Desert Springsnail (*Pyrgulopsis deserta*)

Species Status Statement.

Distribution

The currently understood distribution of this freshwater snail is six springs in Washington County, Utah and two springs in Mohave County, Arizona (Hershler and Landye 1988). The only collections of this species were from 1973 and 1977 (Hershler and Landye 1988).

Table 1. Utah counties currently occupied by this species.

Desert Springsnail
WASHINGTON

Abundance and Trends

Abundance information for this species is not available.

Statement of Habitat Needs and Threats to the Species.

Habitat Needs

Snails in the genus *Pyrgulopsis* are usually associated with rheocrenes (a rheocrene is a spring that emerges from the ground as a flowing spring), aquatic vegetation and hard surfaces (Hershler 1998). Specific habitat descriptions for the springs in Utah and Arizona where this species occurs are not available (Hershler and Landye 1988; Oliver and Bosworth 1999).

Threats to the Species

The restricted distribution of this species in Utah makes its populations susceptible to catastrophic natural events, as well as human intervention. Growth in Washington County, Utah, poses many potential threats to desert springsnail (Oliver and Bosworth 1999). Increased water demands, whether in the form of groundwater pumping or surface water diversion, could degrade or destroy habitat. Housing development, stormwater runoff, and other urban-related threats could also degrade spring habitat and water quality in the springs. Introduced non-native species could also compete for resources with desert springsnail, and threaten its persistence in Utah.

Table 2. Summary of a Utah threat assessment and prioritization completed in 2014. This assessment applies to the species' entire distribution within Utah. For species that also occur elsewhere, this assessment applies only to the portion of their distribution within Utah. The full threat assessment provides more information including lower-ranked threats, crucial data gaps, methods, and definitions (UDWR 2015; Salafsky et al. 2008).

Desert Springsnail
High
Channelization / Bank Alteration (direct, intentional)
Housing and Urban Areas
Small Isolated Populations
Spring Development / Capping
Stormwater Runoff
Medium
Agricultural / Municipal / Industrial Water Usage
Groundwater Pumping
Invasive Wildlife Species - Non-native

Rationale for Designation.

Desert springsnail lives in only six springs in Utah and two nearby in Arizona, which makes it susceptible to catastrophic events and human activities. In order to maintain understanding of the distribution and status of this species in Utah, managers need to conduct occasional surveys, and monitor potential threats. These activities will help prevent the possibility of Endangered Species Act listing of this species. Desert springsnail is included in the Conservation Agreement for Springsnails in Nevada and Utah (Springsnail Conservation Team 2017).

Economic Impacts of Sensitive Species Designation.

Sensitive species designation is intended to facilitate management of this species, which is required to prevent Endangered Species Act listing and lessen related economic impacts. The listing of desert springsnail would impact management and development of water resources within Washington County. There would also be increased costs of regulatory compliance for many land-use decisions and mitigation costs. Housing development and management of stormwater runoff could also be impacted.

Literature Cited.

Hershler, R. and J.J. Landye. 1988. Arizona Hydrobiidae (Prosobranchia: Rissoacea). Smithsonian Contributions to Zoology, number 459:1-63.

Oliver, G.V. and W.R. Bosworth. 1999. Rare, imperiled, and recently extinct or extirpated mollusks of Utah: a literature review. Report to the Utah Division of Wildlife Resources, Publication Number 99-29. Salt Lake City, Utah, USA.

Salafsky, N., D. Salzer, A.J. Stattersfield, C. Hilton-Taylor, R. Neugarten, S.H.M. Butchart, B. Collen, N. Cox, L.L. Master, S. O'Connor, and D. Wilkie. 2008. A standard lexicon for biodiversity conservation: unified classifications of threats and actions. Conservation Biology 22: 897–911.

Springsnail Conservation Team. 2017. Conservation Agreement for Springsnails in Nevada and Utah. Nevada Division of Wildlife and Utah Division of Wildlife Resources agreement. 13 pp plus signatory pages.

Utah Division of Wildlife Resources [UDWR]. 2015. Utah Wildlife Action Plan: A plan for managing native wildlife species and their habitats to help prevent listings under the Endangered Species Act 2015-2025. Publication Number 15-14, 385 pp.