NO PHOTO AVAILABLE

Common Name: GRAINY CRAYFISH

Scientific Name: *Procambarus* (*Ortmannicus*) *verrucosus* Hobbs

Other Commonly Used Names: none

Family: Cambaridae

Rarity Ranks: G4/S2

State Legal Status: Rare

Federal Legal Status: none

Description: The dorsal surface of the grainy crayfish has an overall olive coloration with darker mottling. The sides are tan and orange. The carapace is often speckled with light colored spots that appear as though they had been etched into the surface. A broad, dorsal stripe down the center of the abdomen may range from brown to black. This stripe is bordered by alternating pairs of light and dark stripes, the last of which may contain the etched spots described above. Claws are brown with dark markings on top and lighter brown to orange underneath. The claws are rather delicate and weak, but male claws are larger and longer than female claws. The areola is moderately narrow. This species reaches a maximum total body length of over 75 mm (3½ inches).

Similar Species: The sharpnose crayfish (*Procambarus acutissimus*) is quite similar in appearance to the grainy crayfish. These two species occupy similar habitats and their ranges are contiguous but not known to be overlapping. Definite identification may require examination of male and female reproductive structures.

Habitat: The grainy crayfish has been found in a variety of lentic wetlands, ranging from beaver impoundments to marshy areas associated with creeks to roadside ditches. Specimens are commonly collected from aquatic plants (macrophytes) or inundated terrestrial plants. Observational data suggest that the distributions of the grainy crayfish and the sharpnose crayfish may be related to pH. Many of the streams south of Upatoi Creek are characterized by low pH (acidic) and are occupied by the grainy crayfish. Those wetlands supporting the sharpnose crayfish are more likely to be associated with creeks of near neutral pH, which also support the white tubercled crayfish (*Procambarus spiculifer).*

Diet: No studies of the grainy crayfish diet are known. Crayfishes are considered opportunistic omnivores and likely feed on live and decaying vegetation, aquatic insect larvae, small fishes, and dead animal matter.

Life History: Egg-carrying females have not been observed in nature, although they have reproduced in the laboratory. It is inferred that females retreat to burrows after mating and then stay with their young until winter rains. The young are collected first in the spring, followed by adults. It is not unusual for the waters in which they live to dry up in the late summer and fall, which likely triggers burrowing behavior. Hobbs (1952)

observed a sperm plug in a female in the early spring. This single observation concurs with laboratory observations made by Stanton.

Survey Recommendations: Because this species occupies slow-moving streams and wetlands, dipnetting, seining, and trapping are recommended sampling methods. Sampling is more effective during late winter and spring when wetland habitats are inundated.

Range: The grainy crayfish has been found in Chattahoochee and Stewart Counties in Georgia. It is found in the Upatoi Creek catchment, but only within tributaries south of the mainstem. It is found in wetlands associated with Ochillee Creek and other small creeks south of Upatoi Creek in Chattahoochee County. It has also been found along Hannahatchee Creek in Stewart County. This range bisects the range of the sharpnose crayfish. This latter species occurs in the mainstem of Upatoi Creek, in creeks north of Upatoi Creek, and within the Pataula Creek system.

Threats: The grainy crayfish is threatened in Georgia by its small geographic range. Disturbance or loss of wetland habitats is the most significant threat to the grainy crayfish. About half of the Georgia habitat for this species lies on Fort Benning Military Reservation. This habitat has been well protected in the past, but could be threatened by increased military training occurring on base.

Georgia Conservation Status: Fort Benning has natural resource management programs in place and has the ability to provide considerable protection to this species.

Conservation and Management Recommendations: Conservation of the grainy crayfish will require protection of stream and wetland habitats throughout its very limited range. Fort Benning should include this species in future conservation planning efforts. 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:

Bouchard, Raymond William. 1976. Crayfishes and shrimps. *In* Herbert Boschung, editor, Endangered and Threatened Plants and Animals of Alabama. Alabama Museum of Natural History Bulletin 2:13-20.

Hobbs, H.H., Jr. 1952. A new crayfish from Alabama, with notes on *Procambarus lecontei* (Hagen). Proceedings of the U.S. National Museum 102 (3297): 209-219.

Stanton, George E. 2003. First record of the crayfish *Procambarus* (*Ortmannicus*) *verrucosus* Hobbs in Georgia. Southeastern Naturalist 2(4): 615-618.

Stanton, George E. 2006. Evaluation of conservation status of six west Georgia, Chattahoochee-Flint River crayfish species. Columbus State University, report to the Georgia Department of Natural Resources, Georgia Natural Heritage Program. 60 pp.

Taylor, Christopher A., Gunter A. Schuster, John E. Cooper, Robert J. DiStefano,

Arnold G. Eversole, Premek Hamr, Horton H. Hobbs III, Henry W. Robison, Christopher E. Skelton, and Roger 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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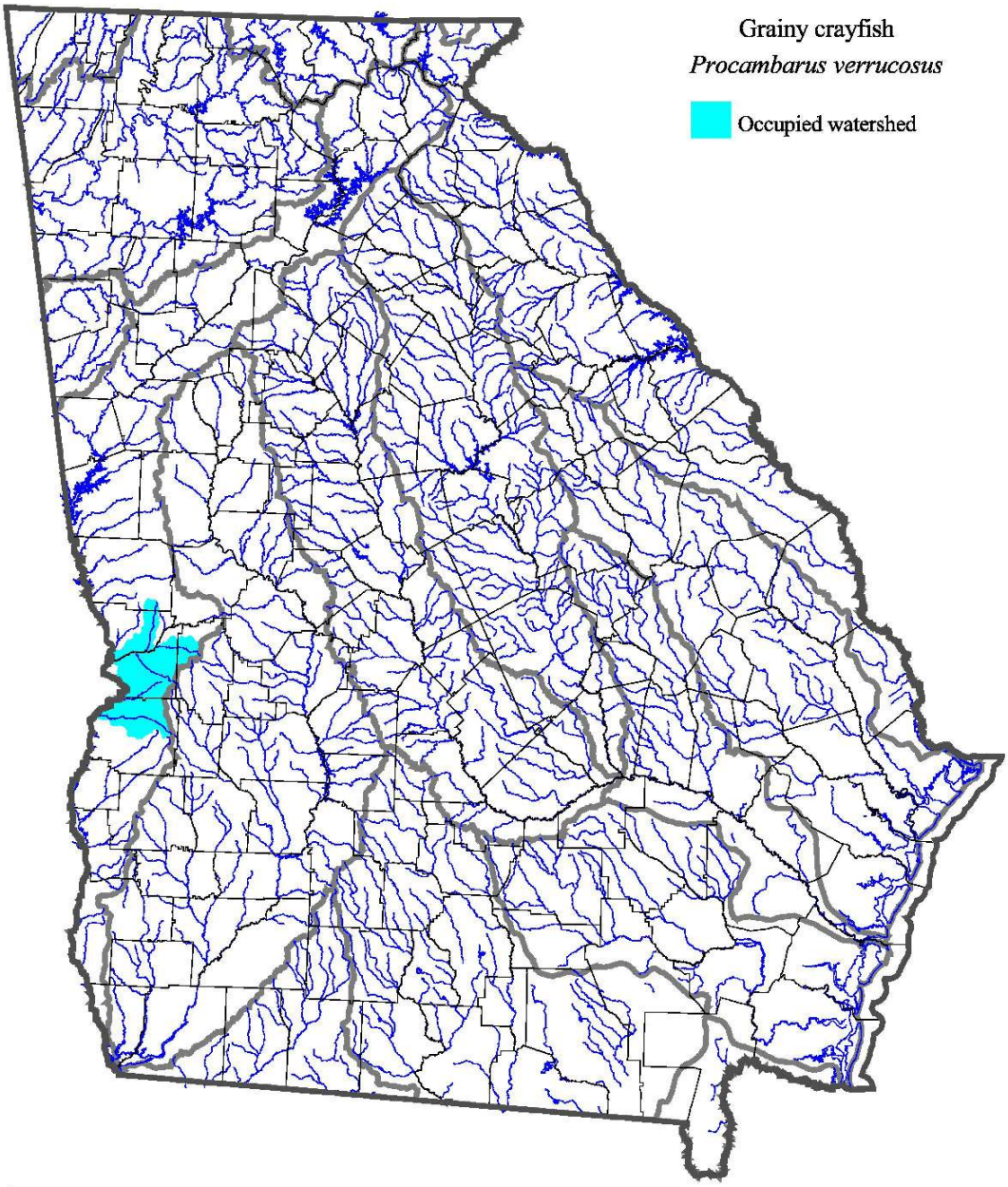

Watersheds (Huc 10) with known occurrences. Streams, county lines, and major river basin boundaries are also shown. Map generated from GADNR (Nongame Conservation Section) data on December 18, 2008.