

AMENDMENTS TO APPENDICES I AND II OF THE CONVENTION

Other Proposals

A. PROPOSAL

Inclusion of Strombus gigas in Appendix II.

B. PROPONENT

The United States of America.

C. SUPPORTING STATEMENT

1. Taxonomy

- | | |
|-------------------|---|
| 11. Class: | Gastropoda |
| 12. Order: | Megogastropoda |
| 13. Family: | Strombidae |
| 14. Species: | <u>Strombus gigas</u> (Linnaeus, 1758) |
| 15. Common Names: | English: queen conch
French:
Spanish: |
| 16. Code Numbers: | |

2. Biological Data

21. Distribution: Queen conchs are found throughout the Caribbean, Bermuda, southeast Florida, and the West Indies. They are also found in the southern Gulf of Mexico from Belize to Venezuela. Queen conchs are found in coastal waters around the Bahamas, Cuba, Jamaica, Turks and Caicos, Haiti, Dominican Republic, Puerto Rico, Leeward Islands, Windward Islands, Barbados, Trinidad and Tobago, and the Netherlands Antilles (Clench and Abbott, 1941; Coomans, 1959).
22. Population: The queen conch is rare around areas of high human population density, but may be common elsewhere. It once was abundant in the coastal waters of Belize, the Turks and Caicos, Antigua and Bermuda, the Bahamas, the Grenadines, and some Venezuelan offshore islands, but is now less common in all these areas (Flores, 1964; Brownell, 1978). In 1979, the average queen conch density in an area off the Turks and Caicos Islands was estimated at one conch per 9.4 square meters (Hesse, 1979). It is fairly common in some parts of the Grenadines. St. Lucia has many suitable areas, but conchs are only found occasionally (Brownell, 1978). Reportedly, conchs have never been abundant in the Dominican Republic, Dominica, Trinidad, and Barbados (Brownell, 1978).

23. Habitat and Ecology: The queen conch is found in sea grass beds around islands and coral reefs. Generally, it occurs in shallow water where light penetration is sufficient to permit the growth of large quantities of benthic algae and sea grasses. Conchs have been recorded from depths of 200 feet (60 m), but rarely found as deep as 100 feet (30 m) (Randall, 1964).

Both adults and juveniles are predominantly nocturnal (Randall, 1964; Hesse, 1979). Adults as well as juveniles may remain partially or completely buried for several weeks in the winter.

Like other strombids, S. gigas is herbivorous and grazes on microscopic algae found on sand and detached sea grass leaves.

Conchs are migratory, moving in groups from deeper to shallower water to spawn. They also appear to migrate to deep offshore water with sparse algae and sand in winter, with adult conchs moving greater distances than juveniles. Occasionally, conchs are found clumped together, possibly for protection against wave action in storms (Hesse, 1979), although females are found in similar clusters during spawning (Hesse, 1979; Percharde, 1970). Queen conchs come to shallow waters to breed during the summer months. The spawning season in Florida is late May to September (D'Arsaro, 1965).

3. Trade Data

31. National Utilization: The United States imported approximately 472 metric tons of conch in 1990 from the wider Caribbean region (NMFS, 1971). The U.S. fishery was traditionally located on the south coast of Florida. Very little is now landed, but the high price of imported conch meat (US\$ 13.20/kg) leads occasionally to collection restrictions being ignored.
32. Legal International Trade: In addition to its use as a food source, queen conch was once used extensively for bait in fish traps. Conch shells have been used for making cameos and as decorative ornaments for many centuries. It is one of the most popular species in the shell trade; most shell specimens in trade are by-products of the meat industry (Abbott, 1981).

Harvest of conch in the wider Caribbean region from 1958-1988 ranged from 5095 to 6308 metric tons (FAO, 1988). These harvests, by country, are provided in Table 1.

Table 1. Harvest of Stromboid Conchs (*Strombus* spp.) in the Wider Caribbean Region. Source; FAO 1988 Yearbook of Fisheries.

Annual Harvest (metric tons)

COUNTRY	1985	1986	1987	1988
Bahamas	541	423	527	498
Belize	215	135	149	157
Cuba	617	31	192	215
Grenada	2	7	26	32
Guadeloupe	300	300	300	500
Honduras	301	396	68	33
Mexico	3192	2535	2448	2330
Turks & Caicos	758	1030	726	735
USA	367	222	662	1127
Venezuela		5	5	3
Virgin Is (US)	15	11	8	8
TOTAL	6308	5095	5111	5638

33. Illegal Trade:

34. Potential Trade Threats: In all Caribbean countries, heavy fishing pressure for local use and the export market has severely depleted stocks in areas close to island population centres and fishing villages.

In many areas, conch populations seem to be incapable of recuperating naturally even if fishing is curtailed. Deeper areas are being exploited by SCUBA divers.

In the Lower Florida Keys, adult specimens are now rarely found (Abbot, 1973, 1981). The heaviest pressure comes from the ornamental shell trade and tourists.

4. Protection Status

41. National: In the United States, the State of Florida, which manages conch, has placed a moratorium on commercial conch fishing, and there is a daily bag limit for recreational fishing. Puerto Rico periodically has a closed season.
42. International: In June 1991, several nations which are party to the Cartagena Convention, of the UNEP Regional Seas Programme, signed the Special Protocol for Protected Areas and Wildlife (SPAW Protocol), which lists species of plants and animals for various levels of protection. All parties agreed to list *Strombus gigas* in Annex III of the SPAW Protocol.

This listing requires that all Parties adopt appropriate measures to ensure the protection and recovery of queen conch and to regulate the use of conch to ensure and maintain the species at the highest possible populations levels.

In the Bahamas, the Fisheries and Conservation Act protects this species and ensures maximum local utilization by banning the export of edible conch and whole shells. The queen conch is protected in Bermuda. In the Turks and Caicos, a minimum size limit of 7 inches (17.8 cm.) has been imposed, and licences are required for fishing and exporting conch. Taking conch while using SCUBA gear is prohibited. In the Netherlands Antilles, a minimum size limit of 20 cm. has been in effect since the 1950s. The Belize Fisheries Department has had a comprehensive conch fishery research programme underway since 1974. There is a closed season from 1 July - 30 September and a minimum legal size limit. Venezuela has imposed a closed season and requires conch fishermen to be licensed.

43. Additional Protection Needs: Conch is the single most important staple food on the Caribbean Islands, and it also brings high prices on the export market. Effective management and enforcement programmes must be instituted if stocks are to continue providing a sustainable yield (Brownell, 1978). In the Bahamas, there are plans for further restrictions on export (Berg, 1981).

In the Netherlands Antilles, it has been suggested that conch fishing be prohibited for a 2 year period and that subsequently commercial fishing should be restricted to a very small number of licensed local operators.

5. Information on Similar Species

Strombus gigas is readily distinguished from the other five species of Strombus (apart from S. goliath) by the large size of adults and the deep pink of the shell aperture (Randall, 1964; Fisher, 1978). S. samba is a synonym of S. gigas, often used for thick-lipped forms (Randall, 1964).

6. Comments from Countries of Origin

None received.

7. Additional Remarks

The level of protection for Strombus gigas agreed to by nations signing the SPAW Protocol on June 11, 1991, at the Conference of Plenipotentiaries is encouraging. If efforts to recover stocks to former levels are to succeed, a formal mechanism for monitoring and control of international trade, as provided by a CITES Appendix-II listing, will be needed to support the agreed upon protection.

8. References

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