

## ***Orconectes (Faxonius) wrighti* Hobbs 1948**

Hardin crayfish



Form I male from Hardin, Co. Tennessee. Photo by S.B. Adams

### **Distribution, Habitat, and Behavior**

*Orconectes wrighti* has a restricted range, with previous reports indicating that the species' distribution is probably limited to the area bordered by two stream systems (Robinson and Snake creeks) tributary to the Tennessee River in Hardin and McNairy counties, Tennessee (Hobbs 1948, Bouchard and Bouchard 1976). In 1996, C. A. Taylor and M. H. Shabaj collected a female *O. wrighti* from the Chambers Creek drainage in Alcorn County, MS, just south of the Tennessee state line, and in 2008, I collected the species, including form I males, from two locations in the same vicinity (MS crayfish database, this website). Chambers Creek enters the Tennessee River between Robinson and Snake creeks. The distribution of *O. wrighti* in Mississippi may be restricted to the Chambers Creek drainage.

The limited habitat information for this species indicates that it lives in small to medium sized streams with low velocities and clay and gravel substrates (Hobbs 1948). The type locality had a wetted width of 3.0 - 4.5 m, large pools as deep as 2 m, exposed gravel bars, some vegetation near the edges, and was heavily shaded (Hobbs 1948). The species uses rocks, leaf litter, and other shelter in both pool and riffle areas (Bouchard 1972), and is often found under rocks in riffles (Bouchard and Bouchard 1976). The two sites where I collected the species in Mississippi had clay and sand substrate and areas of rip-rap (piles of large rock used to control erosion). One of the sites was channelized and contained some brush and detritus; the other had some gravel substrate and large woody debris.

### **Life Colors and Distinctive Characters**

*Orconectes wrighti* is the only species in the state with the combination of an open areola with space for >1 punctation, a rostrum with a distinct acumen, and gonopods with two short terminal elements forming a "V" and not recurving. This is evident in form II as well as form I males. Form I males have hooks on the third pereopods (legs). Life

colors are also distinctive, especially the tan chelae with a prominent black blotch near the base of the moveable finger and the subtle dark band across the tips of the fingers.

## Most Like

*Orconectes wrighti* is the only member of the *Orconectes* subgenus *Faxonius* in Mississippi, and it does not closely resemble any other species in the state. Preserved specimens are most likely to be confused with *O. perfectus* or *O. hartfieldi*, but *O. wrighti* has terminal elements of the gonopod that are nearly equal in length, a more sharply pointed central projection on the gonopod, and a much wider areola than the other two species (Walls 1972). *Orconectes wrighti* could be initially mistaken for *Orconectes etnieri*, but closer examination will reveal many differences, particularly the curved gonopods of the latter.

## Size

Four adults measured for the species description or in the US Forest Service collection range in size from 26.0 - 27.0 mm CL and 53.2 - 56.7 mm body length (Hobbs 1948; unpublished data).

## Life History

In Tennessee, form I males were collected in early September, October, March, and May, but were not found in an early June collection (Hobbs 1948, Bouchard 1972, Bouchard and Bouchard 1976; Smithsonian National Museum of Natural History database). Form I males were collected on 21 March 2008 in Mississippi (MS crayfish database, this website). Nothing else is known about the species' life history, but presumably, like many other *Orconectes* species, its breeding season extends from fall through spring with juveniles being released in spring (Adams *In press*).

## Crayfish Associates

In Mississippi, *O. wrighti* has been collected with *Cambarus diogenes*, *C. striatus*, *O. etnieri*, *Procambarus acutus*, and *P. ablusus* (MS crayfish database, this website). In Tennessee, it was also collected with *O. validus* (Bouchard and Bouchard 1976). The type locality is also the type locality for *O. etnieri*.

## Conservation Status

American Fisheries Society ranking: Endangered

Heritage global ranking: G2 (imperiled)

State of Mississippi: *Orconectes wrighti* was not included in the species list for Mississippi when the state rankings were last updated.

See (Taylor et al. 2007) for further explanation of the American Fisheries Society and Heritage rankings.

## Species Description

Hobbs, H. H., Jr. 1948. A new crayfish of the genus *Orconectes* from southern Tennessee. *Proceedings of the Biological Society of Washington* 61:85-92.

## **Literature Cited**

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