

**New and Little Known Phalangids from
the United States**

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New and Little Known Phalangids from the United States

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During the study of United States Phalangida in preparation for future monographing, several new species were encountered. Several other species whose relationships were not clear, were also studied and redescribed. Both the new and redescribed species are included in this paper with the hope that other workers will be able to understand better the relationships of the United States phalangid fauna.

The authors wish to thank Dr. W. J. Gertsch of The American Museum of Natural History for placing much of this material at their disposal and Dr. Nathan Banks of the Museum of Comparative Zoology for permitting them to examine certain types. They also wish to thank the collectors who contributed material. These collectors are listed after the described species.

Suborder LANIATORES Thorell

COSMETIDAE Simon

COSMETINAE Cambridge

Calicynorta, new genus

Cynorta (in part), Banks, 1893, Trans. Amer. Ent. Soc. 20:150; Banks, 1901, Amer. Natural. 35:671; Banks, 1904, Proc. Calif. Acad. Sci. (Ser. 3) 3:363; Banks, 1911, Pomona Journ. Ent. 3:415.

Eucynortella (In part) Roewer, 1912, Arch. Naturg. (10) 78A:53; Roewer, 1923, Die Weberknechte der Erde, p. 326.

Genotype.—*Calicynorta bimaculata* (Banks).

Diagnosis.—Dorsum with five areas, fourth area with median paired tubercles. Remaining dorsal areas and free tergites unbedecked. Tarsal segments 5-more than 6-6-6. Distitarsus of first tarsus with 3 segments, of second also 3. Basal segments of third and fourth legs not enlarged over those of the first and second.

A study of the holotype of *Cynorta bimaculata* Banks revealed that it was a member of a new genus closely related to *Kevonones* Chamberlin. *Calicynorta* differs from *Kevonones* by having tubercles on the fourth area of the dorsum.

Calicynorta bimaculata (Banks)

Fig. 1

Cynorta bimaculata Banks, 1893, Trans. Amer. Ent. Soc. 20:150; Banks, 1901, Amer. Natural. 35:671; Banks, 1904, Proc. Calif. Acad. Sci. (Ser. 3) 3:363; Banks, 1911, Pomona Journ. Ent. 3:415.

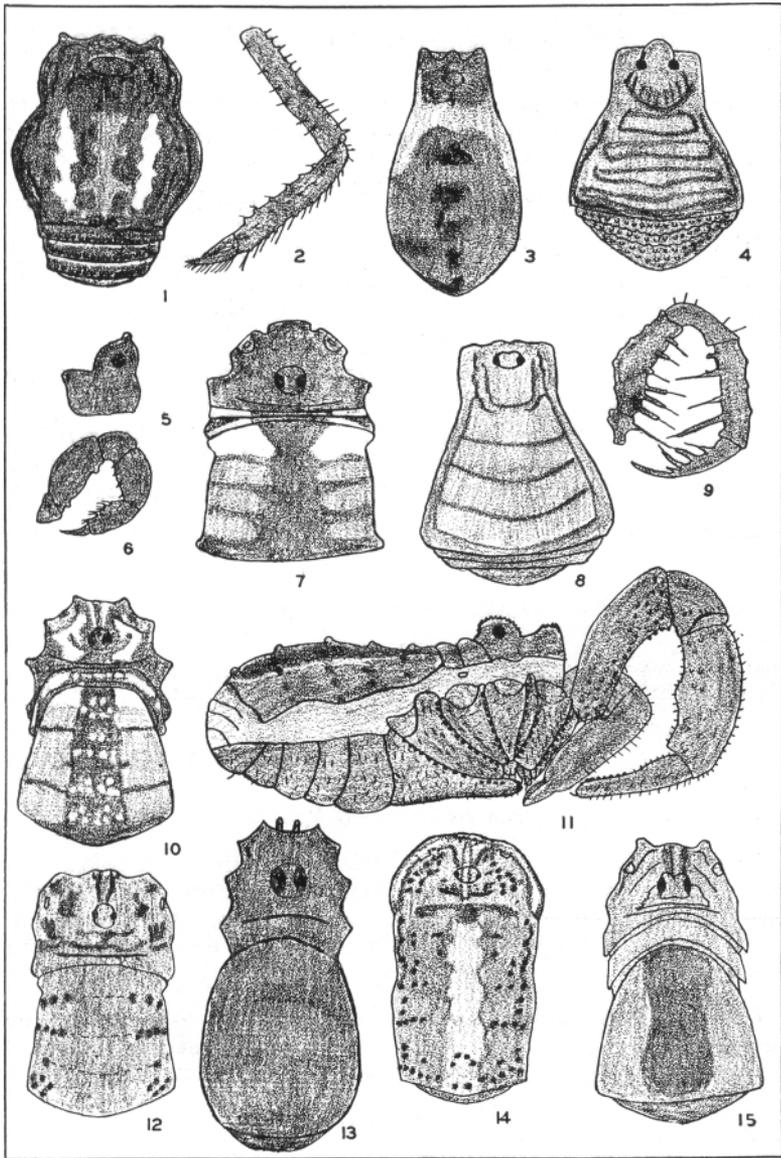


PLATE 1.—1, *Calicynorta bimaculata* (Banks), dorsal view of female. 2, *Taracus nigripes*, new species, retrolateral view of left chelicera of female. 3, *Idem*, dorsal view of female. 4, *Sclerobunus brunneus* Banks, dorsal view of male. 5, *Idem*, lateral view of eye tubercle of male. 6, *Idem*, retrolateral view of left palpus of male. 7, *Leiobunum bimaculatum* Banks, dorsal view of male. 8, *Sclerobunus cavicolens* (Banks), dorsal view

Eucynortella bimaculata Roewer, 1912, Arch. Naturg. (10) 78A:53; Roewer, 1923, Die Weberknechte der Erde, p. 326.

Holotype.—Female from San Diego, California. In the collection of the Museum of Comparative Zoology.

Description of holotype : Total length of body, 3.7 mm. Length of Cephalothorax, 1.0 mm. Width of body at widest portion, 3.0 mm. Dorsum finely granulate, with a row of small tubercles along the posterior margin of the fifth area and the free tergites. Eye tubercle low, normal; no median spines on the dorsum. A pair of tubercles on the fourth area. Venter and coxae finely granulate.

Legs : clothed only with a few scattered hairs and tubercles. Third and fourth legs not enlarged over the first and second. Tarsal segments 5-9-6-6. Distitarsus of first tarsus 3, of second 3.

	Trochanter	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.3	1.3	0.5	0.8	1.2	0.7	4.8 mm.
II	0.3	2.3	0.6	1.9	2.2	1.7	9.0 mm.
III	0.3	1.6	0.6	1.1	1.8	1.0	6.4 mm.
IV	0.4	2.3	0.7	1.5	2.3	1.1	8.3 mm.

Palpus: trochanter 0.2 mm. long, femur 0.7, patella 0.5, tibia 0.9, and tarsus 0.4. Total length, 2.7 mm. Palpus normal, characteristically flattened. Chelicerae normal.

Dorsum reddish brown with lighter markings faintly outlining the areas. The median line lighter. On either side of the median line, midway between the median line and the lateral margin of the dorsum is a long narrow white spot extending from the first area through the fourth. Venter, chelicerae, and palpi reddish brown. Legs yellowish red, somewhat lighter.

TRIAENONYCHIDAE Soerensen

TRIAENONYCHINAE Pocock

SCLEROBUNUS BRUNNEUS Banks

Figs. 4, 5, and 6

Sclerobunus brunneus Banks, 1893, Trans. Amer. Ent. Soc. 20:152; Banks, 1911, Pomona Journ. Ent. 3:416; Roewer, 1914, Arch. Naturg. 80A:88; Roewer, 1923, Die Weberknechte der Erde, p. 597.

Sclerobunus robustus, Roewer, 1931, Zeit. Wiss. Zool. 138:153.

Cotype.—Male from Olympia, Washington. Female from same locality. Both in the collection of the Museum of Comparative Zoology.

Description of cotype : Male, total length of body, 2.0 mm. Length of cephalothorax, 0.7 mm. Width of body at widest portion, 1.4 mm. Dorsum

of male. 9, Idem, retrolateral view of left palpus of male. 10, *Leiobunum trimaculatum*, new species, dorsal view of male. 11, *Protolophus rossi*, new species, lateral view of male. 12, *Eurybunus pallidus*, new species, dorsal view of male. 13, *Mesosoma texana*, new species, dorsal view of male. 14, *Eurybunus riversi*, new species, dorsal view of male. 15, *Leiobunum oregonense*, new species, dorsal view of male.

with five distinct areas which are parallel to one another. Entire dorsum faintly granulate with rows of larger granulations on the free tergites. First area of dorsum without a median line. Eye tubercle in the form of a rounded cone, located on the anterior margin of the cephalothorax. Venter and coxae granulate, lateral teeth present on the anterior and posterior margins of coxa III and on the posterior margin of coxa IV.

Legs : clothed with short scattered hairs and granulations. Legs relatively heavy. Astragalus of the metatarsi greater in length than the calcaneus. Tarsal segments 3-5-4-4. Distitarsus of tarsus of first leg with 2 segments, of second, with 3.

	Trochanter	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.2	0.5	0.3	0.4	0.4	0.4	2.2 mm.
II	0.2	1.0	0.4	0.8	0.9	0.7	4.0 mm.
III	0.2	0.5	0.3	0.5	0.6	0.5	2.6 mm.
IV	0.3	0.9	0.4	0.7	1.0	0.6	3.9 mm.

Palpus: trochanter 0.2 mm. long, femur 0.4, patella 0.3, tibia 0.4, and tarsus 0.4. Total length, 1.7 mm. Palpus as in Fig. 6. Entire dorsal surface granulate.

Chelicerae: proximal segment with a slight elevation on the dorsal surface. Second segment short, clothed with hairs.

Entire animal reddish brown with the areas and free tergites outlined in a darker color. Appendages concolorous.

Description of cotype : female, total length of body, 2.3 mm. Length of cephalothorax, 0.6 mm. Width of body at widest portion, 1.7 mm. Female identical in appearance with male; but lacking the raised area on the proximal segment of the chelicera.

***Sclerobunus cavicolens* (Banks)**

Figs. 8 and 9

Cytobunus cavicolens Banks, 1905, Ent. News 16:251, figs. 1 and 2; Roewer, 1915, Arch. Naturg. 80A:62, fig. 12; Roewer, 1923, Die Weberknechte der Erde, p. 631.
Sclerobunus robustus, Crosby and Bishop, 1924, Ent. News 35:109; Roewer, 1931, Zeit. Wiss. Zool. 138:153.

Holotype.—Immature specimens from Morrison's Cave, 60 miles West of Bozeman, Montana. Several males and females studied were from the type locality. These were collected February 22, 1941, by H. B. Mills and A. L. Jellison. These specimens were compared with the holotype which is in the collection of the Museum of Comparative Zoology.

Description of male: total length of body, 2.0 mm. Length of cephalothorax, 0.7 mm. Width of body at widest portion, 1.6 mm. Dorsum finely granulate, abdominal scute with five distinct areas, the boundaries of which are parallel to one another. First area without a median line. All dorsal areas and free tergites unbedecked. Eye tubercle in the form of a low rounded eleva-

tion, clearly removed from the anterior margin of the cephalothorax. Venter granulate, spiracle not visible. Coxae I to III have a few spine-like hairs. All coxae with small tubercles at the distal ventral margin.

Legs : clothed only with scattered hairs except for leg I. The trochanter of leg I has one spine-bearing tubercle, and the femur has two. The second leg has an extremely long first tarsal segment, other legs have first tarsal segment longer than the remaining ones. Astragalus of the metatarsi much longer than the calcaneus. Lateral projections of the third and fourth claw very small, barely discernible. Tarsal segments 3-5-4-4. Distitarsus of first tarsus with 2 segments, of second with 3.

	Trochanter	Femur	Patella	Tibi	Metatarsus	Tarsus	Total
I	0.2	0.9	0.4	0.7	1.0	0.7	3.9 mm.
II	0.2	1.5	0.5	1.6	1.6	1.7	7.1 mm.
III	0.3	1.2	0.4	1.0	1.5	1.4	5.8 mm.
IV	0.3	1.4	0.4	1.3	1.9	1.1	6.4 mm.

Palpus : trochanter 0.2 mm. long, femur 0.7, patella 0.4, tibia 0.7, and tarsus 0.6. Total length 2.6 mm. Palpus armed as in Fig. 9. In addition on the prolateral margin of the femur two spine-bearing tubercles on the apical median portion. The extreme apical tubercle is sometimes very reduced. One spine-bearing tubercle on the prolateral margin of the patella. Tibia and tarsus armed as on the retrolateral side.

Chelicerae : normal, clothed with a few small hairs and tubercles.

Entire dorsum light yellow, with a slightly darker mottling on the lateral portion of the cephalothorax and the anterior part of the abdomen. Eyes black, strongly contrasting with the light tubercle. Venter and appendages concolorous with the dorsum.

Description of female : total length of body, 2.1 mm. Length of cephalothorax, 0.6 mm. Width of body at widest portion, 1.8 mm. Similar in appearance to male except that the spines of the femur of the first leg are somewhat reduced.

Sclerobunus cavicolens (Banks) was originally described in the genus *Cyrtobunus*; however examination of the holotype and numerous specimens from the type locality revealed that they belonged to *Sclerobunus*. *S. cavicolens* is a valid species and not a synonym of *Sclerobunus robustus* Packard.

Suborder PALPATORES Thorell

Tribe DYSPNOI Hansen and Soerensen

ISCHROPSALIDAE Simon

Taracus nigripes, new species

Fig. 2 and 3

Holotype.—Female, from Wolf Creek Pass, elevation 10,000 ft., Colorado, July 22, 1941. Female paratypes from same locality. C. J. and M. L. Good-

night collectors. All in the collection of The American Museum of Natural History.

Description of holotype : length of body, 3.6 mm. Length of cephalothorax, 0.9 mm. Width of body at widest portion. 2.3 mm. Dorsum smooth, covered with widely separated, extremely small black spines. Cephalothorax arched. Eye tubercle smooth, not canaliculate. Cephalothorax and first abdominal segment lacking the small black spines. Posterior to the eye tubercle a small forward pointing spine, characteristic of the genus. Free sternites with numerous small black spines. These black spines become longer and more numerous on the genital operculum and coxae. Coxae without lateral teeth.

Legs : armed with scattered black spines which are more numerous on the basal segments. Metatarsi with false articulations.

	Trochanter	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.3	1.4	0.4	1.2	1.4	1.0	5.7 mm.
II	0.3	2.0	0.4	1.5	2.3	2.2	8.7 mm.
III	0.3	1.4	0.5	1.0	1.4	1.2	5.8 mm.
IV	0.3	1.8	0.6	1.7	2.1	1.5	8.0 mm.

Palpus: trochanter 0.3 mm. long, femur 1.7, patella 1.1, tibia 0.9, and tarsus 0.3. Total length, 4.3 mm. Palpus slender as is characteristic of the genus. Trochanter, femur, and patella armed with scattered black spines. Tibia and tarsus thickly covered with light spinose hairs. Tarsus very small, folded back against the tibia.

Chelicerae: long, proximal segment 1.6 mm. long. Distal segment 1.4 mm. long. Proximal segment armed with scattered spine-bearing tubercles. Distal segment likewise armed with numerous spine bearing tubercles. These tubercles more or less arranged in several rows giving an angular appearance. Cheliceral jaws armed distally with small inner teeth.

Cephalothorax and eye tubercle very dark brown with a few darker brown markings laterad to the eye tubercle. Small spine posterior to the eye tubercle dark brown. First abdominal segment and the small lateral portion of the cephalothorax adjoining it silvery white. Remaining abdominal segments silvery with a brownish overcast. In the median posterior portion of each segment is a brown spot. The small spines covering the abdomen are black, but so small as to be scarcely discernible. Each spine arising from a small darker brown dot. Free sternites and genital operculum silvery with black spines. Spiracle dark brown, contrasting vividly. Coxae brownish with dark spines. Trochanters brown, a lighter brown portion present at the base of each femur. Femur, patella, and tibia of legs dark brown, metatarsi and tarsi lighter brown. Spines on legs black. Palpi very dark brown, almost black except for a lighter portion at the base of the femur. Entire chelicera deep black.

T. nigripes shows affinities to *T. packardi* Simon, but differs by having dark colored legs and palpi.

Tribe EUPNOI Hansen and Soerensen

PHALANGIIDAE Simon

LEIOBUNINAE Banks

LEIOBUNUM BIMACULATUM Banks

Fig. 7

Leiobunum bimaculatum Banks, 1893, Canad. Ent. 25:210; Banks, 1901, Amer. Nat. 35:676; 1904, Banks, Proc. Calif. Acad. Sci. 3:361; Roewer, 1910, Abh. Ver. Hamburg 19(4): 229; Banks, 1911, Pomoma Journ. Ent. 3:421; Roewer, 1923, Die Weberknechte der Erde, p. 905.

Holotype.—Male from southern California. In the collection of the Museum of Comparative Zoology.

Description of holotype: total length of body, 4.1 mm. Length of cephalothorax, 1.7 mm. Width of body at widest portion, 3.3 mm. Dorsum granulate, truncate caudad as seen from above. Eye tubercle not canaliculate, with several small spinules over each carina. Venter and coxae granulate, lateral teeth present on the anterior margin of all coxae and on the posterior margin of coxa IV.

Legs: long and slender. Femur I, 13 mm. long; femur II, 21 mm.; femur III, 12 mm.; and femur IV, 16 mm.

Palpus: femur not extending above the dorsum. Femur armed ventrally with small tubercles and hairs. Tibia likewise armed. Patella and tarsus clothed with hairs. Tarsal claw small and black, toothed.

Chelicerae normal.

Dorsum dark chocolate brown, eye tubercle concolorous, slightly lighter on the interior basal portion. A large white spot at the junction of the abdomen and the cephalothorax, broken into three spots by the folds separating the cephalothorax from the abdomen. Venter and coxae ash-grey. Trochanters yellowish brown, not contrasting very strongly with the coxae. Legs yellowish brown. Palpi and chelicerae concolorous with the legs.

***Leiobunum oregonense*, new species**

Fig. 15

Holotype.—Male from Rain Rock, Lane County, Oregon. Collected by Borys Malkin. Holotype in the collection of The American Museum of Natural History. Male and female paratypes from Car Canyon, California. Collected August 9, 1940, by E. S. Ross. In the collection of the California Academy of Sciences.

Description of holotype: total length of body 5.5 mm. Length of cephalothorax, 1.4 mm. Width of body at widest portion, 3.6 mm. Dorsum coarsely granulate. Eye tubercle canaliculate, smooth above, situated on the median portion of the cephalothorax, constricted at the base. Abdomen subtruncate as seen from above. Supra-cheliceral lamella extended into two blunt spines. Venter and coxae granulate, genital operculum with lateral rows of teeth. On the anterior and posterior margins of coxae I to IV small teeth present. In the holotype these teeth are so reduced as to be scarcely discernible. These teeth are quite large in the specimens from California. Penis elate.

Legs : armed with small black spines more or less arranged in rows on all segments but the metatarsi and tarsi. Metatarsi with numerous false articulations. Femur I, 8 mm. long; femur II, 13 mm.; femur III, 8 mm.; and femur IV, 11 mm.

Palpus: trochanter 0.4 mm. long, femur 1.4, patella 0.7, tibia 0.9, and tarsus 1.4. Total length, 4.8 mm. Palpus armed throughout with numerous black spines. Tarsal claw toothed. Femur not extending above the eye tubercle.

Chelicerae normal.

Dorsum golden with a faint suggestion of a median darker stripe. A few lighter punctate dots present at the junction of the abdominal segments. Eye tubercle yellowish, eyes black. A few darker brown markings present in the region from the eye tubercle to the anterior margin of the cephalothorax. Venter and coxae yellowish, lateral teeth brown. Trochanters light with a few darker mottlings, not contrasting with the coxae. Legs brownish, darker distally. Palpus yellowish brown with some darker brown present at the apical portion of the femur, and some mottlings on the patella and tibia. Chelicerae concolorous with the dorsum.

Description of paratype : female, total length of body, 3.8 mm. Length of cephalothorax, 1.3 mm. Width of body at the widest portion, 2.8 mm. Identical in appearance with the male.

This species differs from the other western *Leiobunum* in the appearance of the dorsum.

***Leiobunum trimaculatum*, new species**

Fig. 10

Leiobunum bimaculatum, Crosby and Bishop, 1924, Journ. Elisha Mitchell Sci. Soc. 40:13-16, pl. 2, figs. 11 and 12; Davis, 1934, Amer. Midl. Nat. 15:669, pl. 31, fig. 8.

Holotype.—Male holotype and male and female paratypes from Ocala, Florida. Collected September 1 1940, by C. J. and M. L. Goodnight. All specimens in the collection of The American Museum of Natural History.

Description of holotype: length of body, 3.1 mm. Length of cephalothorax, 1.4 mm. Width of body at widest portion, 2.5 mm. Dorsum finely granulate, eye tubercle high, not canaliculate, constricted at the base, located at the posterior portion of the cephalothorax. A few very small tubercles over each carina. Venter and coxae with numerous small tubercles and a few scattered hairs. Lateral teeth present on the anterior margins of coxae I to IV and on the posterior margin of coxa IV.

Legs : clothed only with a few small scattered hairs, a few small black spines on the basal segments. Femur I, 14 mm. long; femur II, 18 mm.; femur III, 13 mm.; femur IV, 18 mm.

Palpus : trochanter 0.4 mm. long, femur 1.1, patella 0.5, tibia 0.7, and tarsus 1.3. Total length, 4.0 mm. Clothed with scattered hairs. Femur not elevated above the eye tubercle. Palpal claw toothed.

Chelicerae normal.

Dorsum brownish, eye tubercle concolorous, lighter at the anterior basal portion. A series of light spots at the lateral portion of each abdominal segment, giving the appearance of a darker dorsal stripe on the median line. The first two spots are much lighter, being silvery in color. The lateral portion of the cephalothorax bears irregular lighter markings. Two small lighter stripes pass from the eye tubercle to the anterior margin. There are a few small lighter punctations on each abdominal segment within the darker median stripe. Venter and coxae light yellowish, trochanters concolorous, legs yellowish brown, darker distally. Chelicerae and palpi concolorous with the venter.

In the more northern specimens, those from the Carolinas, etc., the dorsum is extremely dark, almost black. Eye tubercle black. The two anterior spots on the abdomen stand out strongly as yellow against the dark background. The yellowish markings of the lateral portions of the cephalothorax are reduced to a small white marking at the posterior margin. Otherwise these specimens are identical with the more southern forms. Specimens from most of the southeastern states were studied.

Description of female: total length of body, 4.9 mm. Length of cephalothorax, 1.4 mm. Width of body at widest portion, 3.1 mm. Identical in appearance with male.

In previous literature, this species has been referred to as *L. bimaculatum* Banks, following Crosby and Bishop's interpretation (1924). An examination of the holotype of *L. bimaculatum* Banks reveals that it has a somewhat different arrangement of these spots. When *L. bimaculatum* and *L. trimaculatum* are seen side by side, they are quite distinct.

Mesosoma roeweri, new species

Phalangium nigrum Wood, 1870, Comm. Essex Inst. 6:34-35;

Astrobus nigrum, Weed, 1890, Amer. Nat. 24:683.

Mesosoma nigrum, Weed, 1893, Trans. Amer. Ent. Soc. 20:286, Roewer, 1910, Abh. Ver. Hamburg 49:258; Roewer, 1923, Die Weberknechte der Erde, p. 920.

Holotype.—Male from Houston, Texas. Collected June 11, 1937, by S. Mulaik. Holotype in the collection of The American Museum of Natural History.

A new species is proposed for the *Mesosoma* described by Roewer in "Die Weberknechte der Erde," p. 920 as *M. nigrum*. The true *M. nigrum* described by Say from the southeastern portion of the United States differs from *roeweri* by having small three-pronged lateral coxal teeth. *M. roeweri* has conspicuous blunt teeth, and also has the ventral portion of the femur of the palpus armed with spines rather than with hairs as in *nigrum*. A specimen of the true *nigrum* from Illinois has been incorrectly referred to as *M. ephippiatum* in "Die Weberknechte der Erde." Thus Roewer's *M. ephippiatum* becomes a synonym of *M. nigrum* Say.

Records : Liberty, Texas, June 12, 1937; Orange, Texas, June 12, 1937,

and Jasper, Texas, June 6, 1940. All collected by S. Mulaik. Further records from Corpus Christi, Texas, July 15, 1935, collector, H. C. Sibley, Jr., and from Austin, Texas, September, 1909, collector, A. Petrunkevitch.

Mesosoma texanum, new species

Fig.13

Holotype.--Male from Goose Creek, Texas, October, 1931. Holotype in the collection of The American Museum of Natural History.

Description of holotype : total length of body, 5.3 mm. Length of cephalothorax, 1.5 mm. Width of body at widest portion, 3.6 mm. Dorsum coarsely granulate, giving a pebble-like appearance. Eye tubercle in the median portion of the cephalothorax, wider than high, covered with coarse granulations. Abdominal segments united closely in a hard dorsal scute, characteristic of the genus. A very small elevation at the median anterior margin of the cephalothorax. Supra-cheliceral lamella prolonged into two obtuse spines. Venter and coxae with scattered granulations. Lateral teeth present on the margin of the genital operculum and on the fore and hind margins of coxae I to IV. Coxal teeth very much reduced on the posterior margin of coxa III. These coxal teeth are bluntly rounded blocks, somewhat similar to those of *M. roeweri*, but slightly more rounded.

Legs : armed with small scattered spines on all segments but the metatarsi and tarsi. Metatarsi with false articulations.

Palpus: trochater 0.3 mm. long, femur, 0.8, patella, 0.3, tibia 0.6, and tarsus, 1.1. Total length, 3.1 mm. Palpus armed with scattered hairs. A few small spines on the ventral portion of the tibia. Ventral portion of the femur clothed only with hairs, not with the spines and tubercles as in *M. roeweri*. Tarsal claw with very small teeth.

Chelicerae normal.

Entire dorsum including the eye tubercle black. Free sternites reddish brown shading, into darker brown at the lateral portions. Genital operculum and coxae reddish brown. Lateral teeth brown. Trochanters and proximal portion of the femora reddish brown, shading distally into black. Distal half of femur, patella, and tibia black. Proximal portion of metatarsi dark, shading into reddish brown at the distal portion. Tarsus reddish brown. Trochanter of palpus dark reddish brown, femur, patella, and tibia black. Tibia lighter ventrally, tarsi light brown.

M. texanum shows its closest affinities to *M. roeweri*, differing mainly in the darker color of the dorsum.

LEPTOBUNINAE Banks

Protolophus rossi, new species

Fig. 11

Holotype.—Male from Moticeto, California. In the collection of the Cali-

ifornia Academy of Science. Female allotype from same locality. In the collection of The American Museum of American History. Both collected. February 22, 1938, by E. S. Ross.

Description of holotype: total length of body, 5.9 mm. Length of cephalothorax, 2.1 mm. Width of body at widest portion, 3.6 mm. Dorsum finely granulate, the five pairs of median elevations characteristic of the genus are very low in this species. The fifth pair being so low as to be discernible with difficulty. These tubercles are unspined, although a few have some very short hairs. Eye tubercle low, not canaliculate, armed with a row of tubercles over each *eye*. Median anterior margin of the cephalothorax characteristically elevated. This elevation armed with small black tubercles more or less arranged in four rows. Supra-cheliceral lamella with a pair of small blunt spines. Posterior part of the cephalothorax with a few very small scattered black spines. Free sternites and genital operculum armed with scattered black spines, the lateral margin of the genital operculum with a row of teeth. Second maxillar lobes straight and armed with black spines. Coxae with scattered black spines, lateral teth present on the anterior margins of coxae I to IV and on the posterior margins of coxae I and IV.

Legs: armed throughout with scattered black spines. Metatarsi without false articulations.

	Trochanter	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
II	0.4	1.9	0.7	2.1	2.2	3.4	10.7 mm.
III	0.5	2.7	0.9	2.9	2.7	6.8	16.5 mm.
IV	0.5	2.0	0.7	2.0	2.5	4.0	11.7 mm.
	0.5	3.0	1.1	2.7	3.8	4.7	15.8 mm.

Palpus: trochanter 0.4 mm. long, femur 2.7, patella 0.8, tibia 2.1, tarsus 1.8. Total length 7.8 mm. Palpus large, armed throughout with scattered black spines. Ventrally armed with heavy tubercles. At the distal portion of the tarsus these ventral tubercles are very thick and heavy. Tarsal claw small, untoothed. Palpus strongly curved, this curving due to a curve at the distal portion of the femur and in the tibia. These two curves giving a bow-like appearance to the palpus. Femur 1.0 mm. wide.

Chelicerae large, normal. Armed dorsally with scattered hairs.

Dorsum yellowish brown with a darker brown median stripe, This darker brown encloses most of the cephalothorax, narrows to a stripe on the abdomen, just enclosing the tubercles. This stripe ends at the posterior margin of the fifth dorsal segment. Darker brown punctate markings mark the junctions between the abdominal segments. The lateral margins of the cephalothorax and abdomen and posterior portion of the abdomen, lighter, almost white. Eye tubercle darker at base, lighter above. Free sternites, coxae, and genital operculum silvery, the black spines contrasting strongly. Trochanters light, remainder of legs somewhat darker with dark brown mottlings. Metatarsi lighter than the remainder of the legs. Palpus brownish except for the tarsus which is quite light. Spines on palpus black. Chelicerae very light except for some brown markings on the proximal segment and the tips of the jaws which are black.

Description of allotype : total length of body, 5.2 mm. Length of cephalothorax, 1.4 mm. Width of body at widest portion, 3.2 mm. Female similar in appearance to the male except that the palpi are not enlarged. The characteristic apical median patellar spur is present. Dorsal tubercles barely discernible.

P. rossi shows its closest affinities to *P. singularis* Banks. It differs markedly, however, in the dorsal color pattern, the shape of the palpus, and in the heavy tuberculation of the palpus.

PHALANGIINAE Simon

Eurybunus pallidus, new species

Fig. 12

Holotype.—Male, from Scottsdale, Arizona. Female allotype from same locality. Both collected by H. Britcher. In the collection of The American Museum of Natural History.

Description of holotype: total length of body, 3.3 mm. Length of cephalothorax, 1.4 mm. Width of body at widest portion, 2.5 mm. Dorsum smooth, eye tubercle normal, scarcely canaliculate, low, smooth above. The median anterior portion of the cephalothorax is elevated and notched slightly as is characteristic of the genus. This elevation extends posteriorly almost to the eye tubercle. It is roughly triangular in shape. The anterior portion of this elevation is set with numerous small black spines. Supra-cheliceral lamella smooth. Free sternites smooth, a few small black spines present on the genital operculum, maxillary lobes and coxae. Second maxillary lobes curved. Coxae without lateral teeth, a spine present at the anterior distal portion of the fourth coxae.

Legs : armed with a few scattered black spines more or less definitely arranged in rows on the femora of the second and fourth legs. Spines much more numerous on the ventral surface than on the dorsal surface of the tibiae and metatarsi. First and third legs with femur, patella, and tibia enlarged as is characteristic of the genus. Metatarsus of the second leg with two false articulations, of the fourth, one. Tibia of the second leg with three false articulations.

	Trochanter	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.4	1.5	0.4	1.6	1.9	2.7	8.5 mm.
II	0.4	3.2	1.1	3.2	2.7	5.4	16.0 mm.
III	0.4	1.4	0.7	1.4	2.2	3.2	9.3 mm.
IV	0.4	2.3	0.9	1.8	3.2	4.5	13.1 mm.

Palpus : trochanter 0.2 mm. long, femur 0.8, patella 0.4, tibia 0.4, and tarsus 0.9. Total length 2.7 mm. Palpus normal, armed throughout with small scattered black spines. Tarsal claw simple. Scattered spines most numerous on the tarsus.

Chelicerae normal, proximal segment without a ventral tooth, but with a slight elevation at the apical median portion. Slight elevation of the second segment also present.

Dorsum yellowish brown, silvery in some specimens. Eye tubercle also

yellowish brown. Dorsum with darker brown mottlings. The brown mottlings are especially numerous on the lateral and posterior portions of the cephalothorax. The median elevation has two long and two short brown stripes. On the lateral portion of the boundaries of the abdominal segments there are several brown spots. Towards the posterior portion of the abdomen, these become less regularly arranged. Venter and coxae silvery, legs light yellowish brown with a few brown spots on the femur, patella, and tibia. Palpi and chelicerae yellowish brown with a few darker mottlings.

Description of allotype : total length of body, 3.1 mm. Length of cephalothorax, 1.2 mm. Width of body at widest portion, 2.0 mm. Similar in appearance to male except that it lacks the secondary sexual characters, i.e., raised portions of the chelicerae.

This species differs from *E. brunneus* in being smaller and in having a lighter coloration. It differs from *E. spinosus* by lacking the spines of the dorsum.

***Eurybunus riversi*, new species**

Fig. 14

Holotype.—Male from Reno, Nevada. Collected April 19, 1941, by Ira La Rivers. Male paratype from Montgomery Canyon, Mono County, California. Collected July 13, 1941, by W. M. Pearce. Both in the collection of The American Museum of Natural History.

Description of holotype : total length of body, 5.4 mm. Length of cephalothorax, 2.1 mm. Width of body at widest portion, 2.9 mm. Dorsum finely granulate, eye tubercle low, not canaliculate, smooth above. Median anterior portion of the cephalothorax with the characteristic notched elevation. This elevation is covered with small black spines. From the margin it slopes posteriorly ending just anterior to the eye tubercle, roughly in the form of a triangle. Posterior part of the abdomen distinctly truncate as seen from above. Free sternites smooth, a few scattered black spines on the genital operculum. Second maxillary lobes slanted anteriorly and armed with scattered black spines. Coxae with a few scattered black spines. First to third coxae with small black tubercles which on coxa I become extremely numerous. Supra-cheliceral lamella smooth.

Legs : trochanters with a few scattered black spines and with small black tubercles on trochanter I to III. Femur, patella, and tibia of first and third legs characteristically enlarged. All segments of all legs armed with scattered black spines, the spines being especially numerous and large on the ventral portion of the first and third legs. The metatarsi of the first and third legs armed ventrally with two rows of sharp black spines. Two false articulations in the metatarsus of the second leg, one in the metatarsus of the fourth. Tibia of second leg with three false articulations.

	Trochanter	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	0.4	1.6	0.9	1.8	2.3	2.9	9.9 mm.
II	0.5	5.1	1.0	4.8	3.2	4.5	19.1 mm.
III	0.5	1.8	0.7	1.8	3.1	2.9	10.8 mm.
IV	0.5	3.6	1.0	2.9	4.1	4.9	17.0 mm.

Palpus: trochanter 0.3 mm., femur 0.7, patella 0.5, tibia 0.6, and tarsus 0.9. Total length, 3.0 mm. Palpus armed throughout with small black spines which are very numerous on the tibia and tarsus. Ventrally there are some heavier black spines on the trochanter, femur, and tibia. Tarsal claw untoothed.

Chelicerae normal. Armed with scattered black spines.

Dorsum dark brown with a suggestion of an irregular lighter median stripe. Lighter area in the anterior median portion of the cephalothorax. A lighter area also along the lateral margin of the cephalothorax and the anterior abdominal segments. Eye tubercle brownish. There are also some dark brown markings irregularly arranged on either side of the cephalothorax. On the abdomen these dark markings are in the form of round spots roughly following the divisions of the abdominal segments, becoming more regular at the posterior portion. Except at the posterior portion, they are lacking in the median lighter marking. Venter and coxae lighter, yellowish brown. The dark armature of the coxae contrasting strongly. Trochanters concolorous with the coxae. Femur, patella, and tibia of first and third legs and distal portion of the femur, patella, and tibia of the second and fourth legs dark brown. Remainder of legs yellowish brown. Chelicerae and palpi yellowish brown, the black spines contrasting strongly.

The paratype from California has longer legs than the holotype. Also the tubercles on the first and second coxae are light brown instead of black.

E. riversi differs from other species of *Eurybunus* mainly in its distinct dorsal color pattern.