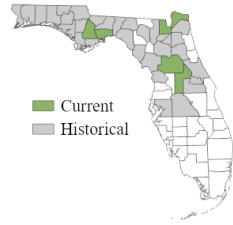


HOLBROOK'S SOUTHERN DUSKY SALAMANDER

Desmognathus auriculatus



Order: Caudata
Family: Plethodontidae
FNAI Ranks: G3/S1
U.S. Status: none
FL Status: none

Description: A medium-small (to 5 in. = 13 cm), dark, robust wetland salamander with hind legs larger than front, a diagonal patch below the eye (though it may be obscured by dark pigment), and a stout tail that is flattened posteriorly from side to side, hence blade-like. Body black to very dark brown, sometimes with a reddish overwash, and usually with a series of white to reddish spots on sides between legs and continuing onto tail; belly black, often with white to silvery speckling. Larva dark brown with lines of light dots on sides, and small red feathery gills.

Similar Species: All dusky salamanders (*Desmognathus*) share the large hind legs and diagonal patch beneath the eye. Compared to other Gulf Coastal Plain members of its genus, *D. auriculatus* is dark over its entire body, whereas the sides of other species (*D. apalachicola*, *D. conanti*, *D. monticola*) lighten toward the belly. The blade-like tail and black belly with light speckling are also diagnostic. *D. auriculatus* is intermediate in size between the larger *D. monticola* and smaller *D. apalachicola*. Juveniles are black dorsally, whereas in the other species brightly colored pairs of round- to diamond-shaped blotches characterize the dorsum of juveniles (and most females). Most other Florida salamanders are more colorful, have more equally sized legs, and lack diagonal facial patches. Although also mostly black, the slimy salamander (*Plethodon grobmani*) is covered with white flecks and lives in upland situations. Another mostly dark species, the mole salamander (*Ambystoma talpoideum*), has a short chunky body and very large head.

Habitat: Mucky areas around cypress heads and gum swamps, sphagnum bogs, swampy lakes, and other depressional basins, and swampy stream floodplains (including springs, seeps, steepheads, and ravine streams) under forest canopy. Environments usually acidic. Commonly found under wet leaf litter at the edge of

water, in mucky depressions, and under wet logs. Larvae aquatic, typically in seepage habitat.

Seasonal Occurrence: Present year-round. Lays eggs in fall (Sep-Oct), when the young also hatch (Oct-Dec). Larvae typically metamorphose in spring to early summer (Apr-Jul).

Florida Distribution: Restricted to isolated occurrences in a few counties of the Panhandle and northern peninsula. Formerly, the range included nearly all of the Panhandle and northern third of the peninsula, with the southernmost populations reaching the level of Tampa Bay. Based on roughly drawn polygons emulating the range map of Means et al. (2017; Fig. 5), the historic Florida range represented ca. 56% of the global range (ca. 83,000 sq. km vs. 148,000 sq. km). The range has contracted substantially in the last 50 years, with the apparent and largely unexplained extirpations of many populations (Means and Travis 2007, Means et al. 2017, Lips and Talley 2018).

Range-wide Distribution: Beyond Florida, the range extends throughout southern Georgia. Populations formerly occurred in southern Alabama just north of the Florida panhandle, but these appear to have been extirpated.

Conservation Status: The species is unquestionably in sharp decline, but for unknown reasons. Populations from throughout the range, most notably in peninsular and western panhandle Florida and adjacent Alabama, have disappeared since having been common prior to the mid-1970s. Although the best remaining population occurs on federal land in the Florida panhandle, such protection has not prevented the species' extirpation elsewhere.

Protection and Management: Besides listing the species as Threatened or Endangered and securing private lands that may support populations, it is crucial to determine and address the cause of disappearance of populations where habitat still remains, including at several protected sites. Mechanical disturbance from logging of swamp forest wetland habitat should be prevented. Forests should be maintained on upland slopes (ideally with native landcover) adjacent to stream systems to protect the latter from siltation and pollution, and drainage of wetlands should be eliminated. Feral hogs should be removed from within 10 km of all known sites; this will need to be repeated at regular intervals.

Holbrook's Southern Dusky Salamander

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References: Dodd 1998; Lips and Talley 2018; Means 1975, 2005; Means et al. 2017; Means and Travis 2007; Mount 1975.



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