

Sub-globose Snake Pyrg (*Pyrgulopsis saxatilis*)**Species Status Statement.**Distribution

Sub-globose Snake pyrg is a springsnail endemic to Gandy Warm Spring of Snake Valley, Millard County, Utah, near the Nevada state line (Hershler 1995). The Bureau of Land Management manages Gandy Warm Spring.

Table 1. Utah counties currently occupied by this species.

<b>Sub-globose Snake Pyrg</b>
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Abundance and Trends

Quantitative assessments of abundance for this species are limited; therefore, the status of this species is currently unclear. Golden et al. (2007) visited Gandy Warm Spring in 2005. They found sub-globose Snake pyrg to be common near the springhead, and that it occurred at least 250 meters downstream. Utah Division of Wildlife Resources (UDWR) personnel visited the site in 2009, and found the springsnail to be common in the spring pool (Jones and Wilson 2009). UDWR surveys conducted in 2012 documented Sub-globose Snake pyrg ranging 1,120 meters downstream of the springhead (Wheeler 2012). Surveyors examined 100 cm<sup>2</sup> plots at distances of 52 meters, 549 meters, and 1,065 meters downstream of the spring pool. These three plots had springsnail densities of 60, 23, and one springsnail, respectively (Wheeler 2012).

**Statement of Habitat Needs and Threats to the Species.**Habitat Needs

Springsnails are dependent on persistent springs with high water quality, and they often occur within a limited distance from the springhead (Hershler 1998).

Threats to the Species

The limited distribution of this snail makes the species susceptible to any catastrophic natural events, or human actions, that could destroy or degrade the spring habitat where it lives. Small, isolated seeps, springs, or spring complexes are very susceptible to small-scale habitat destruction or modifications that alter the springhead or flow. Potential threats include factors that decrease flow regionally such as prolonged drought or groundwater pumping. There are also potential local threats to individual springs such as wildfire, nonnative plants and animals,

ungulate trampling and grazing, herbicide use, spring outflow alteration, and diversion of spring discharge. Specific threats for sub-globose Snake pyrg may include red-rimmed melania (*Melanoides tuberculatus*), a non-native snail species found at this site (Wheeler 2012). Jones and Wilson (2009) speculate that habitat partitioning may limit this species' negative impacts on sub-globose Snake pyrg, but this needs investigation. Recreational use of this site as a local swimming hole, with associated damming of outflows to increase pool size, appears to have minimal impact on the species (Jones and Wilson 2009).

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>Sub-globose Snake Pyrg</b>
<b>Very High</b>
Small Isolated Populations
<b>High</b>
Invasive Wildlife Species - Non-native
<b>Medium</b>
Invasive Plant Species – Non-native

### **Rationale for Designation.**

Sub-globose Snake pyrg is restricted to a small, isolated spring system. 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 develop a better understanding of the 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.

### **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 sub-globose Snake pyrg would impact management and development of water resources in the Snake Valley region 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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