



U.S. Fish & Wildlife Service

QUESTIONS AND ANSWERS: 12-MONTH FINDING ON TWO SPRINGSNAIL PETITIONS AND A PROPOSED RULE TO DELIST THE IDAHO SPRINGSNAIL

What is being announced?

The U.S. Fish and Wildlife Service has accepted new scientific findings that four groups of freshwater springsnails living in Idaho, Oregon, Washington and Wyoming are actually one species. The agency has determined that the new species does not require the protection of the Endangered Species Act (ESA), and therefore will not be placed on the Federal List of Threatened and Endangered Species.

One of the four groups of springsnails, formerly identified as the Idaho springsnail and listed as endangered under the ESA, has been proposed for removal from the list of threatened and endangered species.

What four groups of springsnails are being classified as one species?

The four groups of springsnails are the Idaho springsnail (*Pyrgulopsis idahoensis*), the Jackson Lake springsnail (*Pyrgulopsis robusta*), the Harney Lake springsnail (*Pyrgulopsis hendersoni*), and the Columbia springsnail (*Pyrgulopsis sp. A*). All four are considered one species, *Pyrgulopsis robusta*.



Idaho springsnail

On what basis did the Fish and Wildlife Service come to this determination?

The Service reviewed the best available scientific and commercial information. Past, present, and future threats faced by the newly combined species were studied, leading to the determination that listing is not warranted because the species is neither in danger of extinction presently (definition of “endangered” under the ESA) nor likely to become endangered in the foreseeable future (definition of “threatened” under the ESA). Delisting the Idaho springsnail was warranted on the grounds that the Idaho springsnail is considered a member of the species *Pyrgulopsis robusta*.

Why did the Service conduct a status review of the Idaho springsnail and three other springsnails that occur in Wyoming, Oregon, and Washington?

The ESA requires that if a petition to list or delist a species contains substantial scientific and commercial information suggesting the action may be warranted, the agency must make a finding within 12 months of receiving the petition. On June 28, 2004 the Service received a petition from the Idaho Governor’s Office of Species Conservation and the Idaho Power Company requesting that the Idaho springsnail be delisted based on a recent taxonomic revision of the species. On August 5, 2004, a second petition was received from Dr. Peter Bowler, the Biodiversity Conservation Alliance, the Center for Biological Diversity, the Center for Native Ecosystems, the Western Watersheds Project, and the Xerces Society, requesting that the Jackson Lake, Harney Lake, and Columbia springsnails be listed as either threatened or endangered under the ESA. This listing petition cited habitat loss and degradation from spring development, domestic livestock grazing, and groundwater withdrawal, among other factors, as threats to the continued existence of these three northwestern springsnails. The listing



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petition also cited the taxonomic revision and acknowledged that the Jackson Lake, Harney Lake, Columbia Idaho springsnails may be one species (*i.e. Pyrgulopsis robusta*) but contended that whether assessed individually or as one species all four springsnails deserved the protection of the ESA. On April 20, 2005, the agency determined that both petitions contained substantial information suggesting that delisting the Idaho springsnail or listing all four species may be warranted and initiated a 12-month status review of the springsnail group.

What is a status review?

A status review is a comprehensive review of the best scientific and commercial information concerning a particular species. It includes a narrative discussion of the species' biology and ecology, distribution and status, threats to the species continued existence, and an analysis of existing regulatory mechanisms (termed a "five factor analysis" in the Endangered Species Act). The review includes information from a wide range of concerned publics and is subject to independent scientific review.

What information did the Service use to make this recommendation?

The Endangered Species Act requires the agency to consider the best scientific and commercial data available as well as efforts being made by states or other entities to protect a species when making a listing determination. To meet this standard, agency staff systematically collected all the available information on the Idaho, Jackson Lake, Harney Lake, and Columbia springsnails, their habitats, and factors affecting the species from a wide array of sources. The scientific literature on these springsnails is relatively scarce, but the agency received a substantial amount of unpublished information from other Federal agencies, States, universities, private industry, and individuals. The agency compiled all this data and information into a single document, called a draft "Best Available Information," or BAI document.

How did the Service arrive at this recommendation?

The Fish and Wildlife Service is committed to using sound science and the best available information, and to the continued use of "peer review" for influential documents. As part of the structured process for this status review, 12 scientific peer-reviewed comments were submitted on the draft BAI document for springsnails. The general public also reviewed and commented on the draft BAI. The revised draft BAI document was then reviewed by an expert panel of six researchers, scientists and managers with extensive applicable expertise. After the document was updated, this same expert panel met and discussed all the available information on new combined species, *Pyrgulopsis robusta*. The discussion included factors affecting the species and the potential for it to become extinct at some point in the future. During this two-day meeting, a panel of Fish and Wildlife Service managers was present and interacted with the experts. Afterwards, the Fish and Wildlife Service managers met for two additional days to further discuss the BAI, the expert panel's discussions, as well as public and peer review comments, new information, and the regulatory and policy framework. The managers then provided a recommendation on the appropriate status of the species.



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Who served on the expert panel?

The panel consisted of experts in snail biology and ecology, community ecology, population ecology, stream ecology, aquatic ecotoxicology, and water quality. Panelists were drawn from around the country and included Joseph Bidwell, Oklahoma State University, Stillwater, Oklahoma; Gregory Clark, United States Geological Survey, Boise, Idaho; Stephanie Clark, University of Alabama, Tuscaloosa, Alabama; Robert Dillon, College of Charleston, Charleston, South Carolina; Billie Kerans, Montana State University, Bozeman, Montana; and Leslie Riley, Washington State University, Pullman, Washington.

Has the Service used a similar structured decision process for other species?

Yes. The Service previously used risk analysis through structured solicitation of expert opinion to respond to petitions to list the Alexander Archipelago wolf (*Canis lupus ligoni*) and Queen Charlotte goshawk (*Accipiter gentiles laingi*) in Southeast Alaska and to complete a risk analysis for the eastern massasauga rattlesnake (*Sistrurus catenatus catenatus*), slickspot peppergrass, (*Lepidium papilliferum*) and greater sage-grouse (*Centrarchus urophasianus*). Both the National Marine Fisheries Service and U.S. Forest Service have used similar expert panel processes to conduct species extinction risk or viability analyses for many years.

What is *Pyrgulopsis robusta* and where does it live?

Pyrgulopsis robusta is a small (4-6mm) freshwater snail species. Today the species is distributed in the northwestern states of Idaho, Oregon, Washington, and Wyoming. It may be found in various habitats from small springs and spring-fed creeks to reservoirs and large river systems. The snails feed primarily on algae, bacteria, fungi, diatoms (small plants), and protozoa (small animals) on the surface of rocks or gravel in the water. The species lays an unknown number of single eggs on hard substrates which hatch in several weeks depending on ambient temperatures. Timing of emergence appears to be summer and fall. Recently spawned, or hatched, snails are less than 1 mm in length. The species is generally thought to be annual and laboratory estimates place survival at an average of 382 days. Field data show that not all adult snails die-off during the winter, and it may be possible that *P. robusta* reproduce more than once and live longer than one year.

What are the factors affecting populations of these snails?

The primary factors affecting populations of *Pyrgulopsis robusta*, as determined by the expert panel, included flow regulation and non-native species that compete with native species for food and/or space. Flow regulation was indicated as a threat factor for populations in the Snake and Columbia Rivers and the closed basins of southeastern Oregon. Flow regulation was considered control of water quantity by way of releases below dams, withholding water above dams or weirs, diversions of water from creeks or rivers, or mining of groundwater which affects flows in creeks or rivers. Non-native species were primarily considered a threat factor for Wyoming populations, but were also considered threats for



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populations in the Snake and Columbia Rivers. Specifically, the New Zealand mudsnail exists together with *P. robusta* in Wyoming. Other threat factors identified by the science panelists included barriers to dispersal in Wyoming and Oregon and siltation, excessive nutrients, and chemical stressors in the Snake and Columbia Rivers.

Does this decision mean that there is no concern about the future of the species?

No. The Fish and Wildlife Service will continue to monitor the status of *Pyrgulopsis robusta* and to accept additional information and comments from all governmental agencies, the scientific community, industry, or any other interested party concerning this finding and the species. If future information demonstrates declines in *P. robusta* populations, the agency may re-initiate a status review of the species to assess its status.

What is being done to conserve *Pyrgulopsis robusta* throughout its range?

Comparatively few conservation efforts have been implemented for freshwater mollusks in the western United States. The U.S. Bureau of Reclamation's recent spring management guide is the best example of a conservation effort to maintain springsnail habitats and populations. It covers numerous spring species and functions, and specifically discusses springsnail conservation. Aside from this effort, habitat protection, in the form of riparian, spring, or stream system maintenance, constitute the primary range-wide conservation actions in place to conserve populations of *Pyrgulopsis robusta*. Numerous programs are in place from multiple State and Federal agencies that protect and conserve riparian, spring, and stream systems on the lands for which they are responsible.