

SGCN/Banded Sunfish/Swamp Darter Surveys (119008-28,31-33,35-36)
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Region 1 fisheries staff conducted surveys for banded sunfish (*Enneacanthus obesus*) and swamp darter (*Etheostoma fusiforme*) in 25 ponds in 26 surveys throughout 2019. Both species are listed as Species of Greatest Conservation Need (SGCN) in the NYS Comprehensive Wildlife Conservation Strategy (CWCS) and are currently only known to exist only within the Peconic River Drainage Area on Eastern Long Island. The 25 ponds surveyed are within the Peconic River Drainage Area, in Brookhaven Town. All the ponds surveyed and have had recent occurrences (since 2011) of one or both species. Habitat requirements are similar, and therefore surveys are conducted with both species as targets. The majority of ponds occur within protected lands such as Wildlife Management Areas, and are managed for hunting, bird viewing and fishing. Access to many of ponds is limited through trails maintained by the DEC. Ponds are typically bog-like, surrounded by pine barrens and mixed forests, tend to have high acidity, and may be subject to low dissolved oxygen and low water levels during drought periods.

Surveys are conducted with a 1/8 in mesh scap nets or a 4 x 10 ft 1/8 in mesh seine net. At each location different types of vegetated habitat types are sampled. All species are recorded, and target species (banded sunfish and swamp darter) are measured in mm. Dissolved oxygen, pH, water temperature, shoreline vegetation, submerged aquatic vegetation are recorded. In 2019, a total of 69 banded sunfish were caught in 13 of 25 surveyed ponds with an average length of 36.7 mm, 17 swamp darters were caught in two of the 25 ponds with an average length of 32 mm. Although swamp darters were found in only two ponds, it is likely that they are present in more. Seining is the most effective method for collecting swamp darter, dense vegetation encountered in most of the ponds makes it difficult to seine large portions of the pond. Table 1 shows a listing of ponds surveyed in 2019 and indicates whether banded sunfish or swamp darter were present or not observed.

Survey #	Waterbody Name	FIN #	Banded Sunfish	Swamp Darter
119017	Sweezy Pond	FB3-112-2-P5044	Present	Not Observed
119018	Woodhole Pond	FB3-112-2-P5827	Not Observed	Not Observed
119008	Swan Pond	FB3-112-5-P570	Present	Not Observed
119024	Sandy Pond	FB3-112-6-P575	Present	Present
119025	Block Pond	FB3-112-6-P575-1-P5033	Present	Not Observed
119021	Linus Pond	FB3-112-6-P576	Present	Not Observed
119027	Linus Pond	FB3-112-6-P576	Present	Not Observed
119026	Fox Pond	FB3-112-6-P576A	Present	Present
119033	Zeeks Pond	FB3-112-8-P592A	Not Observed	Not Observed
119028	Browns Bog	FB3-112-P565	Not Observed	Not Observed
119032	Donahues Pond	FB3-112-P565A	Not Observed	Not Observed
119031	Unnamed Water	FB3-112-P565C	Not Observed	Not Observed
119013	Grassy Pond	FB3-112-P600	Present	Not Observed



119012	Sandy Pond	FB3-112-P600A	Present	Not Observed
119015	Peasys Pond	FB3-112-P602	Present	Not Observed
119014	Jones Pond	FB3-P5029	Present	Not Observed
119036	Cedar Swamp Pond	FB3-P529	Not Observed	Not Observed
119035	Cheney Pond	FB3-P529A	Present	Not Observed
119010	Railroad Pond # 2	FB3-P5444	Not Observed	Not Observed
119009	Railroad Pond # 1	FB3-P5824	Not Observed	Not Observed
119011	Railroad Pond # 3	FB3-P5830	Not Observed	Not Observed
119020	Twin Pond West	FB3-P598	Present	Not Observed
119019	Twin Pond East	FB3-P598A	Present	Not Observed
119016	Round Pond	FB3-P602A	Not Observed	Not Observed
119022	Horn Pond	FB3-P603	Not Observed	Not Observed
119023	Little Horn Pond	FB3-P603A	Not Observed	Not Observed

Table 1- 2019 Banded Sunfish and Swamp Darter Surveys

In comparison to 2018, banded sunfish were caught in 8 of 29 ponds surveyed while swamp darters were caught in 2 of the 29 ponds. The most notable changes from 2018 to 2019 is the recolonization of banded sunfish in the western most chain of ponds within their known range (Survey #s 119012, 119013, 119014, 119015, 119019, and 119020). In 2018, this chain of ponds had waters levels return after 2016/2017 drought conditions, however, neither target species were caught or observed in those years. Additionally, Linus Pond had banded sunfish in 2019 for the first time since 1994. This pond was dry for most of those years and has since developed a shoreline almost completely dominated by phragmites.

Banded sunfish and swamp darter have been reported by the DEC to recover from drought conditions in past years (1990s) recolonizing connected ponds within the drainage area, therefore changes in their range are likely to be related to the water table levels. Further management recommendations should include identification of ponds that appear to have stable populations, high abundances, and are less likely to be affected by drought due to elevation. Additional threats include loss of preferred vegetative habitat by invasive plant species such as phragmites, competition with other species, and the introduction of non-native predators such as largemouth bass. Population monitoring of banded sunfish and swamp darter will continue in 2020.