



## Crayfish

*Cambarus bartoni*

Turn over a rock in almost any North Carolina stream in summer, and chances are a crayfish will dart from underneath. About 33 species of this common freshwater crustacean live in Tar Heel streams, ponds and burrows from the mountains to the coast. About five of these species are found only in North Carolina. Scientists are working to identify another dozen or so types in the state.

### History and Status

Native to North Carolina, the crayfish remains one of the oldest living creatures, surviving at least 60 million years. Many species remain prolific and common in the state, but some that live in limited habitats, such as the Greensboro burrowing crayfish are endangered or of special concern. Crayfishes found in some declining habitats are also threatened, such as those in polluted or densely vegetated streams with low oxygen levels.

### Description

Crayfishes look like miniature lobsters, with a front pair of pincers, an armored body and a broad tail. Like lobsters, crayfishes have three main body parts—a head, thorax and abdomen—and a hard exoskeleton that protects their soft tissues and organs. The front part of the body is rigid, but the back part, or abdomen, has movable segments.

Crayfishes have five legs on each side of their body. The

two front legs are shaped like large claws or pincers and help them catch and hold their prey. They use the other four pairs of legs for walking and swimming. Under their abdomen, five smaller and thinner pairs of legs, called swimmerets, aid in swimming and carry eggs and young.

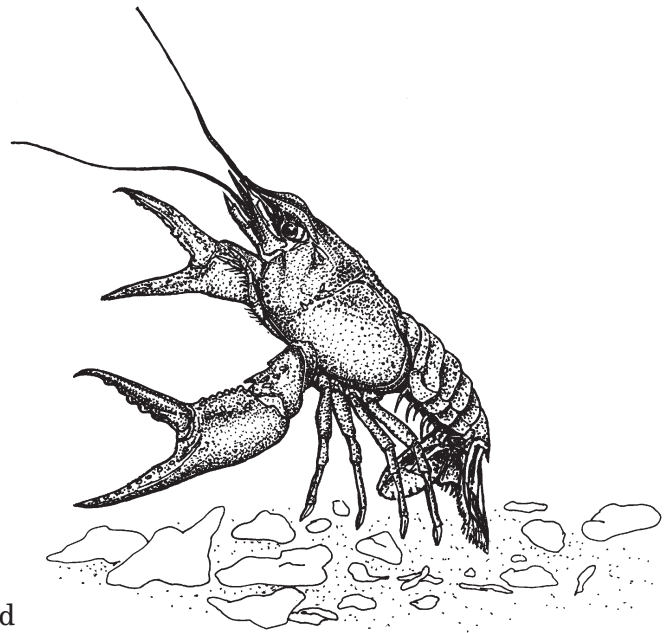
Two pairs of antennae and tiny eyes aid the crayfish in sensing its surroundings. And soft, feathery gills on the crayfish's thorax are used for respiration.

Crayfishes' color varies from crimson to cobalt blue depending on the species. Some appear pink, brown, greenish black or even aquamarine. Crayfishes rarely grow longer than 6 inches and average about 3 inches.

### Habitat and Habits

Wild crayfishes inhabit streams, ponds, lakes and swamps throughout North Carolina. Three groups of this crustacean can be found in the state: stream dwellers, lake dwellers and burrowers.

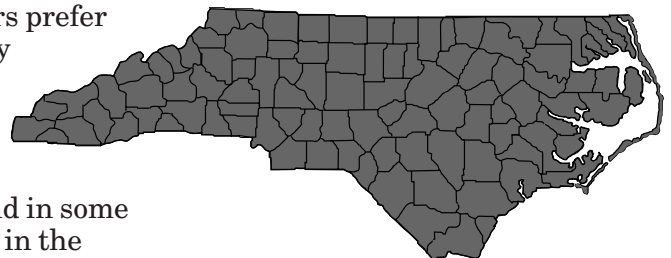
Stream dwellers prefer fast-moving, highly oxygenated rivers and streams like those in the mountains and Piedmont. Here and in some slower streams, as in the Coastal Plain, these crayfishes hide under rocks for protection.



Lake dwellers find cover in submerged vegetation in still waters, making a home in ponds, standing water and roadside ditches, too. Burrowers dig branching tunnels up to 15 feet deep in muddy wetlands. Most burrows average about 2 or 3 feet and can be found away from standing water but near groundwater. Burrowing crayfishes, found mostly in the Coastal Plain and eastern North Carolina, often pitch up clay "chimneys" as they dig.

Crayfishes become most active at nightfall or daybreak, emerging from their burrows or rocks to feed. These hardy crustaceans eat primarily aquatic vegetation, but they also feed on small live or dead animals such as worms, snails and tadpoles.

Typically, a crayfish will catch or grasp food with its clawlike pincers and then pass it to its



**Range Map:**  
Found statewide 

mouth. Mandibles, or jaws, break up the food for digestion.

Crayfishes often become prey to other animals such as bullfrogs, turtles, game fish, raccoons, wading birds and hawks. But crayfish are fighters. Their best defense is a powerful tail, which propels the crayfish backward with forceful strokes. Also, if they lose a claw or leg in battle, a new one grows in its place.

Most crayfish species in North Carolina produce their young in early spring, when food and rain are plentiful. A few species breed in winter. To mate, the male crayfish grasps the female and turns her over so their ventral sides are together. Then the male passes sperm through his first pair of swimmerets, called the gonopod, to the female. When fertilized, hundreds of tiny eggs attach to the female's swimmerets with a sticky discharge called glair. Larger females typically produce more eggs.

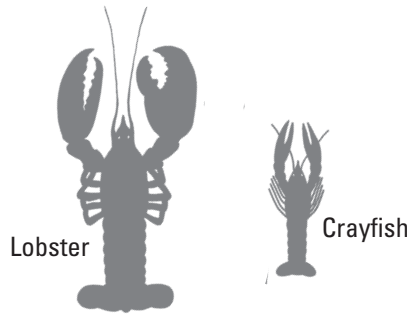
Unlike many other crustaceans, crayfishes do not go through a larval stage but molt about six times in the first seven to eight months of life. They continue to molt at a slower rate for the rest of their lives. When the old skeleton falls away, the soft, tiny crayfishes grow quickly as they take in large amounts of water. Unprotected, they hide between molts and become less aggressive until the new skeleton hardens in several days.

## Range and Distribution

Crayfishes live along lakes and rivers on every continent except Africa and Antarctica. Two major groups exist in the United States, east and west of the Rockies. Crayfishes can be found throughout North Carolina.

## People Interactions

For years, crayfishes have been an important cash crop for fishermen in Louisiana, Mississippi and other Gulf Coast states.



The crayfish's mild and sweet meat remains a popular food in Europe and North America. Farmers along the Gulf and East coasts raise crayfish in farm ponds to meet growing demand.

Generations of youngsters know crayfish, too, from catching them bare-handed in backyard streams. Other people use crayfish as bait. In some areas, burrowing crayfishes may destroy cropland or weaken earthen dams.

Although crayfishes remain common, scientists know little about these important aquatic creatures. Yet these crustaceans are recognized as ecologically important species because they can be found in nearly every ecosystem and are the primary prey for many other animals.

## References

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## Credits

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## CRAYFISH

### Classification

Class: Crustacea

Order: Decapoda

### Average Size

About 3 in. in length.

### Food

Feed primarily on aquatic vegetation but also eat worms, snails, tadpoles, and other small live or dead creatures.

### Breeding

Most produce young in spring. Female produces hundreds of eggs; about 85 percent hatch. Number of broods varies. Scientists are not sure how long it takes for the eggs to hatch, but they estimate a month or more. When the eggs do hatch, tiny, transparent versions of adult crayfish emerge, measuring about  $\frac{1}{6}$  of an inch long.

### Young

Young cling to the female through three molts, until they reach a size of about  $1\frac{1}{2}$  inches. Do not go through a larval stage.

### Life Expectancy

About three to five years.