



Common Name: OLIVE DARTER

Scientific Name: *Percina squamata* (Gilbert and Swain)

Other Commonly Used Names: none

Previously Used Scientific Names: none

Family: Percidae

Rarity Ranks: G3/S1

State Legal Status: Endangered

Federal Legal Status: Not Listed

Description: This large olive-colored darter reaches a maximum total length in excess of 13 cm (5.1 in) and is characterized by an exceptionally pointed snout. Young fish are marked with dark blotches along the sides and on the dorsum, but these markings become less distinct with age. All ages have a small, distinct spot at the base of the caudal fin. The only noticeable bright color on this darter is an orange band in the first dorsal fin.

Similar Species: The sharply pointed snout and overall drab coloration of this species makes it difficult to confuse with any co-occurring darter species.

Habitat: The olive darter inhabits deep, swift, rocky habitats of high elevation rivers, where the fish forages in very fast current around boulders.

Diet: Benthic aquatic insects, including caddisflies and mayflies.

Life History: Because its typical swift-water habitat makes sampling and underwater observations difficult, there is very little known about the life history and behavior of the olive darter. Reproductive condition of adults and the timing of young-of-year recruitment indicate a May-July spawning season. Length frequency histograms from a Tennessee population include four different size groups, suggesting a lifespan of at least four years. Growth is relatively rapid, with

young of year exceeding 50 mm during their first year.

Survey Recommendations: Because of its occurrence in deep, swift and rocky sections of rivers, this species is very difficult to sample. To increase the probability of detecting this species, multiple sampling techniques (e.g., snorkeling and electrofishing upstream of a seine) and multiple sampling events are recommended. Night snorkeling may also be effective.

Range: The olive darter is restricted to the upper-most portions of the Tennessee River and Cumberland River systems in Tennessee, Kentucky, North Carolina, and Georgia. In Georgia, this species is only known from the Toccoa and Little Tennessee River systems. Almost all of Georgia's records are from the mainstem Toccoa River upstream of Lake Blue Ridge, but there are a few records known from the lower reaches of larger tributary streams (e.g., Coopers Creek). The olive darter is known from the Little Tennessee River in North Carolina and was collected in Betty's Creek (GA) during 2011. Check the [Fishes of Georgia Webpage](#) for a watershed-level distribution map.

Threats: The olive darter depends on good water quality and fast-water habitats in upland streams. Impoundments have reduced available habitat for the olive darter, and remaining free-flowing mountain streams are vulnerable to degradation by excessive inputs of silt and sediment. 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 houses utilizing poor construction and riparian management practices poses a significant threat to the olive darter in the Toccoa River system. In addition, hemlock wooly adelgid is a significant threat to riparian zone habitats in this region.

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. Twenty-percent of these sites, along with all olive darter historic sites within Coopers Creek and Wilscot Creek, were also surveyed by electrofishing. A single olive darter was observed during this sampling. While this species may be very difficult to collect and observe, the results of this survey suggest that the olive darter is very rare and vulnerable to extirpation from Georgia.

Conservation and Management Recommendations: Conserving populations of the olive darter will require maintaining and improving habitat quality in the Toccoa River by eliminating sediment runoff from land-disturbing activities such as roadway and housing construction, maintaining forested buffers along stream banks, eliminating inputs of contaminants such as fertilizers and pesticides, and maintaining natural patterns of streamflow. There are many opportunities to enhance and widen riparian zone habitats by [planting native trees and shrubs](#) along creeks and streams. The [Georgia Forestry Commission](#) 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, 1999: original account.

K. Owers, Jan, 2009: Added picture, updated status and ranks, added fish atlas link, converted to new format, minor edits to text

B. Albanese, June, 2009: general update of entire account.

B. Albanese, December 2011: added new Betty's Creek record documented by Bill McLarney.

Z. Abouhamdan, April 2016: updated links