

## Longitudinal Gland Pyrg (*Pyrgulopsis anguina*)

### Species Status Statement.

#### Distribution

This freshwater snail is endemic to Snake Valley on the Utah–Nevada border, where it occurs in only two springs (Hershler 1995, 1998). One of the two springs is located in northwestern Millard County, Utah. The other spring is nearby, in White Pine County, Nevada.

Table 1. Utah counties currently occupied by this species.

Longitudinal Gland Pyrg
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#### Abundance and Trends

Hershler (1995) reported this species to be common within the limited area in which it occurs. The Utah Division of Wildlife Resources (UDWR) surveyed the Utah site in 2009, 2012 and 2016 (Wheeler and Fridell 2009; Wheeler 2012, 2016).

In 2009 and 2012, three 100 cm<sup>2</sup> plots were sampled.

- In 2009 an estimated 644 snails per 100 cm<sup>2</sup> were collected 4 meters from the springhead.
- In 2012, using the same methods the corresponding estimate was 602 snails per 100 cm<sup>2</sup>.

During the 2016 survey, 106 snails were collected three meters from the springhead. No density estimate was calculated, as the area from which the snails were collected is unknown (Wheeler 2016).

### 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). Hershler (1995) described longitudinal gland pyrg habitat as two warm, flowing springs with intermediate conductivity. During UDWR surveys at the Utah site in 2009 and 2012, density of longitudinal gland pyrg was highly tied to aquatic plants (*Chara* and watercress; Wheeler and Fridell 2009; Wheeler 2012). While the highest measured densities of longitudinal

gland pyrg have been located closest to the springhead, individuals have been detected at distances up to 76 m from the springhead (Wheeler and Fridell 2009; Wheeler 2012, 2016).

### Threats to the Species

The limited distribution of this snail makes the Utah population susceptible to any catastrophic natural events that could destroy or degrade the spring habitat where it lives. The population is equally susceptible to human alteration of the habitat. The spring in Utah has been modified; it flows from an artificial structure, and it is mostly diverted to an irrigation ditch, which reduces available habitat to the longitudinal gland pyrg (Hershler 1995; Jones and Wilson 2009). A similar but much less reversible potential threat is groundwater pumping, either to supply water to distant cities or to local agriculture.

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).

<b>Longitudinal Gland Pyrg</b>
<b>High</b>
Droughts
Groundwater Pumping
Small Isolated Populations

### **Rationale for Designation.**

Longitudinal gland pyrg lives in only two springs, one in Utah and the other nearby in Nevada. Although it is abundant in the Utah spring, its exceptionally limited distribution makes it susceptible to threats – whether natural or human-caused - related to loss of water. 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. This species will be undergoing a formal Species Status Assessment in early 2020 to determine whether this species needs protection under the U.S. Endangered Species Act, and it 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. An ESA listing of longitudinal gland pyrg would impact management and development of water

resources within Snake Valley in Millard County. There would also be increased costs of regulatory compliance for many land-use decisions and mitigation costs.

### **Literature Cited.**

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