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THREE NEW PHALANGIDS FROM TROPICAL AMERICA

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During a study of phalangids from tropical America, several species of unusual interest were encountered. The writers were enabled to study these ani-

mals through the courtesy of Dr. W. J. Gertsch of The American Museum of Natural History and Mr. Wm. Gerhard of Field Museum of Natural History.

SUBORDER LANIATORES THORELL

PHALANGODIDAE Simon

Phalangodinae Roewer

Kimula tuberculata, new species

Figures 1, 2 and 3

FEMALE.—Total length of body, 2.9 mm. Cephalothorax, 0.7 mm. Width of body at widest portion, 1.6 mm.

	I	II
Trochanter	0.6 mm.	0.9 mm.
Femur	1.9	3.0
Patella	1.0	1.3
Tibia	1.5	1.9
Metatarsus	2.2	3.3
Tarsus	1.8	3.4
Total	9.0 mm.	13.8 mm.

	III	IV
Trochanter	0.9 mm.	1.4 mm.
Femur	1.9	2.9
Patella	0.9	1.5
Tibia	1.7	2.9
Metatarsus	2.5	3.2
Tarsus	1.7	2.0
Total	9.6 mm.	13.9 mm.

Dorsum with five distinct areas, the boundaries of which are parallel. First area without a median line. Dorsal areas without median armature, but first four thickly covered with tubercles. A transverse row of tubercles across the fifth area, the row joining at its lateral boundaries with a longitudinal row of tubercles extending from the first to fifth area. A transverse row of tubercles across each of the free tergites. First and second free tergites without median armature, but the third free tergite with a very small median spine. Eye tubercle low with eyes widely separated, tipped by a short median spine. Eye tubercle situated on the anterior margin of the cephalothorax. On the

anterior margin of the cephalothorax is a small median tubercle and another small one on either side. Venter and coxae finely granulate with numerous spine-like hairs and tuberculations on the lateral portion of the fourth coxae. A transverse row of tubercles across each free sternite; numerous tubercles on the anal operculum. Spiracles visible.

Legs: clothed with hairs and a few small tuberculations on the femora and trochanters. These tubercles arranged in a larger row on the retrolateral surface of the third femur; on the retrolateral margin of the fourth femur is another larger row with three or four spines at the distal portion of the row. Fourth femur, patella and tibia quite tuberculate. Fourth femur short and curved. Tarsal segments: 4-7 to 8-5-6. Distitarsi of both first and second tarsi with two segments. Metatarsi not divided into astragalus and calcaneus.

Palpus: trochanter, 0.6 mm. long; femur, 1.4; patella, 0.6; tibia, 1.5; and tarsus, 1.1. Total length, 5.2 mm. Retrolateral surface armed as in Fig. 2, and in addition on the prolateral surface is a small spine-bearing tubercle in the apical median portion of the femur. The tibia with only two spine-bearing tubercles on the prolateral surface. Tarsus armed as on retrolateral surface.

Chelicera with a few scattered hairs, proximal segment somewhat thickened but not elevated.

Dorsum reddish brown, somewhat darker across the dorsal areas, free tergites and lateral margin. Darker markings on the cephalothorax. Venter and coxae reddish brown, with the free sternites somewhat darker. All appendages lighter, with some darker brown mottlings. These darker brown mottlings are more numerous on the fourth legs, with the exception of the tarsus.

TYPE LOCALITY.—Female holotype from San Carlos Estate, Guantanamo, Cuba (F. E. Lutz). Holotype deposited in the collection of The American Museum of Natural History.

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Kimula tuberculata is related to *K. elongata* Goodnight and Goodnight, differing in the tuberculations of the dorsum, the shape of the eye tubercle, and in lacking a median line on the first area.

COSMETIDAE Simon
Cosmetinae Cambridge

***Paecilaema chiriquiensis*, new species**

Figure 4

MALE.—Total length of body, 5.8 mm. Cephalothorax, 1.9 mm. Width of body at widest portion, 4.7 mm.

	III	IV
Trochanter	1.0 mm.	1.0 mm.
Femur	8.4	10.8
Patella	1.9	1.9
Tibia	4.6	6.6
Metatarsus	8.7	12.1
Tarsus	3.8	4.0
Total	28.4 mm.	36.4 mm.

Dorsum finely granulate. A pair of tubercles on the first area and a pair of short thick spines on the third area; remaining areas and free tergites unbedecked. A transverse row of very fine granulations across each free tergite. Eye tubercle normal, with a few small granulations.

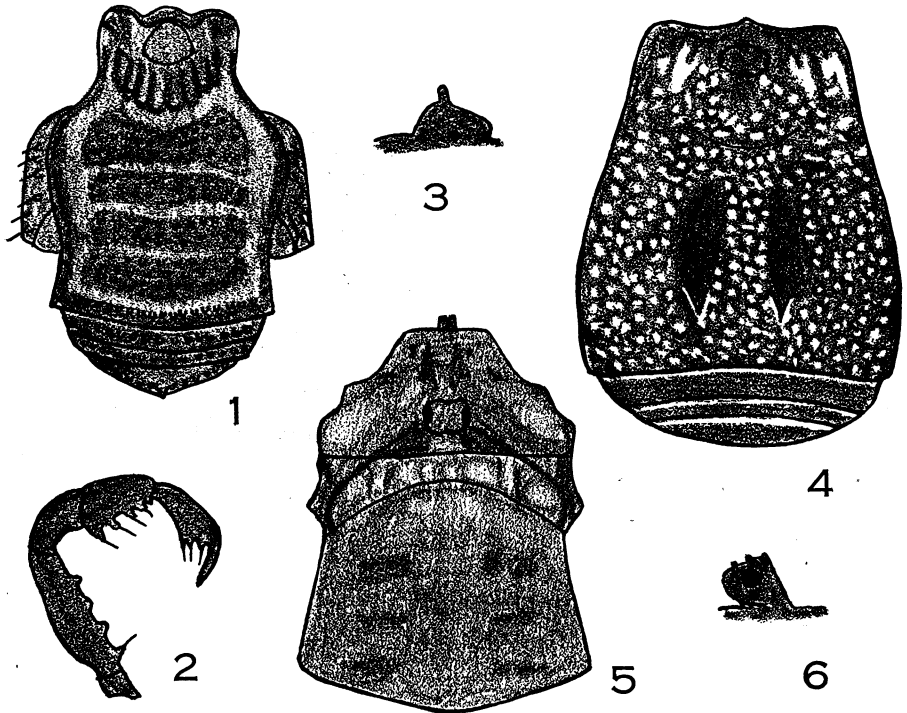


Fig. 1. *Kimula tuberculata*, new species, dorsal view of female.
Fig. 2. *Idem*, retrolateral view of left palpus of female.
Fig. 3. *Idem*, lateral view of eye tubercle of female.
Fig. 4. *Paecilaema chiriquiensis*, new species, dorsal view of male.
Fig. 5. *Geaya haitiensis*, new species, dorsal view of male.
Fig. 6. *Idem*, lateral view of eye tubercle of male.

	I	II
Trochanter	0.7 mm.	0.9 mm.
Femur	5.0	10.1
Patella	1.0	1.8
Tibia	3.2	8.5
Metatarsus	5.9	12.6
Tarsus	2.8	5.8
Total	18.6 mm.	39.7 mm.

Venter and coxae granulate, with a few scattered hairs. A transverse row of large granulations across the first coxa; a transverse row of very fine granulations across each free sternite. Anal operculum granulate, a few scattered hairs present.

Legs: long, thickly clothed with hair. Trochanters with a few granulations and some small spine-like hairs. Femur, patella and tibia with

small sharp tubercles, more or less arranged in rows. These tubercles are larger on the fourth leg. Tarsal segments: 7-17-10-11. Distitarsi of both first and second tarsi with three segments. Basitarsi of first tarsi not enlarged.

Palpus: trochanter, 1.4 mm. long; femur, 2.3; patella, 1.0; tibia, 2.2; and tarsus, 0.8. Total length, 7.7 mm. Palpus characteristically flattened, numerous scattered hairs present on all segments. A ventral row of teeth on the femur and a small spine on the ventral portion of the trochanter.

Chelicera: proximal segment somewhat enlarged and with several small spines on the retro-lateral margin. Distal segment slightly elevated dorsally.

The eye tubercle, the area from the eye tubercle to the anterior margin, and a small V-shaped area posterior to it dark brown. The area around each eye black. On either side of the median line there is an area, extending from the tubercle of the first area to the spine of the third area and enclosing the large spine which is black. Remainder of dorsal scute reddish

brown, thickly covered with small white spots. Free tergites without any such spots. Venter, coxae, chelicerae and palpi dark reddish brown, mottled with lighter colorations. Legs much lighter, almost yellowish except at the distal portion of the femur, the patella and the proximal portion of the tibia which are darker.

FEMALE.—Total length of body, 6.0 mm. Cephalothorax, 1.5 mm. Width of body at widest portion, 4.6 mm.

Similar to male, except tubercles of the fourth leg are somewhat reduced, and the chelicerae are not enlarged.

TYPE LOCALITY.—Male holotype and female paratypes from El Volcan, Chiriqui, Panama, February 18, 1936 (W. J. Gertsch). Holotype and paratypes deposited in the collection of The American Museum of Natural History.

This species is closely related to *Pacilaema lateralis* Goodnight and Goodnight, but it differs in the dorsal color pattern.

SUBORDER PALPATORES THORELL

PHALANGIDAE Simon

Gagrellinae Thorell

Geaya haitiensis, new species

Figures 5 and 6

MALE.—Total length of body, 2.3 mm. Cephalothorax, 0.9 mm. Width of body at widest portion, 1.9 mm. Length of femora: I, 4.9 mm.; II, 8.4 mm.; III, 5.1 mm.; IV, 6.8 mm.

Dorsum coarsely granulate, roughened to the extent of giving a somewhat pebbly appearance. Eye tubercle at the posterior third of the cephalothorax, higher than wide, canaliculate, with several small granulations above each eye; constricted at the base. Suprachelical lamella in the form of two obtuse projections. Venter and coxae roughened as is dorsum. Characteristic three-pronged teeth present on the anterior and posterior margins of all coxae.

Legs: long and slender, clothed throughout with hairs. Small, spine-like hairs present on the femora. Nodules: 0-3-0-0. Nodules not very prominent. Metatarsi and tibia with false articulations.

Palpus: trochanter, 0.3 mm. long; femur, 0.9; patella, 0.4; tibia, 0.5; and tarsus, 1.0. Total length, 3.1 mm. Palpus clothed throughout with hairs, spines present on the ventral portion of the trochanter, femur, patella and tibia. Median apical portion of the patella with a short but distinct apophyses which is clothed with hairs. Tarsus with numerous hairs, tarsal claw toothed.

Chelicera normal, clothed throughout with scattered hairs.

Dorsum golden brown with darker mottlings on the margins of the cephalothorax, the area about the eye tubercle and at the posterior portion of the abdomen. Eye tubercle light brown with darker markings around each eye. There is a darker spot on either side on the anterior abdominal segments. These darker spots lie midway between the median line and the lateral margin forming an indefinite sub-obsolete median line. Lighter portions show through in the form of indefinite rows of spots between the eye tubercle and the abdomen. Venter and coxae brownish, darker at the distal portions of the coxae. Trochanters dark brown, concolorous with the distal portions of the coxae, legs brownish, lighter distally. There is a light yellow ring around each of the nodules of the second femur. There is also a light ring in the median portion of the first and fourth femora, but close examination shows these rings as not marking nodules. These light rings on the femora and a few on the tibia stand out distinctly. Palpi yellowish, with darker mottlings on the femora, patella and tibia. Chelicerae light.

FEMALE.—Total length of body, 4.7 mm. Cephalothorax, 1.2 mm. Width of body at widest portion, 2.8 mm.

Identical in appearance with the male.

TYPE LOCALITY.—Male holotype and male and female paratypes from Kenscoff, Haiti, November 2, 1928 (K. P. Schmidt). Holotype deposited in the collection of Field Museum of Natural History, Chicago,

Illinois. Paratypes in the collection of Field Museum of Natural History and the collection of The American Museum of Natural History.

G. haitiensis is related to *G. atrolutea* Roewer, differing, however, in the color and appearance of the eye tubercle. It also differs in the color of the dorsum.