



Photo by Chris Luknaup

**Common Name:** COOSAWATTEE CRAYFISH

**Scientific Name:** *Cambarus (Hiaticambarus) coosawattae* Hobbs

**Other Commonly Used Names:** none

**Previously Used Scientific Names:** none

**Family:** Cambaridae

**Rarity Ranks:** G1/S1

**State Legal Status:** Endangered

**Federal Legal Status:** none

**Description:** The base color of the Coosawattee crayfish is brownish to olive with a reddish or burgundy coloration on the posterior portion of the carapace and the posterior edge of each abdominal segment. Margins of the rostrum and postorbital ridges are orange to reddish. The claws can be quite large in relation to the body and there is a gap between the fingers of the claw when the claw is closed. There is usually a tuft of setae at the base of the fixed finger of the claw and a single row of flattened tubercles along the mesial margin of the palm. The rostrum tapers anteriorly and appears “pinched” near the middle. The areola is broad with sides that are nearly parallel. Cervical spines are absent. This species reaches a maximum total body length of about 75 mm (3 inches).

**Similar Species:** The Coosawattee crayfish may be found with the similar appearing beautiful crayfish (*Cambarus speciosus*). The Coosawattee crayfish differs from the latter by the lack of cervical spines and a rostrum that appears pinched in the middle compared to the nearly parallel-sided rostrum of the beautiful crayfish

**Habitat:** Adults are typically found under rocks in relatively fast currents within streams. Juveniles may be found in leaves or woody debris in slower moving water.

**Diet:** No studies of the Coosawattee crayfish 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:** Stream dwelling crayfishes typically hide during the day and come out at night to feed. Reproduction usually occurs during the spring and fall, but males in reproductive condition may be found at any time during the year. When female crayfish are ready to lay eggs, they usually find a secure hiding place and hence are rarely encountered. When the eggs are released, the female attaches them to her swimmerets and is said to be “in berry.” Upon hatching, the juvenile crayfish are attached to the mother by a thread. After the juveniles molt for the second time, they are free of the mother, but stay close and will hold on to her for some time. Eventually they move off on their own. Crayfishes molt 6 or 7 times during their first year of life and most are probably able to reproduce by the end of that year. They molt once or twice a year for the remainder of their lives and live about 3 years. Male Coosawattee crayfish in reproductive condition have been collected in April, June, September, and October and females carrying eggs were found in April and June. The number of eggs for 8 individuals ranged from 27-101 with egg diameters of 2.4-2.6 mm (about  $\frac{1}{8}$  inch).

**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. Shocking downstream into a seine net with a backpack electroshocker is also effective. Collections in spring or fall are more likely to produce males in reproductive condition, which can be helpful with identifications.

**Range:** The Coosawattee crayfish is known only from the Coosawattee River system in Gilmer County, Georgia. Records are from streams and rivers upstream of Carter’s Lake and are within the Blue Ridge physiographic province.

**Threats:** The small range of this species and the high development rates within that range are significant threats to the Coosawattee crayfish. Heavy sedimentation resulting from poor development and land management practices may cover substrates and other daytime hiding places on which crayfishes rely to avoid predation. The introduction of non-native crayfishes is a threat to all native crayfishes.

**Georgia Conservation Status:** Populations at collection locations were apparently secure during a survey conducted in 2001.

**Conservation and Management Recommendations:** Conserving populations of the Coosawattee crayfish will require general watershed level protection measures, including the protection of riparian zones, control of sediment and nutrient runoff from farms and construction sites, and limiting the amount of impervious cover (e.g., pavement) within occupied watersheds.

Non-native crayfishes should never be used for bait. Instead, anglers should use crayfishes collected from the river system they will be fishing in and should never release unused bait crayfish back into Georgia waters.

**Selected References:**

Hobbs, H. H., Jr. 1981. The crayfishes of Georgia. Smithsonian Contributions to Zoology 318:1-549.

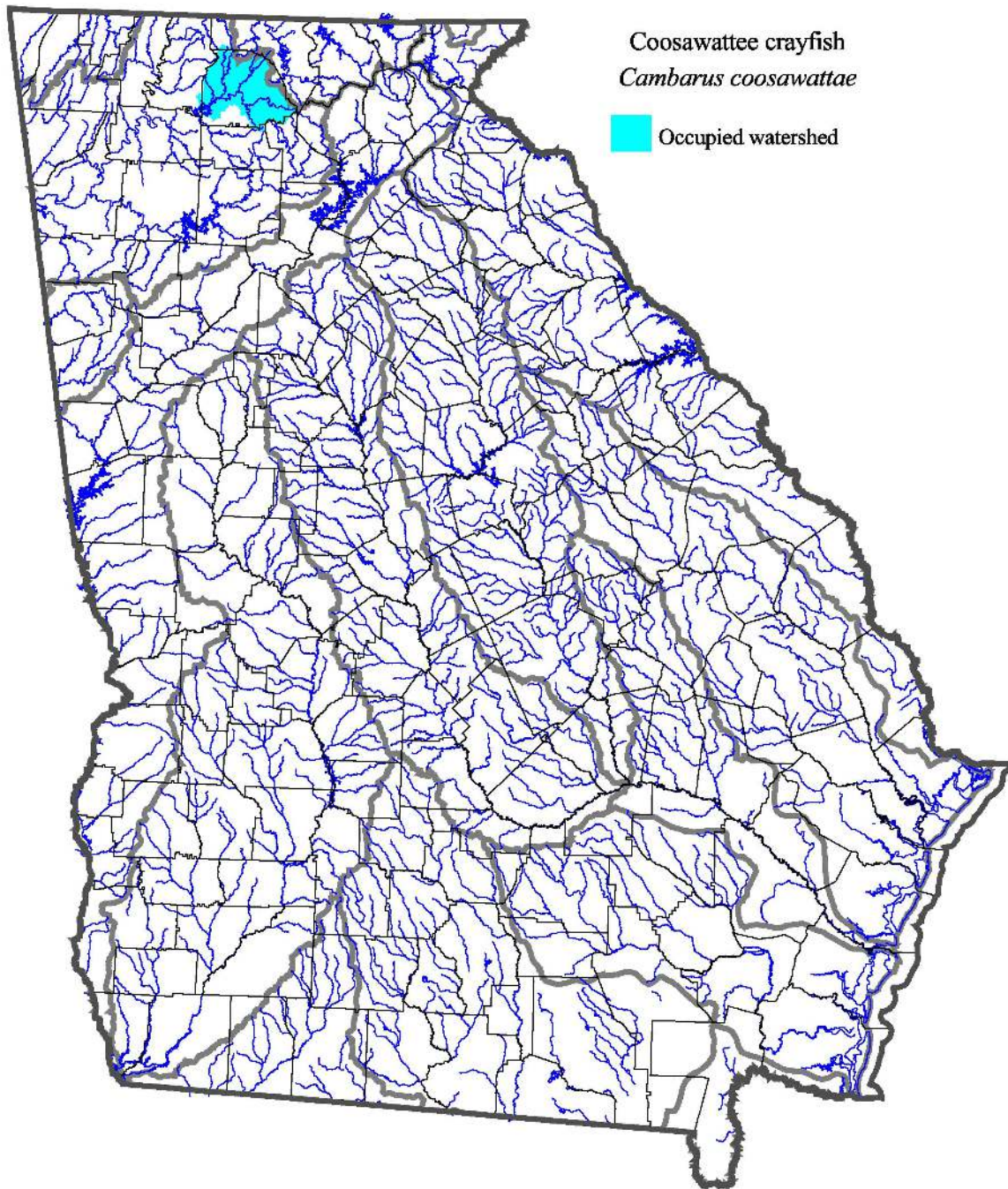
Hobbs, H. H., Jr. 1989. An illustrated checklist of the American crayfishes (Decapoda: Astacidae, Cambaridae, and Parastacidae). Smithsonian Contributions to Zoology 480:1-236

Schuster, G.A. 2001. A study of the current status of two species of crayfishes, *Cambarus coosawattae* and *Cambarus speciosus*, both endemic to the Coosawattee River system in northern Georgia. Final Report, Georgia Forest Watch, Ellijay, Georgia. 9 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.