

CLARENCE J. GOODNIGHT and MARIE L. GOODNIGHT,
Purdue University

Grant No. 1219 (1950), \$500. Distribution and taxonomic relationships of the
Phalangid¹ fauna of Chiapas, Mexico.

Previous trips to Chiapas, Mexico (1948 and 1949) had revealed the
interesting taxonomic and distributional studies possible in this moun-

¹ Arachnids commonly known as Daddy-long-legs or Harvestmen. The tropical forms have no
specific common names. The families Cosmetidae and Phalangodidae are families within the order
Phalangida.

Reprinted from YEAR BOOK OF THE AMERICAN PHILOSOPHICAL SOCIETY, 1950
142—145

Printed in U. S. A.

tainous state. Geographically, Chiapas varies from low tropical forest to mountain coniferous forests. The entire state is dissected by several mountain ranges.

Upon arriving in Tuxtla Gutierrez on June 22, arrangements were immediately made to take a small plane to Ocosingo. In Ocosingo collections were made during a period of four days. Above the town, in a small cave, an interesting new species of Phalangodid was found. This species seemingly was confined to this small moist area. Most of the remaining collecting in Ocosingo was done along the flood plain of the Rio de la Virgen. The Cosmetids collected included *Holovones compressus* Cambridge and *Erginus serratotibialis* Cambridge formerly reported from the gulf lowlands as well as a new species of *Erginulus*. *Leiobunum dromedarium* Cambridge originally described from Teapa, Tabasco, was also found.

From Ocosingo a trip was made by horseback to the Finca El Real and beyond there into the Selva Lacandona. This trip took three days each way, and collections were made along the way. Ten days were spent at El Real and in the Selva Lacandona. The species of Phalangids from this series of collections were in part the same as those found in Ocosingo; for example, *H. compressus* and *E. serratotibialis* were obtained. In addition, *Stygnomma teapensis* (Phalangodidae) described by the authors from Teapa, Tabasco, was captured. Another Phalangodid, at present undescribed and known from Palenque was also found. In addition to these, several new species were encountered including two new species of Cosmetids and one Phalangodid.

One of the most interesting animals found was *Mexscotolemon actus* Goodnight. This species ranges throughout the gulf lowlands from Vera Cruz to Yucatán. This is the southernmost record. As this species was found only in disturbed areas, it would appear that the species is increasing while forms such as *S. teapensis* and the new Phalangodid are able to exist only in patches of remaining rain forest.

The material collected appears to confirm the opinion that the fauna of this area is derived in part from the gulf lowlands and in part from the rain forest to the East.

During this portion of the trip, the authors were accompanied by Mr. Lewis J. Stannard of the Illinois Natural History Survey.

Following the work in the Ocosingo valley, the high mountain area near San Cristóbal Las Casas was visited beginning July 10. Several days of work here revealed that the high mountain area was extremely rich in species. The interesting species *Caddo chomulae* Goodnight was found in large numbers. This genus is a very ancient one, and species of it are known from Baltic Amber, from northeastern portions of the United States, and from southeastern Canada. Its presence here is accountable by the extreme age of these mountains.

Other genera found here showed the interesting intermixture of both tropical and temperate forms. Among these latter were two new species of Cosmetids, a new species of *Paramitraceras* (Phalangodidae) related to *P. granulatus* Cambridge from the Guatemalan highlands, a new

species of *Stygnomma*, and species of *Metopilio*, *Hadrobunus*, and *Nelima*. These last three genera are possibly derived from a more northern fauna.

Short trips were made by bus and horseback to Cruz Quemada, Comitán, the Cave of Zapaluta, El Rio San Gregorio, and Tenejapa. At Cruz Quemada which is slightly lower than Las Casas, *Meterginulus rastellifera* Cambridge was found. This is the first record of this animal since that in the *Biologia Centrali-Americana*. As the first report was simply "Chiapas," this establishes a definite locality. Other species found here were the same as at Las Casas. A distinctive new species of *Paramitraceras* was found at Tenejapa. The collecting area of Comitán produced few Phalangids, but in the low tropical area near the Rio San Gregorio, a distinctive Cosmetid was found which is possibly *Eucynorta unicolor* Roewer.

From Las Casas, the authors went on July 28 to Tapachula. This represented an entirely different area, completely separated faunistically from the previously studied areas by the high coastal range of mountains. The first study area was along the coastal lowlands at the Finca Santa Marta near Huehuetán and at Puerto Madero. A rich fauna showed undoubted affinities to that of the nearby Guatemalan lowlands. This fauna included *Bivonones gertschi* Goodnight formerly known only from Tonalá and *Metacynorta gracilipes* Cambridge previously reported from Guatemala. A new species of *Cynorta* similar to a species from Guatemala and a new Phalangodid were also found.

Above Tapachula collections were made at the Finca Guatemoc located at 3,000 feet on the Volcano Tacaná. By traveling up and down a portion of this volcano from about 2,500 feet to 6,000 feet, the changes occurring in the fauna were observable. A rich assemblage of species was found, most species being closely restricted to a narrow altitudinal band.

From 1,300 feet to 2,500 feet, *Erginus erectispinus* Cambridge occurred. Above this altitude, it was replaced by *Meterginus dorsalis* Cambridge. Both these species were described from Guatemala. Other species, possibly new, of Cosmetids demonstrated this same phenomena. The Phalangodid, *Paramitraceras granulatus* Cambridge appeared only above 3,800 feet. Four small new species of Phalangodidae were found at this higher altitude. This includes also the first *Stygnomma* to be found on the Pacific slope of Mexico. At Union Juárez, the authors were able to collect in a pine grove. Here were simulated conditions which would be found at higher altitudes on the volcano. The presence of the Pine forest can perhaps be accounted for by the prevailing winds and extreme slope. One Phalangodid, the same as one of the species found at Finca Guatemoc, was encountered. The genus *Leiobunum*, usually considered a northern one, was also found. It was impossible to reach the summit of the volcano owing to the heavy seasonal rains. One very interesting discovery was that of the very poorly known group of Arachnids, the Rincinulei. These occurred only above 4,000 feet. From this study, it appears that there are at least three distinctive faunal areas in Chiapas. The first of these is north of the high central

mountains. In these collections, it is represented by the material from the Ocosingo Valley. Here the fauna appears to be derived from the gulf lowlands and from the forests to the east. The second area is represented by the high central mountains near San Cristóbal las Casas. Here the fauna is derived from two sources: genera from the north as represented by *Caddo* and *Hadrobunus* and invasions from the lowlands. The third area is represented by the Pacific slope. This fauna appears to be derived from Guatemala. The genera found in the mountains are similar to those found in the Guatemalan highlands while those found in the coastal area are similar to those of the coastal area of Guatemala.