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## REPORT ON A COLLECTION OF ARACHNIDA FROM THE CHISOS MOUNTAINS

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The author is indebted to Dr. Leo T. Murray, Director of the Baylor University Museum, for the opportunity of studying the arachnids collected by a field party in the Chisos Mountains during the summer of 1938. In spite of the fact that arachnids were for the most part incidental to the purposes of the expedition, representatives of twenty-two species were taken. Of that number three species of the Order Solpugida have not been identified specifically as yet. The remaining material contains two species which are described as new, a scorpion, *Centruroides chisosarius*, new species, and a spider, *Euagrus chioseus*, new species. The latter belongs to the highly interesting group of tarantulas (Dipluridae) which spin a funnel-web comparable to that of true spiders of the family Agelenidae.

### ORDER SCORPIONIDA

#### DIPLOCENTRIDAE

##### *Diplocentrus keyserlingi* Karsch

*Diplocentrus keyserlingi*, Karsch, 1880, S. B. Ges. naturf. Fr. Berlin, p. 57.

RECORDS.—Chisos Mountains: twelve specimens from the Basin, taken July 24, 26, and 27, and August 2, and 4, 1938. Three specimens from the Basin, foot of Casa Grande, July 26, 1938.

The present collection represents material which should be referred to the above specific name in the sense it is used by Hoffmann. No conclusions have as yet been reached as regards the racial status of specimens from the Chisos Mountains because of lack of material from Mexico for comparison. It is quite possible the Texas specimens will require at least a racial name.

VAEJOVIDAE

*Vaejovis bilineatus* Pocock

*Vaejovis bilineatus* Pocock, 1898, Ann. and Mag. Nat. Hist., 7 ser., I, p. 395.

RECORDS.—Chisos Mountains: three specimens from the Basin, foot of Casa Grande, July 26, 1938. Nine specimens from the Basin, taken July 27, August 2, 4, and 5, 1938.

This pretty species is easily separated from the related species, *Vaejovis spinigerus* Wood, by its much smaller size and distinctive color pattern. Both agree in lacking ventral keels and in having black lines beneath the first four segments of the postabdomen. In *bilineatus* the fifth segment is a very dark brown, not concolorous with the basal joints, and the fourth and fifth segments are not obviously more robust than the ones in front.

BUTHIDAE

*Centruroides chisosarius*, new species

General coloration of the whole animal dull yellow. Carapace marked with light brown, irregular maculations on a paler ground. Ocular triangle not at all darker than the remainder of the carapace, the median and lateral eye groups ringed with black. Postabdomen dull yellow. Preabdomen dull yellow, without traces of longitudinal darker bands in the females but with distinct traces of such bands in the males which are somewhat wider than the median pale stripe between them. Chelicerae and appendages dull yellow, quite uniform, the hand of the pedipalp only slightly darker.

Female.—Total length, 56.50 mm., not including the chelicerae. Carapace, 6.00 mm. long, 6.50 mm. wide behind, moderately roughened in about the same degree as in *vittatus*, the median groove distinct. Length of abdomen 50.50 mm., the preabdomen 17.50 mm., the postabdomen 33.00 mm. long. Dorsal and ventral keels of postabdomen well developed, evenly dentate. Segments of postabdomen: first, 4.70 mm. long, 3.00 mm. wide; second,

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5.60 mm. long, 2.70 mm. wide; third, 6.10 mm. long, 2.70 mm. wide; fourth, 6.10 mm. long, 2.60 mm. wide; fifth, 7.50 mm. long, 2.40 mm. wide. Caudal vesicle, 4.00 mm. long, 2.20 mm. wide, with a small nodule beneath the sting which is curved. Pectines with twenty-six teeth. Basal piece of the pectines subparallel in front and on the sides, strongly rounded caudally, with a short transverse groove just above the middle. Chela relatively slender, the hand with finely granular keels, the movable finger slender (7.50 mm. long), less than twice as long as the hand (4.50 mm. long), somewhat longer than the carapace.

Male.—Total length, 58.00 mm. Carapace, 5.55 mm. long, 5.25 mm. wide behind. Preabdomen, 15.50 mm. long. Postabdomen, 37.00 mm. long. Structure closely approximating the female. Pectines with twenty-eight teeth. Basal piece of the pectines truncated in front and behind, narrowed behind. Keels on postabdomen fairly well developed, evenly dentate.

Segments of postabdomen: first, 5.15 mm. long, 2.50 mm. wide; second, 6.00 mm. long, 2.30 mm. wide; third, 6.70 mm. long, 2.30 mm. wide; fourth, 7.60 mm. long, 2.15 mm. wide; fifth, 9.00 mm. long, 2.00 mm. wide. Vesicle of sting, 4.50 mm. long, 1.80 mm. wide, more slender than in the female, the sting, 2.20 mm. long, with a low tubercle beneath. Chela of pedipalp with keels, the movable finger, 6.70 mm. long, the hand, 4.50 mm. long.

RECORDS.—Chisos Mountains: male holotype and female allotype from the Basin, August 4, 1938, in the American Museum of Natural History. Two paratypes from ten miles from Hot Springs, on Marathon Road, July 21, 1938. Twenty-two adult and numerous immature paratypes from the Basin, taken on July 24 and 26, and August 2, 4, and 5. One paratype from the Basin, foot of Casa Grande, July 26, 1938. Three paratypes from beneath stones on the trail to Lost Mine Peak, August 1, 1938. The paratypes are deposited in the Baylor University Museum and in the American Museum of Natural History.

This species is closely related to *Centruroides vittatus* (Say) with which it agrees in having the basal piece of the pectines marked with a small transverse depression in the females. It

may be distinguished by the following characters. The basal piece of the pectines is proportionately much longer than broad as compared with *vittatus*, the caudal end strongly produced and rounded. The females lack the well defined dorsal dark stripes present on the preabdomen in *vittatus* and they are only faintly indicated in the males. The interocular space on the carapace is not more heavily darkened than the remainder of the carapace. The species differs from *Centruroides chiaravigli* Borrelli, from Durango, Mexico, now regarded as a race of *suffusus*, in the form of the depression on the basal piece of the pectines and in having the fifth segment of the postabdomen not markedly darker than the others.

#### ORDER PEDIPALPIDA

##### *Mastigoproctus giganteus* (Lucas)

*Thelyphonus giganteus* Lucas, 1835, Mag. Zoöl., CL, viii, t. 8.

RECORDS.—Chisos Mountains: two juvenile specimens from the Basin, taken on August 4 and 5, 1938.

#### ORDER PHALANGIDA

##### *Globipes formosus* (Banks)

*Eurybunus formosus* Banks, 1912, Ent. News, Philadelphia, XXI, p. 136.

RECORDS.—Chisos Mountains: numerous examples from the Basin, taken July 25, August 1, 2, and 5, 1938; foot of Casa Grande, July 26, 1938; on trail to Lost Mine Peak, August 1, 1938.

#### ORDER SOLPUGIDA

##### *Eremobates* spp.

RECORDS.—Chisos Mountains: one female from ten miles from Hot Springs, on Marathon Road, July 21, 1938. Two females from the Basin, July 25 and 26, 1938. One male from

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the Basin, August 4, 1938. One male without specific locality but presumably from the basin, July 27, 1938.

The above specimens belong in the Eremobatinae as defined by Roewer and represent three or more species. It has not been possible to identify them specifically up to the present time because of the uncertainty of most of the previously described species.

ORDER ARANEIDA  
AVICULARIIDAE

*Eurypelma steindachneri* Ausserer

*Eurypelma steindachneri* Ausserer, 1875, Verh. Zoöl.—Bot. Gesell. Wien, XXV, p. 199, Pl. vii, figs. 43 and 44.

RECORDS.—Chisos Mountains: one juvenile individual from the basin, August 2, 1938, and two young specimens taken July 27, 1938.

DIPLURIDAE

*Euagrus chioseus*, new species

Female.—Total length, 8.50, exclusive of chelicerae and spinnerets.

Carapace, 4.00 mm. long, 3.10 mm. wide; abdomen 4.50 mm. long, 3.00 mm. wide.

Carapace and legs light yellowish brown, clothed with fine procumbent black hairs and suberect black spines and setae. Eyes enclosing a black field. Sternum and coxae paler yellow. Abdomen dark gray above, paler beneath, evenly covered with fine gray hairs, more sparsely set with long, suberect setae, the base with a group of long, curved setae.

Carapace oval, relatively low, moderately and evenly convex, the median groove a round pit rather small in size situated back one-half the length, the radial furrows distinct as pale depressions on which there are no hairs. Pars cephalica V-shaped, only slightly higher than the rest of the carapace. Eyes all close

together in a group near the frontal margin, the clypeus low, equal to about the radius of an anterior median eye. First row of eyes strongly procurved, the dark median eyes small, separated by scarcely their radius, as far from the much larger, suboval lateral eyes. Second row moderately recurved, the median eyes suboval, separated by one and one-fifth their diameter, contiguous with the subequal, more narrowly oval lateral eyes. Median ocular quadrangle about three-fifths as long as broad (72/40), greatly narrowed in front (72/38).

Sternum longer than broad (2.00 mm./1.68 mm.), clothed with erect hairs, the posterior coxae subcontiguous. Chelicerae convex, without rastellum, clothed with long curved setae, the outer margin with a band of hairs, the inner armed with fourteen black teeth of which the fourth, sixth, ninth, and twelfth are enlarged.

All coxae subequal. Legs relatively short and stout. First tibia with 1-1-2 ventral spines, the unpaired ones weak, and a distal spine on the prolateral side. First metatarsus with 2-2-2-2 ventral spines, all of them small, and two prolateral spines, the second one distal. First two legs unarmed above; the posterior legs spinose above, on the sides, and beneath.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	2.45	1.70	1.83	1.80	1.18	8.96 mm.
II	2.25	1.60	1.70	1.75	1.20	8.50 mm.
III	2.33	1.40	1.70	2.25	1.35	9.03 mm.
IV	3.00	1.70	2.40	3.00	1.60	11.70 mm.

Male.—Total length, 7.50 mm. Carapace, 3.50 mm. long, 2.80 mm. wide.

Structure and coloration in close agreement with the female, the chief difference being in the legs, particularly the second which is modified. Chelicera with eleven teeth on the lower or inner margin, the third, sixth, and ninth enlarged. Eye arrangement as in the female.

Legs proportionately longer than in the female. First metatarsus with 2-2-2 ventral and 1-1-1 retrolateral spines, the last spine or spines in each case distal. First tibia with a group of

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thirteen spines, most of them in the distal half, which form a patch on the retrolateral and ventral surfaces. Second leg modified, the metatarsus with a low spur on the prolateral side at the middle of the joint. Second tibia incrassated, produced beneath at the middle into a stout spur from which originate three spines, two of them about as long as the width of the joint at the spur, the third shorter; the space between the spur and the distal end of the tibia without spines.

	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	2.45	1.30	1.75	1.85	1.30	8.65 mm.
II	2.60	1.50	1.80	2.15	1.50	9.55 mm.
III	2.20	1.18	1.70	2.25	1.35	8.68 mm.
IV	3.15	1.70	2.80	3.50	1.80	12.95 mm.

RECORDS.—Chisos Mountains: male holotype, female allotype and paratype from the Basin, August 2, 1938, in the American Museum of Natural History. Two female paratypes from the Basin, July 26, 1938, in the Baylor University Museum. One immature female paratype from the Basin, July 24, 1938, in the Baylor University Museum. Two juvenile examples from Hot Springs, June 7 to 10, 1938 (D. and S. Mulaik) probably belong to this species.

This species resembles *Euagrus pragmaticus* Chamberlin in the details of the second leg of the male but lacks the small group of spines in the groove in front of the heavy tibial spur. It is also closely related to *Euagrus comstocki* Gertsch but differs in the following particulars. It is darker in color, has the posterior median eyes proportionately larger and much nearer together, separated by slightly more than their diameter, and in addition has the tube of the palpus decidedly longer.

FILISTATIDAE

*Filistata arizonica* Chamberlin and Ivie

*Filistata arizonica* Chamberlin and Ivie, 1935, Bull. Univ. Utah, XXVI, p. 4, Pl. iv, figs. 24 and 25.

RECORDS.—Chisos Mountains: ten miles from Hot Springs,

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on Marathon Road, July 21, 1938, one young female. One female from the basin, July 26, 1938. Two females taken from under rocks on the trail to Lost Mine Peak, August 1, 1938. Two females from the basin, August 2, 1938.

SCYTODIDAE

*Loxosceles arizonicus* Gertsch and Mulaik

*Loxosceles arizonicus* Gertsch and Mulaik, 1939, American Museum Novitates.

RECORD.—Chisos Mountains: one female and immature specimens from the Basin, July 26, 1938.

This species is common in Arizona and has been taken on one or two occasions in western Texas. The above name is a nomen nudum but the manuscript in which it is contained will probably be published this year in the above publication.

PHOLCIDAE

*Physocyclus enaulus* Crosby

*Physocyclus enaulus* Crosby, 1926, Proc. Ent. Soc. Washington, XXVIII, p. 1, figs. 1 and 2.

RECORD.—Chisos Mountains: one female from the Basin, July 26, 1938.

THERIDIIDAE

*Latrodectus mactans* (Fabricius)

*Aranea mactans* Fabricius, 1775, Entom. Syst., II, p. 410, No. 11.

RECORDS.—Chisos Mountains: immature male and female from the Basin, July 26, 1938. Two females from the Basin, August 2, 1938; two females, August 4, 1938; juvenile male, August 5, 1938.

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ARGIOPIDAE

*Metepeira labyrinthea* (Hentz)

*Epeira labyrinthea* Hentz, 1847, Journ. Boston Soc. Nat. Hist., V, p. 471, Pl. xxxi, fig. 3.

RECORD.—Chisos Mountains: one young female taken on the trail to Lost Mine Peak, August 1, 1938.

ZOROPSIDAE

*Zorocrates isolatus* Gertsch and Davis, 1936

*Zorocrates isolatus* Gertsch and Davis, 1936, American Museum Novitates, No. 881, p. 16.

RECORDS.—Chisos Mountains: one immature male from the Basin, July 27, 1938. One mature female, one immature male, and two immature females from the Basin, August 2, 1938.

The above name was based on an immature female taken in the Chisos Mountains by L. Irby Davis in July, 1935. The present collection contains a mature female and several immature examples which agree satisfactorily with the immature holotype. The species is related to *Zorocrates fuscus* Simon from Mexico and Central America.

CTENIDAE

*Leptoctenus byrrhus* Simon

*Leptoctenus byrrhus* Simon, 1888, Ann. Soc. Ent. France, (6), VIII, p. 210.

RECORDS.—Chisos Mountains: one female from the Basin, July 25, 1938; one female, August 2, 1938; one female, August 5, 1938.

AGELENIDAE

*Agelenopsis apertus* (Gertsch)

*Agelena aperta* Gertsch, 1934, American Museum Novitates, No. 726, p. 25, fig. 10.

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RECORDS.—Chisos Mountains: one young female from the Basin, July 25, 1938. One immature female from the Basin, foot of Casa Grande, July 26, 1938.

LYCOSIDAE

*Pardosa sternalis* (Thorell)

*Lycosa sternalis* Thorell, 1877, Bull. U. S. Geol. Survey, III, p. 504.

RECORD.—Chisos Mountains: one female in Laguna, July 29, 1938.

*Lycosa helluo* Walckenaer

*Lycosa helluo* Walckenaer, 1837, Ins. Apt., I, p. 337.

RECORD.—Chisos Mountains: one immature female from the Basin, August 4, 1938.

*Lycosa avida* Walckenaer

*Lycosa avida* Walckenaer, 1837, Ins. Apt., I, p. 322.

RECORDS.—Chisos Mountains: one female from the Basin, July 24, 1938; one female, July 27, 1938. One female from Panther Mountains, August 10, 1938.

*Lycosa retenta* Gertsch and Wallace

*Lycosa retenta* Gertsch and Wallace, 1935, American Museum Novitates, No. 794, p. 17, fig. 30.

RECORD.—Chisos Mountains: immature male and female from the Basin, foot of Casa Grande, July 26, 1938.