

American Malacological Society (AMS) Conservation Committee Imperiled Species News **2013 Annual Review**

February 2014

Hello again to all American Malacological Society (AMS) members and mollusk conservation enthusiasts. As part of a continuing series of installments, I am herein posting this 2013 summary of all legislative action taken during the calendar year 2013 by the United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) regarding conservation of marine, freshwater, and terrestrial mollusks as applied by the U.S. Endangered Species Act (ESA) and other relevant legislation.

Formal notices are published by the USFWS and NMFS in what is called the Federal Register Endangered Species Program (<http://www.fws.gov/endangered/laws-policies/federal-register-notices.html>). Rules are enacted only for taxa and populations that are specifically named in a Federal Register Notice of Review or the Federal Register Proposed or Final Rule section (Code of Federal Regulations C.F.R. 50 Part 17). Federal Register Notices are issued daily. Notices generally fall within three categories: notices, proposed rules, and final rules. Also included are notices of scheduled hearings, proposed rulings, formal rules and regulations, and in extreme circumstances, presidential orders and proclamations. Public comments are solicited on proposed rules but are required within a given time period. Each installment of this news post lists current petitioned, proposed, candidate, listed, and delisted species added or modified within the time frame delineated. Comment periods, including submission deadlines, are also included to better inform the reader as to the progress of each proposal and to provide adequate time for public comment.

Before reading this summary, please familiarize yourselves with the basic criteria used for listing of species as Endangered or Threatened. A species is first assessed by the USFWS to determine if a proposed listing is appropriate based on the best available data for listing consideration (U.S. ESA, Section IV). Under the Act, a species may be listed as an endangered or threatened species based on any of five factors: (A) The present destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its existence. Species previously identified as candidates can also be re-assessed based on updated information. A Species Assessment Document is prepared by candidate conservation staff (including non-governmental agency staff with intimate knowledge of any aspect of the natural history of a species). This document is then presented to the USFWS Director (currently Daniel M. Ashe) to determine if a species' status as a candidate should be changed. Assessments are updated annually through a Candidate Notice Review (CNOR) available online at: <http://www.fws.gov/endangered/what-we-do/cnor.html>. Update summaries for all species for 2013 can be found at: <http://www.fws.gov/policy/frsystem/default.cfm>.

Another year has come and gone and 2013 saw yet more species added to the U.S. Endangered Species list. 2013 marked the 40th Anniversary of the Endangered Species Act. Currently, 2066 U.S. and foreign species (including some populations) are listed as Endangered or Threatened under the Act. This is not counting the 78 species listed under the previous Endangered Species Preservation Act of 1966 and its amended 1969 Endangered Species Conservation Act (which would create the Convention on International Trade in Endangered Species; now known as Cites). May 2013 marked the first invertebrate ever to be removed from listing under the Endangered Species Act due to full recovery. The Magazine Mountain shagreen snail (*Inflectarius magazinensis*) is known only from the north and west slopes Magazine Mountain above 2200 feet altitude in Logan County, Arkansas. Of the 340 listed invertebrates in the American southeast, more than 100 species are invertebrates; including the Magazine Mountain shagreen and 38 other species of terrestrial snails.

A well managed conservation plan for the species now includes protection of the entire occupied habitat of the species within U.S. Forest Service property. Portions of this area have been designated a Special Interest Area specifically to protect the snail and its habitat. The population has expanded to 27 locations on Magazine Mountain; comprising some 22 acres of occupied habitat, contributing directly to the secure status of the species and the conditions under which it was listed removed and goals of the listing achieved. Future management and protection fall jointly under the U.S. Forest Service and Arkansas Department of Parks and Recreation.

Since 1978, 58 species have been delisted under the act for various reasons (see below); including full recovery, but none have been invertebrates. Historically, Sampson’s pearly mussel (*Epioblasma sampsoni*) was removed due to extinction; the Utah valvata snail (*Valvata utahensis*) was removed based upon receipt of updated information, and the Idaho springsnail (*Pyrgulopsis idahoensis*) was removed due to taxonomic revision. The Magazine Mountain shagreen now holds a unique place in Endangered Species history as the first invertebrate species fully recovered and removed from listing under the Endangered Species Act; an honor shared by 29 other animal and plant species (and subpopulations) including the bald eagle, American alligator, Virginia northern flying squirrel, and Eggert’s sunflower.

TAXONOMIC GROUP	DELISTED	RECOVERED	EXTINCT	TAXONOMIC OR DATA ERROR
mammals	13	10	1	2
birds	15	9	4	2
Reptiles/amphibians	7	5	0	2
fishes	5	0	4	1
invertebrates	5	1	1	3
plants	14	5	0	9

One of the rarest freshwater mussels in North America, the purple cat's paw (*Epioblasma obliquata obliquata*), was given a renewed opportunity for recovery. The species was listed as Endangered in 1976 and has undergone two five-year status reviews (the most recent in 2013), each time resulting in the species' status remaining as Endangered. At the time of the most recent review in 2010, the species was known to exist in only three streams with no individuals documented in two of the streams in over 20 years. In 2012, a new viable population was discovered in Killbuck Creek in Ohio. A handful of individuals are being jointly propagated for eventual reproduction by the Freshwater Mussel Conservation and Research Center at the Columbus Zoo and Aquarium. Previous surveys of the creek revealed few individuals and a population not large enough to attempt propagation..

As of November 22, 2013, 146 species of animals and plants are recognized as candidates for ESA protection. Candidate species do not receive formal federal legislative protection but their listing as Candidates draws attention to their plight as potentially imperiled species and is the first critical step toward the listing process.

Eleven mollusk species were formally added to the USESA and designated as Endangered: *Newcombia cumingi* (Newcomb's treesnail), *Partulina semicarinata* (Lanai tree snail), *Partulina variabilis* (Lanai treesnail), *Pseudotryonia adamantina* (Diamond Y springsnail), *Pyrgulopsis texana* (Phantom Cave snail), *Tryonia circumstriata* (Gonzales springsnail), *Tryonia cheatumi* (Phantom springsnail), *Lampsilis rafinesqueana* (Neosho mucket), *Ptychobranthus subtentum* (fluted kidneyshell) and *Pleuironaia dolabelloides* (slabside pearlymussel) and one as Threatened *Quadrula cylindrica cylindrica* (rabbitsfoot),

Fourteen species still remain as candidates. Of these, five are freshwater mussels, three are freshwater snails, and six are terrestrial snails. All other formal proposals for mollusk listings have been reviewed and closed leaving no open or proposed listings. This is in contrast with 2012 when ten species were listed as Endangered and five as Threatened. Other administrative decisions include the determination that listing of *Sonorella rosemontensis* (Rosemont talussnail) is not warranted. As of the posting of this installment, no additional species have been proposed for listing. This does not mean that upcoming candidate proposals are not forthcoming. There are still dozens of species that have not yet been assessed but are in need of review. This posting will periodically include updates to current and proposed candidates so keep track of comment periods as they are set and make a valuable contribution toward endangered mollusk conservation by contributing insights and comments.

Thanks for a prosperous year in mollusk conservation. Looking forward to 2014.

Sincerely,

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SUMMARIES FOLLOW:

U.S. Fish and Wildlife Service Releases Annual List of Candidates for Endangered Species Act Protection

***Sonorella rosemontensis* (Rosemont talussnail)**

- POSTED: March 28, 2013
- SUMMARY: Proposed Rule to list *Sonorella rosemontensis* (Rosemont talussnail) as Endangered and designate Critical Habitat = **listing is not warranted at this time**
- JUSTIFICATION: Listing of *Sonorella rosemontensis* (Rosemont talussnail) is not warranted because this snail does not constitute a listable entity under the Act. The species was subsumed into the Santa Rita talussnail (*Sonorella walkeri*), which is a widespread and common species.
- RESULTS: **CLOSED**
- LINK: <http://www.fws.gov/policy/library/2013/2013-07149.pdf>

***Inflectarius magazinensis* (Magazine Mountain shagreen) [formerly *Mesodon magazinensis*]**

- POSTED: May 28, 2013
- SUMMARY: Final Rule to delist *Inflectarius magazinensis* (Magazine Mountain shagreen) [formerly *Mesodon magazinensis*] from the Federal List of Endangered and Threatened Wildlife = **species is delisted**
- JUSTIFICATION: The species is deemed recovered as all of the threats to the species have been eliminated or reduced, adequate regulatory mechanisms exist, and populations are stable so that the species is not currently, and is not likely, to again become a threatened species within the foreseeable future in all or a significant portion of its range.
- RESULTS: **CLOSED**
- LINK: <http://www.fws.gov/policy/library/2012/2012-14502.pdf>

***Newcombia cumingi* (Newcomb's treesnail), *Partulina semicarinata* (Lanai tree snail), *Partulina variabilis* (Lanai treesnail)**

- POSTED: May 28, 2013
- SUMMARY: Final Rule to list 38 species of plants and animal species [including 3 mollusks: *Newcombia cumingi* (Newcomb's Treesnail), *Partulina semicarinata* (Lanai tree snail), *Partulina variabilis* (Lanai tree snail)] as Endangered = **species listed as Endangered**; reaffirm listing of 2 endemic Hawaiian plant species currently listed as Endangered = **species listed as Endangered**; designate Critical Habitat for 39 of these plant and animal species [including 3 mollusks: *Newcombia cumingi* (Newcomb's treesnail), *Partulina semicarinata* (Lanai tree snail), *Partulina variabilis* (Lanai tree snail)] on the Hawaiian Islands of Molokai, Lanai, and Maui = **Critical Habitat designated**; designate Critical Habitat for 11 plant and animal species [no mollusks] already listed as Endangered; and revise Critical Habitat for 85 plant and animal species already listed as Endangered or Threatened on the Hawaiian Islands of Molokai, Lanai, Maui, and Kahoolawe = **species listed as Endangered and Critical Habitat designated**

- JUSTIFICATION: This finding is based on information provided under factors (A) habitat degradation and destruction by agriculture and urbanization, nonnative ungulates and plants, fire, natural disasters, and climate change, and the interaction of these threats; (G) overutilization due to collection of the three tree snail species for trade or market; (C) predation by nonnative animal species (pigs, goats, axis deer, mouflon sheep, cattle, rats, Jackson's chameleon, slugs, snails, and flatworms; (D) inadequate regulatory mechanisms to address the threats posed by nonnative species; and (E) limited numbers of populations and individuals, hybridization, lack of regeneration, and ongoing human activities (e.g., trampling and hiking).
- RESULTS: **CLOSED**
- LINK: <http://www.fws.gov/policy/library/2013/2013-12105.pdf>

***Pseudotryonia adamantina* (Diamond Y springsnail), *Pyrgulopsis texana* (Phantom Cave snail), *Tryonia circumstriata* (Gonzales springsnail), *Tryonia cheatumi* (Phantom springsnail)**

- POSTED: July 9, 2013
- SUMMARY: Final Rule to list *Pseudotryonia adamantina* (Diamond Y springsnail), *Pyrgulopsis texana* (Phantom Cave snail), *Tryonia circumstriata* (Gonzales springsnail), *Tryonia cheatumi* (Phantom springsnail) as Endangered or Threatened and designate Critical Habitat = **species listed as Endangered and Critical Habitat designated**
- JUSTIFICATION: For Diamond Y species (*Pyrgulopsis texana* (Phantom Cave snail), *Tryonia cheatumi* (Phantom springsnail)), this finding is based on information provided under factors (A) current and ongoing and future decline in spring flows, and historic modification of spring channels; particularly historic and future declines in regional groundwater levels that have caused some springs to cease flowing and threaten the remaining springs with the same fate; (D) existing regulatory mechanisms are inadequate to provide protection to the species habitat from existing and future threats through groundwater management by groundwater conservation districts; and (E) occurrence of two nonnative snails in portions of the species' range that could be another factor negatively affecting the species (Factor E). Also, small, reduced ranges of these species, when coupled with the presence of additional threats, also put them at a heightened risk of extinction.
- For San Solomon Spring species (*Pseudotryonia adamantina* (Diamond Y springsnail), *Tryonia circumstriata* (Gonzales springsnail)), this finding is based on information provided under factors (A) current and ongoing modification and destruction of their habitat and range from the ongoing and future decline in spring flows, and historic modification of spring channels; particularly historic and future declines in regional groundwater levels that have caused some springs to cease flowing and threaten the remaining springs with the same fate; (D) existing regulatory mechanisms are inadequate to provide protection to the species habitat from existing and future threats through groundwater management by groundwater conservation districts; and (E) occurrence of two nonnative snails portions of the species' range that could be another factor negatively affecting the species.
- Also, small, reduced ranges of these species, when coupled with the presence of additional threats, also put them at a heightened risk of extinction.
- RESULTS: **CLOSED**
- LINK: <http://www.fws.gov/policy/library/2013/2013-16222.pdf> and <http://www.fws.gov/policy/library/2013/2013-16230.pdf>

***Lampsilis rafinesqueana* (Neosho mucket), *Quadrula cylindrica cylindrica* (rabbitsfoot)**

- POSTED: September 17, 2013
- SUMMARY: Final Rule to list *Lampsilis rafinesqueana* (Neosho mucket) as Endangered = **species listed as Endangered**; and *Quadrula cylindrica cylindrica* (rabbitsfoot) as Threatened = **species listed as Threatened**; and designate Critical Habitat for both = **Critical Habitat designated**
- JUSTIFICATION: This finding is based on information provided under factors (A) long-lasting direct and secondary effects of habitat alterations such as impoundments, channelization, sedimentation, chemical contaminants, oil and gas development, and mining, and it is reasonable to conclude that the changes in the river basins historically and currently occupied by the species are the cause of population-level (river basin) effects; (D) the Clean Water Act has been insufficient at protecting mussels, and adequate water quality criteria protective of all life stages, particularly glochidia and juveniles, may not have been established; and (E) population fragmentation and isolation (from what was once widespread distribution) prohibiting natural interchange of genetic material; susceptibility to inbreeding depression and stochastic changes to the environment; established invasive species including zebra mussel, Asian clam, black carp, round goby, golden alga; ongoing/projected changes in climate with direct impacts such as thermal sensitivity or host fish dispersal not known
- RESULTS: **CLOSED**
- LINK: <http://www.fws.gov/policy/library/2013/2013-22245.pdf>

***Ptychobranchus subtentum* (fluted kidneyshell) and *Pleuonaia dolabelloides* (slabside pearl mussel)**

- POSTED: September 26, 2013
- SUMMARY: Final Rule to list *Ptychobranchus subtentum* (fluted kidneyshell) and *Pleuonaia dolabelloides* (slabside pearl mussel) as Endangered and designate Critical Habitat = **species listed as Endangered and Critical Habitat designated**
- JUSTIFICATION: This finding is based on information provided under factors (A) imminent and severe degradation from impoundments, gravel and coal mining, oil and natural gas development, sedimentation, chemical contaminants, and stream channel alterations; (D) inadequate regulatory mechanisms as the Clean Water Act has been insufficient to significantly reduce or remove threats to the species; and (E) other natural and manmade factors, such as alteration of natural temperature regimes below dams; chemical contaminants; sedimentation; small isolated populations and low genetic diversity; coupled with localized extinctions from point source pollution or accidental toxic chemical spills, habitat modification and progressive degradation by nonpoint source pollutants, natural catastrophic changes to habitat through flood scour or drought as exacerbated by climate change, and nonindigenous species
- RESULTS: **CLOSED**
- LINK: <http://www.fws.gov/policy/library/2013/2013-23357.pdf>

FYI:

For proposed and current rulings, comments may be submitted via one of the following methods:

(1) Electronically

Go to the Federal eRulemaking Portal: <http://www.regulations.gov>. In the Search field, enter Docket No. FWS-R5-ES-2012-0054, which is the docket number for this action. Then click on the Search button. You may submit a comment by clicking on “Comment Now!”

(2) By hard copy

Submit by U.S. mail or hand-delivery to: Public Comments Processing, Attn: FWS-R5-ES-2012-0054; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, MS 2042-PDM; Arlington, VA 22203.