Common Name: LITTLE TENNESSEE CRAYFISH

Scientific Name: *Cambarus* (*Puncticambarus*) *georgiae* Hobbs

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Cambaridae

Rarity Ranks: G2/S1

State Legal Status: Endangered

Federal Legal Status: none

Description: The background color of the Little Tennessee crayfish is greenish-gray and the animal appears somewhat mottled. The abdomen has paired, slanted, black marks down each side of center. The rostrum is fairly long, narrow, and pointed with lateral spines near the tip. The areola is wide and nearly parallel-sided. Cervical spines are present. This species reaches a maximum total body length of about 75 mm (3 inches).

Similar Species: The common crayfish (*Cambarus bartonii*) occurs with the Little Tennessee crayfish and at a glance looks very similar. However, the common crayfish has a short, wide rostrum and lacks cervical spines.

Habitat: The Little Tennessee crayfish is a stream dwelling species and can be found in leaf litter or other debris in moderately flowing water as well as under rocks in quieter parts of the stream.

Diet: No studies of the Little Tennessee 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. Very little is known concerning the life history of the Little Tennessee crayfish. Males in reproductive condition have been collected from March-May and a female carrying eggs was found in 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 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: As its name implies, the Little Tennessee crayfish is known only from the upper Little Tennessee River system in Macon County, North Carolina and Rabun County, Georgia. The Georgia range lies within the Blue Ridge physiographic province. In Georgia, the species appears to be restricted to the Little Tennessee River and Betty's Creek.

Threats: The small range of this species and the high development rates within that range are significant threats to the Little Tennessee 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: The upper Little Tennessee River in Georgia is surrounded by intensive agriculture and urban development and is in very poor condition. A large tributary to the Little Tennessee River, Betty's Creek, has high habitat quality and has a conservation easement in place in its headwaters.

Conservation and Management Recommendations: Conserving populations of the Little Tennessee 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

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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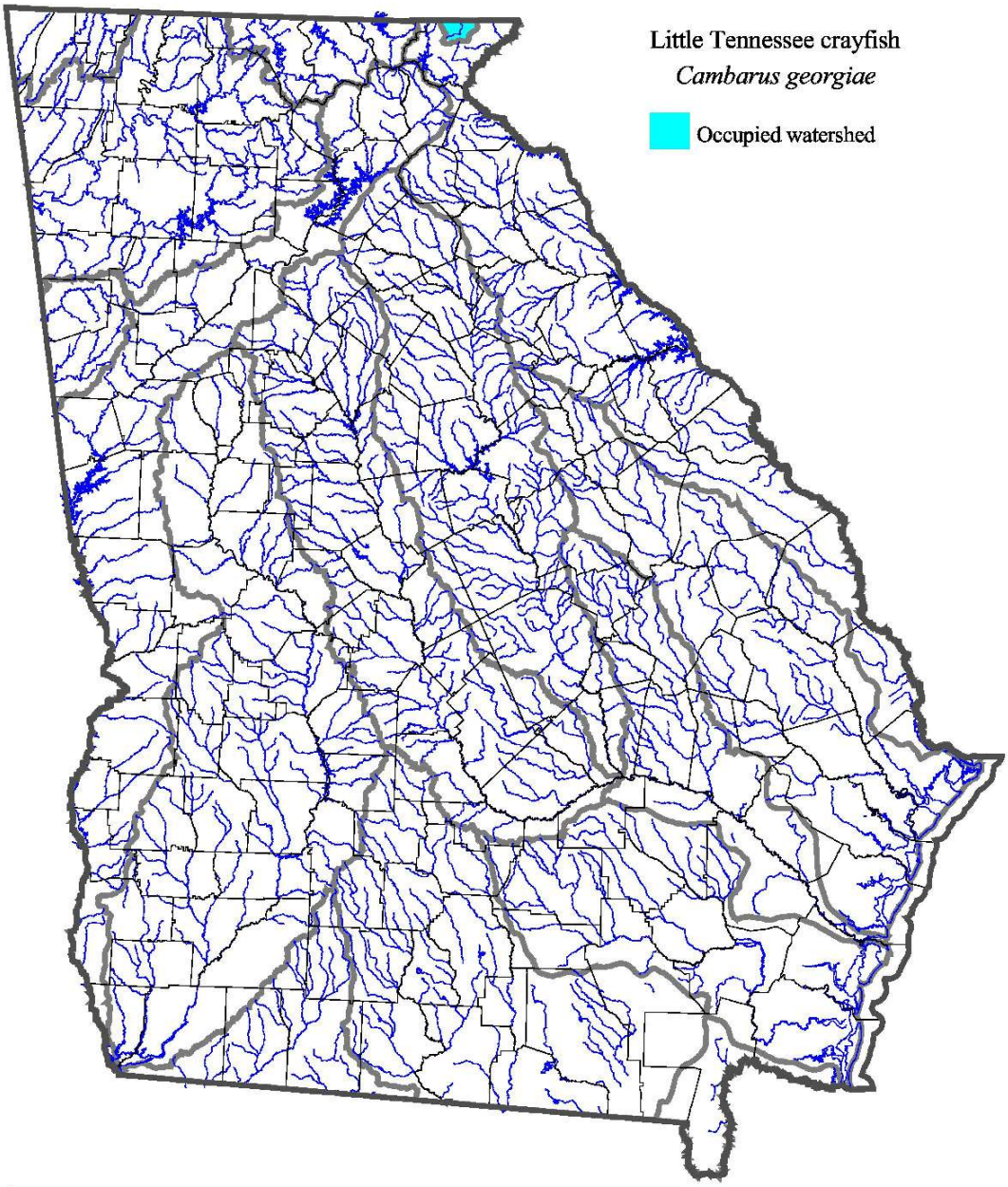

Watersheds (Huc 10) with known occurrences. Streams, county lines, and major river basin boundaries are also shown. Map generated from GADNR (Nongame Conservation Section) data on December 18, 2008.