

***Cambarus* sp. nov. “B”**

No Common Name

Contributor (2005): Jennifer Price (SCDNR)

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

DESCRIPTION

Taxonomy and Basic Description

Cambarus sp. nov. “B” appears to be a new species that was formerly misidentified as *Cambarus longirostris*. Although *C. longirostris* was previously thought to have been introduced to South Carolina, further examination of specimens indicates that *C. longirostris* does not occur in the state (D. Jones, pers. comm., 2004). However, the species was included as an invasive species (as *C. longirostris*) in South Carolina by McLaughlin et al. (2005) and Taylor et al. (2007), although the latter source indicated that *C. longirostris* was a species complex under investigation. There are several Tennessee River Basin fish species that occur in the upper Savannah River Basin of South Carolina; therefore, it would not be surprising that this crayfish was another aquatic species transferred as a result of stream capture.



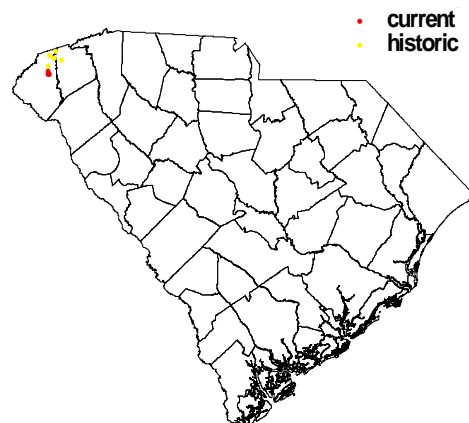
Adults of this species average about 58 mm (2.3 in.) in total length. The body of this species is buckskin to dark tan with the tips of the chelae white and the joints of the legs pale blue. The posterior terga of the abdomen bears a thin, transverse, burgundy line, and there is usually a dark brown or black saddle following the cervical groove. The fingers of the chelae are very long and form a noticeable gap when closed (D. Jones, Clemson University, pers. comm. via e-mail message on March 10, 2005).

Status

Because this is possibly a new species of crayfish, no status information exists for *Cambarus* sp. nov. “B.”

POPULATION SIZE AND DISTRIBUTION

Cambarus sp. nov. “B” has been collected in medium-sized rivers in the Savannah drainage in Pickens and Oconee Counties in South Carolina. Efforts to locate the species in Georgia have been unsuccessful; it appears to be endemic to South Carolina. It has only been found recently at 3 sites, 2 on Flat Shoals River and 1 on Oconee Creek. The site on Oconee Creek appears highly affected by sedimentation



and is the site where the species is least abundant (D. Jones, pers. comm., 2004).

HABITAT AND NATURAL COMMUNITY REQUIREMENTS

Cambarus sp. nov. “B” prefers riffles and fast flowing sections of streams and rivers with coarse gravel and cobble overlaying fractured bedrock. Females carrying juveniles can be found under boulders in deeper pools of water downstream from the riffles. Specimens are primarily found in crevices in boulders and under rocks 45 cm (18 in.) or more in diameter (D. Jones pers. comm. 2004).

CHALLENGES

Cambarus sp. nov. “B” appears to be highly sensitive to sedimentation due to its need for coarse substrates. Therefore, development or forestry activities in the vicinity of this species’ habitat could adversely impact *Cambarus* sp. nov. “B.” Oconee Creek, one of the three locations from which this species is documented, appears to have been negatively affected by a high sediment loading and supports the smallest population. Additionally, much of the suitable habitat for this species has been inundated by reservoirs. *Cambarus* sp. nov. “B” is no longer found at several sites where specimens were once taken prior to inundation by Lake Jocassee (D. Jones pers. comm. 2004).

CONSERVATION ACCOMPLISHMENTS

There are no significant conservation accomplishments specifically for the *Cambarus* sp. nov. “B” crayfish at this time.

CONSERVATION RECOMMENDATIONS

- Complete the taxonomic description of *Cambarus* sp. nov. “B.”
- Develop a landowner education program to promote sound land stewardship practices that result in the reduction of sedimentation in waterbodies.
- Conduct a stream restoration project at Oconee Creek to stabilize streambanks and reduce sediment loads. Revisit the site and conduct additional surveys to determine the affect of the restoration project on the population of *Cambarus* sp. nov. “B.”
- Conduct additional surveys to determine the range for the *Cambarus* sp. nov. “B” crayfish.
- Based on surveys, determine the need to obtain special concern status for the *Cambarus* sp. nov. “B” crayfish.
- Review any new proposals for dam construction to determine whether habitat for *Cambarus* sp. nov. “B” is not affected by inundation. Work with appropriate agencies to reduce or eliminate impacts associated with dam construction.

MEASURES OF SUCCESS

An increase or no net decrease in numbers of individuals collected in future surveys would be considered a sign of success. An increase in the numbers of individuals identified in surveys at

the location of stream restoration would also be considered to be a success. Monitor the number of individuals that are reached through the landowner education program and survey those individuals to determine whether they implement stewardship practices conveyed in that program.

LITERATURE CITED

- McLaughlin, P.A., D.K. Camp, M.V. Angel, E.L. Bousfield, P. Brunel, R.C. Brusca, D. Cadien, A.C. Cohen, K. Conlan, L.G. Eldredge, D.L. Felder, J.W. Goy, T. Haney, B. Hann, R.W. Heard, E.A. Hendrycks, H.H. Hobbs III, J.R. Holsinger, B. Kensley, D.R. Laubitz, S.E. LeCroy, R. Lemaitre, R.F. Maddocks, J.W. Martin, P. Mikkelsen, E. Nelson, W.A. Newman, R.M. Overstreet, W.J. Poly, W.W. Price, J.W. Reid, A. Robertson, D.C. Rogers, A. Ross, M. Schotte, F.R. Schram, C.-T. Shih, L. Watling, G.D.F. Wilson, and D.D. Turgeon. 2005. Common and scientific names of aquatic invertebrates from the United States and Canada: crustaceans. American Fisheries Society, Special Publication 31, Bethesda, Maryland. i-xiii + 1-545 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.