



**Common Name:** LIPSTICK DARTER

**Scientific Name:** *Etheostoma chuckwachatte* Mayden and Wood

**Other Commonly Used Names:** none

**Previously Used Scientific Names:** This species is in the subgenus *Nothonotus*, which has been elevated to generic status by some ichthyologists. Prior to formal description, this species was recognized as *Etheostoma jordani* (greenbreast darter).

**Family:** Percidae

**Rarity Ranks:** G2G3/S1S2

**State Legal Status:** Endangered

**Federal Legal Status:** none

**Description:** The lipstick darter is a small laterally compressed fish reaching a maximum length of about 60 mm standard length (2.4 in), with 8-9 square blotches on its back and 5-6 indistinct vertical bars located posteriorly along the sides. Adult males are distinguished by red-orange lips, large red-orange spots along the sides, and orange and blue-green coloration on the anal fin. On breeding males, the first dorsal fin is dusky and edged in orange, and the second dorsal fin has orange submarginal and blue marginal bands. The sides of females are brown and mottled and may be marked with faint vertical bars. Females may also have a thin red marginal band on the first dorsal fin and faint turquoise coloration on the breast.

**Similar Species:** The lipstick darter is a member of the greenbreast darter (*Etheostoma jordani*) species group, and is distinguished from other members of the group by the presence of red-orange lips, bright red spots along the flanks, a broad red band in the anal fin of adult males, and scales on the opercle. However, it does not co-occur with any other member of the greenbreast darter species group. Other darters sympatric with the lipstick darter include the Tallapoosa darter (*Etheostoma tallapoosae*), speckled darter (*E. stigmaeum*), Mobile logperch (*Percina kathae*), blackbanded darter (*P. nigrofasciata*), bronze darter (*P. palmaris*), and muscadine darter (*P. smithvanizi*). None of these are laterally compressed (both sexes and all age groups), and none have red-orange lips

and bright red spots along the flanks (males only).

**Habitat:** Lipstick darters inhabit riffles with swift currents in larger streams and rivers, where they commonly forage in and around gravel and cobble substrata. At low or moderate flow conditions, lipstick darters occur most abundantly in shallow riffles 12-36 cm deep (5-14 in), with fast currents (>36 cm/s) and cover provided by riverweed, cobbles or rock ledges. Its laterally compressed shape allows this small darter to maneuver and forage among rocks and crevices even in very swift currents.

**Diet:** Aquatic insect larvae picked from riverweed and rock surfaces.

**Life History:** Lipstick darters spawn in riffles from April through June, burying their eggs in sand and small gravel between riffle cobbles. Young of year first appear in June. Small young of year have also been collected in late summer, which suggests that the spawning season may extend later in the year than reported above. Length-frequency data indicate a lifespan of 2-3 years.

**Survey Recommendations:** Lipstick darters are vulnerable to seining and backpack electrofishing, especially in their preferred habitat of deep, swift riffles.

**Range:** The lipstick darter is endemic to the Tallapoosa River system above the Fall Line in Alabama and Georgia. Although the species commonly occurs in the main channel of the Tallapoosa River and its larger tributaries, the lipstick darter has not been found in the Little Tallapoosa River system. As a result, the species has a relatively restricted distribution in Georgia: the upper portion of the Tallapoosa River main channel and a few tributary streams. Check the [Fishes of Georgia Webpage](#) for a watershed-level distribution map.

**Threats:** Impoundments, particularly Harris Reservoir in Alabama, eliminate or alter the flow regime of approximately 40% of the lipstick darter's native range. Populations persist upstream and downstream of Harris Reservoir and in larger tributary streams. Construction of additional impoundments on the Tallapoosa River upstream from Harris Dam would further fragment populations in the main channel of the upper Tallapoosa River and would likely isolate populations in newly cut off tributaries. The occurrence of lipstick darters is positively associated with forest cover, suggesting vulnerability to future land use change associated with the westward expansion of metropolitan Atlanta. Finally, this species is vulnerable to impacts from sedimentation associated with land clearing and failure to follow best management practices. Excessive sediment deposition in riffles reduces habitat quality by filling in the spaces where lipstick darters forage, spawn, and find refuge during high flows.

**Georgia Conservation Status:** A recent study documented 25 (30% of surveyed sites) collections of the lipstick darter between 1991 and 2002 in the Georgia portion of the Tallapoosa River system, with most collections being from the mainstem Tallapoosa River and larger tributary streams. This same study found no evidence for decline when comparing 22 sites that were sampled with similar methods in 1990 and 2002.

**Conservation and Management Recommendations:** Conserving species unique to the Tallapoosa River system, such as the lipstick darter, depends on maintaining and improving

flowing-water habitats and water quality in the river and its tributaries. It is essential to eliminate sediment runoff from land-disturbing activities such as roadway and housing construction as well as inputs of contaminants such as fertilizers and pesticides. Forested buffers should be maintained or restored along the banks of the river and the smaller tributary streams that feed the river. Maintaining natural streamflow patterns by preventing excessive water withdrawal or unnaturally flashy runoff (such as from urban stormwater runoff) is also an essential element of protecting riverine habitat quality in the free-flowing and unregulated portions of the Tallapoosa River system. The lipstick darter and other fishes that similarly depend on riffle and run habitats are especially vulnerable to prolonged streamflow depletion, because habitats with swift currents are diminished at low flows.

### **Selected References:**

Boschung, H. T. and R. L. Mayden. 2004. *The Fishes of Alabama*. Smithsonian Institute, Washington,. 736 pp.

Freeman, M.C., Z.H. Bowen, K.D. Bovee, and E.R. Irwin. 2001. Flow and habitat effects on juvenile fish abundance in natural and altered flow regimes. *Ecological Applications* 11(1): 179-190.

Freeman, M.C., J.T. Peterson, E.R. Irwin, and B.J. Freeman. 2004. Distribution and status of at-risk aquatic taxa in the Upper Tallapoosa River System, Georgia and Alabama. Final Report to U.S. Fish and Wildlife Service.

Lee, S. L., C. R. Gilbert, C. H. Hocutt, R. E. Jenkins, D. E. McAllister, and J. R. Stauffer. 1980. *Atlas of North American fishes*. North Carolina State Mus. Nat. Hist. 867pp.

Mettee, M. F., P. E. O'Neil and J. M. Pierson. 1996. *Fishes of Alabama and the Mobile Basin*. Oxmoor House, Birmingham. 820pp.

Orr, J. W. 1989. Feeding behavior of the greenbreast darter, *Etheostoma jordani* (Percidae: Etheostomatini). *Copeia* 1989:202-206.

\_\_\_\_\_, and J. S. Ramsey. 1990. Reproduction in the greenbreast darter, *Etheostoma jordani* (Teleostei: Percidae). *Copeia* 1990: 100-107.

Page, L. M. and B. M. Burr. 1991. *A field guide to freshwater fishes of North America north of Mexico*. Houghton Mifflin, Boston. 432pp.

Wood, R. M. and R. L. Mayden. 1993. Systematics of the *Etheostoma jordani* species group (Teleostei: Percidae), with descriptions of three new species. *Bull. Alabama Mus. Nat. Hist.* 16: 31-46.

**Author of Account:** Byron J. Freeman and Gerald Dinkins.

### **Date Compiled or Updated:**

B. Freeman, 1999: original account.

K. Owers, Jan, 2009: updated status and ranks, added fish atlas link, converted to new format,

minor edits to text

G. Dinkins, Sept, 2009: general account revision.

B. Albanese, Dec, 2009: Added picture, re-checked all statuses, and incorporated species at risk report.

Z. Abouhamdan, April 2016: updated link