



# Animal Welfare Institute

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December 22, 2017

BY ELECTRONIC MAIL ([www.regulations.gov](http://www.regulations.gov))

Ms. Maggie Miller  
NMFS Office of Protected Resources (F/PR3)  
1315 East-West Highway  
Silver Spring, MD 20910

Dear Ms. Miller:

On behalf of the Animal Welfare Institute (AWI), I submit the following comments on the proposed rule to list the chambered nautilus (*Nautilus pompilius*) as a threatened species under the Endangered Species Act (ESA). See 82 Federal Register 48948.

AWI supports the proposed rule but strongly recommends that the National Marine Fisheries Service (NMFS) reconsider whether the chambered nautilus warrants protection under the ESA as an endangered species. For a host of reasons including: how little is known about the biology and ecology of the chambered nautilus; lack of information on population abundance and trends in vast portions of the species range; the species reproductive characteristics (i.e., long-lived, late maturing, slow growing); its patchy distribution, geographic isolation, specialized habitat needs, and genetic distinction between populations; the massive level of international trade in the species (including in to the United States); and the lack of effective regulations protecting the species where it exists, the precautionary principle would warrant an endangered designation for this species.

Given the role of the United States as a primary destination of chambered nautilus and products containing nautilus parts, including from countries where much (if not all) of the take of the species is illegal, much of the existing “legal” trade in chambered nautilus in the US likely violates the Lacey Act. Beyond this concern, procedurally an endangered designation would increase the transparency of US imports or exports of chambered nautilus and its products and would provide opportunities for the public to participate in decision-making regarding the issuance of ESA import permits for chambered nautilus that doesn’t exist if the species is designated as threatened. Alternatively, if NMFS elects to list the species as threatened, AWI would recommend that in any 4(d) rule for the species NMFS mandates that the import or exports of the species, its parts, or products require permits and that notice of applications for

said permits be published in the Federal Register with a solicitation for public comments to facilitate public participation in the decision-making process.

The evidence supporting the listing of the chambered nautilus -- preferably as an endangered species but at least as a threatened species -- is overwhelming and is well summarized in the proposed rule which is based on the species population assessment prepared by NMFS (see Miller 2017). This evidence includes:

- Geographic isolation of populations and limited ability to disperse or to recolonize vacant habitat resulting in morphologically and genetically distinct populations;
- Significant changes in the proportion of males and mature nautilus in unfished versus fished population with these proportions in certain fished populations indicative of pending collapse of the fishery;
- Low density of chambered nautilus in unfished populations suggesting that the species may be naturally rare or that other unknown factors are affecting species numbers and densities which, regardless of reason, makes the species especially vulnerable to exploitation with limited capacity to recover from depletion;
- Overestimates of the number of chambered nautilus given the methodology used for counting;
- Declining chambered nautilus populations in many of the primary range states of the species including Indonesia (up to 97 percent decline), the Philippines where declines in the four main nautilus fishing areas in the Palawan region have decreased by an average of 80 percent over 30 years) and where evidence exists of localized species extinction and serial depletion of nautilus populations,
- Destructive fishing practices including blast and cyanide fishing and anthropogenic activities, including deep sea mining, increasing pollution and sedimentation potentially adversely affecting the chambered nautilus at least at a site specific level;
- Overutilization of the species from several range states, including Indonesia, Philippines, India to feed demand for whole nautilus shells or products containing nautilus shells in the major markets of Italy, France, Portugal, the United Kingdom, and the United States with additional demand from the United Arab Emirates, Saudi Arabia, Australia, Singapore, Malaysia, Indonesia, Philippines, Hong Kong, Russia, Korea, Japan, China, Israel, South Africa, Argentina, Chinese Taipei, and India. . Other range states where the species is taken, including commercially, include: Vietnam, Thailand, Vanuatu, Papua New Guinea, China, Hong Kong, and Chinese Taipei. Notably, according to NMFS, there is no evidence of local utilization or commercial harvest of the species in American Samoa, Australia, Fiji, or the Solomon Islands. The US alone, between 2005 and 2014, imported more than 900,000 chambered nautilus products. Between 2010 and 2013, the US imported between 20,000 and 100,000 nautilus individuals (although these data may underestimate actual nautilus import numbers);
- Historical declines in the number of chambered nautilus caught per trap in several range states (particularly the Philippines and Indonesia) with active fisheries (including illegal fisheries) indicative of significant population declines which forces fishers to

routine move to new fishing sites as fishing pressure causes the serial depletion of populations. Additional evidence of population over-exploitation includes declines in catch per unit effort, local extirpations of the species, reduction in the number of shells available from local fishers, reduction in the size of nautilus shells sold in curio markets (including evidence in India of shells available in markets almost entirely coming from immature nautilus who have not reproduced), overall amount of chambered nautilus shells or products in trade (including products available online);

- International trade in chambered nautilus for food including 25,000 nautilus exported from Indonesia to China between 2007 and 2010;
- Lack of enforcement of domestic or national regulations to protect the species in Indonesia, the Philippines, India, and China;
- High susceptibility of chambered nautilus to fish, ease of capture, and increased vulnerability of the species to predation in shallow waters (where nautilus captured by ecotourists for photographs are often deposited after use).

Based on this evidence, not only is the proposed threatened designation warranted but there is ample reason for NMFS to consider listing *Nautilus pompilius* as endangered throughout the species range.

Thank you in advance for considering this input as you determine whether to designate the chambered nautilus as threatened or endangered under the ESA.

Sincerely,

A handwritten signature in black ink, appearing to read "DJ Schubert".

DJ Schubert  
Wildlife Biologist