

Constricted Fairy Shrimp - *Branchinecta constricta*

Abundance: Unknown

Status: NSSU

NatureServe: G2 S4

Population Status:

Limiting Factor:

Comment:

Introduction

Fairy shrimp are aquatic crustaceans in the class Branchipoda and order Anostraca. The constricted fairy shrimp has a translucent, elongate, delicate body (Dodson et al. 2010). The species have 11 pairs of legs and lack a carapace. Individuals can grow up to 1.6 cm (0.6 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). *Branchinecta constricta* is known from 3 counties in Wyoming and two counties in Idaho (NatureServe 2016; Rogers 2006; Rogers and Hill 2013). The fairy shrimp has a state rank of apparently secure in Wyoming and a range-wide rank of critically imperiled (NatureServe 2016). 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). Generally, 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 vehicles and foot traffic in temporary aquatic habitats during the dry and wet season would reduce the risk of crushing fairy shrimp cysts.

Habitat

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 these species.

Recent Developments

The constricted fairy shrimp was described in 2006 based on individuals collected in the 1980s and 1990s and thought to be endemic to Wyoming (Rogers 2006). Rogers and Hill (2013) recently discovered constricted fairy shrimp in Idaho. The Wyoming Game and Fish Department and the Wyoming Natural Diversity Database collected fairy shrimp from across Wyoming since 2010 and did not find the constricted fairy shrimp.

References

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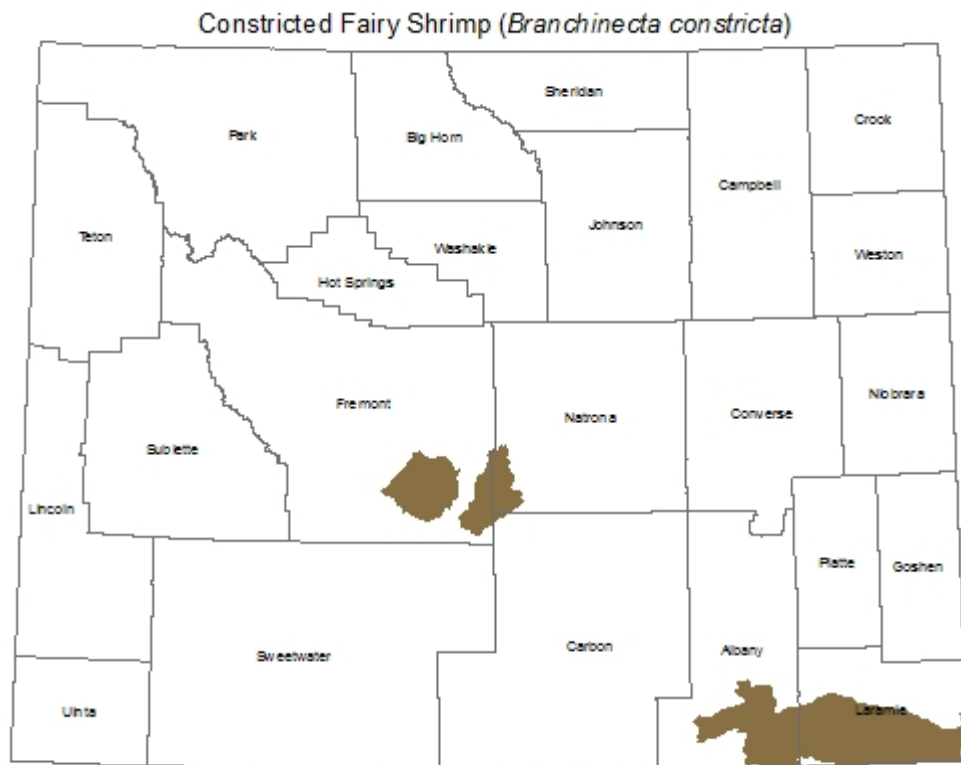
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Rogers, D. C. and M. A. Hill. 2013. Annotated checklist of the large branchipod crustaceans of Idaho, Oregon and Washington, USA, with the "rediscovery" of a new species of Branchinecta (Anostraca: Branchinectidae). Zootaxa 3694:249-261.



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.