

Piedmont Prairie Burrowing Crayfish

Distocambarus crockeri

Contributor (2005): Jennifer Price (SCDNR)

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

DESCRIPTION

Taxonomy and Basic Description

Distocambarus crockeri is dark brown in color with grayish-brown and chocolate-colored lateral stripes. The chelae are dark tan with brown tubercles. The eyes are small but well-developed, and the carapace may have one or several tubercles (Hobbs and Carlson 1983).

Status

NatureServe (2011) currently identifies *D. crockeri* with a ranking of vulnerable both in South Carolina (S3) and globally (G3). This may be appropriate given that it is moderately abundant but with a restricted distribution. Given the restricted endemic distribution of *D. crockeri*, Taylor et al. (2007) recommended listing it as a threatened species.

POPULATION SIZE AND DISTRIBUTION

D. crockeri is an obligate and very terrestrial burrower that is endemic to South Carolina. It appears to be the most abundant of the *Distocambarus* species, and should be a lower conservation priority than the other three. However, none of the species in this genus are particularly widespread. It is found in Abbeville, Edgefield, McCormick, Greenwood and Saluda Counties. Its distribution lies primarily within the Long Cane Ranger District of the Sumter National Forest (S. Welch, pers. comm.).



HABITAT AND NATURAL COMMUNITY REQUIREMENTS

In the Long Cane Ranger District of the Sumter National Forest, *D. crockeri* is most abundant in wildlife openings within the forests. These wildlife openings are grassy fields that were maintained by mowing or disking and resemble Piedmont prairies, which were present throughout much of the Piedmont at the time of European settlement (S. Welch, unpublished manuscript).

Distocambarus crockeri is found primarily on ridgetops and saddles in upland Piedmont areas where there is a perched water table of less than 2 m (6.6 ft.) during the winter and spring. The soils in which *D. crockeri* is found also undergo seasonal drying during the summer and fall (S. Welch, pers. comm.).

CHALLENGES

The dependence of *D. crockeri* on a perched water table makes it vulnerable to alterations in soil hydrology such as digging a large number of wells or severe drought. Forest succession in prairie areas may also threaten the survival of *D. crockeri* since it is rare in forested areas (S. Welch, unpublished manuscript).

CONSERVATION ACCOMPLISHMENTS

The majority of the distribution of *D. crockeri* lies within the Sumter National Forest. The US Forest Service may be able to maintain suitable habitat for *D. crockeri* by managing wildlife openings.

CONSERVATION RECOMMENDATIONS

- Conduct additional surveys for *D. crockeri*.
- Based on surveys, investigate the need to initiate the process to achieve South Carolina special concern status for *D. crockeri*.
- Continue to work with the US Forest Service to ensure that operations on Sumter National Forest maintain suitable habitat for *D. crockeri*.
- Develop and conduct landowner and general education programs that stress the unique nature of terrestrial burrowing crayfish and their importance in South Carolina.

MEASURES OF SUCCESS

Assessing participation in education programs would assist in measuring the success of these programs.

LITERATURE CITED

Hobbs, H.H. Jr. and P.H. Carlson 1983. *Distocambarus* (Decapoda: Cambaridae) elevated to generic rank, with an account of *D. crockeri*, new species, from South Carolina. *Proceedings of the biological society of Washington*. 96(3):420-428.

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

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.