



Photo by Chris Lukhaup

**Common Name:** CHATTAHOOCHEE CRAYFISH

**Scientific Name:** *Cambarus howardi* Hobbs and Hall

**Other Commonly Used Names:** None

**Family:** Cambaridae

**Rarity Ranks:** G3/S3

**State Legal Status:** Threatened

**Federal Legal Status:** None

**Description:** The dorsal surface of the Chattahoochee crayfish has bronze and bluish-green coloration on the claws, carapace, and on the abdomen. The areola is lavender-brown with hints of green. Thin orange-brown bands mark the separation of the abdominal segments and the joints of appendages. The center of the tail fades from green to yellow-brown posteriorly, and the sutures are a darker orange-brown. The areola is 3-5 times as long as broad and comprises 35-39 percent of the total length of the carapace. Not counting the tail, mature males range in length from 20-33 mm (about  $\frac{3}{4}$  -  $1\frac{1}{4}$  inches) and mature females range from 20-36 mm (about  $\frac{1}{16}$  -  $1\frac{3}{8}$  inches).

**Similar Species:** The common crayfish (*Cambarus bartonii*) and the variable crayfish (*C. latimanus*) are the two most similar species that may occur with the Chattahoochee crayfish. Neither of these species displays the distinctive bluish-green coloration as seen on the Chattahoochee crayfish.

**Habitat:** The Chattahoochee crayfish has been found in clear, free-flowing waters, often in riffle habitat. It has been collected in a range of stream sizes, from smaller tributary streams to the mainstem of the Chattahoochee River. During daylight, specimens are usually found sheltered under rocks. Specimens are typically found in shallow waters, but

this may be a result of sampling bias. Observations made during a recent field study suggest that the Chattahoochee crayfish has been lost from streams impacted by forest clearing, sedimentation, urbanization, and impoundment.

**Diet:** No studies of the Chattahoochee crayfish diet are known. Crayfishes are considered opportunistic omnivores and are likely to feed on live and decaying vegetation, aquatic insect larvae, small fishes, and dead animal matter.

**Life History:** The only life history information published were notes by Hobbs (1981). Males in reproductive condition have been collected from January to October. Females carry eggs in the late spring, which hatch in early summer. Two females had 20-42 eggs, which ranged in size from 2.2-2.3 mm (about 1/8 inch). As in many crayfish, the young stay with the female for some period of time, clinging to the abdomen.

**Survey Recommendations:** Since this species is usually found in swift water, it is most easily collected by holding a net perpendicular to the current downstream of a large rock, then lifting the rock and disturbing the substrate beneath it. If a crayfish is hiding underneath the rock, it will likely move into the net. Disturbing submerged collections of leaves and twigs upstream from a net is also productive. Because crayfish are typically more active at night, trapping may also be effective.

**Range:** The Chattahoochee crayfish is distributed within the Chattahoochee River system in Cobb, DeKalb, Douglas, Forsyth, Fulton, Hall and Lumpkin Counties in Georgia. It has been reported from the Halawakee Creek system in Alabama.

**Threats:** Much of the suitable habitat within the range of the Chattahoochee crayfish has been inundated by Lake Lanier and other, smaller impoundments. Other habitat has been paved over by highways and replaced by underground culverts. Other urbanization impacts include removal of riparian zone vegetation, hydrological alteration, and runoff of pollutants.

**Georgia Conservation Status:** Some populations occur in municipal parks, but even these are vulnerable to impacts occurring upstream of park boundaries.

**Conservation and Management Recommendations:** Conserving populations of the Chattahoochee crayfish will require general watershed-level conservation and restoration practices. These efforts should be targeted in watersheds where healthy populations remain and would include restoration and enhancement of stream buffers, preservation of uplands, and better storm water management practices.

### **Selected References:**

Bouchard, Raymond William. 1976. Crayfishes and shrimps. *In* Herbert Boschung, editor, *Endangered and Threatened Plants and Animals of Alabama*. Alabama Museum of Natural History Bulletin 2:13-20.

Hobbs, Horton H., Jr. , Horton H., Jr. 1981. The crayfishes of Georgia, *Smithsonian Contributions to Zoology* 318: vii – 549.

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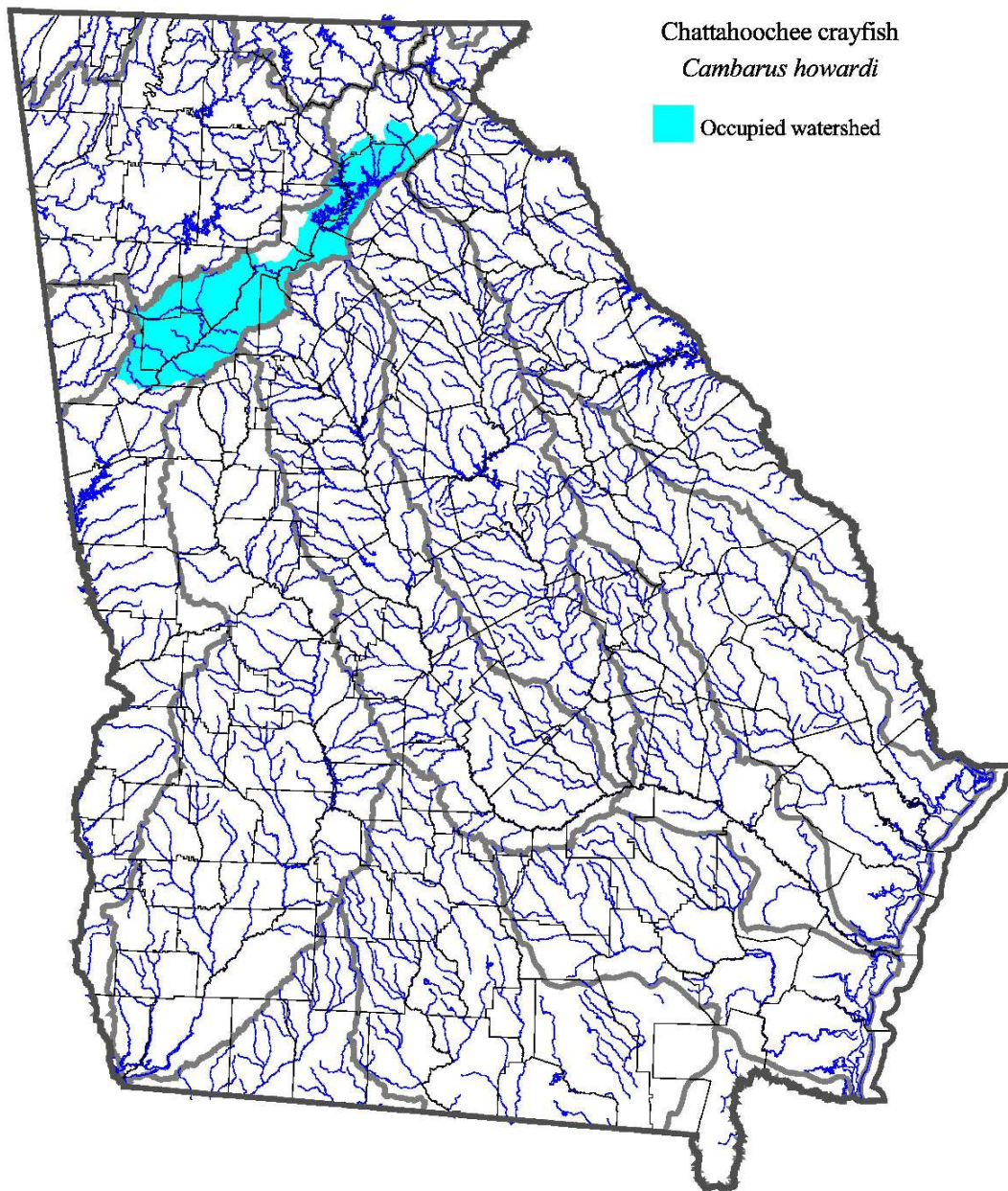
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Taylor, Christopher A., Gunter A. Schuster, John E. Cooper, Robert J. DiStefano, Arnold G. Eversole, Premek Hamr, Horton H. Hobbs III, Henry W. Robison, Christopher E. Skelton, and Roger F. Thoma, 2007. A reassessment of the conservation status of crayfishes of the United States and Canada after 10+ years of increased awareness. *Fisheries* 32(8): 372-389.

Yarbrough, James Edward. 1973. An ecological and taxonomic survey of the crayfish of the Tallapoosa and Chattahoochee River drainages in Lee County, Alabama. Thesis, Auburn University. viii+96 pp.

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Watersheds (Huc 10) with known occurrences. Streams, county lines, and major river basin boundaries are also shown. Map generated from GADNR (Nongame Conservation Section) data on December 18, 2008.