

Beavertail Fairy Shrimp - *Thamnocephalus platyurus*

Abundance: Unknown

Status: NSSU

NatureServe: G5 SNR

Population Status: Unknown

Limiting Factor: Unknown

Comment:

Introduction

Fairy shrimp are aquatic crustaceans in the class Branchipoda and order Anostraca. The beavertail fairy shrimp have translucent, elongate and delicate bodies (Dodson et al. 2010) that vary in color from white, gray, blue, green, orange or red depending on their diet (Maedamartinez et al. 1995). Their abdomen is broad and shaped like a paddle leading to their common name (Thorp and Rogers 2011). The species have 11 pairs of legs and lack a carapace. Individuals can grow up to 5.5 cm (2.2 inches) in length. Fairy shrimp swim upside-down and live in temporary aquatic habitats (rock pools, playas, roadside ditches, etc.) often with several other species of Branchipoda (Maeda-Martinez et al. 1997). They are distributed from Missouri to California and Montana to Texas (NatureServe 2016; Belk and Brtek 1995). Oklahoma ranked the fairy shrimp as apparently secure but this invertebrates is not ranked in other states (NatureServe 2016). Across their range, the beavertail fairy shrimp is ranked as secure. Fairy shrimp are typically filter feeders and can develop from egg to adult in 6 to 45 days depending on the temperature of the water and other conditions (Dodson et al. 2010). Beavertail fairy shrimp can survive in water up to 40°C (Hillyard and Vinegar 1972). Generally, these fairy shrimp complete one generation and produce resting eggs during the time that a temporary habitat is inundated with water (Dodson et al. 2010). The eggs of many species requires diapause before hatching. Temperature, daylight length, dissolved oxygen concentration and salinity may trigger encysted eggs to release from dormancy. Eggs can be produced parthenogenetically or sexually. The cysts of fairy shrimp are easily crushed, especially when they are wet (Hathaway et al. 1996). Minimizing off road vehicle and foot traffic on playas and other temporary aquatic habitats during the dry and wet season would reduce the risk of crushing fairy shrimp cysts.

Habitat

Beavertail fairy shrimp can live in temporary wetlands such as rock pools, vernal pools, seasonal wetlands, alpine pools and alkali lakes.

Problems

- h A lack of basic knowledge of the species, their distributions and ecology precludes status assessments in Wyoming.

Conservation Actions

- h More records are needed to accurately assess the species' status.

Monitoring/Research

The Wyoming Game and Fish Department and the Wyoming Natural Diversity Database have collected specimens of fairy shrimp since 2010 to estimate the distribution of beavertail fairy shrimp in Wyoming.

Recent Developments

The Wyoming Game and Fish Department and the Wyoming Natural Diversity Database collected beavertail fairy shrimp from 9 locations in Wyoming during 2013.

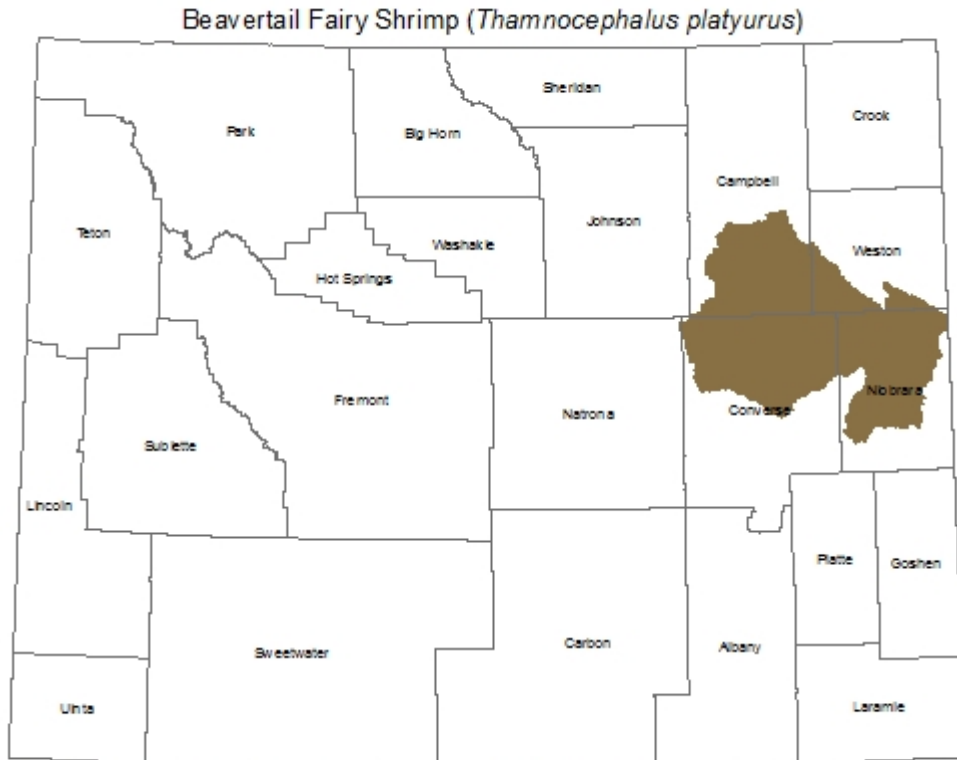
References

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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.