

## Northern Pearl Dace - *Margariscus margarita*

Abundance: Extremely rare

Status: NSS2 (Ab)

NatureServe: G5 S1

Population Status: Imperiled because of greatly restricted distribution. Found only in Niobrara River drainage at very few locations.

Limiting Factor: Habitat: severe due to limited habitat in Wyoming.

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

### Introduction

The species was referred to as northern pearl minnow by Simon (1951) and northern pearl dace by Baxter and Simon (1970). Pearl dace are found across the northern United States and Canada with populations in the U.S. sporadically distributed along the Canadian border from Montana to Maine. Their distribution extends south to Nebraska (Cunningham 2006). The population in Wyoming is considered a glacial relict population and is found in the Niobrara River and Van Tassell Creek in the Niobrara River drainage (Moan et al. 2010).

Pearl dace are sight-feeding foragers, actively feeding on aquatic macroinvertebrates and zooplankton. They spawn when water temperatures are around 61 °F to 64 °F, generally mid April to mid May. Females spawn multiple times per year over cobble or gravel substrates. Males defend egg deposit sites, but no parental care is given.

In Wyoming pearl dace are found with brassy minnow, creek chub, fathead minnow, finescale dace, plains topminnow, central stonerollers and white suckers. When present, pearl dace commonly dominate species composition making up more than 70% of species collected (Bear and Barrineau 2007; Moan et al. 2010).

### Habitat

Pearl dace prefer slow moving, spring-fed streams with well-vegetated banks (Cunningham 2006). They are frequently found in cool clear headwater drainages, with deep pools and sand or gravel substrates. Pearl dace are most commonly found in the absence of large predatory fish (Cunningham 2006). In Wyoming pearl dace were collected at sites with clear, slow moving or stagnant water with depths greater than 1.5 feet, dense aquatic vegetation, and predominantly silt substrate (Moan et al. 2010).

### Problems

- h Introduced nonnative predators.
- h Restricted population, making them susceptible to extirpation from disease and habitat alterations.

### Conservation Actions

- h Investigate threats posed by Northern Pike present in the stream, and explore options for their suppression.
- h Investigate pearl dace behavior and habitat utilization within Wyoming.
- h Continue to exclude stocking of non-native fish in the mainstem Niobrara River.

### Monitoring/Research

Conduct annual or biannual, single event presence/absence sampling of pearl dace populations at the Nebraska border to facilitate the assessment of population trends. Co-occurring SGCN, including Finescale dace and Plains topminnow can be monitored concurrently.

Coordinate with Nebraska Game and Parks Commission and National Parks Service to monitor invasive species influence, especially northern pike, from Nebraska.

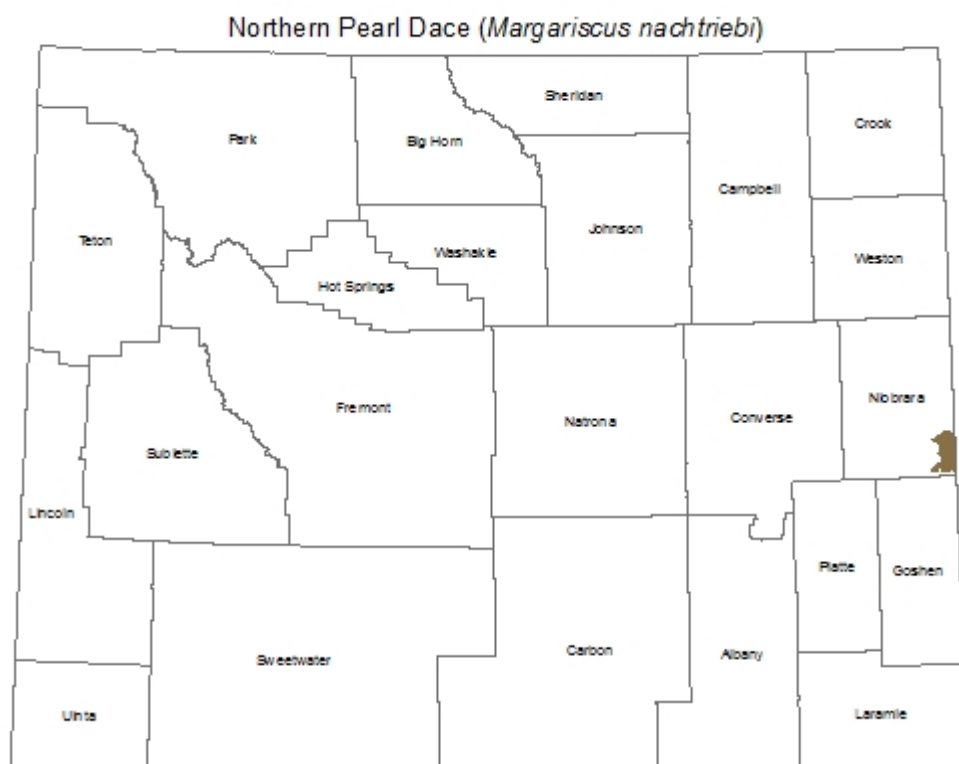
### Recent Developments

WGFD surveys were conducted on the Niobrara River in 2004 (Bear and Barrineau 2007) and 2008 (Moan et al. 2010) to develop a baseline understanding of the fish assemblage. Pearl dace have been found at similar sampling locations during each survey.

Pearl dace were found in large numbers during Niobrara River fish surveys in 2015 (Nick Hogberg, WGFD, unpublished data). They were particularly abundant in the marshy sections of the river near the state line.

#### References

- Baxter, G. T., and J. R. Simon. 1970. Wyoming Fishes. Wyoming Game and Fish Department, Cheyenne.
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- Bear, B., and C. Barrineau. 2007. Status of habitat and native fish in southeast Wyoming prairie streams. Wyoming Game and Fish Department Administrative Report, Cheyenne.
- Moan, C. A., M. M. McGree, and G. P. Edwards, Jr. 2011. Prairie stream conservation in southeast Wyoming. Wyoming Game and Fish Department Administrative Report, Cheyenne, WY.
- Cunningham, G.R. 2006. Pearl Dace (*Margariscus margarita*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region. Available: <http://www.fs.fed.us/r2/projects/scp/assessments/pearldace.pdf>.



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.