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### ***Short Communication***

## **A SHORT NOTE ON REVISIONARY STUDIES OF INDIAN LANIATORES**

### **INTRODUCTION**

The class Arachnida is a unique group of Arthropoda differing from its nearest relatives like crustacea and insecta in lacking antennae and in having chelicerae and pedipalp. Of the twelve living orders of class Arachnida, the order Opiliones is the third largest group, representing about 4000 species, placed behind Aranae and Acari. It is among the four arachnid orders, which are distributed all over the world including the frigid regions.

The order Opiliones or Phalangida are commonly termed as harvestman. Their ancestors are found as before as carboniferous period, about 280–320 millions years before (Savory, 1977). These are average sized arachnids, with comparatively long legs. Prosoma dorsally covered by an unsegmented carapace. The two eyes are located near the front edge of carapace normally on an ocularium. The ocularium may be smooth, tuberculate or bear spines. Chelicerae are three segmented and chelate type, whereas pedipalps are six segmented and nonchelate, comparatively simple and leg like. The legs are seven segmented, tarsi with many segments. There is no pedicel. Phalangids are characterized by the presence of odoriferous glands in prosoma, above the 1<sup>st</sup> or 2<sup>nd</sup> coxa.

Phalangids occurs mostly in litters of forests, under stones, woods, barks of large trees and in caves. These are mostly nocturnal in habit and found abundantly during autumn.

The order Phalangida is broadly divided into two suborders, the Laniatores and the Palpatores. The suborder Laniatore is highly specialized and more numerous than Palpatores. They characteristically differ from Palpatores in having well developed, strong and well-armed palps with reflexable claws; 4<sup>th</sup> leg strong with broad coxae. In Laniatores the 3<sup>rd</sup> and 4<sup>th</sup> legs are with two or three tarsal claws, whereas Palpatores have single claw in all legs. The opening of the odoriferous glands present above the 2<sup>nd</sup> coxa in Laniatores and not above 1<sup>st</sup> coxa as in Palpatores. The opisthosoma of Laniatores with 8 tergites and 9 sternites, whereas Palpatores have 9 tergites and 9 sternites. The first five tergites of Laniatores fused together to form the scutum, which may

be smooth or armed with tubercles or spines. The genital operculum of Laniatore small and roughly triangular, whereas that of Palpatores comparatively large and elongated. The genital organs of laniatores also differ much from that of Palpatores.

The suborder Laniatore is represented with five families from India, out of the twelve known from all over the world. These are Assamiidae, Phalangodidae, Oncopodidae, Biantidae and Podoctidae. Among these the latter two previously had subfamily status under family Phalangodidae and have been raised to family level recently (Marten, 1977 and Suzuki, 1977). Assamiidae is the largest and widely distributed in India, on the other hand Oncopodidae represents only two genera, confined to North-eastern India.

Though the suborder is well distributed in India, very few works has been done on Indian Laniatores. Some of the taxonomic works were done by Thorell (1876), Soerensen (1884–1932), Simon (1879–1909), *etc.*, on Indian Phalangids. Recently J. Marten (1971–1999) has done some contribution on Phalangid fauna of Nepal Himalaya. It was Roewer (1910–1959) who has done some substantial works on Indian Phalangids. Roewer (1935) in his monumental work, “Die Weberknechte de Erde” has thrown light on Opiliones from entire Oriental region.

The works put forth by Roewer and other authors on Indian Laniatores comply to give about 93 known species belonging to 5 families and 64 genera. Roewer has deposited 46 para/lecto/cotypes in Indian Museum, Kolkata, 1 at Berlin, 18 at Geneva and 13 in his personal collections (place not known). Regarding the deposition of types of remaining species (about 15) seems to be not mentioned in the concerned literature.

After Roewer for many years the group remained almost ignored from India. Roewer’s work, though monumental, was confined to previous methods of taxonomy of Opiliones based only on external morphology and numerological characters such as tarsal joints, number and arrangement of spines, furrows, shape of organs and even colour. Such descriptive characters created ambiguity in proper identification of genera and species. To overcome such problems, the revisionary work is inevitable for full redescription and illustrations of important morphological characters along with the genitallial characters of male and female. Unfortunately after Roewer there was almost no contribution on this large group of Arachnids. Mrs. J.P. Despande (1987) has made some attempts to revise 40 species of the Indian Phalangids of suborder Palpatore for her Ph.D. thesis, submitted to BAMU, Aurangabad.

The suborder Laniatore remains unattended except the recent revisionary studies of five species belonging to family Assamiidae (D.B. Bastawade, 2002).

Thus it is emphatically essential to make revisionary studies of available 46 (para/lecto/cotypes) Laniatores species deposited in Indian Museum, Kolkata, so as to up date the studies of this widely spread group of Indian Phalangids.

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