

FAUNA OF INDIA CHECKLIST

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ARTHROPODA: ARACHNIDA: PALPIGRADI, Thorell, 1888

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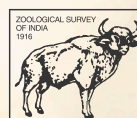
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Comments on the checklist:

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ZOOLOGICAL SURVEY OF INDIA
Ministry of Environment, Forest & Climate Change

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Introduction: Palpigradi is an order of very small arachnids commonly known as microwhip scorpions or palpigrades. They have less than 3 mm in length. They have an elongated and whip-like tail (flagellum), which resembles a bottlebrush and is comprised of 14-15 segments. Each segment of the flagellum has a circle of setae or bristles on it. These bristles act as sensors and detect any disturbances in the air. Palpigrades are delicate animals that walk sensing the substrate with what seems a nervous behavior of the first pair of walking legs, and use their unmodified palps for walking, unlike all other arachnids. They have colorless, translucent prosoma and a pale opisthosoma. Their Exoskeleton is very weakly sclerotized compared to other arachnids.

Global Diversity: At present, a total of 137 known species of microwhip scorpions are described under 6 genera and 2 families. However, 2 fossils species under 2 genera had also been reported. (World Palpigradi Catalog, 2022).

Indian Diversity: 4 species are reported so far from India under 1 genus and 1 family i.e., Eukoeneiidae.

Diversity in states

Sl No.	State/UT	No. of Species
	INDIA Total	4
1	Andhra Pradesh	0
2	Arunachal Pradesh	0
3	Assam	0
4	Bihar	0
5	Chhattisgarh	0
6	Gujarat	0
7	Goa	0
8	Haryana	0
9	Himachal Pradesh	0
10	Jharkhand	0
11	Karnataka	0
12	Kerala	0
13	Madhya Pradesh	0
14	Maharashtra	0
15	Manipur	0
16	Meghalaya	0
17	Mizoram	0

SI No.	State/UT	No. of Species
18	Nagaland	0
19	Odisha	0
20	Punjab	0
21	Rajasthan	0
22	Sikkim	0
23	Tamil Nadu	0
24	Telangana	0
25	Tripura	0
26	Uttar Pradesh	3
27	Uttarakhand	0
28	West Bengal	0
29	Andaman & Nicobar	0
30	Chandigarh	0
31	Dadra Nagar Haveli, Daman & Diu	0
32	Delhi	0
33	Jammu & Kashmir	0
34	Ladakh	0
35	Lakshadweep	0
36	Puducherry	2
37	State Unknown	0

Endemism: 3 species are found as endemic to India.

Habitat: Palpigrades occur in the soil and leaf debris of moist tropical and subtropical regions of the world and many species are restricted to cave (Condé, 1996). The peculiar genus *Leptokoenia* Condé is found in littoral ecosystems in Saudi Arabia and Congo, a habitat once thought to represent the archetypal environment from which all other palpigrades may have evolved (Savory, 1977). The palpigrade's ability to migrate through interstitial spaces has allowed it to sustain itself in harsh and hostile environments. Troglotic (adapted to cave life) species account for roughly one-third of all described species.

Ecological Significance: They are predators and capture very small soft-bodied invertebrates with their pedipalps. They are the most ecologically diverse group of arachnids, with many species acting as microbivores, herbivores, scavengers, predators, and parasites.

Human Significance: No significant studies have been done in this aspect. Rucker (1903) suggested that palpigrades feed on arthropod eggs, but nothing seems to support this idea.

Threatened species as per IUCN: None of the species is included in the list of threatened species as per IUCN.

Protected species as per WPA (2022): None of the species is considered as protected species as per IWPA (2022).

Species under CITES: None of the species is considered under CITES.

Invasive Alien Species: None of the species is treated as invasive alien species.

Gap Areas: Palpigrades are a totally unexplored group of Indian arachnids and reported so far from Uttar Pradesh and Puducherry. This current situation due to lack of taxonomist.

Systematic list of Palpigradi of India (Endemic species marked with *)

Order Palpigradi

Family Eukoeneniidae Petrunkevitch, 1955

1. *Eukoenenia angusta* (Hansen, 1901)
2. *Eukoenenia angusta hindua* Condé, 1989*
3. *Eukoenenia angusta tamula* Rémy, 1960*
4. *Eukoenenia singhi* Condé, 1989*

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