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## DESCRIPTIONS OF NEW AMERICAN THERIDIIDAE

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In the present paper a number of spiders of the family Theridiidae are described, all of them from within the borders of the United States. Most of the species belong in the large, somewhat heterogeneous genus *Theridion*, a group well represented in North America but still quite imperfectly known. A new name is proposed for *Theridion cinereum* Emerton inasmuch as that specific name was used by Thorell in 1875 for a spider from southern Russia. A third species of the genus *Theridula* from the United States is described on the basis of several females from Royal Palm State Park, Florida. It has been noted that the American species referred to the European *Crustulina guttata* Wider represents a distinct species so the new name *altera* has been applied to it.

The types of all the new species are deposited in the collection of The American Museum of Natural History. A number of the paratypes are in the personal collection of A. F. Archer.

### *Crustulina altera*, new species

Figure 9

*Steatoda guttata* EMERTON, 1882, Trans. Connecticut Acad. Arts and Sci., VI, p. 20, Pl. iv, figs. 2 to 2b. (This is the *Crustulina guttata* of American authors but not *Crustulina (Theridion) guttata* of Wider.)

MALE.—Total length, 2.30 mm. Carapace, 1.13 mm. long, 0.92 mm. wide. Abdomen, 1.20 mm. long, 0.94 mm. wide.

Carapace and sternum rather dark brown, with numerous black elevations, darkest at the margins. Ocular region nearly black. Chelicerae, maxillae and labium dark brown, the palpus brown. Coxae very light brown, almost yellow, the legs slightly darker. Dorsum of abdomen with two dark brown triangular markings at the base on each side of a light central zone; in turn a pair of pale dots on each side of the markings; five brown patches in a transverse row across the middle of the abdomen; a white dot located just in front of the middle one; a

fairly large white marking just behind the two outermost patches; a dark brown transverse zone at the apex, interrupted in the middle by a white dot; the rest of the abdomen dark yellow and varied with fine light brown markings. Venter of abdomen rather dark, especially around the spinnerets. Region of pedicel and epigastric plates very dark brown.

Carapace ovate, the pars cephalica slightly differentiated, the posterior end of carapace forming a ring around the pedicel. In profile, pars cephalica elevated above the rest of the carapace in the form of a hump on which the eyes are placed, with a concavity below the ocular region and above the sloping clypeus, the lower portion of the clypeus convex. Both rows of eyes procurved; the posterior median eyes separated from the contiguous lateral eyes by the diameter of one of the former; the anterior median eyes closer to each other than are the posterior median eyes. Numerous crescent-shaped elevations, each at one side of a puncture, all over the carapace and sternum. Sternum wide in front, narrowed to a blunt point between the fourth coxae. Chelicerae almost oblong, in profile wide at the base, forming a triangle, sloping backward a little.

Legs of average length. First leg: femur, 1.04 mm., patella, 0.35 mm., tibia, 0.84 mm., metatarsus, 0.65 mm., and tarsus, 0.55 mm. long. Femora and patellae covered with fine points.

Abdomen ovate, rather flattened on dorsum, with a horny ring around the insertion of the pedicel prominent.

FEMALE.—Total length, 2.00 mm. Carapace, 0.95 mm. long, 0.78 mm. wide. Abdomen, 1.25 mm. long, 1.15 mm. wide.

Carapace, sternum and legs colored as in the male. Palpi yellowish. Margin of the dorsum of the abdomen with a wide, dark brown zone, interrupted at the base by a longitudinal white line, at the sides by whitish markings, and at the apex by a longitudinal pale line; a white patch present in the center of the dorsum, in turn surrounded by dark brown irregular markings; the rest of the dorsum very dark yellow; the muscle impressions indicated by tiny brown dots. Venter yellowish brown except for the brown epigastric plates.

Carapace proportionately wider in the male, not as large, otherwise similar. Ocular region a little less elevated and a little more abruptly prominent than in the male. Chelicerae similar

to those of the male but smaller and shorter. Legs of average length. First leg: femur, 0.80 mm., patella, 0.31 mm., tibia, 0.57 mm., metatarsus, 0.50 mm., and tarsus, 0.44 mm. long.

Epigynum as illustrated in Fig. 9.

**TYPE LOCALITY.**—Male holotype and female allotype from Norwalk, Fairfield County, Connecticut, May 27, 1933 (W. J. Gertsch). Male and female paratypes from Cullman, Cullman County, Alabama, October 8, 1940 (A. F. Archer). Two male paratypes from Lake Minnetonka, near Minneapolis, Minnesota, July 4, 1931 (W. J. Gertsch). Female paratypes from Newman's Lake, near Gainesville, Florida, June 13, 1935 (W. J. Gertsch). Two female paratypes from thirty miles west of Knoxville, Tennessee, July 11, 1933 (W. J. Gertsch). Male and female paratype from Torne Mountain, near Suffern, New York, May 27, 1939. Male and female paratypes from Cold Spring Harbor, Long Island, New York, April 10, 1905 (J. H. Emerton). Male and female paratypes from Elkmont, Tennessee, June 11, 1939 (B. J. Kaston).

The present species, which has long been known under the name of *Crustulina guttata* Wider, is widely distributed throughout the eastern United States. A comparison of this form with European examples of *guttata* has shown that the American species is distinct in the details of the genitalia and even in the coloration. A second *Crustulina* from the United States has been referred to *sticta* Cambridge, a species apparently known in Europe only from England and southern France. Inasmuch as the species of this genus are very closely allied and are separated chiefly on the basis of the genitalia, characters not fully appreciated by those workers who founded the present synonymy, the authors consider it highly improbable that *sticta* actually occurs within our borders. Until such a time when it is possible to verify or disprove that synonymy on the basis of authentic European specimens, we propose to regard our second species as distinct. It should be known as *Crustulina borealis* Banks, a name based on specimens from Washington State. This species is common in the northern United States

from coast to coast. *Crustulina pallipes* Banks is probably synonymous with *borealis*.

### ***Theridula regia*, new species**

Figure 10

**FEMALE.**—Total length, 2.00 mm. Carapace, 0.80 mm. long, 0.70 mm. wide. Abdomen, 1.70 mm. long, 1.35 mm. wide.

Carapace pale ivory yellow, with a longitudinal band of black which extends from the ocular region to the vicinity of the pedicel and becomes widest in the thoracic region. Appendages and sternum pale ivory yellow, unmarked. Dorsum of abdomen bright yellow, paler on the lateral borders, interrupted at the base by an arched brownish line, each end of the line directed caudally; with two more such arched lines behind the greatest width of the abdomen, the ends of each line directed diagonally caudad; outer edges and apices of the three tubercles nearly black. Sides of abdomen chalky white, streaked with scarlet brown. Venter scarlet brown; spinnerets sooty.

Carapace widely cordate, the sides rounded and merging with the blunt pars cephalica; in profile, ocular region elevated, somewhat prominent over the clypeus, concave behind, slanting backward to the thoracic region. Clypeus moderately high, slightly convex. Posterior row of eyes slightly recurved; anterior row procurved; arrangement of eyes as usual in the genus. Chelicerae elongate-conical; the outer side of fang groove with two small denticles. Maxillae wide, triangular, the corners blunt. Labium wide and short. Anterior border of sternum curved caudad, the sternum being about as wide as long, widest between first legs, gradually narrowing but still widely curved between fourth coxae.

Legs slender, of average length, with longitudinal rows of long hairs, the hairs more numerous on the tarsi.

Abdomen wider than long, proportionately large, with pale scattered hairs, indented at the base and elevated above the pedicel, each side with a prominent angle surmounted by a sharp tubercle, the caudal end with a warty tubercle. Epigynum as illustrated in Fig. 10.

**TYPE LOCALITY.**—Female holotype and two paratypes from Royal Palm State Park, Dade County, Florida, December 27–29, 1940, taken on low vegetation just outside of the tropical hammock and not far from an open marsh (prairie) (A. F. Archer). Three female paratypes from the same general locality taken in December, 1938 (F. E. Watson and L. J. Sanford).

This species differs from *Theridula sphaerula* Hentz and *T. quadripunctata* Keyserling in possessing a well-developed

caudal tubercle, as well as in the color pattern.

### *Theridion cheimatos*, new species

Figures 15 and 16

**FEMALE.**—Total length, 1.44 mm. Carapace, 0.55 mm. long, 0.53 mm. wide. Abdomen, 0.85 mm. long, 0.90 mm. wide.

Carapace yellow, unmarked except for the ruddy brown eye tubercles. Fang groove of the chelicerae brown. Legs yellow, unmarked. Abdomen (Fig. 16) isabelline, darker in front of the shoulders, with a black patch just above the pedicel, with white patches branching diagonally backward in front of a crescent-shaped black patch located on the highest elevation of the abdomen; behind this conspicuous dorsal maculation a longitudinal black patch.

Carapace widely cordate, the sides rounded, the pars cephalica blunt; in profile, carapace slanting backward gently from the ocular region. Ocular region not elevated but prominent over the shallow convex clypeus. Posterior row of eyes nearly straight; anterior row nearly straight; posterior median eyes nearer to the anterior lateral than to each other. Chelicerae long, conical, slender, the tips not produced; two denticles on the outer margin of the fang groove. Sternum nearly as wide as long, the greatest width between the second and third coxae; anterior margin nearly straight; posterior end very blunt between the widely separated fourth coxae. Maxillae convergent, the anterior external corner rounded, the internal corner rounded. Labium wide, rounded in front.

Legs slender and rather long, with scattered hairs, some on the first femur almost spinose. Coxae narrow and slender. First leg: femur, 0.95 mm., patella, 0.24 mm., tibia, 0.73 mm., metatarsus, 0.74 mm., and tarsus, 0.35 mm. long.

Abdomen elevated above the pedicel, rounded-cordate, about as wide as long, the greatest width being in the shoulder region, the apex blunt. Epigynum as illustrated in Fig. 15.

**TYPE LOCALITY.**—Female holotype from north of Winter Park, Orange County, Florida, April 11, 1938 (W. J. Gertsch). Two female paratypes from five miles north of Palatka, Florida, June 12, 1935 (W. J. Gertsch).

This species resembles *T. sexpunctatum* Emerton in structural features but is much lighter in color and definitely smaller. The epigynum is provided with a strongly elevated rim and differs in various details as illustrated in the figure.

### *Theridion sex-setosum* Barrows

Figures 1, 13 and 14

*Theridium sex-setosum* BARROWS, 1940, Ohio Journal of Science, XL, p. 132, Fig. 4.

**MALE.**—Total length, 1.35 mm. Carapace, 0.65 mm. long, 0.55 mm. wide. Abdomen, 0.75 mm. long, 0.75 mm. wide.

Carapace (see Fig. 14 for female) with a broad longitudinal black band and two black side bands which converge behind on the margin and anteriorly on the clypeus; pars cephalica black. Chelicerae, maxillae, labium and sternum sooty over a brownish undertone. Palpus white except for a black band around the base of the bulb. Legs white or pale yellow, with three black bands on femora, one irregular band on each patella, two black bands on tibiae and metatarsi and one on the tarsi. Dorsum of abdomen dark gray, with two pairs of round white spots, a white patch on the side meeting on the apex and again on the shoulders and base; with white patches on the apical wrinkles. Venter gray over a yellowish undertone, somewhat mottled.

Carapace cordate, broad, the sides of the thoracic portion rounded, the ocular region wide, gently convex; in profile, carapace sloping strongly upward from the posterior region to ocular prominence; ocular area rather strongly elevated, slightly prominent over clypeus. Four or six nearly erect hairs between the eyes. Posterior eye row nearly straight; anterior row recurved; lateral eyes close together; posterior median eyes about as close to posterior lateral as to each other. Sternum wide, truncated in front, abruptly rounded behind, extending between the well-separated fourth coxae. Chelicerae subvertical, elongated, concave on the sides, almost abruptly constricted in the region of the fang, the distal ends projecting.

Legs rather long and slender, the first tibia with a long, forwardly directed spine on the inner face which is set on a slight elevation, the third and fourth tibiae with two dorsal spines, each patella with a thin spine at the distal end.

Abdomen ovate, strongly elevated above the pedicel.

Palpus as illustrated in Fig. 1.

**FEMALE.**—Total length, 1.50 mm. Carapace, 0.65 mm. long, 0.60 mm. wide. Abdomen, 0.90 mm. long, 0.90 mm. wide.

Color pattern and general proportions of the carapace and the abdomen as illustrated in Fig. 14, similar to the male. Structure closely approximating that of the male. Epigynum as illustrated in Fig. 13.

**TYPE LOCALITY.**—Male holotype from the Great Smoky Mountain National Park, Tennessee, June 12, 1939 (W. M. Barrows).

**RECORDS.**—Males and females from Hatchet Creek, five miles north of Rockford, Coosa County, Alabama, June 1-4, 1940 (A. F. Archer). One of the females

has been designated as the allotype. One female from Guess' Creek, Jackson County, Alabama, June, 1940 (A. F. Archer). This species is quite common in Alabama and Florida and is also known from western Georgia.

This interesting spider resembles *Theridion sexpunctatum*, *cheimatos*, new species, *punctosparsum*, and related species. It is somewhat smaller than any of these species and differs conspicuously in coloration and genitalia.

### *Theridion dulcineum*, new species

Figures 11, 12, 17 and 18

FEMALE.—Total length, 1.08 mm. Carapace, 0.50 mm. long, 0.45 mm. wide. Abdomen, 0.64 mm. long, 0.60 mm. wide.

Carapace pale yellow, the margins with a narrow black seam and the eye tubercles reddish brown, otherwise unmarked, the clothing sparse, consisting of several pale bristles in the ocular region, two behind the eyes on the mid-line and a transverse row of four on the edge of the posterior declivity. Sternum and mouth parts pale yellow, unmarked, sparsely set with short suberect bristles. Legs pale yellow, concolorous with the carapace, narrowly annulate in black as follows: femora with a sub-basal and a subapical ring incomplete above and with a small black spot or pair at middle above; patellae with a single ring incomplete above; tibiae with sub-basal and distal rings incomplete above; metatarsi as the tibiae, but the distal rings are complete; tarsi with a complete or incomplete submedian annulus; all annulae relatively narrow. Pattern as shown in Fig. 11.

Abdomen pale yellow, duller than the carapace, marked as follows: dorsum with two longitudinal rows of six white flecks and with a series of smaller ones on each side, with a small black spot at base and two pairs of spots in apical half; sides with basal, median and broken anal bands which reach the sides of the venter; venter pale with two white flecks just behind the epigynum and indistinct black lines.

Structure essentially typical, suggestive of *Theridion aurantium*. Clypeus subvertical, equal in height to one and one-half diameters of an anterior median eye. First eye row moderately procurved as seen from in front, the dark median separated by their radius, subcontiguous with the subequal lateral eyes. Second row gently recurved, the oval median separated by one-half the long diameter, one-third the long diameter from the subequal lateral eyes. Median ocular quadrangle slightly broader than long (20/18), narrowed in front in the same ratio, the front eyes slightly smaller. Sternum somewhat broader than long, subcordate, truncated behind where the posterior coxae are separated by twice the width of the coxae. Abdomen subglobose,

set with pale erect bristles. Epigynum as illustrated in Fig. 12.

Legs clothed with inconspicuous hairs and a few erect bristles. First leg: femur, 0.55 mm., patella, 0.20 mm., tibia, 0.39 mm., metatarsus, 0.37 mm., and tarsus, 0.28 mm. long.

MALE.—Total length, 1.20 mm. Carapace, 0.55 mm. long, 0.50 mm. wide. Abdomen, 0.65 mm. long, 0.60 mm. wide.

Coloration in complete agreement with the female. Structure in close agreement but differing as follows: pars cephalica somewhat more elevated, the clypeus being equal in height to three times the diameter of an anterior median eye. First eye row moderately procurved as seen from in front, the median slightly protruding, separated by half the diameter, as far from the subequal lateral eyes. Median ocular quadrangle broader than long (24/20), broader in front in the same ratio. Chelicerae normal, slender, the claw rather long. Legs proportionately longer than in the female. First leg: femur, 0.85 mm., patella, 0.23 mm., tibia, 0.64 mm., metatarsus, 0.54 mm., and tarsus, 0.35 mm. long. Male palpus as illustrated in Figs. 17 and 18.

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).

### *Theridion alabamense*, new name

*Theridion cinereum* EMERTON, 1913, Trans. Connecticut Acad. Arts and Sci., XVIII, p. 212, Pl. 1, fig. 2. (Name preoccupied by *Theridium cinereum* Thorell, 1875, Horae Soc. Ent. Ross., XI, p. 66.)

The species for which the above new name is proposed is distributed from New England to Florida, Alabama and Louisiana. It seems to be relatively rare in the north where it is largely replaced by *Theridion puncto-sparsum* Emerton, a species of close structural alliance and general similarity of coloration.

### *Theridion arcadicum*, new species

Figure 24

FEMALE.—Total length, 1.85 mm. Carapace, 0.70 mm. long, 0.62 mm. wide. Abdomen, 1.15 mm. long, 1.27 mm. wide.

Carapace deep yellow with gray lateral borders, with a fan-shaped patch branching from the center of the carapace, a black line to each of the lateral eyes and a longitudinal one to the median eyes, the rest gray except for an oval yellow spot on each side of the central line and behind the eyes. Ocular region black, and this color extends down the front of the clypeus. Chelicerae yellow. Labium, maxillae and ster-

num yellow, each with dark gray borders. Legs yellow, the distal and proximal ends of the femora, the proximal border of the patellae, and the proximal border of the tibiae dusky. Abdomen predominantly black on the dorsum, sides and venter; with three white patches on the mid-line of the dorsum, the first transverse and narrow, the second and third irregularly bifurcate; three elongate transverse patches on each side pale with chalky white spots; a light patch above the anus, and similar patches on two wrinkles above it. Spinnerets yellowish, with light mottling on either side of the ring around the spinnerets. Epigastric plates nearly black, brownish on lateral edges, yellowish around the brown epigynum.

Carapace cordate, rounded on the sides, narrowed in the cephalic region; in profile, carapace nearly horizontal, the pars cephalica little elevated but prominent above the convex clypeus. Posterior row of eyes nearly straight; anterior row procurved; lateral eyes close together; posterior median eyes as much separated from each other as from the posterior lateral. Sternum wide in front, gradually narrowed behind the second coxae, and terminating as a rounded point. Chelicerae vertical, elongate, nearly oblong, almost straight-sided. Maxillae long, converging. Labium very wide.

Legs of average length for the group, rather slender, clothed with fine hairs. First leg: femur, 0.72 mm., patella, 0.26 mm., tibia, 0.54 mm., metatarsus, 0.55 mm., and tarsus, 0.36 mm. long.

Abdomen rounded, elevated, broad in gravid females. Epigynum as illustrated in Fig. 24.

**TYPE LOCALITY.**—Female holotype and paratype from west of Arcadia, DeSoto County, Florida, March 31, 1938 (W. J. Gertsch). Female paratypes from Blountstown, Calhoun County, Florida (W. J. Gertsch). Female paratype from ten miles south of Zephyrhills, Florida, April 7, 1938 (W. J. Gertsch). Female paratype from Hillsborough River State Park, Florida, April 8, 1938 (W. J. Gertsch). One female paratype with a tiny, round, white egg-sac from under a rock, Tuscaloosa, Tuscaloosa County, Alabama, May 9, 1941 (A. F. Archer).

This species differs from *Theridion punctosparsum* Emerton in its smaller size, short legs and especially in the epigynum which is not so deeply excavated and not margined by a pronounced rim.

### *Theridion wallacei*, new species

Figure 2

**FEMALE.**—Total length, 2.05 mm. Carapace, 0.80 mm. long, 0.70 mm. wide. Abdomen, 1.35 mm. long, 1.35 mm. wide.

Carapace light orange, the margins with a narrow black seam, the eyes enclosing a black field behind which is a black stripe nearly as wide as the second row which narrows somewhat back to the posterior declivity where it is abruptly ended. Carapace sparsely set with hairs, the principal ones in a row on the mid-line and several between the eyes. Mouth parts light orange, the labium dusky. Sternum dusky over a light orange base, paler in front. Legs dull yellow, without contrasting markings. Abdomen gray, somewhat yellowish on the side, the dorsum with three long rows of black triangular spots, those in the side rows well spaced, but those of the median row touching to form a toothed band. Venter of abdomen with a black band, and the spinnerets ringed with black.

Structure typical, essentially as in *Theridion edinburgensis* Gertsch and Mulaik. Clypeus equal in height to one and one-fourth diameters of an anterior median eye. First row of eyes procurved as seen from in front, the dark median separated by their radius, nearly touching the smaller oval lateral eyes. Second row moderately recurved, the median separated by scarcely the diameter, nearly as far from the subequal lateral eyes. Median ocular quadrangle broader than long (23/20), narrowed behind in about the same ratio, the eyes subequal in size. Carapace of average height, in profile moderately convex, the eyes of moderate prominence over the subvertical clypeus. Sternum about as broad as long, bluntly rounded between the posterior coxae which are separated by their length.

Legs rather short. First leg: femur, 0.70 mm., patella, 0.25 mm., tibia, 0.44 mm., metatarsus, 0.49 mm., and tarsus, 0.38 mm. long.

Abdomen subglobose, about as high as broad. Epigynum as illustrated in Fig. 2.

**TYPE LOCALITY.**—Female holotype from Gator Sink, Alachua County, Florida, March 13, 1935 (H. K. Wallace, 378).

This small species agrees rather closely in general coloration and structure with *Theridion edinburgensis* Gertsch and Mulaik. It is best distinguished by reference to the eyes which are less widely spaced, the posterior median being separated by at most three-fourths the diameter, whereas in *edinburgensis* these eyes are a full diameter apart.

### *Theridion hobbsi*, new species

Figure 6

**FEMALE.**—Total length, 4.50 mm. Carapace, 1.60 mm. long, 0.40 mm. wide. Abdomen, 3.60 mm. long, 3.80 mm. wide.

Carapace light orange, with a small black maculation at the position of the median groove, the eyes narrowly ringed with brown, the eye field somewhat dusky. Pars cephalica with a row of

bristles on the mid-line and with two lines of bristles which begin near the side eyes and converge to just near the median groove. Sternum yellow, with a spot or smudge opposite each coxa; these are confluent or nearly so to give the impression of a broad marginal band. Labium, maxillae and chelicerae light brown. Legs yellow, conspicuously marked with narrow black annulae which for the most part are incomplete above or below as follows: femora, one submedian dorsal mark and one distal, except on first femora, one sub-basal and one submedian ventral mark; patellae, one ventral mark; tibiae, one dorsal mark at base and three ventral marks, the last apical; metatarsi, three complete broader annulae, only the basal one dusky above; tarsi with one ventral mark. Abdomen dull yellow, thickly flecked with small white and black spots, with a black dash just above the pedicel, the dorsum with a longitudinal pale band which is margined by black spots, the caudal declivity with four pairs of larger black spots. Sides of abdomen with a black patch near the pedicel and one at middle of the length; venter with a small black patch midway between epigynum and spinnerets.

Structure essentially typical, much as in *Theridion tepidariorum* Koch. Carapace somewhat longer than broad, of moderate height, convex, the eyes only moderately prominent over the clypeus which is grooved just below the eyes. Clypeus equal in height to two diameters of an anterior median eye. First row of eyes gently procurved, the median separated by two-thirds their diameter, one-third as far from the smaller lateral eyes. Second row gently procurved, the oval median separated by two-thirds their long diameter, as far from the subequal lateral eyes. Median ocular quadrangle broader than long (40/35), narrowed behind in the same ratio. Chelicerae normal, subparallel, slender apically. Sternum about as broad as long, bluntly pointed between the posterior coxae which are separated by their width.

Legs of moderate length. First leg: femur, 2.30 mm., patella, 0.68 mm., tibia, 2.05 mm., metatarsus, 2.10 mm., and tarsus, 0.65 mm. long.

Abdomen subglobose. Epigynum as illustrated in Fig. 6.

**TYPE LOCALITY.**—Female holotype and two female paratypes from Gainesville, Alachua County, Florida, June 15, 1934 (W. J. Gertsch).

This species is easily differentiated from known American species by the color pattern and the epigynum. The band of spots on the margins of the sternum and the small black spot on the dorsum of the carapace are distinctive.

## ***Theridion catalinae*, new species**

Figure 21

**FEMALE.**—Total length, 2.50 mm. Carapace, 1.00 mm. long, 0.90 mm. wide. Abdomen, 1.50 mm. long, 1.50 mm. wide.

Carapace yellowish brown, the ocular region dusky, the eyes narrowly ringed with black. Sternum, mouth parts and coxae yellowish brown. Legs black or nearly so except the base of the fourth femur and all the tarsi which are yellowish brown. Abdomen a uniform black, shining, above and below.

Structure essentially typical, much as in *Theridion arcadicum*, new species. Clypeus vertical, equal in height to two diameters of an anterior median eye. First row of eyes lightly procurved, essentially straight, the median separated by the radius, slightly nearer the smaller lateral eyes. Second row straight, the broadly oval median separated by the diameter, somewhat farther from the subequal lateral eyes. Median ocular quadrangle broader than long (24/21), narrowed behind (24/20), the eyes subequal. Sternum only slightly longer than broad, subtriangular, bluntly rounded behind between the posterior coxae which are separated by scarcely their length.

Legs of moderate length. First leg: femur, 1.15 mm., patella, 0.36 mm., tibia, 0.75 mm., metatarsus, 0.90 mm., and tarsus, 0.46 mm. long.

Abdomen suborbicular, almost as high as long, broadly rounded and declining behind. Epigynum as illustrated in Fig. 21.

**TYPE LOCALITY.**—Female holotype from Bear Wallow, Santa Catalina Mountains, Arizona, July 12–15, 1940 (W. J. Gertsch and L. Hook).

The coloration of the legs, the complete lack of dorsal pattern on the abdomen and the details of the epigynum will separate *catalinae* from *arcadicum*, *sexpunctatum* and related species.

## ***Theridion dividuum*, new species**

Figure 29

**MALE.**—Total length, 1.30 mm. Carapace, 0.55 mm. long, 0.52 mm. wide. Abdomen, 0.74 mm. long, 0.60 mm. wide.

Carapace bright yellow behind, the front with a large round black spot which covers most of the clypeus, the sides of the head, the eyes and goes back about one-half the total length. Edge of clypeus and chelicerae yellow. Sternum and mouth parts bright yellow, very sparsely set with erect black setae. Legs bright yellow, concolorous or nearly so with the carapace, faintly dusky. Abdomen white, the tip with a large black spot; venter with a black spot just behind the genital furrow.

Clypeus subvertical, equal in height to slightly more than twice the diameter of an anterior

median eye. First eye row procurved as seen from in front, the round median separated by their diameter, half as far from the subequal oval lateral eyes. Second row straight, the median separated by two diameters, three-fourths as far from the subequal lateral eyes. Median ocular quadrangle broader than long (21/17), slightly wider in front (21/19), the anterior eyes slightly larger. Sternum subcordate, about as long as broad, bluntly pointed behind where the posterior coxae are separated by their length.

Legs of normal length. First leg: femur, 0.87 mm., patella, 0.23 mm., tibia, 0.70 mm.; terminal joints missing.

Abdomen suboval, two-thirds as high as long, broadly rounded behind.

Palpus as illustrated in Fig. 29.

**TYPE LOCALITY.**—Male holotype from Pea River Project, Dale County, Alabama, summer, 1940 (A. F. Archer).

### *Theridion jeanae*, new species

Figures 25 and 26

**MALE.**—Total length, 3.40 mm. Carapace, 1.68 mm. long, 1.44 mm. wide. Abdomen, 1.80 mm. long, 1.30 mm. wide.

Carapace dull yellow, unmarked except for the black eye tubercles, clothed sparsely with short erect black hairs. Sternum yellow, set with erect black hairs. Labium, maxillae and chelicerae somewhat darker yellow. Legs brighter yellow, unmarked except for a faint dusky annulus at distal end of the tibiae, clothed with rows of rather long black setae. Abdomen light gray, with a small black spot at base and three longitudinal rows of small black spots, two in the middle row and four on each side, of which the caudal spots are fainter. Venter unmarked, the basal plate yellowish.

Structure essentially typical, much as in *Theridion tepidariorum*. Clypeus essentially vertical, rather high, grooved below the first eye row, equal in height to four diameters of an anterior median eye. First row of eyes gently procurved as seen from in front, the dark median eyes separated by scarcely their diameter, somewhat nearer the subequal lateral eyes. Second row essentially straight, the median separated by the short diameter, one and one-half the short diameter from the subequal lateral eyes. Median ocular quadrangle forming a square, as wide in front as behind, the eyes subequal. Sternum subcordate, about as broad as long, bluntly pointed between the posterior coxae which are separated by their width.

Legs rather long, the first femur scarcely twice as long as the carapace. First leg: femur, 3.20 mm., patella, 0.80 mm., tibia, 3.12 mm., metatarsus, 3.20 mm., and tarsus, 1.25 mm. long.

Abdomen oval, moderately high. Palpus as illustrated in Fig. 26.

**FEMALE.**—Total length, 5.15 mm. Carapace,

1.80 mm. long, 1.60 mm. wide. Abdomen, 3.35 mm. long, 3.30 mm. wide.

Coloration essentially as in the male except as follows: Legs faintly annulate with sub-basal and subdistal rings on femora, tibiae and metatarsi. Abdomen suborbicular, strongly elevated, marked as in the male but the spots more extensive, confluent at base to form a broad maculation. Venter with a transverse dusky band which continues up the sides. Structure differing from the male as follows: Clypeus sloping forward, equal in height to three diameters of an anterior median eye. Second row of eyes moderately procurved. Legs proportionately shorter. First leg: femur, 2.80 mm., patella, 0.90 mm., tibia, 2.45 mm., metatarsus, 2.45 mm., and tarsus, 1.20 mm. long. Epigynum as illustrated in Fig. 25.

**TYPE LOCALITY.**—Male holotype and female allotype from Summer Haven, Santa Catalina Mountains, Arizona, July 14, 1940, taken in sweeping (Jean M. Gertsch).

### *Theridion ritae*, new species

Figure 22

**MALE.**—Total length, 2.20 mm. Carapace, 0.94 mm. long, 0.85 mm. wide. Abdomen, 1.28 mm. long, 0.96 mm. wide.

Carapace yellow, slightly dusky, with faint radiating black lines on the pars thoracica, the eyes narrowly ringed with black. Sternum yellow, the margins with an irregular dusky seam, clothed with erect black setae. Chelicerae, labium and maxillae light yellowish brown. Legs yellow, unmarked except for faint narrow black rings at distal end of tibiae and metatarsi. Abdomen with a median longitudinal paler stripe, flecked in black, somewhat wider at middle than at either end, the sides darker, speckled with black and white. Venter dusky, the sclerotized plate in front of the genital furrow half as long as the abdomen, dusky yellow in color, with white flecks in front of the spinnerets. An immature male is marked essentially as in *Theridion zelotypum* Emerton, and its pattern probably approximates that of the female of *ritae* which is unknown.

Carapace rather strongly elevated, the subvertical clypeus equal in height to two and one-half diameters of an anterior median eye. First row of eyes gently procurved, the round median separated by their diameter, half as far from the smaller oval lateral eyes. Second row of eyes moderately procurved, the suboval median separated by the short diameter, the long diameter from the somewhat smaller lateral eyes. Median ocular quadrangle as broad as long, wider in front (25/21), the eyes subequal. Pars cephalica protruding forward a moderate distance over the clypeus. Sternum as broad as long, subtriangular, bluntly pointed behind where the fourth coxae are separated by scarcely their length.

Legs relatively long, the first femur more than twice as long as the carapace. First leg: femur, 2.10 mm., patella, 0.47 mm., tibia, 1.87 mm., metatarsus, 1.90 mm., and tarsus, 0.59 mm. long.

Abdomen suboval, moderately elevated, three-fourths as high as long, rounded behind. Palpus as illustrated in Fig. 22.

**TYPE LOCALITY.**—Male holotype and immature male paratype from Madera Canyon, Santa Rita Mountains, Arizona, July 16, 1940 (W. J. Gertsch).

The palpus of this species is very distinct from most other forms, as shown in the figures. In some respects it resembles that of *spirale* but the fine embolus is not coiled.

### *Theridion lawrencei*, new species

Figure 23

**MALE.**—Total length, 2.15 mm. Carapace, 1.00 mm. long, 0.90 mm. wide. Abdomen, 1.30 mm. long, 0.90 mm. wide.

Carapace pale yellow, with a narrow marginal black seam and with a dusky longitudinal band which includes the ocular group and narrows gradually caudad to the margin where it is one-third as wide. Clypeus dusky, with a black patch above the chelicerae. Sternum pale yellow, margined with a broad dusky band. Mouth parts darker. Legs pale yellowish brown, strongly marked with broad black annulae at middle and at distal ends of femora, tibiae and metatarsi. Dorsum of abdomen with scattered black markings on the darker sides, medially with a longitudinal paler stripe the whole length which is filled with white flecks. Venter paler, with white flecks and four small black spots behind the dusky basal plate.

Structure typical, in close agreement with *Theridion placens* Keyserling. Clypeus subvertical, grooved just below the first eye row, equal in height to two diameters of an anterior median eye. First eye row gently procurved as seen from in front, essentially straight, the median separated by their diameter, half as far from the slightly smaller lateral eyes. Second row very gently procurved, essentially straight, the median separated by four-fifths their diameter, a full diameter from the subequal lateral eyes. Median ocular quadrangle as broad as long, narrowed behind (31/30), the eyes subequal in size. Sternum slightly longer than wide, subtriangular, narrowly truncated between the posterior coxae which are separated by scarcely their width.

Legs relatively long as in *placens* and related species. First leg: femur, 2.20 mm., patella, 0.48 mm., tibia, 2.00 mm., metatarsus, 2.20 mm., and tarsus, 0.75 mm. long.

Palpus as illustrated in Fig. 23.

**TYPE LOCALITY.**—Male holotype from

Jackson County, Oregon, June–July, 1935 (Fred Lawrence).

This species is closely allied to *placens* Keyserling and *leechi*, new species. The specific differences are best shown in the details of the apophyses of the male palpus which is figured.

### *Theridion leechi*, new species

Figures 19 and 20

**FEMALE.**—Total length, 3.05 mm. Carapace, 1.15 mm. long, 1.00 mm. wide. Abdomen, 1.95 mm. long, 1.70 mm. wide.

Carapace pale yellowish, with a narrow longitudinal dusky stripe as wide as the posterior median eyes and which goes back to the caudal margin. Under side of carapace and the appendages concolorous with the carapace, without contrasting markings. Abdomen creamy white above, with a few indistinct dusky reticulations. Venter gray, with a band of white spots just behind the genital furrow which does not reach the spinnerets. Dorsum of abdomen in some specimens with a gray to black stripe on each side.

Structure typical, in close agreement with *Theridion placens* Keyserling. Carapace of moderate height, the pars cephalica only slightly higher than the pars thoracica. Clypeus subvertical, equal in height to three diameters of an anterior median eye. First row straight as seen from in front, the dark median separated by one and one-half their diameter, scarcely a diameter from the subequal lateral eyes. Second row of eyes straight, the median separated by one and one-fourth times their diameter, a full diameter from the subequal lateral eyes. Median ocular quadrangle broader than long (30/26), narrowed behind (30/27), the eyes subequal in size. Sternum subtriangular, rounded behind, the posterior coxae separated by their width.

Legs relatively long. First leg: femur, 2.30 mm., patella, 0.55 mm., tibia, 2.00 mm., metatarsus, 2.15 mm., and tarsus, 0.74 mm. long.

Epigynum as illustrated in Fig. 20.

**MALE.**—Total length, 3.00 mm. Carapace, 1.25 mm. long, 1.05 mm. wide. Abdomen, 1.80 mm. long, 1.10 mm. wide.

Carapace and appendages marked essentially as in the female, somewhat darker yellowish brown. Legs with a dusky annulus at distal end of femora and tibiae. Abdomen with a median longitudinal white stripe which is flanked by dusky side bands which enclose black spots. Venter gray, with a large black maculation in front of spinnerets.

Structure typical for the group, in close agreement with *placens*. Clypeus equal in height to three and one-half diameters of an anterior median eye. First row of eyes straight, the dark median separated by slightly more than the diameter, as far from the subequal lateral eyes. Second row of eyes straight, the median sepa-



rated by their full diameter, somewhat farther from the subequal lateral eyes. Median ocular quadrangle as broad as long, as wide behind as in front. Chelicera with a basal enlargement which in lateral view appears as a blunt process.

First leg: femur, 2.55 mm., patella, 0.55 mm., tibia, 2.50 mm.; other distal joints missing on both front legs. Palpus as illustrated in Fig. 19.

**TYPE LOCALITY.**—Male holotype and female allotype from Salmon Arm, British Columbia, May 25, 1938 (O. R. Leech).

### ***Theridion mohave*, new species**

Figure 8

**FEMALE.**—Total length, 2.50 mm. Carapace, 0.85 mm. long, 0.73 mm. wide. Abdomen, 1.70 mm. long, 1.60 mm. wide.

Carapace pale yellow, unmarked except for narrow brown rings around the eyes, the clothing sparse. Sternum, mouth parts and coxae pale yellow, set with scattered hairs. Legs pale yellow, almost white, with a small median and an apical dark spot or band beneath the tibiae and metatarsi, the remnants of annulae. Abdomen creamy white or nearly so, reticulated with gray, unmarked above but the venter with two round black spots just behind the epigynum.

Structure typical, in close agreement with *Theridion australe* Banks. Clypeus subvertical, slightly excavated below the first eye row, equal in height to two diameters of an anterior median eye. First row of eyes procurved as seen from in front, the median separated by three-fifths their diameter, one-third as far from the smaller lateral eyes. Second row gently procurved, essentially straight, the median separated by their radius, a little farther from the subequal lateral eyes. Median ocular quadrangle broader than long (29/28), narrowed behind (29/26), the eyes subequal. Sternum slightly longer than broad, subtriangular, bluntly rounded between the posterior coxae which are separated by their width.

Legs of average length. First leg: femur, 1.44 mm., patella, 0.40 mm., tibia, 1.00 mm., metatarsus, 1.07 mm., and tarsus, 0.47 mm. long.

Abdomen suborbicular. Epigynum as illustrated in Fig. 8.

**TYPE LOCALITY.**—Female holotype and a female paratype probably not fully adult from near Twenty Nine Palms, Mohave Desert, California, August, 1939 (John A. Anderson).

### ***Theridion indianorum*, new species**

Figures 4 and 5

**MALE.**—Total length, 1.90 mm. Carapace, 0.80 mm. long, 0.75 mm. wide. Abdomen, 1.15 mm. long, 0.75 mm. wide.

Carapace orange, the pars cephalica black. Chelicerae orange except for the dusky tips.

Maxillae dusky over orange. Labium dusky. Sternum and legs yellow, unmarked. Abdomen yellow in most specimens but not rarely all or nearly all scarlet, the dorsum with small white spots and a pair of brown spots in the center. Epigastric plate dark yellow.

Carapace widely cordate, the pars cephalica broad and blunt; in profile, the ocular region little elevated, prominent over the convex clypeus, the rest of the carapace slanting gently backward; the clypeus slanting outward to the base of the chelicerae. Posterior row of eyes procurved; anterior row procurved. Chelicerae elongate, conical, the tips not produced. Maxillae elongate, triangular. Labium wide. Anterior border of sternum nearly straight, widest between first coxae, diminishing gradually behind to a wide point between fourth coxae.

Legs 1243, the first pair very long and slender, the first femur with two long hairs on the ventral surface, the first three patellae with a long distal hair, the fourth patella with a long proximal hair. First leg: femur, 1.44 mm., patella, 0.32 mm., tibia, 1.25 mm., metatarsus, 1.32 mm., and tarsus, 0.52 mm. long.

Abdomen slender, oval, not elevated.

Palpus as illustrated in Fig. 4. The details of the palpus are essentially as in *australe*, but the whole appendage is much less robust.

**FEMALE.**—Total length, 2.10 mm. Carapace, 0.80 mm. long, 0.70 mm. wide. Abdomen, 1.35 mm. long, 1.05 mm. wide.

Carapace as in the male, but the black patch on the pars cephalica more extensive. Last half of the chelicerae nearly black. Maxillae and labium nearly black. Abdomen pale yellow to scarlet with scattered yellowish spots on each side of the dorsum; medially with a well-marked yellow and white-bordered folium, expanding behind the base and with two scallops on the highest elevation, parallel-sided from there to the caudal end; a pair of brown muscle scars present on each side of the center of the dorsum.

Carapace similar to that of the male, but the pars cephalica not quite as broad. Chelicerae stouter than those of the male, the apical third a little constricted.

Legs very similar to those of the male, the first pair very long, with scattered hairs, those on the ventral surface of the femora very long; first and second patellae with very slender distal spines. First leg: femur, 1.30 mm., patella, 0.35 mm., tibia, 0.96 mm., metatarsus, 1.10 mm., and tarsus, 0.46 mm. long.

Abdomen oval, moderately elevated above the pedicel, the apex bluntly rounded.

Epigynum as illustrated in Fig. 5.

**TYPE LOCALITY.**—Male holotype and female allotype and paratypes from Indian Town, Martin County, Florida, March 28, 1938 (W. J. Gertsch). Two male paratypes from Okeechobee, Florida, March 26, 1938 (W. J. Gertsch). Male and female paratypes from Englewood, Florida, April

1-4, 1938 (W. J. Gertsch). Male and female paratypes from north of Olney, Osceola County, Florida, March 27, 1938 (W. J. Gertsch). Male and female paratypes from Blountstown, Florida, April 18, 1938 (W. J. Gertsch). Female paratype from Quincy, Gadsden County, Florida, December 1, 1934 (H. K. Wallace, 357).

This species is related to *Theridion australe* Banks. It is easily differentiated by the smaller size, distinctive color pattern, and by the considerable differences in the palpus and epigynum which are illustrated.

### *Theridion serenoae*, new species

Figures 27 and 28

MALE.—Total length, 1.65 mm. Carapace, 0.80 mm. long, 0.70 mm. wide. Abdomen, 0.90 mm. long, 0.76 mm. wide.

Carapace dark gray to black, darker on the lateral markings, the pars cephalica black. Chelicerae, maxillae and labium dark gray; palpi dark gray except on the genital bulb. Sternum black. Coxae gray, the trochanters dirty white. Femora white except for a patch of dark gray on the ventral surface and a wide dark gray band on the distal end; third femora with a ruddy zone just at the joint; patellae ruddy brown except for the junction with the femora; tibiae dirty white with two wide ruddy brown bands; metatarsi and tarsi the same and with a wide ruddy band except that the fourth metatarsus has a distal black band. Dorsum of abdomen black except for white patches and red spots, the apical portion with a white patch with red dots, the patch being bordered with black spots merging into crimson or red on the sides; sides also mottled with white and black spots. Area around spinnerets bright red with black patches. Venter bright red in front of the spinnerets. Epigastric plates nearly black.

Carapace cordate, rather broad, the sides curved, the pars cephalica wide; in profile, carapace sloping back from ocular prominence. Ocular area a little elevated, very prominent over the deep clypeus; clypeus sloping forward from the fossa below the eyes to the base of the chelicerae. Posterior row of eyes straight; anterior row procurved; lateral eyes nearly contiguous; the others as in *Theridion rupicola*. Sternum broad, truncated anteriorly, narrowing rather abruptly in the posterior portion to a blunt point between the fourth coxae. Chelicerae elongate, tapering from base to apex, sloping outward slightly, the apex produced. Maxillae convergent, rather long, bluntly terminated. Labium wide.

Legs long and slender, more or less clothed with fine hairs; each patella with a slender spine near the distal border; first and second tibiae

with two exterior spines; the fourth tibiae with one dorsal spine. First leg: femur, 1.40 mm., patella, 0.32 mm., tibia, 1.00 mm., metatarsus, 1.10 mm., and tarsus, 0.50 mm. long.

Abdomen blunt in area of shoulders, narrow, tapering to the produced spinnerets; roundly elevated over the pedicel, with a prominent hump on the dorsum in the middle, well above the apex.

Palpus as illustrated in Fig. 27.

FEMALE.—Total length, 2.20 mm. Carapace, 0.83 mm. long, 0.72 mm. wide. Abdomen, 1.40 mm. long, 1.26 mm. wide.

Carapace and appendages as in the male, although tending to have an even darker hue. Palpi dark brown, blackish at the joints. Legs as in the male except for the black rings on the distal end of fourth femur and the very wide band at the distal end of fourth metatarsus. Abdomen of nearly the same color as in the male, but in some females the black on the base is partly replaced by red and white mottling.

Carapace essentially as in the male but more convex in profile. Chelicerae proportionately shorter and stouter than those of the male and less produced. Legs proportionately stouter than those of the male and slightly shorter. First leg: femur, 1.30 mm., patella, 0.38 mm., tibia, 0.83 mm., metatarsus, 0.95 mm., and tarsus, 0.46 mm. long. Abdomen rounded, wide behind the base, bilobate at the base, much higher than the distance from the pedicel to the spinnerets, the dorsum very convex and with the hump prominent. Epigynum as illustrated in Fig. 28.

TYPE LOCALITY.—Male holotype, female allotype and male and female paratypes from Dauphin Island, Mobile County, Alabama, July 29, 1940 (A. F. Archer). Gulf State Park, Baldwin County, Alabama, August 23-24, 1940, male and female paratypes (A. F. Archer). The species is widespread in Florida: Micco, Brevard County, December 30, 1940, females (A. F. Archer). Royal Palm State Park, Dade County, December 27-28, 1940, females (A. F. Archer). All specimens were taken from saw palmettoes and other species of palms.

This pretty species is similar in general appearance to *Theridion rupicola* Emerton. It may be distinguished by its brighter color and by the details of the genitalia.

### *Theridion catapetraeum*, new species

Figure 7

FEMALE.—Total length, 2.50 mm. Carapace, 1.05 mm. long, 0.95 mm. wide. Abdomen, 1.50 mm. long, 1.35 mm. wide.

Carapace greenish gray, speckled, paler be-

hind, the ocular region almost black. Palpi greenish gray. Lateral borders of chelicerae gray, the rest dirty white. Maxillae and labium brownish gray. Sternum sooty. Legs pale with dusky bands as in *Theridion rupicola*. Base of abdomen a deep gray, densely spotted with black, a longitudinal line present, and with white patches on each side; with black patches in front of the hump, the caudal side of hump with a white patch; zone between base and apex with a black zone whose edge is lobate; succeeded caudally by white mottling, flecked with black and brown; posterior wrinkles flecked with white and black; a white patch present above the black ring around the spinnerets. Venter nearly black, with some white mottling. Epigastric plates greenish gray.

Carapace widely cordate, the pars cephalica blunt, triangular with apex caudad; in profile, carapace of about equal elevation. Anterior row of eyes procurved; posterior row straight; anterior and posterior median eyes about the same distance apart; posterior median eyes closer to posterior lateral than to each other; lateral eyes closely approximated. Ocular region not noticeably elevated, prominent over clypeus. Clypeus slanting to base of chelicerae. Chelicerae conical, slender, flattened in front, the ends not produced. Anterior border of sternum slightly curved caudad, wide in front, narrowing to a blunt point behind.

Legs long and slender, with scattered hairs. First leg: femur, 1.90 mm., patella, 0.52 mm., tibia, 1.33 mm., metatarsus, 0.63 mm., and tarsus, 0.70 mm. long. First, second and fourth tibiae with two dorsal spines; third tibia with one spine; patellae with distal and proximal dorsal spines.

Abdomen high, rounded, elevated at the base but not overlapping pedicel very pronouncedly, higher than long; a definite, blunt hump present behind the greatest elevation. Epigynum as illustrated in Fig. 7.

**TYPE LOCALITY.**—Female holotype from a slash-pine woods just north of Royal Palm State Park, Dade County, Florida, December 27–29, 1940 (A. F. Archer). Subadult female paratype from the same locality. This species is also known from some localities in Alabama south of the fall line. It hides under rocks and other objects much as does *Theridion rupicola*.

This species resembles *rupicola* in coloration and general appearance. It may be distinguished from that species and from the related *serenoae* by the epigynum which differs from both in being an open pit. In these species, and in related forms from Mexico, the abdomen has a caudal hump, a character which sets them apart as a group from all other true Theridiids.

### **Theridion paradisiacum, new species**

Figures 32, 33 and 34

*Theridion unimaculatum* KEYSERLING, 1884, "Die Spinnen Amerikas, Theridiidae," I, p. 41, Pl. II, fig. 21 (part).

**MALE.**—Total length, 1.75 mm. Carapace, 0.78 mm. long, 0.78 mm. wide. Abdomen, 1.00 mm. long, 0.74 mm. wide.

Carapace orange except for a dusky band from the ocular region to the median groove. Posterior eyes ringed with black, and a black patch extending from anterior eyes to clypeus. Sternum orange. Chelicerae orange, faintly dusky in the region of the claws. Labium dusky. Femora orange except for dusky gray covering the distal half of segment, the gray becoming black on the dorsal aspect; patellae dusky over yellow; tibiae and terminal joints dusky over yellow. Abdomen dirty white, with a patch of dark gray in the middle of the dorsum, and a black zone bordering the posterior portion of the spinnerets. Epigastric plate with a W-shaped zone of gray on posterior half, but becoming yellowish toward the pedicel.

Carapace broadly cordate, the pars cephalica prominent above the clypeus; in profile, carapace flattened and low. Posterior row of eyes straight; anterior row of eyes procurved; posterior median eyes separated from posterior lateral and also from each other by the diameter of one of them; anterior median closer to anterior lateral than to each other; lateral eyes contiguous. Sternum broad, truncate in front, narrowed behind. Chelicerae as in *Theridion unimaculatum*, with a small angular tooth on the furrow.

Legs of medium length, with fine hairs on femora, longer on distal end as well as on tibiae and metatarsi. Inner faces of metatarsi with two diverging rows of spines, three in each row; inner face of tarsi with similar spines, two in each row. First leg: femur, 1.15 mm., patella, 0.33 mm., tibia, 0.95 mm., metatarsus, 0.66 mm., and tarsus, 0.42 mm. long.

Abdomen ovate, the base not strongly elevated above the pedicel.

Palpus as illustrated in Fig. 34.

**FEMALE.**—Total length, 2.00 mm. Carapace, 0.80 mm. long, 0.90 mm. wide. Abdomen, 1.20 mm. long, 0.90 mm. wide.

Carapace as in the male but the longitudinal dusky zone wider and more diffused; the area in front of the front eyes orange, the dusky coloration being confined to the zone around the eyes and to the space between the anterior and posterior median eyes. Chelicerae orange; maxillae orange except for duskiness at distal end. Legs yellow with an overtone of light gray, especially on the distal half of the femora and the external faces of the tibiae. Abdomen dirty white, with a longitudinal patch of gray on the dorsum and a zone of dark gray or black on the sides, this zone having an irregular wavy border. Epigastric plates light yellow.

Carapace essentially as in the male, but the

pars cephalica not produced. Posterior row of eyes slightly procurved; anterior row recurved; posterior median eyes closer to anterior lateral than to posterior lateral, and separated from each other by the diameter of one. Chelicerae stout, broad at the base and gently tapering.

Legs short, provided with fine, long hairs. First leg: femur, 1.05 mm., patella, 0.33 mm., tibia, 0.84 mm., metatarsus, 0.73 mm., and tarsus, 0.40 mm. long.

Abdomen broadly ovate. Epigynum as illustrated in Figs. 32 and 33.

**TYPE LOCALITY.**—Male holotype, female allotype and paratypes from Hillsborough River State Park, Hillsborough County, Florida, April 8, 1938 (W. J. Gertsch). Male and female paratypes from Indian Town, Florida, March 28, 1938 (W. J. Gertsch). Male paratype from Okeechobee, Florida, March 26, 1938 (W. J. Gertsch). Female paratype from near Trilby, Florida, April 8, 1938 (W. J. Gertsch). Male and female paratypes from Highland Hammock State Park, near Sebring, Florida, March 24, 1938 (W. J. Gertsch). Female paratype from woods south of Sarasota, Florida, December 26, 1940 (A. F. Archer). Male paratype from Brown's Station, Dallas County, Alabama, April 24, 1940. Female paratype from Grove Hill, Clarke County, April 10, 1940 (A. F. Archer).

This small species is very closely allied to *Theridion unimaculatum* Emerton with which it has probably been confused. It is quite probable that Keyserling's description and figures in "Die Spinnen Amerikas" attributed to *unimaculatum* in reality belong with *paradisiacum*. Keyserling's material came from Enterprise, Florida, but he also mentions specimens from Pennsylvania. *Theridion paradisiacum* is easily differentiated by the differences in the color pattern and by the genitalia.

### ***Theridion maderae*, new species**

Figures 30 and 31

**FEMALE.**—Total length, 1.25 mm. Carapace, 0.48 mm. long, 0.48 mm. wide. Abdomen, 0.80 mm. long, 0.80 mm. wide.

Carapace bright yellow to orange brown, unmarked except for the narrow black rings around

the eyes, clothed with several weak hairs on the mid-line and in the ocular region. Sternum, mouth parts and legs concolorous, clothed sparsely with black hairs. Abdomen gray to white, without contrasting markings, clothed with inconspicuous hairs.

Structure in close agreement with *Theridion unimaculatum* Emerton. Carapace moderately high, convex, the clypeus subvertical, equal in height to four times the diameter of an anterior median eye. First eye row slightly procurved as seen from in front, the dark median separated by their diameter, about half as far from the lateral eyes which are twice as large. Second row of eyes gently recurved, the broadly oval median separated by three-fourths the short diameter, one-third the short diameter from the subequal lateral eyes. Median ocular quadrangle broader than long (19/14), narrowed in front (19/15), the front eyes about half as large as the posterior. Sternum slightly broader than long, rather broadly truncated between the posterior coxae which are separated by a little more than their length.

Legs of average length. First leg: femur, 0.55 mm., patella, 0.19 mm., tibia, 0.36 mm., metatarsus, 0.35 mm., and tarsus, 0.28 mm. long.

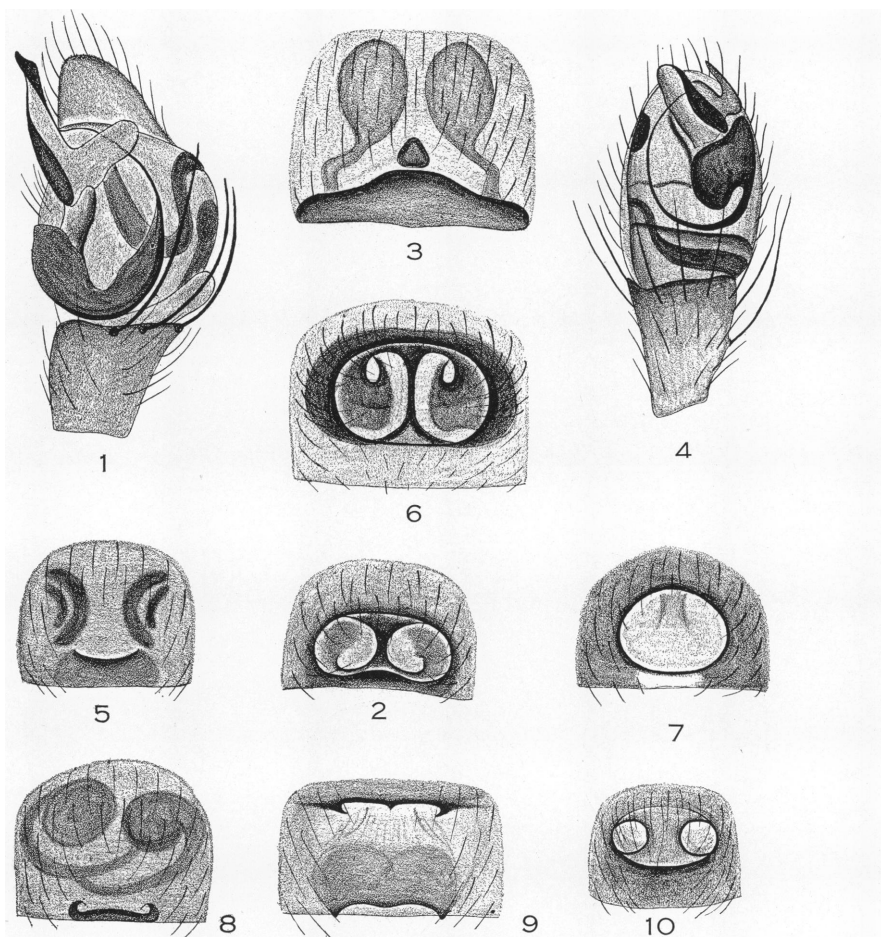
Abdomen suborbicular as seen from above, higher than long as seen from the side. Epigynum as illustrated in Fig. 31.

**MALE.**—Total length, 1.10 mm. Carapace, 0.55 mm. long, 0.37 mm. wide. Abdomen 0.55 mm. long, 0.55 mm. wide.

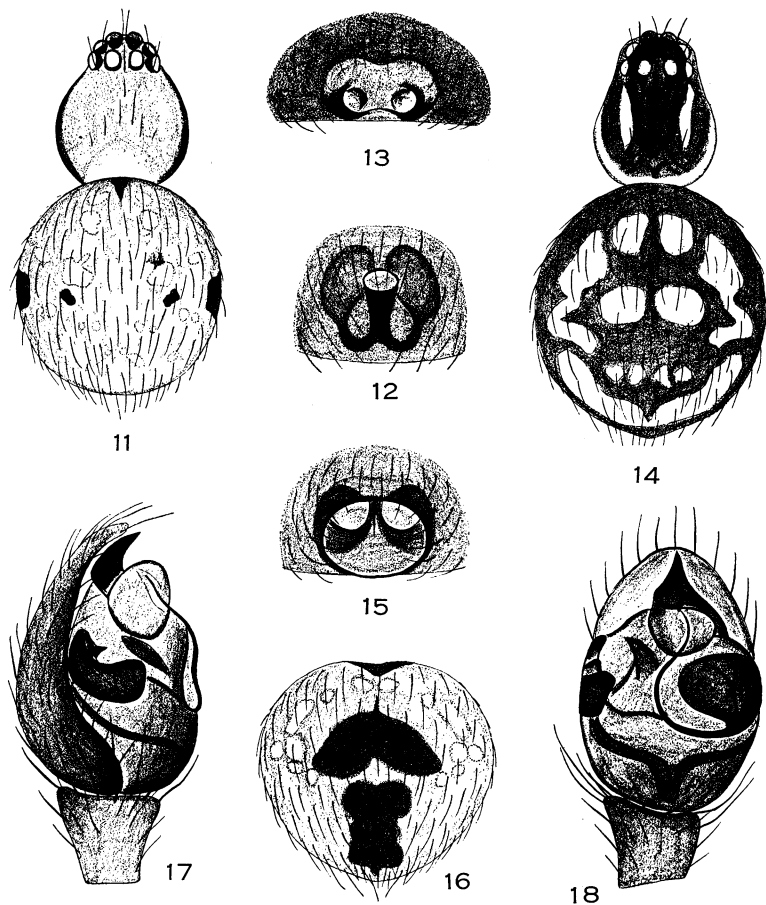
Coloration in close agreement with the female. Structure essentially as in that sex but differing as follows: Clypeus vertical, very much higher, about twice as high as the length of the eye group. Head relatively higher. Eyes as in the female, but those of the posterior row nearly equidistantly spaced. First leg: femur, 0.56 mm., patella, 0.17 mm., tibia, 0.43 mm., metatarsus, 0.34 mm., and tarsus, 0.28 mm. long. Palpus as illustrated in Fig. 30.

**TYPE LOCALITY.**—Male holotype and female allotype and paratype from Madera Canyon, Santa Rita Mountains, Arizona, June 24, 1939 (A. M. and L. I. Davis). Female paratype from Bear Wallow, Santa Catalina Mountains, July 12–15, 1940 (W. J. Gertsch).

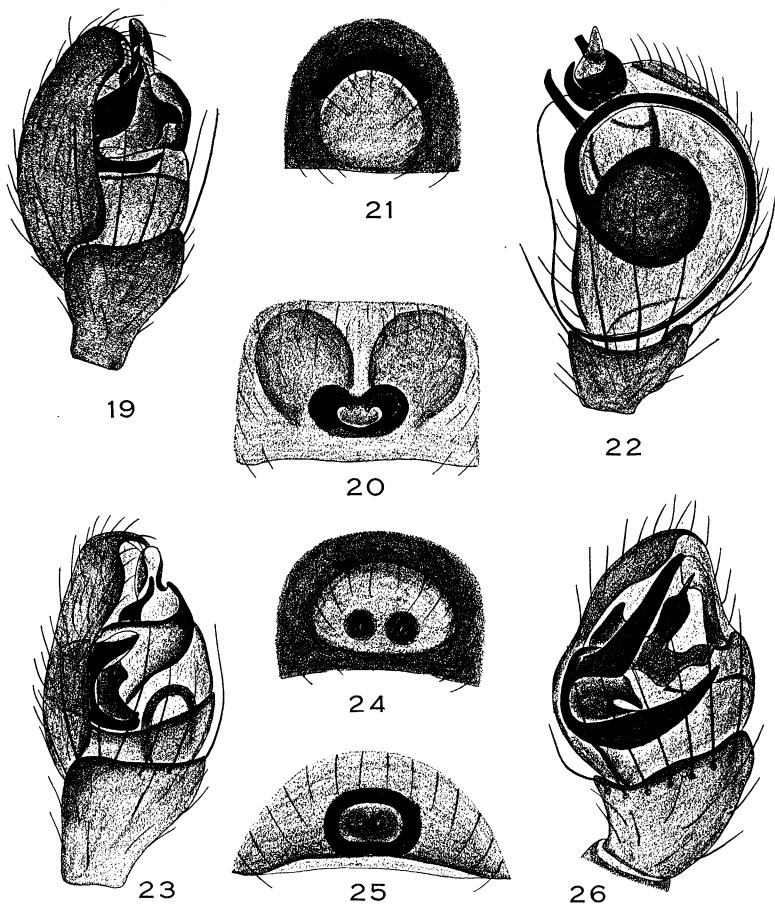
This species is closely allied to *Theridion unimaculatum* Emerton and *paradisiacum*, new species. The carapace and the abdomen of *maderae* completely lack the distinctive black markings present in these species. More significant differences are provided by the details of the genitalia which are figured.



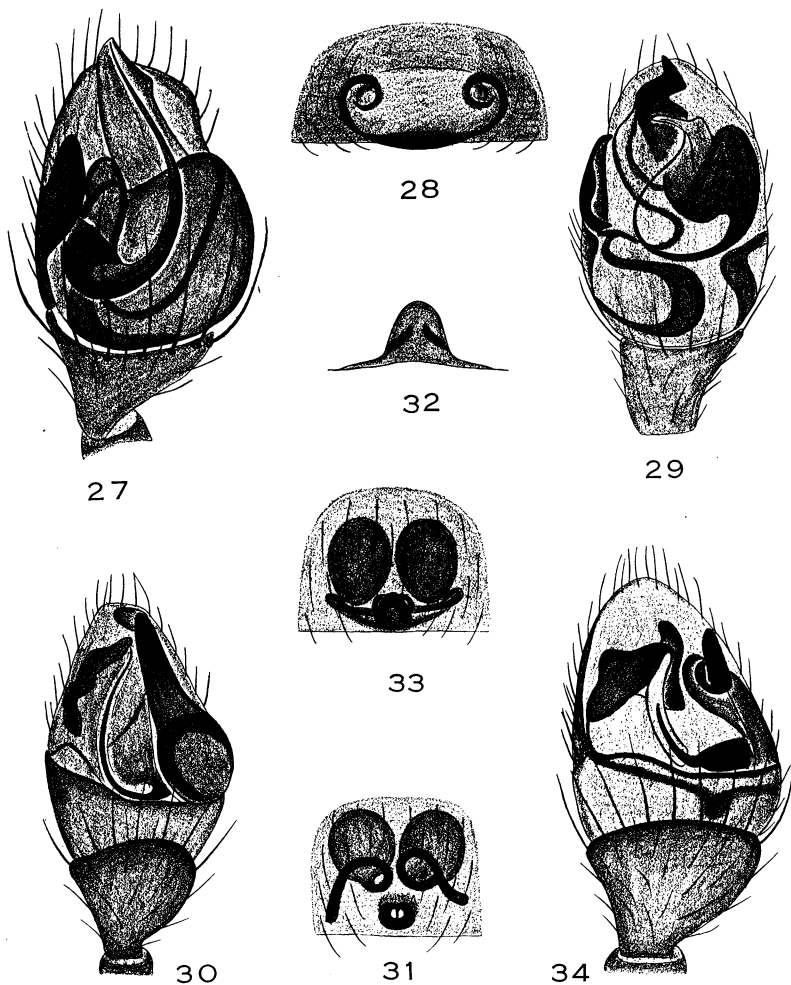
- Fig. 1. *Theridion sex-setosum* Barrows, left male palpus, retrolateral view.  
 Fig. 2. *Theridion wallacei*, new species, epigynum of female.  
 Fig. 3. *Theridion zelotypum* Emerton, epigynum of female.  
 Fig. 4. *Theridion indianorum*, new species, left male palpus, ventral view.  
 Fig. 5. *Idem*, epigynum of female.  
 Fig. 6. *Theridion hobbsi*, new species, epigynum of female.  
 Fig. 7. *Theridion catapetraeum*, new species, epigynum of female.  
 Fig. 8. *Theridion mohave*, new species, epigynum of female.  
 Fig. 9. *Crustulina altera*, new species, epigynum of female.  
 Fig. 10. *Theridula regia*, new species, epigynum of female.



- Fig. 11. *Theridion dulcineum*, new species, dorsal view of female, appendages omitted.  
 Fig. 12. Idem, epigynum of female.  
 Fig. 13. *Theridion sex-setosum* Barrows, epigynum of female.  
 Fig. 14. Idem, dorsal view of female, appendages omitted.  
 Fig. 15. *Theridion cheimatos*, new species, epigynum of female.  
 Fig. 16. Idem, dorsal view of abdomen of female.  
 Fig. 17. *Theridion dulcineum*, new species, left male palpus, lateral view.  
 Fig. 18. Idem, left male palpus, ventral view.



- Fig. 19. *Theridion leechi*, new species, left male palpus, subventral view.  
 Fig. 20. *Idem*, epigynum of female.  
 Fig. 21. *Theridion catalinae*, new species, epigynum of female.  
 Fig. 22. *Theridion ritae*, new species, left male palpus, ventral view.  
 Fig. 23. *Theridion lawrencei*, new species, left male palpus, subventral view.  
 Fig. 24. *Theridion arcadicum*, new species, epigynum of female.  
 Fig. 25. *Theridion jeanae*, new species, epigynum of female.  
 Fig. 26. *Idem*, left male palpus, ventral view.



- Fig. 27. *Theridion serenoae*, new species, left male palpus, subventral view.  
 Fig. 28. Idem, epigynum of female.  
 Fig. 29. *Theridion dividuum*, new species, left male palpus, ventral view.  
 Fig. 30. *Theridion maderae*, new species, left male palpus, ventral view.  
 Fig. 31. Idem, epigynum of female.  
 Fig. 32. *Theridion paradisiacum*, new species, epigynum of female, caudal view  
 Fig. 33. Idem, epigynum of female.  
 Fig. 34. Idem, left male palpus, ventral view.