



Common Name: CONASAUGA BLUE BURROWER

Scientific Name: *Cambarus (Depressicambarus) cymatilis* 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 overall color of the Conasauga blue burrower is deep blue and the tips of the claws are orange. The areola is obliterated and the abdomen appears narrower and shorter than the cephalothorax. This species reaches a maximum total body length of about 75 mm (3 inches).

Similar Species: This is the only all blue crayfish that occurs within its range.

Habitat: Complex burrows adjacent to streams or in low areas where the water table is near the surface of the ground.

Diet: Crayfishes are considered opportunistic omnivores that will consume virtually any live or dead organic matter that they find or can capture. Night video of burrowing crayfishes indicates they may also be active predators of invertebrates that venture close to their burrow openings.

Life History: Burrowing crayfishes inhabit a system of tunnels that may be very complex with several openings to the surface. Openings to the tunnels are often marked by piles of dirt or mud pellets (chimneys). Depending on the soil type and moisture content, these chimneys can reach heights of 15 cm (6 inches) or more. These crayfishes are typically confined to their burrows, but a male must leave its burrow to search for females during the reproductive season. As mentioned above, they may also forage near the opening of their burrow. Active burrows with fresh soil are seen from late spring to late fall, particularly after rain events. During the dry part of the summer, burrow openings may be plugged to help conserve moisture in the burrow. Reproduction probably occurs during the spring and fall, but males in reproductive condition may be found at any time during the year. It is very rare to find more than one adult crayfish in the same burrow. When a female crayfish releases her eggs, she 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. Multiple juveniles are occasionally found in a single burrow. 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. Although it is difficult to study burrowing crayfishes, some researchers believe they may live as long as 10 years. Male Conasauga blue burrowers in reproductive condition have been collected in April; a single female with 7 eggs, 1.9-2.0 mm (slightly less than 1/8 inch) diameter, was collected the same month.

Survey Recommendations: Burrowing crayfishes may be collected by direct excavation of their burrows, by trapping, and during night surveys. Excavating burrows is time consuming and can be very difficult. It also results in destruction of the animals’ burrow. Traps made with PVC pipes or mist nets can be effective. Burrowing crayfishes are sometimes captured around the openings of their burrows on damp nights. Active burrows are found from about mid-March to mid-November if the water table is within about 2 feet of the surface of the ground.

Range: The Conasauga blue burrower is known from the Conasauga and Hiwassee river systems in the Ridge and Valley physiographic province in northwestern Georgia and southeastern Tennessee. In Georgia, it has been collected from only about 5 locations, most around Chatsworth in Murray County.

Threats: Small range size makes this species vulnerable to extirpation. About one-half of the known populations of this species occur within the Chatsworth city limits. One location is in a neighborhood, and the other was along a street that has now been paved over.

Georgia Conservation Status: There is a single population known from state-owned property, the Conasauga River Natural Area.

Conservation and Management Recommendations: Areas with burrows should be protected from land disturbing activities. Additional surveys and life history studies are needed to better define the range of the Conasauga blue burrower and help predict its response to environmental change. Environmental education programs should include information about burrowing crayfishes and encourage protection of burrows.

Selected References:

Hobbs, Hobbs, H. H., Jr. 1970. New crayfishes of the genus *Cambarus* from Tennessee and Georgia (Decapoda: Astacidae). Proceedings of the Biological Society of Washington 83(23): 241-259.

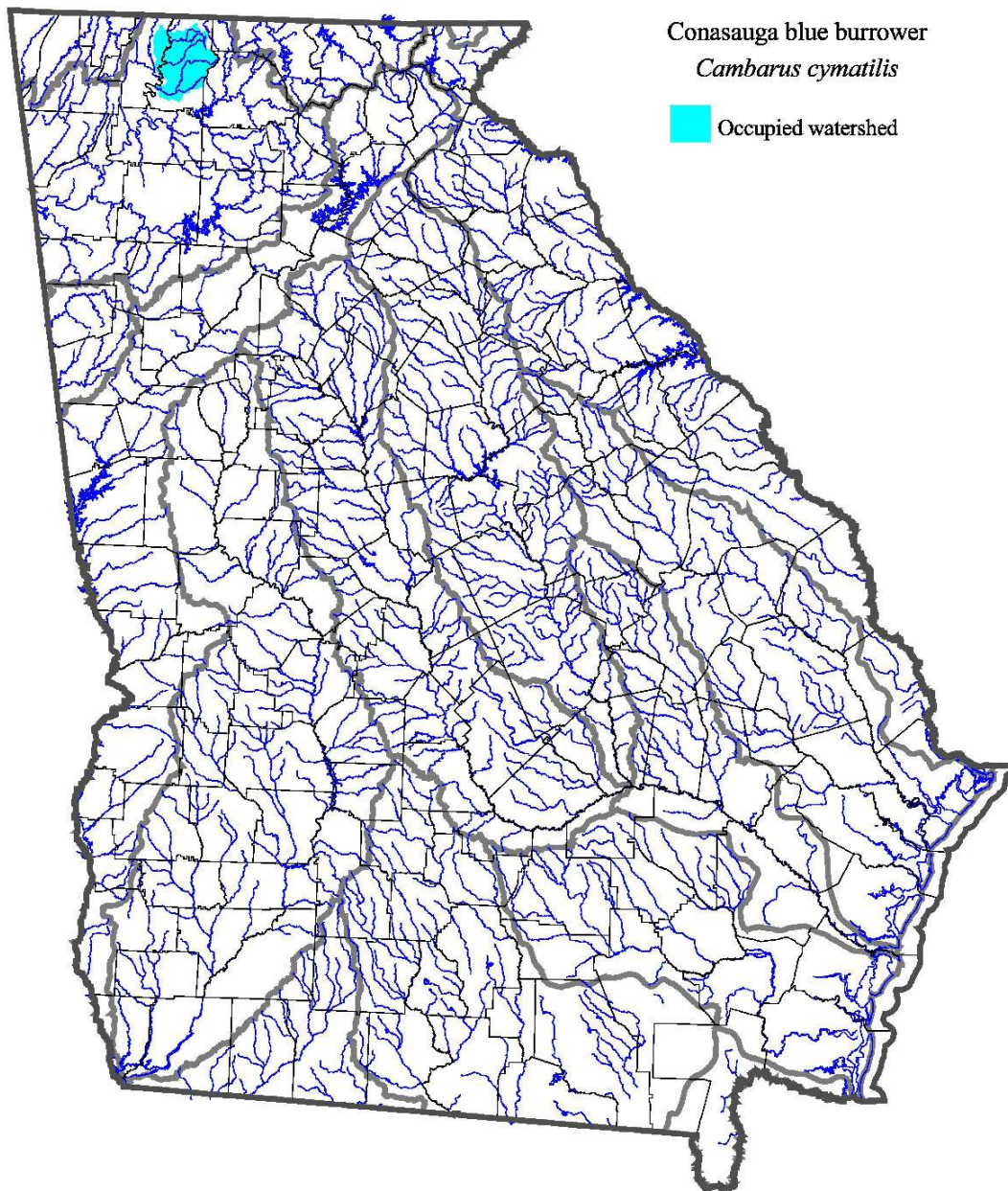
Hobbs, H. H., Jr. 1981. The crayfishes of Georgia. Smithsonian Contributions to Zoology 318:1-549.

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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.