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Report on a Collection of Phalangids from Rancho Grande, Venezuela.¹

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(Text-figures 1-4.)

[This is one of a series of papers resulting from the 45th and 46th Expeditions of the Department of Tropical Research of the New York Zoological Society, made during 1945 and 1946 under the direction of Dr. William Beebe, with headquarters at Rancho Grande in the National Park of Aragua, Venezuela. The expeditions were made possible through the generous cooperation of the National Government of Venezuela and of the Creole Petroleum Corporation.

[The characteristics of the research area are in brief as follows : Rancho Grande is located in north-central Venezuela (10° 21' N. Lat., 67° 41' W. Long.) , 80 kilometers west of Caracas, at an elevation of 1,100 meters in the undisturbed montane rain forest which covers this part of the Caribbean range of the Andes. Adjacent ecological zones include seasonal forest, savanna, thorn woodland, cactus scrub, the fresh-water lake of Valencia and various marine littoral zones. The Rancho Grande area is generally subtropical, being uniformly cool and damp throughout the year because of the prevalence of the mountain cloud cap. The dry season extends from January into April. The average humidity during the expeditions, including parts of both wet and dry seasons, was 92.4% ; the average temperature during the same period was 18° C ; the average annual rainfall over a five-year period was 174 cm. The flora is marked by an abundance of mosses, ferns and epiphytes of many kinds, as well as a few gigantic trees. For further details, see Beebe and Crane, *Zoologica*, Vol. 32, No. 5, 1947. Unless otherwise stated, the specimens discussed in the present paper were taken in the montane cloud forest zone, within a radius of one kilometer of Rancho Grande.]

This paper is a report on the phalangids collected during the 45th and 46th Expeditions of the Department of Tropical Research.

The species showed relationships to those of Trinidad (Goodnight and Goodnight, 1947) , many of the specimens representing the same species. The Cosmetidae, one of the most typical of neotropical families, is here represented by two species, one of which is new.

Among the Phalangodidae, the Stygnommatinae are represented by the wide-ranging *Zygobunus rufus* (Petrunkevitch) . This was formerly known only from Panama. The sub-family Phalangodinae is represented by *Kalina tuberculata* Goodnight and Goodnight

known formerly only from Trinidad. The Triacominatinae are represented by one new species, *Vima plana*.

Among the family Gonyleptidae, three species are represented, one of which is new.

The writers wish to express their appreciation to Dr. Beebe and Mr. H. Fleming for making this material available for their study. Types are deposited in the collections of the Department of Tropical Research, New York Zoological Society, New York 60, New York.

SUBORDER LANIATORES THORELL.

PHALANGODIDAE Simon.

Phalangodinae Roewer.

Kalina tuberculata Goodnight and Goodnight.

Reference : *Kalina tuberculata* Goodnight and Goodnight, 1947, p. 1, fig. 4.

Record : Zone 28, Rancho Grande, Venezuela, 1945.

Stygnommatinae Roewer.

Zygobunus rufus (Petrunkevitch) .

References : *Stygnomma rufum* Petrunkevitch, 1925, p. 62.

Zygobunus barronus Chamberlin, 1925, p. 245 ; Roewer, 1928, p. 546.

Stygnommatiplus rufus Roewer, 1928, p. 544.

Zygobunus barronus Goodnight and Goodnight, 1942, p. 4, figs. 10, 11, 12.

Record : Rancho Grande, Venezuela, March 4, 1945.

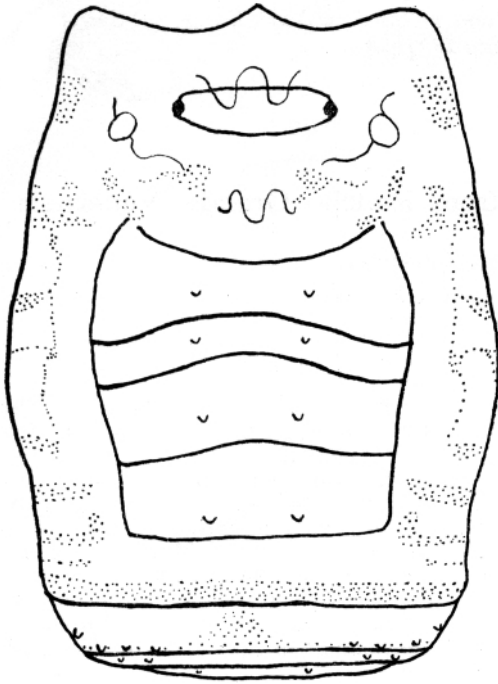
Tricommatinae Roewer.

Vima plana sp. nov.

(Text-figs. 1 & 2) .

Male : Dorsum with five areas, very small paired tubercles on the 1st, 2nd, 3rd and 4th areas. These tubercles are very small and vary in size in different individuals. Cephalothorax smooth, with a low tubercle at the posterior lateral portion. Eye tubercle wider than long, with low tuberculations across the median portion. First area of the abdomen without a median line. Boundaries of areas indistinct, not parallel. Lateral margin of abdominal scute smooth, without median armature. 5th area and free tergites each with a few small granulations. Anal operculum smooth, free sternites each with a transverse

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TEXT-FIG. 1. *Vima plana* sp. nov. Dorsal view of male holotype.

row of minute tubercles. Spiracle visible. Coxae with a few small granulations; 1st coxa with a transverse row of spines.

First leg slender, unarmed; 2nd to 4th legs heavier, a few scattered tuberculations on the trochanters. Femora with longitudinal rows of spines, remainder of legs only with scattered hairs. 4th patella with a few apical tubercles. Double claws smooth, without scopula or false claw. Tarsal segments: 9-18-8-9. Distitarsus of 1st tarsus with 3 segments, 2nd with 3 also.

LENGTH OF LEGS.

	I. mm.	II. mm.	III. mm.	IV. mm.
Trochanter	0.3	0.7	0.8	0.8
Femur	6.3	14.4	11.5	16.2
Patella	0.7	1.2	1.4	1.5
Tibia	4.0	10.8	6.1	8.5
Metatarsus	8.5	17.4	12.4	20.5
Tarsus	1.5	4.5	2.9	3.2
Total	21.3	49.0	35.1	50.7

Palpus with the trochanter 0.8 mm. long, femur 1.1, patella 0.7, tibia 0.6, and tarsus 0.7. Total length, 3.9 mm. Femur armed retrolaterally as in figure. Proxilaterally femur and patella each with a median apical spine. Tibia and tarsus armed as on retro-lateral margin.

Proximal segment of chelicera with a dorsal elevation on which are scattered tubercles. Distal segment greatly enlarged.

Body, chelicerae, and palpi light yellowish with scattered black mottlings. First leg uniformly colored; second leg with a white mark at the distal end of the femur; patella black,

a white patch at the distal portion of the tibia; third leg with a darker patella but no white markings; fourth leg with a white band following a black band on the distal portion of the tibia. Legs otherwise uniformly dark brown to dusky.

Female: Similar in appearance to male.

Measurements in mm.: Male, total length 3.7; cephalothorax 1.5; width at widest portion 2.6. Female, total length 7.2; cephalothorax 1.7; width at widest portion 4.2.

Record: Male holotype from Rancho Grande, Venezuela; July 22, 1945; paratypes from same locality, March 22, 1945, and July 22, 1945.

Remarks: *Vima plana* is related to *Vima insignis* Hirst. It differs from this latter species by lacking the raised area of the dorsum and the paired low tubercles over the eye.

COSMETIDAE Simon.

Cosmetinae Cambridge.

Cynorta estebana Roewer.

Reference: *Cynorta estebana* Roewer, 1947, p. 18, pl. 18, fig. 66.

Record: Rancho Grande, Venezuela, August 9, 1945.

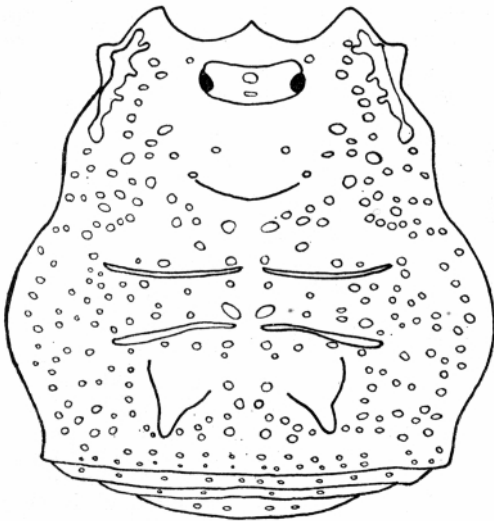
Cynorta bromeliaca sp. nov.

(Text-fig. 3).

Male: Eye tubercle wider than long. 1st area with a pair of enlarged tubercles, 3rd area with a pair of robust spines which are short and heavy at the base. Remaining areas and free tergites without median armature. Entire dorsum covered with small white elevations. These are more numerous on the lateral posterior portions of the scute. Each free tergite with a transverse row of same tuberculations. Anal operculum with only a few granulations, free sternites each with a transverse row of hair-tipped granulations. Coxae and genital operculum smooth except for scattered hairs. A few teeth on the anterior margins of the 3rd and 4th coxae, and a transverse row of granulations across the 1st coxa.



TEXT-FIG. 2. *Vima plana* sp. nov. Retrolateral view of palpus of male holotype.



TEXT-FIG. 3. *Cynorta bromeliaca* sp. nov. Dorsal view of male holotype.

Legs clothed only with hairs except for a few tuberculations at the apical portion of the 4th patella; femora straight. Tarsal segments: 6-14-11-12. Distitarsus of both 1st and 2nd tarsi with 3 segments. Proximal portion of 1st tarsus enlarged.

LENGTH OF LEGS.

	I.	II.	III.	IV.
	mm.	mm.	mm.	mm.
Trochanter	0.6	0.8	0.8	0.8
Femur	4.4	6.6	6.6	9.3
Patella	1.0	1.6	1.6	1.6
Tibia	2.8	8.3	3.8	5.3
Metatarsus	4.3	10.3	5.5	9.4
Tarsus	2.6	5.2	3.6	4.4
Total	15.7	32.8	21.9	29.8

Palpus with the trochanter 0.8 mm. long, femur 1.4, patella 0.9, tibia 1.5, and tarsus 0.8. Total length, 5.4 mm. Palpus characteristically flattened with a ventral row of teeth on the femur.

Proximal segment of chelicera with a dorsal elevation on which are a few granulations. Distal segment somewhat enlarged.

Dorsum reddish-brown, thickly covered with white spots which are more numerous on the lateral and posterior portions of the scute. These form an irregular band of white spots, with a few scattered ones in the median area. Several white spots on the eye tubercle. A transverse row of white spots across each free tergite. Anal operculum without markings. Venter, coxae, and chelicerae reddish-brown with darker markings. Legs yellowish, trochanters, and bases of femora, patellae, and tibiae reddish-brown. Metatarsi white.

Measurements in mm.: Male, total length 6; cephalothorax 1.9 width of body at widest portion 4.1.

Record: Male holotype from bromeliads, Rancho Grande, Venezuela, August 8, 1946.

Remarks: This species is most nearly related to *Cynorta catenulata* Roewer. It differs from this latter species by having an entirely different pattern of white on the dorsal scute.

GONYLEPTIDAE SUNDEVALL.

Cranainae Roewer.

Poecilocranaus graciosus Roewer.

Reference: *Poecilocranaus graciosus* Roewer, 1943, p. 54, pl. 7, fig. 63.

Record: Rancho Grande, March 22, 1945.

Santinezia albilineata Roewer.

Reference: *Santinezia albilineata* Roewer, 1932, p. 290, fig. 7.

Record: Rancho Grande, Venezuela, August 1, 1945.

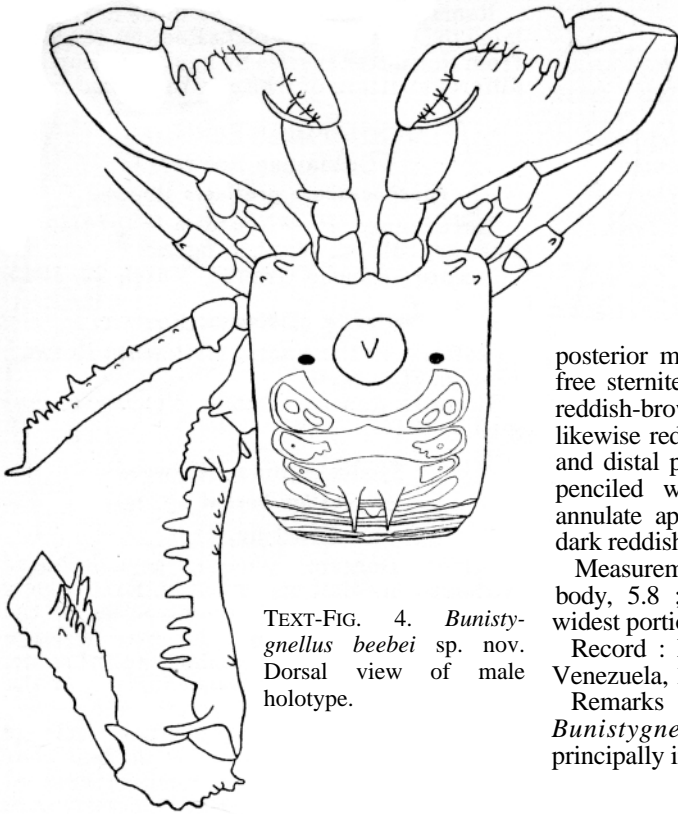
Stenostyginae Roewer.

Bunistygnellus beebei sp. nov.

(Text-fig. 4).

Male: Dorsum smooth, cephalothorax without a median eye tubercle. Eyes widely separated near the posterior portion of the cephalothorax. Between the eyes a large rounded elevation with a short apical spine. Elevation granular. Anterior margin of the cephalothorax with a short anterior projection between the chelicerae and palpi. A large vertical spine at the anterior margin near the coxa of the palpus. A small tubercle at the anterior lateral margin. Abdomen with five areas. 1st area constricted in the middle, 2nd area narrow, 3rd area with a pair of large spines, 4th and 5th areas unarmed. Free tergites smooth, unarmed. Lateral margins of scute smooth, anal operculum smooth. Free sternites each with a transverse row of hair-tipped tubercles which are enlarged into spines at the lateral margin. Spiracles widely open. Coxae covered with hair-tipped tubercles. A transverse row of spines across the 1st coxa. 3rd coxa with anterior and posterior teeth. 4th coxa only slightly projecting and with a large dorsal apical spine.

Trochanters globular. 2nd and 3rd trochanters tuberculate, 2nd with two small dorsal apical spines, 3rd with a posterior apical spine. 4th trochanter very heavy, with a large dorsal apical spine and a lateral spine on each side; covered with smaller tubercles. 1st and 2nd femora clothed only with hairs. 3rd femur covered with hairs and tubercles, ventrally with 2 long rows of spines and with 2 dorsal apical spines. 4th femur tuberculate, ventrally with 2 rows of very large spines, dorsal-apically with 2 large spines. Remaining segments of 1st and 2nd legs clothed only with hairs. Patella of 3rd leg tuberculate with a large ventral apical spine. 3rd tibia with 2 ventral rows of tubercles at the distal third, remainder of 3rd leg un-armed. 4th patella heavily tuberculate and with large apical spines. 4th tibia clavate, with 2 ventral rows of spines at the apical third. Remainder of leg clothed only with hairs. 3rd and 4th tarsi with heavy scopulae, double claws toothed. Tarsal segments: 7-



TEXT-FIG. 4. *Bunistygneilus beebei* sp. nov. Dorsal view of male holotype.

16-8-9. Distitarsi of both 1st and 2nd tarsi with 3 segments.

	LENGTH OF LEGS.			
	I.	II.	III.	IV.
	mm.	mm.	mm.	mm.
Trochanter	0.7	0.8	1.0	1.0
Femur	3.0	4.8	3.8	4.1
Patella	0.9	1.3	1.8	2.0
Tibia	2.0	4.3	2.6	3.3
Metatarsus	3.2	5.0	4.0	5.0
Tarsus	1.4	4.8	2.7	3.1
Total	11.2	21.0	15.9	18.5

Palpus with the trochanter 1.2 mm. long, femur 3.6, patella 1.6, tibia 1.9, and tarsus 1.9. Total length, 10.2 mm. Coxa with scattered granulations. Trochanter globular with a dorsal elevation, with a small dorsal and a small ventral spine. Femur curved, unarmed except for a small basal ventral tubercule. No dorsal apical or median apical spine. Patella unarmed, tibia and tarsus each with 5 hair-tipped spines on either side. Tarsal claw long and curved back against the tarsus.

Chelicera greatly enlarged, proximal segment with a dorsal elevation, with several small tubercles dorsal and ventral. A large retrolateral spine at the apical portion. Distal segment huge, elevated considerably over the proximal segment. Distal segment smooth.

Dorsum reddish-brown. Spines and elevation of the cephalothorax likewise reddish-brown. Eyes black. Lateral portions of 1st

to 3rd segments with a large white blotch. Within these white areas 1 or 2 circles of reddish-brown. 4th area with a transverse line of white, ending in a wider area at the lateral edge. 4th area with a posterior margin of white. A narrow line of white at the lateral margin of the scute, extending from the anterior portion of the cephalothorax to the 2nd area. A large white spot on the lateral margins of the 3rd and 4th areas. Each free tergite with the posterior margin irregularly lined in white. Last free sternite lined with white. Venter and coxae reddish-brown, basal portions of 3rd and 4th legs likewise reddish-brown. Palpus, 1st and 2nd legs, and distal portion of 3rd and 4th legs yellowish, penciled with gray. These markings give an annulate appearance on the metatarsi. Chelicera dark reddish-brown, with netted dark markings.

Measurements in mm. : Male, total length of body, 5.8 ; cephalothorax, 3 width of body at widest portion, 4.

Record : Male holotype from Rancho Grande, Venezuela, 1945.

Remarks : This species is related to *Bunistygneilus macrochelis* Roewer, differing principally in the color markings on the dorsum.

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