

CANDIDATE AND LISTING PRIORITY ASSIGNMENT FORM

SCIENTIFIC NAME: *Pyrgulopsis thompsoni*

COMMON NAME: Huachuca springsnail

LEAD REGION: Region 2

INFORMATION CURRENT AS OF: Feb. 2003

STATUS/ACTION (Check all that apply):

New candidate

Continuing candidate

Non-petitioned

Petitioned - Date petition received: \_\_\_\_

90-day positive - FR date: \_\_\_\_

12-month warranted but precluded - FR date: \_\_\_\_

Is the petition requesting a reclassification of a listed species?

Listing priority change

Former LP: \_\_

New LP: \_\_

Candidate removal: Former LP: \_\_\_\_ (Check only one reason)

A - Taxon more abundant or widespread than previously believed or not subject to a degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status.

F - Range is no longer a U.S. territory.

M - Taxon mistakenly included in past notice of review.

N - Taxon may not meet the Act's definition of a species. @

X - Taxon believed to be extinct.

ANIMAL/PLANT GROUP AND FAMILY: Gastropoda, Hydrobiidae

HISTORICAL STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Arizona; Sonora, Mexico

CURRENT STATES/TERRITORIES/COUNTRIES OF OCCURRENCE: Arizona, Cochise and Santa Cruz Counties; Sonora, Mexico

LEAD REGION CONTACT (Name, phone number): Susan Jacobsen (505) 248-6641

LEAD FIELD OFFICE CONTACT (Office, name, phone number):

Arizona Field Office, Phoenix, Mike Martinez, (602) 242-0210 ext. 224

BIOLOGICAL INFORMATION (Describe habitat, historic vs. current range, historic vs. current

population estimates (# populations, #individuals/population), etc.):

The species inhabits 13 springs and cienegas at 4,500 to 7,200 feet elevation in southeastern Arizona (11 sites) and adjacent portions of Sonora, Mexico (2 sites). This species was described by Taylor (1987). Habitats of the snail are typically marshy areas characterized by various aquatic and emergent plant species that occur within plains grassland, oak and pine-oak woodlands, and coniferous forest vegetation communities. The species is typically found in the shallower areas of springs or cienegas, often in rocky seeps at the spring source.

THREATS (Describe threats in terms of the five factors in section 4 of the ESA providing specific, substantive information. **If this is a removal of a species from candidate status or a change in listing priority, explain reasons for change**):

A. The present or threatened destruction, modification, or curtailment of its habitat or range.

The historical distribution of the species is unknown, as it was first collected in 1969. However, loss of cienegas during the last century in southeastern Arizona is well-documented, and it is likely that the species occurred at many more than 13 localities in the past. Causes of cienega loss are debated, but probably include overgrazing, timber harvest, altered fire regimes, drought, and mining. After cienegas and watersheds were degraded by these activities, severe storms and periods of high precipitation caused erosion and sedimentation, accelerating loss of cienegas and riparian areas.

Many of the sites at which the springsnail occurs are developed springs where flows have been altered by dams, springboxes, and diversions. The effects of these alterations on the springsnail are difficult to assess because predevelopment conditions are unknown. Fuel loads are abnormally high in the Huachuca Mountains, where fire regimes have been altered from one of frequent ground fires to infrequent catastrophic crown fires. Loss of cover, and subsequent erosion and sedimentation following a catastrophic fire could result in loss of habitat and extirpation of one or more of the seven populations in the Huachuca Mountains. Grazing can result in trampling and denuding of vegetation in the shallow waters of cienegas where the springsnail occurs, but grazing has been excluded from most springsnail localities. Development and associated groundwater pumping threatens populations in the Sonoita Creek basin.

B. Overutilization for commercial, recreational, scientific, or educational purposes.

Not a known threat.

C. Disease or predation.

Not a known threat for the Huachuca springsnail, though other species are known to serve as the intermediate hosts for a variety of trematodes (parasitic flatworms) and as a prey item for non-native fish and crayfish.

D. The inadequacy of existing regulatory mechanisms.

Existing regulatory mechanisms are not adequate to address threats such as fire and environmental catastrophe. The species is afforded some protection by occurring with or near other listed species (Huachuca water umbel, Sonora tiger salamander, Mexican spotted owl) at some localities.

The Huachuca springsnail is protected by the State under Commission Order 42 which establishes a closed season for the species. This order prohibits direct take and collection of Huachuca springsnails but does not prevent habitat modification or destruction.

E. Other natural or manmade factors affecting its continued existence.

All populations of Huachuca springsnail are limited to very small sites that are often many miles apart. Extirpation of a population could occur as a result of major storms, drought, fire, or other forms of environmental variability. Because populations are isolated, once extirpated, sites are unlikely to be recolonized without active management. Small populations are also subject to genetic deterioration and demographic variability, which increases the likelihood of extinction.

BRIEF SUMMARY OF REASONS FOR REMOVAL OR LISTING PRIORITY CHANGE: N/A

FOR RECYCLED PETITIONS: N/A

- a. Is listing still warranted?
- b. To date, has publication of a proposal to list been precluded by other higher priority listing actions?
- c. Is a proposal to list the species as threatened or endangered in preparation?
- d. If the answer to c. above is no, provide an explanation of why the action is still precluded.

LAND OWNERSHIP (Estimate proportion Federal/state/local government/private, identify non-private owners):

USA: Federal: 55%, private: 45%; Mexico: private: 100%.

PRELISTING (Describe status of conservation agreements or other conservation activities):

The Service began development of a conservation agreement with the Federal landowner (Fort Huachuca) in 1995, but discussions were not fruitful, and private landowners need to be included for a viable agreement that would protect the species. A prelisting notification letter was sent out to experts, interested persons, and potentially affected parties in November 1998. Fort Huachuca personnel are currently working to compile baseline information and assess the need for a candidate conservation agreement.

REFERENCES (Identify primary sources of information (e.g., status reports, petitions, journal publications, unpublished data from species experts) using formal citation format):

Bequaert, J.C. and W.B. Miller. 1973. The mollusks of the arid southwest. The University of Arizona Press, Tucson, Arizona, pp 213-214.

Hershler R., and J.J. Landye, 1988. Arizona Hydrobiidae (Prosobranchia: Rissoacea).  
 Smithsonian Contributions to Zoology. Number 459. 63 pp.

Landye, J. Undated field notes. Huachuca springsnail populations located on the Fort Huachuca  
 Army Post. Fish and Wildlife Service, Pinetop, Arizona.

LISTING PRIORITY (place \* after number)

THREAT
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Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/population	3
	Non-imminent	Monotypic genus	4
		Species	5 *
		Subspecies/population	6
Moderate to Low	Imminent	Monotypic genus	7
		Species	8
		Subspecies/population	9
	Non-imminent	Monotypic genus	10
		Species	11
		Subspecies/population	12

**Rationale for listing priority number:**

*Magnitude:* Most of the springs in which the species is found have been modified or subjected to some form of adverse management action. Habitats continue to be vulnerable to fire and grazing.

*Imminence:* We are currently in discussions with the State and Department of Defense regarding the development of conservation agreement for the species. Therefore, we believe the potential for extinction is non-imminent.

APPROVAL/CONCURRENCE: Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes to the candidate list, including listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all additions of species to the candidate list, removal of candidates, and listing priority changes.

Approve: Tom Bauer March 14,  
Acting Regional Director, Fish and Wildlife Service 2003  
Date

Concur: \_\_\_\_\_  
Director, Fish and Wildlife Service Date

Do not concur: \_\_\_\_\_  
Director, Fish and Wildlife Service Date

Director's Remarks: \_\_\_\_\_

Date of annual review: Feb. 2003

Conducted by: Mike Martinez

Comments: \_\_\_\_\_