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ARTHROPODA: ARACHNIDA: UROPYGI, Thorell, 1883

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FAUNA OF INDIA CHECKLIST

ARTHROPODA: ARACHNIDA: UROPYGI, Thorell, 1883

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Introduction: Uropygi, commonly known as whip scorpions or vinegaroons, is a small order of arachnids characterized by their elongated, segmented bodies and long, whip-like tails (flagella) (Harvey, 2003). The most prominent character of Order Uropygi is that the prosoma is longer than broad and is covered by an undivided carapace with 8 or 12 eyes (Pocock, 1900). Unlike true scorpions (order Scorpiones), they lack a venomous sting but can spray a defensive acetic acid-based liquid, giving them the name "vinegaroons" (Schmidt & Schmidt, 2022). They have large, powerful pedipalps (pincer-like appendages) for grasping prey and rely on their first pair of legs as sensory structures (Cowles, 2018). Uropygi differ from spiders (order Araneae) in having segmented abdomens and lateral, rather than forward-facing, fangs. These nocturnal predators are found in tropical and subtropical regions, preying on insects and other small invertebrates. Fossil evidence suggests that their evolutionary origins date back to the Upper Carboniferous period (Clouse *et al.*, 2017). Their unique behaviours, including chemical defence and complex sensory adaptations, make them a fascinating group within class Arachnida.

Global diversity: Globally, the order Uropygi encompasses 128 species of whip scorpions under 18 genera which are placed in a single family, Thelyphonidae. However, 14 fossil species under 09 genera have also been described (World Uropygi Catalog, 2022).

Diversity in India: 05 species belonging to 04 genera have been described so far from India.

Diversity in States

Sl. No.	State/Union Territory	No. of Species	No. of Endemic Species
1	Andhra Pradesh	2	1
2	Arunachal Pradesh	1	0
3	Assam	2	1
4	Bihar	0	0
5	Chhattisgarh	1	0
6	Gujarat	0	0
7	Goa	1	1

Sl. No.	State/Union Territory	No. of Species	No. of Endemic Species
8	Haryana	0	0
9	Himachal Pradesh	0	0
10	Jharkhand	1	0
11	Karnataka	3	2
12	Kerala	0	0
13	Madhya Pradesh	1	0
14	Maharashtra	4	2
15	Manipur	0	0
16	Meghalaya	1	0
17	Mizoram	0	0
18	Nagaland	0	0
19	Odisha	1	0
20	Punjab	0	0
21	Rajasthan	0	0
22	Sikkim	0	0
23	Tamil Nadu	1	0
24	Telangana	0	0
25	Tripura	0	0
26	Uttar Pradesh	0	0
27	Uttarakhand	0	0
28	West Bengal	2	1
29	Andaman & Nicobar Islands	0	0
30	Chandigarh	0	0
31	Dadra Nagar Haveli, Daman & Diu	0	0
32	Delhi	0	0
33	Jammu & Kashmir	0	0
34	Ladakh	0	0
35	Lakshadweep	0	0
36	Puducherry	0	0
37	State Unknown	0	0
	INDIA Total	**05**	**03**

Endemism: Among the 05 species known from the country, 03 are endemic to India.

Habitat: Whip scorpions are found in tropical and subtropical areas, excluding Europe and Australia. Their preferred habitat includes damp places beneath stones or pieces of wood, in the crannies of rocks or termites' nests, or other crevices where shelter from light and protection from the rays of the sun are obtainable. Some of the species excavate burrows for protecting themselves and their young (Pocock, 1900).

Ecological Significance: Whip scorpions are

active predators feeding upon small insects and even large scrub millipedes. Being predatory in nature, whip scorpions help in maintenance of ecological balance by keeping their prey population under control (Carrel & Britt, 2009).

Human Significance: The whip scorpions spray a secretion consisting primarily of acetic acid (up to 84 percent), water and caprylic acid as a part of their defence mechanism. However, this secretion is not harmful to humans, but it may cause burning sensation when it comes in contact with human skin.

Threatened species: 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 WPA (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: As the whip scorpions are nocturnal in habit and live in extreme environments, detailed study of this group is yet to be performed. Only a few scientists are working on this group at present in India as well as in the world. Extensive study of this predatory animal is required to understand its role in the ecosystem.

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

Order Uropygi Thorell, 1883
Family Thelyphonidae Blanchard, 1852

1. *Hypoctonus stoliczkae* Gravely, 1912 *
2. *Labochirus cervinus* Pocock, 1899 *
3. *Labochirus tauricornis* Pocock, 1900 *
4. *Thelyphonus sepiaris* Butler, 1873
5. *Uroproctus assamensis* (Stoliczka, 1869)

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