

CONVENTION OF INTERNATIONAL TRADE IN ENDANGERED SPECIES  
OF WILD FAUNA AND FLORA

---



CONSIDERATION OF THIS PROPOSAL FOR A RESOLUTION AND ANNOTATION OF APPENDIX II

At the 65<sup>th</sup> meeting of CITES Standing Committee  
Geneva (Switzerland) 7-11 July 2014

A. Proposal

Annotation of Appendix II related to *Strombus gigas* (wasted) parts and derivatives of the meat harvest

CITES 2009, “When a species is included in one of the Appendices, all parts and derivatives of the species are also included in the same Appendix unless the species is annotated to indicate that only specific parts and derivatives”.

B. Proponent

Belize and Bahamas (to also benefit other conch harvesting countries)

C. Supporting statement

1. Taxonomy

- 1.1 Taxon group: Mollusca
- 1.2 Class: Gastropoda
- 1.3 Order: Caenogastropoda (shelled marine mollusks)
- 1.4 Family: Strombidae
- 1.5 Genus: *Strombus*
- 1.6 Species: *Gigas*
- 1.7 Common names: Queen Conch, Pink Conch, Caribbean Pink Conch
- 1.8 Trade name: Conch (pron. konk)

## 2. Background

In 1985 the *Strombus gigas*, Queen Conch, was first noted in the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) document, followed by inclusion in the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena Convention) in 1990, which also included the Queen Conch in Annex II of its Protocol Concerning Specially Protected Areas and Wildlife (SPAW Protocol). The majority of policy planning related to *Strombus gigas* have focused exclusively on conch meat as the tradable commodity.

Following the destruction of Queen Conch fisheries in Florida and other U.S territories in the Caribbean, the United States of America in 1992 recommended to the Convention on International Trade in Endangered Species (CITES) that *Strombus gigas* be included in the Appendix II of CITES.

Of note is that the listing protects the commercial significance and continued availability of the conch meat product. Up to this point, the USA was the largest consumer and importer of conch meat; however, the depletion of their own conch resources sent ripples of concern for this highly significant commercial species. The consideration for the future of conch fishing was commendable and adopted into legislation to include readily recognizable specimens of the species, I.E.: live specimens, meat, shells, pearls, carvings and all other parts of wild, ranched, or maricultured origin.

According to CITES 2009, “When a species is included in one of the Appendices, all parts and derivatives of the species are also included in the same Appendix unless the species is annotated to indicate that only specific parts and derivatives are included”.

Since 1995, CITES has encouraged a review of the biological and trade status of the Queen Conch under the Significant Trade Review process and has included local, regional, national and international organizations to assist with ensuring that the species is harvested in a sustainable manner. In the 20 years since the Appendix II listing some of the more significant protection measures have been Marine Protected Areas, Management Plans, Harmonized Fisheries Regulations (size, weight, catch quotas, lip thickness, fishing gear usage), Seasonal Closures, Data Collection on catch and export as well as research on the *Strombus gigas* reproduction, growth, and pearl development. According to NOAA (2009) import data of Queen Conch meat to the United States showed a substantial reduction from 1998 to 2009; 1,832,000 kg to 387,000 kg respectively. The USA is joined by the European Union (EU) as the primary importers of conch meat despite the 80% decrease of conch meat imports over the past twelve years (NOAA 2009).

The 2012 CITES Significant Trade Review (AC26/PC20 Doc. 7 Annex 5, pp 44-83), Level of Concern, reviewed the conch harvesting countries of the Bahamas and Belize. Both countries have improved the management of the species though more work needs to be done to attain sustainability. Sustainability can be improved by using the ‘garbage of the harvest’ if the annotated from the present regulations. For example:

- Operculum (foot) of the conch – new markets in art and jewelry
- Pistol (enzyme rod) – food label testing as a food delicacy and possibly food additive, recipe creation and taste testing
- Dirty Meat – collect the ‘dirty meat’ for drying and manufacturing as a type of ‘fish’ fertilizer
- New Shells – collect and clean the freshly harvested Queen Conch shells for art, tile making,
- Old Shells – collect and clean old (midden) shells for fill, aggregate, landscape materials

Going back in history (2000-3000 years ago) conch shells became useful as building materials, cooking pots, dippers and cups, chisels, knives, scrapers, fish hooks, earrings, buttons and pendants. Modern t historical uses include both the shell and the pearl in jewelry. Overall, very little of the conch marine animal was wasted.

Today, even with the sustainability efforts in place, approved fishing/harvest methods for the conch meat allow for an 85-92% waste of the animal. The meat is the main product of this commercially traded species; the remainder is considered to be the derivatives or by-products (Mulliken, 1996; Chakalall and Cochrane, 1996). The derivatives or by-products include the conch shell, the undesirable meat scrapings (tissue loss or dirty meat), the operculum, the pistol (enzyme rod) and the pearl.

Depending on the size and age of the animal, and the processing practice, the meat accounts for only 8% - 15% of the weight of a live animal (Formoso, 2001). Commercial profit must be extremely high to accept 85-92% wasted by-products. As a private entity Strombus Gigas Alliance (SGA), with applications for NGO status, is of the position that this cannot be what was conceived of or intended by the drafters of the CITES Appendix II legislation in 1992; hence this proposal for a resolution and annotation of the derivatives of the *Strombus gigas*.

Paul Medley (2008) highlights two significant points of the convention for Appendix II species. The first point of clarity is the requirement of an export permit, to be obtained in

advance of fishing, processing and exporting. This is done for the meat-for-trade harvest. The next point Medley states is that the export permit is granted if regulatory authorities deem the export of the product will not be detrimental to the species survival. SGA questions if the stipulation “non-detrimental to the survival of the species” includes acceptable harvesting methods which allow a majority discard of the animal. Current approved fishing practices in Belize allow the shell to be discarded at sea. “Local fishers report that, if freshly cleaned conch shells are discarded in the sea, living conch will in fact abandon the area” (Julie Gauthier, personal communication, December 2002). The shell discards from the past 40 years of queen conch harvest are evident in mounds (middens) under the sea; they do not even create reef nor bio-degrade. This acceptance of wasteful fishing practices is hindering repopulation in the vicinity.

The animal has been divided into commercial meat products and wasted by-products under the same governance. Relegated for secondary economics (handicrafts, jewelry, fill materials) the derivatives are also regulated and restricted by the CITES agreement (Mulliken, 1996; Chakalall and Cochrane, 1996). Unfortunately this regulation has led to the seizure of thousands of shells annually and impeded the marketability of the wasted by-products.

In 2004 Belize (*in litt.* to the CITES Secretariat) expressed concern that, a trade restriction in respect of Queen Conch would “present major socio-economic difficulties for almost 2,000 active Belizean artisanal fishermen” given the importance of the Queen Conch fishery in Belize. The concern remains the same as 10 years previous due to lower catch quotas and shorter catch seasons, coupled with the Queen Conch moving to deeper habitats.

Published October 12, 2013 (Caribbean News Now) was a decision by CITES to allow the export of by-products of the Queen Conch in the Turks and Caicos Islands (TCI). “In view of the hardships faced by vendors as a result of the existing legislation, the department of environment and maritime affairs (DEMA) made a formal appeal to CITES for the TCI to be allowed ‘permitted’ [to] export conch shells, pearls and jewelry during the closed season. CITES has now responded and has agreed to allow the export of the above mentioned products, pending revision of the existing TCI legislation and the submission of the annual CITES report from DEMA.” Of interest in this decision is that the TCI as not a CITES member, yet forwarded the same concerns as reported by Belize and experienced by Bahamas.

At the Harbor Branch Oceanographic Institute (HBOI) of Florida Atlantic University, much research has been conducted on the reproduction of *Strombus gigas*; the fertilization of egg strands, reseeded habitats with juvenile conch and the study of developmental stages from growth to maturity. For the past 32 years it has been possible to cultivate the Queen Conch though the application has been under-utilized for sustainability.

Furthermore, HBOI has conducted research with the Gemological Institute of America (GIA) to create cultured conch pearls. Dr. Héctor Acosta-Salmón and Dr. Megan Davis claim that the most significant outcome of their research is the 100% survival rate of the host conch. Also of significance is that same conch will produce another conch pearl when it is reseeded after the first pearl has been harvested. This is epitome of sustainability for a commercially tradable by-product; yet the conch pearl also comes under the governance and difficulties following CITES.

In 1997, the State of California's Department of Fish and Game responded to Pacific Coast Pearls, acknowledging that 'abalone pearls' are not a part of the [protected species] abalone and therefore may be bought or sold by anyone if taken under the authority of a commercial license; not a sports diver or found on the beach (per.comm Jack A. Edwards, Deputy Chief, Wildlife Protection Division). Though rare (1 in 10 000) the pearl from the Queen Conch is found in the same manner; under the commercial license for the meat harvest (HBOI 2009).

### 3. Conclusion

The 1992 Appendix II listing was a necessary wake-up call for *Strombus gigas* fisheries. Today, we have research proving the suggestions we have forwarded can provide more sustainability for the product, the by-product and the species as a whole animal than is currently being enforced by regulations. We propose a change in the methods of commercial meat harvesting and encourage the inclusion of by-products and derivatives for commercial trade. We also welcome the landing of shells to protect habitats from building middens of shells. Onshore and barge landings would allow for shell size measurements and data collection as well as the collection of shells for artisanal and alternative uses. Annotating the derivatives and by-products from regulations, creating a habit of 'no waste', would encourage total usage of each animal and improve the sustainability of the species as a complete product for marketable trade. Mariculture and aquaculture for the Queen Conch are truer forms of sustainability for a commercial product than current fishing practices and the restrictions might also be considered for removal from the governing legislation. Advances in technology for breeding and pearl harvesting, fishing efforts, habitat clean-up (environmental improvements), marine protected areas, and marine management plans have paved the way for our suggestions for the next 20 years of Queen Conch management. We formally request the wastage be stopped and consideration given to this proposal.