Desert Tryonia (*Tryonia porrecta*)

Species Status Statement.

Distribution

This is a mainly parthenogenic, relatively large-bodied freshwater snail native to the interior southwestern United States and adjacent Mexico. The currently understood distribution of the desert tryonia includes California, Nevada, Arizona, and Utah. All known Utah localities are in north-central and west-central Utah, including:

- Juab County - Fish Springs, Middle Springs and North Spring (Russell 1971);
- Tooele County - Iosepa, Blue Lake, Salt Spring, Little Salt Spring Horseshoe Springs, and Warm Springs (Hovingh 2018);
- Utah County - Saratoga Springs (Oliver and Bosworth 1999).

Table 1. Utah counties currently occupied by this species.

Desert Tryonia
JUAB
TOOELE
UTAH

Abundance and Trends

Information is limited in this regard. The population trend of desert tryonia is unknown. While there appears to be no quantitative information on abundance of this species, it has been described variously as “rare” (Chamberlin and Jones 1929) or “scarce” (Hershler 1995) at several locations where it has been found.

Statement of Habitat Needs and Threats to the Species.

Habitat Needs

Generally, desert tryonia is found in springs and spring outflows. At four locations where it has been found, three were in limnocrenes (groundwater springs emerging into pools) and one was a rheocrene (a spring flowing out of the ground into one or more channels). Elevations at these sites ranged from 4,320 to 4,500 feet. Water temperatures were warm, ranging from 72 to 82 degrees F. Conductivities were high to extremely high, measuring 3,100, 9,300, 9,500, and 34,800 umhos/cm (Oliver and Bosworth 1999).

Threats to the Species

Some potential threats listed at sites where this species lives include recreational activities, livestock damage and habitat alteration (Oliver and Bosworth 1999). Ongoing groundwater development may pose a threat as well to the springs where this species occurs.

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 Tryonia
No Identified Threats - Data Gaps Only

Rationale for Designation.

Compared to other native snails in the springs where it lives, this species occurs in relatively low abundance. Its occurrence in restricted locations at a limited number of sites makes it vulnerable to natural catastrophes as well as human activities. Direct human pressures, and climate change, presently threaten many springs and spring systems in Utah, and managers and scientists expect these issues to intensify. In order to improve understanding of the distribution and status of this species in Utah, managers need to conduct occasional surveys, and monitor and manage potential threats. Desert tryonia is included in the Conservation Agreement for Springsnails in Nevada and Utah (Springsnail Conservation Team 2017). These activities will help prevent the possibility of Endangered Species Act listing of this species.

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. An ESA listing of desert tryonia would have unknown economic impacts for Tooele, Utah, and Juab counties. Designated Sensitive Species with no identified threats, only data gaps, will be researched until concerns are allayed, or specific threats are identified for management. In the absence of specific threats to manage, generic measures to protect springs are recommended.

Literature Cited.

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