Common Name: BEAUTIFUL CRAYFISH

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

Other Common Names: none

Previously Used Scientific Names: none

Family: Cambaridae

Rarity Ranks: G2/S2

State Legal Status: Endangered

Federal Legal Status: none

Description: The carapace color of the beautiful crayfish is orange-tan and the abdomen greenish. The edges of the rostrum and rear margins of the abdominal segments are reddish. The areola is wide with margins nearly parallel sided and well developed cervical spines are present. The rostrum is narrow and tapers anteriorly. The claws can be quite large in relation to the body and there is a gap between the fingers of the claw when the fingers are closed. There is usually a tuft of setae at the base of the fixed finger of the claw. This species reaches a maximum total body length of about 90 mm (3½ inches).

Similar Species: The beautiful crayfish differs from all other species within its range, except the Coosawattee crayfish (*Cambarus coosawattee*), by having claws with a large gap between the fingers when the claw is closed. It differs from the Coosawattee crayfish by having a gradually tapering rostrum rather than a rostrum that is “pinched” in the middle.

Habitat: The beautiful crayfish is usually collected in medium-sized streams from beneath rocks in moderate to swift current.

Diet: No studies of the beautiful 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 beautiful crayfish in reproductive condition have been collected in April, September, and October; a single female carrying eggs was found in April.

Survey Recommendations: Since this species is usually found in flowing 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 beautiful crayfish is endemic to the Coosawattee River system (Upper Coosa River system) in northwest Georgia. Records are known from Talking Rock Creek and several other streams and rivers upstream of Carter's Lake Reservoir. Almost all of the occupied watersheds fall within the Blue Ridge physiographic province. Hobbs (1981) reported it from 10 locations and Schuster (2001) documented it at five additional sites.

Threats: The small range of this species and the high development rates within that range are significant threats to the beautiful 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: There are no protected populations of beautiful crayfish at this time.

Conservation and Management Recommendations: Conserving populations of the beautiful 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.

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): 72-389.

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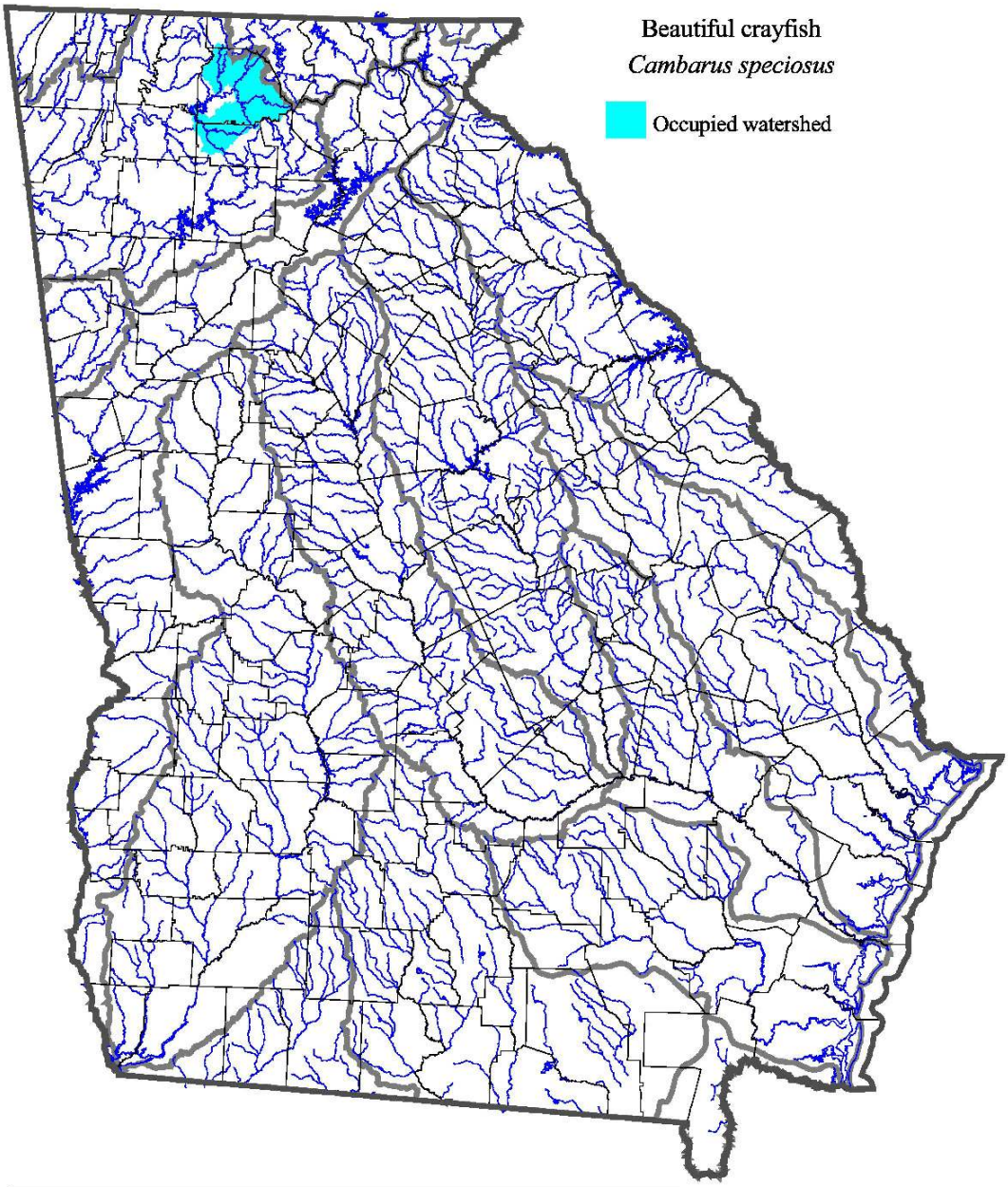

Watersheds (Huc 10) with known occurrences. Streams, county lines, and major river basin boundaries are also shown. Map generated from GADNR (Nongame Conservation Section) data on December 18, 2008.