

Brief Species Description:

The key silverside is a small diurnal species occurring in swift moving schools. It has a restricted distribution and is only found in the Florida Keys, from Key West to Long Key (Fig. 1). The key silverside is the smallest species of *Menidia*; its maximum size is about 2 inches (53 mm). It has fewer anal rays, branchial later-line scales (33-35), predorsal scales (12-14), and vertebrae (35-38) than other *Menidia* species. Males have slightly longer snouts and paired fins, and the dorsal and anal fin have a more anterior origin (Robbins 1969).

KEY INFORMATION

Areas of Concern

Western Atlantic: Florida Keys.

Year Identified as “Species of Concern”
1991

Factors for Decline

- Habitat destruction for development
- Introduced predators

Conservation Designations

IUCN: Near Threatened
American Fisheries Society: Threatened
Species of Greatest Conservation Need: FL

Florida considers key silversides members of the mangrove, [pelagic](#), and subtidal unconsolidated marine/estuary sediment habitats (Florida Fish and Wildlife Conservation Commission 2005). Their main habitat is tidal creek, lagoon, and pond waters of varying salinity (NatureServe 2006). Key silversides are commonly found in the rhizomes of black mangrove trees or in areas of turtlegrass and other macroalgae, where it is presumably less vulnerable to predation (Duggins et al. 1986). They move into shallower (< 5 inches or 10 cm), protected waters at night. Key silversides are tolerant to a wide range of salinities. They feed on copepods, cladocerans, mysids, isopods, amphipods, and insects (Duggins and Relyea undated, Getter 1981). Spawning is thought to occur in mid to late winter. They spawn by scattering eggs on the substratum. The eggs are attached with a single stalk connected to long filaments that extend from the bulk of each egg. Eggs are not guarded and average fecundity is 42 eggs (Getter 1981). Lifespan is thought to be less than 2 years. Based on electrophoretic data (Duggins et al. 1986), key silversides may be a subspecies of the tidewater silverside (*M. peninsulae*), though *M. conchorum* differs meristically from *M. peninsulae*.

Rationale for “Species of Concern” Listing:

Demographic and Genetic Diversity Concerns:

Loftus et al. (2002) found the species is still common in pools in which it had been collected over 20 years ago. However, some pools have been lost to development and habitat alteration, leading to overall population declines (Florida Fish and Wildlife Conservation Commission 2005). Seasonal fluctuation in population size is common (Getter 1981), as this is a short-lived species. The apparent rarity of this species may be due in part to inaccessibility of the habitat to routine collecting.



Key Silverside SOC Range

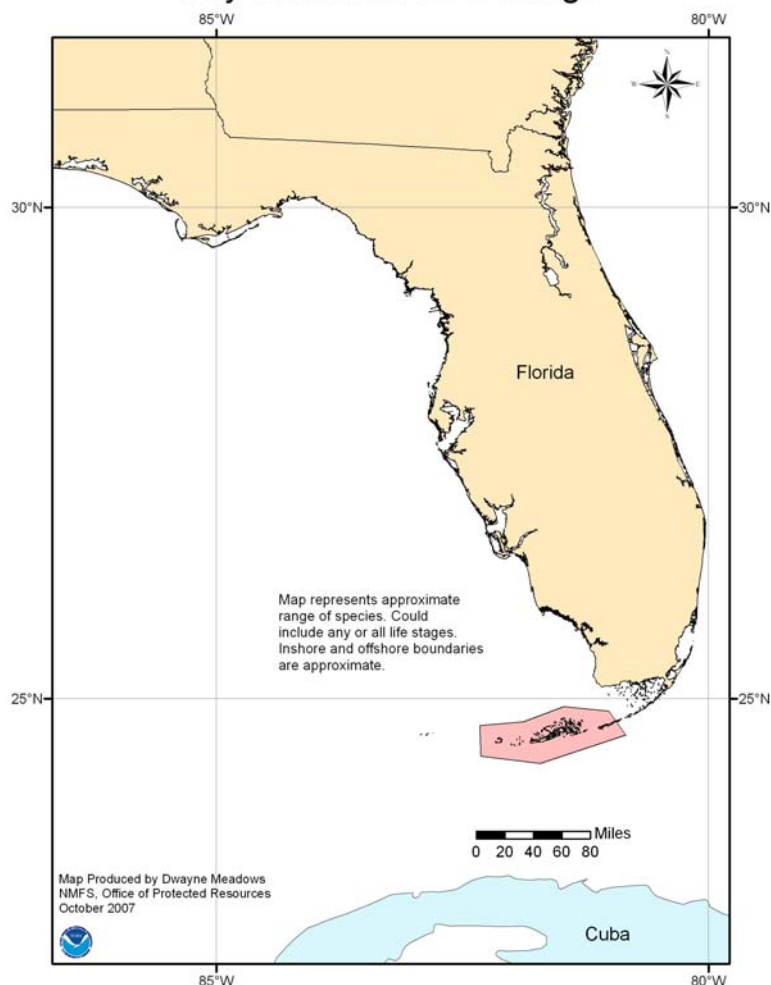


Figure 1. Map of Key silverside species of concern range.

Factors for Decline:

Habitat destruction for development has reduced available habitats through loss of a number of ponds and formerly occupied sites (Loftus et al. 2002) and loss of black mangrove habitats. Introduced bluegill apparently wiped out at least one population (Getter 1981).

Status Reviews/Research Underway:

Some recent work on the species has been undertaken by Dr. David Conover (SUNY Stony Brook) and associates.

Data Deficiencies:

Evaluation of population sizes throughout their range is essential to prioritizing conservation actions and will assist in identifying habitat characteristics associated with persistent populations. A long-term



Species of Concern

NOAA National Marine Fisheries Service

monitoring program should be established. Better knowledge of specific salt marsh microhabitat types is fundamental to the species conservation.

Existing Protections and Conservation Actions:

Listings by the IUCN, American Fisheries Society, and state of Florida, as well as by the NMFS Species of Concern program, identifying the species as in need of protection, have led to further conservation and research projects outside of regulatory restrictions.

References:

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- Duggins, C. Jr, and K. Relyea. Undated. Ecological notes on the key silverside, *Menidia conchorum*. Unpublished ms.
- Florida Fish and Wildlife Conservation Commission. 2005. Florida's Wildlife Legacy Initiative. Florida's Comprehensive Wildlife Conservation Strategy. Tallahassee, Florida.
- Getter, C. 1981. Ecology and survival of the key silverside, *Menidia conchorum*, an atherinid fish endemic to the Florida Keys. Ph.D. Dissertation, University of Miami.
- Loftus, W., D. Conover, S. Munch, and T. Langford Jr. 2002. Current status of the Key silverside, *Menidia conchorum*, in southern Florida. U. S. Geologic Survey. Project report at: http://fl.water.usgs.gov/cesi/lwf_currentstatus_proj.htm Cited 8 Dec 2006.
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- Robbins, T. 1969. A systematic study of the silversides *Membras* Bonaparte and *Menidia* (Linnaeus) (Atherinidae, Teleostei). Ph.D. Dissertation, Cornell University.

Point(s) of contact for questions or further information:

For further information on this Species of Concern, or on the Species of Concern Program in general, please contact NMFS, Office of Protected Resources, 1315 East West Highway, Silver Spring, MD 20910, (301) 713-1401, soc.list@noaa.gov; <http://www.nmfs.noaa.gov/pr/species/concern/>, or Jennifer Moore, NMFS, Southeast Region, Protected Resources Division, 263 13th Avenue South, St. Petersburg, FL 33701, (727) 824-5312, Jennifer.Moore@noaa.gov.