Plains Topminnow - Fundulus sciadicus

Abundance: Rare

Status: NSS3 (Bb) NatureServe: G4 S3

Population Status: Vulnerable due to limited distribution in native range. Distribution may be declining in native range (North Platte and South Platte drainages).

Limiting Factor: Habitat: severe due to limited availability of preferred shallow, backwater habitats.

Comment: NSS Ranks are reviewed and revised with each SWAP revision. No changes were made for this species in this revision.

Introduction

The distribution of the plains topminnow ranges from South Dakota to Oklahoma and from eastern Wyoming to western Iowa in the streams within the Great Plains region (Baxter and Stone 1995; Rahel and Thel 2004). In Wyoming, they are found in the North Platte, South Platte, Niobrara, and Cheyenne river drainages, but are considered introduced to the Cheyenne drainage (Baxter and Stone 1995; Rahel and Thel 2004). Little is known about the feeding habits of plains topminnow, but insects are probably an important component of their diet (Pflieger 1997). Spawning occurs in late spring and early summer, and eggs are deposited on aquatic plants or algae (Pflieger 1997). They may reproduce in the same areas of aquatic vegetation that they occupy throughout the year (Rahel and Thel 2004). Little is known about the life history of plains topminnow.

Habitat

The plains topminnow prefers shallow, slow water in clear streams with heavy vegetation (Rahel and Thel 2004) and sand or gravel substrate (Baxter and Stone 1995). They have also been collected in vegetation-filled sloughs and backwaters (Baxter and Stone 1995).

Problems

- Introductions of western mosquitofish (Gambusia affinis) have been implicated in the current restricted distribution of plains topminnow in Nebraska and may be affecting populations in Wyoming (Rahel and Thel 2004).
- The plains topminnow occupies habitats that are impacted by natural and anthropogenic dewatering.
- Altered flow regimes, habitat fragmentation, and impacts to aquatic and riparian habitat associated with agricultural practices.

Conservation Actions

- Continue efforts to maintain flows and connectivity.
- Continue efforts to educate landowners and the public about the importance of native fish and their habitats.

Monitoring/Research

Continue to identify and record observations while conducting fisheries management sampling.

Recent Developments

Prairie stream surveys were completed in 2004-2005 (Barrineau et al. 2007; Bear and Barrineau 2007) and 2008-2009 (McGree et al. 2010; Moan et al. 2010) to assess the distribution of this species in eastern Wyoming and to determine potential conservation actions.

The Laramie Region Fish Mangement Crew conducted surveys in 2012 at two sites (Interstate 25 Exit 70 Bordeaux Road Crossing and at Interstate 25 Exit 68) on Antelope Creek in Platte County. Twenty-four plains topminnow were captured at the Bordeaux site and but were not collected at the Exit 68 site. Plains topminnow were considered locally common and good habitat conditions were observed.

The Laramie Region Fish Management Crew sampled Lodegpole Creek upstream of Wyoming State Highway 213 in 2011 and 2012 for approximately nine miles. In 2011, plains topminnow were found at 9 of 16 sampling sites (Wyoming Game and Fish Department 2011). In 2012, surveys were conducted upstream of the 2011 surveys and were found at 7 of 9 sites (Wyoming Game and Fish Department 2012). Plains topminnow were considered locally rare within this segment, but when good habitat was observed, plains topminnow were found.

Intensive surveys were completed on Horse Creek, Lodgepole Creek, Laramie River, and Niobrara River in 2015 (Compton and Hogberg: In Draft). Plains topminnow were found at 9 of 40 sites on Horse Creek, 11 of 22 sites on Lodgepole Creek, 9 of 29 sites on the Laramie River, and at 3 of 8 sites on the Niobrara River. Like 2011 and 2012 surveys, when favorable habitat was observed, plains topminnow were found.

Western mosquitofish were collected at three sites on Horse Creek in 2015. This is the first time they have been docuemented in the North Platte drainage of Wyoming.

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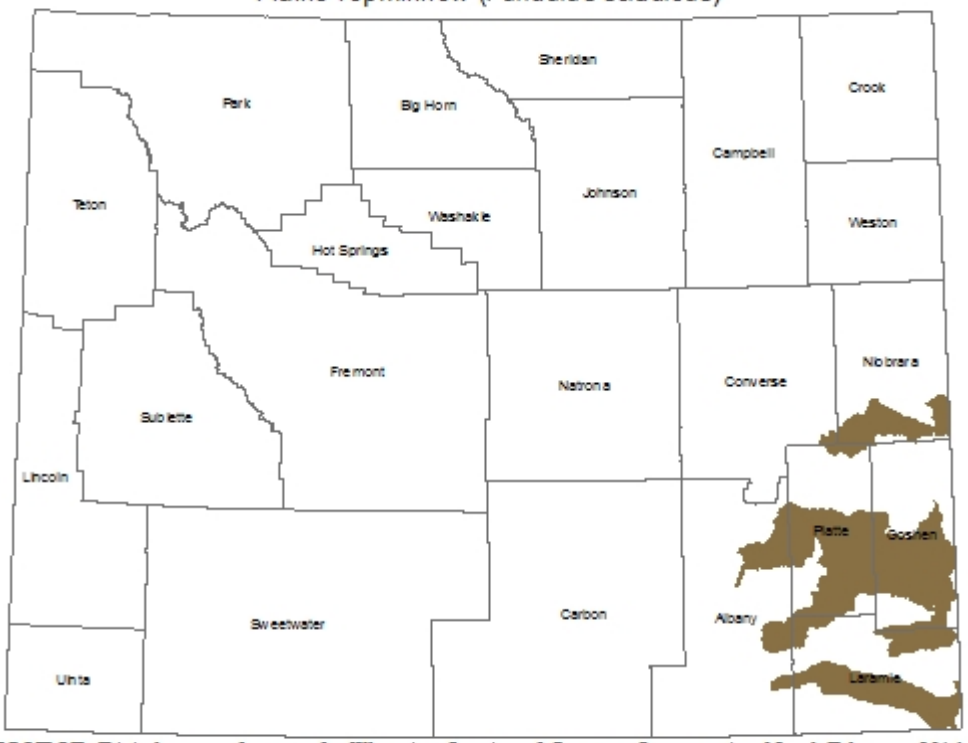
Plains Topminnow (*Fundulus sciadicus*)



SOURCE: Digital maps of ranges for Wyoming Species of Greatest Conservation Need: February 2016. Wyoming Game and Fish Department. Note that brown indicates the current known range of the species.