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WASHINGTON PHALANGIDA, WITH DESCRIPTION OF A  
NEW SOUTHERN LIOBUNUM.

BY NATHAN BANKS, SEA CLIFF, N. Y.

During the past few years Mr. Trevor Kincaid, of Olympia, Washington State, has kindly sent me many interesting arachnids from that region. Among them quite a number of phalangids, some of which have been described, others will be given in this paper. Previous to my descriptions of Californian and Washington phalangids of last year, but one species (*Liobunum exilipes*, Wood) was known from the Pacific region; I have described and recorded fifteen others. These, with the four new ones described below, make a total of twenty; probably as many more remain to be described. To an Eastern student this fauna is very interesting because of the number of peculiar forms not known in the Eastern States. The families and genera may be separated by the following table:—

1	{	A compound claw to posterior tarsi, palpi	
		very spiny. ....	(Phalangidæ) <i>Sclerobunus</i> .
		All tarsal claws simple. ....	2
2	{	Last joint of palpus with a claw.....	(Phalangidæ).....6
		Last joint of palpus without a claw. ....	3
3	{	Palpi very short, coxæ united.....	(Trogulidæ) <i>Dendrolasma</i> .
		Palpi long, coxæ separate.....	(Nemastomidæ).....4
4	{	Mandibles longer than body.....	<i>Taracus</i> .
		Mandibles shorter than body... ..	5
5	{	Palpi slender.....	<i>Nemastoma</i> .
		The joints much swollen .....	<i>Phlegmacera</i> .
6	{	Femur I. longer than body, palpal claw denticulate, lateral pore oblong .....	<i>Liobunum</i> .
		Femur I. shorter than the body, palpal claw smooth, lateral pore nearly circular.....	7
7	{	Eye-tubercle and anterior margin of cephalothorax spiny.....	<i>Homolophus</i> .
		Eye-tubercle and anterior margin smooth.....	<i>Leptobunus</i> .

SCLEROBUNUS, Banks.

Both species of this genus occur in the State.

Colour red, tips of legs black..... *robustus*.

Colour brown, tips of legs yellowish..... *brunneus*.

*Sclerobunus robustus*, Pack.

*Phalangodes robusta*, Pack. The Cave Fauna of North America, 1888.

This species is quite common from Colorado north-westward to the Pacific.

*Sclerobunus brunneus*, Banks. Trans. Am. Ent. Soc. 1893.

This is not uncommon near Olympia.

TARACUS, Simon.

*Taracus pallipes*, n. sp.

Length of body, 6 mm. ; mandibles, 9 mm.

Colour—Cephalothorax pale, with a broad, black, median stripe, as wide as the base of the mandibles ; abdomen dark gray above with black spots ; venter pale, darker near tip ; legs pale, except tarsi, which are mostly black ; mandibles black ; palpi pale, except last joint, which is dark brown.

Cephalothorax smooth, with a prominent median spine behind the eye-tubercle, the latter with several small projections, each tipped with a hair ; anterior margin of cephalothorax strongly bi-emarginate. The dorsum of the abdomen has many conical tubercles of various sizes ; none, however, large ; they are somewhat irregularly arranged in transverse rows ; these tubercles are black, and have their base surrounded by a black ring. Femur II. is as long as the basal joint of the mandibles, which is equal to three-fourths of the body ; the femur of the palpus is longer than the femur of leg I. and shorter than femur II. ; the last joint of palpus is about one-fourth the length of the penultimate joint ; the basal joints of the mandibles have many small elevations, each bearing a hair.

Locality—Washington State, one male and one female.

This species is larger, much less spiny, and darker coloured than *T. spinosus* ; the mandibles slightly longer and the legs more slender than in that species. Some young specimens, one millimetre long, have the mandibles much shorter than in the adult, thus plainly showing that the genus has developed from forms with normal mandibles.

PHLEGMACERA, Packard.

*Phlegmacera occidentalis*, Banks. Psyche, Feb., 1894.

This species is quite frequent near Olympia.

NEMASTOMA, Koch.

*Nemastoma modesta*, Banks. Psyche, Feb., 1894.

This is common in California and Washington.

DENDROLASMA, Banks.

*Dendrolasma mirabilis*, Banks. Psyche, Jan., 1894.

Uncommon ; I have but two specimens.

## LIOBUNUM, Koch

The three species known to me may be separated as follows, applying especially to the males :

Palpus with tibia, patella and tip of femur dark brown,  
dorsum mostly blackish ..... *exilipes*.

Palpus and dorsum paler.

Spinules on venter and coxæ, trochanters brown, a brown  
median stripe on dorsum ..... *pacificum*.

Only stiff black hairs on coxæ and venter, trochanters pale,  
a large cruciate mark on the abdomen ..... *parvulum*.

*Liobunum pacificum*, nov. sp.

Length, ♂ 4.2 mm.; femur I. 5.8 mm., tibia I. 4.5 mm., femur IV. 9 mm., tibia IV. 6.8 mm. Dorsum, dirty white to gray, with a broad median brown stripe above, which is nearly equal in width throughout, barely wider at middle of abdomen; two diverging white stripes run from the eye-tubercle to the anterior margin of the cephalothorax; a few brown spots on each side of cephalothorax; venter coxæ and palpi whitish; legs dirty white, trochanters brown, patellæ and tips of femora and tibiæ light brown, tarsi brownish; basal joint of mandibles with a brown line above. Eye-tubercle moderate, with a few blunt processes above. Palpus with spinules, largest on femur; none of the joints have their angles prolonged; tarsus nearly straight, as long as patella plus tibia, claw with a few small teeth near base. Dorsum of abdomen granulate. Coxæ, trochanters, sternum and ventral segments with spinules; a white spine on inner tip of coxæ I. and II.; legs with short stiff hairs, three or four false articulations in metatarsus I., none in tibia II.

♀ length, 7 mm., femur I. 6.2 mm. Similar to the ♂, but the brown stripe is usually broken up into small patches on the cephalothorax, and indistinct on the posterior half of the abdomen; the spinules on the palpi are smaller, and there are but three or four on each side of each ventral segment.

Sometimes the legs are brownish and the dorsum suffused with brown.

Numerous specimens, ♂ and ♀, from Olympia, Washington.

*Liobunum exilipes*, Wood.

Phalangium *exilipes*, Wood, Bull. Essex Institute, Vol. VI., p. 23. This was described from California and Nevada; I have a number of specimens which agree quite well with the description, but in most of them there is a broad yellow band near the middle of the abdomen,

behind which the dorsum is much spotted; in front it is black, with a few spots on each segment; the patellæ of the legs are dark brown; only in a few specimens are the white lines in front of the eye-tubercle bent to form a white margin; the palpus has the tibia, patella and tip of femur black only in the male.

Olympia, Washington, ♂ and ♀.

*Liobunum parvulum*, nov. sp.

Length, ♂ 4 mm.; femur I. 5 mm., tibia I. 4 mm., femur IV. 7 mm., tibia IV. 5.2 mm. Dorsum grayish, with a large spot on abdomen in the form of a Greek cross, mostly brownish, but paler within, the truncate tip reaching just beyond the middle of the abdomen; on the cephalothorax several dark brown patches, more or less connected; no distinct lines from the eye-tubercle to the anterior margin; palpi whitish, with a brown line above on patella and base of tibia; venter, coxæ and trochanters white; legs pale, with broad brown bands at tips of femora and tibiæ, less distinct ones on middles of these joints; patellæ brown, tarsi mostly blackish. Eye-tubercle very low and smooth. Coxæ, trochanters, venter, sternum, palpi and legs with short stiff black hairs, no spinules, a white spine on inner tips of coxæ I., II. and III. Several false articulations in metatarsus I., three or four in tibia II. Tibia of palpus straight, much longer than patella, tarsus slightly curved; about as long as tibia plus patella; claw with a few fine teeth near base, none of the angles of the joints prolonged.

♀ Length, 5 mm.; femur I. 4.2 mm. Similar to male; mandibles slightly brownish, margin of abdomen deeper gray, ventral segments with a few brown spots. The ovipositor is extruded; it is about half as long as body, cylindrical and ringed, blackish in the middle.

Two males and one female, Olympia, Washington.

LEPTOBUNUS, Banks.

I have several specimens of a species belonging to this genus, but as they are all young, I will not describe them.

HOMOLOPHUS, Banks.

I would consider *Mitopus biceps*, Thorell, as a Homolophus, though the last joint of the palpus is longer than the two preceding; a better character for the genus is the presence of the two prominent supra-mandibular teeth. *Mitopus*, Thorell (of which *M. Morio*, Fab., was made the type), differs from *Oligolophus* in having no spines to the femur of palpus. *O. montanus*, Bks., would thus be a *Mitopus*. From Washington and

Idaho, I have another species of *Homolophus*, differing from *H. biceps* in the longer body, more spinose character, and in coloration.

*Homolophus punctatus*, nov. sp.

Length, ♂ 4 mm., breadth, 2 mm.; femur I. 2.6 mm., tibia I. 2 mm., femur IV. 4 mm., tibia IV. 3 mm. Dorsum pale brownish, with a great many small white spots and darker brown punctures; eye-tubercle with a broad white stripe above; a bifid white stripe from eye-tubercle to anterior margin; venter, sternum and coxæ whitish, stigmata and some spots on the venter, brown; trochanters white; legs brownish, darker on patellæ and ends of tibiæ; palpus with tibia, patella and most of femur black, tarsus paler; basal joint of mandibles brown above. Dorsum with many spinules, a pair of elevations on anterior margin of cephalothorax each bearing eight or ten small spines; two rows of small spines above on eye-tubercle; two prominent white supra-mandibular teeth; lateral pore nearly circular; no spinules on coxæ except on sides near tip; a white spine on inner tip of coxæ I and II; sternum and venter smooth; legs with femora, patellæ and tibiæ quite stout, and with spinules; a false articulation in metatarsus I., none in tibia II.; palpus short, basal joints very stout, with a few spinules and many short, stiff, black hairs; tarsus curved, not quite as long as tibia plus patella, with blunt spinules beneath; claw smooth.

♀ length, 5 mm., breadth, 2.4 mm. Similar to male, but the median stripe is more distinct.

One ♂ Olympia, Washington; one ♀ Bear, Idaho [L. M. Cockerell].

*Liobunum flavum*, nov. sp.

Length, ♂ 5.5 mm., breadth, 4 mm.; femur I. 1.3 mm., tibia I. 8 mm., femur IV. 17 mm., tibia IV. 12 mm. Wholly yellow, an indistinct trace of a brown vasa-mark on abdomen, patellæ of legs faintly brownish, tarsi whitish; cephalothorax with a few yellow-brown spots; eyes black. Dorsum hard, nearly coriaceous, covered with spinules; venter, sternum, coxæ, trochanters and femora with spinules, quite large on the coxæ; cephalothorax broad; eye-tubercle with a few spinules; a row of plates on each side of each coxa; a spine on inner tips of coxæ I., II. and III.; several false articulations in metatarsus I. and two or three in tibia II.; palpus slender, with a few spinules, tibia but little longer than patella, tarsus curved, longer than tibia plus patella, claw with a few small teeth near base.

♀ Length, 8 mm., femur IV. 13 mm. Similar to ♂, but a little more brownish, legs shorter and more reddish, fewer spinules on the venter, body softer.

One ♂, Shreveport, La.; one ♀, Harper's Ferry, W. Va.

The appearance of this species is somewhat like *L. verrucosum*, but the trochanters are pale and there is no golden tinge. It is more closely related to *L. ventricosum*, but has longer and lighter legs, with a more spinose body.