

## **Edisto Crayfish**

*Procambarus echinatus*

Contributor (2005): Jennifer Price (SCDNR)

Reviewed and Edited (2012): William Poly (SCDNR)

### **DESCRIPTION**

#### **Taxonomy and Basic Description**

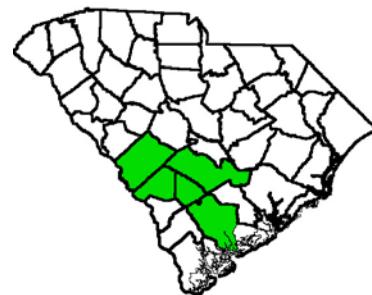
This is a large species with the holotypic male measuring 64 cm in carapace length, which is roughly equal to 128 mm (5.1 in.) in total length. The carapace of *Procambarus echinatus* is olive-green dorsally, fading ventrally to creamy-white with ridges edged in black. The abdomen is greenish with a bright blue caudal section bearing red and reddish-purple markings. The chelae are reddish-black with white tubercles. There are well-developed spines on the carapace and chelae. This species exhibits large amounts of variation between individuals in the number of spines and the size ratios of various body parts (Hobbs 1956b). The taxonomic status of this species is under study by W. Poly.

#### **Status**

NatureServe (2011) identifies the rank of *P. echinatus* as vulnerable (S3) in South Carolina. The species was listed as vulnerable by Taylor et al. (2007).

### **POPULATION SIZE AND DISTRIBUTION**

*P. echinatus* is endemic to South Carolina and known only from the headwaters of the Edisto and the Salkahatchie/Combahee River drainages. It has been recorded in five Coastal Plain counties (Eversole 1995, Poly 2009). In an extensive survey during 1988 and 1989, Eversole (1995) found that the species had a restricted distribution but was abundant at some sites. It is often abundant where it occurs based on recent surveys (Poly 2009).



### **HABITAT AND NATURAL COMMUNITY REQUIREMENTS**

*P. echinatus* is known to inhabit good quality, fast-flowing, dark water streams, usually with sandy substrates. It is often found in grass beds dominated by *Sparganium* and *Saururus* or in submerged rootwads along stream banks (Eversole 1995, Poly 2009).

### **CHALLENGES**

The restricted distribution of *P. echinatus* and its apparent dependence on good water quality streams warrant considerable protection both for the species and its habitat. Current surveys indicate that this species has a very limited distribution. Therefore, updated surveys are

necessary to better determine its status. Additionally, the rarity of *P. echinatus* indicates that its status should be reviewed in South Carolina.

## CONSERVATION ACCOMPLISHMENTS

Distribution, abundance, and life history of this species have been studied recently, resulting in a slight extension of the known range into two other counties.

## CONSERVATION RECOMMENDATIONS

- Conduct research to determine the range, population densities, and habitat associations for *P. echinatus*.
- Based on surveys, investigate the need to assign special concern status for *P. echinatus* in South Carolina.

## MEASURES OF SUCCESS

The collection of data that better describes the range, population densities, and habitat associations for *P. echinatus* may be considered a measure of success.

## LITERATURE CITED

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Hobbs, H.H. Jr. 1956b. A new crayfish of the genus *Procambarus* from South Carolina (Decapoda: Astacidae). *Journal of the Washington Academy of Sciences*. 46(4):117-121.

NatureServe. 2011. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>.

Poly, W.J. 2009. Taxonomy, life history, and distribution of the crayfish, *Procambarus echinatus*. Final Performance Report. 4 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. Reassessment of the Conservation Status of Crayfishes of the United States and Canada after 10+ Years of Increased Awareness. *Fisheries*. 32(8):372–389.