

Other Arthropods

Key Words

- arachnids:** arthropods that have four pairs of jointed legs
- crustaceans:** arthropods that have five pairs of jointed legs
- centipedes:** arthropods that have one pair of jointed legs attached to most of their body segments
- millipedes:** arthropods that have two pairs of jointed legs attached to most of their body segments

KEY IDEAS

Insects are just one of many classes of arthropods. Other classes include arachnids, crustaceans, centipedes, and millipedes.

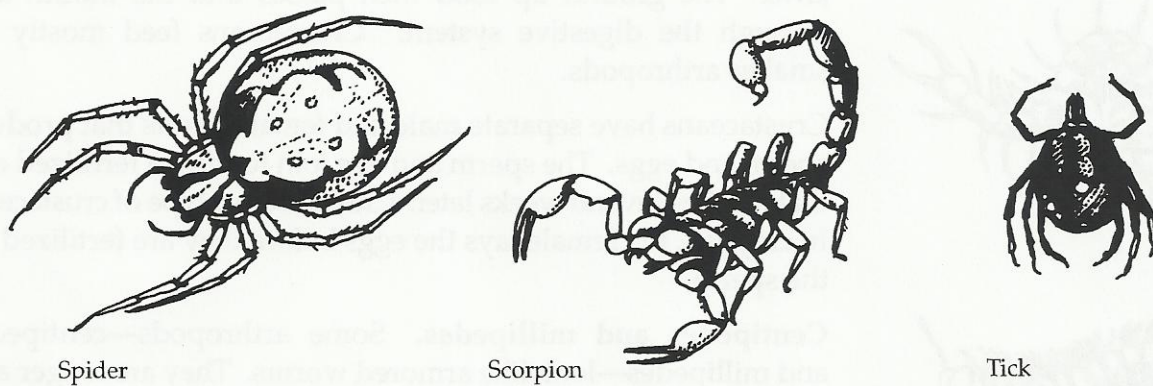
In addition to insects, arthropods include many other invertebrates. Among them are spiders, lobsters, crabs, centipedes, and millipedes. Like other arthropods, all these arthropods have segmented bodies, jointed legs, and exoskeletons.

Arachnids. Arthropods that have four pairs of jointed legs are **arachnids** (uh-RAK-nihdz). Unlike insects, arachnids do not have wings or antennae. While insects have three body segments, arachnids have only two—a fused head and thorax and an abdomen. See Fig. 30-1.

The most common arachnids are spiders. There are thousands of kinds of spiders. Some are as tiny as the head of a pin. Others are larger than your hand. Spiders make silk from a special gland in their bodies. Most spiders spin the silk into complex webs which they use to catch their prey. Spiders feed mostly on insects. They capture their food by hunting or trapping the prey in webs. Once a spider catches its prey, the spider injects poisons into it. The poison paralyzes the prey.

Other kinds of arachnids are ticks, mites, and scorpions. Ticks and mites are very tiny and are often parasites. Ticks may affect dogs, deer, mice, and other animals. Many ticks carry disease from one animal to another. Two diseases that affect humans—Rocky Mountain spotted fever and Lyme disease—are carried by ticks. Scorpions are large arachnids that have a stinger at the end of their abdomens. Their sting is painful, but usually not fatal.

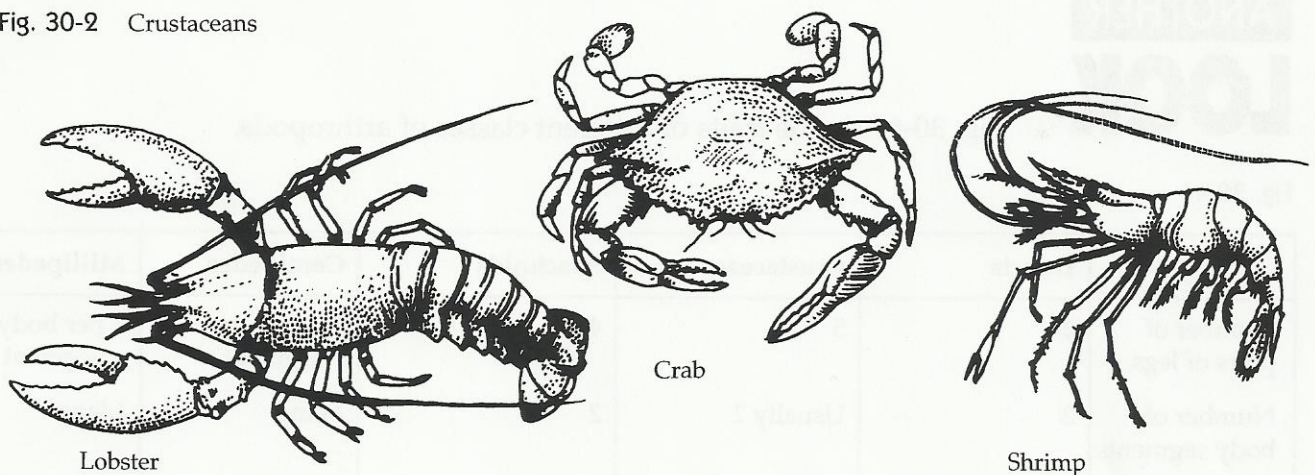
Fig. 30-1 Arachnids



1. What are three ways in which arachnids differ from insects?

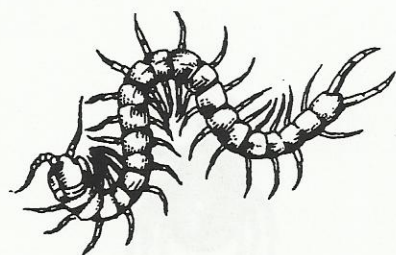
Crustaceans. Arthropods that have five pairs of jointed legs are **crustaceans** (kruhs-TAY-shuhnz). Many crustaceans have a fused head and thorax. Unlike insects, crustaceans do not have wings. However, they do have two pairs of antennae. The first pair of walking legs are often adapted as claws that are used to get food and for defense. Smaller legs, called swimmerets, are attached to each segment of the abdomen. See Fig. 30-2.

Fig. 30-2 Crustaceans



Although insects outnumber all other arthropods on land, crustaceans “rule” the waters. Some crustaceans that live in the oceans, such as lobsters, grow very large and have heavy exoskeletons. Other crustaceans, such as shrimp, are tiny and are important as food for larger animals.

Fig. 30-3



Centipede



Millipede

Crustaceans eat by grinding up their food with their powerful jaws. The ground up food then passes into the mouth and through the digestive system. Crustaceans feed mostly on smaller arthropods.

Crustaceans have separate male and female adults that produce sperm and eggs. The sperm and egg join to form a fertilized egg that hatches several weeks later. Crayfish are a type of crustacean. In crayfish, the female lays the eggs before they are fertilized by the sperm.

Centipedes and millipedes. Some arthropods—centipedes and millipedes—look like armored worms. They are longer and thinner than most arthropods in other classes. Their many body segments are not clearly grouped into a head, thorax, and abdomen. See Fig. 30-3.

Centipedes (SEHN-tuh-peedz) have one pair of legs on most of their body segments. A pair of poison claws is attached to the first segment below the head. These claws are used to catch insects, worms, and other small animals. Even though the name *centipede* means “having 100 legs,” most centipedes have only 30 legs.

Millipedes (MIHL-ih-peedz) have two pairs of jointed legs attached to most of their body segments. Millipedes mostly eat dead plants.

TAKE ANOTHER LOOK

Fig. 30-4 lists the traits of different classes of arthropods.

Fig. 30-4

	Insects	Crustaceans	Arachnids	Centipedes	Millipedes
Number of pairs of legs	3	5	4	1 per body segment	2 per body segment
Number of body segments	3	Usually 2	2	Many	Many
Habitat	Land, air, water	Fresh water and salt water	Land	Land	Land
Food	Wide variety including plants, wood, blood	Other crustaceans and small mollusks	Prey on small animals including insects	Small animals including insects	Dead plants and insects
Special features	Most have wings and can fly	Main arthropod in ocean	Make silk and spin webs	Look like segmented worms	Look like segmented worms

Check Your Understanding

Write a sentence explaining the connection between each pair of words.

2. arachnids, four _____

3. crustaceans, five _____

4. centipedes, one _____

5. millipedes, two _____

Complete the following outline.

I. The "ruling" class of arthropods in the water are the (6) _____.

A. Crustaceans have (7) _____ pairs of legs.

B. Crustaceans have (8) _____ pairs of antennae.

II. Arthropods in the (9) _____ class make silk and spin webs.

A. Arachnids have (10) _____ pairs of legs.

B. Arachnids have (11) _____ body parts.

III. The (12) _____ and (13) _____ look more like worms than like other arthropods.

A. Centipedes have (14) _____ pair of legs attached to most segments.

B. Millipedes have (15) _____ pairs of legs attached to most segments.

16. How do spiders catch their prey? _____

17. Describe the difference between centipedes and millipedes.

What
Do You
Know?