As of July 17, 2012, David Strickland, the Fish and Wildlife Service, announces a 90-day finding on a petition to list the Sonoran talussnail as endangered or threatened.

The petition has been submitted by individuals to the U.S. Fish and Wildlife Service, and it requests that the Service initiate a review of the status of the Sonoran talussnail. The petitioners believe that the talussnail may warrant a listing as an endangered or threatened species under the Endangered Species Act of 1973, as amended (Act).

The Fish and Wildlife Service is required to promptly review the status of the species and arrive at a determination. If, after the status review, we determine that listing the Sonoran talussnail is warranted, we will propose to list it as an endangered species and propose critical habitat, as defined in section 3(5)(A) of the Act.
Petition History and Previous Federal Actions

On June 24, 2010, we received a petition dated June 24, 2010, from the Center for Biological Diversity, requesting that we list the Rosemont talussnail (Sonorella roseomontensis) and Sonoran talussnail (Sonorella magdalenensis) as endangered or threatened and that we designate critical habitat under the Act. The petition clearly identified itself as such and included the requisite identification information for the petitioner, required by 50 CFR 424.14(a). In a December 1, 2011, letter to the petitioner, we responded that we reviewed the information presented in the petition and determined that issuing an emergency regulation temporarily listing the Sonoran talussnail under section 4(b)(7) of the Act was not warranted. According to the Multi-district Litigation Stipulated Settlement Agreement (WildEarth Guardians v. Salazar, No. 1:10–mc–00377–EGS (D. D.C.); Center for Biological Diversity v. Salazar, No. 1:10–mc–00377–EGS (D. D.C.)), we are required to complete an initial finding for the Sonoran talussnail in Fiscal Year 2012, which ends September 30, 2012, as to whether the petition contains substantial scientific or commercial information indicating that the action may be warranted. This finding addresses the petition to list the Sonoran talussnail and fulfills the requirement of the Multi-district Litigation Stipulated Settlement Agreement. The petition for the Rosemont talussnail will be addressed in a separate finding. There are no previous federal actions concerning to the Sonoran talussnail under the Act.

Species Information

Species Description and Taxonomy

The Sonoran talussnail is a relatively large pulmonate (with functional lungs), terrestrial snail with an average shell diameter of 0.74 inches (in) (19 millimeters (mm)) (Miller 1978, p. 111). The petitioner provided no further physical description of the species, nor do we have any additional species-specific information in our files. In general, snails of the Sonorella genus have a depressed spherical spiraling shell that is 0.47 to 1.30 in (12 to 33 mm) in diameter and lightly colored, normally containing a dark peripheral band (Bequaert and Miller 1973, p. 110). Because shells of Sonorella are weakly differentiated and Sonorella is hermaphroditic (meaning an individual has both male and female sex organs), species are primarily separated by geographic location and anatomy of male genitalia (Bequaert and Miller 1973, p. 110).

According to information in our files, the genus Sonorella includes 79 species (McCord 1995, p. 317). The Sonoran talussnail is in the order Stylommatophora and the family Helminthogyphiidae first described in 1890 by R.E.C. Stearns as Helix from specimens collected near Magdalena, Sonora, in Mexico (Bequaert and Miller 1973, pp. 121–122). Between 1915 and 1923, Pilsbry and Ferriss described seven other species and subspecies of Sonorella that are currently recognized as the Sonoran talussnail: S. hinckleyi, S. h. fraternal, S. tumacaccori, S. cayetanensis, S. sitiens arida, S. tumamocensis, and S. linearis (Bequaert and Miller 1973, p. 122). Pilsbry (1939, p. 341) later synonymized the first four of these species with S. s. arida, which he raised to a species, S. arida.

Following additional research, the three remaining species recognized by Pilsbry were synonymized with S. magdalenensis as a single species (Bequaert and Miller 1973, p. 122).

Although a thorough systematic and phylogenetic review of the genus Sonorella has not been published in the literature, the Sonoran talussnail is recognized as a valid species by the scientific community (Bequaert and Miller 1973, pp. 121–123; McCord 1995, p. 320). We consider the petitioned species, Sonorella magdalenensis, to be a valid species based on the information in the petition and available in our files, and, therefore a listable entity under the Act.

Habitat and Life History

There is little other information available specific to the biology of the Sonoran talussnail; however, it is reasonable to conclude that the Sonoran talussnail is likely to be similar to other closely related talussnails in terms of its habitat needs and life-history traits. Sonorella species are generally considered rock snails, occupying rockslides and talus slopes (slopes composed of volcanic rock and limestone) (Pilsbry 1939, p. 268; Naranjo-Garcia 1988, p. 84; Pearce and Orstan 2006, p. 265). The petitioner notes that the Sonoran talussnail is found in talus or coarse broken rock slides at elevations ranging from 2,750 to 6,000 feet (839 to1830 meters) (Bequaert and Miller 1973, p. 122). Most Sonorella species prefer steep rock slides with sufficient interstitial space (space between rocks) that allow crawling to the proper depth for protection from summer heat (Bequaert and Miller 1973, p. 27; Hoffman 1990, p. 7; Hoffman 1995, p. 5). Occupied...
sites can usually be identified by the presence of dead and bleached shells, which are typically abundant because they disintegrate slowly in arid environs (Pilsbry 1939, p. 269).

Talussnails spend considerable time in estivation (dormancy), perhaps up to 3 years at a time (Hoffman 1990, p. 7). To prepare for estivation, talussnails use mucus and calcium to attach the opening of the shell to the face of a rock to make a waterproof seal. During estivation, talussnails survive by extracting calcium carbonate from their shells, which is re-deposited when active feeding resumes (Hoffman 1990, p. 7). Weather conditions are the most important factor affecting activity of living Sonorella, with talussnails only active above ground during or following summer monsoon rains (Jontz et al. 2002a, p. 3; Weaver et al. 2010, p. 3).

Talussnails feed primarily on fungus and decaying plant matter (Hoffman 1990, p. 7; Hoffman 1995, p. 6; AGFD 2008, p. 2). Sonorella species in the Santa Rita Mountains have been reported to feed on Xanthoparmelia, a leaf-like lichen, during and after rains (WestLand Resources 2010, pp. 26, 31).

Sonorella species mate face-to-face, and insemination is simultaneous but reciprocal, meaning when two talussnails meet both are usually inseminated (Hoffman 1995, p. 6; Davison and Mordan 2007, p. 175). During or after rain events, talussnails lay a clutch of 30 to 40 eggs once or twice during summer. Fluctuations in humidity may cause large variations in rates of maturation and the life span of talussnails. The life span of land snails is dependent on their cycle of activity, although talussnails are believed to live 8 to 9 years (Hoffman 1995, p. 6). Many mountain ranges in southeastern Arizona where Sonorella species live are also inhabited by a snail-eating beetle (Scaphinotus petersi), which presumably preys upon talussnails (McCord 1995, p. 321). Talussnails are also believed to be eaten by rodents and birds, but this is probably a sporadic random occurrence (Hoffman 1990, p. 10).

Distribution and Abundance

Species in the Sonorella genus are found throughout most of Arizona, portions of western New Mexico and Texas, and in Sonora, Mexico, and are typically distributed across the landscape as geographically isolated populations exhibiting a high degree of endemism (organisms having narrowly distributed isolated populations) (Bequaert and Miller 1973, p. 22; McCord 1995, p. 321). The distribution and diversity of Sonorella species across the arid Southwest has likely been promoted by cycles of fragmentation and connection between the mountains they inhabit. It is thought that a protracted series of substantial migrations occurred during wetter periods throughout the Pleistocene Epoch (i.e., 2.5 million to 10,000 years ago), when topography also may have been more suitable for colonization by snails crawling across the landscape (Bequaert and Miller 1973, p. 22; McCord 1995, p. 321). In contrast, the drier climate and geography of the present-day Southwest does not favor dispersal of Sonorella species into new territories (Bequaert and Miller 1973, p. 22).

The Sonoran talussnail is one of six Sonorella species that has a large range relative to other members of the genus, and the Sonoran talussnail inhabits the most widely separated localities of all Sonorella (Bequaert and Miller 1973, p. 25). In addition to the type locality in the Sierra Madagáena in Sonora, Mexico, the population numbers or trends known to us are defined by the Act. This does not necessarily require empirical proof of a threat. The mere identification of factors that could impact a species negatively may necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice. The mere identification of factors that could impact a species negatively may not be sufficient to compel a finding that listing may be warranted. The information must contain evidence sufficient to suggest that these factors may be operative threats that act on the species to the point that the species may meet the definition of endangered or threatened under the Act.

In making this 90-day finding, we evaluated whether information regarding threats to the Sonoran talussnail, as presented in the petition and other information available in our files, is substantial, thereby indicating that the petitioned action may be warranted. Our evaluation of this information is presented below.

Evaluation of Information for This Finding

Section 4 of the Act (16 U.S.C. 1533) and its implementing regulations at 50 CFR part 424 set forth the procedures for adding a species to, or removing a species from, the Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act:

(A) The present or threatened destruction, modification, or curtailment of its habitat or range;
(B) Overutilization for commercial, recreational, scientific, or educational purposes;
(C) Disease or predation;
(D) The inadequacy of existing regulatory mechanisms; or
(E) Other natural or manmade factors affecting its continued existence.

In considering what factors might constitute threats, we must look beyond the mere exposure of the species to the factor to determine whether the species responds to the factor in a way that causes actual impacts to the species. If there is exposure to a factor, but no response, or only a positive response, then the factor is not a threat. If there is exposure and the species responds negatively, the factor may be a threat and we then attempt to determine how significant a threat it is. If the threat is significant, it may drive or contribute to the risk of extinction of the species such that the species may warrant listing as endangered or threatened as those terms are defined by the Act. This does not necessarily require empirical proof of a threat. The combination of exposure and some corroborating evidence of how the species is likely impacted could suffice.
The petitioner asserts that the Sonoran talussnail is threatened by habitat loss and degradation due to mining: exotic plant invasion and control; real estate development; livestock grazing; recreation and vandalism; and illegal immigration, smuggling, and enforcement activities along the international border. Other threats asserted by the petitioner include over-collection; inadequate regulatory mechanisms; and small, isolated populations at risk of loss due to chance events and ongoing climate change.

**Mining**

In support of the assertion that mining activity is a threat to the Sonoran talussnail throughout its range, the petitioner explains that mining, in general, and the proposed Rosemont Copper Mine in the Santa Rita Mountains (Augusta Resource Corporation 2010, p. 10), specifically, may directly remove talus, degrade habitat and water quality and quantity, alter microhabitat conditions, and increase access roads and collection pressure (Center for Biological Diversity 2010, pp. 15–17). The petitioner referenced WestLand Resources (2009, p. 2 and 2010, pp. 23–32), Jones (2008, p. 1), and Bequaert and Miller (1973, p. 25) to illustrate that the Sonoran talussnail may occur in talus slopes as well as the waste rock footprint of the proposed Rosemont Copper Mine. The petitioner indicated that dust, sediment, herbicides, and windblown pollutants from mining activities, and mining-related road construction, use, and maintenance, may cause increased interstitial sedimentation and contamination of Sonoran talussnail habitat in the Santa Rita Mountains within and adjacent to the proposed Rosemont Copper Mine footprint (Service 1998, p. 5; AGFD 2003, p. 3; Fonseca 2009, p. 3; SWCA Environmental Consultants 2009, pp. 3–7).

In reference to the petitioner's claim that mining is a threat to the Sonoran talussnail, some of the information presented by the petitioner appears to be reliable. Review of the information provided by the petitioner supports that the Sonoran talussnail likely occurs in the waste rock footprint and talus slopes of the proposed Rosemont Copper Mine; however, the petitioner did not provide substantial information to illustrate that mining and mineral exploration is occurring in other parts of the species' range. However, according to U.S. Geological Survey 7.5-minute topographic maps readily available in our files, there are numerous mines and mining prospects within 2 miles of five of the known locations of Sonoran talussnail in Arizona: the Cerro Colorado Mountains, San Cayetano Mountains, Santa Rita Mountains, Tucson Mountains, and Tumacacori Mountains. These mines and mining claims are on privately owned lands or lands managed by U.S. Forest Service or Arizona State Land Department. Although we do not have information on the status of these mines, we believe their existence reveals that there is mining potential and a history of interest in areas adjacent to known locations of the Sonoran talussnail. Hard rock mining typically involves the blasting of hill sides and the crushing of rock. Threats posed to the Sonoran talussnail from such mining are supported by the information provided by the petitioner as well as other information readily available in our files (Hoffman 1990, p. 7; Jontz et al. 2002b, p. 1) that indicates Sonoran talussnails could be killed or their habitat rendered unsuitable from hard rock mining activities that remove talus, increase sedimentation in spaces between talus, and otherwise alter moisture conditions. These additional mines in locations that could impact more populations of the Sonoran talussnail would put the species at a high risk of extinction. Therefore, we conclude that the petition, as well as information readily available in our files, presents substantial information that this species may warrant listing due to habitat destruction from mining activities throughout most of its range.

**Exotic Plants**

In support of its assertion that the Sonoran talussnail is threatened by exotic plant invasion and control, the petitioner stated that *Pennisetum cilare* (buffelgrass) invades both lower slopes and steep rocky hillside and is expanding very rapidly in areas inhabited by the species in the Roskruge Mountains, Tumamoc Hill, and Mexico (Arizona-Sonora Desert Museum 2010, p. 1). The petitioner further explained that fire carried by buffelgrass, as well as rock disturbance and herbicide application to remove buffelgrass, may degrade habitat of talusssnails (Fonseca 2009, p. 3). The petitioner further referenced Garcia and Conway (2007, entire) and U.S. Forest Service (2003, entire) to illustrate that herbicides used in control of exotic plants such as buffelgrass threaten non-target species. Finally, the petitioner stated that *P. setaceum* (buffelgrass) may also threaten Sonoran talussnail in the Tucson Mountains.

In reference to the petitioner's claim that exotic plant invasion and control is a threat to Sonoran talussnail, some of the information presented by the petitioner appears to be reliable. Review of this and other information readily available in our files confirm that the perennial African buffelgrass is prevalent throughout four of the seven mountain ranges in Arizona and one in Mexico with known locations of Sonoran talussnails: Cerro Colorado Mountains, Roskruge Mountains, Tucson Mountains, Tumamoc Hill, and Sierra Madigalona (Van Devender and Dimmitt 2006, pp. 5–6; Burquez-Montijo et al. 2002, p. 137). However, the petitioner provided no information concerning how fire carried by buffelgrass may be acting on the species. Information readily available in our files supports that fire has become an increasingly significant threat in the Sonoran Desert within the range of the Sonoran talussnail due to the widespread invasion of nonnative annual and perennial grasses (Burquez and Quintana 1994, p. 23).

The Sonoran Desert is not adapted to high-intensity fire, yet buffelgrass is not only fire-tolerant but also fire-promoting (Halverson and Guertin 2003, p. 13). On slopes where Sonoran talussnails may be present, buffelgrass establishment is higher in the vicinity of rocks and in disturbed soils (Burquez-Montijo 2002, p. 134). The fire cycle created by conversion of slopes to buffelgrass can alter the microclimate and nutrient availability in the soil and litter layer that Sonoran talussnails rely on for food (Burquez-Montijo 2002, p. 135; Esque and Schwalbe 2002, p. 181; Williams and Baruch 2000, pp. 128–130). A study by Nekola (2002, pp. 64–65) found that increased fire cycles caused by fire management in central North American grasslands reduced the abundance and diversity of land snails and altered the microclimate and nutrient availability to snails by burning the duff or litter layer where snails feed. Even though they live in talus and not grasslands, Sonoran talussnails also rely on a litter layer to feed. In addition, sun exposure of a canyon occupied by *Sonorella* species in the Pinaleno Mountains of Arizona following the Nuttall complex fires in 2004 revealed hundreds of scorched talussnail shells along the canyon where burnout operations apparently reached high temperatures (Jones 2004, pers. comm.).

Information in our files regarding the ability of buffelgrass to carry fire into habitats of the Sonoran talussnail, combined with evidence that fire has killed other *Sonorella* species and resulted in decreased abundance and...
diversity and altered habitat of other land snails, supports that similar negative impacts may occur, or may be occurring, to Sonoran talussnail. Therefore, information provided by the petitioner and readily available in our files presents substantial evidence that this species may warrant listing due to habitat destruction from exotic plant invasion throughout most of its range. The petitioner did not provide substantial information, nor do we have information in our files, supporting that mechanical or chemical removal of invasive plant species is a threat to the Sonoran talussnail.

Other Factors

The petitioner also states that real estate development, livestock grazing, recreation, vandalism, and activities along the international border are threats to Sonoran talussnail, but provides no substantial information to evaluate. The petitioner also states that collection is known to threaten talussnails. The petition also explains that inadequate existing regulatory mechanisms are a threat to the Sonoran talussnail based on a lack of regulation from collection laws, U.S. Forest Service regulations, and a general lack of other regulations to protect the species or its habitat in the United States or Mexico. The petitioner also asserts that Sonorella species are highly vulnerable to extinction due to chance events because they are found in isolated populations in small patches, and from historic range contraction that is likely to continue due to climate warming. We will further evaluate these factors, along with any other potential factors, during our status review and will report our findings in the subsequent 12-month finding.

Finding

On the basis of our determination under section 4(b)(3)(A) of the Act, we determine that the petition presents substantial scientific or commercial information indicating that listing the Sonoran talussnail may be warranted. This finding is based on substantial information provided in the petition, in addition to information readily available in our files, related to possible impacts originating from mining and the invasion of exotic plants.

Because we have found that the petition presents substantial information indicating that listing the Sonoran talussnail may be warranted, we are initiating a status review to determine whether listing the Sonoran talussnail under the Act is warranted. We will evaluate all information under the five factors during the status review under section 4(b)(3)(B) of the Act. We will fully evaluate these potential threats during our status review, under the Act’s requirement to review the best available scientific information when making that finding. Accordingly, we encourage the public to consider and submit information related to these and any other threats that may be operating on the Sonoran talussnail (see Request for Information).

References Cited

A complete list of references cited is available on the Internet at http://www.regulations.gov and upon request from the Arizona Ecological Services Office (see FOR FURTHER INFORMATION CONTACT).

Authors

The primary authors of this notice are the staff members of the Arizona Ecological Services Office.

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.).

Dated: July 12, 2012.
Daniel M. Ashe,
Director, U.S. Fish and Wildlife Service.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R8–ES–2011–0085; 4500030114]

RIN 1018–AX39

Endangered and Threatened Wildlife

and Plants; Designation of Critical Habitat for the Tidewater Goby

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule; reopening of comment period.

SUMMARY: We, the U.S. Fish and Wildlife Service, announce the reopening of the public comment period on the October 19, 2011, proposed revised designation of critical habitat for the tidewater goby (Eucyclogobius newberryi) under the Endangered Species Act of 1973, as amended (Act). We also announce the availability of a draft economic analysis (DEA) of the proposed revised designation of critical habitat for tidewater goby and an amended required determinations section of the proposal. We are reopening the comment period to allow all interested parties an opportunity to comment simultaneously on the proposed revised designation, the associated DEA, and the amended required determinations section. Comments previously submitted need not be resubmitted, as they will be fully considered in preparation of the final rule.

DATES: The comment period for the proposed rule published October 19, 2011 (76 FR 64996) is reopened. We will consider comments received on or before August 23, 2012. Comments submitted electronically using the Federal eRulemaking Portal (see ADDRESSES section, below) must be received by 11:59 p.m. Eastern Time on the closing date.


Comment submission: You may submit written comments by one of the following methods:

(1) Electronically: Go to the Federal eRulemaking Portal: http://www.regulations.gov. In the Search box, enter FWS–R8–ES–2010–0085, which is the docket number for this rulemaking. Then, on the left side of the screen, under the Document Type heading, click on the Proposed Rules link to locate this document and submit a comment.

(2) By hard copy: Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS–R8–ES–2011–0085; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042–PDM; Arlington, VA 22203.

We request that you send comments only by the methods described above. We will post all comments on http://www.regulations.gov. This generally means that we will post any personal information you provide us (see the Public Comments section below for more information).


SUPPLEMENTARY INFORMATION: