Mountain Snails - Oreohelix sp.

Abundance: Unknown

Status: NSSU

NatureServe: G5 SNR

Population Status:

Limiting Factor:

Comment:

Introduction

Mountain snails, genus Oreohelix, are land snails in the order Stylommatophora. Mountain snails typically have depressed, heliciform shells with an umbilicus and 4 to 6 whors (Pilsbry 1939). Shell diameter varies between 0.7 and 2.1 cm (0.3 to 0.8 inches). Mountain snails are located in western North America from Saskatchewan and British Columbia to Mexico and California to South Dakota (Pilsbry 1939). Nearly 91% of mountain snail species and subspecies are considered critically imperiled or imperiled (G1/T1 or G2/T2) by NatureServe (2009). In fact, a few species and subspecies have been petitioned for listing under the Endangered Species Act. Mountain snails eat leaf litter, detritus, and microorganisms growing on surfaces, such as rocks, logs, or soil (Speiser 2001). Little is known about the life history of mountain snails, including how long these snails live, and how often they reproduce. Mountain snails are live bearers, meaning they raise their young within their shell until the young reach a certain size. Seven species of mountain snails are recorded from the state: O. carinifera, O. pilsbryi, O. pygmaea, O. strigosa, O. subrudis, O. yavapai, and O. swopei (NatureServe 2009). Several subspecies have also been collected in Wyoming, including O. strigosa berryi, O. strigosa cooperi, O. strigosa spp. 1, O. strigosa spp. 2, O. yavapai magnicornu, O. yavapai extremitatis, O. pygmaea maculate, O. strigosa depressa, and O. subrudis obscura. Of these snails, O. pygmaea is endemic to the Bighorn Mountains of Wyoming, O. yavapai occurs in Wyoming and 5 other western states, and O. carinifera is located in one area of Montana and possibly the Bighorn Mountains and Shoshone National Forest of Wyoming. O. strigosa and O. subrudis are thought to be widespread throughout the mountains of Wyoming.

Habitat

Mountainsnails live in the mountains in areas with canopy cover and leaf or needle litter. Mountainsnails are generally found in moist, cool areas such as north facing slopes or near streams.

Problems

- Lack of basic information on the species present, their distribution, and ecology in Wyoming
- The taxonomy of species within the genus Oreohelix is in question

Conservation Actions

- Concerns over the effects of habitat disturbance, such as logging, forest thinning, and grazing in association with the limited disbursal ability of land snails.
- The unknown affects of climate change on the distribution of Oreohelix.

Monitoring/Research

Tronstad (unpublished data) has an on-going study of Oreohelix in the Snowy Mountains of Wyoming and individuals in her study have lived for four years. Tronstad et al. (2014) collected snails from four areas of Grand Teton National Park and identified them as Oreohelix subrudis. Additionally, snails collected from the Tensleep and Heart Mountain Preserves were identified as O. subrudis (Tronstad et al. 2011).

Recent Developments

Molecular and morphological work on Oreohelix strigosa cooperi in the Black Hills of Wyoming and South Dakota came to two conclusion using different techniques (Weaver et al. 2006; Chak 2007). Chak (2007) found that Oreohelix in the Bear Lodge Mountains were different than those in the Black Hills, whereas Weaver’s et al. (2006) evidence suggested that Oreohelix in the Bear Lodge Mountains and the Black Hills were the same species. Anderson (2010) suggested that Oreohelix pygmaea and Oreohelix strigosa cooperi are the same species because of little genetic difference.
References


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SOURCE: Digital maps of ranges for Wyoming Species of Greatest Conservation Need: April 2010. Wyoming Game and Fish Department. A range map is unavailable for the taxa because distribution and ecology are poorly known in Wyoming.