

Cambarus (Depressicambarus) striatus Hay 1902

Ambiguous crayfish



Photo by C. Lukhaup.

Distribution, Habitat, and Behavior

Cambarus striatus is a widely distributed species, ranging from South Carolina to Florida, west to Mississippi and north through Tennessee into part of Kentucky (Bouchard 1978, Hobbs 1989). It occurs throughout most of Mississippi, except in the Mississippi Alluvial Plain ecoregion (USEPA 2007).

Cambarus striatus may be primary, secondary, or tertiary burrowers, depending on the population (Bouchard 1978). Burrowing versus stream-dwelling habits by *C. striatus* appears to depend, at least in part, on the species with which it is syntopic (Bouchard 1978, Hobbs 1981). Hobbs (1989) noted that the species tends to burrow more in the southern portion of its range, and in Kentucky, Taylor and Schuster (2004) collected the species from “creeks and rivers of all sizes” but not from burrows. In Mississippi, small juveniles are common in streams from fall through spring, especially streams that dry seasonally, and it is not uncommon to find a few mature individuals in streams, particularly during spring and fall.

Life Colors and Distinctive Characters

Cambarus striatus of two color morphs typically coexist in Mississippi streams (personal observations). One morph has a uniform or very lightly mottled tan, brown, olive or sometimes bluish-gray coloration over its entire body. The other morph has similar background coloration but has two dark stripes that begin on either side of the carapace and extend the length of the abdomen (see also Hay 1902, Bouchard 1978, Hobbs 1981). We raised juveniles of both color morphs in the laboratory and found that the color differences are maintained for at least 1.5 years (the longest we held them), although the dark stripes fade somewhat with age.

Size

Cambarus striatus is one of the largest crayfishes in Mississippi, with females becoming larger than males. The maximum total length reported for *C. striatus* is 107.8 mm (Taylor and Schuster 2004). A specimen from Tennessee had a carapace length (CL) of 68.6 mm (post-orbital carapace length [POCL] = 59.7 mm)(Bouchard 1972), and a female from Kentucky had a CL = 60.1 mm (POCL = 52.8 mm)(Bouchard 1978).

Most Like

Cambarus striatus usually has an open, though narrow, areola, differentiating it from *C. diogenes* and *C. ludovicianus*. The stout body, heavy chelae, and very small, almost rectangular antennal scales differentiate it from *Orconectes* and *Procambarus* species with open areolae.

Life History

Bouchard (1978) reported a female with five eggs captured on 11 March 1966 in a cavern and another female with young on 9 October 1977 under a rock in a stream, both in Alabama, and noted that the species appears to remain in burrows while in berry. Another ovigerous female was collected in July (Bouchard 1972). Form I males have been found in most months, and Hobbs (1981) suggested that they are probably rare from mid-July to early October. In Mississippi, form I males have been collected in every month except February and August. We generally found small (CL < 10.0 mm) juveniles in streams from late fall through spring. All but two small individuals found during a stream study in northern Mississippi were captured from November through March, with the smallest of those captured in November and December (unpublished data).

Crayfish Associates

Because it is widely distributed and uses many habitat types, *C. striatus* occurs with a large number of other crayfish species. Species co-occurring with *C. striatus* in our Mississippi National Forest stream collections included, in order of decreasing frequency, *Orconectes chिकासawae*, *Procambarus vioscai*, *P. acutus*, *P. hayi*, *Cambarus diogenes*, *P. ouachitae*, *O. palmeri palmeri*, *O. etnieri*, *Hobbseus prominens*, and *P. clemmeri*. In other studies in the state, we collected *C. striatus* with *C. ludovicianus*, *Fallicambarus fodiens*, *H. yalobushensis*, *P. clarkii*, *P. hybus*, and *P. viaeviridis* (unpublished data). Other species that occur in Mississippi and have been reported occurring with *C. striatus* (though not necessarily co-occurring in the state) include *C. girardianus*, *Faxonella clypeata*, *O. alabamensis*, *O. compressus*, *O. mississippiensis*, *O. spinosus*, *O. validus*, and *P. acutissimus* (Bouchard 1972, Cooper and Hobbs 1980, Hobbs 1989).

Conservation Status

IUCN Red List (2011): Least Concern

American Fisheries Society ranking: Currently Stable

Heritage global ranking: G5 (demonstrably widespread, abundant, and secure)

See Taylor et al. (2007) for explanation of these rankings.

Species Description

Originally described as *Cambarus latimanus striatus*.

Hay, W. P. 1902. Observations on the crustacean fauna of Nickajack Cave, Tennessee, and vicinity. Proceedings of the United States National Museum 25(1292):417-439.

Bouchard (1978) presents a detailed, illustrated redescription of the species and discusses variation within the species and subgenus. Hobbs (1981) contains additional description and illustrations.

Literature Cited

Bouchard, R. W. 1972. A contribution to the knowledge of Tennessee crayfish. Ph.D. dissertation. University of Tennessee, Knoxville.

Bouchard, R. W. 1978. Taxonomy, ecology and phylogeny of the subgenus *Depressicambarus*, with the description of a new species from Florida and redescrptions of *Cambarus graysoni*, *Cambarus latimanus* and *Cambarus striatus* (Decapoda: Cambaridae). Bulletin Alabama Museum of Natural History 3:27-60.

Cooper, M. R. and H. H. Hobbs, Jr. 1980. New and little-known crayfishes of the virilis section of genus *Orconectes* (Decapoda: Cambaridae) from the southeastern United States. Smithsonian Contributions to Zoology 320:1-44.

Hay, W. P. 1902. Observations on the crustacean fauna of Nickajack Cave, Tennessee, and vicinity. Proceedings of the United States National Museum 25:417 - 439.

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

Hobbs, H. H., Jr. 1989. An illustrated checklist of the American crayfishes (Decapoda: Astacidae, Cambaridae, and Parastacidae). Smithsonian Contributions to Zoology 480:1-236.

IUCN, International Union for Conservation of Nature. 2011. IUCN Red List of Threatened Species. Version 2011.2. <www.iucnredlist.org>. Downloaded on **03 May 2012**.

Taylor, C. A. and G. A. Schuster. 2004. The crayfishes of Kentucky. Illinois Natural History Survey Special Publication No. 28, Champaign, IL.

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. A reassessment of the conservation status of crayfishes of the United States and Canada after 10+ years of increased awareness. Fisheries 32:372-389.

USEPA, US Environmental Protection Agency. 2007. Level III Ecoregions of the Conterminous United States, Map. http://www.epa.gov/naaujydh/pages/ecoregions/images/useco_key.jpg. Accessed 18 April 2008

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