

Hobbseus petilus Fitzpatrick 1977

Tombigbee riverlet crayfish

Photo not available

Distribution, Habitat, and Behavior

Hobbseus petilus is endemic to Mississippi, occurring in Itawamba, Lee, Monroe, and Oktibbeha counties (Fitzpatrick 1977, Hobbs 1989, Fitzpatrick 1996, 2002). Fitzpatrick (2002) also reported the species from Clay County, Mississippi, but the location of voucher specimens from that county is unknown. *Hobbseus petilus* has been collected from streams, a roadside ditch, and a slough. The “sluggish, shallow (<30 cm deep) stream” at the type locality flowed through dense sedges over a silty bottom (Fitzpatrick 1977). Hobbs (1989) suggested that the species is probably a secondary burrower.

Life Colors and Distinctive Characters

To describe the color of *H. petilus*, I paraphrase from Fitzpatrick (1977):

The base color is blue-black and a prominent tan band as wide as the rostrum and areola runs from the rostral tip to the anterior margin of the tail fan. The lower sides of the carapace are mottled with tan, and a vague, narrow, tan line runs lengthwise about midway up the carapace. The dorsal side of the abdomen is lightly mottled. A well-defined narrow light tan stripe delimits the upper portions of abdominal segments from the sides (i.e., the terga from the pleura). The walking legs are banded. The chelae, or claws, are basically tan but with blue-black tubercles and punctations. Both fingers are very dark tan with light tips. The underside of the crayfish is creamy to white.

The rostrum is flat with a very small acumen and no marginal spines. The areola is moderately wide. Cervical spines are absent. Antennal scales are rounded, with the widest part near the distal end. Males have hooks only on the third pereopods (legs). Gonopods have two terminal elements bent at a 90 degree angle. In form I males, the mesial process is longer than the central projection and tapers and curves upward from the middle to the end.

Size

The three type specimens ranged in size from 13.6 to 18.1 mm carapace length.

Most Like

Hobbseus petilus is similar to all other members of the genus, but only *H. attenuatus* and *H. cristatus* have a similar 90° bend in the mesial process of the form 1 gonopod. *Hobbseus petilus* differs most noticeably from *H. attenuatus* in having an undulating, rather than a straight, mesial process (Fitzpatrick 1977). Also, *H. attenuatus* has a prominent knob near the base of the mesial process (Black 1969). In *H. cristatus*, the mesial process is straight and more triangular near the base, and the entire gonopod is

more stout than in *H. petilus*. Form 1 male *H. petilus* differ from all other *Hobbseus* species in having an eminence at the base of the central projection of the gonopod (Fitzpatrick 1977).

Life History

Hobbseus petilus has been collected from February through May, with juveniles appearing in collections from February through April and form 1 males in April and May (Fitzpatrick 1977; MS crayfish database, this website). Nothing else is known about the species' life history.

Crayfish Associates

Hobbseus petilus has been collected with *Cambarus striatus*, *C. (Lacunicambarus) sp.*, *Procambarus acutus acutus*, *P. hagenianus vesticeps*, *P. hayi*, *P. hybus*, *P. (Ortmannicus) sp.*, and two undescribed species of *Orconectes* (Fitzpatrick 1977). Note that one of the undescribed *Orconectes* species is probably *O. chickasawae*, described in 1980.

Conservation Status

American Fisheries Society ranking: Threatened

Heritage global ranking: G2 (imperiled)

State of Mississippi: Tier 1 (in need of immediate conservation action and/or research)(MDWFP 2005).

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

Species Description

Fitzpatrick, J.F., Jr. 1977. A new crawfish of the genus *Hobbseus* from northeast Mississippi, with notes on the origin of the genus (Decapoda, Cambaridae). Proceedings of the Biological Society of Washington 90:367-374.

Literature Cited

Black, J. B. 1969. A new crawfish of the genus *Hobbseus* from Mississippi (Decapoda, Astacidae). Proceedings of the Biological Society of Washington 82:193-200.

Fitzpatrick, J. F., Jr. 1977. A new crawfish of the genus *Hobbseus* from northeast Mississippi, with notes on the origin of the genus (Decapoda, Cambaridae). Proceedings of the Biological Society of Washington 90:367-374.

Fitzpatrick, J. F., Jr. 1996. Rare and endangered crawfishes of Mississippi. Museum Technical Report No. 93, Mississippi Department of Wildlife, Fisheries, and Parks, Jackson.

Fitzpatrick, J. F., Jr. 2002. The conservation status of Mississippi crawfishes (Crustacea: Decapoda: Cambaridae). Louisiana Academy of Sciences 63:25-36.

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

MDWFP, Mississippi Department of Wildlife, Fisheries, and Parks. 2005. Appendix VIII: Mississippi's species of greatest conservation need by ecoregion. Pages 375-380 Mississippi's Comprehensive Wildlife Conservation Strategy 2005-2015, version 1.1, Jackson, MS (<http://home.mdwfp.com/more.aspx>).

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.

Fact sheet author

Susan B. Adams

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