

San Bernardino Springsnail
Pyrgulopsis bernardina

STATUS: Candidate (72 FR 69034, December 6, 2007)

SPECIES DESCRIPTION: The San Bernardino springsnail is an aquatic springsnail of the family Hydrobiidae. It has a narrow-conic shell, height 1.3 to 1.7 mm, and 3.25 to 4.0 whorls with an operculum ovate and light amber. This species is distinguished from other forms by its smaller ventral gland (sexual organ).

HABITAT: Hydrobiid snails occur in springs, seeps, marshes, spring pools, outflows, and diverse lotic waters. The most common habitat for *Pyrgulopsis* is a rheocrene, or a spring, emerging from the ground as a free flowing stream. In the arid southwest, these spring-fed aquatic climax communities are commonly described as cienegas. Firm substrate such as cobble, gravel, woody debris, and aquatic vegetation are essential for egg-laying and feeding.

RANGE: The historical range of the species is believed to have included eight springs along the headwaters of the Rio Yaqui. One spring is located on the San Bernardino National Wildlife Refuge (Tule Spring), five springs are located on the John Slaughter Ranch (Snail Spring, Goat Spring, and unnamed springs), and two unnamed springs are located in Sonora, Mexico. The species is currently limited in distribution in the U.S. to one spring, Snail Spring, on the Slaughter Ranch in Cochise County. The species is believed to be doing well in at least one site in Sonora, a 50-acre cienega just across the border.

REASONS FOR DECLINE/VULNERABILITY: Loss of natural rheocrene habitat due to water depletion, springhead modification, use of pesticides on nearby landscaping; and known susceptibility to catastrophic events and stochastic extinction due to geographic isolation and endemism. For the past few years Snail Spring has only been partially wet.

LAND MANAGEMENT/OWNERSHIP: The John Slaughter Ranch (private), and land in Sonora, Mexico (private).

NOTES: Intensive surveys are needed to confirm the continued existence of the species in the United States. Detailed information on the San Bernardino springsnail can be found in the Species Assessment Form posted on the U.S. Fish and Wildlife Service Environmental Conservation Online System at http://ecos.fws.gov/docs/candforms_pdf/r2/G05E_I01.pdf.

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