

Common Name: TANGERINE DARTER

Scientific Name: Percina aurantiaca

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Percidae

Rarity Ranks: G4/S1

State Legal Status: Endangered

Federal Legal Status: none

Description: One of the largest darters with a maximum total length exceeding 17 cm (6.7 in), the tangerine darter takes its common name from the brilliant orange coloration that adorns the belly and underside of the head of adult males. Females and juveniles are less intensely colored with yellow on the undersides. Both sexes have dark blotches that blend together to form a dark stripe along the fish's sides, and a single row of small dark spots above. The dorsum is tinted yellow; the dorsal fins are bright orange in males and yellow in females. Males may retain the orange coloration on their bellies past the spawning season and throughout much of the year.

Similar Species: This large colorful darter is distinctive and not easily confused with other species. Orange body coloration on breeding gilt darters renders them superficially similar to tangerine darters, especially when making underwater observations. The gilt darter only reaches a maximum total length of about 7.5 cm (3 inches) and never has the row of small black, dorsolateral spots that are found on the tangerine darter.

Habitat: The tangerine darter inhabits high gradient rivers and large streams, where adults occupy swiftly flowing, moderately deep riffles and runs, and deeper pools in winter. Juveniles occupy shallower, slower habitats adjacent to faster water areas. Unlike most darter species, the tangerine

darter is often observed hovering over, instead of resting on the stream bottom.

Diet: Like many stream fishes, tangerine darters feed primarily on aquatic invertebrates. Juveniles are known to include mayfly and dipteran larvae in their diet, while adults feed heavily on larval caddisflies. The aquatic plant riverweed (*Podostemum ceratophyllum*) is an important feeding habitat.

Life History: This large darter may live 4 years or longer. Spawning occurs primarily in May and June. As is typical of the genus *Percina*, the tangerine darter is an egg-burying species. The male straddles the female during spawning and the pair quivers as gametes are buried in the gravel. Large colorful males participate in the most spawning events, but territories are not defended.

Survey Recommendations: This species is very difficult to capture by seining or electrofishing and is best-surveyed using visual observation techniques (i.e., snorkeling or SCUBA). For example, during a 2008 survey on the Toccoa River, backpack electrofishing upstream of a bag seine failed to capture any specimens at four sites where the species was detected during a snorkeling survey conducted during the same week.

Range: The tangerine darter occurs in the upper Tennessee River drainage in Georgia, North Carolina, Tennessee and Virginia. In Georgia, this large darter is known only from the Toccoa River system. Most records are from the mainstem river upstream of Lake Blue Ridge. Check the <u>Fishes of Georgia Webpage</u> for a watershed-level distribution map.

Threats: Impoundments throughout the upper Tennessee River system limit available habitat for the tangerine darter. The portions of the system that remain free-flowing are vulnerable to degradation by excessive inputs of silt and sediment, which fill-in the gravel and cobble substrata that support the fish's prey and developing eggs. Stream degradation results from failure to employ Best Management Practices (BMPs) for forestry and agriculture, failure to control soil erosion from construction sites and bridge crossings, and increased stormwater runoff from developing urban and industrial areas. Increasing development of second homes utilizing poor construction and riparian management practices poses a threat to this species. Finally, hemlock wooly adelgid is a significant threat to riparian zone habitats along the Toccoa River.

Georgia Conservation Status: Twenty-nine randomly selected sites, located upstream and downstream of Lake Blue Ridge on the mainstem Toccoa River, were surveyed by snorkeling during summer 2008. The tangerine darter was observed at 17 of these sites (59%), all of which were located upstream of Lake Blue Ridge. Although there is no historic data for comparison, this relatively high rate of occupied sites suggests that the tangerine darter population in Georgia is currently stable. However, given the relatively short section of river occupied (about 33 river kilometers or 20 miles), this species remains vulnerable.

Conservation and Management Recommendations: Conserving populations of the tangerine darter will require maintaining and improving habitat quality in the upper Toccoa River by eliminating sediment runoff (from land-disturbing activities such as roadway and housing construction) and maintaining forested buffers along stream banks. There are many opportunities to enhance and widen riparian zone habitats by <u>planting native trees and shrubs</u> along creeks and

streams. The <u>Georgia Forestry Commission</u> provides information on treatment options for hemlock wooly adelgid. Finally, ongoing monitoring efforts should be continued for this species.

Selected References:

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Author of Account: Byron J. Freeman and Brett Albanese

Date Compiled or Updated:

B. Freeman-Original Account: 1999

K. Owers-Updates: January 29th, 2009, Added picture, updated status and ranks, added fish atlas link, converted to new format, minor edits to text

Brett Albanese-Updates: April 1st, 2009, General update of entire account.

Zach Abouhamdan-Update: April 5, 2016, Updated links

