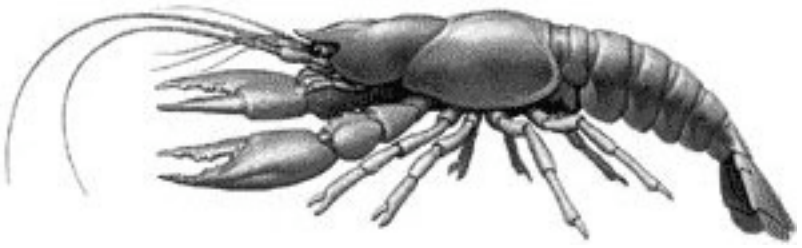
Crayfish

General Information



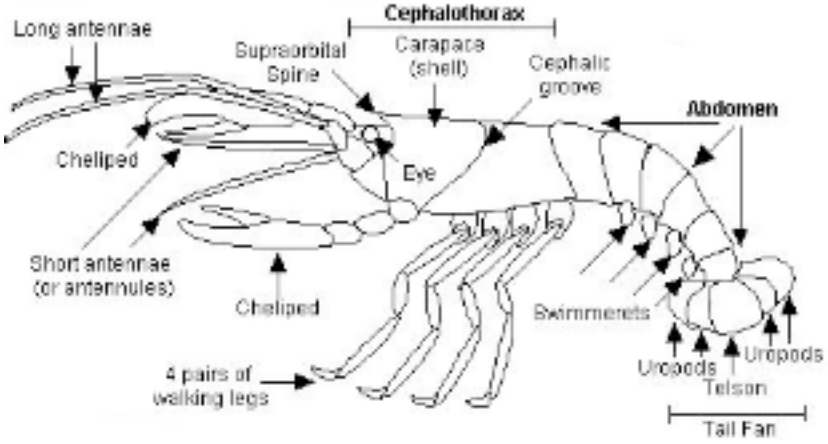
Crayfish, also called *crawfish* or *crawdad*, are closely related to the lobster. More than half of the approximately 540 species occur in North America. Nearly all of the world's crayfish live in freshwater, although there are a few that can survive in salt water.

Appearance & External Anatomy

The crayfish is typical of most shrimplike crustaceans and is characterised by a joined head and thorax, or midsection, and a segmented body, which is sandy yellow, green, white, pink or dark brown in color. Diet helps influence the color.

Typical adult crayfish are usually about 3 inches long. Among the smallest is the 1 inch-long *Cambarellus diminutus* of the southeastern United States. Among the largest is *Astacopsis gouldi* of Tasmania; its length may reach 16 inches and its weight about 8 pounds.

The head has a sharp snout, two pairs of sensory antennae, and a pair of eyes on movable stalks. The appendages, or pereiopods, of the thorax include four pairs of walking legs which, as well as walking, are to probe cracks and crevices between rocks looking for food.



Crayfish also own one pair of clawbearing chelipeds, which it extends in front of its body while moving. These strong pinchers are specialized for cutting, capturing food, attack, and defense.

The crayfish also has several pairs of specialized food handling "legs," bailers to cycle water over the gills, and five pairs of swimmerets which are under the abdomen. All of these "legs" can be regenerated if broken off.

Crayfish have a hard outside skeleton. This jointed exoskeleton provides protection and allows movement, but limits growth. As a result, the crayfish regularly gets too big for its skeleton, sheds it, and grows a new larger one. This is called molting. and occurs six to ten times during the first year of rapid growth, but less often during the second year. For a few days following each molt, crayfish have soft exoskeletons and are more vulnerable to predators, including other crayfish.

Behavior & Diet

Crayfish, common in streams and lakes, often conceal themselves under rocks or logs. General movement is always a slow walk, but if startled, crayfish use rapid flips of their tail to swim backwards and escape danger.

They are most active at night, when they feed largely on snails, algae, insect larvae, worms, and tadpoles; some eat aquatic vegetation. Studies show that adults (one year old and up) become most active at dusk and continue heavy feeding activity until daybreak. Young crayfish are more likely to be the ones out during bright sunny days, while the older crayfish are more active on cloudy days and during the night. Larval crayfish are very tiny and eat plankton.

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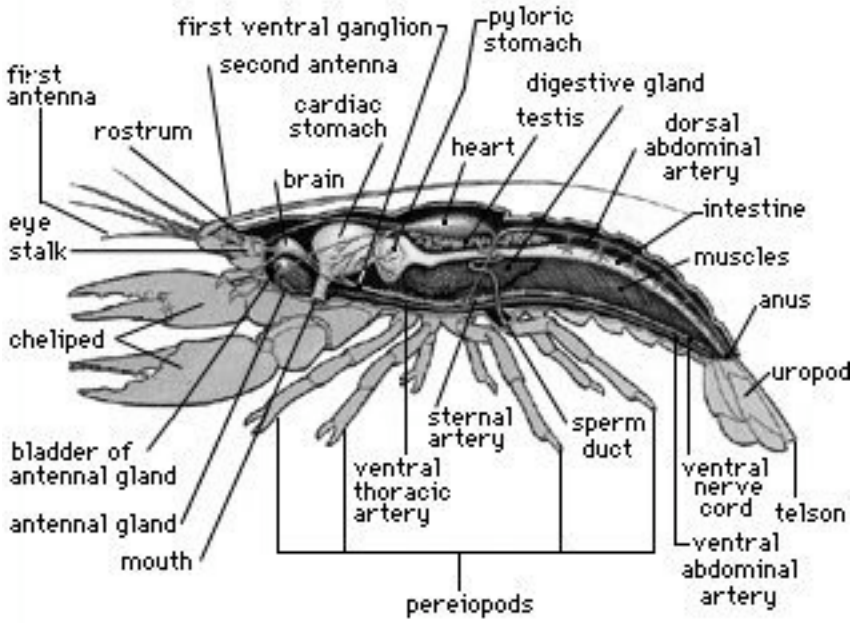
Lifespan & Reproduction

Most crayfish live short lives, usually less than two years, so rapid, high-volume reproduction is important for the continuation of the species. Many crayfish become sexually mature and mate in the October or November after they're born, but fertilisation and egg laying usually occur the following spring. The fertilised eggs are attached to the female' swimmerets on the underside of her jointed abdomen. There the 10 to 800 eggs change from dark to translucent as they develop. The egg-carrying female is said to be "in berry," because the egg mass looks something like a berry. Females are often seen "in berry" during May or June. The eggs hatch in 2 to 20 weeks, depending on water temperature. The newly-hatched crayfish stay attached to their mother until shortly after their second molt.

Internal Anatomy

In the open circulatory system, blood flows from the heart through the arteries and returns into open sinuses. The digestive system has a stomach for grinding food and a gland for chemical processing. The antennal gland is the main excretory organ.



Predators

Many animals eat crayfish including fish, birds (herons, ibis, storks, egrets, hawks, owls, grackles, just to name a few), otters, raccoons, snakes, some turtles, and people.

Crayfish in Dry Places

Because crayfish breathe through gills, they can only survive in a watery environment. However, crayfish can survive as long as its gills are moist, which allows them to take short nocturnal walks to find food, to socialize, or to move from a drying puddle or pond to the next nearest water. During drydowns, they can tunnel into the ground, building “burrows.” The burrows may have many connecting tunnels and several entrances. They dig through damp soil to the water table level. Entrances to the “burrows” can be spotted because they often have chimneys of soil around the top which are formed with pellets of soil the crayfish have excavated with their claws and then carried to the top of the burrow.

Scientific Classification

Crayfish are part of the order Decapoda constituting the families Astacidae (Northern Hemisphere), Parastacidae, or Austroastracidae (Southern Hemisphere). The most common genera of North America include Procambarus, Orconectes, Faxonella, Cambarus, Cambarellus, and Pacifastacus. The arthopod class also includes centipedes, crustaceans, insects, millipedes, mites, scorpions and spiders.

Kingdom	Phylum	Class	Order	Family	Species	
Animalia	Arthropota	Crustacea	Decapoda	Astacidae	Cambarellus	spp.