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NEW SPECIES OF CYMATODERA FROM THE SOUTHWESTERN UNITED STATES AND NORTHERN MEXICO (COLEOPTERA, CLERIDAE)¹

By William F. Barr²

In order that the names may be used in a forthcoming paper on the Cleridae of northern Mexico by Patricia Vaurie, two new species of *Cymatodera* are described at this time. Both species were abundantly represented in the collections of the David Rockefeller Mexican Expedition.

Cymatodera werneri Barr, new species

MALE: Small size, slender, dark brown, antennae, mouth parts, and hind margin of pronotum, legs, and ventral surface dark testaceous; elytra with a broad, antemedian, irregularly margined, testaceous fascia. Head finely, very sparsely punctured, densely but inconspicuously clothed with short, semirecumbent and suberect, fine, pale hairs, sparsely intermixed with long, erect hairs; front distinctly convex; eyes large, distance between them slightly more than one and one-half times the length of last antennal segment; antenna robust, extending to middle of elytra, serrate from fifth segment, segments nearly cylindrical, ratio of lengths of segments 1 to 11, 7:4:5:4:7:7:7:7:7:7:10, last segment cylindrical, pointed at apex; maxillary palpus with last segment slender, sides broadest in front of middle, tapering towards apex, apical margin narrowly rounded. Prothorax finely, very sparsely punctured, densely

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but inconspicuously clothed with short, semirecumbent, fine, pale hairs and short and long, erect and suberect, stiffer hairs; pronotum broader along front margin than hind margin (20:18), broadest at middle, about one and two-thirds times longer than median width (36:31); sides weakly constricted in front of middle, strongly constricted behind middle; disk feebly convex, with transverse impressions in front of and at middle; antescuteller impression feebly indicated, subbasal tumescences absent. Scutellum rounded; disk convex, strongly punctured; hind margin notched at middle. Elytra densely but inconspicuously clothed with very short and short, semirecumbent and suberect, pale hairs, moderately intermixed with longer, erect hairs; length along suture slightly less than two and one-fourth times the width behind humeri (99:45); postscutellar impression nearly wanting; humeri distinct; sides more or less parallel; apices broadly rounded, sutural angles narrowly rounded; disk feebly convex. striae extending behind middle, strial punctures round, deep, moderate in size, becoming shallower apically, interstrial spaces one to four at middle, broader than width of strial punctures, remaining interstrial spaces narrower than width of punctures. Mesosternum finely, moderately punctured; triangular, apical half of episternum more sparsely punctured. Metasternum convex, with a strongly indicated longitudinal impression in front of hind margin at middle and a small, elongate, median depression near front margin, very finely, sparsely punctured; midline entire: carinae or tubercles absent. Legs finely punctured and rugose, densely but inconspicuously clothed with short, semirecumbent and suberect, pale hairs, sparsely intermixed with longer, erect hairs. Abdomen very finely, sparsely, indistinctly punctured; sternites 1 to 4 with hind margins broadly membranous; fifth sternite with hind margin very broadly and shallowly, arcuately emarginate; sixth sternite short, lateral margins strongly oblique, arcuate, hind margin feebly, arcuately emarginate; fifth tergite with hind margin subtruncate, notched at sides; sixth tergite broader (except at extreme base) and much longer than sixth sternite, lateral margin very shallowly and broadly, triangularly emarginate. Length: 3.8 mm.

Female: Distance between eyes slightly more than one and three-fourths times the length of last antennal segment. Ratio of lengths of antennal segments 1 to 11, 7:4:5:4:7:6:6:6:

6:6:10. Abdomen with hind margin of fifth sternite subtruncate; sixth sternite with lateral and hind margins semicircularly rounded; fifth tergite with hind margin subtruncate; sixth tergite with lateral and hind margins semicircularly rounded. Length: 3.8 mm.

Type Material: Holotype male and allotype female (Museum of Comparative Zoölogy) and 18 male and 42 female paratypes from Chisos Mountains, Brewster County, Texas, 5260 feet, July 9-12, 1948 (F. Werner and W. Nutting). Additional paratypes Texas: Six males and six females from Big Bend as follows: National Park Headquarters, Chisos Mountains, June 9-10, 1948 (H. S. Barber); four males and four females from The Basin, 5000 feet, Big Bend National Park, Brewster County, July 8-11, 1948 (G. E. Ball); one male from Chisos Mountains, July 9 (J. N. Knull); two males from Chisos Mountains Basin, Big Bend National Park, Brewster County, June 15, 1948 (M. A. Cazier); one male from Tornillo Flat, Big Bend National Park, July 12, 1948 (F. Werner and W. Nutting); three males and one female from Sonora, April 18 and 24, 1932 (S. E. Jones); two males and four females from Pine Springs, July 12–16, 1928 (W. Benedict); one male from Sierra Blanca, July 8, 1917; two females from Van Horn, May 23, 1932 (E. G. Linsley); one female from Terlingua, Brewster County, May 6, 1927 (J. O. Martin); one female from Cleburne, September 24, 1937; two females from Lozier Canyon, Terrell County, July 8, 1948 (F. Werner and W. Nutting); two females from Sanderson, June 18, 1932 (J. O. Martin), and September 4, 1947 (F. Werner and W. Nutting). New Mexico: One female from White Sands, June 27, 1940 (L. J. Lipovsky); one male from Lincoln County, July 9, 1940 (D. J. and J. N. Knull). Arizona: Two males and one female from Chiricahua Mountains, July 14 (J. N. Knull); five males and one female from Oracle, July 5, 8, and 11 (Hubbard and Schwarz), and September 6, 1947 (F. H. Parker); one male from Santa Rita Mountains, July 13, 1937 (D. J. and J. N. Knull); one male and one female from Stockton Pass, near Fort Grant, August 4, 1948 (F. Werner and W. Nutting); one male and one female from San Bernardino Ranch, Cochise County, August 16, 1949 (F. H. Parker); two males from Cochise Stronghold, July 21, 1949 (F. Werner and W. Nutting); five males from west slope of Patagonia Mountains, on Lochiel Road, Santa Cruz County, 5330 feet, July 28, 1948 (F. Werner and W. Nutting); one male from Calabasa Canyon,

Tumacacori Mountains, July 28, 1948 (F. Werner and W. Nutting); one female from Paradise, July 2, 1919 (A. Wetmore); one female from Sunnyside, Huachuca Mountains, August 19, 1940 (E. C. Van Dyke); four females from Huachuca Mountains. June 6 (I. N. Knull). Mexico: One female from Samalayuca, Chihuahua, June 24, 1947 (C. D. Michener); three males from 25 miles southwest of Camargo, Chihuahua, July 14, 1947 (M. A. Cazier and W. Gertsch); one male from Valle de Olivos, Chihuahua, 5500 feet, July 20, 1947 (W. Gertsch); one male from San José Babícora, Chihuahua, July 5, 1947 (W. Gertsch); one female from Kilometer 36 (Oiito Road), Chihuahua, 6900 feet, August 17, 1947 (G. M. Bradt). Paratypes in the collections of the Museum of Comparative Zoölogy, the American Museum of Natural History, California Academy of Sciences, United States National Museum. University of Kansas, Texas A. and M. College, Cornell University, J. B. Corporaal, J. N. Knull, F. H. Parker, and the writer. Biology: Adults of this species are commonly collected at lights.

This species is named in honor of Dr. Floyd Werner who has generously given the writer a large amount of *Cymatodera* material.

Cymatodera werneri is a species which is represented in most collections but which is most frequently labeled as C. puncticollis Bland or C. aegra Wolcott. Its closest affinities are with the latter species, both in structure and the similarity of markings. C. werneri can be distinguished from C. aegra by being smaller in size and more slender in shape. The front of the head is distinctly swollen near the vertex and is more shining as a result of the fewer and smaller sized punctures. Moreover, the last abdominal sternite of the male of C. werneri is more or less triangular, with the hind margin narrow. In C. aegra the sixth abdominal sternite is shorter, and the hind margin is quite broad. In the females the hind margin of the last abdominal sternite of the former is semicircularly rounded, whereas in the latter species it is more or less triangular in shape.

In addition to the structural differences these two species, for the most part, occupy different ranges. C. werneri is quite widespread in the Southwest, occurring from western Texas to southeastern Arizona and in northern Mexico. C. aegra on the other hand occupies a more restricted area in southern Arizona and northern Mexico. It is only in certain parts of southern Arizona and northern Mexico that overlap in the ranges of these species has been found.

Cymatodera dietrichi Barr, new species

MALE: Moderate sized, elongate, piceous; head very dark reddish; elytra with an indistinct, angulate, median fascia; antennae, mouth parts, tibiae, and tarsi brown. Head finely, densely punctured, densely clothed with very short, subrecumbent, fine, pale hairs, very sparsely intermixed with short, erect, stiff hairs; front not bi-impressed; eyes moderate in size, distance between them about two and one-third times the length of last antennal segment; antenna slender, extending slightly beyond base of elytra, moderately serrate from fifth segment, segments flattened, ratio of lengths of segments 1 to 11, 19:11:14:14: 15:14:14:14:14:13:21, last segment very feebly aciculate, rounded at apex; maxillary palpus with last segment somewhat robust, broadest at middle, apical margin angulate. Prothorax very finely, sparsely punctured, feebly, transversely rugose, more strongly punctured along front margin, moderately clothed with very short, subrecumbent, fine, pale hairs, sparsely intermixed with longer, erect hairs; pronotum distinctly broader along front margin than along hind margin (67:57), median width about equal to width along front margin, about one and one-half times longer than median width (97:66); sides moderately constricted at basal and apical thirds; disk feebly convex, with a transverse, V-shaped impression in front of middle; antescutellar impression distinct, subbasal tumescences prominent. Scutellum flattened, as broad as long; sides arcuate; disk oblique, finely, densely punctured; hind margin notched at middle. Elytra moderately clothed with short, suberect, fine, pale hairs, intermixed with a few, long, erect hairs; length along suture three times the width behind humeri (296:99); postscutellar depression more or less distinct; humeri distinct; sides parallel; apices broadly, nearly conjointly rounded, sutural angles feebly rounded; disk convex, striae extending beyond apical fourth, first and second strial rows attaining middle, strial punctures round, deep, moderate in size, becoming finer and shallower posteriorly, interstrial spaces at middle, broader than width of strial punctures, finely punctulate. Mesosternum densely, rather coarsely and deeply punctured, more sparsely punctured at middle. Metasternum convex, with a moderately distinct longitudinal impression in front of hind margin at middle and a very feebly indicated, elongate, median depression near front margin, finely,

sparsely punctured; midline entire; a short, cristate, longitudinal carina on either side of midline behind middle. Legs finely, densely punctured, distinctly rugose, densely, rather inconspicuously clothed with short, subrecumbent to suberect, fine, pale hairs; tarsal claws with a broad, blunt, triangular, basal tooth. shorter than median tooth which is shorter than acuminate apex of claw, median tooth moderately slender, rather blunt at apex. Abdomen finely, sparsely punctured; sternites 1 to 4 with a submarginal smooth area, hind margins narrowly membranous: fifth sternite more coarsely punctured, hind margin very deeply and broadly, semicircularly emarginate; sixth sternite punctured as fifth sternite, longer than broad, sides nearly parallel. gradually tapering towards apex, hind angles narrowly prolonged. rather broadly rounded at apex, concave on inner margin, an arcuate, submarginal, cristate, longitudinal carina extending from near base to hind angle where it forms the outer margin, an indistinct, median, longitudinal carina extending from base to before hind margin where it is obliterated, hind margin broadly. arcuately emarginate; fifth tergite with hind margin broadly, rather deeply, more or less triangularly emarginate, notched at sides; sixth tergite narrower and shorter than sixth sternite, disk convex, feebly carinate longitudinally, sides arcuate. hind angles acute, hind margin broadly, very shallowly emarginate. Length: 12.9 mm.

FEMALE: Distance between eyes about two and two-thirds times the length of last antennal segment. Antenna with ratio of lengths of segments 1 to 11, 18:10:11:12:12:12:11:10: 10:10:16. Metasternum without paired carinae. Abdomen with hind margin of fifth sternite broadly, shallowly, triangularly emarginate; sixth sternite convex, lateral margins arcuate, strongly converging towards apex, which is rather narrowly rounded and feebly notched at middle; fifth tergite with hind margin more or less truncate; sixth tergite feebly convex, lateral margins arcuate, strongly converging towards apex which is rather narrowly rounded and feebly depressed at middle. Length: 10.2 mm.

Type Material: Holotype male and allotype female (California Academy of Sciences, Entomology) from Chisos Mountains, Big Bend, Texas. The holotype was collected on July 3, 1941, and the allotype on July 5, 1942. Paratypes are designated as follows: *Arizona*: One male from Joseph City, August 13,

1939 (F. H. Parker); one male from Pine Dale, July 18; one female from 20 miles east of Tuba City, July 22, 1938 (R. P. Allen); one male from Chiricahua Mountains, July 12 (J. N. Knull). New Mexico: One male and one female from San Juan Valley, Taos County, 4500 feet, August 1-4, 1885; two males and three females from Deming, July 16, 1930 (H. M. Smith), July 22 (Hubbard and Schwarz); one male from 10 miles east of Deming, July 12, 1917; one female from Fort Bayard, July 23, 1915 (G. E. Bushnell); one male from Mesclera, July, 1927; three males from Silver City, June and July, 1913 (J. B. Wallis); one male from Jemez Springs (J. Woodgate); one male from Pyramid Peak, Dona Ana County, July 18, 1930 (F. R. Fosberg); one female from White Sands National Monument, Loop Drive, Otero County, July 19, 1947; one female from Tigeras, Sandia Mountains, 6500-7000 feet, July 29, 1919 (Rehn and Hebard); one male from Datil, continental divide, July 17, 1930 (T. F. Winburn and R. H. Painter); one male from Chaves, August 8; one male and one female from Bent, May 1-5 and September, 1927; one female from Carlsbad Caverns, August 28, 1938 (R. P. Allen). Texas: One male from Sanderson, September 4, 1949 (F. Werner and W. Nutting); one male from Big Bend National Park, Brewster County, June 16, 1948 (M. A. Cazier); two males from The Basin, 5000 feet, Big Bend National Park, Brewster County, July 8-11, 1948 (G. E. Ball); one female from Big Bend State Park, July 12, 1941 (B. E. White); one male from Juniper Canyon, Chisos Mountains, 6000 feet, July 14, 1928 (F. M. Gaige); three males and six females from the Chisos Mountains. June 9, 1938 (D. J. and J. N. Knull), July 5, 1942, July 9-12, 1948 (F. Werner and W. Nutting), July 14, 1941 (W. F. Barr); one female from Limpia Canyon, Fort Davis, Jeff Davis County, 5000 feet, July 15–23, 1948 (G. E. Ball); one female from 18 miles west of Fort Davis, Jeff Davis County, 5000 feet, July 16-21, 1948 (G. E. Ball); one male and four females from Alpine, Brewster County, June 1-15, 15-30, and July 1-15, 1926 (G. C. Poling); three males and two females from Alpine, May 1-5, 20, 1926, July 15-30 and August 20, 1926; one male and one female from Ysleta, July 26, 1948 (Smith et al.); one male from Culberson County, August 30, 1940 (D. J. and J. N. Knull); one male from Val Verde County, May 5, 1941 (D. J. and J. N. Knull); one male from the Davis Mountains, May 29 (J. N. Knull); one male and two females from Davis Mountains, July 3

(J. N. Knull); one female from Christoval, Tom Green County, June 29, 1948 (C. and P. Vaurie); one male from Rock Island, Wheeler's Tank, July 5, 1922 (G. O. Wiley): two females from Eastland County, April 29 and May 1, 1921 (G. O. Wiley). Mexico: Two females from 20 miles southwest of Camargo, 4500 feet, Chihuahua, July 13, 1947 (M. A. Cazier and H. T. Spieth); two males and six females from 25 miles southwest of Camargo, Chihuahua, July 14, 1947 (W. J. Gertsch); two males and two females from 42 miles southwest of Camargo, 4900 feet. Chihuahua, July 15, 1947 (M. A. Cazier and W. J. Gertsch); one female from Salaices, Chihuahua, July 23, 1947 (H. T. Spieth); two males from Catarinas, 5800 feet, Chihuahua, July 25, 1947 (M. A. Cazier and C. D. Michener); one female from 63 miles west of Santa Barbara, Chihuahua, 5500 feet. July 20, 1947 (C. D. Michener); one male and one female from Kilometer 36 (Ojito Road), Santa Barbara, Chihuahua, 6900 feet, August 17, 1947 (G. M. Bradt); one female from Santa Barbara, Santa Barbara District, 6300 feet, Chihuahua, July 17, 1947 (C. D. Michener); one male from 15 miles east of Parral, 5500 feet, Chihuahua, July 15, 1947 (M. A. Cazier); one female from Primavera, 5500-6000 feet, Chihuahua, June 30, 1947 (W. J. Gertsch); two females from Canon Prieto, 6500-6800 feet, near Primavera, Chihuahua, July 2, 1947 (M. A. Cazier and C. D. Michener); one male and two females from Valle de Olives. 5500 feet, Chihuahua, July 20, 1947 (M. A. Cazier); one female from Encino, 6200 feet, Durango, July 27, 1947 (M. A. Cazier); one female from Nombre de Dios, 5900 feet, Durango, August 13. 1947 (M. A. Cazier); one female from San Juan de Rio, 5200 feet, Durango, July 30, 1947 (M. A. Cazier). Paratypes in the collections of the California Academy of Sciences, the United States National Museum, the American Museum of Natural History, the Museum of Comparative Zoölogy, the Chicago Natural History Museum, the Southern California Academy of Sciences, the Academy of Natural Sciences of Philadelphia. Kansas State College, University of Michigan, Cornell University, University of Minnesota, J. B. Corporaal, J. N. Knull. B. E. White, F. H. Parker, and the writer.

BIOLOGY: Other than being attracted to light, the only biological information accompanying the specimens is a label on the Fort Bayard, New Mexico, paratype indicating that it was reared from *Pinus ponderosa*. However, the writer has beaten

this species from Acacia farnesiana in the Chisos Mountains, Texas.

Wolcott recognized this form as a new species and had distributed several specimens with his manuscript name. The present writer, in describing this species, feels that the manuscript name should be retained, especially as it honors the able and cooperative curator of the entomological collections of Cornell University, Dr. Henry Dietrich.

Cymatodera dietrichi also is commonly found in most collec-It most frequently is misidentified as C. umbrina. C. morosa, or C. belfragei. It appears to be most closely related to the allopatric C. belfragei and can be distinguished by having a narrower elytral fascia and a very finely, sparsely punctured pronotum. The structure of the sixth abdominal sternite of the male is also very different. The sculpturing of the pronotum and structure of the last abdominal segment of the male will also serve to separate it from the several members of the morosa group with which it occurs sympatrically. The females of C. dietrichi are easily separated from all the female members of the morosa group with the exception of C. oblita, as they both lack a median impression on the hind margin of the last abdominal tergite. C. dietrichi and C. oblita occur sympatrically over a wide range which includes eastern Arizona. New Mexico. and western Texas, and frequently the females cannot be distinguished with certainty. The color, pronotal punctuation, and shape of the last abdominal tergite are too variable to be relied on for their separation.

Contrary to many of the other species in the *morosa* group, *C. dietrichi* is quite widespread in distribution, occurring from north central and eastern Arizona, throughout New Mexico, through western Texas down to north central Mexico. As would be expected, some variation has been noted in the paratypic series. This variation deals primarily with color and color pattern but does not appear to be of geographical significance. The elytra vary from dark brown to piceous in color and the pale, median fascia from quite distinct to absent. The pronotum is usually finely, sparsely punctured, but in some specimens the punctuation becomes rather dense. Specimens in the type series range from 8.1 mm. to 13.3 mm. in length.