Lindahl’s Pyrg (Pyrgulopsis lindahlae)

**Species Status Statement.**

**Distribution**

The currently understood distribution of Lindahl’s pyrg is the Grapevine Spring complex adjacent to the Left Fork of North Creek within Zion National Park in Washington County, Utah (Hershler et al. 2017). This spring complex is within the walls of the canyon of the Left Fork, and flows into the Left Fork of North Creek.

**Table 1. Utah counties currently occupied by this species.**

<table>
<thead>
<tr>
<th>Santa Clara Pyrg</th>
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</thead>
<tbody>
<tr>
<td>WASHINGTON</td>
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</tbody>
</table>

**Abundance and Trends**

Robert Hershler described this recently discovered species in 2017 (Hershler et al. 2017). Peter Hovingh and UDWR personnel collected 11 specimens from the site in 2014. No one has yet completed any surveys to evaluate abundance or trends.

**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, and flash floods. Managers have not yet conducted a species-specific threat assessment for Lindahl's pyrg, but the spring complex occurs within Zion National Park, in designated wilderness, so intentional anthropogenic impacts are likely minimal. There may currently be some impacts from recreation, as the Left Fork of North Creek is a very popular canyoneering destination (containing, e.g., The Subway). A permit system limits the number of daily users.
Table 2. Summary of a statewide-scale threat assessment and prioritization completed in 2013 (Utah WAP 2015; Salafsky et al. 2008). Note that these threat rankings do not apply at the scale of local populations; a threat ranked medium at the overall, statewide level may be the most important threat to a local population. The threat assessment provides more information not presented here, including lower ranked threats, crucial data gaps, and definitions for all the threats and data gaps.

<table>
<thead>
<tr>
<th>Threat (all taxa)</th>
<th>Economic &amp; Social Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Santa Clara Pyrg</td>
<td>No Identified Threats - Data Gaps Only</td>
</tr>
</tbody>
</table>

Rationale for Designation.

Lyndahl’s pyrg appears to be 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 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.

Economic Impacts of Sensitive Species Designation.

Table 3. Brief description of the threat as it presents to all wildlife and habitats statewide. Includes some discussion of sources, potential ways to engage those sources to manage the threat, and some risks and opportunities of engagement.

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<th>Economic &amp; Social Assessment</th>
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</thead>
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<tr>
<td>Data Gaps Only</td>
<td>For the purposes of this socio-economic assessment, data gaps are of no consequence therefore they are not discussed. 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 wildlife (e.g., avoid destroying nests or spawning areas, disturbing colonies, etc.) are recommended.</td>
</tr>
</tbody>
</table>

Literature Cited.


Hershler, R., H.-P. Liu, C. Forsythe, P. Hovingh, and K. Wheeler. 2017. Partial revision of the *Pyrgulopsis kolobensis* complex (Caenogastropoda: Hydrobiidae), with resurrection of *P.*
