Jackson Lake Springsnail - Pyrgulopsis robusta

Abundance: Unknown

Status: NSS2 (Ba)

Population Status: Unknown

NatureServe: G5 S2

Limiting Factor: The invasive New Zealand mudsnail outcompete native Jackson Lake springsnails in Polecat Creek, Wyoming.

Comment: NSS4 (Bc) to NSS2 (Ba)

Introduction

The Jackson Lake springsnail (Pyrgulopsis robusta) is an aquatic snail in the family Hydrobiidae. These snails have a gill and operculum, and their dextral (opening to the right) shell has an elongate spiral. The length of an individual can reach 6.3 mm (0.25 in; Hershler 1994). The Jackson Lake springsnail is known from Washington, Oregon, Idaho and Wyoming (Hershler and Liu 2004; NatureServe 2016). The snail is considered critically imperiled in Oregon and Idaho, imperiled in Wyoming and not ranked in Washington (NatureServe 2016). The Jackson Lake springsnail scrapes algae, microbes, fungi and detritus from solid substrates in aquatic habitats (Lysne et al. 2007). These snails may reproduce throughout the year, but peak reproduction likely occurs in summer. The average life span of an individual is between 11 and 14 months. In Wyoming, individual length does not exceed 5 mm (0.2 in). Jackson Lake springsnails are currently known from two sites in Wyoming, Polecat Creek and Marmot Spring in the Snake River drainage of Grand Teton and Yellowstone National Parks (Riley et al. 2008). The Jackson Lake springsnail was once considered common in Jackson Lake, Grand Teton National Park, but is now thought extirpated from this location, possibly as a result of the dam and shoreline modifications made to improve water storage (USFWS 2006, NatureServe 2016).

Habitat

Jackson Lake springsnails can live in lakes, reservoirs, streams and springs under a wide range of temperatures (Lysne et al. 2007). These snails can survive in habitats with sand, gravel or cobble substrates.

Problems

h The taxonomy of Oreohelix is questionable and is in need of revision.

Conservation Actions

h Concerns over the effects of habitat disturbance, such as logging, forest thinning, fire and grazing in association with the limited dispersal ability of land snails (Anderson 2005).

Monitoring/Research

None by the Wyoming Game and Fish Department.

Recent Developments

This species was considered recently extirpated from Jackson Lake (USFWS 2006).

This snail now has a wider distribution since found synonymous with three other previously distinct species (USFWS 2006).

References

Anderson, T. 2005. Oreohelix strigosa cooperi (Cooper's Rocky Mountain Snail): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region. Available:

http://www.fs.fed.us/r2/projects/scp/assessments/coopersrockymountainsnail.pdf [January 14, 2010].

Speiser, B. 2001. Food and feeding behavior. Pages 259-288 in G. M. Barker, editor. The Biology of Terrestrial Molluscs. CABI Publishing, New York.

Anderson, T. 2010. Oreohelicids (Oreohelix snail species) in the Bighorn National Forest. Report prepared for the Bighorn National Forest.

NatureServe. 2016. NatureServe Explorer: An online encyclopedia of life [web application] Version 7.1. NatureServe, Arlington, Virginia. Available http://www.natureserve.org/explorer. (Accessed: January 20,2016).

Pilsbry, H. A. 1939. Land Mollusca of North America: North of Mexico. Academy of Natural Science Monograph 3 edition. George W. Carpenter Fund for the Encouragement of Original Scientific Research, Philadelphia, PA.

Anderson, T. K., K. F. Weaver, and R. P. Guralnicki. 2007. Variation in adult shell morphology and life-history traits in the land snail Oreohelix cooperi in relation to biotic and abiotic factors. Journal of Molluscan Studies 73:129-137.



Jackson Lake Springsnail (Pyrgulopsis robusta)

SOURCE: Digital maps of ranges for Wyoming Species of Greatest Conservation Need: February 2016. Wyoming Game and Fish Department. Note that brown indicates the current known range of the species.

2017