



Diversity Of Soil Organisms
Mesofauna – Pseudoscorpionida

Morphology

Pseudoscorpions are tiny arachnids known as 'false scorpions' because they look similar to scorpions but do not have an elongated post abdomen with a venomous sting at the end. Usually less than 5 mm in length, they are brownish arachnids with large pincer-like chela (pedipalps). The body is divided in two regions: the cephalothorax (or prosoma, a fused head and thorax) and the abdomen (or opisthosoma) clearly divided into 11 - 12 segments. The cephalothorax is covered dorsally by a shield (carapace) and bears the appendages. One to two pairs of simple eyes (ocelli) are sometimes present on the head, but many species are blind. The first pair of cephalic appendages, the chelicerae, are two-segmented, chelate (clawed) and used for feeding. Chelicerae have silk glands. Behind the chelicerae are the pedipalps, which are used to capture prey and for defence. Pseudoscorpions, like all arachnids, have four pairs of thoracic legs. The abdomen has no appendages. These animals have a long lifecycle (the course of developmental changes through which an organism passes from its birth to the mature state in which it may give birth to another organism), depending on the environment and the temperature. The males produce a spermatophore, and pull the female over it. The female carries a silken egg bag of about 12 - 40 eggs in a brood sac that is attached to the ventral surface of the opisthosoma. She can produce several broods each year. The young pseudoscorpions moult, passing from several larval instars (protonymph, deutonymph and tritonymph) before becoming adults that can live three to four years.



Taxonomy

The Pseudoscorpionida or Pseudoscorpiones is a large group comprising 27 different families. They are found everywhere, but their highest diversity is found in the tropics.

Microhabitat

Pseudoscorpions live under bark and stones, in leaf litter, in caves, under rocks on the ground and in soil. They are also often found in moss and lichens, in ant and bee nests and in the burrows of ground-dwelling mammals. The cosmopolitan species *Chelifer cancroides* is often found in houses.

Diversity, abundance and biomass

Approximately 3 400 species of Pseudoscorpions have been described. Their density, in general, is not high (< 300 individuals per square metre). In some cases they are considered beneficial to humans as they prey on various pest species; for example, carpet beetle larvae, ants, mites and booklice. Occasionally Pseudoscorpiones may disperse attached to flying insects, birds and mammals.

Farming Secrets says: Another Rarely Seen Animal In The Soil Food Web

Ref: A Global Atlas of Soil Biodiversity p 55

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