



Status: State Endangered

Global and State Rank: G5/S1

Family: Cyprinidae (Minnows)

Synonyms: The pugnose minnow is the only member of the genus *Opsopoeodus*. In recent years, it has been suggested that the pugnose minnow belongs in the genus *Notropis*, with *Opsopoeodus* as a monotypic subgenus. There are two recognized subspecies of the pugnose minnow. *O.e. peninsularis* occurs only in Florida, while *O.e. emiliae* occurs throughout the rest of the range (NatureServe, Page and Burr 1991).

Total Range: The pugnose minnow is found from the southern Great Lakes basin and upper Mississippi River valley to the Gulf of Mexico. This species is common in much of its range, particularly in the southeastern United States. However, at the northern edge of its range, the pugnose minnow is becoming rare. It is considered imperiled in Indiana, Illinois and Ontario (S2), and critically imperiled in Ohio and Michigan (S1) (NatureServe).

State Distribution: The pugnose minnow was historically found in southeastern Michigan, including tributaries and nearshore areas of Lake St. Clair and

Lake Erie. While museum records indicate that the pugnose minnow was present in the Huron River in Wayne County, a 1994 survey found no individuals. The only record in Michigan in the past 20 years was in the Detroit River near Grosse Isle.

Recognition: The pugnose minnow is a small silver minnow with a distinct black lateral band running from the tail through the eye to the upturned mouth. There are nine dorsal fin rays with faintly dark areas on the fin. The pugnose minnow is usually around two inches in length. It is most often confused with the pugnose shiner (*Notropis anogenus*). The pugnose shiner has eight dorsal fin rays and a caudal spot. The bluntnose minnow (*Pimephales notatus*), with which it may also be confused, also has eight dorsal fin rays (Becker 1983, Evers 1994).

Best Survey Time: It is easiest to survey for the pugnose minnow in the summer, during periods of low flow.

Habitat: The pugnose minnow occurs in rivers and shallow regions of lakes. It prefers slow, clear water and is found in greatest abundance in weedy areas. The pugnose minnow is found most often over sand or organic substrate. In several areas, including the Huron River, the pugnose minnow has been found in turbid



areas lacking submergent vegetation. It is assumed that these occurrences in submarginal conditions are the result of changing habitats and remnant fish populations (Trautman 1981).

Biology: Little is known about the life history of the pugnose minnow. In southern Wisconsin, the fish is thought to breed from at least mid-June to mid-July. Growth of young-of-year pugnose minnows is rapid. This species reaches two inches in length in two years (Becker 1983).

The nearly vertical orientation of the mouth of the pugnose minnow suggests that it is well adapted for feeding near the water surface. The few diet studies that have been performed support this theory. Pugnose minnows feed on a variety of aquatic invertebrates, including midge and black fly larvae, as well as microcrustaceans. Algae and plant fibers have also been found in the diet (Gilbert and Bailey 1972, Becker 1983).

Conservation/Management: While the pugnose minnow was never widely distributed in Michigan, it was reported to be common in the southeastern part of the state, near Lakes St. Clair and Erie. Increased siltation and the loss of weedy habitats due to extensive lake management activities have led to a significant decline in this species in Michigan.

Remaining populations need to be protected by insuring that the necessary habitat conditions are available. Improving water quality by limiting or stopping drainage, channelization and damming, and encouraging the natural growth of vegetation in shallow water areas may aid in the recovery of the pugnose minnow in Michigan.

Research Needs: The current range and distribution of the pugnose minnow in Michigan needs to be determined through extensive surveys of historical and potential sites. Life history data, specifically spawning behavior and nesting requirements, are also important for effective pugnose minnow management.

Selected References:

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