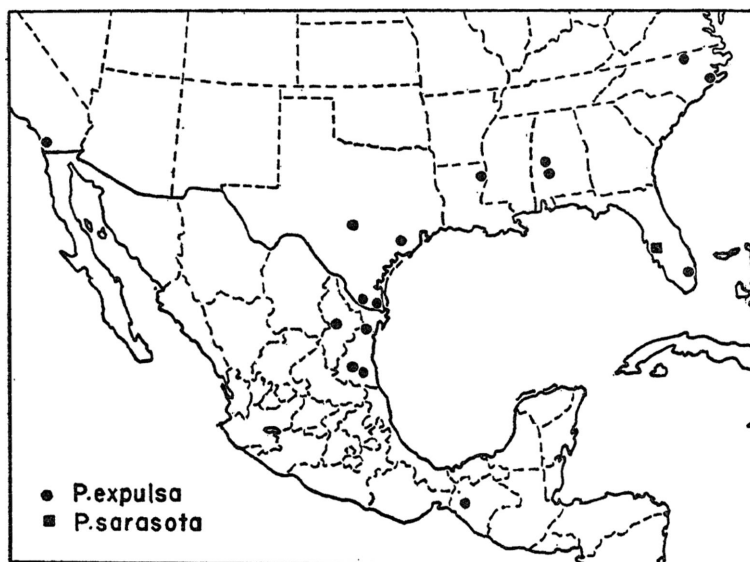
of Creedmore, Granville County (R. D. Barnes). California: Jamacha, San Diego County (W. M. Pearce). Chiapas: Tuxtla Gutiérrez (C. and M. Goodnight).

RECORDS: See Appendix.

***Paidisca illudens* Gertsch and Mulaik**

Figures 396, 399, 414, 415; map 40

Paidisca illudens GERTSCH AND MULAİK, 1936, Amer. Mus. Novitates, no. 863, p. 3, figs. 20, 21 (female). ROEWER, 1942, Katalog der Araneae, vol. 1, p. 392.



MAP 39. Distribution of *Paidisca expulsa* and *P. sarasota*.

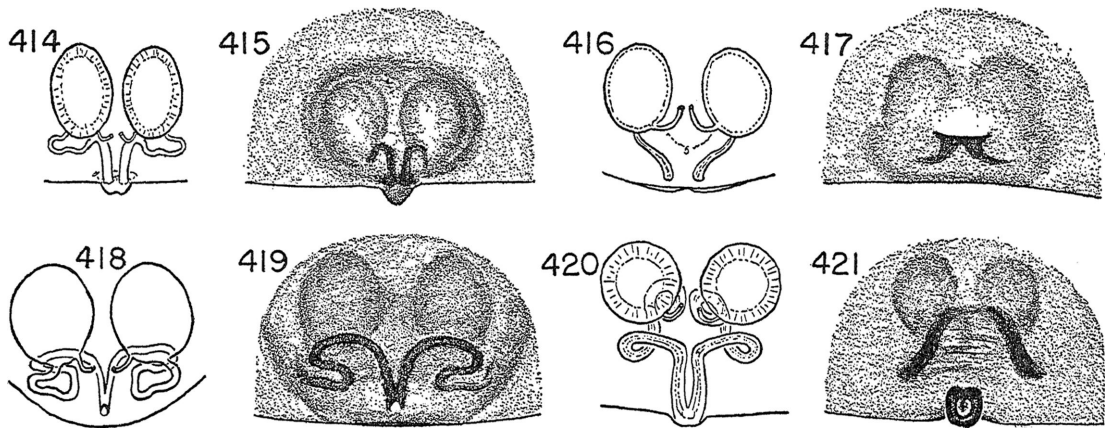
MALE: Abdomen with teeth at side of pedicel. Palpus illustrated by figure 400. Total length, 1.3–1.5 mm. Measurements of a male paratype: total length, 1.4 mm.; carapace 0.75 mm. long, 0.65 mm. wide; first femur, 1.00 mm.; patella and tibia, 1.00 mm.; metatarsus, 0.71 mm.; tarsus, 0.39 mm.; second patella and tibia, 0.77 mm.; third, 0.55 mm.; fourth, 0.75 mm.

Barnes (1953) collected this species by sweeping in a salt marsh.

TYPE LOCALITY: Male holotype, female allotype, and paratypes from Edinburg, Texas, March and April, 1934 (S. Mulaik), are in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Southeastern states, California, Texas to Chiapas. North Carolina: Eight miles north

FEMALE: Carapace yellow to yellow-brown, with some dusky patches. Sternum orange-brown. Coxae and legs yellowish; tibiae, patellae, and ends of femora may be dusky. Abdomen yellow-white; wide median dorsal gray band with irregular margins and a band on each side extending two-thirds of length of abdomen. Sternum convex. Epigynum yellow-brown; sometimes a gray ring around spinnerets. Anterior median eyes one diameter apart, one-half of a diameter from laterals. Posterior eyes two-thirds of a diameter apart. Anterior medians slightly smaller than others. Epigynum (fig. 415) a sclerotized plate with a posterior projection. Total length, 1.4–1.8 mm. Measurements of female allotype: total length, 1.4 mm.; carapace 0.70 mm. long, 0.55 mm. wide; first femur, 0.78 mm.;



FIGS. 414, 415. *Paidisca illudens* Gertsch and Mulaik. 414. Female genitalia, dorsal view. 415. Epigynum.

FIGS. 416, 417. *Paidisca expulsa* (Gertsch and Mulaik). 416. Female genitalia, dorsal view. 417. Epigynum.

FIGS. 418, 419. *Paidisca marxi* (Crosby). 418. Female genitalia, dorsal view. 419. Epigynum.

FIGS. 420, 421. *Paidisca maderae* (Gertsch and Archer). 420. Female genitalia, dorsal view. 421. Epigynum.

patella and tibia, 0.75 mm.; metatarsus, 0.52 mm.; tarsus, 0.32 mm.; second patella and tibia, 0.58 mm.; third, 0.45 mm.; fourth, 0.60 mm.

MALE: Clypeus with a seam underneath anterior median eyes, which are on a slight projection (fig. 396). Anterior medians one diameter apart, one and one-quarter diameters from laterals. Posterior medians three-quarters of a diameter apart, more than one diameter from laterals. Eyes subequal in size. Palpus illustrated by figure 399. First femur slightly thickened. Measurements:

total length, 1.5 mm.; carapace 0.72 mm. long, 0.61 mm. wide; first femur, 0.85 mm.; patella and tibia, 0.68 mm.; metatarsus, 0.48 mm.; tarsus, 0.27 mm.; second patella and tibia, 0.61 mm.; third, 0.47 mm.; fourth, 0.65 mm.

One specimen was collected in the nest of the wood rat, *Neotoma micropus* Baird.

TYPE LOCALITY: Male holotype from Brownsville, Texas, January 5, 1928 (F. Lutz), and female allotype from same locality, November 30, 1934 (S. Mulaik), are in the American Museum of Natural History.

DISTRIBUTION AND MARGINAL RECORDS: Texas to Yucatan. Yucatan: Uxmal (C. Goodnight).

RECORDS: See Appendix.

Paidisca marxi (Crosby)

Figures 393–395, 401, 418, 419; map 41

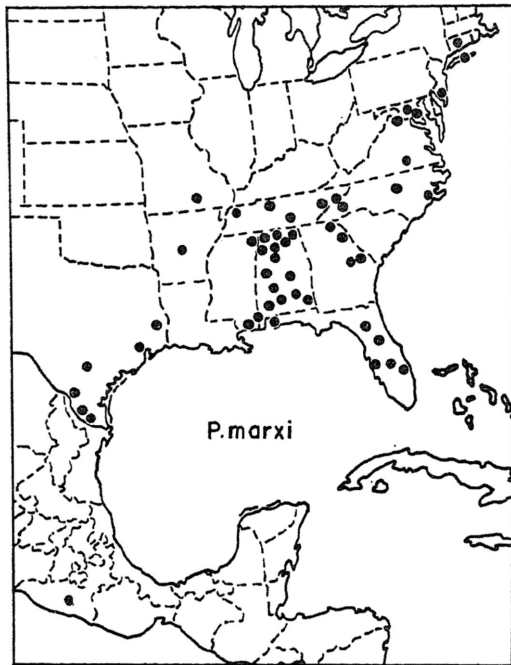
Histagonia marxi CROSBY, 1906, Canadian Ent., vol. 38, p. 309, figs. 35, 36 (male). BANKS, 1910, Bull. U. S. Natl. Mus., no. 72, p. 24. PETRUNKEVITCH, 1911, Bull. Amer. Mus. Nat. Hist., vol. 29, p. 179.

Ulesanis serrata EMERTON, 1913, Trans. Connecticut Acad. Sci., vol. 18, p. 213, pl. 1, fig. 5 (male).

Paidisca marxi, BISHOP AND CROSBY, 1926, Jour. Elisha Mitchell Sci. Soc., vol. 41, p. 178, figs. 23–27 (male, female). CROSBY AND BISHOP, 1928, Mem. Cornell Univ. Agr. Exp. Sta., no. 101,



MAP 40. Distribution of *Paidisca illudens*.



MAP 41. Distribution of *Paidisca marxi*.

p. 1040. KASTON, 1938, Bull. Connecticut Geol. Nat. Hist. Surv., no. 60, p. 185. COMSTOCK, 1940, The spider book, rev. ed., p. 382. ROEWER, 1942, Katalog der Araneae, vol. 1, p. 392. CHAMBERLIN AND IVIE, 1944, Bull. Univ. Utah, biol. ser., vol. 8, no. 5, p. 45. MUMA, 1945, Bull. Univ. Maryland Agr. Exp. Sta., no. A38, p. 26. ARCHER, 1946, Paper Alabama Mus. Nat. Hist., no. 22, p. 58. KASTON, 1948, Bull. Connecticut Geol. Nat. Hist. Surv., no. 70, p. 95, fig. 111 (female). ARCHER, 1950, Paper Alabama Mus. Nat. Hist., no. 30, p. 26, pl. 4, fig. 1 (male). BARNES, 1953, Amer. Mus. Novitates, no. 1632, p. 4.

FEMALE: Carapace, sternum, and legs orange-brown. Distal leg segments sometimes dusky. Abdomen orange-white except for darker orange sclerotized areas; sometimes with a dusky dorsal spot and dusky ring around spinnerets. Anterior median eyes one diameter apart, one-quarter of a diameter from laterals. Posterior medians one diameter apart, two-thirds of a diameter from laterals. Anterior medians smallest, almost two-thirds of size of other eyes. Abdomen with many short hairs arising from tiny sclerotized spots,

four dorsal sclerotized spots, a sclerotized ring around spinnerets, and some sclerotized areas on sides around pedicel and lateral to epigastric area. Epigynum (fig. 419) with a small median opening; loops of connecting ducts always visible. Total length of females, 1.0–1.3 mm. A female from New Jersey measured: total length, 1.2 mm.; carapace 0.58 mm. long, 0.52 mm. wide; first femur, 0.50 mm.; patella and tibia, 0.51 mm.; metatarsus, 0.29 mm.; tarsus, 0.26 mm.; second patella and tibia, 0.39 mm.; third, 0.35 mm.; fourth, 0.47 mm.

MALE: Color as in female. Carapace projecting as a lobe (fig. 394) on which eyes are located. Anterior median eyes more than one diameter apart, one diameter from laterals. Posterior medians one diameter apart, two-thirds of a diameter from laterals. Anterior medians smallest, about two-thirds of size of other eyes. Most of dorsum of abdomen covered by a scutum; a sclerotized ring around spinnerets. A ventral plate surrounds the pedicel and covers half of the abdomen. Palpus (figs. 395, 401) typical of this genus. Total length of males, 1.1–1.6 mm. Measurements of a specimen from New Jersey: total length, 1.1 mm.; carapace 0.55 mm. long, 0.50 mm. wide; first femur, 0.52 mm.; patella and tibia, 0.52 mm.; metatarsus, 0.30 mm.; tarsus, 0.26 mm.; second patella and tibia, 0.42 mm.; third, 0.35 mm.; fourth, 0.45 mm.

There seems to be some variation in the shape of the palpal conductor.

Found in leaf litter and under stones (Archer, 1946).

TYPE LOCALITIES: Syntypes of *Histagonia marxi* from "Beersheba, Tennessee and District of Columbia, contained in a collection purchased by Cornell University from William Fox," are in the American Museum of Natural History. Male holotype of *Ulesanis serrata* from New Haven, Connecticut, is in the Museum of Comparative Zoölogy.

DISTRIBUTION AND MARGINAL RECORDS: Atlantic and Gulf Coast states to central Mexico. Missouri: Big Spring State Park, Carter County (C. and M. Goodnight). Guerrero: Chalpincingo (L. I. Davis).

RECORDS: See Appendix.

APPENDIX

THE RECORDS ARE listed below for species with six or more localities. For species with fewer, the records are listed in the text.

Enoplognatha ovata (Clerck)

Ontario: New York Co. *British Columbia*: Victoria. *Maine*: Hancock Co. *Massachusetts*: Essex Co. *Rhode Island*: Newport Co. *New York*: Westchester Co. *Washington*: Island Co.; King Co.; Mount Rainier National Park; Pacific Co.; San Juan Co.; Skagit Co.; Snohomish Co.; Thurston Co.; Walla Walla Co.; Yakima Co. *Oregon*: Benton Co.; Coos Co.; Clackamas Co.; Curry Co.; Jefferson Co.; Josephine Co.; Lane Co.; Marion Co.; Multnomah Co.; Washington Co.; Yamhill Co. *California*: Del Norte Co.

Enoplognatha marmorata (Hentz)

Nova Scotia: Truro. *Ontario*: Algonquin Provincial Park; Peel Co.; Minaki. *Maine*: Aroostock Co. *New Hampshire*: Grafton Co. *Massachusetts*: Barnstable Co. *Rhode Island*. *Connecticut*: Black Hall. *New York*: Richmond Co.; Suffolk Co.; Wayne Co.; Ulster Co. *New Jersey*: Middlesex Co. *Maryland*: (Muma, 1945). *West Virginia*: Pocahontas Co. *Ohio*: Knox Co. *District of Columbia*. *Virginia*: Clark Co.; Montgomery Co.; Shenandoah National Park. *Tennessee*: Bedford Co.; Great Smoky Mountains National Park; Knox Co.; Unicoi Co. *North Carolina*: Buncombe Co. *Georgia*: Cobb Co.; Fulton Co. *Florida*: Putnam Co. *Alabama*: (Archer, 1946). *Michigan*: Alcona Co.; Washtenaw Co. *Wisconsin*: (Levi and Field, 1954). *Illinois*: Kankakee Co. *Minnesota*: Mille Lacs Co. *North Dakota*: Divide Co.; Grand Forks Co. *Missouri*: Saint Charles Co. *Texas*: Wilbarger Co. *Montana*: Flathead Co.; Lewis and Clark Co. *Wyoming*: Albany Co.; Teton Co.; Yellowstone National Park. *Colorado*: Archuleta Co.; Denver; Mesa Co. *Utah*: Box Elder Co.; Sevier Co.; Tooele Co.; Utah Co. *New Mexico*: Sandoval Co. *Arizona*: Coconino Co.; White Mountains. *Washington*: Clallam Co.; King Co.; Pacific Co.; San Juan Co.; Thurston Co. *Oregon*: Hood River Co. *California*: Humboldt Co.; Inyo Co.; Lassen Co.; Monterey Co.; Riverside Co.; San Francisco; Shasta Co.; Sierra Co.

Enoplognatha tecta (Keyserling)

Alaska: Matanuska. *Newfoundland*: (Hackman, 1954). *Ontario*: Peel Co.; York Co. *Maine*: Mt. Desert Island. *Massachusetts*: Middlesex Co. *Rhode Island*. *Connecticut*: Fairfield Co.; Middlesex Co.; New Haven Co. *New York*: Clinton Co.; Dutchess Co.; Fulton Co.; Nassau Co.; Rockland Co.; Suffolk Co.; Tompkins Co.; Ulster Co.; West-

chester Co. *New Jersey*: Bergen Co. *Maryland*: (Muma, 1945). *District of Columbia*. *Virginia*: Fairfax Co. *Ohio*: Cuyahoga Co.; Lake Co.; Trumbull Co. *Michigan*: Macomb Co.; Washtenaw Co. *Wisconsin*: Bayfield Co.; Clark Co.; Crawford Co.; Dane Co.; Polk Co.; Sauk Co.; Vernon Co.; Waushara Co.; Winnebago Co. *Illinois*: Cook Co.; Piatt Co. *Minnesota*: Minneapolis; Lake Pepin; Mille Lacs Co. *Iowa*: Story Co. *Texas*: Travis Co.

Enoplognatha joshua Chamberlin and Ivie

Virginia: Fairfax Co. *Georgia*: Rabun Co. *Wyoming*: Albany Co.; Sweetwater Co. *Utah*: Emery Co.; Grand Co.; Salt Lake Co.; Sevier Co.; Washington Co. *Arizona*. *Idaho*: Bear Lake Co.; Owyhee Co. *Washington*: Kittitas Co. *California*: Los Angeles Co.; Mono Co.; Sierra Co.

Enoplognatha wyuta Chamberlin and Ivie

South Dakota: Custer Co.; Pennington Co. *Wyoming*: Sweetwater Co. *Utah*: Emery Co.; Salt Lake Co.; Utah Co.

Enoplognatha intrepida (Sørensen)

Greenland: (Braendegaard, 1937, 1946); Llua. *Alaska*: Matanuska Valley; 28 miles northwest of Glennallen. *Ontario*: Algonquin Provincial Park; York Co. *Manitoba*: Riding Mountain. *Alberta*: Jasper National Park; Medicine Hat; Waterton National Park, 7200 ft.; Banff National Park. *Connecticut*: Fairfield Co. *New York*: Tompkins Co. *Pennsylvania*: Venango Co. *Wisconsin*: Vilas Co. *Minnesota*: Clearwater Co. *Montana*: Glacier National Park, 7600–7900 ft. *Wyoming*: Carbon Co.; Medicine Bow Peak; Grand Teton National Park, 10,000 ft.; Teton Co., 11,000 ft.; Yellowstone National Park. *Colorado*: Clear Creek Co., 12,800 ft.; Grand Co., 12,000 ft.; El Paso Co., 12,000 ft.; Larimer Co., 11,500 ft.; Pitkin Co., 12,000–13,000 ft.; Rocky Mountain National Park. *New Mexico*: San Miguel Co.

Theridion murarium Emerton

Nova Scotia: Truro; Weymouth. *Quebec*: (Emerton, 1920). *Ontario*: Algonquin Provincial Park; Carleton Co.; Nipissing Co.; Peel Co.; Prince Edward Co.; Simcoe Co.; York Co. *Manitoba*: (Emerton, 1920). *Saskatchewan*: Prince Albert. *British Columbia*: Kaslo; Wellington. *Maine*: Mt. Desert Island; Penobscot Co.; Piscataquis Co. *New Hampshire*: Carroll Co.; Cheshire Co. *Vermont*: Addison Co.; Chittenden Co.; Caledonia Co.; Lamoille Co. *Massachusetts*: Barnstable Co.; Essex Co.; Nantucket Co. *Rhode Island*. *Connecticut*: (Kaston, 1948). *New York*: (Crosby and

Bishop, 1928). *New Jersey*: Bergen Co.; Passaic Co.; Ocean Co. *Pennsylvania*: Blair Co.; Bucks Co. *Ohio*: Erie Co.; Franklin Co. *Maryland*: (Muma, 1945). *District of Columbia*. *Virginia*: Accomack Co.; Fairfax Co. *Tennessee*: Great Smoky Mountains National Park; Roane Co. *North Carolina*: Avery Co.; Buncombe Co.; Carteret Co.; Durham Co. *Georgia*: Fulton Co.; Ware Co. *Florida*: Collier Co.; Dade Co.; Highland Co.; Leon Co.; Monroe Co.; Sarasota Co. *Alabama*: (Archer, 1946). *Mississippi*: Adams Co.; Lafayette Co.; Wilkinson Co. *Louisiana*: Caddo Par. *Michigan*: Allegan Co.; Berrien Co.; Calhoun Co.; Clinton Co. *Indiana*: (Elliott, 1953). *Wisconsin*: (Levi and Field, 1954). *Illinois*: Lake Co.; Peoria Co.; Will Co.; Winnebago Co. *Minnesota*: Carlton Co.; Minneapolis. *Iowa*: Dickinson Co. *North Dakota*: Divide Co. *South Dakota*: Custer Co.; Lawrence Co.; Lyman Co. *Nebraska*: Cass Co.; Dawson Co.; Lancaster Co. *Kansas*: (Scheffer, 1905). *Arkansas*: Hempstead Co. *Oklahoma*: Comanche Co. *Texas*: Angelina Co.; Cameron Co.; Dallas Co.; Comal Co.; Hall Co.; Hidalgo Co.; Liberty Co.; Panola Co.; Shelby Co. *Montana*: Sanders Co. *Colorado*: Jackson Co.; Larimer Co. *Utah*: Davis Co.; Tooele Co.; Utah Co. *New Mexico*: Catron Co.; San Miguel Co., 7000 ft.; Sandoval Co.; Socorro Co., 7000 ft. *Arizona*: Coconino Co. *Washington*: (Worley, 1932). *Oregon*: Jackson Co.; Polk Co.; Umatilla Co. *California*: Los Angeles Co.; Riverside Co.; Santa Barbara Co.; Santa Clara Co. *Chihuahua*: Saucedo, 7000 ft.; San José Babicora. *Sonora*: West of Agiabampo. *Zacatecas*: Canutillo. *Veracruz*: Veracruz. *Chiapas*: La Zaulapa.

Theridion petraeum L. Koch

Ontario: "Gunchennon." *Maine*: Mt. Desert Island. *New York*: (Crosby and Bishop, 1928). *Michigan*: Marquette. *North Dakota*: Divide Co. *Nebraska*: Scotts Bluff Co., on potatoes. *Colorado*: Gunnison Co., 9500 ft. *Utah*: Grand Co.; Millard Co.; Morgan Co.; Salt Lake Co.; Summit Co.; Utah Co.; Washington Co. *Idaho*: Bear Lake Co.; Payette Co.; Valley Co. *Washington*: Yakima Co. *California*: Mono Co.; Siskiyou Co.

Theridion rabuni Chamberlin and Ivie

New Jersey: Gloucester Co. *Maryland*: (Muma, 1944, 1945). *North Carolina*: Bertie Co.; Wake Co. *South Dakota*: Custer Co. *Nebraska*: Lancaster Co.; Pierce Co. *Texas*: Dallam Co. *Colorado*: Gunnison Co.; 9500–11,000 ft. *Utah*: Morgan Co.; Salt Lake Co.; San Juan Co.; Utah Co. *California*: Los Angeles Co.; Mendocino Co.

Theridion differens Emerton

Nova Scotia: Weymouth. *Quebec*: Quebec; Montreal; Sherbrooke. *Ontario*: Algonquin Pro-

vincial Park; Carleton Co.; Cochrane; Nipissing Co.; Peel Co.; Prince Edward Co.; Simcoe Co.; York Co. *Manitoba*: Kettle Rapids; The Pas. *Saskatchewan*: Saskatoon. *Alberta*: Medicine Hat. *British Columbia*: Masset; Salmon Arm; Kaslo; Wellington; Elko. *Maine*: Aroostock Co.; Cumberland Co.; Mt. Desert Island; Oxford Co. *New Hampshire*: Belknap Co.; Carroll Co.; Coos Co.; Hillsboro Co.; Rockingham Co. *Vermont*: Addison Co.; Chittenden Co.; Windham Co. *Massachusetts*: Barnstable Co.; Essex Co.; Middlesex Co.; Nantucket Co. *Connecticut*: (Kaston, 1948). *New York*: (Crosby and Bishop, 1928). *New Jersey*: Bergen Co.; Burlington Co.; Ocean Co. *Pennsylvania*: Blair Co.; Fulton Co. *Ohio*: (Barrows, 1918); South Bass Island. *Maryland*: Montgomery Co. *District of Columbia*. *Virginia*: Fairfax Co.; Page Co. *Kentucky*: Jefferson Co.; Mammoth Cave National Park. *Tennessee*: Davidson Co.; Obion Co.; Roane Co. *North Carolina*: Buncombe Co.; Durham Co.; Lee Co.; Mecklenburg Co.; Moore Co.; Wake Co. *South Carolina*: Chesterfield Co. *Georgia*: (Chamberlin and Ivie, 1944). *Florida*: Charlotte Co.; Hillsborough Co. *Alabama*: (Archer, 1946). *Mississippi*: Lafayette Co. *Michigan*: Clinton Co.; Crawford Co.; Midland Co. *Indiana*: Porter Co.; Rush Co. (Elliott, 1953). *Wisconsin*: (Levi and Field, 1954). *Minnesota*: Minneapolis. *Illinois*: Lake Co.; Vermilion Co.; Winnebago Co.; Union Co. *South Dakota*: Custer Co.; Lawrence Co.; Pennington Co. *Nebraska*: Cherry Co.; Hall Co.; Knox Co.; Lancaster Co.; Madison Co.; Nemaha Co. *Kansas*: Riley Co. *Missouri*: Boone Co. *Oklahoma*: Cleveland Co.; Le Flore Co.; Murray Co. *Texas*: Cherokee Co.; Denton Co.; Henderson Co. *Montana*: Gallatin Co.; Glacier National Park. *Wyoming*: Grand Teton National Park; Teton Co.; Yellowstone National Park. *Colorado*: Denver; Platte Canyon. *Utah*: Boxelder Co.; Grand Co.; Rich Co.; Salt Lake Co.; Sevier Co. *Idaho*: Franklin Co.; Valley Co. *Washington*: King Co.; San Juan Co.; Snohomish Co.; Thurston Co. *Oregon*: Benton Co.; Jackson Co.; Josephine Co.; Lane Co.; Marion Co.; Polk Co.; Yamhill Co. *California*: San Francisco; Santa Clara Co.; Siskiyou Co.

Theridion flavonotatum Becker

Ohio: Hocking Co. *District of Columbia*. *Kentucky*: Breathitt Co. *Tennessee*: Obion Co. *North Carolina*: Buncombe Co.; Lenoir Co.; Pitt Co.; Transylvania Co. *South Carolina*: Charleston; Savannah River Game Refuge. *Georgia*: Bibb Co.; Chatham Co.; Jefferson Co.; Jenkins Co.; Okefenokee Swamp; Screven Co.; Seminole Co.; Union Co. *Florida*: Alachua Co.; Collier Co.; Dade Co.; De Soto Co.; Gadsden Co.; Hardee

Co.; Hernando Co.; Highlands Co.; Hillsborough Co.; Indian River Co.; Lake Co.; Lee Co.; Leon Co.; Liberty Co.; Martin Co.; Monroe Co.; Okaloosa Co.; Orange Co.; Pasco Co.; Pinellas Co.; Sarasota Co.; Seminole Co. *Alabama*: (Archer, 1946). *Mississippi*: Forrest Co.; Harrison Co.; Wilkinson Co. *Louisiana*: Jefferson Par. *Texas*: Angelina Co.; Hidalgo Co.; Nacogdoches Co.; Polk Co. *Cuba*: Sierra de Anafe.

***Theridion intritum* (Bishop and Crosby)**

Georgia: Lowndes Co.; Screven Co. *Florida*: Calhoun Co.; Dade Co.; Gadsden Co.; Okeechobee Co.; Osceola Co.; Sarasota Co. *Alabama*: Houston Co.

***Theridion dilutum*, new species**

Texas: Llano Co. *Utah*: Sevier Co.; Washington Co. *Arizona*: Gila Co.; Maricopa Co.; Mohave Co.; Pima Co. *Nevada*: Clark Co. *California*: Imperial Co.; Inyo Co.; Los Angeles Co.; Orange Co.; Riverside Co.; San Diego Co.; Santa Barbara Co.; Santa Cruz Co. *Nuevo León*: Montemorelos; Linares. *Chihuahua*: Matachic; 5 miles east of Parral; Huejotitán. *Sonora*: 66 miles north of Hermosillo; Hermosillo; 15 miles west of Agiabampo; Minas Nuevas. *Durango*: Nombre de Dios. *Sinaloa*: Culiacán. *Nayarit*: Acaponeta.

***Theridion submissum* Gertsch and Davis**

Texas: Big Bend National Park. *New Mexico*: Socorro Co. *Arizona*: Pima Co. *Chihuahua*: Madera; 25 miles southwest of Camargo; west of Santa Bárbara. *Sonora*: 10 miles west of Alamos.

***Theridion cynicum* Gertsch and Mulaik**

Texas: Monte Cristo; Hidalgo Co.: 7 miles east of Edinburg, 1 ♀; Benton State Park, Mission, 1 ♀. Jim Wells Co.: 9 miles north of Premont, 1 ♀. Kleberg Co.: Kingsville, 1 ♂. Llano Co.: 2 ♀, 1 ♂. *Tamaulipas*: Reynosa, 1 ♀; Padilla, 2 ♂. *Nuevo León*: Linares, 1 ♀. *Morelos*: Oaxtepec, 1 ♂. *Guerrero*: 62 miles north of Acapulco, 3 ♀, 1 ♂.

***Theridion goodnightorum*, new species**

Texas: Crockett Co.; Wichita Co. *Wyoming*: Sheridan. *Colorado*: El Paso Co. *Utah*: Sevier Co.; Utah Co. *New Mexico*: San Miguel Co.; Valencia Co. *Arizona*: Navajo Co. *California*: Madera Co.; San Diego Co.; Sierra Co.; Sonoma Co. *Chihuahua*: Madera; Las Delicias, 7700 ft. summit northeast of San José Babicora. *Distrito Federal*: Tlalpan.

***Theridion australe* Banks**

New Jersey: Cape May Co. *Maryland*: (Muma, 1944); Wicomico Co. *North Carolina*: Carteret Co. *Georgia*: Chatham Co.; Lowndes Co. *Alabama*:

Hale Co.; Tuscaloosa Co. *Mississippi*: Harrison Co. *Louisiana*: Saint Landry Par.; Tammany Par. *Texas*: Bee Co.; Cameron Co.; Hidalgo Co.; Nueces Co.; Travis Co.; Victoria Co.; Wilbarger Co. *Utah*: Sevier Co. *Tamaulipas*: Reynosa.

***Theridion hidalgo*, new species**

Texas: Cameron Co.: 1 ♀. Hidalgo Co.: Edinburg, several collections. Kimble Co.: Segovia, 1 ♂. Kleberg Co.: Kingsville, 1 ♀. Llano Co.: 1 ♀. McClellan Co.: Riesel. Starr Co.: Rio Grande City, 1 ♀ paratype. *Tamaulipas*: San Pedro; Padilla, 1 ♂.

***Theridion glaucescens* Becker**

Newfoundland: (Hackman, 1954). *Nova Scotia*: Truro; Barrington. *Prince Edward Island*: Tracadie. *Quebec*: Montreal. *Ontario*: Algonquin Provincial Park; Carleton Co.; Peel Co.; Prince Edward Co.; York Co. *Maine*: Cumberland Co.; Lincoln Co.; Penobscot Co. *New Hampshire*: Lake Winnepesaukee. *Vermont*: Windsor. *Massachusetts*: Barnstable Co.; Boston; Berkshire Co.; Essex Co.; Nantucket Co.; Suffolk Co. *Connecticut*: (Kaston, 1948). *New York*: (Crosby and Bishop, 1928). *New Jersey*: Ocean Co. *Pennsylvania*: western Pennsylvania; Philadelphia. *Ohio*: Franklin Co. *West Virginia*: Pocahontas Co. *Kentucky*: Breathitt Co. *Tennessee*: Roane Co. *District of Columbia*. *Virginia*: Fairfax Co.; Pittsylvania Co. *North Carolina*: Columbus Co.; Pitt Co.; Swannanoa Valley. *South Carolina*: Chesterfield Co.; Horry Co.; Lexington Co.; Savannah River Game Refuge. *Georgia*: Jenkins Co.; Okefenokee Swamp; Screven Co.; Seminole Co.; Thomas Co. *Florida*: Alachua Co.; Collier Co.; De Soto Co.; Escambia Co.; Glades Co.; Hernando Co.; Highlands Co.; Jackson Co.; Lake Co.; Martin Co.; Nassau Co.; Okaloosa Co.; Okeechobee Co.; Orange Co.; Pasco Co.; Sarasota Co. *Alabama*: (Archer, 1946). *Louisiana*: Calcasieu Par.; Saint Mary Par. *Michigan*: Alcona Co.; Allegan Co.; Cheboygan Co.; Oakland Co.; Shiawassee Co. *Indiana*: Lake Co. *Wisconsin*: (Levi and Field, 1954). *Illinois*: Lake Co. *Nebraska*: Thomas Co. *Texas*: Hays Co.

***Theridion transgressum* Petrunkevitch**

Colorado: Archuleta Co., 7000 ft. *Utah*: Garfield Co.; Utah Co.; Washington Co.; Weber Co. *New Mexico*: Otero Co.; Sandoval Co., 8200 ft.; San Miguel Co., 8300 ft.; Taos Co. *Arizona*: Santa Cruz Co. *Chihuahua*: San José Babicora; Madera. *Durango*: Coyotes, 8300 ft.; 10 miles east of El Salto; Palos Colorados, 8000 ft. *Nayarit*: Tepic. *Jalisco*: Chapala. *Hidalgo*: Tenango. *Distrito Federal*: in crop of hummingbird *Lampornis clemenciae*. *Morelos*: Cuernavaca.

***Theridion michelbacheri*, new species**

Montana: Glacier National Park. *Washington*: Mount Rainier National Park, 4300–5000 ft.; San Juan Co. *Oregon*: Baker Co.; Benton Co.; Josephine Co.; Lake Co.; Lane Co.; Yamhill Co. *California*: Alameda Co.; Contra Costa Co.; Los Angeles Co.; Mono Co.; Napa Co.; San Benito Co.; Sierra Co.; Siskiyou Co.

***Theridion ornatum* Hahn**

Northwest Territory: Great Bear Lake; Great Slave Lake. *Nova Scotia*: Truro; Barrington; Digby. *Quebec*: Como; Dixville Notch; Chicoutimi; St. Joseph d'Alma; Lake Megantic; Sherbrooke; Montreal. *Ontario*: Algonquin Provincial Park; Carleton Co.; Cochrane; Manitoulin Island; Manaki; Nipissing Co. *Manitoba*: Winnipeg; Kettle Rapids. *Saskatchewan*: Prince Albert. *Alberta*: Medicine Hat; Athabasca Landing; Jasper Park; Seba. *Maine*: Aroostock Co.; Cumberland Co.; Mt. Desert Island; Lincoln Co.; Waldo Co.; Washington Co. *New Hampshire*: White Mountains. *Massachusetts*: Boston. *New York*: Herkimer Co.; Washington Co. *Michigan*: Alcona Co.; Delta Co.; Iosco Co.; Kalkaska Co.; Roscommon Co. *Wisconsin*: (Levi and Field, 1954). *South Dakota*: Pennington Co. *Montana*: Glacier National Park. *Wyoming*: Grand Teton National Park; Teton Co. *Utah*: Salt Lake Co.; Sevier Co. *Idaho*: Bear Lake Co.

***Theridion berkeleyi* Emerton**

Ontario: Algonquin Provincial Park; Bracebridge. *Massachusetts*: Essex Co. *Connecticut*: Fairfield Co.; Hartford Co.; Litchfield Co. *New York*: Clinton Co.; Greene Co.; Tompkins Co.; Washington Co. *New Jersey*: Bergen Co. *Michigan*: Calhoun Co. *Wisconsin*: (Levi and Field, 1954); Winnebago Co. *Illinois*: Lake Co.; Sangamon Co.; Winnebago Co. *Minnesota*: Mille Lacs Co. *Iowa*: Springfield. *Utah*: Salt Lake Co.; Utah Co. *Oregon*: base of Mt. Laughlin, 3200 ft.; Klamath Co. *California*: Lake Co.; Los Angeles Co.; Monterey Co.; San Diego Co.; Jamacha; San Francisco; Santa Barbara Co.; Yosemite National Park.

***Theridion simile* C. L. Koch**

British Columbia: Vancouver. *Washington*: Island Co.; King Co.; Pierce Co.; Snohomish Co.; Whatcom Co.

***Theridion melanurum* Hahn**

British Columbia: Vancouver Island. *Utah*: Salt Lake Co. *Idaho*: Canyon Co. *Washington*: King Co.; Pierce Co.; Snohomish Co. *Oregon*: Benton Co.; Deschutes Co.; Jackson Co.; Klamath Co.; Lane Co.; Multnomah Co.; Wasco Co.;

Washington Co. California: Alameda Co.; Contra Costa Co.; Lassen Co.; Los Angeles Co.; Marin Co.; Mendocino Co.; Monterey Co.; Placer Co.; Riverside Co.; San Diego Co.; San Francisco Co.; San Joaquin Co.; Santa Barbara Co.; Santa Clara Co.; Santa Cruz Co.; Solano Co.; Sonoma Co.

***Theridion rufipes* Lucas**

Florida: Alachua Co.; Brevard Co.; Lake Co. *Texas*: Hays Co. *Washington*: Seattle in lumber shipped from Australia (Archer, 1950). *San Luis Potosi*: Tamazunchale. *Nayarit*: Tepic, 15 miles north of Tepic. *Distrito Federal*. *Chiapas*: La Zacualpa. *Costa Rica*: Santa María Dota; San José. *Bermuda Islands*. *Bahama Islands*: New Providence; near Nassau. *Cuba*: Vilches Cave, Soledad, Santa Clara. *Lesser Antilles*: Dominica: Laudat. *Galapagos Islands*: P. O. Bay, Charles Island. *Peru*: North Chincha Island. *Brazil*: Minas Gerais: Minas Serinha Diamantina.

***Theridion alabamense* Gertsch and Archer**

Connecticut: Hartford Co.; New Haven Co.; New London Co. *New York*: Clinton Co.; Nassau Co.; Tompkins Co.; Westchester Co. *New Jersey*: Bergen Co.; Hunterdon Co. *Pennsylvania*: Bucks Co.; Pike Co. *Ohio*: Licking Co. *Maryland*: Harford Co. *North Carolina*: Buncombe Co. *Florida*: Alachua Co. *Alabama*: Lee Co.; Tuscaloosa Co. *Mississippi*: Bolivar Co.; Wilkinson Co. *Louisiana*. *Indiana*: La Porte Co. *Wisconsin*: Grant Co. *Illinois*: Pope Co. *Nebraska*: Richardson Co. *Texas*: "Cologne"; Matagorda Co. *California*: Los Angeles Co.; San Diego Co.

***Theridion antonii* Keyserling**

Connecticut: Fairfield Co., 1 ♂. *New York*: Suffolk Co., 1 ♀. *Maryland*: Harford Co., 1 ♀, 1 ♂. *Tennessee*: Grundy Co., 1 ♂. *Florida*: Jackson Co., 2 ♂. *Mississippi*: Bolivar Co., 5 ♀, 2 ♂; George Co., 1 ♀.

***Theridion punctosparsum* Emerton**

Massachusetts: Boston, 1 ♀; Essex Co., 1 ♀. *Connecticut*: Fairfield Co., 1 ♀, 1 ♂; New Haven Co., 1 ♀; New London Co., 1 ♀. *New York*: Ulster Co., 2 ♀. *New Jersey*: Bergen Co., 1 ♀, 1 ♂. *Maryland*: Georges Co., 1 ♀. *District of Columbia*: 1 ♂. *Virginia*: Montgomery Co., 1 ♀. *Kentucky*: Breathitt Co., 1 ♀. *Tennessee*: Bedford Co., 5 ♀, 2 ♂. *North Carolina*: Buncombe Co., 1 ♀; Cherokee Co., 1 ♀; Jackson Co., 1 ♀. *Arkansas*: Carroll Co.

***Theridion hobbsi* Gertsch and Archer**

Florida: Collier Co.; Dade Co.; Lake Co.; Lee Co. *Alabama*: Montgomery Co. *Mississippi*:

Amite Co.; Forrest Co. *Louisiana*: Baton Rouge; New Orleans. *Texas*: Jefferson Co. *Brazil*: Cidade Rio de Janeiro; Teresopolis; Minas Gerais: Minas de Serrinha Diamantina; Bello Horizonte. *New Guinea*: Milne Bay.

***Theridion intervallatum* Emerton**

Maine: Lincoln Co. *Massachusetts*: Nantucket. *New York*: Nassau Co. *Maryland*: Prince Georges Co. *Virginia*: Fairfax Co. *Tennessee*: Shelby Co.; Robertson Co.; Wilson Co. *North Carolina*: Carteret Co.; Henderson Co.; Black Mountain. *Georgia*: Screven Co. *Florida*: Dixie Co.; Glades Co.; Hernando Co.; Highlands Co.; Liberty Co.; Pinella Co. *Alabama*: Baldwin Co.; Bullock Co.; Montgomery Co. *Mississippi*: George Co. *Louisiana*: Grant Par. *Texas*: Dallas; Harris Co.; Hidalgo Co.; Jim Wells Co.; Liberty Co.; Starr Co. *Oregon*: Curry Co. *California*: Christine; Monterey Co.; Santa Barbara Co.; Santa Cruz Co. *Nueva León*: Chipinque Mesa. *Tamaulipas*: Jiménez; west of Reynosa; 50 miles south of Matamoros. *San Luis Potosí*: Tamazunchale. *Sinaloa*: 6 miles east of Villa Unión. *Hidalgo*: Rancho Viejo near Jacala. *Colima*: Las Humedades, Armería. *Veracruz*: Tecolutla; Jalapa. *Oaxaca*: Oaxaca. *Chiapas*: Tecojá; Ocosingo; Ocosingo Valley. *Guatemala*: Chiquimula. *Brazil*: São Paulo; Rio de Janeiro: Nictheroy.

***Theridion atropunctatum* Petrunkevitch**

Florida: Collier Co.; Dade Co.; Monroe Co. *Guatemala*: Guatemala City; Tiquizate. *Panama*: Summit; Barro Colorado Island. *Bahama Islands*: South Bimini. *Puerto Rico*: Río Piedras.

***Theridion istokpoga*, new species**

Florida: Highlands Co.: Archbold Biological Station, Lake Placid, Feb. 8, 1951 (A. M. Nadler), 9 ♀ paratypes; Nov. 17, 1952 (A. M. Nadler), 4 ♀, 1 ♂ paratypes; 3 miles south of Lake Istokpoga, Feb. 28, 1951 (A. M. Nadler), 6 ♀, 2 ♂ paratypes; Nov. 21, 1952 (A. M. Nadler), 1 ♀ paratype. Lake Co.; Liberty Co. *Chiapas*: Las Casas.

***Theridion positivum* Chamberlin**

Texas: Red Gate; Cameron Co.; Hidalgo Co.; Jim Wells Co.; Kleberg Co.; Starr Co. *California*: Los Angeles Co.; Santa Clara Co.; Santa Cruz Co. *Tamaulipas*: San Rafael, 6 miles east of Villa Juárez; Arroyo La Chorrera; Reynosa. *Baja California*: (Chamberlin, 1924); San Josef Island; North San Lorenzo Island. *Durango*: San Juan del Río. *Sinaloa*: 6 miles east of Villa Unión. *Guerrero*: Iguala. *Costa Rica*: San José. *Bahama Islands*: North Bimini; South Bimini.

***Theridion saanichum* Chamberlin and Ivie**

Alaska: Pleasant Bay, Admiralty Island; Skagway; Haines. *British Columbia*: Alert Bay; Sidney; Wellington. *Washington*: Palix River; Island Co.; Kitsap Co.; Pierce Co.; San Juan Co.; Snohomish Co.; Thurston Co. *Oregon*: Clackamas Co.; Curry Co.; Douglas Co. *California*: Mendocino Co.; Monterey Co.; San Francisco Co.; Santa Barbara Co.

***Theridion lawrencei* Gertsch and Archer**

Idaho: Latah Co. *Washington*: Mt. Ranier National Park; Pierce Co.; San Juan Co.; Skamania Co. *Oregon*: Baker Co.; Benton Co.; Douglas Co.; Lane Co.; Marion Co.; Wheeler Co.; Yamhill Co. *California*: Alameda Co.; Humboldt Co.; Los Angeles Co.; Mendocino Co.; Placer Co.; San Diego Co.; Santa Clara Co.; Solano Co.; Tulare Co.; Tuolumne Co.; Yosemite National Park.

***Theridion montanum* Emerton**

Alaska: Skagway; Admiralty Islands. *Newfoundland*: (Hackman, 1954). *Prince Edward Island*: Tracadie. *Nova Scotia*: (Emerton, 1920). *Quebec*: (Emerton, 1920); Percé; Mount St. Anne. *Ontario*: Algonquin Provincial Park; Thunder Bay Dist.; "northern Ontario." *Manitoba*: The Pas; Clearwater Lake. *Alberta*: Waterton National Park, 5800-6000 ft. *British Columbia*: Kettle River at Vernon-Needles Road, Monashee Mountains. *Maine*: Aroostook Co.; Hancock Co.; Knox Co.; Waldo Co.; Washington Co.; islands in Casco Bay. *New Hampshire*: Coos Co.; Moosilauke; Mt. Washington; Mt. Rouze. *Vermont*: Addison Co.; Mt. Mansfield; Ascutney; Grout. *New York*: (Crosby and Bishop, 1928). ?*Virginia*: Dickenson Co. *Michigan*: Marquette Co. *Minnesota*: Clearwater Co. *Montana*: Glacier National Park, 5200-5500 ft. *Wyoming*: Grand Teton National Park; Yellowstone National Park. *Colorado*: Jackson Co.; Pingree Park. *Utah*: Beaver Co.; Emery Co.; Rich Co. *New Mexico*: Taos Co., 8500-8700 ft. *Washington*: Mt. Rainier National Park, 4300-6000 ft. *Oregon*: Hood River Co.; Wallowa Co.

***Theridion leechi* Gertsch and Archer**

British Columbia: Kaslo; Ainsworth. *Wyoming*: Grand Teton National Park. *Colorado*: Mineral Co.; Ouray Co. *Utah*: Morgan Co.; Salt Lake Co.; Utah Co. *Idaho*: Boise Co.; Payette Co.; Valley Co. *Washington*: King Co.; Kitsap Co.; Spokane Co. *Oregon*: Benton Co.; Jefferson Co.; Josephine Co.; Lane Co. *California*: Alameda Co.; Los Angeles Co.; Monterey Co.; Placer Co.; Riverside Co.; San Bernardino Co.; San Diego Co.; Santa

Cruz Co.; Sequoia National Park; Sonoma Co.; Tuolumne Co.; Yolo Co.

***Theridion punctipes* Emerton**

Washington: Lewis Co. *Oregon*: Clackamas Co.; Josephine Co. *California*: Los Angeles Co.; Monterey Co.; Orange Co.; San Diego Co.; San Francisco Co.; San Luis Obispo Co.; Santa Barbara Co.; Santa Clara Co.; Sonoma Co.; Yosemite National Park. *Baja California*: North of Ensenada.

***Theridion neomexicanum* Banks**

British Columbia: Victoria; Wellington; Kaslo; Powder Creek; junction of Snow Mountain look-out train and Shingle Creek Road; Cascade. *Montana*: Park Co.; Sanders Co. *Colorado*: Archuleta Co.; Boulder Co.; Larimer Co.; Mesa Verde National Park. *Utah*: Beaver Co.; Bryce Canyon National Park; Carbon Co.; Emery Co.; Grand Co.; Juab Co.; Kane Co.; Salt Lake Co.; Sevier Co.; Washington Co.; Wayne Co.; Weber Co. *New Mexico*: Bernalillo Co., 9300 ft.; Catron Co., 8500 ft.; Grant Co.; Lincoln Co.; Otero Co.; Rio Arriba Co.; Sandoval Co.; San Miguel Co., 7500 ft.; Sante Fe Co., 9700 ft.; Taos Co., 8750–9700 ft.; Torrance Co., 7570 ft.; Valencia Co., 8500 ft. *Arizona*: Apache Co.; Cochise Co.; Coconino Co.; Gila Co.; Graham Co.; Grand Canyon National Park; Navajo Co.; Pima Co. *Idaho*: Adams Co.; Boise Co.; Custer Co.; Franklin Co.; Payette Co.; Washington Co. *Washington*: Grays Harbor Co.; Island Co.; King Co.; San Juan Co.; Snohomish Co.; Thurston Co. *Oregon*: Baker Co.; Benton Co.; Deschutes Co.; Douglas Co.; Gilliam Co.; Grant Co.; Harney Co.; Jackson Co.; Jefferson Co.; Josephine Co.; Klamath Co.; Lane Co.; Linn Co.; Malheur Co.; Washington Co.; Yamhill Co. *California*: Alameda Co.; Eldorado Co.; Fresno Co.; Humboldt Co.; Los Angeles Co.; Mariposa Co.; Placer Co.; Plumas Co.; Riverside Co.; San Diego Co.; San Francisco Co.; Santa Clara Co.; Shasta Co.; Sierra Co.; Siskiyou Co.; Sonoma Co.; Tehama Co.; Tuolumne Co.; Yosemite National Park.

***Theridion pictipes* Keyserling**

South Carolina: Beaufort Co. *Georgia*: Seminole Co.; Okefenokee Swamp. *Florida*: Alachua Co.; Citrus Co.; Gadsden Co.; Highlands Co.; Hillsborough Co.; Leon Co.; Okeechobee Co.; Orange Co.; Pasco Co.; Saint Johns Co.; Seminole Co.; Volusia Co. *Alabama*: (Archer, 1946). Tuscaloosa Co.

***Theridion frondeum* Hentz**

Nova Scotia: Truro. *Quebec*: Quebec; Montreal; Lake Ouareau. *Ontario*: Algonquin Provincial

Park; Minaki; Nipissing Co.; Peel Co.; Prince Edward Co.; York Co. *Saskatchewan*: Waskesiu; Prince Albert. *British Columbia*: Salmon Arm. *Maine*: Mt. Desert Island; York Co. *New Hampshire*: Lake Winnepesaukee; Coos Co.; Grafton Co. *Vermont*: Grout; Rutland Co. *Massachusetts*: Barnstable Co.; Berkshire Co.; Middlesex Co.; Nantucket Co. *Connecticut*: (Kaston, 1948). *New York*: (Crosby and Bishop, 1928). *New Jersey*: Bergen Co.; Sussex Co. *Pennsylvania*: Armstrong Co. *Ohio*: Delaware Co.; Erie Co.; Hocking Co.; Perry Co. *West Virginia*: Raleigh Co.; Randolph Co. *Maryland*: (Muma, 1945). *District of Columbia*: (Marx, 1891). *Virginia*: Giles Co. *Tennessee*: Cumberland Co.; Shelby Co.; Great Smoky Mountains. *North Carolina*: Avery Co.; Buncombe Co.; Mitchell Co.; Watauga Co. *Alabama*: Colbert Co.; Tuscaloosa Co. *Louisiana*. *Michigan*: Baraga Co.; Cheboygan Co.; Clinton Co.; Crawford Co.; Gratiot Co.; Ionia Co.; Kalkaska Co.; Kent Co.; Manistee Co.; Mason Co.; Mecosta Co.; Midland Co.; Muskegon Co.; Newaygo Co.; Osceola Co.; Roscommon Co.; Saginaw Co.; Wexford Co. *Indiana*: (Elliott, 1953). *Wisconsin*: (Levi and Field, 1954). *Illinois*: Winnebago Co.; Chicago. *Minnesota*: Rock Co.; Saint Louis Co. *Iowa*: Dickinson Co.; Lyon Co.; Muscatine Co. *North Dakota*: Pembina Co. *Arizona*: Santa Cruz Co. *Washington*: Spokane Co. *California*: Los Angeles Co.

***Theridion albidum* Banks**

Ontario: Algonquin Provincial Park. *Maine*: Wales. *Massachusetts*: Middlesex Co. *Connecticut*: (Kaston, 1948). *New York*: Suffolk Co.; Tompkins Co.; Westchester Co. *New Jersey*: Bergen Co. *Pennsylvania*: Berks Co. *Ohio*: Hocking Co. *Maryland*: Montgomery Co.; Plummers Island. *West Virginia*: Williams River, mouth of Tea Creek, 3000 ft. *Virginia*: Fairfax Co. *Kentucky*: Breathitt Co. *Tennessee*: Davidson Co.; Great Smoky Mountains National Park; Roane Co.; Sevier Co. *North Carolina*: Buncombe Co.; Durham Co.; Guilford Co.; Henderson Co.; McDowell Co. *Alabama*: (Archer, 1946); Colbert Co.; Tuscaloosa Co. *Louisiana*: Caddo Par. *Michigan*: Newaygo Co.; Ontonagon Co. *Indiana*: Porter Co. *Wisconsin*: (Levi and Field, 1954). *Illinois*: Champaign Co. *Missouri*: Boone Co.

***Theridion agrifoliae*, new species**

British Columbia: Wellington. *Washington*: Clallam Co.; Island Co.; Couperville (M. H. Hatch), 1 ♀ paratype; Sunnyside, Whidbey Island (M. H. Hatch), 1 ♂ paratype; Camano Island (H. Exline), 1 ♀ paratype. Pacific Co.; San Juan Co.; Snohomish Co.; Thurston Co.; Olympia (H. Exline); ♀ paratype. *Oregon*:

Clackamas Co.; Coos Co.; Curry Co.; Douglas Co.; Lane Co.; Lincoln Co. *California*: Humboldt Co.; Marin Co.; Mendocino Co.; Monterey Co.; Monterey (A. F. Archer), ♀ allotype from *Quercus agrifolia*; San Francisco Co.; San Mateo Co.; Santa Clara Co.

***Theridion californicum* Banks**

British Columbia: Vancouver; Sidney; Wellington; Tofino. *Washington*: Clallam Co.; King Co.; Lewis Co.; San Juan Co.; Thurston Co. *Oregon*: Benton Co.; Coos Co.; Curry Co.; Douglas Co.; Lane Co.; Lincoln Co.; Tillamook Co.; Yamhill Co. *California*: Alameda Co.; Humboldt Co.; Los Angeles Co.; Marin Co.; Mendocino Co.; Monterey Co.; Orange Co.; San Bernardino Co.; San Francisco Co.; San Luis Obispo Co.; San Mateo Co.; Santa Barbara Co.; Santa Clara Co.; Santa Cruz Co.; Sonoma Co.; Ventura Co.

***Theridion pennsylvanicum* Emerton**

Ontario: Point Pelee. *Connecticut*: Fairfield Co. *New York*: Kings Co.; Suffolk Co. *New Jersey*: Bergen Co. *Pennsylvania*: Monterey. *Maryland*: Montgomery Co. *District of Columbia*. *Tennessee*: Roane Co. *North Carolina*: Guilford Co. *Florida*: Gadsden Co.; Seminole Co. *Alabama*: Baldwin Co.; Lee Co.; Montgomery Co. *Illinois*: Pope Co. *Missouri*: Boone Co.

***Theridion lyricum* Walckenaer**

Ontario: York Co. *Maine*: Cumberland Co.; Mt. Desert Island. *New Hampshire*: Cheshire Co.; Hillsboro Co. *Massachusetts*: Norfolk Co. *Connecticut*: (Kaston, 1948). *New York*: (Crosby and Bishop, 1928). *New Jersey*: Bergen Co. *Pennsylvania*: Montgomery Co.; Philadelphia. *Ohio*: Hocking Co.; Knox Co. *West Virginia*: Jefferson Co. *Maryland*: (Muma, 1945). *District of Columbia*: (Marx, 1891). *Virginia*: Elizabeth City Co.; Fairfax Co. *Kentucky*: Barren Co.; Breathitt Co. *Tennessee*: Davidson Co.; Shelby Co.; Great Smoky Mountains. *North Carolina*: Buncombe Co.; Carteret Co.; Orange Co.; Yadkin Co. *Georgia*: Fulton Co.; Muscogee Co.; Union Co. *Florida*: Alachua Co.; Dade Co.; Highlands Co.; Liberty Co.; Leon Co. *Alabama*: (Archer, 1946). *Mississippi*: Bolivar Co.; Harrison Co.; Wilkinson Co. *Louisiana*: Jefferson Par. *Indiana*: (Banks, 1907). Monroe Co. *Michigan*: Berrien Co. *Wisconsin*: (Levi and Field, 1954). *Texas*: Denton Co.; Orange Co.

***Theridion sexpunctatum* Emerton**

Alaska: Aleutian Islands: Kanaga Island; Yakutat; Juneau; Admiralty Island; Sitka; Metlakatla; Berg Bay; Kodiak; Skagway; southeast

of Wrangell; Prince of Wales Island; Ketchikan; Kupreanof Island; Mitkof Island; Kuiu Island; Scenery Cove, Thomas Bay. *Newfoundland*: (Hackman, 1954). *Quebec*: (Crosby and Zorsch, 1935); (Emerton, 1930); Quebec. *Ontario*: Algonquin Provincial Park; Minaki; Prince Edward Co.; York Co. *Manitoba*: Dauphin. *Alberta*: Waterton National Park, 5400 ft. *British Columbia*: Yoho National Park; Field; Vancouver; Sidney; Cameron Lake; Wellington; Prince Rupert; Alert Bay; Nanoose; Parksville; Forbidden Plateau, 4000 ft.; Tofino; Terrace. *Maine*: Lincoln Co.; Piscataquis Co. *New Hampshire*: Carroll Co.; Coos Co.; Grafton Co. *Vermont*: Mt. Mansfield. *Massachusetts*: Worcester Co. *New York*: (Crosby and Bishop, 1928). *Pennsylvania*: (Truman, 1942). *Maryland*: (Muma, 1945). *Ohio*: Hocking Co. *West Virginia*: Pocahontas Co. *Tennessee*: Great Smoky Mts. *North Carolina*: Summit of Mt. Mitchell. *Michigan*: Marquette Co. *Wisconsin*: (Levi and Field, 1954). *Montana*: Glacier National Park, 3400-4100 ft.; Ravalli Co. *Wyoming*: Grand Teton National Park; Teton Co.; Yellowstone National Park; *Utah*: Box Elder Co.; Salt Lake Co.; Summit Co.; Utah Co.; Wasatch Co.; Zion National Park. *Arizona*: Navajo Co. *Idaho*: Adams Co.; Valley Co. *Washington*: King Co.; Mt. Ranier National Park; Olympic National Park; Pierce Co.; San Juan Co.; Snohomish Co.; Thurston Co. *Oregon*: Benton Co.; Coos Co.; Curry Co.; Douglas Co.; Lane Co.; Lincoln Co.; Linn Co.; Multnomah Co.; Polk Co.; Tillamook Co.; Umatilla Co.; Washington Co.; Yamhill Co. *California*: Del Norte Co.; Humboldt Co.; Marin Co.; Mendocino Co.; Monterey Co.; San Francisco; San Mateo Co.; Santa Barbara Co.; Santa Cruz Co.

***Theridion aurantium* Emerton**

Alaska: Matanuska Valley; Matanuska; College. *Newfoundland*: (Hackman, 1954). *Nova Scotia*: Barrington. *Quebec*: Chelsea; Lake Megantic; Quebec; Sherbrooke; Montreal; Montfort; Fox Bay, Anticosti Island; St. Joseph d'Alma. *Ontario*: Algonquin Provincial Park; Nipissing Co.; York Co. *British Columbia*: Victoria. *Maine*: Aroostook Co.; Cumberland Co.; Mt. Desert Island; Piscataquis Co. *New Hampshire*: Carroll Co.; Cheshire Co.; Coos Co.; Grafton Co. *Vermont*: Caledonia Co. *New York*: Hamilton Co. Warren Co. (Crosby and Bishop, 1928). *Michigan*: Wexford Co. *Wisconsin*: Forest Co. *Wyoming*: Grand Teton National Park; Teton Co.

***Theridion cheimatos* Gertsch and Archer**

Ohio: Fairfield Co. *Tennessee*: Roane Co. *Georgia*: Chatham Co.; Rabun Co.; Screven Co. *Florida*: Lee Co.; Putnam Co.

Theridion ohlerti Thorell

Greenland: Kangerdlugsuak. *Alaska*: Glennallen. *Northwest Territory*: Great Slave Lake. *Quebec*: Esker du Campement. *Alberta*: Lake Louise. *British Columbia*: Vancouver; Field. *Montana*: Glacier National Park, 4200–5500 ft. *Wyoming*: Teton Co.; Yellowstone National Park. *Colorado*: Gilpin Co., 8500 ft.; Gunnison Co., 9500 ft.; Rocky Mountain National Park. *Utah*: Rich Co.; Tooele Co.; Utah Co. *New Mexico*: Rio Arriba Co.; Santa Fe Co.; Taos Co., 8700 ft. *Idaho*: Franklin Co., 8700 ft.; Payette Co. *Oregon*: Deschutes Co.; Grant Co.; Umatilla Co. *California*: Yosemite National Park, 8600 ft.

Paidisca pallida (Emerton)

Massachusetts: Barnstable Co. *New York*: Suffolk Co. *Tennessee*: Shelby Co. *North Carolina*: Carteret Co. *Georgia*: Screven Co. *Florida*: Highlands Co.; Lee Co. *Mississippi*: Wilkinson Co. *Texas*: Hidalgo Co.; Panola Co.; Starr Co. *Colorado*: Archuleta Co. *Utah*: Salt Lake Co.; Utah Co. *California*: Between Santa Monica and Oxnard; Imperial Co.; Santa Barbara Co. *Tamaulipas*: 10 miles north of Ciudad Victoria; San Fernando; Santa Teresa; 14 miles south of Villa Juárez. *Districto Federal*.

Paidisca pictipes (Banks)

Washington: Seattle. *Oregon*: Benton Co.; Lane Co.; Marion Co.; Multnomah Co.; Washington Co.; Yamhill Co. *California*: Los Angeles Co.; Monterey Co.; San Diego Co.; Santa Barbara Co.

Paidisca camano, new species

Utah: Salt Lake Co. *Washington*: Island Co. *Oregon*: Benton Co.; Corvallis, Oct. 15, 1949 (V. Roth), 1 ♀. Multnomah Co.; Portland, June 8, 1952 (V. Roth), 1 ♀; May 12, 1953 (V. Roth), 1 ♂. *California*: Alameda Co.; Castro Valley, March 16, 1941 (W. M. Pearce), 2 ♀. Contra Costa Co.; March Creek Springs, May 5, 1940 (W. M. Pearce), 1 ♀; Yosemite National Park.

Paidisca maderae (Gertsch and Archer)

Arizona: Cochise Co.; Chiricahua Mountains; Pima Co.; Santa Cruz Co. *Chihuahua*: Cañón Prieta near Primavera. *San Luis Potosí*: 20 miles south of Valles. *Colima*: Boca de Pascuales. *Veracruz*: 15 miles east of Pánuco; Veracruz. *Chiapas*: El Real.

Paidisca unimaculata (Emerton)

Quebec: Montreal. *Ontario*: Prince Edward Co.;

Peel Co.; York Co. *Maine*: Mt. Desert Island; Lincoln Co.; York Co. *Massachusetts*: Barnstable Co.; Nantucket. *Rhode Island*: Kingston. *Connecticut*: (Kaston, 1948). *New York*: (Crosby and Bishop, 1928). *New Jersey*: Bergen Co.; Burlington Co.; Ocean Co. *Pennsylvania*: (Truman, 1942); Philadelphia. *Maryland*: Cecil Co. *District of Columbia*. *Tennessee*: Roane Co. *North Carolina*: Carteret Co.; Craven Co. *Georgia*: Okefenokee Swamp; Jenkins Co.; Rabun Co.; Screven Co. *Florida*: Collier Co.; Dade Co.; Gadsden Co.; Glades Co.; Highlands Co.; Lake Co.; Martin Co.; Okeechobee Co.; Sarasota Co. *Alabama*: (Archer, 1946). *Mississippi*: Forrest Co.; Wilkinson Co. *Louisiana*: Grant Par.; Madison Par. *Michigan*: Berrien Co.; Calhoun Co.; Midland Co.; Osceola Co.; Tuscola Co. *Indiana*: La Porte Co. *Wisconsin*: (Levi and Field, 1954). *Minnesota*: Marshall Co. *Illinois*: Lake Co. *Texas*: Henderson Co.

Paidisca expulsa (Gertsch and Mulaik)

North Carolina: Carteret Co.; Granville Co. *Alabama*: Dallas Co.; Hale Co. *Florida*: Palm Beach Co. *Louisiana*: Madison Par. *Texas*: Piper's Lake; Cameron Co.; Llano Co.; Hidalgo Co.; Wharton Co. *California*: San Diego Co. *Tamaulipas*: San Pedro; Mesa de la Angostura, south of Ciudad Victoria. *Nuevo León*: Monterrey. *Chiapas*: Tuxtla Gutiérrez.

Paidisca illudens Gertsch and Mulaik

Texas: Cameron Co. *Tamaulipas*: 13 miles south of Villa Juárez; 40 miles south of Linares; Ciudad Victoria. *Nuevo León*: Chipinque; Monterrey. *San Luis Potosí*: 20 miles north of Ciudad de Valles. *Colima*: Potrero Grande. *Puebla*: Huauchinango. *Veracruz*: Tuxpan. *Chiapas*: near Huehuetán. *Yucatan*: Uxmal.

Paidisca marxi (Crosby)

New York: Suffolk Co. *New Jersey*: Cape May Co. *Maryland*: (Muma, 1945). *Virginia*: Brunswick Co.; Fairfax Co. *Tennessee*: Great Smoky Mountain National Park; Obion Co.; Wilson Co. *North Carolina*: Buncombe Co.; Carteret Co.; Haywood Co.; Wake Co. *Georgia*: Elbert Co.; Jenkins Co.; Rabun Co.; Screven Co. *Florida*: Alachua Co.; Highlands Co.; Lake Co.; Martin Co.; Sarasota Co. *Alabama*: (Archer, 1946). *Mississippi*: Jackson Co.; Tishomingo Co. *Missouri*: Carter Co. *Arkansas*: Saline Co. *Texas*: Frio Co.; Harris Co.; Hidalgo Co.; Jasper Co.; Webb Co. *Guerrero*: Chalpincingo.

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