



Questions and Answers: Final Rule to List the Three Forks Springsnail and the San Bernardino Springsnail With Critical Habitat

Arizona Ecological Services Field Office

www.fws.gov/southwest/es/arizona/

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Q: What are the Three Forks springsnail and the San Bernardino springsnail?

A: Both the Three Forks springsnail (*Pyrgulopsis trivialis*) and the San Bernardino springsnail (*Pyrgulopsis bernardina*) are members of the snail family Hydrobiidae (Gastropoda). Three Forks springsnail is a variably sized species, with a shell height 1.5 to 4.8 mm. The San Bernardino springsnail is a species with a narrow-conic shell height 1.3 to 1.7 mm.

Q: What is the Service's listing determination for these species?

A: Both springsnail species have been added to the list of animals protected under the Endangered Species Act – the Three Forks springsnail as an endangered species and the San Bernardino springsnail as a threatened species. New information received since the April 12, 2011, proposal to list the San Bernardino springsnail as endangered confirmed that springsnails at five sites in Sonora, Mexico, are San Bernardino springsnails, indicating the species is more widely distributed than previously believed. This led the Service to list the San Bernardino springsnail as threatened. The listing includes the designation of critical habitat for each species. The listing and critical habitat designation become effective on May 17, 2012.

Q: Where has critical habitat been designated for these species?

A: For the Three Forks springsnail, critical habitat designation was initially proposed for 11.1 acres encompassing Three Forks Springs and Boneyard Bog Spring. However, new information led the Service to increase the size of Boneyard Bog Springs Unit to 5.3 acres and add the Boneyard Creek Unit for a total of 17.1 acres of designated critical habitat. These spring complexes are in the North Fork East Fork Black River Watershed of the White Mountains in Apache County, east-central Arizona.

For the San Bernardino springsnail, critical habitat is designated on 1.21 acres (three units at Snail Spring, Goat Tank Spring and Horse Spring) on the John Slaughter Ranch, Cochise County, Arizona, and 0.8 acres on San Bernardino National Wildlife Refuge. No critical habitat is designated for the San Bernardino springsnail sites in Mexico, as the Service does not designate critical habitat in foreign countries.

Q: What is critical habitat?

A: Critical habitat is a term in the Act that identifies geographic areas containing features essential for the conservation of a threatened or endangered species, and which may require special

management considerations or protection. Designation of critical habitat does not affect land ownership, establish a refuge or preserve and has no impact on private landowners taking actions on their land that do not require federal funding or permits. Federal agencies that undertake, fund or permit activities that may affect critical habitat are required to consult with the Service to ensure such actions do not adversely modify or destroy designated critical habitat.

When specifying an area as critical habitat, the Act requires the Service to consider economic impacts, the impact to national security, and other relevant impacts of the designation. If the benefits of excluding an area outweigh the benefits of designating it, the Secretary of Interior may exclude an area from critical habitat, unless the exclusions would result in the extinction of a threatened or endangered species. The Service has prepared a draft economic analysis of the proposed critical habitat and is seeking comments on it.

Q: What do the terms “endangered” and “threatened” mean?

A: Under the Endangered Species Act (ESA), the U.S. Fish and Wildlife Service is responsible for identifying species of plants and animals that may be threatened or endangered with extinction. An ‘endangered’ species is one that is in danger of extinction throughout all or a significant portion of its range. A ‘threatened’ species is one that is likely to become endangered in the foreseeable future.

Endangered animal species are given protection under Section 9 of the Endangered Species Act, which prohibits killing, harming or otherwise "taking" a listed species without authorization in the form of a permit from the Service.

The Service treats threatened animal species similarly to endangered species with regard to prohibitions on take and requirements for consultation by federal agencies. However, the ESA provides management flexibility for threatened species that is not allowed for endangered species. The Service sometimes makes exceptions to the take rule for threatened species (for example, to allow some traditional land-use activities to continue), and is able to issue take permits to allow more activities that affect threatened species than would be permitted for endangered species.

Q: What prompted the Service to make this determination at this time?

A: We first identified Three Forks springsnail as a candidate for listing in the October 30, 2001, Review of Plant and Animal Species That Are Candidates or Proposed for Listing as Endangered or Threatened, Annual Notice of Findings on Recycled Petitions, and Annual Description of Progress on Listing Actions (66 FR 54808). We first identified San Bernardino springsnail as a candidate for listing in the December 6, 2007, Review of Native Species That Are Candidates for Listing as Endangered or Threatened; Annual Notice of Findings on Resubmitted Petitions; Annual Description of Progress on Listing Actions (72 FR 69034).

On May 4, 2004, the Center for Biological Diversity petitioned the Service to list 225 species of plants and animals as endangered under the provisions of the ESA, including Three Forks springsnail. On June 25, 2007, we received a petition from Forest Guardians to list 475 species in the southwest United States as threatened or endangered under the provisions of the ESA, including San Bernardino springsnail. In our Notice of Review, dated December 6, 2007, we retained candidate status for Three Forks springsnail and assigned candidate status to San Bernardino springsnail, but determined that publication of a proposed rule to list these species was precluded by work on higher priority listing actions. We are now finalizing the rulemaking process for both species.

Q: Where are these snails found?

A: The Three Forks springsnail was historically distributed in three two separate spring complexes, Three Forks springs (T5N, R29E), Boneyard Bog springs, and Boneyard Creek springs (both T6N, R29E) in the North Fork East Fork Black River Watershed of the White Mountains in Apache County, east-central Arizona. These spring complexes are found in open mountain meadows at elevations of approximately 8,200 feet (2,500 meters), separated by about 3.7 miles (6 kilometers) of perennial flowing stream. The Three Forks springsnail has been known from free-flowing springheads, concrete boxed springheads, spring runs, and spring seepage.

The historical range of the San Bernardino springsnail in the U.S. may have included several populations along the headwaters of the Rio Yaqui, but the species has only been confirmed from three springs (Snail Spring, Goat Tank Spring, and Horse Spring) on the John Slaughter Ranch, Cochise County, Arizona. New information received since the proposal was published shows that springsnail populations in Sonora, Mexico, are San Bernardino springsnails, indicating the species is more widely distributed than previously believed.

Q: What is the natural history of these snails?

A: In the arid southwest, snails of the family Hydrobiidae are largely relicts of the Pleistocene, and are typically distributed across the landscape as geographically isolated populations. Springsnails are strictly aquatic and respiration occurs through an internal gill. These snails are egg-layers and upon hatching, tiny snails crawl out into their adult habitat.

Springsnails graze primarily on periphyton (algae). The life span for most aquatic snails is usually 9 to 15 months. Natural predators include waterfowl, shorebirds, amphibians, fishes, crayfish, leeches, and aquatic insects. Aquatic snails are known to serve as intermediate hosts for a variety of parasites, particularly trematodes. The most common habitat for *Pyrgulopsis* is a “rheocene” – a spring emerging from the ground to form a free-flowing stream.

Q: What are the threats to these snails?

A: The primary threats to the Three Forks springsnail include wildfire, exposure to fire retardant drift, habitat degradation related to elk wallowing and predation by nonnative crayfish. The primary threats to the San Bernardino springsnail include potential habitat loss from groundwater depletion, springhead inundation, and drought.

Q: Are there efforts underway to conserve these snails?

A: We are currently working with the Arizona Game and Fish Department and the Phoenix Zoo to maintain a captive propagation program for the Three Forks springsnail. The Arizona Game and Fish Department also conducts crayfish trapping at Three Forks springs to reduce predatory pressure. We have restored a spring on the San Bernardino National Wildlife Refuge for the potential translocation of San Bernardino springsnails.

Q: How can the public participate in conservation of these snails?

A: The public can initiate or participate in on-going projects to 1) control the spread of nonnative species such as crayfish and New Zealand mudsnail; and 2) protect the integrity of spring ecosystems harboring these species. Owners of land that support spring ecosystems within the same watersheds can allow surveys and implement conservation actions if springsnails occur on their land. The Service’s Partners in Fish and Wildlife Program (602/242-0210 x250) can provide technical and financial assistance.

Q: Where can I get more information?

A: The Service's determination will publish in the *Federal Register* on April 17, 2012, and become effective on May 17, 2012. Relevant documents are available at:

<http://www.fws.gov/southwest/es/arizona/> or by request from the Field Supervisor, U.S. Fish and Wildlife Service, 2321 W. Royal Palm Rd., Suite 103, Phoenix, AZ 85021-4951; phone 602/242-0210 or fax 602/242-2513.