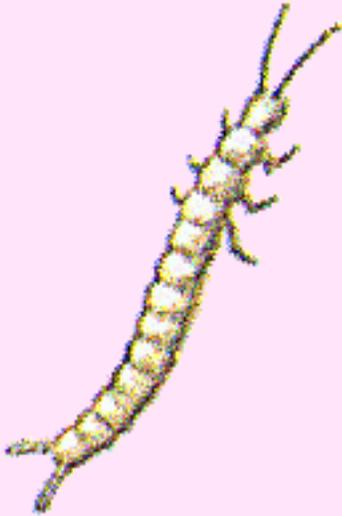


DIPLURA



Diplurans

The name Diplura, derived from the Greek words "*diplo-*" meaning two and "*ura*" meaning tails, refers to the large cerci at the rear of the abdomen.

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Life History & Ecology:

These small, eyeless arthropods are considered to be among the most primitive of all hexapods. They have a pair of long, beaded antennae on the head and a pair of segmented sensory structures (**cerci**) at the rear. In one common family (Japygidae), these cerci are developed into strong pincers.

Diplura are tiny, cryptozoic animals that live in moist soil, leaf litter, or humus. They have small, eversible vesicles on the ventral side of most abdominal

segments that seem to help regulate the body's water balance, perhaps by absorbing moisture from the environment.

Most Diplura are predators; their diet probably includes a wide variety of other soil-dwellers, including collembola, mites, symphyla, insect larvae, and even other diplurans. They may also survive on vegetable debris and fungal mycelia, but most species seem to prefer animal prey.

Distribution:

Common in grassy or wooded habitats worldwide, but seldom seen because of their small size and reclusive habits.

	North America	Worldwide
Number of Families	5	7
Number of Species	64	~800

Classification:

Ametabola

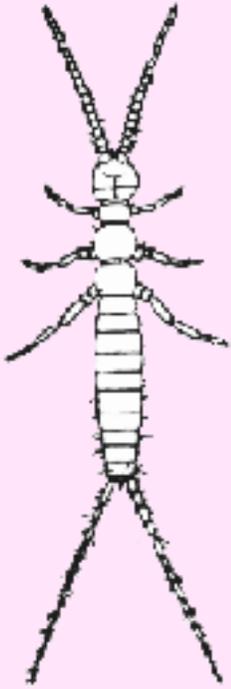
lacking metamorphosis
eggs hatch into young which are smaller than adults, but similar in appearance.

Apterygota

primitively wingless

Physical Features:

Adults and Immatures



1. Compound eyes absent
2. Antennae longer than head, with 10 or more bead-like segments
3. Abdomen with 10 visible segments
4. Cerci present --
 - a. long and slender, or
 - b. forceps-like in appearance
5. Tarsi one-segmented
6. Short, lateral styli and eversible vesicles present on most of the first 7 abdominal segments

Economic Importance:

Diplurans are common inhabitants of forest leaf litter. They are part of the community of decomposers that help break down and recycle organic nutrients. None of the Diplura are considered pests.

Major Families:

- **Campodeidae** -- approximately 34 North American species, all of which have long cerci (10-segments).
- **Japygidae** -- 28 North American species, all of which have short (unsegmented) cerci in the form of pincers (forceps).

Fact File:

- The sexes are separate and fertilization is external. Males produce sperm packets (spermatophores) and glue them to the substrate on the end of little stalks. Females use their genital opening to gather spermatophores and then lay their eggs on little stalks inside a crevice or small cavity in the ground.
- Male Diplura produce large numbers of spermatophores -- up to 200 per week. This large number is probably necessary because sperm only remain viable in the spermatophore for about two days.
- The cerci of some diplurans are designed to break off near the base if they are mishandled. This spontaneous autotomy is probably an adaptation for avoiding predation. A similar adaptation is found in the legs of some walkingsticks and the tails of some lizards.
- Diplura and some walkingsticks (Phasmatodea) are the only terrestrial arthropods known to be able to regenerate lost body parts. Legs, antennae, and cerci can be regenerated over the course of several molts. Some crustaceans (*e.g.* crabs and lobsters) can regenerate missing legs or claws.

Hot Links and Illustrations:

- [Ecowatch Diplura Page](#)
- [Gordon Ramel's Diplura Page](#)
- [Tree of Life Web Project - Diplura](#)

- [Discover Life - Diplura](#)

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Department of
Entomology
NC State University

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