Introduction to the Myriapoda

They've got legs. . . they know how to use them. . .


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Nearly 13,000 species of arthropod are classified in the Myriapoda, the "many-legged ones." All myriapods are terrestrial forms. Like insects and other uniramian arthropods, myriapods have appendages with only one branch, or **ramus**. Myriapods can have anywhere from fewer than ten to nearly 200 pairs of appendages; they range in size from nearly microscopic to 30 cm in length. Most myriapods live in humid environments, and can be found in soils, in leaf litters, or under stones and wood. Many species possess **repugnatorial glands**, specialized glands that secrete foul-tasing compounds and thus function in defense.

There are four groups of myriapods; how they are related to each other is not yet well understood. Two of them, the **Symphyla** and **Pauropoda**, consist of tiny arthropods living in leaf litter and soil; both superficially resemble centipedes. The **Chilopoda** includes the true centipedes, like the one shown at the top left of this page. Chilopods have only one pair of legs per body segment. They are predators; the first pair of appendages on the trunk are modified into a pair of claws with poison glands, which centipedes use to capture prey (usually other arthropods). The bite of large centipedes can cause humans some pain and discomfort, although there are no authenticated cases of human fatalities from centipede bites.

Myriapods in the Diplopoda ("double legs") include the millipedes, like the one pictured at the

top right of this page. Millipede segments are formed in early development by fusion of two adjacent embryonic segments; thus, each adult segment of a millipede bears two pairs of legs. Unlike the predatory Chilopoda, most millipedes feed on decaying vegetation, although some are carnivorous.

Because most myriapods have a thin, light cuticle and live in environments where fossilization is unlikely, the fossil record of myriapods is quite sparse. Enough remains, however, to show that the group is a very old one indeed. The oldest fossil uniramians are myriapod-like marine organisms from the Cambrian. Some fossil burrows from the Ordovician have been claimed as myriapod burrows; this speculation is hard to test, but if it is correct, then myriapods might have been living on land as early as 400 million years ago. The oldest definite body fossils of myriapods come from the Late Silurian, though the oldest centipedes come from the Devonian-age Gilboa Forest of New York. A few more myriapod are known from the Devonian and Carboniferous (like the fossil millipede shown below, from the Pennsylvanian-age Mazon Creek deposits of Illinois) and from Cenozoic amber.

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Another fossil millipede from Mazon Creek is on-line as part of an exhibit on Mazon Creek fossils, created by the Illinois State Museum.

The millipede image at the top of this page is from the slide collection of the Texas Agricultural Extension Service, Texas A&M University. Thanks y'all.

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