

# CoP17 Proposal #48: Include the Family Nautilidae in CITES Appendix II



## NOAA FISHERIES



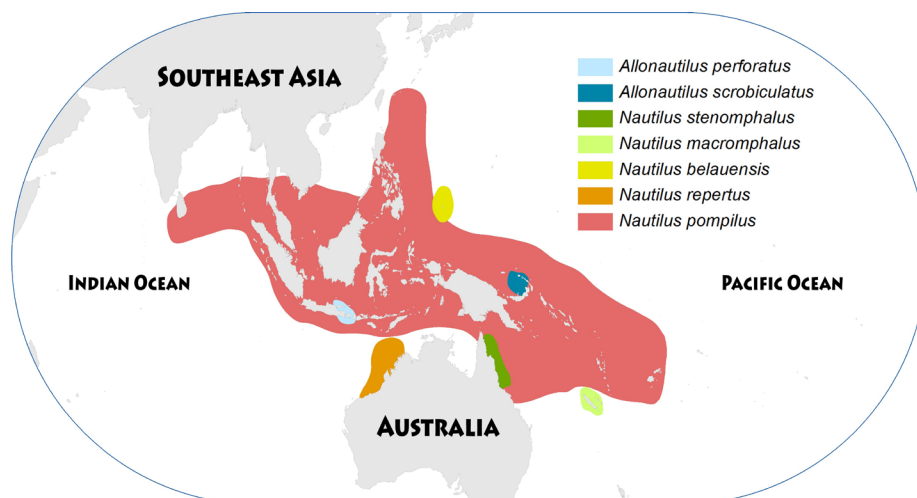
## U.S. Fish & Wildlife Service



The United States, along with Fiji, India, and Palau, submitted a proposal for consideration at the 17th meeting of the CITES Conference of the Parties (CoP17) to include all species of chambered nautilus in Appendix II of CITES. International trade in nautilus commodities is demand-driven with a worldwide consumer market, but current management and regulations are not sufficient to protect these slow-growing, late-maturing, low-productivity species from being overharvested for international trade. As range States involved in the harvest or trade of these charismatic species, we believe that CITES regulation is needed to ensure that international demand is not reducing the wild population to a level at which its survival might be threatened by continued harvesting or other influences. An Appendix-II listing will regulate, not ban, the commercial trade in these species and will engage more than 180 countries to ensure that international trade is both legal and sustainable.

### What is a chambered nautilus?

Chambered nautilus are marine invertebrates which are prized for their distinctive chambered shells. As cephalopods, the Family Nautilidae is related to squids and octopuses but differs by having external shells, lengthy maturation and producing few young. There are two main genera of chambered nautilus and seven species.



Map Credit: Food & Agriculture Organization

### Where are chambered nautilus found?

Native to tropical coastal reef habitat of the Indo-Pacific, most of these species are endemic to only one or two countries. *Nautilus pompilius* is considered native to as many as 16 countries, but information suggests that geographically-isolated populations in these countries may represent distinct species.

### What are the threats to the chambered nautilus?

Threats to chambered nautilus include targeted harvest for commercial international trade, habitat degradation throughout most of their range, as well as risks associated with bycatch, ecotourism, predation, and small population size. Chambered nautilus are particularly vulnerable to overfishing due to their low reproductive potential and inability to recolonize areas where they have been over-exploited.

Chambered nautilus mature around 10-15 years of age and then produce a small number of eggs each year that require at least a year to develop. They cannot survive in water that is too warm or too deep, so they live in isolated populations separated by deep water. They do not swim in the open ocean, nor do they have a mobile larval phase. Thus, they are very unlikely to recolonize an area that has been overharvested, except through chance events, such as tropical storms.



Chambered nautilus

In addition, many parts of chambered nautilus territory are under pressure from human activities that degrade or destroy their habitat, including destructive fishing practices and pollution.

Naturally rare, chambered nautilus are extremely vulnerable to overexploitation. Populations have low abundances where surveyed, with 15 or fewer individuals per square kilometer in unfished areas, and between 1 and 3 orders of magnitude fewer individuals where targeted harvest has occurred.



Photo credit: Gregory Barco

Chambered nautilus are low-productivity species, with populations typically consisting of only about 10% juveniles. Since harvest of chambered nautilus removes predominantly mature individuals, this further reduces the number of potentially reproductive-age individuals that could contribute to the population, decreasing their resilience to harvest.

Harvested primarily for their beautiful shells, not as a source of food, chambered nautilus are predictable in their habits and easy to catch with baited traps. Significant population declines have been documented in areas where targeted fisheries exist or have existed, including in India, Indonesia, New Caledonia, the Philippines, and possibly in Palau. One population showed a 97 percent decline in trap yields within 16 years; another population showed 100% decline within two years. The fishery follows a boom-bust cycle that moves on to a new location once a population is

depleted. There is evidence that such serial depletion is occurring in harvesting sites within the Philippines and Indonesia.

**What are the commodities of chambered nautilus in trade?**

These species are targeted primarily for their shells. Consumption of the meat is largely as a byproduct of the shell trade. Shells are traded internationally as souvenirs to tourists and shell collectors, as jewelry and home décor items ranging from whole-shell decorative objects to chambered nautilus shell-inlay lacquerware, and living animals are taken for public aquariums and research. All seven species can be found in global trade.

**What protections are currently in place for chambered nautilus?**

Although they are not “fish,” chambered nautilus are harvested by fishermen and this harvest is not addressed in any fisheries management plans. Where commercial harvest is ongoing, there have been no known studies by natural resource authorities to determine the status of populations or the impact of such harvest. Where protections exist, they appear to be poorly implemented and enforced. In some cases, species that are protected may be traded under the names of other non-protected chambered nautilus species in order to avoid regulations. Thus, active fisheries to satisfy international demand continue largely unregulated.



Photo credit: Christopher Rogers

**Do chambered nautilus meet the criteria for a CITES Appendix II listing?**

Yes. All of the currently recognized species of chambered nautilus are found in international trade. They are naturally rare, with small, isolated populations. Even the widest-ranging species may represent distinct species of chambered nautilus, so the loss of any one population could result in the loss of a species.

**What would be the impact of including chambered nautilus in Appendix II of CITES?**

Chambered nautilus shells are valuable in trade and harvest is driven by international demand. Given the extensive targeted harvest of chambered nautilus for commercial international trade, along with their highly vulnerable life history characteristics, protection under Appendix II of CITES will benefit the conservation of these species and ensure that continued harvest is legal and sustainable. An Appendix-II listing will complement domestic measures that appear to be inadequate to control the harvest pressure caused by international trade, and listing the entire family would remove the loophole in existing protections and increase capacity to address illegal trade.

**Therefore, we the co-proponents, seek your support to include the Family Nautilidae in CITES Appendix II.**

