Common Shiner - Luxilus cornutus

Abundance: Common

Status: NSS4 (Bc) NatureServe: G5 S3S4

Population Status: Vulnerable due to limited distribution within Wyoming. Comparison of distribution surveys suggests a declining distribution.

Limiting Factor: Habitat: moderate. Habitat is vulnerable and increases in habitat loss are likely.

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

Introduction

Common shiner distribution extends across the eastern U.S. and Canada. In the U.S. they stretch from North Dakota eastward to Maine, south to Virginia, west to Wyoming. Populations in northern Colorado and Wyoming make up the southwestern edge of their distribution. In Wyoming, they are native to the North and South Platte drainages.

Common shiners most commonly feed in the open water, consuming aquatic and terrestrial insects and some fish (Pflieger 1997). Spawning usually occurs in slow riffles with gravel substrate when water temperature rises above 65 °F (Baxter and Stone 1995; Weitzel 2002). Males can excavate nests, but will commonly use the nests of creek chub or hornyhead chub. Males will aggressively defend the nest, thus providing benefit to any species of egg found in the nesting area. In Wyoming they were commonly found in association with creek chub and hornyhead chub (Moan et al. 2010).

Habitat

Common shiners are considered habitat generalists, but are said to prefer cool, clear streams with gravel substrates, little vegetation, and flowing water. They reside near pool – riffle complexes and become more dependent on pools as water levels decrease. In Wyoming they were found in a variety of habitats, usually at sites with clear water and gravel substrates present (Moan et al. 2010).

Problems

- Unfavorable land use and inefficient water management, particularly when combined with drought, can reduce the preferred habitat of common shiner through reduced flows, increased siltation, and increased aquatic vegetation.
- Altered flow regimes, habitat fragmentation, and impacts to aquatic and riparian habitat associated with agricultural practices.

Conservation Actions

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

Monitoring/Research

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

Recent Developments

Detailed fish and habitat surveys were conducted in tributaries to the North Platte River between 2005 and 2009 to establish a baseline for future trend analysis in the North Platte drainage (Gerrity 2009, Moan et al. 2010). In 2005 and 2007, the Casper Region Fish Management Crew conducted non-game fish surveys in the lower sections of the mainstem North Platte River (WGFD 2005, WGFD 2007). Common shiners are currently found throughout most of their historic distribution in the drainage.

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, common shiner were found at 12 of the 16 sampling sites (WGFD 2011). In 2012, surveys were conducted upstream of the 2011 surveys and were found at X of X sites (WGFD 2012). Common shiner were considered locally rare to common within this segment.

The Laramie Fish Management Crew conducted surveys on the lower Laramie River below Grayrocks Reservoir in 2012 and 2013. Nine common shiner were collected in 2012 and were considered locally rare at these sites (WGFD 2012). In 2013, the lower Laramie River was sampled within the Fort Laramie NHS boundary and three common shiners were collected (WGFD 2013).

From June 29, 2012 to August 5, 2012 the Arapaho Fire burned over 100,000 acres (153 square miles) in Albany, Platte and Converse counties. Streams impacted in the Laramie Region were the North Laramie River, Bear Creek, Friend Creek and Arapaho Creek. In addition to the direct effects of the fire, the chief concern for aquatics was the potential flooding and debris flows after storm events. Large debris flows and ash affected about 46 miles of the North Laramie River. Common Shiner were found in post-fire sampling in 2013 below the North Laramie Diversion, but not found in 2014 in the North Laramie River. Their recovery in the North Laramie River is as important as hornyhead chub and common shiner have important interspecies interactions that benefit both species.

Intensive surveys were completed on Horse Creek, Lodgepole Creek, and Laramie River in 2015 (Compton and Hogberg: In Draft). Common shiner were found at 29 of 40 sites on Horse Creek, 22 of 22 sites on Lodgepole Creek, and 19 of 29 sites on the Laramie River. 2014 and 2015 were wet years in southeast Wyoming and stream discharge over this period was average or above average. It is likely that river conditions were favorable for common shiner during this period, as common shiner were one of the most abundant species sampled and all life stages were observed.

References

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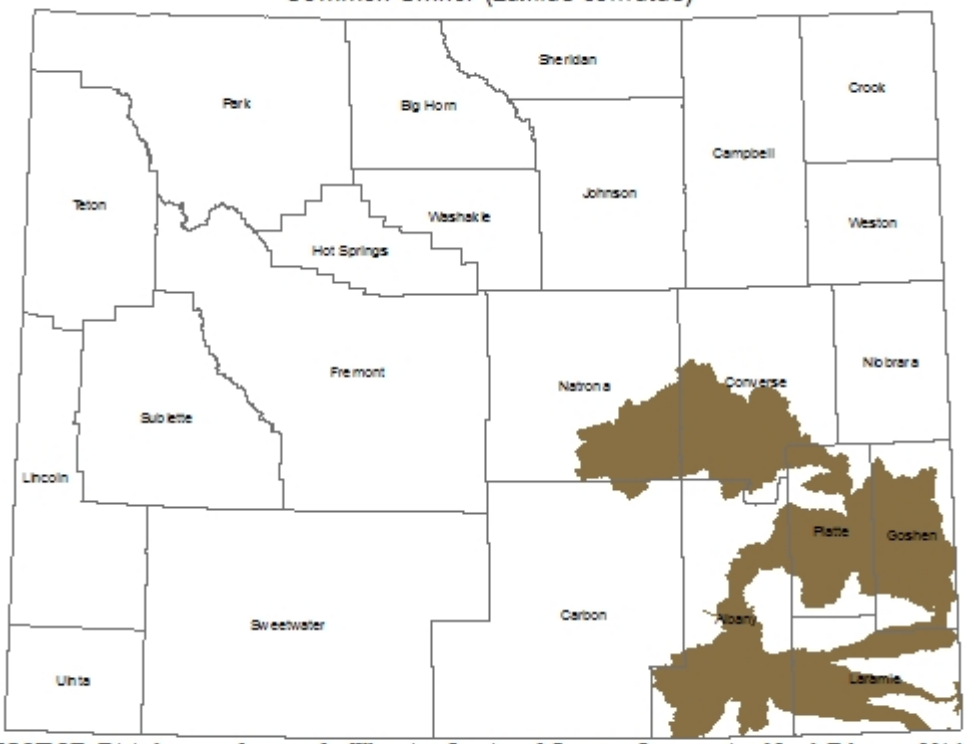
Common Shiner (*Luxilus cornutus*)



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.