

PHALANGIDA FROM THE UNITED STATES

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This present paper is fifth¹ in a series in which the authors are attempting to make the phalangid fauna of the United States better known. Before the entire group is monographed, it has been thought better to describe most of the species and to clarify their relationships and distributions. All holotypes are deposited in the collection of The American Museum of Natural History.

Suborder Laniatores Thorell
Phalangodidæ Simon
Phalangodinæ Roewer

Wespus arkansasensis Goodnight and Goodnight
(Figs. 7, 8, and 9)

Wespus arkansasensis Goodnight and Goodnight, 1942, Amer. Mus. Novitates, No. 1188, p. 12, figs. 46, 47, and 48.

FEMALE.—Total length of body, 2.0 mm. Cephalothorax, 0.8 mm. Width of body at widest portion, 1.6 mm.

	I	II	III	IV
Trochanter	0.2 mm.	0.2 mm.	0.2 mm.	0.2 mm.
Femur	0.9	0.7	0.8	1.0
Patella	0.4	0.3	0.3	0.4
Tibia	0.7	0.6	0.6	0.9
Metatarsus	0.6	0.7	0.7	1.0
Tarsus	0.8	0.5	0.7	0.5
Total	3.6 mm.	3.0 mm.	3.3 mm.	4.0 mm.

¹ See the following papers:
The Genus *Protolophus* (Phalangida). Amer. Mus. Novitates, No. 1157.
New American Phalangida. Amer. Mus. Novitates, No. 1164.
New Phalangodidæ (Phalangida) from the United States. Amer. Mus. Novitates, No. 1188.
New and Little Known Phalangids from the United States. Amer. Midl. Naturalist, Vol. 29, No. 3, pp. 643-656.

Dorsal scute with five distinct areas, the boundaries of which are parallel, but difficult to discern. First area without a median line. Eye tubercle removed from the anterior margin of the cephalothorax, rounded above, eyes at the base. Eye tubercle unarmed, but granulate. Entire dorsum roughly granulate, but without any armature. Venter and coxæ roughly granulate. Third coxa with marginal teeth on the anterior and posterior margins. Spiracles not visible.

Legs: Clothed throughout with scattered hairs, which are more numerous on the tarsi. Legs without tuberculations. Metatarsi of legs divided into a long astragulus and a short calcaneus. Tarsal segments: 3-6-5-6. Distitarsus of first tarsus with 2 segments, of second 3 segments. The fourth tarsus has 6 segments rather than 5 as was stated in the original description. One specimen of the many studied had only 5 segments in the second tarsus; the remaining tarsi had the same number as those of the holotype.

Palpus: Trochanter 0.2 mm. long, femur 0.4, patella 0.4, tibia 0.4, and tarsus 0.3. Total length, 1.7 mm. Palpus armed retrolaterally as in Figure 9. Prolaterally the femur has two apical median spines, one of which is larger. The patella has one spine in the medial portion and one in the apical. The tibia has three spines, and the tarsus is armed as on the retrolateral side. Dorsal surface of femur with heavy granulations.

Chelicera normal, clothed throughout with scattered hairs.

Entire body including palpus reddish brown. Free tergites with darker shadings. Eyes black, contrasting. Appendages yellowish, lighter than the dorsum.

MALE: Total length of body, 2.4 mm. Cephalothorax, 0.8 mm. Width of body at widest portion, 1.8 mm.

Male similar in appearance to the female; however each maxillary lobe of the second coxa has a rounded ventral projection.

RECORDS: Washington County, Arkansas, October 6 and 11, 1939, and October 3 and 21, 1941 (Miller and Sanderson). Centreville, Wilkinson County, Mississippi, July, 1944 (A. F. Archer).

Suborder Palpatores Thorell
Tribe Dyspnoi Hansen and Soerensen
Nemastomatidæ Simon

Nemastoma pallidimaculosa new species

(Figs. 1 and 2)

MALE: Total length of body, 1.4 mm. Cephalothorax, 0.4 mm. Width of body at widest portion, 0.8 mm.

	I	II	III	IV
Trochanter	0.2 mm.	0.2 mm.	0.2 mm.	0.2 mm.
Femur	0.9	1.4	0.9	1.3
Patella	0.3	0.3	0.3	0.3
Tibia	1.0	1.8	1.0	1.4
Metatarsus	1.4	3.0	1.7	2.5
Tarsus	1.1	2.2	1.1	1.5
Total	4.9 mm.	8.9 mm.	5.2 mm.	7.2 mm.

Body elongate, eye tubercle low, rounded, near the anterior margin of the cephalothorax. The male holotype has colorless eyes at the base. The two paratypes lack all traces of eyes. Dorsal scute, including the eye tubercle and cephalothorax, covered with small round granulations. Free tergites also covered with these small granulations except for the membranes which separate them. A row of irregularly shaped light splotches along the lateral margins and the posterior margin of the dorsal scute; these splotches are without granulations, and extend onto the cephalothorax and up to the eye tubercle. Free sternites, venter, and coxæ thickly covered with the same type of granulations. First to fourth coxæ with teeth on the anterior and posterior margins. Spiracle very conspicuous.

Legs: Trochanters granulate, remainder of legs smooth, with a few long scattered hairs on all segments and numerous small, closely adhered hairs on the tibiæ, metatarsi, and tarsi. All femora with a basal false articulation. Tarsal segments: 8-13-7-7.

Palpus: Trochanter 0.4 mm. long, femur 1.0, patella 0.9, tibia 1.0, and tarsus 0.4. Total length, 3.7 mm. Palpus very long and slender. All segments clothed with long hairs which extend at right angles to the segment. These hairs are more numerous on the tibia and tarsus.

Chelicerae: clothed with scattered hairs. A dorsal median enlargement on the proximal portion of the second segment.

Entire body brown, with granulations a darker brown. Lateral portion of the body and membranes between the free tergites lighter. The row of spots on the abdominal scute lighter and somewhat shiny. Appendages lighter. Tips of cheliceral claws dark.

FEMALE: Total length of body, 1.6 mm. Cephalothorax, 0.3 mm. Width of body at widest portion, 0.9 mm.

Similar in appearance to the male, but lacking the enlargement of the chelicera.

Type locality: Male holotype and female paratypes from Rock House Cave, 1 mile south of Oleander, Marshall County, Alabama, June 23, 1942 (W. B. Jones).

This species differs from *Nemastoma inops* Packard in the conspicuous lateral spots and in the granulation of the body.

Ischropsalidæ Simon

Taracus malkini, new species

(Figs. 4, 5, and 6)

FEMALE: Total length of body, 2.0 mm. Cephalothorax, 1.5 mm. Width of body at widest portion, 3.2 mm.

	I	II	III	IV
Trochanter	0.3 mm.	0.3 mm.	0.4 mm.	0.4 mm.
Femur	1.4	1.2	1.3	1.6
Patella	0.6	0.7	0.6	0.7
Tibia	1.1	1.8	1.2	1.5
Metatarsus	1.5	2.3	1.7	2.2
Tarsus	1.3	2.1	1.4	1.8
Total	6.2 mm.	8.4 mm.	6.6 mm.	8.2 mm.

Cephalothorax smooth except for some extremely fine granulations. Eye tubercle large, not canaliculate, a row of spine-tipped tubercles over each eye. Just posterior to the eye tubercle is the characteristic spine. It has an enlarged base, and is situated on a slight elevation. It is directed forward. Laterad to the spine, on both sides, is a row of several spine-tipped tubercles. On the last segment of the cephalothorax is a complete transverse row of the same type of tubercles. Abdomen smooth except for numerous tubercles which are scattered irregularly over the surface. There is variation in the size of these tubercles, and little regularity of arrangement. Most, but not all of the tubercles, are tipped with a small spine-like hair. These hairs are curved and directed caudad. Venter, coxæ, and genital operculum thickly covered with long black spine-like hairs. These spines are situated on very small tubercles. Spiracles visible. Maxillary lobe of second coxa club-shaped and thickly covered with spine-like hairs.

Legs: Trochanters with scattered spine-bearing tubercles which are similar to those on the coxæ. All segments of the legs with numerous small hairs which are closely applied to the surface. In addition there are the same spines on all segments but the tarsi. These hair-like spines are somewhat arranged in rows. All femora with a basal false articulation. Metatarsi with false articulations. Tarsal segments: 11-16-11-13.

Palpus: Trochanter 0.4 mm. long, femur 1.5, patella 1.1, tibia 0.9, and tarsus 0.4. Total length, 4.3 mm. Palpus elongate. Femur, patella, and trochanter with numerous spine-like hairs on small tubercles. Tibia and

tarsus thickly covered with hairs which extend at right angles to the segment.

Chelicera: Length of proximal segment 1.7 mm. Length of distal segment 2.4 mm. Length of movable claw 0.9 mm. Proximal segment with heavy spines which are arranged in rows. Distal segment with somewhat less heavy spines. All these spines are hair-tipped. Cheliceral claw armed as in Figure 5.

Cephalothorax brown. Eye tubercle brown except for a black ring around the eye. Spine pale. Abdomen grey with irregular light patches. Spines on the tubercles black. Legs brown, palpi brown, darker distally. Chelicera dark brown to black.

Type locality: Female holotype from Manzanita Lake, Lassen National Park, elevation 5800 feet, California, October 1, 1944 (B. Malkin).

This species is related to *T. silvestrii* Roewer, differing by having the tubercles arranged irregularly on the abdomen and by having 5 or more tubercles over each eye instead of 3 as in *T. silvestrii*.

Tribe Eupnoi Hansen and Soerensen
Phalangiidae Simon
Leiobuninae Banks

Leiobunum gordonii, new species

(Fig. 3)

FEMALE: Total length of body, 5.0 mm. Cephalothorax, 1.8 mm. Width of body at widest portion, 2.7 mm. Length of femora: I, 9.1 mm.; II, 16.5 mm.; III, 8.5 mm.; IV, 12.6 mm.

Dorsum finely granulate. Eye tubercle in the central portion of the cephalothorax, canaliculate, with a row of spinules over each carina. Anterior margin of the cephalothorax smooth. Supracheliceral lamella in the form of an expanded plate. Abdomen subtruncate as seen from above, not strongly arched. Venter and genital operculum clothed with scattered hairs; genital operculum and coxæ with small tuberculations. Genital operculum margined with low teeth. Lateral teeth present on the anterior and posterior margins of coxæ I and IV, those on the posterior margin of coxa I very small; and on the anterior margins only of coxæ II and III.

Legs: Trochanters, femora, patellæ, and basal portion of tibiæ with small black spines which are more or less arranged in rows. Remaining segments with a few scattered hairs placed at right angles to the segments and with many small investing hairs.

Palpus: Trochanter 0.5 mm. long, femur 0.8, patella 0.4, tibia 0.6, and tarsus 1.2. Total length, 3.5 mm. Femur elevated only slightly above the cephalothorax, armed ventrally with small spines. Patella and tibia with small scattered spines, tibia and tarsus clothed with hairs, palpal claw small and toothed.

Dorsum yellowish, eye tubercle black (lighter in some specimens); base of tubercle forming the apex of a triangle which broadens and is continuous with the median dorsal stripe of the abdomen. Lateral portions of cephalothorax bordered with dark brown. Abdominal scute with a dark median stripe which terminates at the posterior margin of the fifth segment. Second, third and fourth abdominal segments indicated by brownish stripes which begin at the median stripe and terminate at the lateral margins. These have light spots on them. Other segments indicated by brownish stripes without the lighter spots. Venter, and coxæ slightly lighter than the dorsum. Palpus light yellowish, distal portion of femur and proximal portion of patella dark brown. Chelicera light. Legs: trochanters and bases of femora dark, contrasting with the coxæ, remainder of legs lighter brown; patellæ darker. All legs ringed with white at the distal portions of all femora and tibiæ. These white rings are preceded by darker rings.

MALE: Total length of body, 3.4 mm. Cephalothorax, 1.3 mm. Width of body at widest portion, 2.5 mm. Length of femora: I, 10.1 mm.; II, ?; III, 9.3 mm.; IV, 12.0 mm.

Similar in appearance to the female. Dorsal stripe less distinct. Penis alate. The white rings of the tibiæ are preceded by dark brown rings, those of the femora are not. Remainder of legs yellowish orange, darker on the distal segments, but much lighter than the legs of the female.

Type locality: Female holotype from Haleyville, Alabama, July 17, 1943 (D. Sparkman). Paratypes from Ranken, Missouri, June 29, 1941 (W. M. Gordon) and from Giant City State Park, Illinois, July 5, 1944 (Sanderson and Leighton).

This species is closely related to *L. relictum* Davis differing by having contrasting trochanters and by the male having an alate penis.

Roewer in "Die Weberknechte der Erde" has described an animal under the name of *Leiobunum nigropalpi* which appears to have many characters in common with this. The true *L. nigropalpi*, as described by Wood however, has no white annulations on the legs and has a completely black palpus.

PHALANGIDA

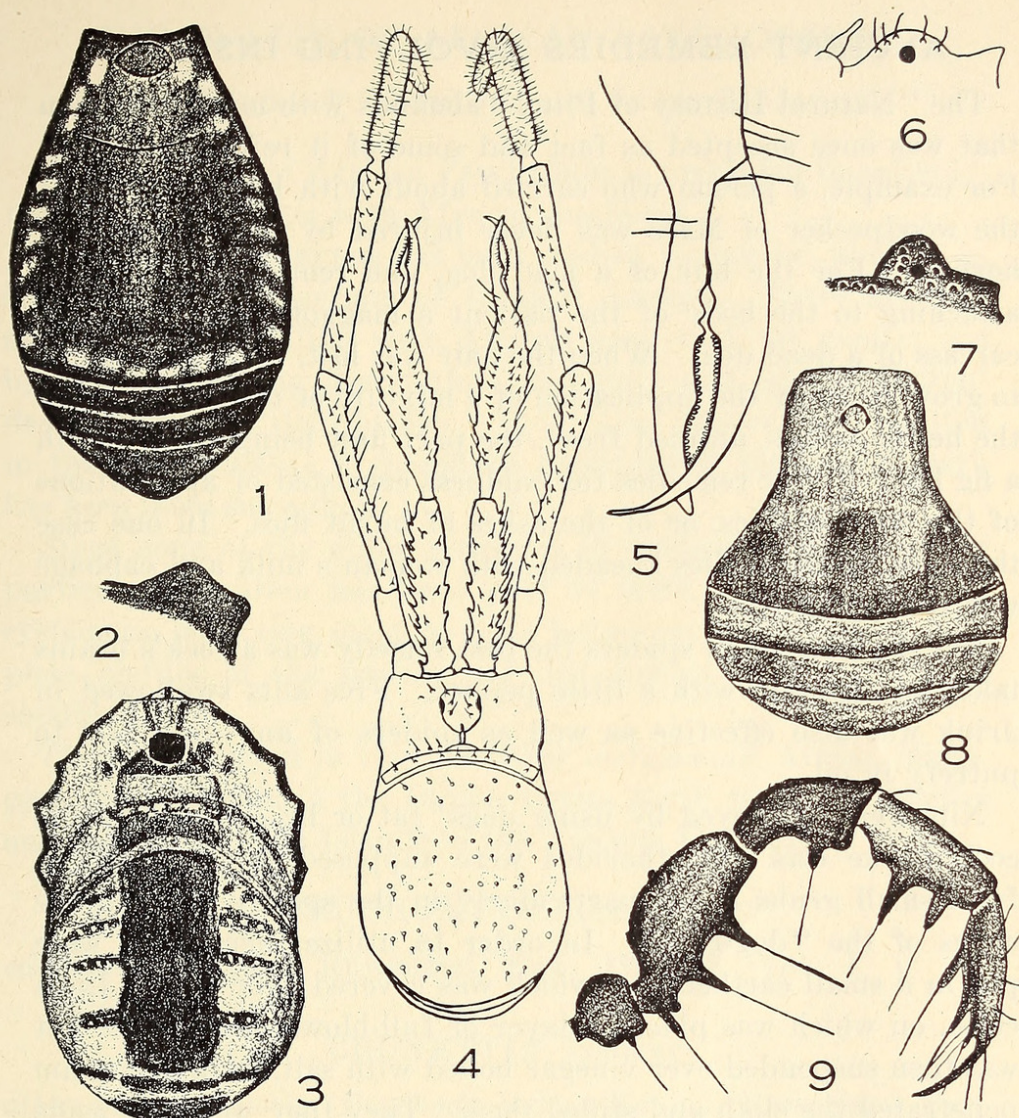


PLATE II

- Figure 1. *Nemastoma pallidimaculosa*, new species, dorsal view of male holotype.
- Figure 2. Idem, lateral view of eye tubercle of male holotype.
- Figure 3. *Leiobunum gordonii*, new species, dorsal view of female holotype.
- Figure 4. *Taracus malkini*, new species, dorsal view of female holotype.
- Figure 5. Idem, ventral view of cheliceral claw of female holotype.
- Figure 6. Idem, lateral view of eye tubercle of female holotype.
- Figure 7. *Wespus arkansasensis* Goodnight and Goodnight, lateral view of eye tubercle of female.
- Figure 8. Idem, dorsal view of female.
- Figure 9. Idem, retrolateral view of palpus of female.



Goodnight, Clarence J. and Goodnight, Marie L. 1945. "Phalangida from the United States." *Journal of the New York Entomological Society* 53, 239–245.

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