



Common Name: CHICKAMAUGA CRAYFISH

Scientific Name: *Cambarus (Puncticambarus) extraneus* Hagen

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Cambaridae

Rarity Ranks: G2/S2

State Legal Status: Threatened

Federal Legal Status: none

Description: The carapace of the Chickamauga crayfish is mottled brownish and tan while the abdomen has an obvious striped pattern. This pattern consists of a pale longitudinal stripe running down the middle of the abdomen, bordered on each side by a dark stripe. Each dark stripe is bordered laterally by a light stripe. This species reaches a maximum total body length of about 100 mm (4 inches).

Similar Species: The tanback crayfish (*Cambarus girardianus*) occurs with Chickamauga crayfish and has a striped pattern on the abdomen. However, the tanback crayfish has a medial dark stripe, while the Chickamauga crayfish has a medial light stripe. Additionally, the claws of the tanback crayfish have a gap between the fingers, even when the claw is closed, whereas the fingers of the Chickamauga crayfish touch throughout their length when the claw is closed.

Habitat: The Chickamauga crayfish is usually found underneath rocks or in leaf material and woody debris in slow moving to moderately flowing sections of small streams.

Diet: No studies of the Chickamauga crayfish are known. Crayfishes are considered opportunistic omnivores and are likely to feed on live and decaying vegetation, aquatic insects, 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 Chickamauga crayfish in reproductive condition have been found in April, May, and October. Females with eggs or young have not been collected. A mating pair was seen in late April.

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. Minnow traps baited with dog or cat food and set overnight may work as well. Collections in spring or fall are more likely to produce males in reproductive condition, which can be helpful with identifications.

Range: The Chickamauga crayfish is known only from the South Chickamauga Creek system in Catoosa, Walker, and Whitfield Counties of Georgia, and Hamilton County, Tennessee. All of these locations lie in the Ridge and Valley physiographic province. It has been collected in about 15 locations in the Georgia portion of its range.

Threats: Small range size makes this species vulnerable to extirpation. 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: Tennessee populations are thought to be declining. Limited collecting in Georgia indicates the at least some populations are doing well.

Conservation and Management Recommendations: Conserving populations of the Chickamauga 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:

Hagen, H. A. 1870. Monograph of the North American Astacidae. Illustrated Catalogue of the Museum of Comparative Zoology at Harvard College 3:1-119

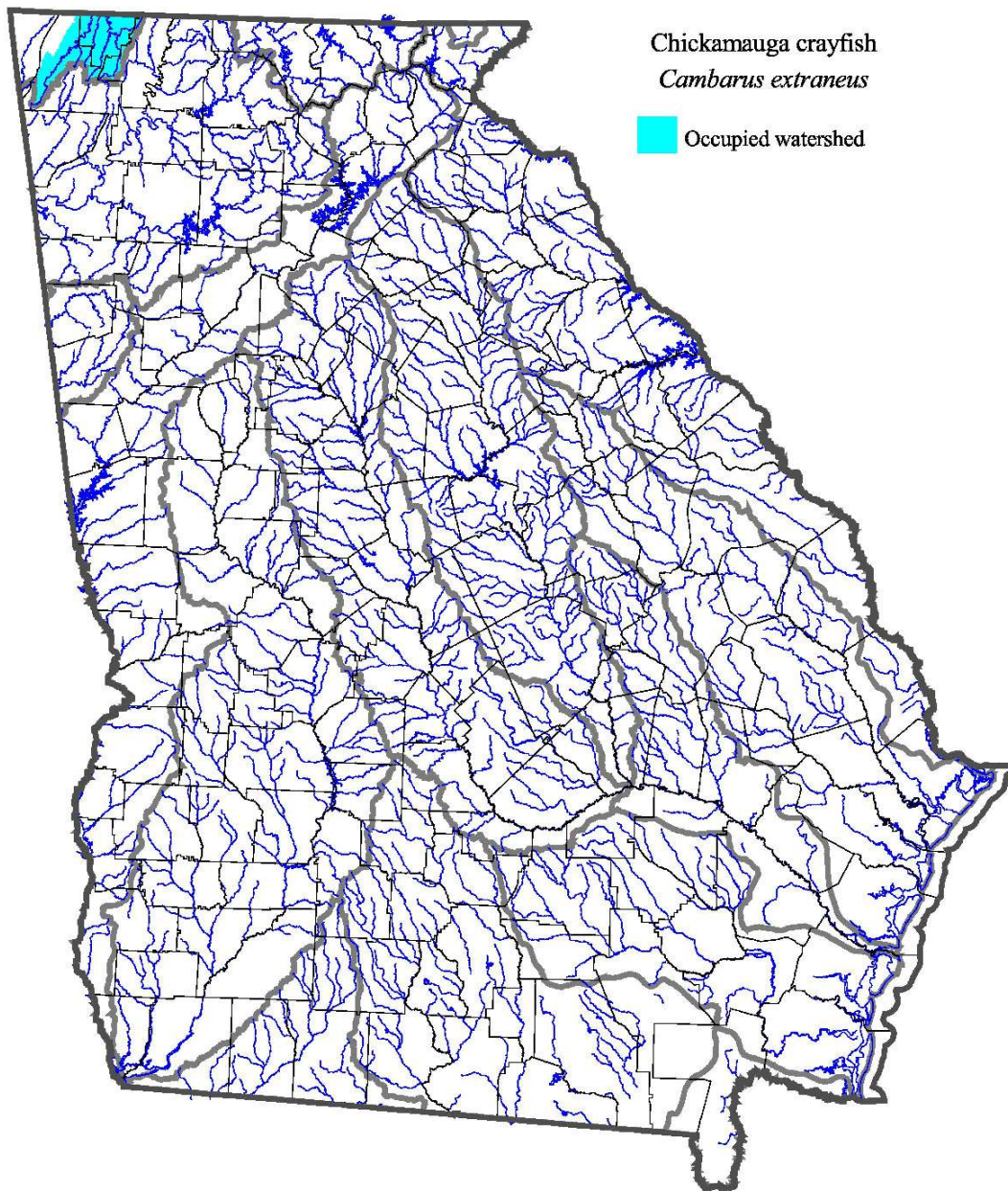
Hobbs, H. H., Jr. 1981. The crayfishes of Georgia. Smithsonian Contributions to Zoology 318:1-549.

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

Taylor, C. A., G. A. Schuster, J. E. Cooper, R. J. DiStefano, A. G. Eversole, P. Hamr, H. H. Hobbs III, H. W. Robison, C. E. Skelton, and R. 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.

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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.